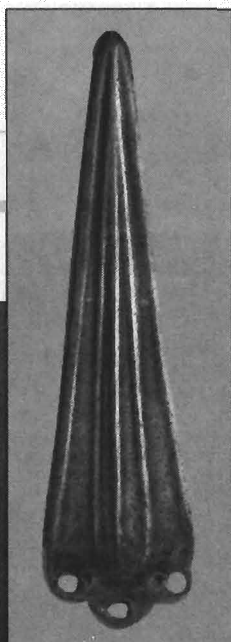
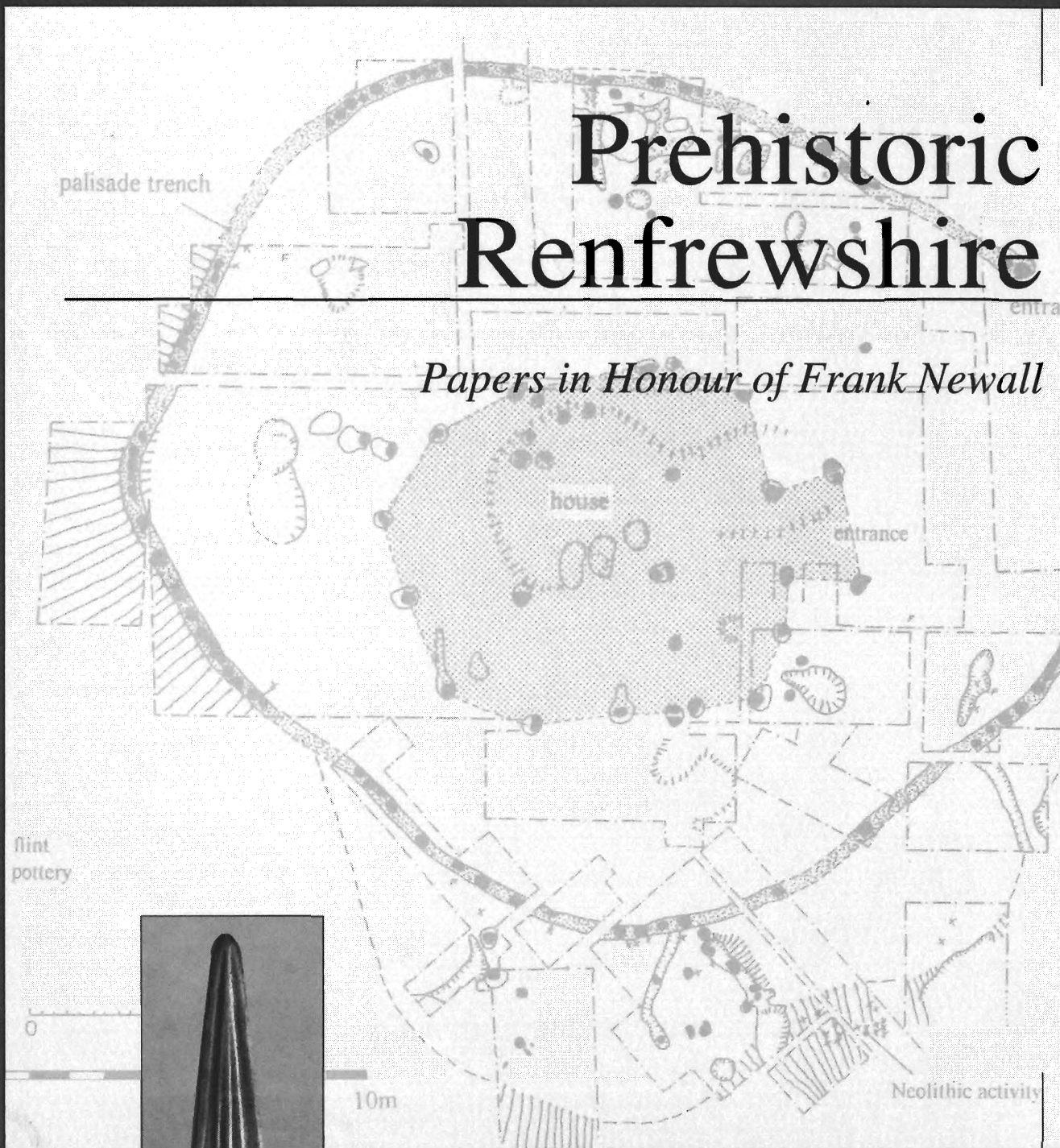


# Prehistoric Renfrewshire

*Papers in Honour of Frank Newall*



Edited by Derek Alexander

1996

Renfrewshire Local History Forum - Archaeology Section

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## Contents

Contributors	iv
Foreword <i>Gordon McCrae</i>	v
Editors Note <i>Derek Alexander</i>	v
Previous archaeological work <i>Derek Alexander</i>	1
Sites and artefacts: the prehistory of Renfrewshire <i>Derek Alexander</i>	5
South Mound cairn, Houston <i>Daniel Stables</i>	23
Picketlaw hut circle, Moyne Moor - an interim report <i>Derek Alexander and Bruce Henry</i>	29
Knockmade homestead, Lochwinnoch <i>Robin Livens</i>	33
Craigmarloch hillfort, Kilmacolm <i>Helen Nisbet</i>	43
Human impact on the vegetation around Walls Hill <i>Susan Ramsay</i>	59
The ditched enclosure at Shiels, Govan, Glasgow <i>Jack G. Scott</i>	65
Future research <i>Derek Alexander</i>	71
Bibliography	73



## Contributors

*Derek Alexander* is Deputy Field Manager with the Centre for Field Archaeology, University of Edinburgh. Brought up in Neilston, south-west of Paisley, he has long had research interests in the archaeology of Renfrewshire. He is currently undertaking postgraduate research into the later prehistoric and proto-historic settlement of west central Scotland.

*Bruce Henry* is an active member of the Association of Certificated Field Archaeologists (ACFA) and has undertaken survey across Scotland. He is also a member of the Renfrewshire Local History Forum Archaeology section and has carried out a number of surveys in the area, including Moyne Moor, and is co-director of the excavations at Picketlaw.

*Robin Livens* worked in the University of Glasgow, from 1957 to 1960 before moving south where he has only recently retired as a Lecturer in Archaeology at the University of Nottingham.

*Gordon McCrae* undertook a degree in archaeology at Liverpool in 1966 - 1969 and has applied his knowledge to Renfrewshire, keeping a watchful eye on many local sites threatened by development. He is deputy librarian at the University of Paisley and is Secretary of the Renfrewshire Local History Forum - Archaeology Section.

*Helen Nisbet* was geological curator at Paisley Museum from 1959 to 1962 before moving to a similar post in the University of Edinburgh. She has a particular interest in vitrified fortifications and undertook excavations at both Craigmarloch, Renfrewshire, and Langwell, Sutherland. She is now retired and lives in Lasswade.

*Susan Ramsay* was recently awarded her PhD from the University of Glasgow for her pollen study entitled "Woodland clearance in west central Scotland in the past 3000 years". She is currently continuing to work on both archaeological and botanical projects at the University of Glasgow.

*Jack Scott* was curator of the Department of Archaeology at Kelvingrove Art Galleries and Museum, Glasgow, from 1948 to 1978. As such he undertook excavations on a range of sites throughout Scotland, most notably on Neolithic and Bronze Age burial mounds. He is also author of the Regional Archaeological Guide for South-west Scotland. He is now retired and lives in Galloway.

*Daniel Stables* was an amateur archaeologist from Paisley and participated on a number of excavations in the area as a member of the Renfrewshire Archaeology Society, most notably at the South Mound, Houston. He also aided in excavation work undertaken by Jim Hunter, Paisley Museum, at Old Barr Castle, Erskine and at the excavations undertaken by Eric Talbot, of Glasgow University, at Crookston Castle.

## Foreword

*Gordon McCrae*

University of Paisley

I have been waiting to read this book since the 1960's - a long wait, but it has been worthwhile. By collecting together four decades of published and unpublished reports of fieldwork and excavations Derek Alexander and his collaborators have made an outstanding contribution to the study of prehistoric archaeology in the former county of Renfrewshire. The previously unpublished reports are particularly welcome since many of the sites discussed are of more than local significance - included here, for example, is the first published account of the Craigmarnock excavation which produced an early radiocarbon date quoted by many subsequent writers.

The book is important in another respect. The archaeology of the former Renfrewshire, like that of other densely populated areas, has suffered more than most from neglect, vandalism and "development". Derek's achievement in bringing the available information and interpretation together in one volume will have the effect of making more people aware of Renfrewshire's prehistory, and so stimulate informed discussion of the issues raised. This, in turn, will help to protect the surviving monuments.

In his dedication the editor rightly pays tribute to Frank Newall, who, through his writing and fieldwork introduced many people to prehistoric Renfrewshire. It would be a fitting tribute to all of the amateur and professional archaeologists whose work is collected in this book if the authorities (who have kindly supported this publication) were to consider the appointment of a "county" archaeologist. As the final chapter shows - there is plenty of fieldwork still to be done.

## Editor's Note

The idea for this publication came after a number of site visits in Renfrewshire and subsequent follow up research. During this research Frank Newall's publications were invaluable and it was clear that he had undertaken extensive fieldwork in the area and had published the results of many of these. He did however refer to other excavations on "type sites" which have, until now, remained unpublished apart from brief entries in *Discovery and Excavation in Scotland*. It was in my eagerness to find out more about these excavations that I first contacted many of the contributors and soon realised there was the potential for a small publication outlining the variety of the archaeological research undertaken in Renfrewshire over the years. All of the contributors either know Frank Newall or have referred to his work and it therefore seemed appropriate that this volume, which represents a significant addition to our understanding of prehistoric Renfrewshire, should be dedicated to him in recognition of his work over the last 40 years.

The layout of the volume is relatively straight forward. A review of previous work in the county is followed by a general overview of the current evidence. This is then followed by five, more detailed, accounts of excavations accompanied by the results of recent palaeoenvironmental work in the area. The conclusion provides a few ideas for future research topics. It is hoped that the level of information provided will be of interest to both amateur and professional archaeologists as well as the interested layman.

The work of the editor for this publication has been relatively light, a deliberate attempt was made not to make substantial changes to the various papers, some of which were written shortly after the field work was completed. The work in assembling the text, illustrations, and desk-top published copy were more laborious, done in my spare time over the last couple of years. It is hoped that most of the problems have been ironed out but any mistakes remain the editor's responsibility.

## Acknowledgments

Each author has provided personal acknowledgments after each of their papers where appropriate. However, I would like to thank a number of individuals and organisations who have helped in the production of this volume. Firstly, I am grateful to the Society of Antiquaries of Scotland, Strathclyde Regional Council Department of Physical Planning, Renfrewshire Enterprise and Renfrew District Council for providing the financial support necessary. Thanks are also due to the Centre for Field Archaeology, University of Edinburgh, for allowing extensive use of their office equipment and stationery supplies. A great number of individuals helped in the production of the volume to whom I am extremely grateful. First and foremost I would like to thank all the contributors for their collaboration and advice throughout the production of the volume. Stuart McLean of the University of Edinburgh printing service was of help relating to the practicalities of the printing process. A number of other individuals are also to be thanked for information, advice, reading of drafts and help in the production, including Neil Alexander, Lesley Alexander, Patrick Begg, Alan Braby, Bill Finlayson, Kevin Hicks, Gordon McCrae, Ian Ralston and Eric Talbot.

I was deeply saddened to hear of the sudden death of Daniel Stables, and my condolences go to his wife Ilene. Robin Livens has recently been taken ill and I would also like to take this opportunity to wish him well.

# Previous archaeological work

## *Derek Alexander*

The current understanding of the prehistoric remains within Renfrewshire is built upon a variety of sources. Prior to the 1960s there was no systematic archaeological fieldwork undertaken in Renfrewshire, although information on a limited number of sites and discoveries can be gleaned from earlier sources such as old maps and documentary records, some dating back to the 18th century.

### The 18th century

The first references to archaeological sites in Renfrewshire can be found in "The History of the Shire of Renfrew" written by George Crawford in 1710 and updated by William Semple in 1782. This parish by parish account of the county mainly focuses on family histories but a number of archaeological sites are mentioned briefly, including the "vestiges of an Old British Camp" in the lands of Rosshill (now only visible as a cropmark, Alexander 1992, 20). What appears to have been an extensive spread of cup-and-ring rock carvings at Hairlaw Craigs near Barrhead are described as "seventy-two small holes of an oval form about an inch deep in the stone", spread out over c. 30 yards (Crawford and Semple 1782, 239). This description was accompanied by the unusual interpretation that "tradition hath handed down, that a battle was fought there, and these holes were where the feet of their tents stood" although they admitted to not knowing what truth there was in the story. Such early references form a record of sites some of which have since been destroyed or are less well-preserved. Of the 72 cup-marks it has been reported that only five are now visible (Newall 1976, 97).

Another excellent source of information on archaeological remains are the parish descriptions compiled by the local ministers in the late 18th century and published in the Statistical Account for Scotland (1791 -1799). These descriptions often include a section on antiquities and other curiosities within the parishes. The entries are very variable in detail and some parishes have no recorded sites. However, others provide detailed

accounts of sites, many of which were destroyed by agricultural improvements or the finds subsequently lost. An excellent example is the description of the discovery of cists close to the South Mound at Houston which is worth quoting at length:

*"...when the country people in this parish were digging for stones to enclose their farms, they met with several chests or coffins of flag stones, set on their edges, sides and ends, and covered with the same sort of stones above, in which were many human bones of a large size, and several skulls in some of them."* Rev. Mr. John Monteath, Houston & Killallan parish, 1791-1799.

This report was checked and confirmed during the excavations on the South Mound in the 1970's (Stables this volume and Morrison 1979). However, a number of other sites from which artefacts were recovered were not as fortunate. The reference to the urns containing human bones found close to the Knock Hill near Renfrew, still remains the best source of information on a site which was completely destroyed during the construction of a housing scheme in the 1950's.

Unfortunately the early map coverage of the county, such as Blaeu's map of 1654, tend not to be detailed enough to show archaeological sites. It is really only with the detailed work of the Ordnance Survey from the second half of the 19th century onwards that archaeological sites are indicated on maps.

### The 19th century

The Ordnance Survey maps provide a record of a number of sites which have subsequently been destroyed or altered. For example the first edition Ordnance Survey map marks the fort at South Branchal, between Bridge of Weir and Kilmacolm which is now covered by a conifer plantation, planted probably in the 1950s or 1960s. In addition, it illustrates an enclosure on Byreshill in Barshaw Park, Paisley, which was

subsequently destroyed by the construction of a golf course.

As well as illustrating archaeological sites such as forts and burial mounds, the Ordnance Survey maps mark the location of well known find spots which are annotated accordingly, such as the location of the urns found close to Knock Hill reported in the 18th century (discussed above). On the map the location of "a stone coffin containing human bones" marks the spot close to the South Mound at Houston where cist burials were found in the previous century. Although some of these references were taken from previous writings many were also derived from local knowledge.

By far the most intriguing reference to an archaeological site discovered in the county in the 19th century, but now destroyed, is the description of the Overlee Weems. These were a series of stone built houses discovered at Overlee, Cathcart, in 1808 and first reported by Rev. Dr. Smith of Cathcart in the New Statistical Account of the parish and retold in later accounts (Ross 1883). It is reported that there were over 42 houses, 36 in an arc on the lower ground with six higher up. The stone houses were partially subterranean from 4 - 5ft high and from 8 -12ft square. The interior of each was paved, with a central hole for a hearth. The date of these features remains unknown, although the reported use of coal and the presence of a dozen hand-mills for grinding corn may suggest a 1st millenium AD or later date for their occupation. Unfortunately the site of these enigmatic structures was quarried away and is now covered by a combination of a railway line, houses and playing fields. Whether any parts of the structures survives remains unknown.

Unfortunately Renfrewshire did not attract the attention of a scholarly antiquarian similar to John Smith of Dalry, whose work in Ayrshire is well known (Smith 1895) and has recently been celebrated (Morrison 1996). While David Christison who surveyed many of the hillforts in Ayrshire (Christison 1898) did not extend the range of his fieldwork into the neighbouring county. Although a number of the crannogs along the mud-flats of the Clyde were investigated in the late 19th century, including one at Langbank, the attentions of the antiquarians focused on the site of Dumbuck on the north side of the river.

## 20th century

Although a number of local history books, such as Pride's volume on Neilston (1910), were published in the first half of the 20th century, there appears to have been a lack of archaeological study in Renfrewshire, in contrast to many other counties. It is surprising that the presence of some major sites, like the hillforts of Craigmarloch and Duncarnock, were not recorded until the Marginal Land Survey undertaken by Richard Feachem of the Royal Commission on the Ancient and Historic Monuments of Scotland in the 1950s.

The rise of popular archaeology in the 1950s and 1960s saw the start of the single most important source of data to be gathered for Renfrewshire archaeology; namely the contribution of the amateur archaeologists. The data was collected by local archaeologists who walked different parts of the county in their spare time and recorded any archaeological sites or artefacts. The artefacts were often deposited in Paisley Museum and reports were published in *Discovery and Excavation in Scotland*, produced by the Council for Scottish Archaeology. A quick glance through these volumes indicates that there were a number of dedicated amateurs working in Renfrewshire, which including W.F. Lonie, W.O. Black, and T.C. Welsh. The survey work tended to focus around the areas where each individual lived and thus the survey coverage is varied, for example T.C. Welsh, who was a keen historian and prolific fieldworker, concentrated around Eaglesham and Eastwood (Welsh 1984). One of the most productive fieldworkers is Frank Newall, who between 1955 and 1978 contributed (either singly or jointly) over 170 entries to *Discovery and Excavation in Scotland* for Renfrewshire and has intermittently contributed another 15 entries since then. It was on the results of his field walking that Newall published an article which focused on the early open settlement in the Renfrewshire uplands (1961-62) in which he identified a number of different types of unfortified prehistoric settlements.

If archaeology in Renfrewshire can be considered to have had a heyday then the concentrated spell of fieldwork during the second half of 1950s and into the 1960s surely must be it. Frank Newall undertook the first modern excavation within the county on the large Iron Age fort at Walls Hill in 1956, the results from which were published by Paisley Museum (Newall

1960). The prehistoric and medieval homestead site at Knapps, near Kilmacolm was similarly excavated by Newall between 1961 - 1962 and published again by Paisley Museum (Newall 1965). The excavations on Knockmade, in 1959 - 1960 and 1967 (Livens this volume), and Craigmarloch, 1963 - 1965 (Nisbet this volume), also fit into what Newall termed a series of "type sites" excavations. The radiocarbon dates from Craigmarloch were among the first in Scotland and as such were much discussed at the time.

In the 1970s Frank Newall produced a series of papers in the *Western Naturalist*, the journal of The Renfrewshire Natural History Society published by Paisley Museum. In these papers he produced period reviews of the evidence for the Stone Ages (1974), the Bronze Age (1976), the Iron Age (1978) and the Romans (1975). These reviews were complemented by reports on a number of fieldwork projects; the artefactual remains of the Late Neolithic activity from around Gryffe Reservoir (1972) and the rescue excavation in advance of the destruction of a Bronze Age cairn at East Green, near Kilmacolm (1973). This extensive list of publications forms the backbone of published archaeological research to date in the county.

Newall's work around Gryffe Reservoir was prompted by large scale planting of conifer plantations and marks the start of rescue excavations in advance of commercial developments from the 1970s onwards. The 1970s also saw the formation of the Renfrewshire Archaeology Society which undertook a number of excavations, most notably at the South Mound, Houston in 1974, directed by Daniel Stables (this volume) which led to further work to the south of the mound by Alex Morrison of Glasgow University in 1976 (1979). These excavations were carried out in advance of proposed tree planting and road construction, while Jack Scott undertook excavation in advance of factory construction at Shiels Farm, Govan in 1973 - 74 (Scott this volume).

Unfortunately the archaeology society appears to have petered out in the early 1980s until its rebirth as the Renfrewshire Local History Forum (RLHF) - Archaeology Section in 1989 under the guiding influence of Gordon McCrae, Bob Turner, Alan Steele and Irene Hughson. This group holds a series of lectures and provides a forum for discussion of archaeological matters in

Renfrewshire. The RLHF also produces a journal, while the Archaeology Section has undertaken a number of surveys including Moyne Moor, Neilston (Henry 1995) and has continued the research into "type sites" with the excavation of an unenclosed hut circle at Picketlaw, Neilston (Alexander and Henry this volume).

The collecting of these papers into one volume is, therefore, a logical progression of the research into prehistoric Renfrewshire and brings together the fieldwork results conducted in the last 40 years, forming a review of previous work, and providing a solid base for any future research.



# Sites and Artefacts: the Prehistory of Renfrewshire

*Derek Alexander*

## Introduction

This paper provides an overview of the archaeological evidence for prehistoric activity in Renfrewshire. The evidence includes the remains of archaeological sites, both visible upstanding remains and more ephemeral cropmarks. This is complemented by the distribution of artefacts, both single, isolated finds and groups of finds from within the area. A shorter version of this paper was produced for the proceedings of the Local Studies Conference held at Paisley University in September 1995 (Alexander forthcoming).

It is divided chronologically into four main sections: Mesolithic; Neolithic; Bronze Age and Iron Age. Each section describes the evidence for prehistoric activity in Renfrewshire and places it within an environmental, social, economic and chronological framework established on the basis of archaeological data from Scotland and further afield. The chronological dates given after each heading are based on those set out in the Royal Commission Inventory Volume for Mid-Argyll and Cowal (RCAHMS 1988). These dates provide a chronological range for each of the periods, including some slight overlaps. The end date chosen for this study is approximately the Roman campaigns of the 80s AD. To provide a summary of the distribution of sites and artefacts within each period a number of maps have been provided, although they are by no means exhaustive. Sites which belong to more than one period are marked on all the appropriate maps.

Archaeological evidence can only ever provide a small part of the overall pattern; many prehistoric sites have been damaged or destroyed by subsequent agricultural activity. Most destruction of archaeological sites occurred in this area during the agricultural improvements of the 18th and 19th centuries when many sites were cleared from fields, banks were flattened and ditches were filled. Often artefacts were recovered

during such operations, although many have been subsequently lost or forgotten and remain unrecorded. Recently, the spread of the Glasgow and Paisley conurbations has also removed more of the evidence from the low-lying parts of the county, while the planting of conifers has probably destroyed sites in the uplands. The surviving archaeological remains are under constant threat and only through continued work in advance of these threats and through targeted research will it be possible to achieve a better understanding of early human activity in Renfrewshire. It is hardly surprising that the earliest period identified, the Mesolithic, is the least evident.

## Mesolithic (7000 - 3500BC)

At the end of the last Ice Age, more than 10,000 years ago, northern Europe underwent major climatic and geomorphological changes. When the climate warmed, the frozen ice sheets and glaciers melted causing an initial rise in sea level, followed by an uplifting of the land which had been compressed by the weight of the ice. A complex state of flux between uplifting land and rising sea resulted in the creation of raised beaches in some areas whilst in others the coastline was submerged. With this warming of the climate, the retreat of the ice, and the formation of thin soils, new land became open to colonisation by firstly tundra vegetation, followed by the spread of birch woodland, and eventually the establishment of elm, hazel, oak and pine forest. As the vegetation changed so did the types of animals. By 8000 BC red deer, bear, aurochs (wild ox), wild boar, and beaver were all present in the mixed deciduous woodlands of Scotland. However, not all of the country was covered in forest. Areas of scrub, marsh, as well as coastal and upland tracts all supporting different flora and fauna became widespread. Following the vegetation northwards were small groups of humans, hunting and gathering for food and living in temporary shelters.



The earliest dated human occupation in Britain has been dated to around 500,000 years ago from evidence in the south of England. Any evidence for such early (Palaeolithic) settlement further north has been removed by glacial erosion. Indeed, it is not until c. 7000 BC that there is conclusive evidence for the earliest human groups in Scotland. These groups may have had at least three points of origin. Many may have come from England to the south, whilst others may have come from Ireland, to the west. In addition, it is also possible that as the sea level rose and flooded the North Sea basin which would have been plain during the early post-glacial period, and groups living there may have been gradually pushed westwards towards Scotland. The complexity of the situation is apparent in the archaeological record where no single site could be said to display uniform traits of any single place of origin (Wickham-Jones 1994, 54, Ill. 42).

In Scotland the earliest human occupation has been dated on Rhum to c. 7000 BC with other early sites established along the western seaboard before 6000 BC on Jura, Ulva, Arran, Oban and Islay. However, this picture may be biased by the areas where Mesolithic material has survived, been

located and studied. "It is likely, therefore, that the known early sites are not in fact, the earliest sites, and that still earlier remains wait to be found" (Wickham-Jones 1994, 55).

The evidence in Scotland and the rest of Western Europe suggests that Mesolithic people lived in small semi-nomadic groups, perhaps formed by extended family units, occasionally coming together in larger groups. They exploited different resources for food and raw materials probably within relatively set areas, and only moved further afield to obtain specific items. They hunted animals, fished and gathered wild plants and shell fish. Hard stone (flint, chert, quartz and volcanic glass) was chipped into small fragments and used for tools, sometimes hafted together in groups to form arrows and other composite tools. Bone, wood and antler were also used as tools, either as shafts or as implements in their own right. Shelters may have consisted of light tent-like structures constructed from a wooden framework covered in animal skins. There is evidence to suggest that in some cases shallow hollows were excavated to provide shelter.

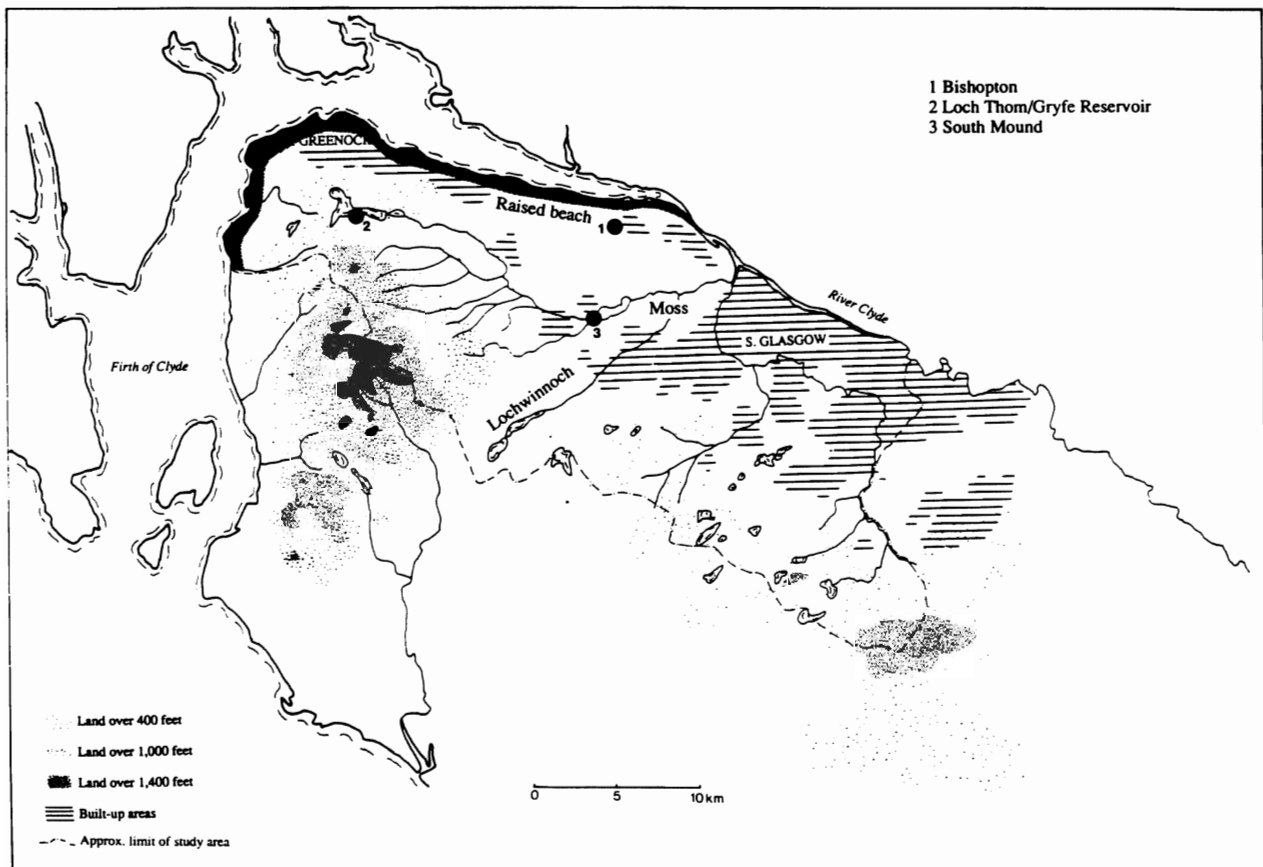


Figure 1 - Mesolithic Renfrewshire

In the past it was thought that these small groups would have moved frequently to exploit seasonally available resources, such as ripening fruit or salmon runs in rivers, but current thinking prefers a less subsistence dominated lifestyle, often allowing at least in theory more prolonged stays at favoured locations. Settlements or camp sites are often found beside water in areas where more than one economic resource could be exploited; for example beside lochs, the sea or river estuaries, with access to both terrestrial and riverine or marine resources.

The archaeological evidence for these small groups is often difficult to find and interpret, especially the scanty remains left by flimsy structures. The majority of Mesolithic sites have been identified by scatters of flint or chert tools recovered from ploughed fields or sand dune areas. There are also the visible remains of shell middens which form upstanding mounds as at Cnoc Sligeach, Oronsay or as spreads of white shells visible against the dark soil of ploughed fields, as at Inveravon, West Lothian.

When Frank Newall wrote his paper on "the Stone Ages in Renfrewshire" no Mesolithic sites were known in the county, although he suggested "the Mesolithic will inevitably emerge" (Newall 1974, 3). Recently McCrae (1991, 4) identified this lack of hunter-gatherer material as one of the problem areas of Renfrewshire archaeology and set about finding evidence for such activity. He considered that it was possible on the basis of the distribution of Mesolithic sites throughout Scotland to build up a picture of the environmental niches where more than one type of resource could be accessed. Then this information could be applied to the topography of Renfrewshire.

Complex changes in sea-level affected coastal Renfrewshire as much as the rest of the western seaboard. Raised beaches were left along the southern bank of the River Clyde, approximately as shown on Figure 1. These appear to follow the current 8m contour. In addition, the area of Linwood Moss, to the north of Paisley, appears to have been a brackish salt water lake before becoming a peat bog (Gray & Lowe 1976) and would have provided an ideal location for hunting and gathering a wide variety of species. "It therefore seems that the most likely places to find remains of flint, shells, bone, or black burnt material (relating to Mesolithic occupation), would be broken ground in the

valleys of the Gryfe, Black Cart, Dargavel or Barochan Burns where they cross the 8m contour - or on the raised beach to the north-west of the county" (McCrae 1991, 5). The Archaeological Section of the Renfrewshire Local History Forum therefore undertook a number of field walking surveys for the collection of Mesolithic flints. This research, organised by Gordon McCrae, targeted the areas of raised beach and river valleys, initially without much success. However, in a ploughed field overlooking the Clyde at Bishopton a small number of flint implements were recovered (Macneil & McCrae 1994, 74). Out of the 13 pieces of chipped stone found, five were flint blades (Fig. 2). This predominance of blades suggests that the material may be Mesolithic (Finlayson pers. comm.)

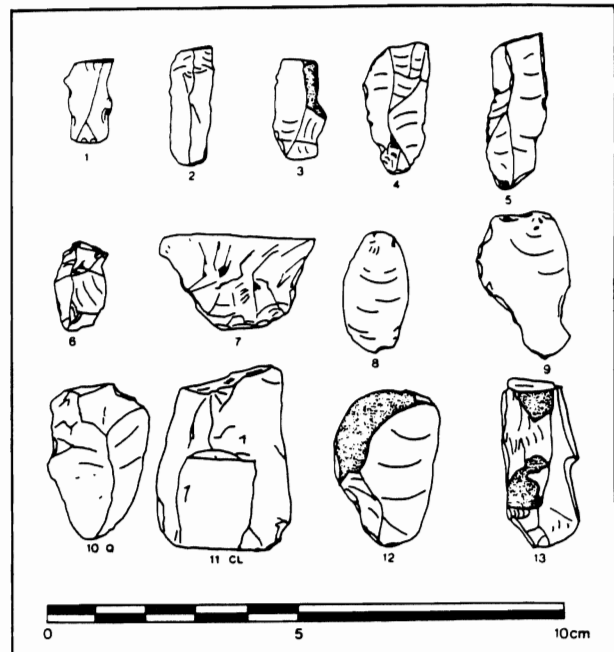


Figure 2 - Mesolithic flints, Bishopton - 10 Q = quartz, 11 CL= chalcedony

Although more evidence for Mesolithic activity should be sought along the raised beaches, inland and upland areas should not be overlooked. The areas around Lochwinnoch and in the uplands around Loch Thom (Fig. 1) would also have provided ideal areas for settlements. In Newall's report on the Late Neolithic settlement in Gryfesdale (1972), a number of isolated finds, including a white flint awl, were suggestive of Mesolithic stone working techniques (Newall 1972, 46-7 Fig. 2: 26). A number of small pieces of flints found below the cairn at the South Mound, Houston, are also possibly of Mesolithic

date (Stables, this volume). These small pieces of flint represent the first pieces of evidence for the earliest human activity in Renfrewshire and could date back 6-8,000 years, prior to the adoption of agriculture.

### Neolithic (c. 4000 - 2000 BC)

The Neolithic was thought to have been characterised by a number of significant changes from the Mesolithic, including the construction of semi-permanent settlements, the production of food through the use of both domesticated plants and animals. These farmers were also believed to have constructed communal tombs. In addition to housing the remains of a community's ancestors, many tombs may have defined the limits of territories. It is possible that communities legitimised their rights to that territory through the veneration of their ancestors, both in the construction and repeated ceremonial use of tombs. Technological innovations are also apparent in their material remains; Neolithic communities made pottery and used polished stones tools, such as axes. These changes used to be seen as a Neolithic "package" adopted wholesale by the Mesolithic hunter-gatherer communities. Current theory suggests that this process of adoption or acculturation of the

indigenous Mesolithic hunter-gatherer groups was slower and more piecemeal. They would have acquired these new techniques and ideas through exchange networks and kinship ties with farming groups in other areas of Britain and ultimately on the Continent. As during the Mesolithic, there must have been contacts between Southern Scotland, Northern England and Ireland. It appears likely that hunter-gatherer groups in distinct parts of the country did not initially adopt all of this Neolithic package at once but chose different elements at different times, and in some cases pottery may have been adopted prior to the use of either farming techniques (Armit & Finlayson 1992), or more permanent settlements.

The actual evidence for Neolithic settlement structures is rare in Scotland, as in the rest of Britain. It is dominated by the village groups in the Orkneys, as at Skara Brae, Links of Noltland (Clarke and Sharples 1985) and the recently excavated settlement at Barnhouse (Richards 1991). In addition to these settlements, there is the important island site of Loch Olabhat, North Uist (Armit 1992). On the mainland, however, settlement evidence is rare. One exception is the large timber hall of Balbridie, in Grampian (Fairweather and Ralston 1993). It is likely that, as in the Mesolithic, the majority of domestic

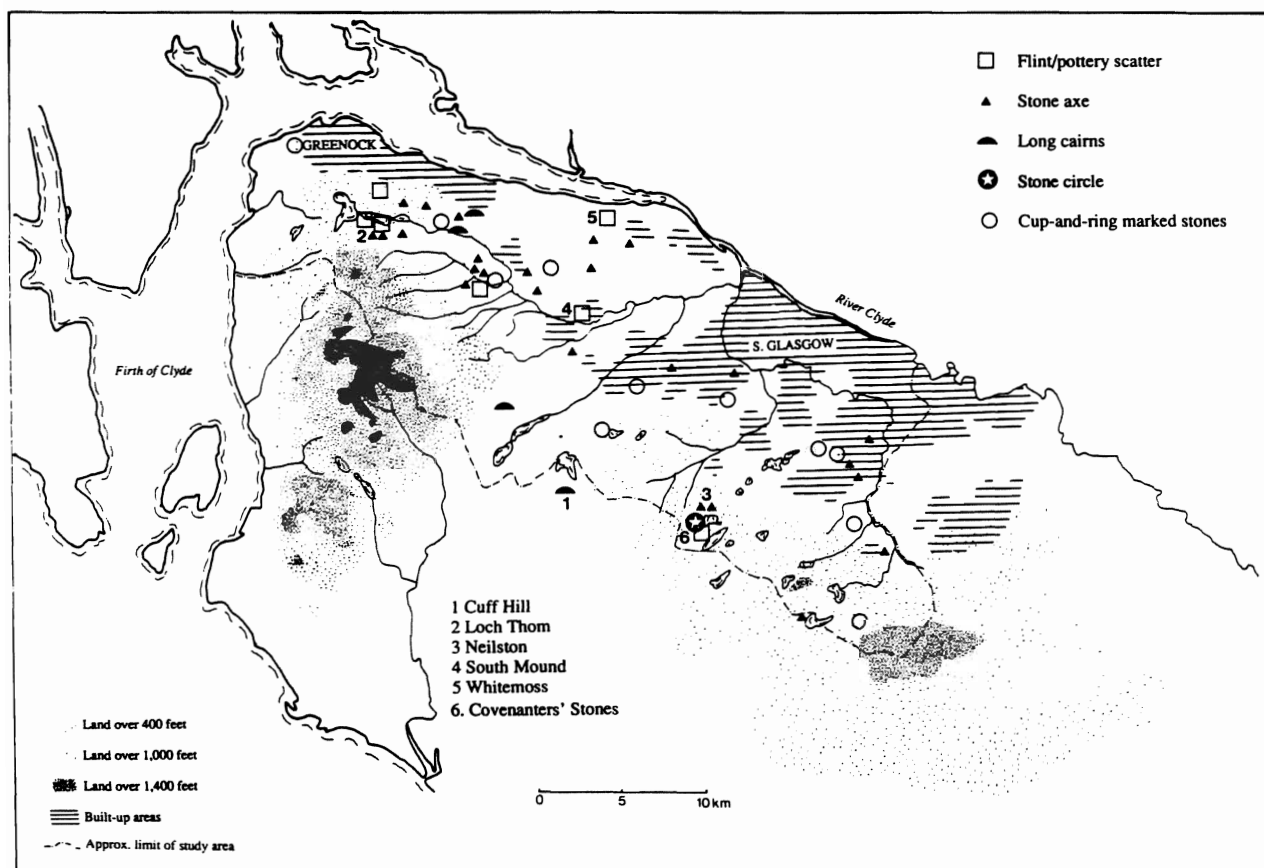


Figure 3 - Neolithic Renfrewshire.

structures would have been of light wooden construction leaving few detectable archaeological remains. Certainly there are no known or excavated Neolithic settlement sites in Renfrewshire. This lack of settlement evidence in Scotland is contrasted by the abundance of burial and ritual sites.

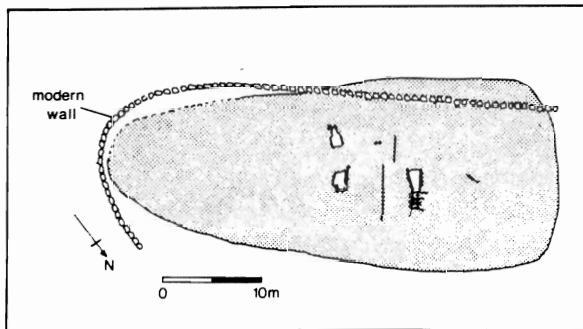


Figure 4 - Cuff Hill long cairn (after Henshall 1972)

During the Neolithic treatment of the deceased members of communities formed a major part of everyday life and this is reflected by the number and diversity of funerary sites. Evidence from a number of sites throughout Britain suggests that corpses may have been placed on raised platforms set within purpose-built enclosures until the flesh was removed by the elements and scavengers. The presence of such structures on which the dead were exposed has been argued for at Balfarg Riding School, Fife (Barclay & Russell-White 1993, 182). Once this process of defleshing or excarnation was complete some of the bones, usually the long bones or skulls, were removed and placed within stone tombs or under earthen mounds. The placing of the bones probably formed part of a complex ritual ceremony involving the community as a whole, possibly including feasting and special offerings. These rituals may have been cyclical/seasonal and access was therefore required to the bones within the tombs in order that they could be taken out and reused or new bones added. A passage to the chamber within the tombs often served this purpose.

Neolithic tomb sites have been identified in a number of different forms of megalithic chambered cairns and earthen long barrows throughout Scotland. The different types are categorised by their different plans of entrance passages and chambers etc, and form reasonably geographically distinct groups. Renfrewshire lies

on the eastern limits of the distribution of one of these types, the Clyde Cairns. Although there are no known chambered cairns within Renfrewshire itself, there is one at Cuff Hill, Ayrshire (Fig. 3) immediately to the south-west of the current study area. This cairn is an example of the small Bargrennan group of chambered cairns, which display a combination of structural features of both early Clyde Cairns and passage-graves. It was excavated in the 19th century when human bones and at least four chambers were recorded (Fig. 4). Prior to 1810, the cairn was intact before the south-east end was robbed for road metalling (Henshall 1972, 400-403). The surface appearance of the cairn is a long oval mound, wider at one end. Although not numerous, similar mounds have been identified by field workers at Auchenfoyle Farm near Kilmacolm and Knockbartnock Farm, near Lochwinnoch (Newall, 1974, 6) (Fig. 3).

It has been suggested that the apparent lack of chambered cairns in Ayrshire and Renfrewshire is a result of their destruction due to improved farming methods and the clearance of land for agriculture in the 18th or 19th century (if not before), and that originally the concentration of monuments may have been similar to the dense spread of monuments located on south Arran (Renfrew 1973, 132-3). However this argument has been questioned because, although there are records of the destruction of Bronze Age cairns in Ayrshire, there are no records of chambered cairns which would certainly have been more difficult to remove (Hughes 1988, 43-44). It remains possible that few chambered cairns were built in the area and perhaps the communities who lived in Renfrewshire travelled to ritual centres elsewhere, as on Arran, at particular times of year. Certainly pieces of pitchstone, a dark volcanic glass found on Arran, was used for making chipped stone tools which have been found on sites in Renfrewshire.

Lithic scatters (spreads of chipped stone such as pitchstone, chert, quartz and flint) and polished stone axes can be used to identify the location of other Neolithic sites (Fig. 3). The leaf-shaped arrowhead found at Gryfe Reservoir (Fig. 5.1) is characteristic of the Neolithic. The presence of arrowheads reflects the use of the bow, not only for hunting but perhaps also for warfare. A yew longbow was discovered in 1990 on a remote peat bog at Rotten Bottom in the Tweedsmuir Hills, Dumfries and Galloway Region, and has been dated to c. 4040 - 3640 cal

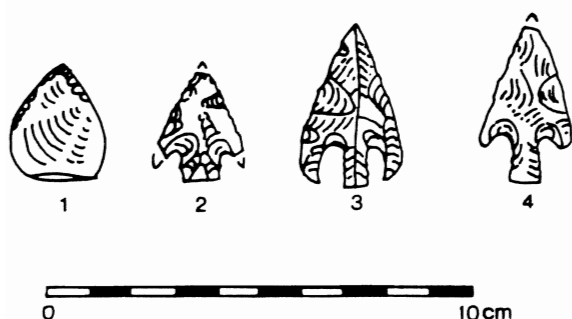


Figure 5 - Flint arrowheads (after Newall 1972)

BC, thus making it the earliest example from Britain and Ireland (Hedges et al. 1993). Polished stone axes are also recovered as isolated finds throughout Scotland. Sometimes the stone from which these axes were crafted can be attributed to particular geological sources (like Killin in Perthshire) whilst others were made of local glacial cobbles. A number of such axes have been found across Renfrewshire (Fig. 3). The petrology or geological rock type of a few Renfrewshire axes have been identified and appear to belong to Group IX, the source of which is Tievebullagh, in Northern Ireland (Ritchie and Scott, 1988). Two stone axes were recently found in a ploughed field close to Neilston along with a cannel-coal disc bead (Fig. 6). A flake has broken off the blade of the larger of the two axes (No. 1) probably during use, while the smaller example (No. 3) exhibits wear around its narrower end where it was probably mounted in a wooden handle. Axes would have been used for clearing areas of forests for farmland, and the pollen record indicates that small scale clearances during this period were relatively common (Tipping 1994, 32). Axes would also have been used for carpentry during the construction of settlements. They therefore were a very important tool, and given the effort needed to make them and the distance over which some were apparently exchanged it is clear that they were regarded as status symbols as well as utilitarian objects.

Sherds of Neolithic pottery can also be found, in association with flints and polished stone axes, on ploughed fields. The production of pottery reflects a major technological change in the control of fire. The process of transforming the raw material, clay, into a finished product, a pot, may have held great symbolic importance and thus the pots themselves appear to have been important in more than just a functional role. The first examples were round bottomed plain bowls

and were reasonably uniform in style across not only Scotland but the rest of Britain. However by 3500 BC different regional styles had evolved with different shapes and forms of decoration, especially on the upper part of the vessels. A form of pottery called Grooved Ware has been found on a number of Late Neolithic sites from ceremonial sites such as the henge complex at Balfarg (Barclay & Russell-White 1993), spreads of pits as at Wellbrae in Lanarkshire (Alexander & Armit 1993), to the complex settlement site at Skara Brae in Orkney. Grooved Ware appears to represent a pan-British pottery style. A single sherd of Grooved Ware (Fig 23.2) was recovered from the forestry plough furrows around Gryfe Reservoir (Newall 1972, 47, Fig 2 no. 10).

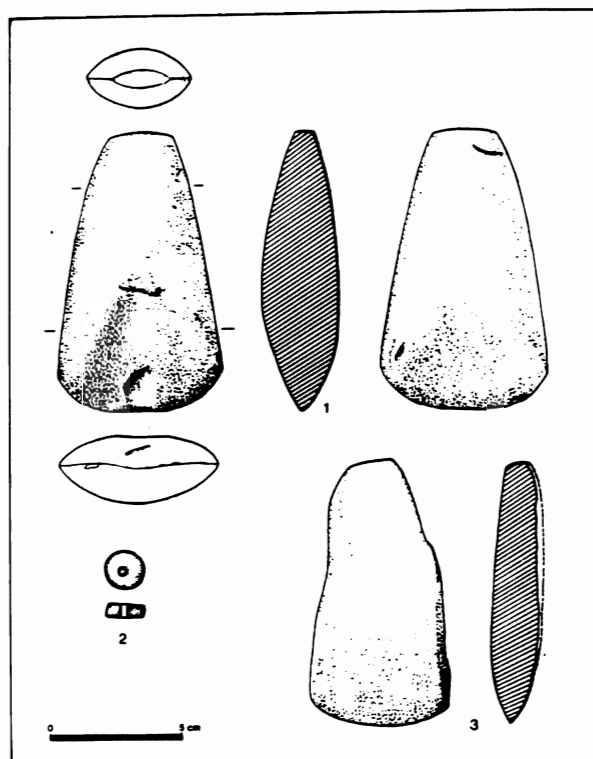


Figure 6 - Polished stone axes and jet bead, Neilston

Pits cut into the subsoil containing sherds of possibly deliberately broken pots appear to represent the remains of an important form of ritual. A number of such pit sites have been discovered in Renfrewshire whilst excavating other later sites, such as the Roman camp of Whitmoss, Bishopton, and the prehistoric and medieval homestead site at Knapps, Kilmacolm (Newall 1972, 9) or under the Bronze Age cairn at the South Mound, Houston (Stables, this volume).

Towards the end of the Neolithic there is evidence from the rest of the country for the construction of extensive ceremonial complexes such as henges and stone circles. What appeared to be the remains of a henge - a ceremonial enclosure with internal ditch and external bank - was located by aerial photography on the flat land beside the Clyde at Shiels Farm, Govan but excavation by Jack Scott, then of the Kelvingrove Museum, in 1973 and 1974 (Scott this volume) proved it to be an Iron Age enclosure. More recently, however, the remains of the Covenanter's Stones on Moyne Moor (Fig. 7) have been surveyed by Bruce Henry and these six large stones may represent the remains of a late Neolithic/Early Bronze Age stone circle (Henry 1995, 19). The recovery of sherds of late Neolithic/Early Bronze Age Beaker pottery from the upcast of a drainage ditch c. 100 yards to the south-west of the stones strengthens this interpretation. These ritual sites may have been used for ceremonial purposes at specific times of year, perhaps for celebrating particular rites of passage, points of change in the life cycle, such as birth and death. Ceremonies may have involved

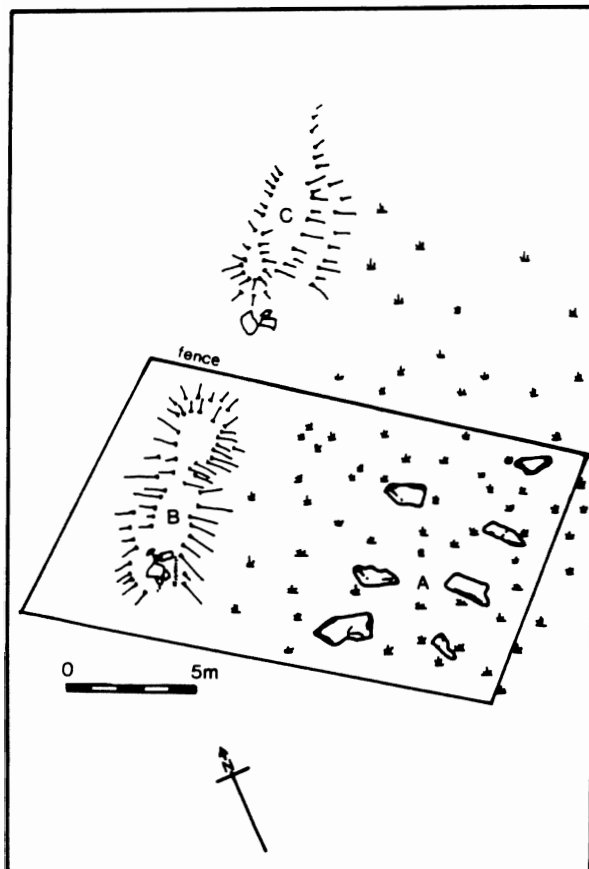


Figure 7 - Covenanter's Stones, Neilston (after Henry 1995)

feasting and the use and deposition of specific artefact types. Fragments of broken pottery and burnt bone are often found within pits or ditches on such sites.

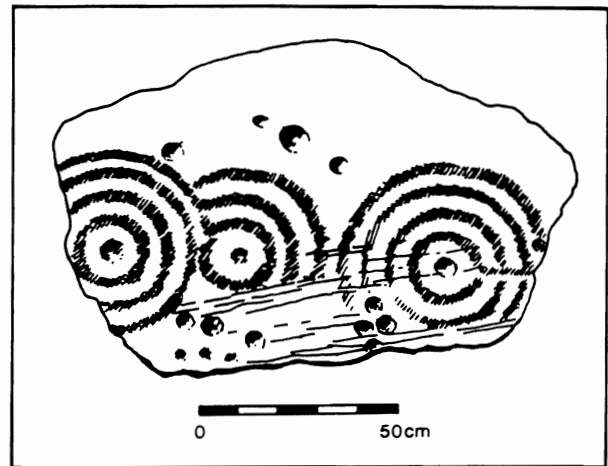


Figure 8 - Cup-and-ring marked stone, Bluebell Wood, Langside (after Coles 1906)

Much of the ritual and beliefs of early societies can only be guessed at and, along with the ceremonial sites, rock carvings are among the most enigmatic. Scottish rock carvings consist of designs, usually shallow scoops or cups often surrounded by rings pecked into stone. This type of design probably has its origins in the Neolithic period if not earlier. Renfrewshire has a limited number of identified areas of rock art, mostly in the form of cup-and-ring marks. Although the rock carvings in the county appear to be evenly spread (Fig 3), they tend to be located at the junction between farming land and upland areas, perhaps lending some weight to the interpretation that these stones marked boundaries between the altered domesticated farming landscape and the natural woodland, scrub and moors; a distinction between what was perceived to be tame and wild (Bradley 1993). A particularly fine example was recovered from Bluebell Wood, Langside (Fig. 8) which displayed three cup marks surrounded by three to four concentric rings, and a number of single cup-marks (Coles 1906, 322 - 324). Rock carvings are notoriously difficult to date but from their presence in burial cairns in other areas of Scotland they clearly continued in use or at least were often reused in the Bronze Age.

The end of the Neolithic and start of the Bronze Age is marked by the appearance of a new form of pottery, called Beaker pottery which is fine and highly decorated with comb tooth or twisted cord impressions. Chambered tombs of



the Neolithic appear to have gone out of use in the late 3rd millennium BC and many of the passageways and chambers were blocked up and from some of these deposits sherds of Beaker pottery have been recovered. The communal tomb appears to be replaced with burial of individuals within stone lined graves or cists, sometimes individually or in groups, below round cairns, sunk into earlier monuments, or in flat cemeteries. These graves are usually accompanied by burial goods, including Beaker pottery, or jet necklaces. All these grave goods are seen as prestige items that reflect the status of the deceased and of the mourners. This period sees the rise in power of the individual and possibly the creation of hierarchies based upon the control of prestige items and resources. By controlling access to such items, through the control of exchange networks, the social elites constantly reaffirmed their position in the social hierarchy.

Beaker pottery was found by Frank Newall during his survey work around Loch Thom and Gryfe Reservoir where he systematically walked forestry plough furrows collecting artefacts (Newall 1972). Figure 23.3 illustrates the general

shape of a Beaker pot reconstructed from three different sherds found during this fieldwork which revealed 14 concentrations of artefact scatters, many located on small knolls. Beaker and Grooved Ware sherds were identified at a number of these locations, along with quantities of flint and chert implements. A number of barbed and tanged arrowheads (sometimes found in Beaker funerary assemblages) have been recovered: a buff chert one from Lurg Moor (Fig. 5.2), a white flint one from Lochwinnoch (Fig. 5.3), and one of dark green Arran pitchstone from Scroggie Bank (Fig. 5.4). Such arrowheads are characteristic of the Early Bronze Age and are often found in cists accompanied by Beaker pots. In addition Newall proposed that some of the simpler hut circles within the Gryfe Reservoir area may be of Beaker, or Early Bronze Age date (Newall 1972, 42). This theory still needs to be tested through excavation. In general the work of Frank Newall around Gryfe Reservoir can be compared to the work more recently carried out by Tam Ward on Biggar Common where a large assemblage of Early Neolithic plain bowl pottery and concentrations of Grooved Ware and Beaker have been recovered from forestry plough furrows (Ward 1993).

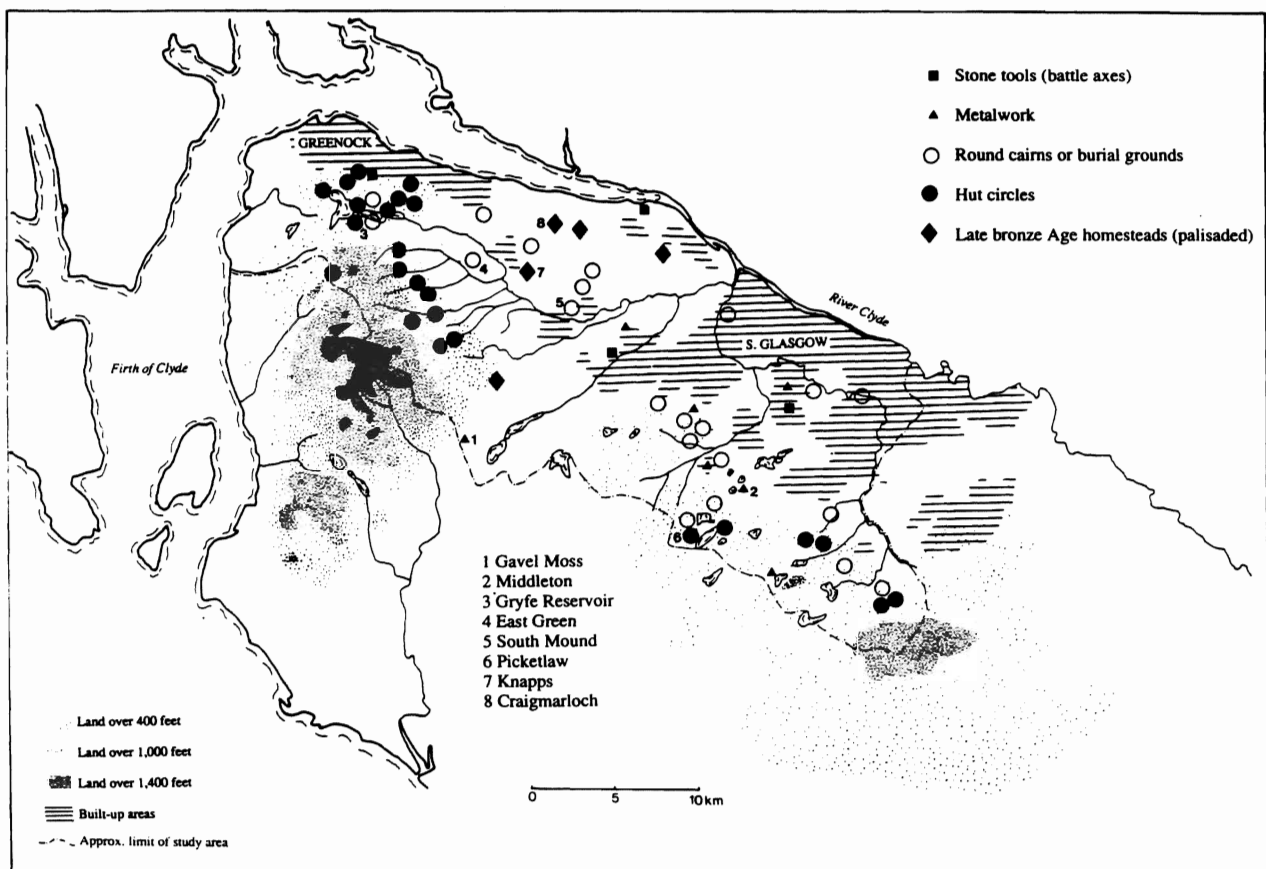


Figure 9 - Bronze Age Renfrewshire

## The Bronze Age (c. 2500 - 600 BC)

Technological change, most noticeably resulting from the adoption of metals, marks the start of the Bronze Age. This change contrasts with the evidence for continuity in many other aspects of the archaeological evidence. There is no clear break between the Late Neolithic and the Early Bronze Age, one merges into the other. This continuity of tradition is evident from the presence of many Early Bronze Age artefacts and burials on Late Neolithic sites. Bronze artefacts seem to have fitted into an existing pattern of prestige items such as decorated pottery, jet necklaces and stone axes, all used to display the social status of their owner, although few bronze artefacts have been recovered from graves. The rise in status of the individual within society is marked by the placing of such status symbols in individual cist graves, and may represent evidence for a hierarchical society.

The Bronze Age was initially defined by a typological division of bronze tools and weapons into Early, Middle and Late phases, the technological changes from simple to complex were used to construct artefact typologies with relative chronological significance. Many artefacts of bronze are recovered individually or in groups (hoards) from bogs and other wet sites. It is possible that the deposition of bronzes in hoards and their deliberate destruction is part of a ritual comparable to the earlier Neolithic pottery deposits. Unfortunately, due to the often isolated nature of their deposition, it is difficult to relate these artefacts to a wider settlement pattern (Fig. 9). There are a number of explanations proposed for the deposition of hoards; some were accidentally lost, others were the stock or scrap of a metalworker, while others were considered to be votive deposits or offerings to deities.

The first metal workers used soft metals such as copper, gold and rarely lead. Copper flat axes, similar in shape to the stone axes, were amongst the earliest forms made in single piece moulds during the Early Bronze Age. Bronze, a mixture of copper and tin, was later used to produce other weapons and tools. Early Bronze Age flat axes have been recovered from Spean Steet, Glasgow, and Kilmacolm (Fig. 10). During the Middle Bronze Age more complex two part moulds were used to produce tools such as flanged axes, palstaves, looped spearheads, dirks, rapiers, chisels, punches, hammers and small bronze

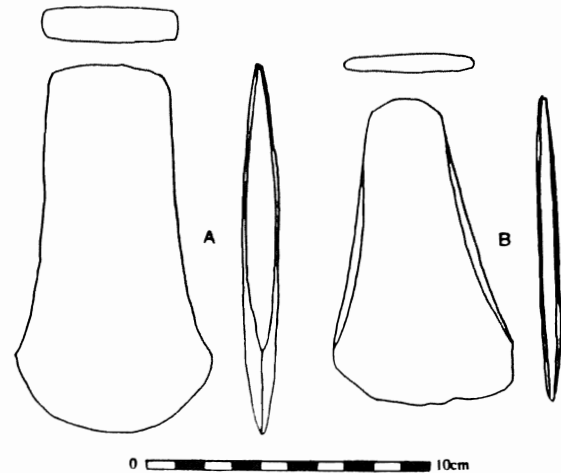


Figure 10 - Early Bronze Age flat axes; a. Spean Street, Glasgow, b. Kilmacolm (after Coles 1969)

razors. Two flanged axes, one decorated with chevrons, and a ribbed dagger were found at Gavel Moss near Lochwinnoch (Fig. 11). On typological grounds these are thought to date to 1500 - 1600 BC. Another flat axe was found in the Levern Water near Pollokshaws, while a decorated socketed axe was found at Cardonald near Paisley. A small hoard of three bronze artefacts was recovered from close to a possible settlement site at Middleton Farm near Newton Mearns. This included a socketed axe (Fig. 12), a tanged chisel (Fig. 13) and the broken remains of an unidentified bronze object over 10cm long. In addition to axes, spearheads were a common artefact of the Middle and Late Bronze Age. A socketed, looped spearhead with a central rib and flanged sides was found in Linwood Moss, Kilbarchan; another

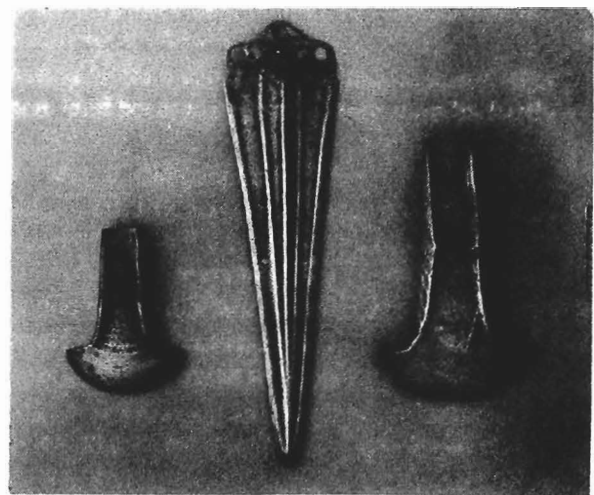


Figure 11 - Gavel Moss bronze hoard (Kelvingrove Art Galleries and Museum)





Figure 12 - Middleton hoard, bronze socketed axe (Kelvingrove Art Galleries and Museum)

double looped socketed spearhead was found in Bennan Loch, Eaglesham, and finally a tanged flat spearhead was found at Langstilly near Lochwinnoch (Newall 1976, 99 - 100).

Leaf-shaped slashing swords appear in the Late Bronze Age and probably developed from earlier daggers and rapiers. Two swords were recovered from the River Clyde at Bowling (Fig. 14), close to Renfrew along with a chape for the bottom of a scabbard (Scott 1967, Newall 1976,

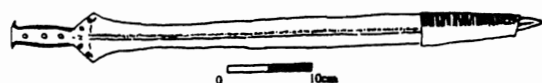


Figure 14 - Late Bronze Age sword from River Clyde (after Scott 1967)

100) whilst six bronze shields were found arranged in a circle in a peatbog at Luggtonridge, Ayrshire, just to the south-west of the current study area. Late Bronze Age metal-work is characterised by an increase in weapon production and the production of such sheet bronze metalwork as ceremonial shields and cauldrons. Quantities of

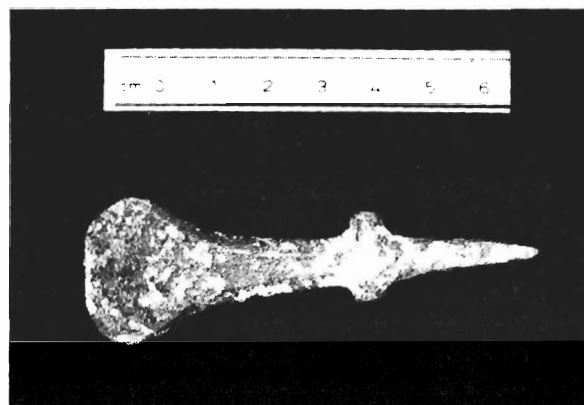


Figure 13 - Middleton hoard, bronze tanged chisel (Kelvingrove Art Galleries and Museum)

lead were added to bronze to improve its ability both to flow in more complex moulds and to be beaten out into flat sheets.

Bronze tools did not completely replace stone tools. Stone axes continue in use in the Early Bronze Age. Some of these have drilled holes in order to receive a wooden shaft and these have been termed battle-axes or axe-hammers depending on their size. It is possible that some of these stone tools were made in imitation of metal examples. Although associations are few, battle axes appear to date from approximately 1600 - 2000 BC (Smith 1979, 15-16). A number of these battle-axes have been found in Renfrewshire. An early type was found at Barochan, Houston (Fig. 15.1) whilst two intermediate-developed types were found at Lawfield, Kilmacolm (Fig. 15.2) and Wheelands Farm, Kilbarchan (Fig. 15.3). All of these were recovered as isolated finds and none are from reliable contexts such as settlements or graves.

With the progression of the Bronze Age new types of pottery such as Food Vessels, which

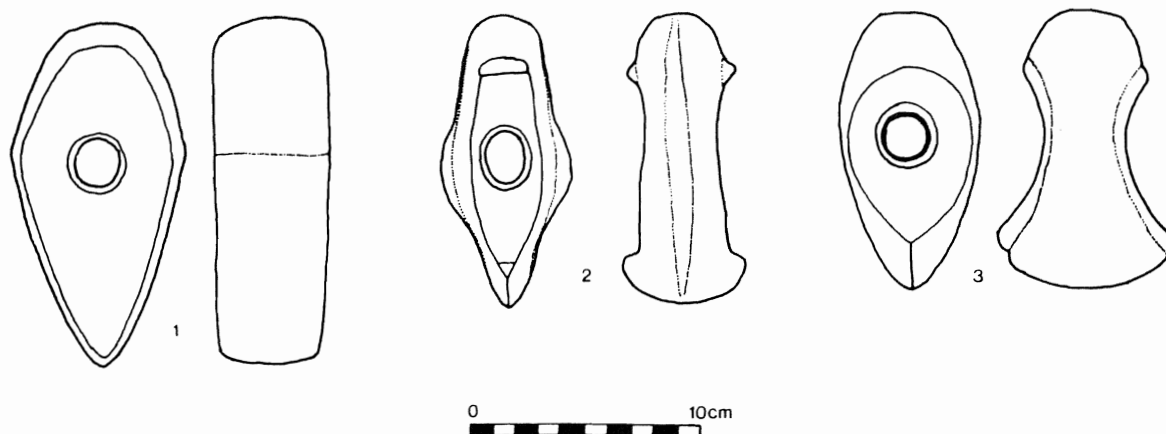


Figure 15 - Bronze Age stone battle axes and axe hammers (after Smith 1979)

appear to be a combination of Late Neolithic pottery types and Beaker decorative motifs, and larger Urns become the norm. The former are commonly found in cist burials with crouched inhumations whereas the latter are found with cremations. Plainer large cinerary urns, sometimes collared or cordoned, were used to hold the cremated remains. Cinerary urns were found at Knock Farm, near Renfrew in the 18th century (Crawfurd and Semple 1782, 30) and two groups each of four cremations, of which four were covered in well decorated urns, were found at Paper Mill Farm, Newlands, Cathcart (Newall 1976, 88). There are a number of references to the discovery of other possible urns, as at Craigmarloch, Kilmacolm (Newall 1976, 88).

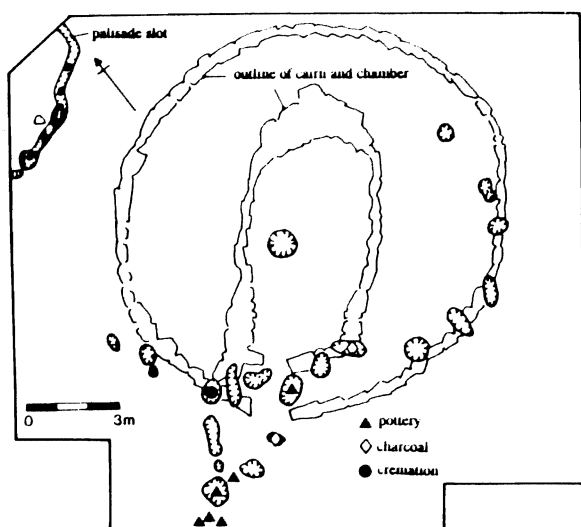


Figure 16 - East Green cairn (after Newall 1973)

A large number of simple round cairns have been recorded throughout Renfrewshire (Fig. 9). However without excavation it is impossible to determine when these cairns were constructed and what their functions were. They can vary from Neolithic or Early Bronze Age burial monuments to post-medieval clearance cairns. Newall excavated what appeared to have been a small ring cairn at East Green Farm near Kilmacolm prior to its destruction for building purposes (Newall 1973). This consisted of an outer kerb c. 12.8m in diameter with an entrance in the south-west, enclosing a central chamber 7.2m long by 3.8m wide (Fig. 16). The space between the inner and outer kerb was filled with cobbles on the north-western side. No burial deposits were found associated with the cairn and it overlay an organic-rich black layer which sealed a number of

pits, two of which contained sherds of prehistoric pottery. Those from pit 6 were of a very coarse, badly-fired vessel while those from pit 1 were finer. Both fabrics were interpreted as sherds from Bronze Age Cinerary Urns (Newall 1973, 104). The excavator tentatively suggested c. 1500 - 1000 BC as an approximate date for the site (ibid. 1973, 105).

The Bronze Age cairn at the South Mound, Houston was excavated in 1975 in advance of proposed tree planting and road construction. This produced a Bronze Age Food Vessel, a pile of cremated human bone and a small flint knife in a rubble built cist (Stables, this volume). The cairn sealed a number of earlier pits containing Neolithic pottery. Excavations carried out to the south of the cairn by Glasgow University recovered the remains of a possible cist cemetery with both inhumations and cremations and the deposition of a number of jet beads and spacer plates from necklaces, along with sherds of another Food Vessel (Fig. 23.4) and fragments of a bronze awl (Morrison, 1979). The bronze awl may have been mounted in a wooden handle and is probably the earliest metal implement found in Renfrewshire.

Another form of possible Bronze Age ritual site consisting of a small annular ditched site, termed a ring-ditch, was discovered by aerial photography where it was revealed as a cropmark in a field at Longhaugh Lodge, near Bishopton (Alexander 1992, 19). Excavations of ring-ditches in other parts of the country have revealed them to be of various dates from the Neolithic to the Iron Age, but the majority are thought to be of Bronze Age date.

One type of monument, radiocarbon dated to the Bronze Age, which has been increasingly identified in upland areas throughout southern Scotland (most notably by the work of the Royal Commission on the Ancient and Historic Monuments of Scotland in Nithsdale and Annadale and by Tam Ward in Clydesdale) is the burnt mound. These enigmatic mounds of burnt stone and charcoal are often found close to water sources and have been interpreted as either cooking sites or as saunas. The lack of artefactual remains may support the latter interpretation. No burnt mounds have as yet been discovered in Renfrewshire, but as more of these features are continually being found in other parts of the country perhaps it may

only be a matter of time until one is identified by field survey.

As during the Neolithic, the settlement evidence for the Early Bronze Age in Scotland is sparse. The majority of unenclosed hut circles in Renfrewshire are probably of later Bronze Age date or even Iron Age. The remains of a hut-circle at Picketlaw near Neilston were recently excavated (Alexander & Henry this volume). It is possible that the construction of such open settlements accompanied an increase in the division of the landscape for agricultural purposes. Small field banks enclose areas adjacent to the hut-circles at Gotter Burn West and Gryfe, site A (Newall 1961-62, 162), and may have been small agricultural plots or enclosures for livestock.

This increased division of the land may be partly a result of a decline in the climate towards the end of the Bronze Age, c. 1000 BC when it became colder. This led to an increase in the growth of peat bogs and the abandonment of marginal land. Bronze Age fieldbanks have been

sealed below peat at Moss of Achnacree, Argyll (Barrett et al). In upland Renfrewshire it is also possible that settlements are preserved below areas of peat. Another effect of this climatic decline may have been crop failure and increased pressure on agricultural land, perhaps resulting in the appearance of small defended settlements.

A number of Late Bronze Age homestead sites have been identified in Renfrewshire. Frank Newall excavated a small multi-phased site at Knapps, near Kilmacolm, which may have been defended by a wooden palisade or fence during this phase (Fig. 17), although some of the pottery found was of Neolithic date (Newall 1965). The homestead at Knapps was one of the first in Southern Scotland to be completely excavated. A similar homestead site was excavated at Knockmade Hill, near Lochwinnoch in 1959-60 and 1967, by Robin Livens, then of the Hunterian Museum (Livens this volume). This revealed two small huts defended by an earth and stone wall. The pottery proved to be coarse, bucket shaped, undecorated ware. There was probably little

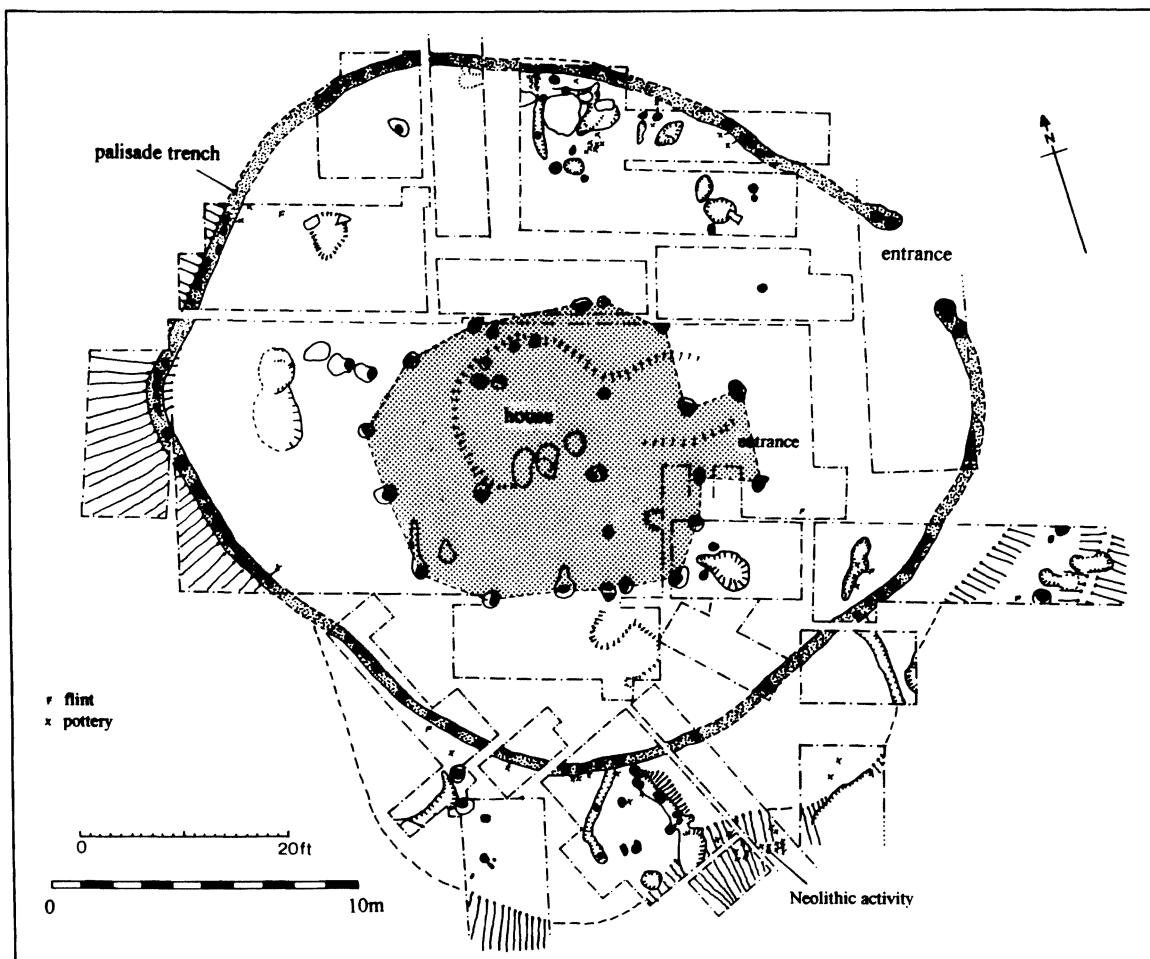


Figure 17 - Knapps palisaded homestead, Kilmacolm (after Newall 1965)

difference in the size of the communities which occupied this settlement and the unenclosed hut-circle at Picketlaw; both probably housed extended family groups and functioned as small farmsteads. A larger defended site is Craigmarnloch hillfort, between Kilmacolm and Port Glasgow. The fort was excavated by Helen Nisbet, then of Paisley Museum, in the mid-1960s (Nisbet this volume). It revealed two main phases of occupation. The first comprised a double line of palisades which encircled the hill. An occupation layer associated with these palisades contained sherds of undecorated coarse pottery. Charcoal from the palisade trench produced a radiocarbon date of 790 BC (GaK 995). The second phase was a timber-laced stone rampart probably of Iron Age date.

### Iron Age (600 BC - c. 100 AD)

By the Iron Age the nature of the archaeological evidence has completely changed. Instead of isolated artefacts, burial sites or hoards of bronze the evidence is formed by a wide variety of different types of settlements. Many of the small settlements such as hut-circles and

homesteads which appeared in the Late Bronze Age continue in use in the Iron Age. However, it is the appearance of larger settlements defended by stone walls and banks that characterises the Iron Age. The size and distribution of these hillforts may suggest the emergence of small tribal units (Fig. 18). The decline in the climate, coupled with an increase in population may have led to pressure on resources and the need for construction of defences around settlements to protect both themselves and their possessions from attacks. However excavation in other areas of Scotland has shown that many sites had undefended, open phases of settlement and there does not appear to have been a simple progression from undefended or unenclosed, to defended or enclosed settlements.

The palisades at Craigmarnloch appear to have been burnt down and replaced by a stone wall with an internal wooden framework for support. This wall was in turn destroyed by fire and the intense heat in the wall core was high enough to melt the stone which, when it cooled, fused together to form a vitrified mass. Charcoal from the wall core produced a calibrated radiocarbon date of AD 20, although some doubt has been cast

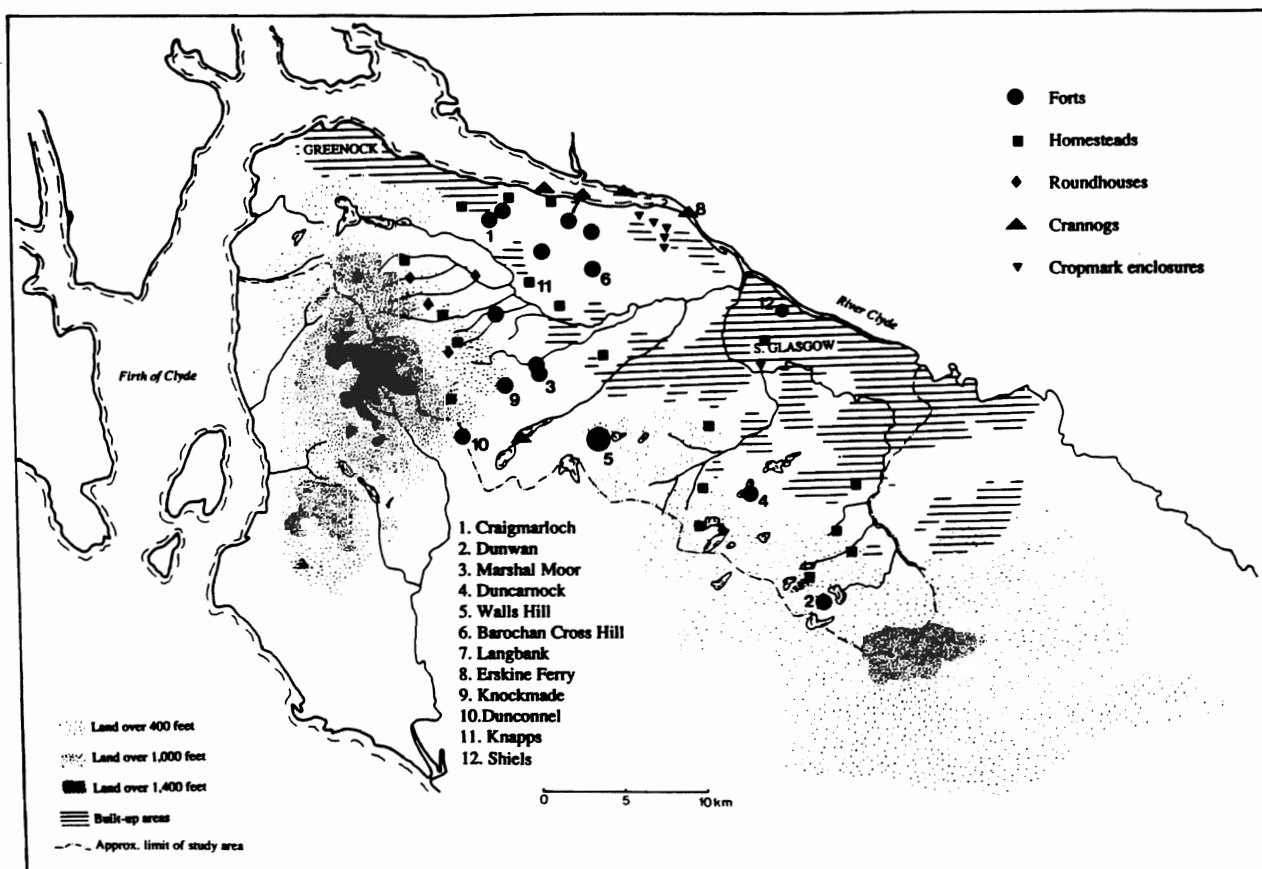


Figure 18 - Iron Age Renfrewshire

on the reliability of the sample used (see Nisbet this volume).

Destruction of Craigmarloch's rampart by fire may be the result of a deliberate act of warfare. The warlike nature of societies during the Iron Age is also reflected in the number of defended sites. Numerous similar hillforts are scattered across the hills of Renfrewshire including Dunwan, near Eaglesham, Marshal Moor, near Bridge of Weir and Duncarnock, close to Newton Mearns (Fig. 18). Although unexcavated, an isolated sherd of coarse pottery was recovered from an erosion scar on Duncarnock (Newall 1978, 9). Duncarnock is larger in area than Craigmarloch, but larger again is the site at Walls Hill, near Howwood.

Walls Hill is the largest hillfort in Renfrewshire and consists of a large basaltic plateau surrounded by steep crags which would have been defended by a rampart around the perimeter. The defences survive as a turf and earth bank c. 1m high along the north and south-west sides (Fig. 19). It encloses c. 18.5 acres (7.5ha). The enclosed area is c. 469m long from north to

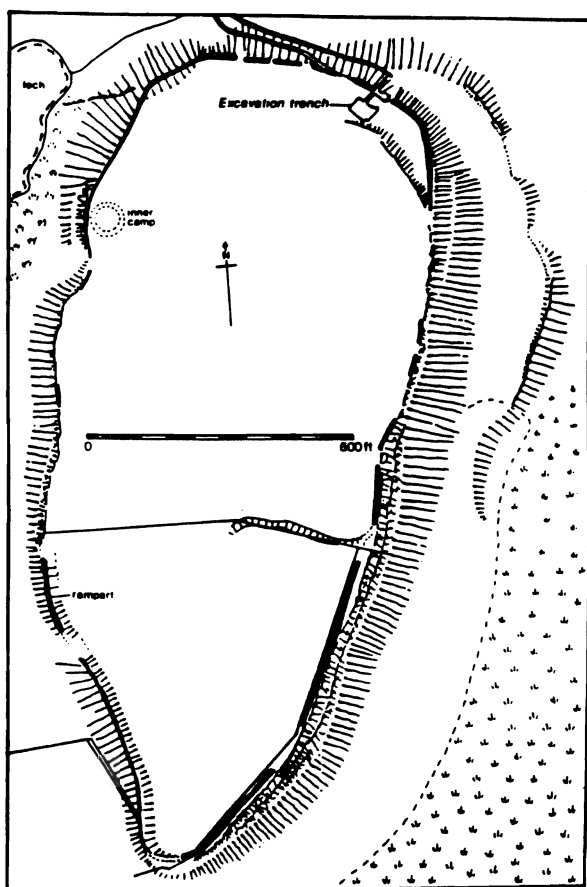


Figure 19 - Walls Hill, Howwood (after Newall 1960)

south and 198m wide from east to west. There are three possible original entrances through the perimeter: one at the north-west, one at the south-west and another at the north-east corner. The latter was excavated along with a small area inside by Frank Newall in 1956. The rampart was found to be 3.0 - 3.5m thick, faced with stone to the front and rear which revetted a core of mixed clay and earth. Evidence for a post hole at the front face of the rampart suggested that the wall face may have contained timber uprights or was preceded by a palisade.

The entrance to the hillfort was found to be 1.5m wide and was also lined with opposed upright timbers perhaps supporting a timber gateway. The remains of a 14th - 15th century AD earth and stone walled structure with a clay floor was located to the south of the entrance. Underneath this were the remains of two earlier phases of occupation consisting of the possible remains of two huts. Sherds of coarse native pottery, Dunagoil Ware, then thought to date to the 1st century BC, were recovered along with some fragments of worked shale from a pit.

A map of tribal territories in Scotland drawn by Ptolemy in the 2nd century AD, probably based on the campaigns of the Roman general Agricola, marks the Damnonii as occupying the area that is now west central Scotland, central Strathclyde. The hillfort at Walls Hill has always been attributed to the Damnonii, possibly as their capital because of its size (Newall 1978, 4). However, there is no absolute dating evidence from the excavations which could be directly attributed to the start of the 1st millennium AD. The large size of Walls Hill does not necessarily make it late in date. There are a number of different interpretations of how Walls Hill fits into the overall settlement pattern. One interpretation is that the smaller, dispersed communities amalgamated over time leading to fewer but larger forts, culminating ultimately in the occupation of Walls Hill. Alternatively, these different-sized settlements could be seen as being broadly contemporary, with the smaller settlements representing satellites around the central capital at Walls Hill. Unfortunately, there is not enough dating evidence from any of the sites to be able to determine the relationships between these hill-top settlements.

The evidence for forts is not restricted to the upland areas of the county. A cropmark at Shiels

Farm, Govan, beside the Clyde was excavated and found to be an oval ditched enclosure c. 42m long by 36m wide and containing the remains of Iron Age hut circles (Scott this volume). The ditch fill contained rich organic remains including



Figure 20 - Cropmark fort on Barochan Cross hill, Houston (Crown copyright: R.C.A.H.M.S.)

vegetation, beetles, animal teeth and a number of pieces of wood which provided a radiocarbon date indicating occupation during the Roman Iron Age (Robinson 1983, 125). At Barochan Cross Hill, a triple-ditched enclosure surrounding the summit of the hill (Fig. 20) was revealed by aerial photography (Alexander 1993, 21). Although nothing is visible on the ground, differential crop growth over the infilled ditches produces a pattern which is visible from the air during favourable weather conditions. A number of other enclosure sites have also been identified from cropmarks and, undoubtedly, more are waiting to be discovered to fill the gaps on the distribution map.

Another type of site which contributes to the overall pattern of Iron Age settlement in Renfrewshire is the crannog. A crannog is a wooden round house built on stilts in water or on an artificial island. These are usually found in lochs although there are the remains of a number of crannogs in the inter-tidal zone of the Clyde, on the mud flats. The excavation of many of these structures as at Langbank, on the southern bank of the Clyde, and at Dumbuck, opposite, was undertaken in the 19th century. The crannog at Langbank is one of at least four along the southern bank of the Clyde. The remains appear to have consisted of a central mass of stones surrounded

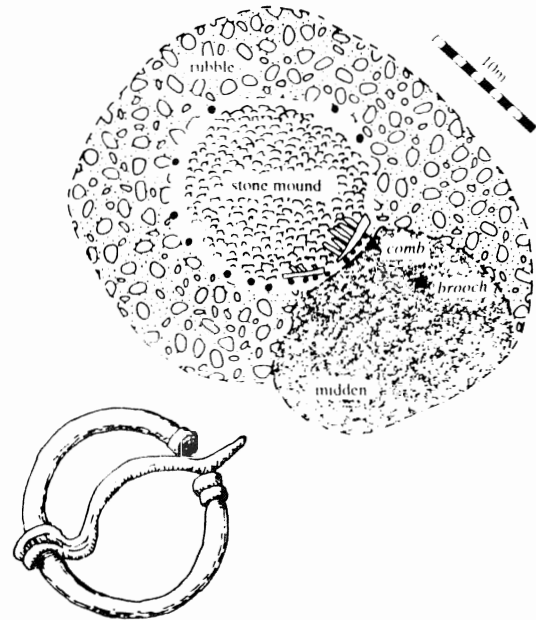


Figure 21 - Plan of Langbank crannog with inset of brooch, c. 3cm (after Morrison 1985)

by timber piles within a ring of rubble (Fig. 21). A spread of midden (domestic rubbish) was located to one side of the crannog and from this a decorated bone comb (Fig. 22) and a penannular brooch, of the mid first century AD, were recovered (Morrison 1985, 69-70). The comb has been dated on stylistic grounds to the 2nd century AD (MacGregor 1976, Vol. 2, 275). In addition, timber samples taken recently from the remains of another crannog at Erskine Bridge provided a radiocarbon date of AD 10 - AD 120 (Crone 1993, 246). These remains, along with those at Shiels

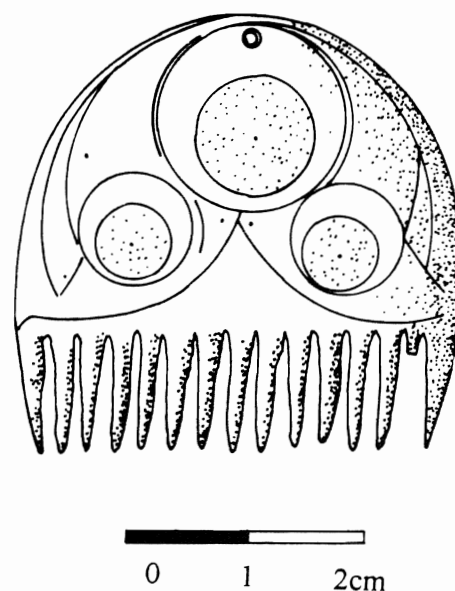


Figure 22 - Decorated bone comb from Langbank crannog (after McGregor 1976)

Farm, can confidently be attributed to the period of the Damnonii.

Although only a few Iron Age sites have been excavated the difference in the artefactual evidence is clear. The pottery has changed from the more decorated vessels of the Bronze Age to plain coarse ware vessels. These are large bucket-shaped vessels probably only for domestic use. Sherds of this pottery were identified on sites at Walls Hill, Craigmarloch and Knockmade. In addition, isolated sherds have been recovered from the sites at Duncarnock and Dunconnel Hill. It is possible that during later prehistory the role that pottery played in society changed. It may be that elaborate metalwork eventually replaced highly decorated pottery as a status symbol.

It is possible that many utensils and containers were in fact made from organic materials such as wood, wicker and leather. However, because of acidic soils these artefacts only survive in waterlogged, anaerobic conditions, such as in bogs. A single piece of a possible wooden vessel was recovered from the excavations at Craigmarloch fort (Nisbet this volume).

Although this period is termed the Iron Age, very little ironwork actually survives from archaeological excavations. This is apparent in both the excavations at Craigmarloch and Knockmade (Livens and Nisbet this volume), but is also true for other excavations throughout Scotland. Again the problem is one of preservation; iron corrodes easily once buried in acidic soil. The evidence for the presence of metals on a site is usually more indirect. A mould for an ornamental bronze stud and metal slag were recovered from the excavations at Craigmarloch and argue for metal working on the site, while a possible whetstone suggests that metal tools were being sharpened.

Materials such as jet, shale and cannel coal were used in the Bronze Age for the production of beads for segmented necklaces such as the one found at the South Mound (Morrison 1979) or the disc bead from the ploughed field near Neilston (Fig. 6.2) (Hay 1990, 39). During the Iron Age this resource appears to have been greatly exploited and large numbers of shale/cannel coal bracelets have been recovered. Isolated finds have been found from Duncarnock fort and Dunconnel Hill. A number of pieces were recovered from the excavations on Knockmade, Walls Hill and two

pieces came from the homestead at Knapps. A large assemblage of bracelets was recovered from the excavations at Craigmarloch (Nisbet this volume). These have invariably been interpreted as bracelets or arm rings, although some are of very small diameter and may have belonged to children. Alternatively they could also have functioned as precursors to the penannular brooch of later periods, by pulling cloth through the ring and pushing a bone or wooden pin through it to hold it in place. A major problem in interpreting the use of shale rings is the absence of contemporary burials. Such an association would perhaps reveal where these items were worn on the body.

There is little evidence for funerary activity in the Iron Age. It is possible that excarnation or cremation may have been the most common funerary rites in the Iron Age. There are very few burials in Scotland which can be attributed to the Iron Age and those that can reveal no single funerary tradition, cremation and inhumation in long cists being equally used. In Renfrewshire there is no evidence for any Iron Age funerary rites.

Iron Age ritual is little understood. Unlike the Late Neolithic/Early Bronze Age there are no large enclosures which have been interpreted as ceremonial centres. A change from rituals based around ancestor worship to ones based around the agricultural cycle may be evident in the Iron Age and domestic settlement sites may have been the focus for everyday ritual activity. The small scale of many enclosure walls indicates they were not primarily defensive and it has been suggested that boundaries may have played a significant role in Iron Age rituals (Hingley 1992). It is possible that such boundaries were constantly rebuilt and maintained, perhaps by a communal workforce under the orders of the political and social elite. It is through such work that social divisions could have been re-emphasised and confirmed. Often special ritual deposits have been found under or included within these boundaries. A piece of quern stone found reused in the walls of the hut circle at Knockmade (this volume) may be just such a deposit. It is possible that natural boundaries such as rivers and bogs were also treated in the same way as man-made boundaries.

Iron Age ritual ceremonies could also have been conducted in places of natural significance such as beside rivers, or in clearings in forests or



in prominent locations. For example, the large glacial erratic whinstone boulder, the Clochodrick Stone, located to the north-east of Lochwinnoch, may have been of some significance. The entry in the Old Statistical Account (Monteath 1791, 487) states that the name is supposedly a corruption of "Cloch o' Druid", meaning the Druid's Stone. However, it appears more likely that the name refers to a 12th century Flemish lord, Boderic, and may have served as a boundary marker to his land (Scott pers. comm.). However, even without the placename, Clochodrick Stone is an impressive natural feature and may have functioned as a boundary marker, perhaps with ritual significance, in an earlier period. Only excavation would be able to determine whether there are any associated archaeological deposits surviving under the ploughsoil around the stone.

### Long term changes

The different periods examined in this overview of prehistoric Renfrewshire have been characterised by differences in the archaeological record, through changes in technology, settlement, economy, ritual activities and social structure of these prehistoric communities. However, it is often the process of change visible from one period to the next that most interests archaeologists. Change would have been a continuous process, initiated from a complex series of sources, varied in its rate and scale, and affecting different parts of the country at different times. The situation would have been far more complex than can be more than outlined in a short paper. There are, however, a number of broad

changes visible throughout the archaeological record.

The most obvious change is in technologies, and in the use of new resources for the manufacture of tools and pottery (Fig. 23). These technological changes were originally identified by antiquarians in the last century when cataloguing their museum collections, leading to the definition of the "Three Age System", of stone, bronze and iron still in use today. The situation was more complex than these divisions suggests with overlap in the use of different raw materials; flint and bronze for example were both still in use during the Iron Age. With the changes in technology also came changes in the economic basis of the communities. The Neolithic saw the change from Mesolithic semi-nomadic hunter-gatherers to more sedentary farmers, who grew crops and tended livestock, although the possibility that Neolithic groups continued to move around cannot be ruled out. Later changes in farming include the introduction of new crop types and tools, coupled with an increase in scale of agricultural activities and their subsequent effect on the landscape.

The effect of human populations on the landscape, such as the clearing of trees for construction and agriculture, is evident in the pollen record. This indicates that there was small scale clearance during the Mesolithic, with possible forest regeneration in the mid-Neolithic perhaps reflecting a serious agricultural recession. During the Early Bronze Age there appears to have been an agricultural expansion and a gradual decline in the climate into the Late Bronze Age.

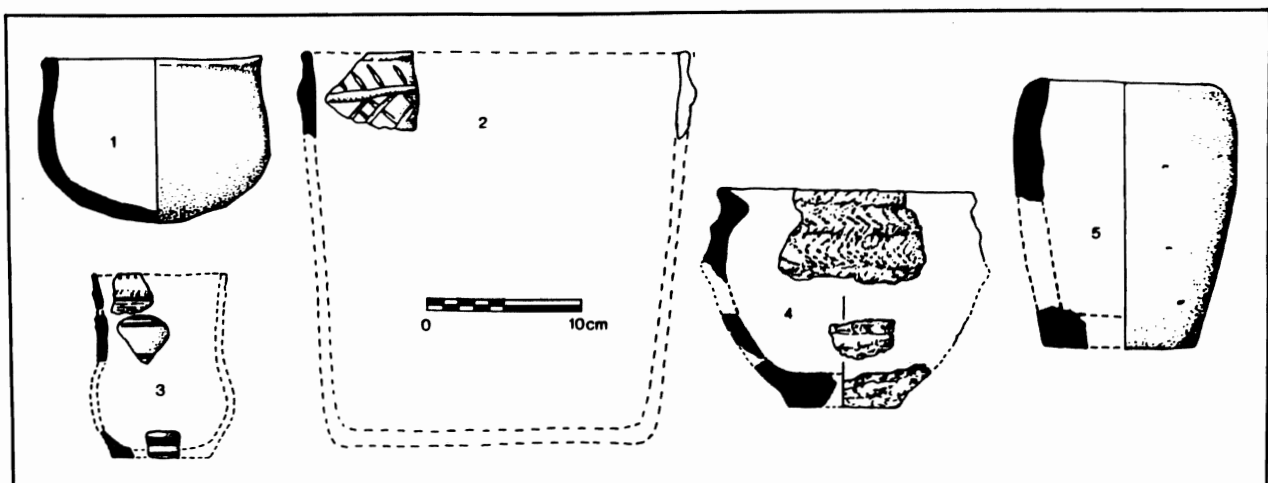


Figure 23 - Changing styles of prehistoric pottery from Renfrewshire



After 500BC in the Iron Age there appears to have been an intensification of agricultural activity and major woodland clearance (Tipping 1994, 32-33). Prehistoric communities and natural changes in the climate clearly affected the landscape.

The social structure of communities also changed through time from the small family groups evident during the Mesolithic period, to the larger scale communities of the Neolithic, capable of constructing impressive monumental ritual sites. The later evidence suggests emergent hierarchies during the Bronze Age and small tribal groups, and possible tribal confederations, in the Iron Age. Coupled with these political and social changes came changes in the ritual basis of these communities, although these theories are necessarily derived from a more subjective interpretation of the evidence. A change from ancestor worship, with many rituals focused on the remains of the dead, during the Neolithic and the Early Bronze Age to rituals associated with the agricultural cycle in the Late Bronze Age and Iron Age may be identified within the archaeological record.

These different changes are reflected in the artefacts and monuments which characterise prehistoric activity throughout Renfrewshire.

## Conclusion

This brief examination of the current evidence, in the form of artefacts and archaeological sites, has revealed the potential for interpreting the nature and extent of prehistoric activity in Renfrewshire. Mesolithic flint artefacts are all that remains of the earliest hunter-gatherers, while pottery and communal tombs are representative of the Neolithic farming communities. Bronze artefacts characterise the Bronze Age, while in contrast, no single find of iron can be attributed to the Iron Age, which is characterised more by its defended hill-top settlements and crannogs. Moreover, the evidence itself changes from the dominance of isolated finds in the earlier periods, to the upstanding remains of firstly, ritual sites and then, settlements in later prehistory. Compared to many other areas of Scotland, Renfrewshire is by no means rich in known archaeological remains, but this is as much a result of the previous destruction of archaeological sites as it is the lack of research.. Future research, such as survey and targeted excavations, must be undertaken in order to

increase the limited data and allow a more complete picture of prehistoric Renfrewshire to be constructed.

## Acknowledgments

Thanks are due to Neil Alexander, Patrick Begg, Bill Finlayson, Helen Nisbet, Gordon McCrae, Jack Scott, and Ian Ralston who all read and commented on drafts of this paper. I am grateful to Jeanette van der Poste who drew the illustrations of the polished stone axes. All the remaining illustrations were drawn by myself. Thanks are also due to Colleen Batey of Kelvingrove Art Galleries and Museum for providing the photographs of the bronze artefacts and to the Royal Commission on the Ancient and Historic Monuments of Scotland for permission to reproduce the aerial photograph of Barochan Cross cropmark.

# South Mound Cairn, Houston

*Daniel Stables*

## Summary

*Excavation of the South Mound at Houston produced evidence for multi-period use. Mesolithic flints and pits containing sherds of Neolithic pottery represented pre-cairn activity. These pits were sealed by the construction of a round cairn with an off-centre cist containing an inhumation accompanied by a Food Vessel and a flint knife. Post-cairn activity was represented by a number of later artefacts.*

## Introduction

Fieldwork in 1974 was carried out by the Renfrewshire Archaeology Society in advance of a road development, which cut across the field immediately to the south of the South Mound at Houston (Fig. 1), close to the site of probable, previously existing cairn, now marked on the Ordnance Survey map only as a spot where a cist was found. Examination of this area showed little, if any trace of cairn material on the surface, although there was an early written reference to its existence (Monteath 1791 - 1799, 779-780).

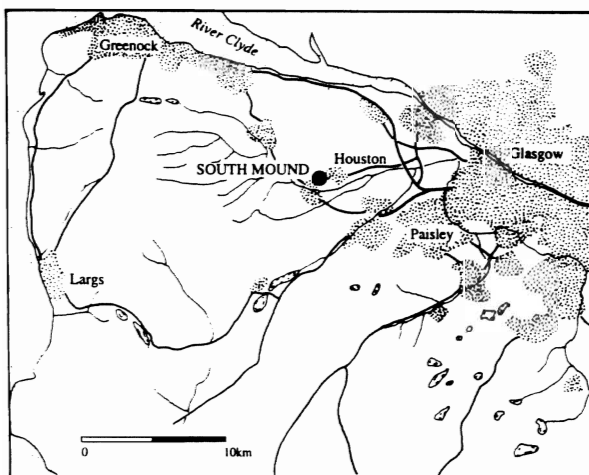


Figure 1 - Location plan

During negotiations with Renfrew County Council and the landowners, Elderslie Estates Limited, it was revealed that they intended to re-plant trees on the South Mound and also on the nearby North Mound, to replace storm damage. Re-planting was postponed to enable the Society to excavate.

Excavation was undertaken by members of the society and a number of students from Glasgow University, and Mr. Andrew Gibb provided guidance in excavation and interpretation of the site.

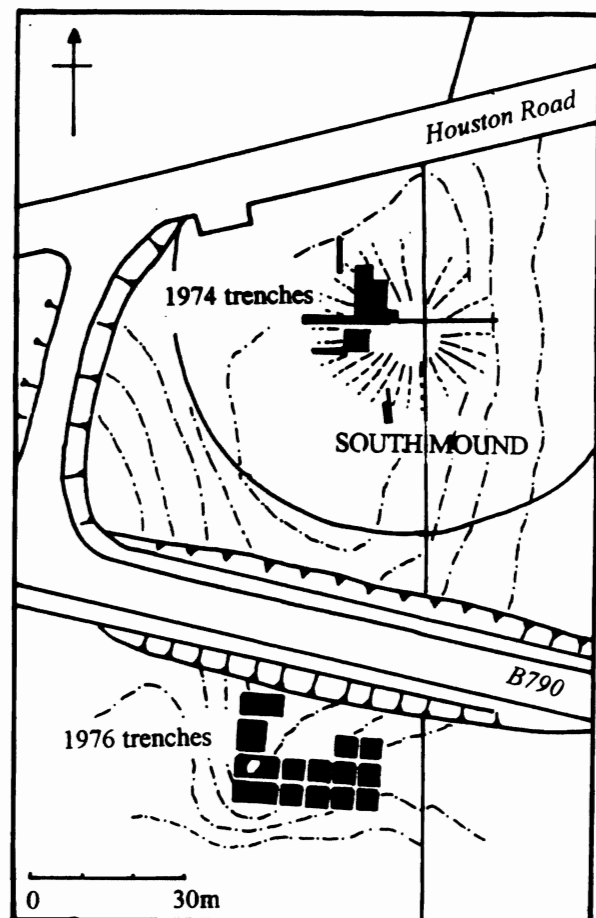


Figure 2 - Location of excavated areas (1976 trenches position after Morrison 1979)

The South Mound is a low knoll covered sparsely with tall trees, including some uprooted

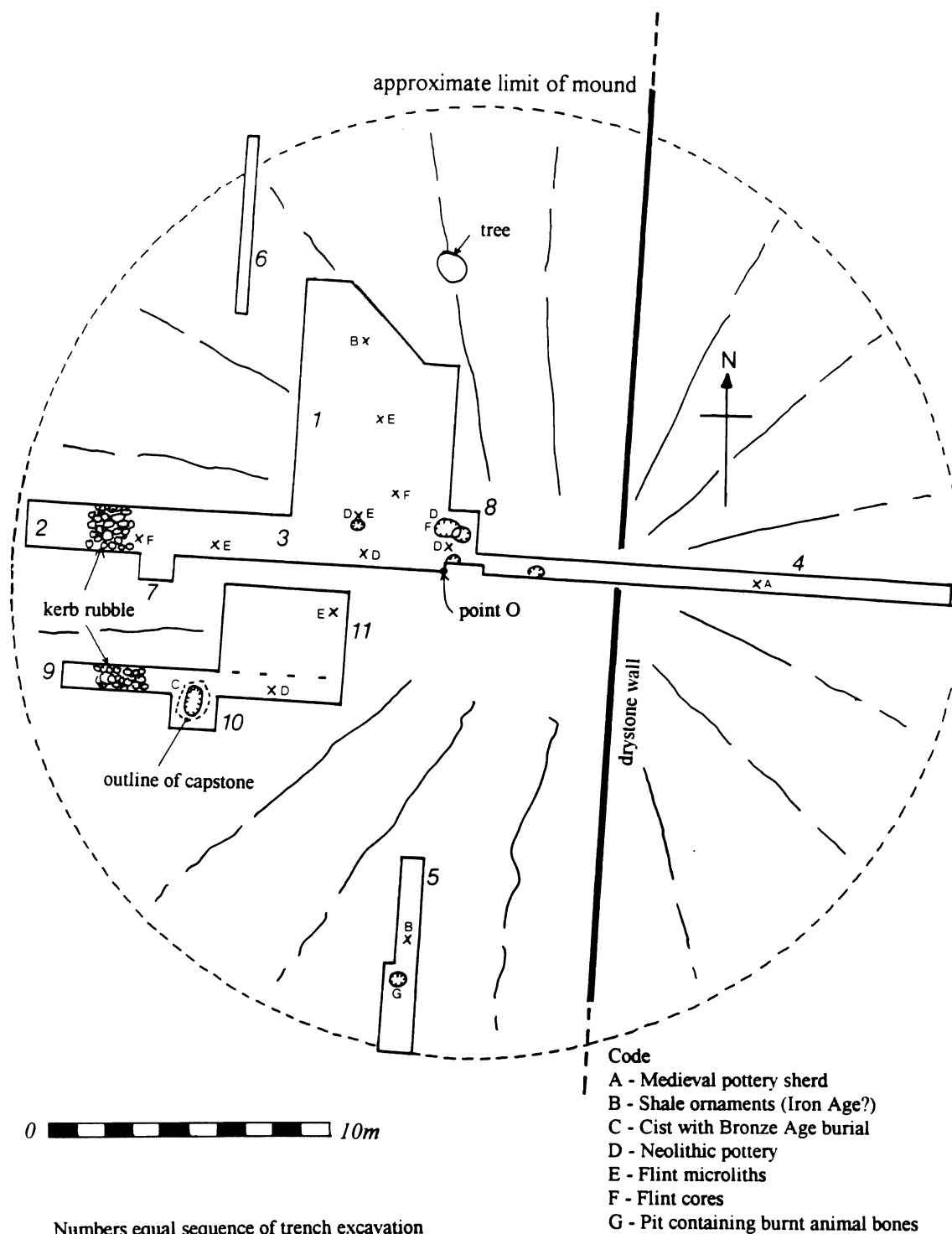


Figure 3 - Plan of excavated features on South Mound

stumps, and is exactly circular in plan, with the Houston to Bridge-of-Weir road cutting through the northern tip, and with a drystone wall running north to south just slightly off centre of the mound (Fig. 2). Prior to excavation a faint raised outline of turf in an arc to the south-east and south of the centre of the mound was thought to represent a

possible kerb (later excavation trenches 4 and 5 did not support this interpretation, Fig. 3)

The original intention was to remove the south-west quadrant of the cairn, with trenches 1 and 2, however time and resources, and a changing excavation strategy based on the immediate

results, dictated the size and location of the remaining trenches.

### Pre-cairn activity

In trenches 1, 3, and 11, bedded into the original soil level, below the cairn, there were arrangements of boulders in curved lines which could not be of natural occurrence, and which could be the base lines of structures. At this same level sherds of Neolithic pottery and flints were recovered. The flints were a dark grey-green of a material closely resembling Arran pitchstone, which was widely traded throughout South West Scotland in the Neolithic period. Two flint cores, the larger being 45mm long and roughly rectangular in section, and about 10mm square, were also recovered. Four microliths each about 10mm long were found in the same material, and possibly represent residual Mesolithic activity on the site or re-use of Mesolithic material by Neolithic people.

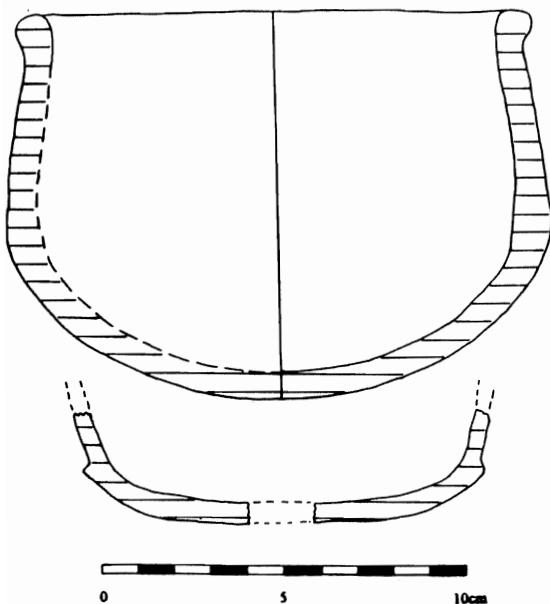


Figure 4 - Neolithic plain bowl pottery

In trench 8 a considerable quantity of Neolithic pottery sherds were found in three adjacent pits, the largest of which had been cut into the bedrock. The pottery appears to be of the domestic type and sherds from different vessels were evident. Figure 4 shows the reconstructed shapes of two of these pots or bowls. Figure 4.1 shows a bowl, about which one third of which was joined together from seven fragments. This material is of coarse fabric and is not decorated, except for a rolled rim with slight fluting on the

top. Figure 4.2 shows a shallow, almost flat bottomed bowl of very fine fabric, not decorated but burnished with a distinct carination or shoulder. Also from the same location were recovered a number of hazelnut shells, which appeared to be blackened or partially burnt, this together with further amounts of charcoal. Some other large pieces of bowl or pot matched in texture and interfit, but differences in the colouring suggested that the bowl was broken and possibly discarded, the lighter fragments being re-fired possibly in a domestic fire.

Another pit, in trench 5, about 0.5m in diameter and quite shallow, was found to contain a lot of burnt animal bones.

### The Cairn

In trenches 1 and 2 there were remains of a close packed rubble spread, which may represent the remains of a kerb around the cairn (Fig.3). The difference in height between the base of the kerb and the top of the mound was roughly 1.5m, it was therefore envisaged that there would be a lot of digging. However, the original ground level was found at a depth of only 0.6m below point O. The depth to the base of the kerb from the turf surface was 0.4m. The rubble make-up of the cairn was, therefore, built upon a natural mound.

Immediately below the turf the material was a mixture of fragmented basalt, with occasional bits of shale and coal, and loose earth which became more dense as the depth progressed. The basalt rubble was for the most part relatively small, with only occasional larger stones. This same material continued downwards to reach a layer of hard packed soil or clay, the depth of which varied, and immediately below this was bedrock.

Trenches 4, 5 and 6 were excavated to investigate the possibility of a continuous kerb, but no evidence for such a feature was found in any of these three trenches. A broken, carved shale ring or spindle whorl about 50mm in diameter was found in trench 1, within the rubble layer.

The highlight of the whole operation, however, was the discovery of a capstone in trench 9, below which was a cist of unusual type, having rubble built walls, with the floor of bedrock (Fig. 3). This cist measured approximately 1.2m long, 0.6m wide and 0.6m deep. The capstone was a

large rough flattish basalt boulder, 1.5m long, 0.9m wide and 0.3m thick. The longitudinal axis of the cist was approximately north - south. It contained a pile of cremated human bone, a small flint knife, and a broken Food Vessel with the remains of its funerary deposit (Fig. 5 & 6).



Figure 5 - Inside the cist, Food Vessel rim and pile of cremated bone

The Food Vessel (Fig. 6) was re-assembled by Alex Morrison, University of Glasgow who gave the following description (Morrison 1979 p.39):

"Decoration is by parallel lines of tooth comb impressions, each line leaving a shallow channel across the surface of the vessel, whipped cord "maggot" impressions, and stamped impressions of a rounded triangular, almost "axe-shaped" form. There are six perforated stops with alternating panels of "maggot" and triangular impressions between them. The base is decorated with haphazard lines of toothed comb impressions. This vessel is basically of the Bowl tradition, although the perforated stops might suggest some influences from the Yorkshire Vases. That this need not imply direct contact with E Britain has been stressed by Simpson (1965) who suggested that contact between Bowl and Vase could have taken place in Ireland, from which "mixed" forms could have been introduced into SW Scotland."

Preliminary analysis of the pollen from the Food vessel and Cist was undertaken by Dr. J. H. Dickson of the Department of Botany, Glasgow University, which suggested an open, perhaps cleared landscape. No great density of tree pollen;

some alder. Herbaceous pollen high with cereal pollen indicating an agricultural landscape. Plantago Lanceolata (Ribwort Plantain) as a weed of cultivation also indicates agriculture in the vicinity. Quantities of bracken pollen was also evident.

## Post-cairn activity

A carved shale object, possibly about one third of a diamond-sectioned bracelet, was found just below the turf in trench 5. In trench 4 the only find was a fragment from the handle of a Medieval green-glaze jug or pot, from just below the turf.

## Excavation to south of cairn

Excavation of a trial trench in the approximate vicinity of the cist site to the south of the mound recovered a number of jet beads close to the surface. The Society then invited Dr Alex Morrison of the University of Glasgow to continue the excavations on this part of the site (Fig. 2, 1976 trenches). The findings from this work was published in the Glasgow Archaeological Journal (Morrison 1979). Morrison's excavations uncovered the partially robbed out remains of a cist cemetery. In a pit the remains of two adults and a child were recovered. The child and an adult male had been cremated while the other adult, a female, had been buried. Fragments of another Food Vessel, similar to the one found in the cist below the mound, were found to accompany the inhumation. A large number of jet beads and spacer-plates appear to represent the remains of more than one jet necklace.

## Conclusion

The brief excavation on the South Mound by the Renfrewshire Archaeology Society proved the site to be multi-phased. The possible microliths may be associated with Mesolithic activity in the area, while a number of sherds of plain bowl pottery deposited in pits attest to Neolithic activity. The alignments of boulders suggest the presence of possible timber structures below the cairn although their precise date remains unknown. The cairn itself is of Bronze Age construction and the cist although of unusual construction contained a typical funerary assemblage for the period. The subsequent work undertaken by Dr Morrison revealed that bronze age funerary activity was not limited to the area of the cairn itself. In response to the results of both



Figure 6 - Food Vessel and flint knife from the cist, scale = 10cm (taken in Paisley Museum)

the excavations the planned replanting of both the South and the North mounds was abandoned, thus preserving the remains of what may have been a more extensive Bronze Age funerary complex.

## Acknowledgments

The total workforce on the site at any time never exceeded 12 people, the average number being 6 or 7, and a great deal of hard work was done by the Society members, who were assisted by few members of the interested public, some of whom subsequently joined the Society. Some early assistance was provided by a few students of Glasgow University coerced by Mr Robert Gourlay, for which I must record my thanks. I think it is fair to say, however, that the hard work was well rewarded by the results produced, and I must also here record my thanks to all the participants for their care in following out instructions to the letter. Their careful attention to detail is evident in the recovery of, amongst other things, microliths no more than 10mm long.

# Picketlaw hut circle, Moyne Moor - an interim report

*Derek Alexander and Bruce Henry*

## INTRODUCTION

This paper forms a brief interim report on the excavations carried out in summer 1995 at Picketlaw (Fig. 1) by members of the Renfrewshire Local History Forum Archaeology Section. The site at Picketlaw lies c. 4.5km south-west of Neilston at the south-west edge of Moyne Moor in a portion of marginally improved pasture land only 40m north-east of the current extent of blanket peat (Fig 2). It was first identified by the farmer, Murray Wilson, in 1957 when he tried to improve the quality and extent of grazing. While ploughing the field to the south of the farmsteading he unearthed a group of stones which seemed to form the base of a circular wall.

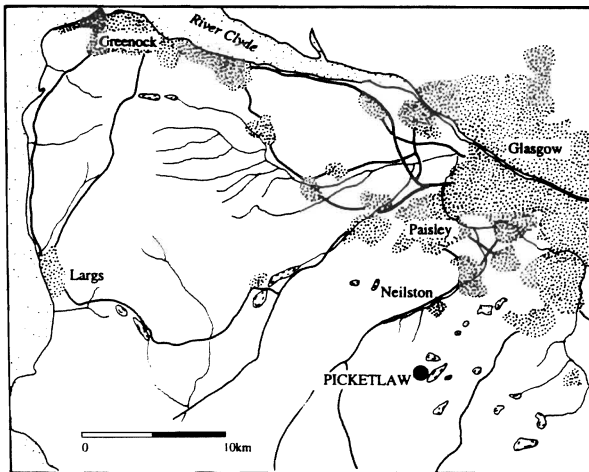


Figure 1 - Location map

Mr Wilson tried to get someone with archaeological experience to examine the site but was unsuccessful. Eventually, prior to ploughing and reseedling, he had to remove some of the stones, many of which required two men to lift. These stones were not dressed and had been placed with their long axis lying horizontally rather than vertically. Unfortunately the location of where

these stones were finally dumped and the exact quantity removed is unknown. However prior to excavation, enough remained of the site that a circular outline could still be traced.

## SURVEY

The remains were surveyed in 1991 by a team from the Renfrewshire Local History Forum, under the direction of Bruce Henry, and was shown to be formed by a dilapidated, turf-covered, stone bank with occasional stones showing through the surface (Henry 1994, 6). The banks formed a roughly oval shape 12.0m long, east to west, by 9.6m wide, south to north. There was a slight hollow 4m long, 3m wide and 0.2m deep in the southern side, perhaps indicating where the bank had been robbed of stone or marking a possible entrance, although the irregular shape of this hollow suggests stone robbing is the most likely interpretation. It was unclear from the surface traces alone whether the site formed the remains of a hut circle or a robbed out cairn. It was therefore decided to excavate.

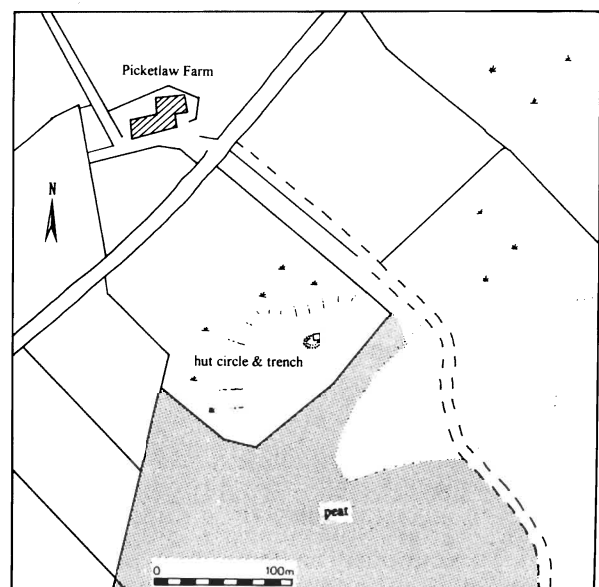


Figure 2 - Picketlaw hut circle and immediate vicinity



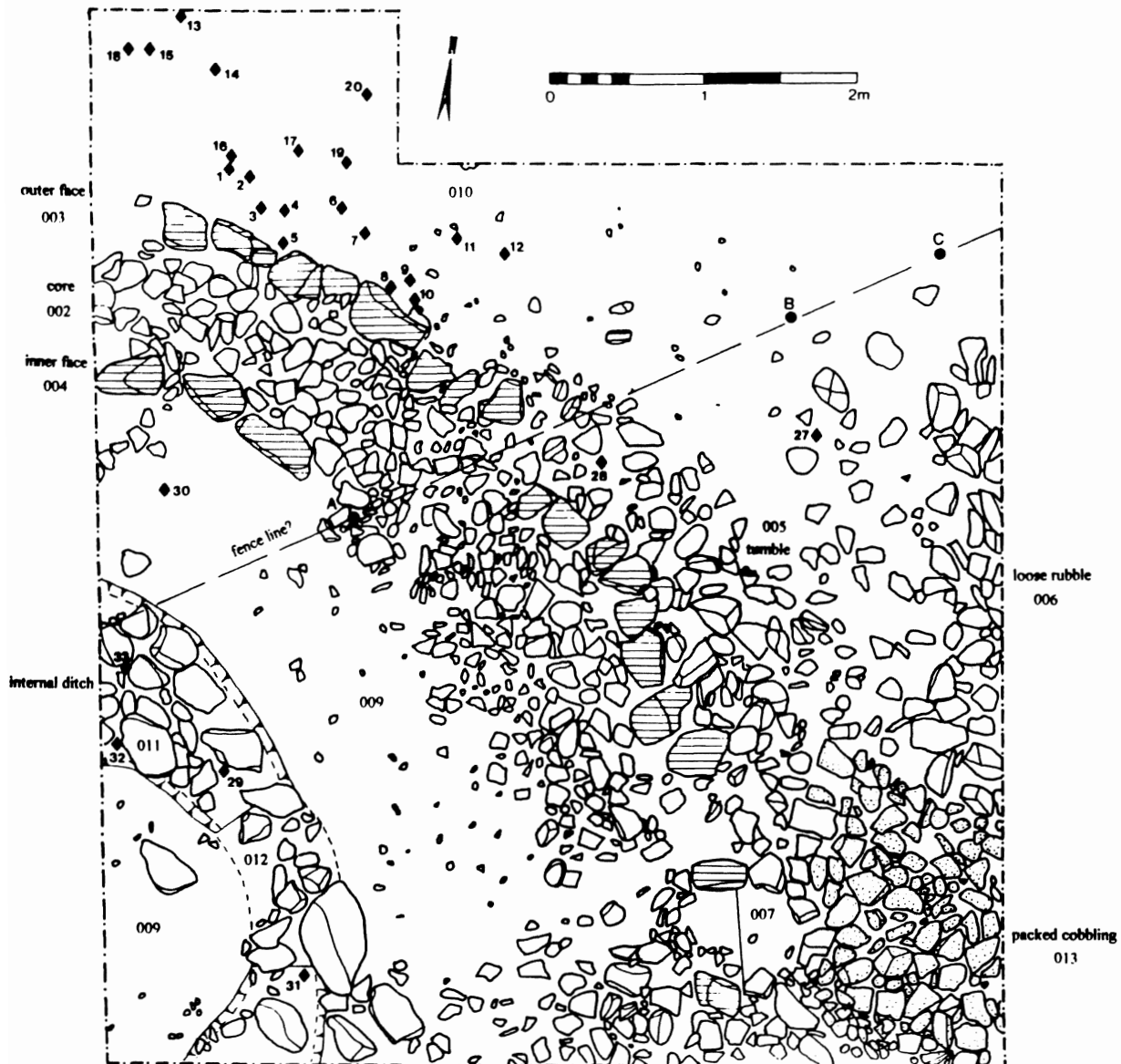


Figure 3 - Plan of excavated north-east quadrant

## RESEARCH AIMS

The following were the main research aims of the excavation:

- 1) To determine the nature and extent of the archaeological remains.
- 2) To identify if the site had been severely damaged by stone clearance in the 1950s.
- 3) To recover any artefacts which may aid in the interpretation of function and date of the structure.

- 4) To expand our knowledge of prehistoric activity in the area.

## EXCAVATION RESULTS

The site was excavated in May 1995 by a team of volunteers from the Renfrewshire Local History Forum Archaeology Section under the direction of the authors. A trench c. 6 x 6m was excavated over the north-east quadrant of the site. The turf and topsoil was removed by hand and two *in situ* wooden stakes (Fig. 3 A & B) and the possible former position of a third (Fig. 3 C) suggested that a relatively modern fence had previously crossed the site. After the removal of

topsoil and subsequent cleaning an arc of stone wall was revealed.

The perimeter of the site was found to consist of an arc of stone wall c. 1.2 - 1.3m wide, faced internally (003) and externally (004) with larger kerb stones revetting a smaller rubble core (002). The north-west end of this arc was the best preserved, with a core of loose rubble retained by inner and outer facing stones. The south-east part

## FINDS

A small assemblage of finds was recovered from the site, including 17 pot sherds and six pieces of quartz. A further 22 pieces of quartz were found in the topsoil and two modern nails are assumed to have come from the fence (see Appendix 1 below). To the north of the circle, immediately outside, a number of sherds of coarse flat-rimmed, later prehistoric pottery were

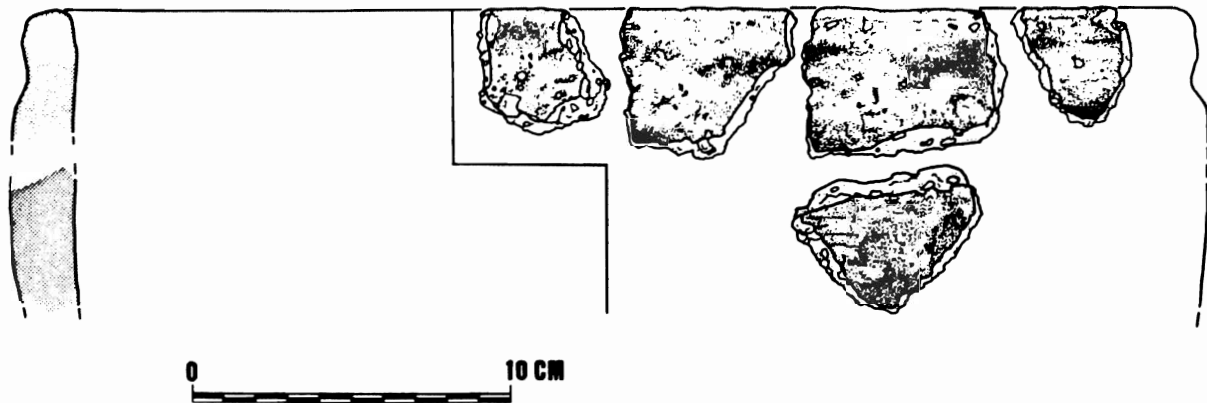


Figure 4 - Pottery sherds from possible Bronze Age vessel

of the arc was less well preserved, only the irregular line of outer kerb stones was apparent. This part of the wall had obviously been disturbed and tumble spread to the north-east.

A circular gap in the stone wall may have been a stone hole (007), the former position of a large boulder, perhaps one of those removed by the farmer. This lay to the south of what was considered to be a possible entrance.

The remains of an irregular, probably concentric, arc of shallow ditch (012), between 0.6 - 0.8m wide and up to 0.25m deep, was revealed within the centre of the circle. This shallow ditch was filled with large stones (011). Although, no evidence for post-holes was observed this inner ring may have formed the foundation trench for upright timbers to support a roof.

An area of cobbling (013) 2.0m long, and 1.5m wide lay to the east of the hut circle and may indicate an area of associated yard. This suggests the settlement may be more extensive than the surviving surface remains indicate.

recovered. The majority of these sherds appear to have come from one vessel, c. 35-40 cm in diameter, with a only slight shoulder below the flat rim interrupting what is an otherwise straight sided profile of a probably bucket-shaped, flat based pot (Fig. 4). It is certainly different from the Iron Age so-called "Dunagoil Ware" found on the excavations at Craigmarloch (this volume) and Walls Hill (Newall 1960) and a date somewhere in the second millennium BC, during the Bronze Age, would perhaps be appropriate.

## CONCLUSION

Both the structural remains and the artefacts suggest that the site at Picketlaw was indeed a hut circle. The remains had been disturbed by field clearance in the 1950's but enough remained of the surrounding wall to provide constructional details. Interestingly the remains to the north-east of the line of the modern fence is better preserved than that to the south, perhaps suggesting that the fence was a boundary up to which the stones were cleared.

The relationship of the hut circle to the present extent of peat is intriguing. At the end of

the Bronze Age and the start of the Iron Age there was a general deterioration in the climate, the weather becoming colder and damper, which led to the increased formation of peat in many marginal or upland areas. At Picketlaw it is possible that occupation of the hut circle was contemporary with the formation of the peat. Alternatively, the spread of peat may have led to abandonment of the site, which may then have been covered by peat growth, and was only revealed after peat cutting and agricultural improvements in the 18th - 19th centuries. If the latter is correct then it follows that more hut circles could lie buried beneath the peat. This however is only speculation. The remains of another single hut circle on Laggen Hill located 2km north-east of Picketlaw suggest that such settlements may have been single isolated households in a widely dispersed settlement pattern, and were not clustered into groups.

Remains of other hut circles are known in the west of Scotland, but few have been excavated. A number of examples were investigated at Muirkirk, Ayrshire, at the start of the century, one of which produced sherds of Early Bronze Age Beaker pottery (Baird 1914, 375). For a more recently excavated example we must look further east. The hut circle at Ormiston Farm, near Newburgh in Fife, is probably closer in both date and method of construction to Picketlaw. The wall at Ormiston Farm was c. 1.3m thick and consisted of internal and external stone wall faces with a core of rubble between (Sherriff 1988, 101), comparable to that at Picketlaw. Similarly, a lack of post holes in the interior suggested to the excavator that any internal posts for supporting the roof may have been set on stone pads or that the roof timbers rested on the stone wall and did not require additional support provided by vertical timbers (ibid, 109). Both of these arguments could be put forward for the evidence from Picketlaw, although the interpretation of the internal ditch as a foundation trench for vertical timbers still needs to be confirmed.

Although the function of the site is apparent, the date of occupation is less clearly defined. The sherds of pottery remain the only datable artefacts from the site, and only provide a very broad date range. In addition, the sherds were recovered from outside the hut circle and are not necessarily contemporary with its occupation. Unfortunately no pieces of charcoal sufficient for radiocarbon dating were recovered and initial processing of soil samples has only provided flecks of charcoal.

It must be stressed that this is an interim report and the conclusions within it may change in the light of further post-excavation work or indeed more fieldwork. A number of questions still remain to be answered. Is there a central hearth from which suitable charcoal samples can be taken for radiocarbon dating? Are there any internal post holes or pits? What is the function of the internal ditch? Further excavation is anticipated in Summer 1996 when it is hoped to answer the questions raised in this brief report.

## ACKNOWLEDGMENTS

The authors would firstly like to express their thanks to Murray Wilson and his family for their permission to excavate on the site and for their continuing interest. The excavation team of volunteers included John & Ann MacDonald, Gordon & Ross McCrae, Jim McSween, Robert Humphrey, Dorothy Gormley, Jane Duffy, Isabel Black, Irene Hughson, Francis Crossan, and Susan and Robin Hunter. Thanks are also due to Trevor Cowie and Dennis Harding who both cast an eye over the pottery sherds. Alan Braby kindly provided the excellent illustration of the pottery. Any faults remain those of the authors.

# Knockmade homestead, Lochwinnoch

*Robin Livens*

## Summary

*Excavation at the homestead on Knockmade Hill revealed the remains of two hut circles enclosed by an earth and stone bank. This bank overlay traces of earlier occupation debris. Coarse pottery and a fragment of jet armlet suggest a general 1st millennium BC date, although the fragment of a rotary quern indicates occupation after the 3rd - 2nd century BC.*

## The Site

Knockmade Hill is isolated, lying to the east of the main massif of the Renfrewshire-Ayrshire moorlands, which shut off the horizon to the west. The hill rises some 100 feet (33m) above the immediate surroundings and the summit is 732 feet (c. 190m) above sea-level according to the Ordnance Survey (NGR. NS 3524 6183). To the east of the hill lies the main "Lochwinnoch Gap" which is today a corridor for communication between the Clyde Valley and the Ayrshire Coast (Fig. 1). Southwards and northwards, the hill commands a magnificent prospect: the Ayrshire coast at Irvine, with Ailsa Craig beyond which can be seen on a clear day, while to the north the site looks towards the Clyde Valley, the Kilpatrick Hills and Ben Lomond. Any inhabitant on Knockmade, therefore, commanded a wide stretch of country while it was itself tucked away up a side-valley.

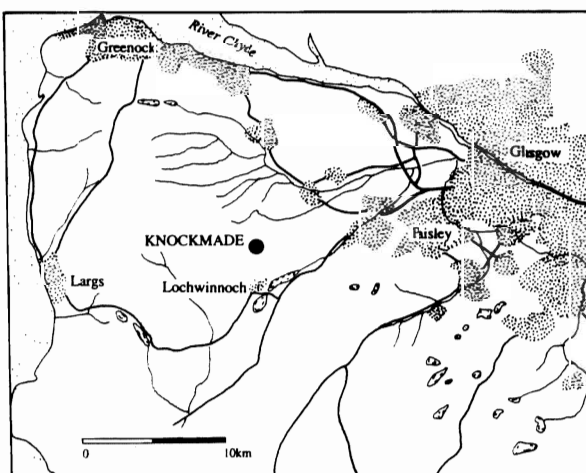


Figure 1 - Location plan

It is something of an archaeological truism that the Iron Age sites of south-western Scotland are mostly to be found near the 700 foot (213m) contour, though precisely why this should be the case is something of a mystery. It may be that the sites on lower ground have been obliterated by more recent cultivation: there is, in Glengarnock, evidence of one habitation site at a lower altitude, for Cleaves Cove, which is at a height of c. 150 feet (46m) above sea level, has produced an antler cheek-piece which is of a type proper to the Late Bronze Age/ Early Iron Age, together with much indeterminate material. Several of the hilltop sites in Ayrshire have been excavated, they furnished evidence of fortification and, in the case of Castle Hill, Dalry, of some occupation during the Roman period. In no case were any unequivocal traces of the structures observed by the excavators, so the question of permanent habitation of these sites remained open. Knockmade Hill, on the other hand, attracted attention on two counts: first, it had apparently not been previously excavated and, second, surface indications suggested that, within the encircling bank, there were remains of at least one substantial hut-circle. These remains were located on a level shelf, south of, and some fifteen feet (4.6m) below, the summit of the hill. The enclosure was approximately triangular in plan, with a steep slope on the south-east side and a cliff on the south-west: the only easy approach to the site is from the north-east. Around the site there are traces of a low bank, containing some large, undressed boulders; this may originally have been a quite substantial structure, the bulk of which has collapsed downslope. Even where the slope down from the site is absolutely precipitous, there are traces of the bank and it is not unlikely that on the exposed south-western flank of the hill, it performed the essential function of a wind-break.

A summary report on the geology of the area has been prepared by H.C. Nisbet and is appended below (Appendix 1).

## The Excavations

Three seasons of brief excavation at Knockmade Hill, in 1959, 1960 and 1967, were used for the training of archaeology students. The excavation concentrated on the lower area to the south-west of the hill summit which is dominated by a cairn. A survey of the area was made (Fig. 2) which showed the remains of two circular structures and a surrounding bank. The number of sizable rocks projecting through the turf in its northern side was quite notable, particularly as some of them were visible inside Hut Circle No. 1. There is no proof that these big rocks were structural, so presumably they were either buried at the time the structure was built, or the inhabitants did not, or could not, move them.

A grid, of 10 feet (3m) squares was set out over the site and this provided the units for the excavation. The majority of the trenches were 8 feet (2.4m) square inside the grid. The references were based on the northern corner of each square, quoting (in order) the north-east/ south-west numbers and letters (0 to 8 and A to G), followed by the south-east/north-west numbers (0 to 9). As deliberate policy, the excavations of each feature did not exceed 50% of the area of each structure, so that in the future, with more advanced techniques and apparatus, the structures could be further investigated if anyone wished to do so. The sections recorded around the sides of the excavations were given the corner numbers; intermediate sections were given the side-numbers plus the letter "a".

### Hut Circle No. 1

The major structure visible on the site before excavation was a circular bank, some 35ft

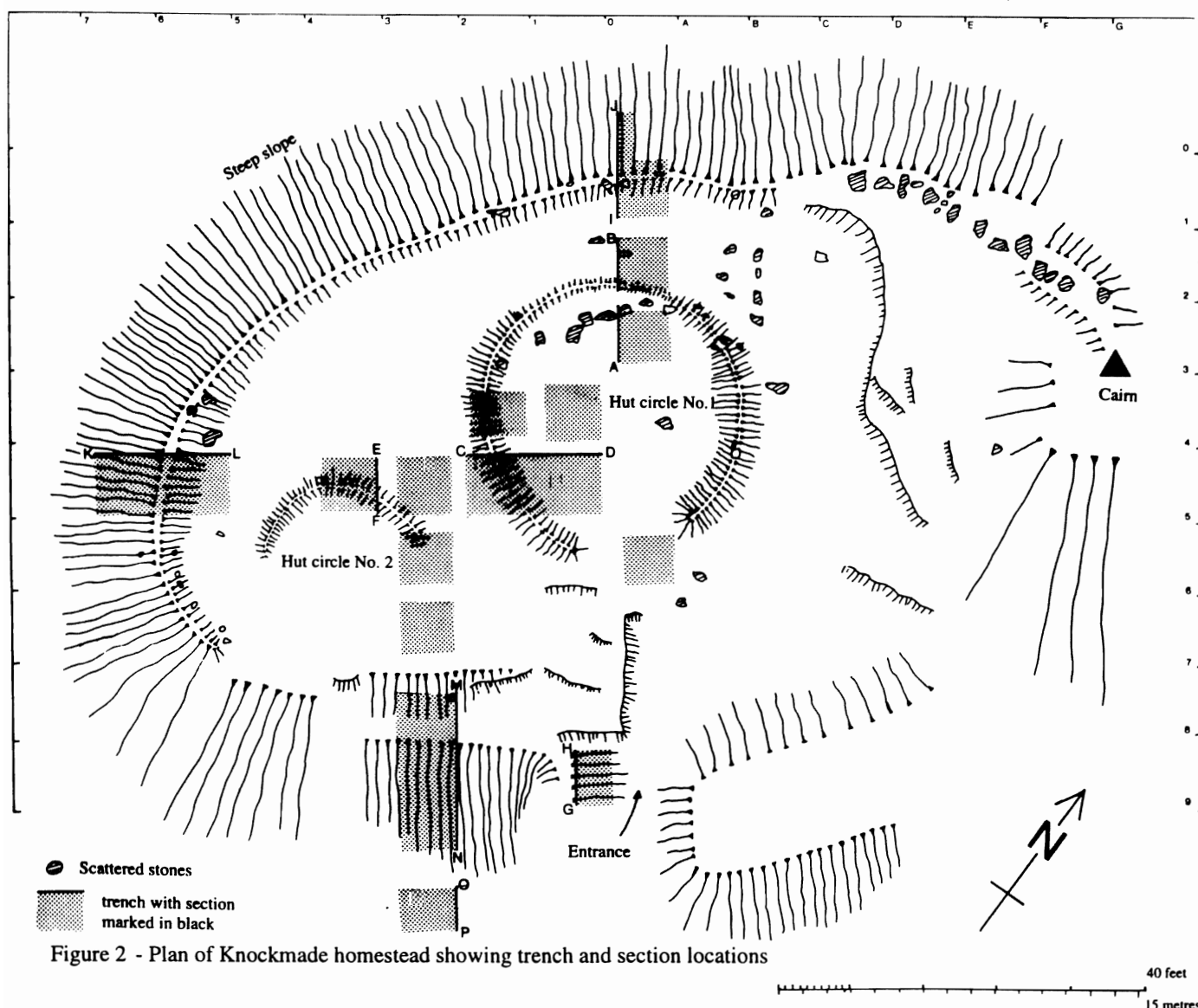


Figure 2 - Plan of Knockmade homestead showing trench and section locations

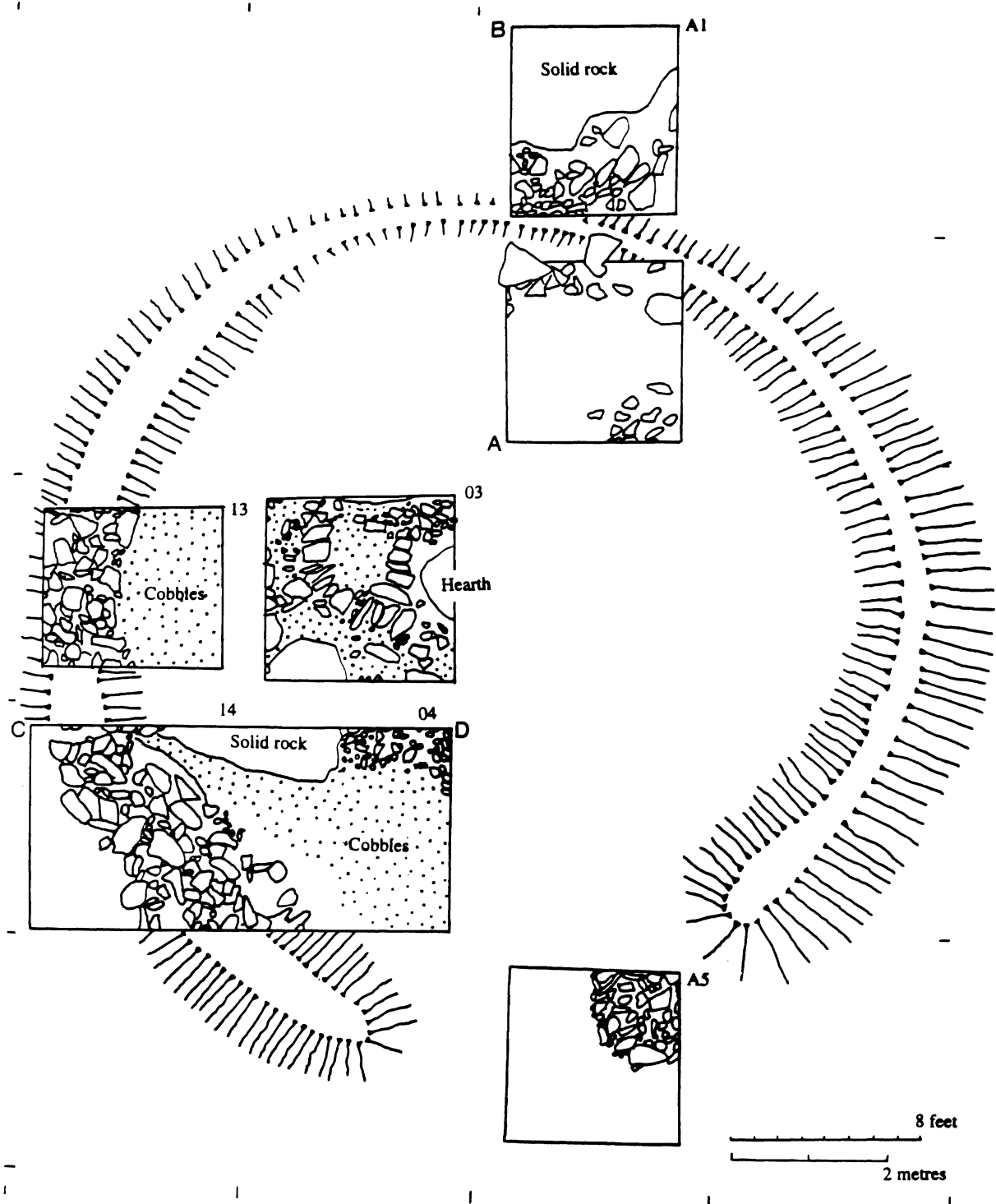


Figure 3 - Plan of hut circle 1

(10.6m) in diameter. There is a gap some 15ft (4.6m) wide on its south-east side and, on the higher ground to the north-west, the bank, although visible was much smaller. The main excavations (Fig 3 and 5 C-D) involved the examination of the southern quarter of this hut. In addition a section was cut through its north-western side (Fig. 5 A-B) and half of the

presumed entrance was excavated. The main features located were:-

1. A central hearth, with traces of burnt timber floored with earth and surrounded by a line of stones forming a kerb. Dr D. Brett (then of the Botany Department, University of Glasgow) has

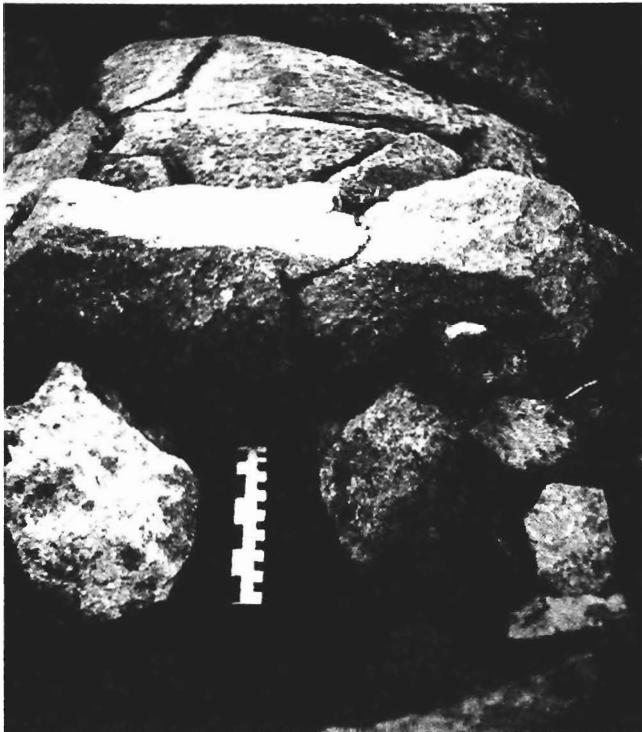


Figure 4 - Photograph of stone culvert in hut circle 1

identified the charcoal recovered from this feature as mainly oak, with a certain amount of birch.

2. Linked to the kerb was a stone-lined and flag-covered culvert apparently running westwards (Fig. 3 & 4).

3. Five postholes were located, three of them near the wall, one near the culvert and one about 1.5 feet (0.46m) outside the culvert. None of

these postholes contained any traces of timber or packing. One posthole (the most westerly one excavated) apparently occurred under the stone structure, while the other in Trench 14 was surrounded by the stonework. This suggests at least two phases of construction.

4. Inside the wall there were traces of a floor of fine, brown sandy earth with cobbles, which did not cover the pothole on the inside of the wall.

5. The wall consisted of some sizeable blocks and still survived some three courses high. It was obviously a substantial construction some 5ft (1.5m) thick and up to 1ft (0.3m) high. Some of the stones, particularly on the inside, seem to have fallen off the wall but unless the stonework has been robbed, there is little collapse and the wall could not have been substantially higher.

On the north- western segment of the hut, the bedrock was very much higher. In Trenches A1 and A2 the stone structure of the wall was somewhat reduced in height and, apart from a scatter of stones below the turf which formed the remains of the wall, there were some traces of stonework and charcoal surviving in the layer of stones. Immediately outside the line of the wall the solid rock raised to just below the turf.

In Trench A5, the end of one side of the wall was revealed, confirming that the hut entrance was on the south-eastern side. No trace of any door-structure was detected. Some traces of occupation-remains survived below the wall.

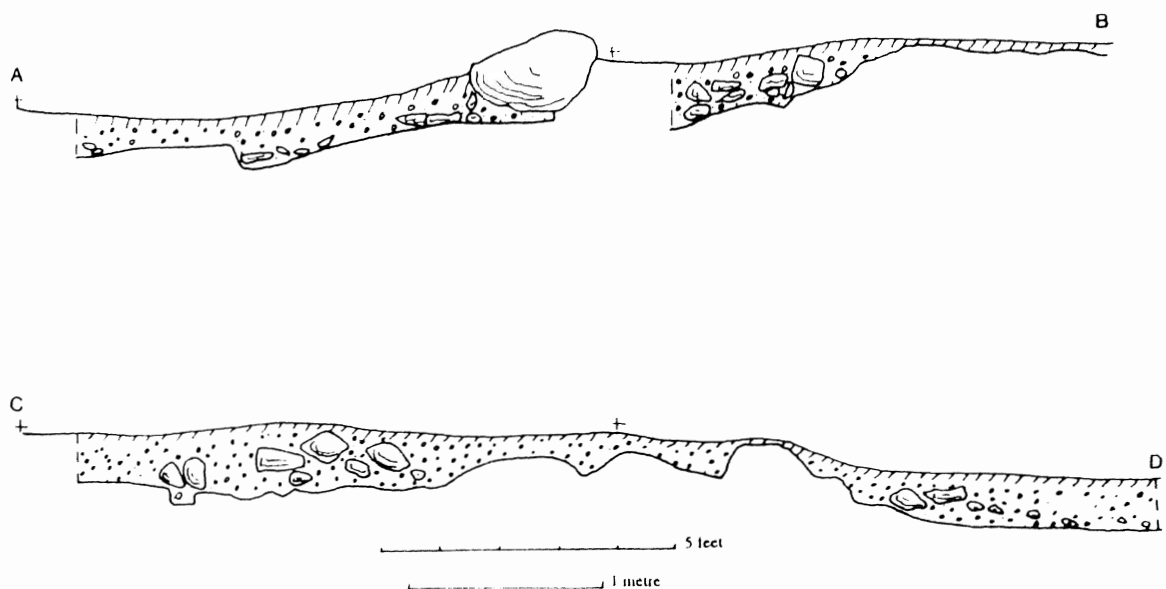


Figure 5 - Sections through hut circle 1



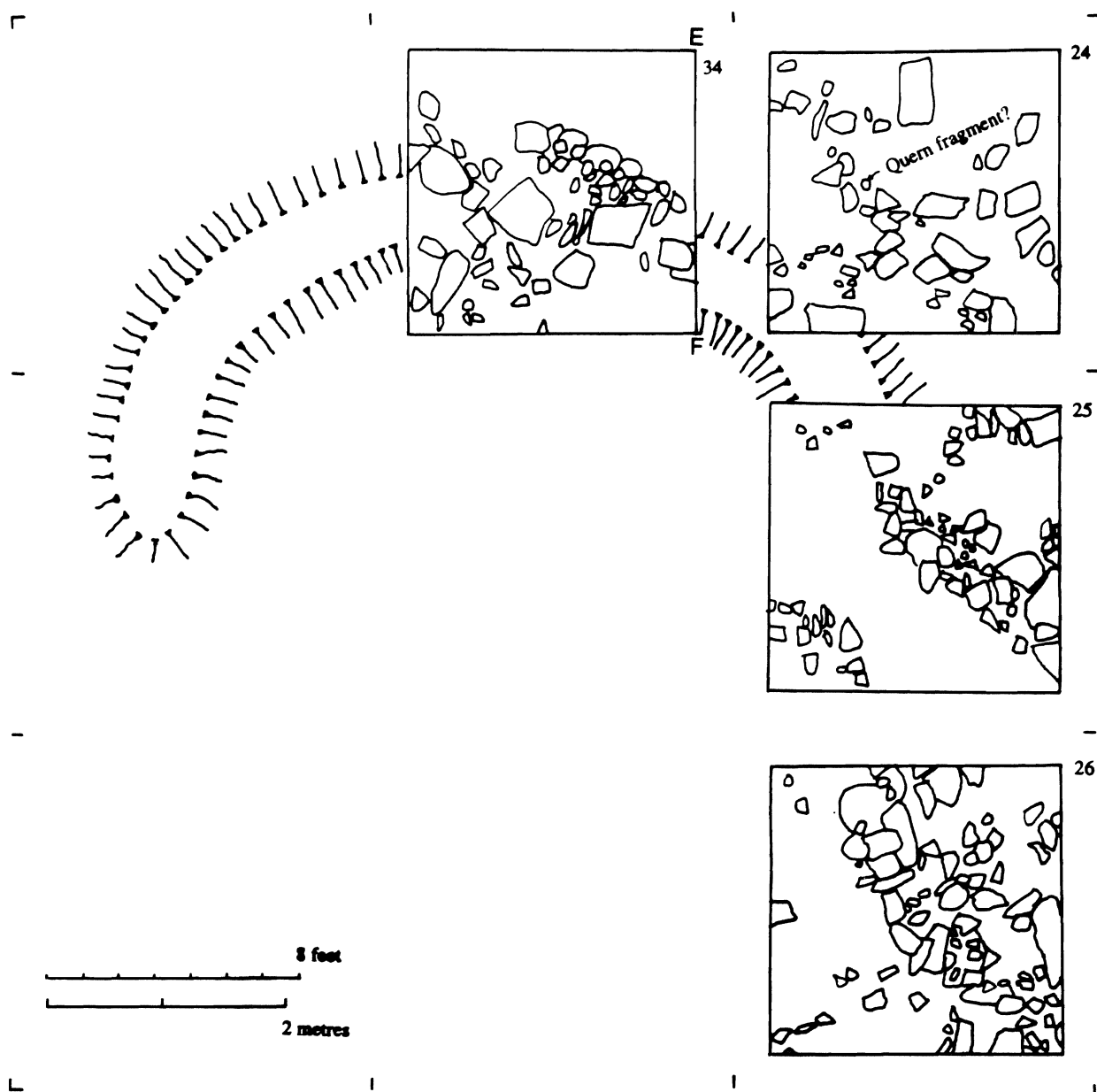


Figure 6 - Plan of hut circle 2

## Hut Circle No. 2

The excavations of this smaller site (some 20ft (6.1m) in diameter) concentrated on the northern sector of the wall (Fig. 6). In Trench 34, the stone structure was revealed (Fig. 7) and it was also located in Trenches 24 and 25. In Trench 24, there was a scatter of stones including a fragment of igneous rock which was not local. This fragment contained a possible segment of a hole and could possibly be a portion of a rotary quern. There was also a small amount of unworked jet. In

Trench 25 the line of the stones did not follow the expected curve and there was a gap some 4ft (1.2m). wide which may have been the entrance. The line of stones may have formed a porch, but if it did it must have been at least 6ft (1.8m) long. In

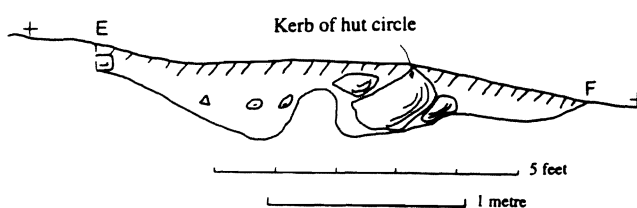


Figure 7 - Section through wall of hut circle 2

Trench 26 there was a scatter of stones which could have been the other side of a porch. Unlike Hut No. 1, there was no detected trace of any postholes or other timber structures.

## The Enclosing Bank

There were four investigations of the surrounding bank. The first (Trench 08) investigated a possible extension bank flanking a probable entrance. A massive stone (Fig. 8) may have been the remains of a possible wall; it was laid in brown earth and some higher stones may well have been a collapsed superstructure from higher up. There were traces of burnt material including charcoal, burnt bone, slag and a fragment of lignite (or jet). The burnt material, according to Dr. A. Holgate, included fragments of a vitrified rampart. No other site produced any such evidence so presumably any vitrification must have been very localised. In the turf-level there were sherds of green-glazed pottery and two un-glazed potsherds (similar to those found in Trenches 27, 28 and 29) were associated with the fallen stones.

Two trenches investigated the bank at the head of the slope. In Trench AO (Fig. 9), the stonework was located. The bank at that point was some 5ft (1.5m) thick and some massive stones were incorporated into it. Two slightly unusual features were located: around the inner edge of the bank were some cobbles and under the bank (Fig.

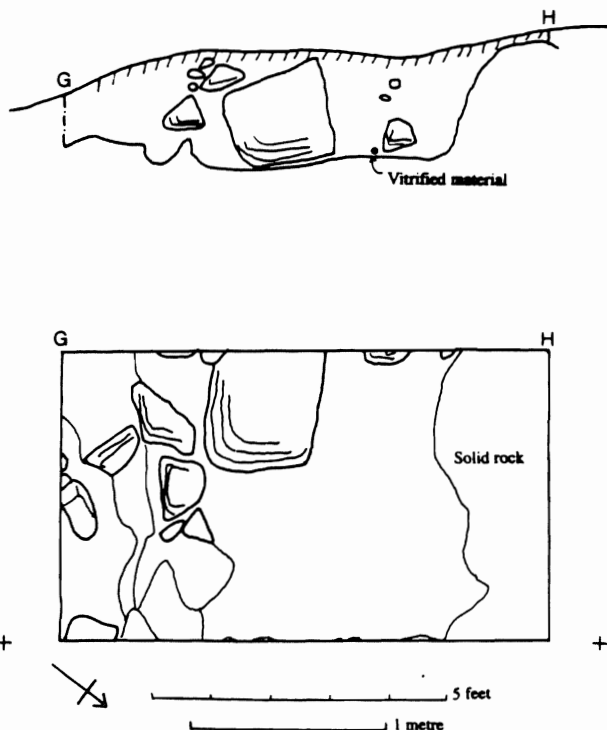


Figure 8 - Plan and section of trench beside entrance

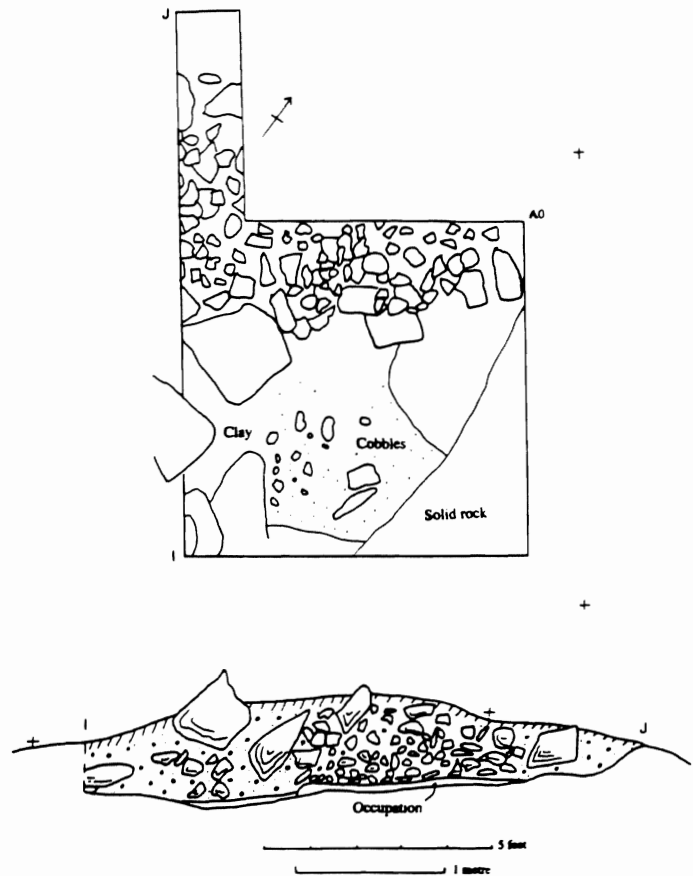


Figure 9 - Plan and section of northern bank

9) there was a trace of occupation which included charcoal, clinker and burnt bone.

In trenches 54 and 64, which were run together, a similar situation was identified, but there seemed to be no cobbles in the vicinity. Again, there was occupation material under the bank (Fig. 10 K-L), consisting again mainly of charcoal, but some sherds of pottery were also found. It is noticeable that neither of these two sections located any post-holes.

The third section across the bank (trenches 27, 28 and 29) on the south-eastern side was different. In the first place, the bank was not located at the top of the slope but was on a shelf some 5ft (1.5m) down (Fig. 10 M-N-O-P). Again there were cobbles inside the edge of it and on top of a layer of brown loam which seemed to be natural. The bank was apparently built above that level and had no foundations; the stone work was substantial. Two postholes were located in this trench and the stratification suggests that they could be secondary, since the holes were apparently dug down from immediately below the turf level.

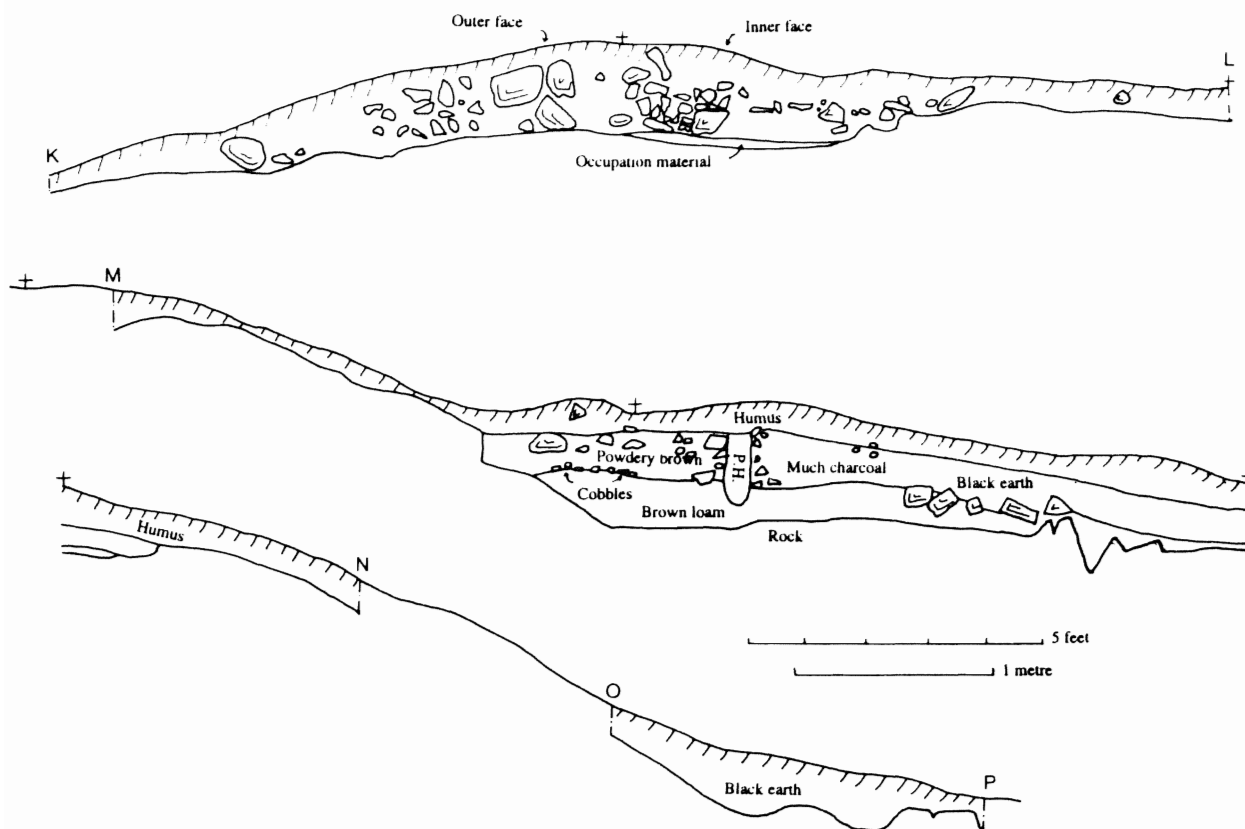


Figure 10 - Sections through bank, K-L, M-N, O-P

On the outside of the rampart there was an accumulation of much charcoal, burnt bone fragments and potsherds.

## Conclusions

The structure on this site was reasonably well-preserved. There is, of course, not evidence that the three structures ( the two hut-circles and the defensive bank) were contemporary, but so far as the hut-circles were concerned , there was little extra space in the enclosure for anything else. So far as Hut No. 1 is concerned, this had a major hearth in the centre and therefore was presumably inhabited. Obviously there must have been a quantity of manpower who constructed the features, but they may not all have lived within the enclosure.

The chronology of the site is something of a mystery. The complete absence of any detected pottery in the huts may suggest either unusually efficient cleaning or that the pottery may not have been contemporaneous with them. Some of the

pottery was found below the bank but the majority above it. This pottery (Fig.11) was apparently of homogeneous type (possibly not more than three pots); it was of a pale brown, heavily-gritted ware, fashioned by hand into large jars with plain rims

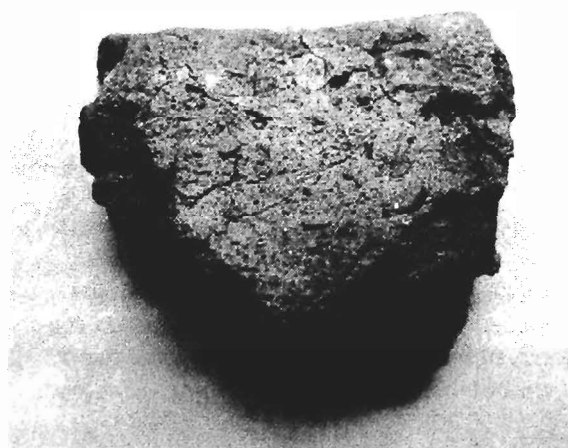


Figure 11 - Photograph of rim sherd of coarse ware pottery

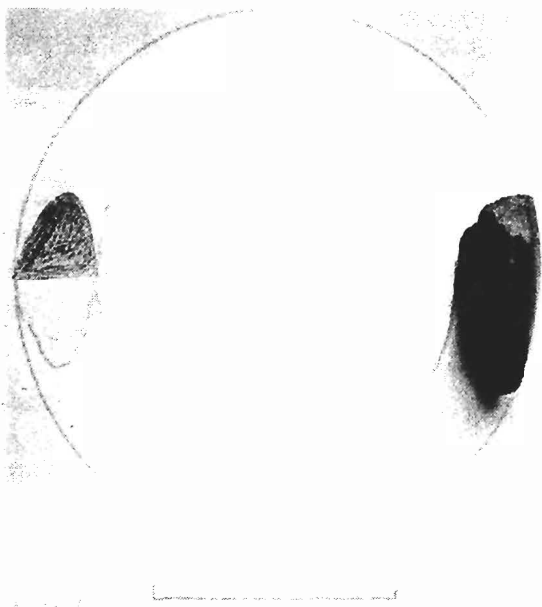


Figure 12 - Photograph of cannel coal, shale or jet bracelet

Similar wares occur among finds from Dunagoil (Bute), Craigmarloch (Renfrewshire), from vitrified forts at Sheep Hill (Dumbartonshire) and Finavon (Angus) and the crannog site at Bishops Loch (Lanarkshire). The presence of a trace of vitrified material (not otherwise detected in the defensive structure) perhaps confirms the linkage.

The possible differences in the structure of the bank (possible timber-framing on the east side and dump-construction on the west) may perhaps query its defensibility. On the west side, the slope is precipitous and defence was not needed, though it could have functioned as a wind-break.

The form of the site may be a homestead (like that at Knapps, excavated by Newall). The occurrence of this type of site in south-west Scotland contrasts with the large "hill-top town" sites in the east and smaller defended sites further north.

The economy of the site is dubious: one possible fragment of a quern stone (which must be dated to after 3rd or 2nd century BC). The smaller hut may have functioned as a granary, but the clearance of ground for arable purposes in the immediate area must have posed problems. The interior of the site, as noted above, could hardly have accommodated numerous domestic animals.

As regards the cultural affinities and date of the site, the form of the enclosure-bank and the associated pottery suggest an early phase of the pre-Roman Iron Age. It lacks the

eyebrow-ornamented pottery, the pulley-shaped spindlewhorls and the bone card-combs which later in the Iron Age penetrated from south-west England to the Hebrides. Parts of the jet fragments found at Knockmade seem to correspond to finds from Castell Odo, Wales (Alcock 1960) help to enforce this view. It is noteworthy that we have no evidence of extensive working of either bronze or iron (apart from a single find of possible slag).

The excavation of Knockmade has provided a certain amount of information about the early phase of the Iron Age in south-west Scotland. To some extent the amount of erosion which the site has undergone, means that the picture is not as clear as it might be. Much of the site has been left untouched in the hope that more advanced techniques may provided more information to future excavators.

## Appendix 1 Geology of Knockmade Hill and District

H. C. Nisbet

Knockmade is situated on the eastern margin of the Renfrewshire Hills, which are composed largely of plateau lavas of Calcareous Sandstone age. The area under consideration is occupied by alterations of markle basalt, Dunsapie basalt and mugearite, the flows dipping to the east. the principal, economic mineral of the area is copper ore (malachite), which was formerly mined at Kaim, less than half a mile south of Knockmade Hill; here basalt slag and other debris can be seen.

Knockmade Hill, which is elongated about N. 40 E., is composed of coarse-grained (macroporphyratic) basalt of Markle type, best exposed in the small crags on the north-west and south sides of the hill. the natural joints of the rock are nearly at right-angles, and there is no evidence that any part of the hill was ever quarried.

The hill owes its isolation partly to a system of faults, one of which, with a north-easterly trend, runs approximately along the line of the road on the east side; its form, however, seems mainly to have determined by glacial action, although this is a little difficult to reconcile with the directions of ice movement deduced from glacial striae in the area, viz. southwards and eastwards. Here the direction of ice travel seems to have been south-south-west to south-west, moulding the form

of the hill and also of the flat-lying area on its north-west flank.

## Soil and vegetation

After the retreat of the ice, the rock may have been left completely, bare everywhere on the hill, including the occupation area and the more-or-less waterlogged parts, the soil is thin and immature. A dark humus-rich layer 2 to 3 inches (5 -7.5cm) thick of reddish-brown crumbly loam, rests directly on little decomposed bedrock. Such a soil could have developed in a relatively short time - a few hundred years at most, possibly much less - conditions of exposure and drainage having arrested any further development.

The flat area north-east of the summit cairn has, in places, a similar soil; elsewhere the bedrock is directly overlain by c. 8 inches (20cm) of incoherent, rather wet, black, humus-rich soil containing in its lower half many small stones, which might be attributed to artificial levelling of this area. The Geological survey, 1 inch map, sheet 30, indicates "Fresh Water Alluvium" on Knockmade Hill (I trust this refers to the adjacent marsh, which has 2 inches (5cm) of greyish clay at depth of c. 18 inches (45cm)).

Vegetation in antiquity was probably not very different from the present, if trees and meadows are eliminated. the moors with coarse grass (*Argostis* etc.), heath or heather and blaeberreries seem more probable than scrub.

Any of the gently sloping fields to the south-west of the site might have been cultivate, but any trace of such cultivation which might have remained, has been removed by later ploughing. The soil in these fields is c. 18 inches deep (45cm), and is surprisingly light, brown loam with only a very thin upper humus layer.

In the small enclosure immediately west of the site the soil is only 2 to 3 inches thick (5 -7.5cm).

## Outcrops of Coal, Shale etc

The Hurlet Limestone and Coal, and various the coals higher in the succession, outcrop on the south side of Castle Semple Loch, and again further east, around Howwood, and north of Kilbarchan. The Hurlet Coal has been mined from

time immemorial. Fine-grained black shale (blaes) may be expected anywhere in these areas.

The usage by archaeologists of the terms "shale", "jet" and "lignite" is rather loose, and I think much of the material (in Scotland at least), referred to as "jet" etc., is likely to be oil shale or cannel coal, which is soft enough to be carved fairly easily, but more coherent and less liable to split than is shale. They are very fine-grained shales containing much microscopic organic matter, they can be induced to burn. A possible source of such material is the Lillie's Shale, which varies locally from micaceous, "parrotty" oil-shale to a good cannel. Its nearest outcrop to Knockmade is 1 mile east-north-east of Kilbarchan. True lignite and jet (which is a variety of lignite) are rare in Scotland outwith the Jurassic areas of Sutherland and the Hebrides; possible but doubtful records are from Gilmerton and West Calder. The "Classical locality" for jet in Britain is the Yorkshire Coast.

## Acknowledgments

Thanks are due to the students who came from many different countries and some of who were funded by the "Field School". The excavations in all three seasons were funded by Glasgow University and in the 1967 season a grant was also received from the Society of Antiquaries of Scotland. The Hunterian Museum and the Department of Archaeology in Glasgow University also provided equipment. I wish to express my thanks to H.C. Nisbet for her report on the geology.

Acknowledgment must also be made to then owner of the site, Mr K. Routledge, of Kaim, Lochwinnoch, who gave permission for the excavations, to Mrs. Halifax Crawford, of Kilbarchan and Mr Frank Newall, of Kilmacolm, who placed their great local knowledge at my disposal with the greatest generosity. The academic support from Prof. A.S. Robertson and late Prof. J.D Mackie and late Prof. E.L.G. Stones deserve my thanks.



# Craigmarloch hillfort, Kilmacolm

**Helen Nisbet**

## Summary

*The primary settlement on Craigmarloch Hill was enclosed by a stockade of oval plan, with internal measurements approximately 210 feet (64m) long by 115 feet (35m) wide at its maximum. It was probably erected in the early 8th century BC. The original palisade was destroyed, possibly by fire, and was replaced by a similar structure following the same line as the original one. Pottery and other finds indicate a link with the Abernethy Culture, and reveal much about the economy of the inhabitants. The stockade was replaced by a slightly smaller timber-laced stone fort built entirely within the earlier enclosure. This fort was in turn destroyed by fire, producing vitrification of the wall core. The site was then deserted and seems to have remained without settled occupants throughout the Roman period. At a later, unknown date (possibly Early Historic), some outworks were added, having the overall appearance of two large annexes, and minor modifications were made within the fort. Intermittent occupation during the Middle Ages is suggested by the name of the hill.*

## Introduction

The hilltop fortification in Craigmarloch Wood (Fig. 1) was reported as a vitrified fort only in 1953, by Mrs. A. Halifax-Crawford and Mr. F. Newall (GAS 1953). It is mentioned, without description, by Cotton (1954). Its choice as a subject for excavation was prompted by interest in the vitrification question in general, and by the shortage of information on hillforts in the Renfrewshire area. Financial and practical support came from the Museum and Art Galleries, Paisley, which also paid for the radiocarbon dates; also from the late Sir Alexander Murray Stephen, owner of the site, whose private generosity helped with volunteers' expenses and photographic costs. Special thanks are due to Mr. Frank Newall (co-director) for tireless digging on site and much discussion before, during and after the excavation.

Work was carried out over a total of seven weeks during the summers 1963 to 1965; the greatest problem on the site was vandalism. The discovery and C-14 dating of a stockaded enclosure carrying a material culture of the Abernethy type, as defined by MacKie (1969) enhances the significance of Craigmarloch in the study of the Scottish Early Iron Age.

## General description of the site

The fort of Craigmarloch (Gael. Creag na meirlich, Robber's Crag), is situated on a wooded hill top two miles (3.2 km) north-west of Kilmacolm (Fig. 1, NS 344719). It sits at a height of about 500 feet (152m) above O. D. on a knoll of trachyandesite forming part of the Calciferous Sandstone Lava sequence. The prehistoric environment was probably moorland or open forest with crags and boggy areas. The situation is a fairly commanding one, with a good prospect northward across the Clyde. The approach to the fort is steep and craggy in the western sector, becoming less so toward the south and south-east, while on the north-east flank there is only a slight

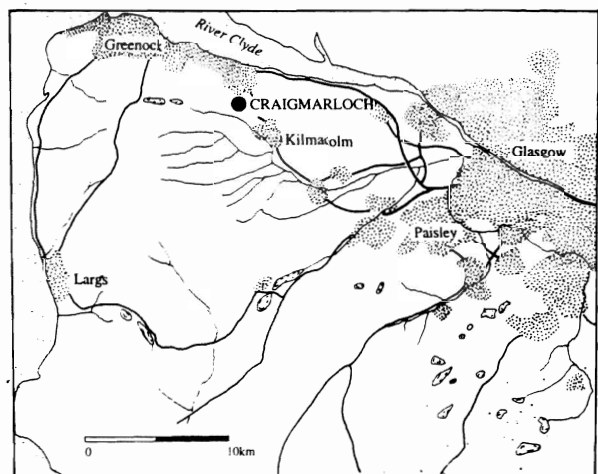


Figure 1 - Location map



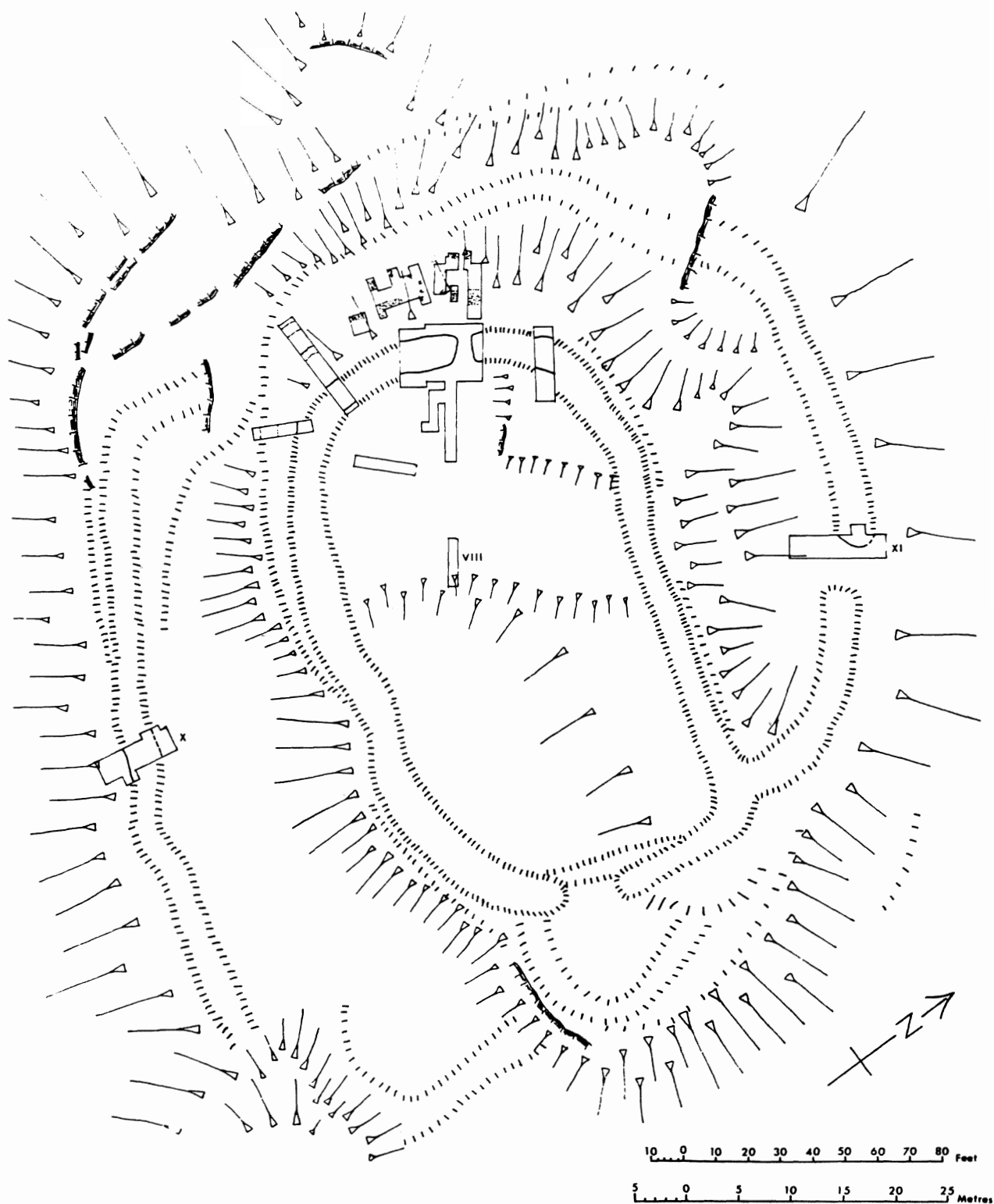


Figure 2 - Survey plan, showing trench locations

rise. Prior to modern drainage operations, however, the ground on this flank must have been much boggier than it now is and may have held standing water.

The Phase II structure (Vitrified Fort) is clearly distinguishable, its wall being traceable all round the hill top (Fig. 2). It is of a rather distorted oval shape, elongated west-north-west to east-south-east, measuring internally 165 feet by 90 feet (50.3m by 27.4m), and enclosing an area of just over 0.3 acre (0.12 ha.). The highest point in the interior, 510 feet (155.45m), is a rock knob in the northern corner. The north-west half of the enclosed area stands higher than the south-east half, a slight break of slope about midway leading down gently to a hollow area in the south.

Parallel to the long sides of the fort, and at or slightly below the presumed level of the wall's outer foundation, a slight terrace or step can be traced; in a disturbance on the steep southern side, massive stonework can be seen, suggesting that the wall has been built in terrace fashion. Evidence from the excavation, however, together with later exposures resulting from the fall of trees, indicates that this "step" is a continuation of the palisade; it accordingly is assigned to Phase I, the Primary construction.

In favourable seasons (i.e. winter and early spring) it is possible to trace a plexus of outworks whose relation to the fort is not clear.

Overall they form two major "annexes" which increase the total enclosed area threefold, although the useful area is considerably less, since much of the enclosed ground is very steep. The style and course of the walling suggest no date more specific than "Early Historic"; these outworks, together with some internal modifications to the fort, are classed together as Phase III. The site must have been used intermittently, whether as cattle pound or bandits' hideout, until the Middle Ages. Other rough alignments of stones in the vicinity may be boundary markers, not directly related to the fort.

At present the simplest access to the fort is from the north-east, through the annex and across the fort wall, in which a gap has been created. Access to the southern annex is easy from the south-east, but the rise from the annex to the fort itself is steep in this quarter. From the west-north-west a natural approach route winds

through the crags and rises steeply to the outer walling, from which point either the fort proper or the southern annex may be reached.

## Excavation

Excavation was concentrated at the north-west end of the fort, covering the entrance and the area to the south-west and west of it, with a few trials into the interior (Fig. 2). The layout of the cuttings was largely determined by the positions of trees, which were particularly troublesome in the palisade trenches due to preferential rooting there, and many of which afterwards fell in the January gale of 1968. Cutting VIII at the break of slope was barren and is not illustrated, nor are cuttings X and XI of the annex walls.

## Stratification

The sequence is fairly condensed, and the whole succession occurs only in places. The following deposits were recorded:

1. The natural subsoil is a greyish-yellow clay, which fills pockets in the rock. Its thickness varies from zero (Cuttings I, II and III) to over 3 feet (0.91m, Cutting IX).
2. Overlying the rock or clay is an occupation deposit with a distinctive brownish tinge. Its maximum thickness is 2 ins. (0.05m, I & III) and its distribution is discontinuous, with a tendency to be preserved in hollows. It is regarded as relating to the earliest palisade (Phase Ia).
3. Yellowish brown beaten clay, discontinuous, maximum thickness 3 ins. (0.08m, Cutting III).
4. Dense occupation deposit; where well preserved, it is black and greasy (eg. Cuttings III-V) with a thickness up to 6 ins. (0.15m, Cutting V). It contains abundant pottery and other artefacts. It is preserved in wider extent than the earlier occupation deposit, which it overlaps everywhere, and is related to the second palisade (Phase Ib). Away from the entrance area, both inside and outside the fort, the black colour disappears and the deposit is compact brown clay.
5. Compact cobbling of small stones in brown soil, concentrated especially around the entrance and the wall faces. Thickness up to 6 ins.

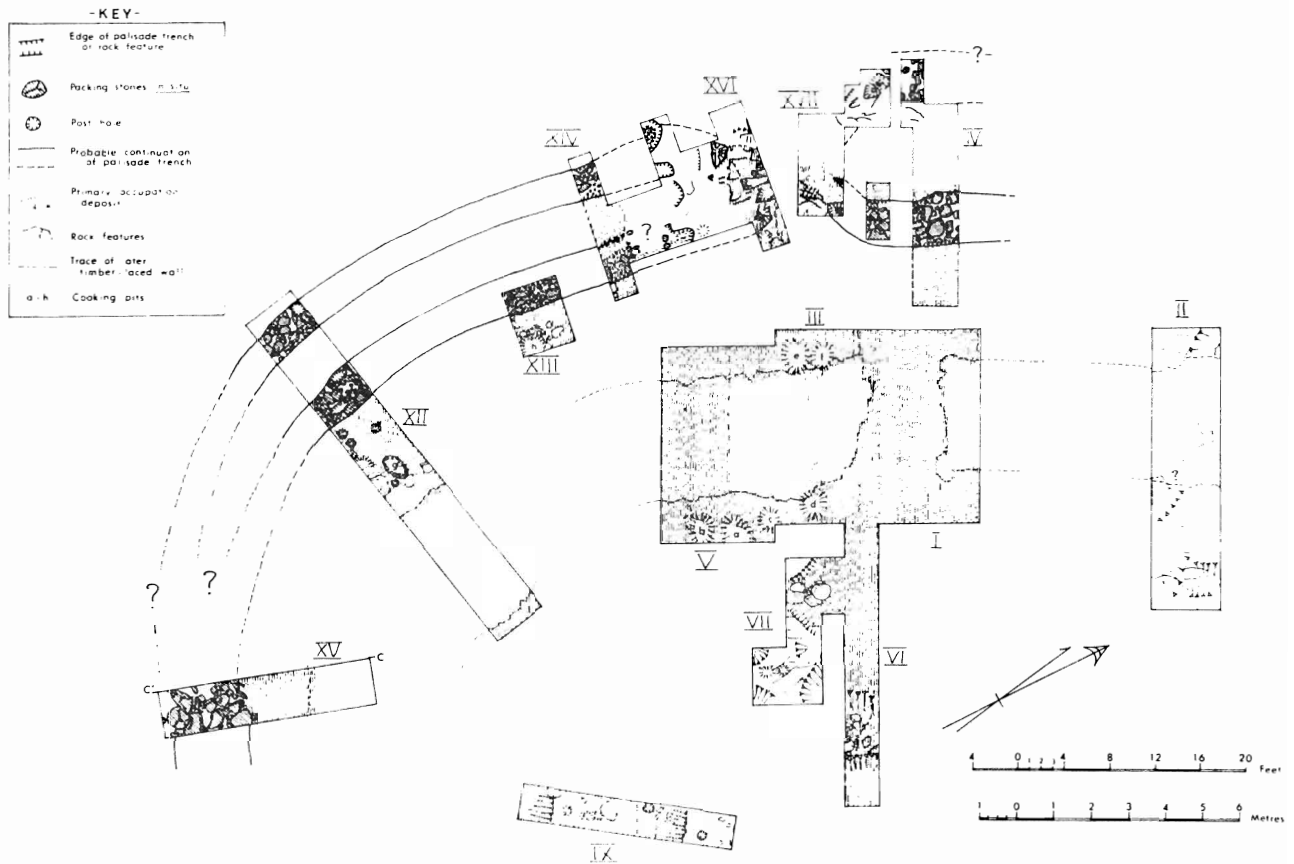


Figure 3 - Plan of Phase I

(0.15m). It is directly overlain by the vitrified wall (Phase II).

6. Massive, sometimes irregular cobbling, in the entrance way and running inward from it (Cutting VI, VII). Presumably relates to Early Historic or Medieval re-occupation (Phase III).

### Phase I: Settings for the palisades

Where there was sufficient depth of soil (Cuttings XII, XIV) the palisade settings were found as twin trenches, averaging 5 feet (1.52m) apart and lying some 10 to 14 feet (3.05 to 4.27m) out beyond the fort wall (Fig. 3 & 4). In the critical area of the entrance, however, bedrock comes very near the surface and there is only a scatter of possibly rock-cut sockets to suggest an outward-splayed entrance passage with looped "hairpin" ends to the double fences. The depressions in the rock surfaces (Cuttings XIV, XVII) were filled with a dark gritty occupation deposit containing charcoal and bone fragments. The line of the inner palisade was not found here.

Due to the inhospitable nature of the ground to the left of the entrance, no attempt was made to follow up the palisades in this direction. On the steepening slope facing south-west, it appeared that the two trenches coalesced into one which



Figure 4 - Palisade trenches beyond fort wall

would ultimately run underneath the fort wall. Surface indications at the east end of the hill suggest that the palisaded enclosure extended beyond the fort wall here also. Its maximum internal dimensions would have been about 210 feet by 115 feet (64m by 35m).

The palisade trenches themselves are about 2 feet (0.61m) wide and 20 ins. (0.51m) deep, and are packed with large stones. The posts, which have been substantial, seem to have been set fairly close together, in a staggered arrangement, and were presumably interwoven with branches to form more or less solid fences.

There are a number of pieces of evidence which suggest that the palisades had been burnt out and renewed at least once, with re-packing of the trenches. (1) Each trench produced a few fragments of pottery. (2) Fragments of slaggy material were found in the trenches. (This would not in itself be conclusive, since similar material had permeated everywhere on the site, even down to bedrock, and some of it might well have been bronze-working slag and not vitrification as was at first thought). (3) The clay of the trenches showed in places a reddening suggestive of burning. (4) the trenches showed evidence of having been partially re-packed with fresh clay and stones, including a broken saddle-quern.

These conclusions are consistent with the stratification, layer 2 representing Palisade Phase Ia, and layers 3/4 representing Phase Ib. Both deposits, which are rich in pottery etc, extend out to the palisades but are sealed under the wall of the vitrified fort.

Where the ground is rocky, the palisades must have been supported in a made-up bank of stones and clay, of which traces were found in the south-west; near the entrance, it may have been cleared away when the fort was built (Fig. 5).

Further information on the palisades was obtained after the storm damage of January 1968. (Refer to figs. 2 and 3). Most of the trees which had come down were on the north-west and west and had fallen toward the east; the general appearance was much changed. An expanse of bare rock was exposed in front of the entrance.

Along the north-west end the inner palisade trench was picked out by the roots of upturned trees. To the south of the entrance the line runs as



Figure 5 - Cutting XV, outer edge of fort wall on left with palisade support on right

shown in the plan. Another uprooted tree allowed the course of the trench to be followed to its previously ascertained position in Cutting XV, but its exact nature was not determinable. About 10 feet (3.05m) north-west of cutting XV was an obvious large post-hole, tightly packed with large stones, with many smaller looser stones on top, bringing its level almost up to that of the bedrock, which rose about 1 foot (0.31m) higher some 6 feet (1.83m) north-west of this point, and in which there was a probable rock-cut post-hole.

These indications generally tended to confirm the conclusion that the dug trench, as it passed on to steeper ground became an "artificial trench" built of supporting stones and clay above ground level, holding up the posts (embanked palisade, or palisade bank). On this basis, its probable line can be traced round most of the periphery of the fort.

Followed south-east, the palisade support closely approaches the wall of the fort, and its continuation is probably represented along this flank by a slight step or terrace lying a little below the outer facing of the wall. Both structures are visible in an artificial fox-earth near the mid-point of this flank; here a massive outer "step" underlies the face of the fort wall. The "step" becomes more pronounced toward the south-east curve, but thereafter the line is difficult to trace, although a very slight bank suggests that the palisade has run close to the edge of the hill top, as at the north-west end. On the north-east flank a similar but less well-defined step can be detected.

Immediately north-east of the entrance it was not possible to trace the palisade, but its probable position is easily estimated.

It was not certain what had happened to the outer palisade. It had not coalesced with the inner in the north-west exposures, and may have lain beyond the end of Cutting XV. Taking into consideration the general lie of the ground, however, it must coalesce not far south-east of Cutting XV, as there is nowhere else for it to go. The same probably applies to the other flank also; depth of defence would be less necessary on these steeper slopes.

## Phase II: The Timber-laced Fort

The enclosing wall (Fig.2) can be traced all round the hilltop - in places, only as a grass-covered mound, although generally its margins are defined by exposed stonework. The wall accommodates itself to the terrain to some degree, but the tendency seems to have been to build linearly as far as possible, and to deviate only where compelled by topography. Flattening is noticeable at the two "ends" of the oval, and the

long straight portion of the wall in the north-east, with its sharp eastern angle, is striking. In the northern corner the irregular course of the wall is due to its having been carried over a small knob of rock. On the south and south-west the wall is considerably spread and almost entirely grassed over, except in the centre of that flank where parts have been exposed in an artificial fox-earth and other vague diggings. In one of these the core of the wall has been removed and the inner facing stones are visible. The pronounced kink in the wall-course where it is cut by the fox-earth suggested that there might have been a subsidiary entrance at this point. At the south-east end the picture is obscured by tree disturbance and a considerable spread of tumble, but it appears that a gap some 17 feet (5.18m) wide (which could hardly be an original entrance) has been blocked on the interior by a flimsy piece of walling. The narrower, north-western entrance is an original feature, but shows evidence of reconstruction.

Vitrified material is visible in situ, or has been proved by excavation, to a distance of some 25 feet (7.62m) on either side of the north-west entrance. Fallen masses of similar material, some

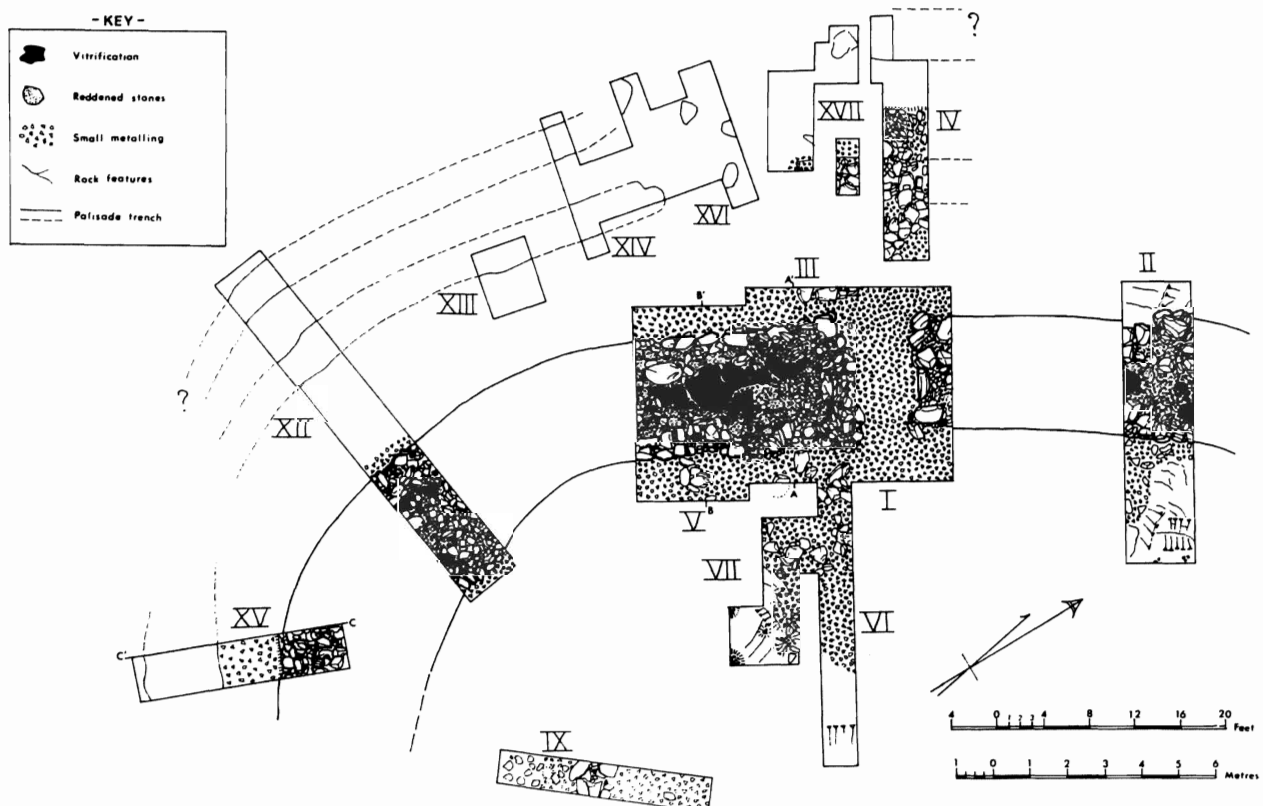


Figure 6 - Phase II - timber-laced fort

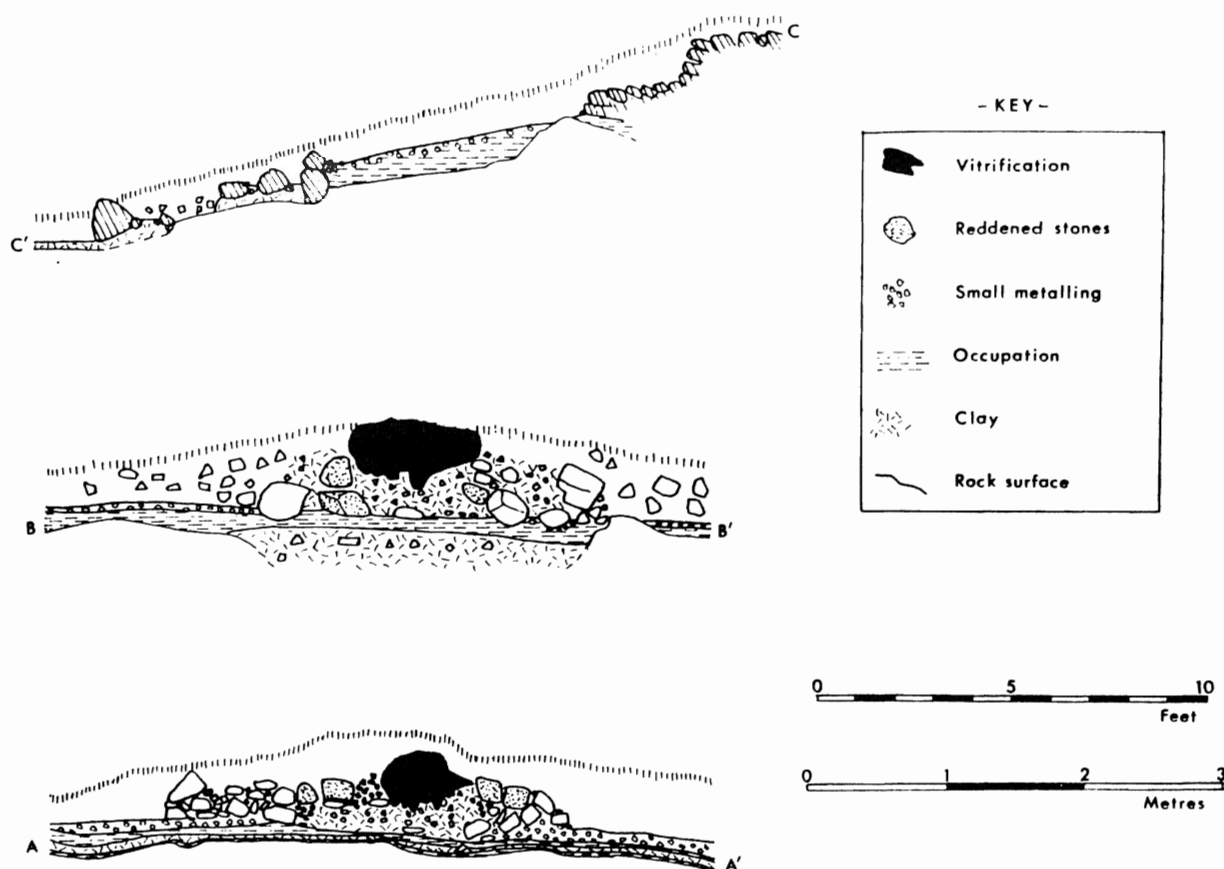


Figure 7 - Sections A-A', B-B', C-C'

of them of considerable size, lie at the foot of the slopes on the north and west, and in places where the wall has been recently disturbed, fragments of



Figure 8 - Cutting V, outer face of fort wall showing double kerbs and core with vitrification

vitrified stone are scattered around. These occurrences suggest that vitrification is almost continuous round the north-western half of the circuit. Sufficient pieces of vitrified stone were found on or near the walls, all round the circuit, to indicate that the wall contains sporadic vitrification throughout its whole course. The greater intensity in the north-west and west sectors may be related to the prevailing wind direction.

The wall (Figs. 6 & 7) was examined in detail in the entrance area (Area I-III-V). In Cutting II it proved rather dilapidated, while Cuttings XII and XV were made with the specific aim of relating the wall to the palisade trenches. A small section (A-A') was cut in the first season; later, a five-foot (1.52m) length of wall (VB) was systematically removed. (Figs. 7 - 9, section B-B').

### Substratum

In Cuttings II and XV the wall was built partly on rock, but in most places it rested on a layer of small cobbles packed in brown soil



Figure 9 - Cutting V, fort wall partially sectioned, kerb stones and vitrification

(Stratum 5). The cobbling was thick and very compact in the entrance way and under the kerb-stones of the wall, becoming sparser and looser with increasing distance from the wall on either side. It was absent under the central part of the wall in Cutting VB, where the original surface was slightly higher due to an underlying rock rib; similarly, it wedges out against rock in the interior of the fort, as seen in Cuttings II, VI and VII. The metalling thus appears to have been laid down to level the ground and give a firm substratum on which to build the wall.

## The Entrance

The entrance way, 6 feet (1.83m) wide at its narrowest point, has a gently curving course and widens slightly toward the interior. It is faced with large blocks which are fairly well set but show some signs of post-vitrification repair, notably on the north side, where the inner corner stone has been raised and underpinned with smaller blocks, including a lump of vitrified stone. On the southern side a rather haphazard piece of stonework, also utilising vitrified lumps, was laid loosely on the cobbling (stratum 5) and had the effect of constricting the inner part of the entrance to 4 feet (1.22m). A single course of neatly-laid stones extending from near the outer corner in Area III into Cutting IV seems to be contemporary with the wall itself, and may be the much-diminished remains of a "blind" to the entrance.

There were no door-checks or postholes, nor anything else to indicate the nature of the gateway structure.

## Structure of the wall

The wall averages a little over 10 feet (3.05m) in thickness at the base, except in Cutting XII (and by inference also in Cutting XV), where it is taking a fairly sharp turn, and attains a thickness of at least 13 feet (3.96m). The wall faces were seldom found more than two courses high, and as the volume of tumble in excavated areas was almost negligible, no legitimate estimate of its original height could be made. In the exposed portion on the south side its outer face would have been at least 6 feet (1.83 m) high; the hill slope there is steep. In the excavated area, the greatest height is 2 feet 4 ins (0.71m), to the top of the vitrified central mass in Area V.

When the debris of the wall was stripped to the bottom course (the only part of the stonework indubitably *in situ*) the structure resolved itself into three parts of approximately equal width: outer stonework, core, and inner stonework. The external facings were formed of large slabby blocks; some of these were missing, and there was obvious disturbance on the inner side near the entrance, where later temporary hearths had been constructed. Where there was least disturbance, for instance on the exterior of Area III-V, it was clear that the blocks had been laid with care.

Behind each external face was an internal face or kerb, fairly well defined (Fig. 9) but built with stones of widely varying shapes and sizes. Stones which must have come from higher courses of these kerbs had slumped inward to the core. A more or less defined gully between the external and internal kerbs contained smaller stones and rubble. Even without the evidence from vitrification, the spacing of the kerb stones would have suggested that timber had constituted a significant proportion of the wall.

The material of the core, contained between the two internal kerbs, was very incoherent. It contained some smallish soot-blackened stones, but for the most part it consisted of rubble, grit and friable roasted clay, with diffuse patches of sooty black matter. The vitrified material formed cake-like (V) to wedge-shaped (III) masses on top of the friable core material, and was broken into discrete sections by near-vertical cooling cracks.



Its upper part consisted of stone blocks, much altered and cemented together by partial fusion; below, it was less coherent, with the blocks loosely cemented and mixed with crumbly roasted clay. The fused mass had been formed mostly from stone blocks, derived either from the collapsing facings or from a stone capping to the core. Droplets of once-molten matter had penetrated the loose rubble, but did not reach the substratum.

The vitrified matter is of the "massive" type commonly derived from fine-grained igneous rocks (eg Dun Troon) and from some greywackes and hornfels (eg Tap o' Noth), in which the original rock texture can still be recognised, yet the blocks are so intimately welded together that they can only be distinguished when the mass is sliced with a rock-saw. It is generally bluish-black in colour, with a thick dark red skin in places. Partial melting of the rock has allowed flow, with the formation of droplets and stalactites at the bottom and sides of the mass. Impressions of wood, in which the grain is clearly recognisable, were found on the underside of the mass only. (Such impressions, often called casts, are strictly speaking moulds of vanished pieces of carbonised wood which were enveloped by the molten rock).

Noteworthy is the conspicuous colour variation from face to centre of the wall, indicated schematically on the plan (Fig. 6). The stones of the outer facings are little altered, and retain their original pinkish-grey colour; many of those of the internal kerbs, and most of those which have fallen toward the core, are reddened: the vitrified mass is almost black. Since the red and the black result from oxidation and reduction respectively of the iron in the rock, it may be concluded that the outer kerbs or faces were not raised to a very high temperature and may have had little or no fuel; that the inner kerbs had plentiful fuel plus excess of oxygen, i.e. an adequate draught of air; and that the upper part of the core had plentiful fuel with a severely restricted air supply.

The gullies between the double faces or kerbs, and cavities below the vitrified mass, suggested the former presence of horizontal timbering. Central longitudinal timber was indicated by two channels in the section B-B', and by the orientation of wood impressions on the underside of the vitrified mass. There was no surviving evidence for longitudinal timbers in the outer gullies.

For transverse horizontal timbers there was only indirect evidence. Such timbering was suggested by the wide spacing of the kerb-stones. The grain of the wall as a whole suggested further that these timbers had been disposed diagonally rather than at right angles to the faces, but this appearance could have resulted from distortion during firing. Arguments *a posteriori* are that such timbers would have been necessary as cross-ties, and that they would, on burning out, provide flues through which air would be drawn to maintain combustion in the interior. Carbonised wood found between and under the kerbs on the inner side in Cuttings II and V was initially interpreted as remains of transverse timbers. The result of C-14 dating, however, is seriously inconsistent with the stratigraphical evidence (see below) and it is possible that this wood is wholly or partly the remains of later camp-fires.

There remains the possibility that vertical timbering may also have been present. At intervals under the vitrified capping there occurred vertical "sockets" characterised by looseness of fill, heavy sooty patches, red-burned clay at the bottom, and trickles of glassy slag which had run down from the molten rock above. It is difficult to see the purpose served by the interior revetment, unless to support a central row of posts. Such vertical timbers would be most efficacious as flues in the early stages of burning. On the other hand, there were no dug post-holes whatever in association with this wall. The north side of the entrance, in Cutting I, had larger stones remaining *in situ* than had the south side. The gullies between the kerbs were open-ended at the wall termination, a feature not apparent on the south side. There was no vitrification *in situ*. The core was an incoherent mixture of earth and stones with sooty patches and bright orange burned clay.

In Cutting II the wall was very ruined and the proportion of stonework to core material seemed less than in the type area. Most of the outer face had fallen outward, but the internal kerb was located. The inner face, which had been carefully built on a sloping rock substratum, was preserved up to three courses high, with the internal kerb less distinct. As elsewhere, the core consisted of uncompacted, friable yellow clay, partially roasted, with small angular debris which included vitrified fragments. It also contained soft dark patches suggestive of turf sods, and orientated vermicular and spindle-shaped droplets of glassy slag. Reddened stones and vitrified masses in

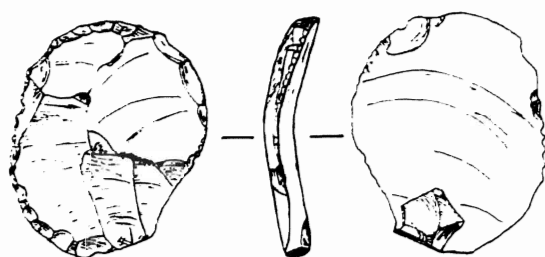
position were found. Here again the spacing of the stones suggested transverse beam-channels.

The wall was exposed, but not completely excavated, in Cutting XII. Here the structure of the faces was largely destroyed. Vitrified masses occurred mainly in the positions where the internal kerbs would be expected. The outer half of the wall was uncovered in Cutting XV, where it was found to rest on bedrock. the wall was built "down the slope" and the gully between face and kerb was deepened by a rock-cut groove several inches

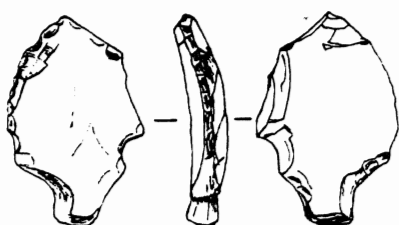
(approx. 0.08m) deep.

### Occupation of timber-laced fort

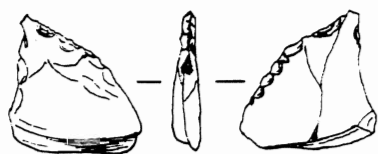
Traces of occupation of the timber-laced fort are sparse. The small cobbles (Stratum 5) were laid down as a preliminary to building the wall, but a final leveling layer seems to have been added after the wall was erected. In the entrance area the uppermost cobbles abutted against the wall in places, and in Cutting II they were banked against the inner wall face where the rock dipped away,



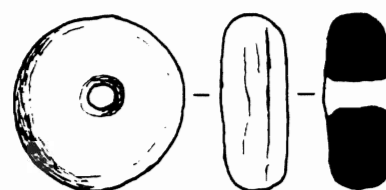
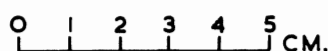
CM 216



CM 664



CM 1100



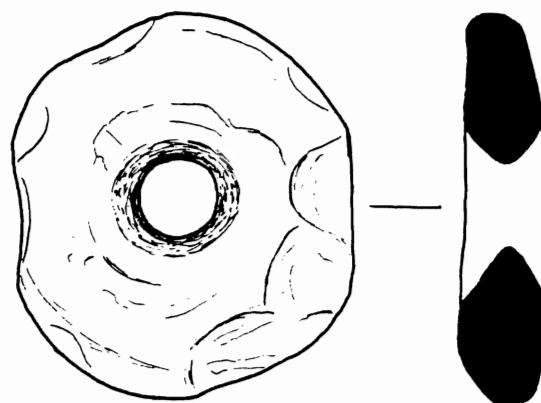
CM 1109



CM 612



CM 41/42



CM 37



Figure 10 - Finds, flint, spindle whorls and fragment of wooden vessel

the initial leveling having been accomplished by packing the hollow with larger stones.

On the assumption that the metallurgy and the wall itself consisted mainly of material already present on the site, the small finds from them are regarded as derived from Phase I deposits, and only the finds from the surface of the metallurgy accepted as belonging to Phase II. Charcoal and bone fragments were very scarce, although there was a scattering of small quartz pebbles and chips, as well as a few miscellaneous stone objects showing abrasion. A piece of a highly polished shale ring came from the surface of the cobbles in Cutting II. From here also came the only pottery recorded for the occupation - eight undistinguished fragments. It is not unlikely that these finds are also strays from the earlier strata.

### **Phase III: The annexes and late alterations**

Phase III is introduced as a blanket term to cover everything manifestly post-dating the vitrified fort. Time-relationships within the group of structures could not be established. The annexes, from their physical relationship to the fort, must be later additions to it; they need not have been much later, but their general character broadly suggests "Early Historic". The uppermost heavy cobbling may be Medieval.

#### *(a) The Annexes*

Cutting XI, at the presumed entrance to the north annex, showed that the wall had been about 8 feet (2.44m) wide, and its termination was an asymmetrical curve. The deeper hollows in the rock contained a dark gravelly deposit with many fragments of quartz pebbles (some abraded, some slightly grooved) and pieces of pot-boilers. The final levelling consisted of heavy, loose cobbles in brown soil, resembling the uppermost cobbling in the fort itself, and incorporating pieces of vitrified stone.

Cutting X proved the boundary of the south annex to be of terrace form, with massive outer kerb-stones and a hard-packed bottoming of cobbles. There were no finds. (More detailed notes on these Cuttings, with plans, will be deposited in the National Monuments Record).

#### *(b) The Cobbling*

The late cobbling was at its heaviest in and around the entrance way. It was distinguished from the underlying cobble layers by the large size and relative looseness of its stones, especially in Cuttings II and III (within the fort only), IV and VI, but it fades out in Cutting V. In Cutting IX it was not certainly distinguishable from wall tumble. A large whorl of shale was found on top of the cobbling in Cutting II.

#### *(c) Alterations to Entrances*

The constriction of the north-west entrance was laid directly on top of the small metallurgy, and thus seems to post-date the fort by only a short interval. The reconstruction of the opposite side of the entrance may be of similar date. Without excavation, it is not possible to comment on the obvious alterations at the east end.

### **The finds**

The pottery and other finds, with relevant field notes, have been deposited in the Museum and Art Galleries, Paisley. The clay mould, no. 1140 (Fig. 12), is in the Royal Museum of Scotland, Edinburgh. A more detailed account of the finds will be placed in the National Monuments Record for Scotland.

#### *Phase I*

Carbonised wood: present everywhere.

Calcined bone: present everywhere, very fragmentary. Red deer, sheep or goat, pig, and cat are represented, in that order of frequency (Identification by Dr A. Clark, formerly of the Royal Scottish Museum).

Wooden vessel: two fragments, nos 41 and 42.

Spindle whorl: clay, no. 1109.

Flint: Oval scraper, no. 216; sub-spherical nodule, no. 538; arrowhead, unfinished or broken, no. 664; unworked flake; small triangular scraper, no. 1100.

Shale: Sixteen pieces of shale rings and rough-outs, (Fig. 11), 25 unfinished pieces and wasters.

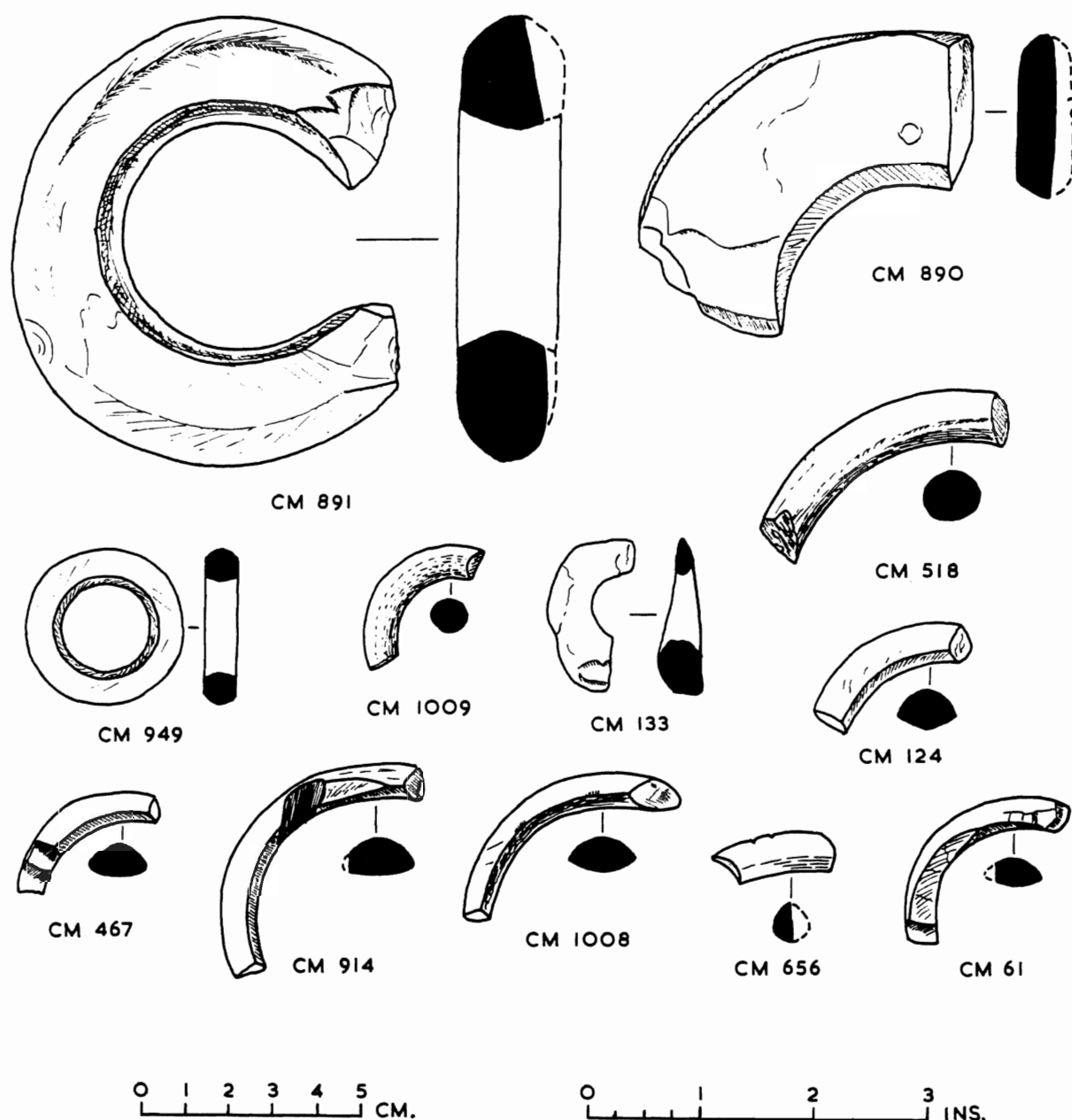


Figure 11 - Finds, shale rings

Querns: one broken saddle-quern from re-packing of inner palisade trench; one small flat quern from fort wall.

Pounders or grinders: 27 in total, mostly quartz and quartzite.

Smoothing stones or "polishers": very numerous, mostly quartzite and sandstone.

Whetstones: at least seven, all of calcareous sandstone.

Pot-boilers: fairly common. (not preserved).

Small quartz objects: abundant pebbles and fragments, some showing signs of mechanical fracture, chipping or grooving. Various "beaked", notched and grooved fragments are conventionally described as "strike-a-lights", although the "beaks" seem too brittle for this purpose. Miscellaneous stone objects: stone objects of frequently recurring form, but showing minimal signs of fashioning or wear, were given field-names such as "toggles", "scoops", "hand-mortars" or "palettes". Some of the latter group could equally well be briefly-used rubbers or whetstones, while two "scoops" are abraded at the tip. A representative selection of these

marginal tools has been deposited with the other finds.

Iron: five pieces all very corroded.

Metallic slag: small pieces of light slag and cindery material, concentrated especially at the south-west end of Cutting IX.

Crucibles: ten pieces of crucibles were found, of which seven undoubtedly belong to Phase I. They are circular or oval at the rim, and a depth of up to 2 inches (0.05m) is possible for the larger examples. Three specimens have a pouring lip preserved. Several bear traces of red slag. Mostly from Cutting IX.



Figure 12 - Cast from clay mould (photo National Museum of Scotland)

Clay moulds: No. 1140 (Fig. 12) was found following the fall of a tree outside the wall on the south-west, and appeared to be derived from Primary occupation between wall and palisade. Mould for a decorative boss. (Photograph of a cast by courtesy of the former National Museum of Antiquities). Five other possible fragments.

### *Phase II*

Carbonised wood and calcined bone: very small in both size and quantity.

Shale: one piece of ring : high polish, no. 124.

Stone: smoothing tools, small quartz pieces, pot-boilers, "scoop" with abraded tip. All could well be derived from Phase I.

Crucibles: three examples may belong to Phase II. All the finds assigned to Phase II are fully consistent with the Phase I assemblage, and if not actually derived from it, they must indicate cultural continuity.

### *Phase III*

Shale: large clumsy whorl, no. 37.

Iron: two small round-headed studs, cf. boot-nails.

Baked clay: one fragment. Clay mould: one fragment of a small mould similar to no. 1140.

Quartz and chert chips, grooved quartzite pebble and pieces of pot-boilers from waterlogged hollow outside entrance to North Annex.

## **The pottery**

Coarse pottery of a more-or-less uniform type was found at all occupation levels, but was especially abundant in stratum 4 (Phase Ib), which yielded 402 out of a total of 489 recorded sherds. It was also found in the packing of the palisade trenches. This pottery thus belongs clearly to the palisaded enclosure and may have continued in use during the life of the timber-laced fort.

The pottery was too fragmentary for anything to be reconstructed: but the larger rim and body sherds suggest plain barrel-shaped vessels about 0.25m (10 ins) in diameter and about the same height. The fabric is of the "Dunagoil type" - thick, coarse, light buff or pink coloured and the large-gritted. The commonest texture is very coarse and "lumpy", with large light-coloured grits which have often burst through the surface at firing. A smoother, slaty-textured variety also occurred, giving rise to many split sherds and false rims. The pots appeared to have been built up crudely by hand, and there was no suggestion of coil-building or of the chevron structure seen in cross-sections of the pottery (generally harder and darker) from, for example, North Berwick Law and Dirlton Craig. The rims are quite plain, rounded, or very slightly inturned.

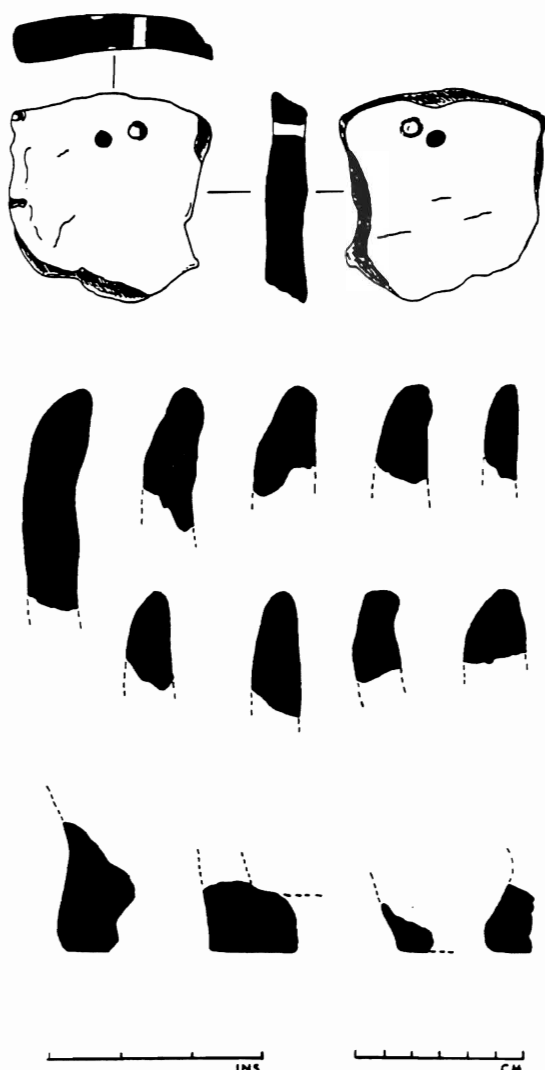


Figure 13 - Finds, the pottery profiles

Some rims and bases are illustrated in Figure 13, also a large sherd with one complete perforation and one incomplete. This was the only piece in the assemblage which bore a trace of elaboration or decoration.

Wall thickness was measured for 218 body sherds, and it was found that individual pieces could vary by up to 3 mm. The thinnest was 11 mm, the thickest 26mm, but the preferred thickness ranged from 14mm to 19mm (83%) with a peak at 18mm (19%). In general, the thinner pottery is harder, better fired, and more even-textured.

Common variations in texture were assessed for 289 suitable sherds, giving the result: coarse or

“rough” texture, with much grit - 30%; “lumpy” or “curdled” texture with less grit - 24%; smooth or even texture, small grit - 22%; slaty and leathery texture, little or no grit - 24%.

Colour is very variable due to uneven firing, the surfaces being yellow, light buff, or pink (very occasionally, bright red); the interiors usually black or bluish-grey. The commonest variety has pink or buff surfaces and a grey interior: at a rough count, this outnumbers by about four to one the variety with yellow surfaces and a black interior. The latter may prove to be a distinct variety, as it is also characterised by the “lumpy” texture, and may have incorporated organic matter which has left a residue of carbon within the fabric.

This pottery is superficially comparable to that from Abernethy (Christison & Anderson, 1899) and Finavon (Childe 1935, 70-2) and is very similar to the “native pottery” from Braidwood Fort, Midlothian (which was enclosed by a palisade in its first phase) - except that the Braidwood pottery is a little more leathery (Stevenson, 1949).

## Radiocarbon dating

The two radiocarbon dates obtained from Craigmarloch were published without comment or calibration (Nisbet 1966). These were Sample CM91a from the early phase of occupation related to the palisaded enclosure, sealed under the vitrified wall - GaK 995. Sample CM468 from the base of the timber-laced wall, and thought at that time to represent original wall timber - GaK 996.

The early (Late Bronze Age) date for the palisade was one of the first to be obtained for that type of site, but soon found supporting dates from other sites, notably Huckhoe (Jobey, 1968). Around 790BC may therefore be taken as a firm date for the occupation of the earliest palisaded settlement at Craigmarloch.

Lab. No.	Yrs. bp	C14 age	Calibrated
GaK 995	2540±40bp	590bc	c. 790 BC
GaK 996	1985±40bp	35bc	c. 20 AD

(Calibration from Clark, 1975)

The second date became the subject of a controversy and some doubt was raised about the sample. It is possible that it could have fallen down into the ruin of the wall from a later

camp-fire. Subsequent experience has shown, also, that the possibility of laboratory error cannot be ruled out, when only one sample is assayed. It is considered that the excavation evidence carries more weight, and that the timber-laced fort should have a date much closer to that of the palisade.

## Discussion

### *The Palisades*

The palisaded settlement is paralleled by several known sites in the Tyne-Forth Province. Hayhope Knowe in Roxburghshire (Piggott, 1949 and RCAHMS, 1956 no. 665) has a similar double palisade with "hairpin ends" at the entrances. Piggott considers possible reasons for doubling the palisade, and suggests that the intervening space was filled with heather or brushwood, of which no trace now remains. Alternatively, the space might have been accessible from the inside and used for stock pens or for storage. It might even have been lightly roofed, in lean-to fashion.

Hownam Rings, Roxburghshire (Piggott, 1948; RCAHMS 1956 no.301) is interesting, in that a two-phase palisaded enclosure was succeeded by a fort with a stone-faced, rubble-cored wall, which in turn was superseded by a later Iron Age multiple-rampart fort. Further afield, the double palisade at Ffridd Faldwyn in Wales (O'Neil 1943) is cited by Piggott as the only close parallel to that at Hayhope. The Ffridd Faldwyn palisade was also succeeded by a timber-laced fort. An example in which the palisade is double only at the end containing the entrance, the two lines running together on the flanks in a manner similar to that suggested for Craigmarloch, is Fasset Hill, Roxburghshire (RCAHMS 1956, no. 660).

Ritchie (1970, 50) in a review of palisaded enclosures, discusses a few sites (eg. Woolshears Wood, Harehope) in which the palisades are set into raised banks rather than being sunk in trenches ("embanked palisades" or "palisade banks") Such appears to have been the case for part of the circuit at Craigmarloch, where rock comes near the surface.

The palisaded sites of the Tyne-Forth group, however, do not produce "Abernethy" pottery or artefacts, and the general label "Hownam Culture" has been attached to the group (MacKie 1969). One possible exception is Braidwood Fort,

Midlothian, where the "native pottery" is very like that from Craigmarloch, only a little more leathery (Stevenson 1949; Piggott 1958)

### *The Transition*

There are strong field indications that the timber-laced fort at Craigmarloch succeeded the Ib stockade after only a relatively short time-interval, if any. Firstly, there is the fact that the fort was built entirely within the stockade, suggesting that the latter was still standing during the construction of the fort. Secondly, there is the stratigraphical evidence that the Primary occupation deposit passes upward into Phase II cobbling without any clear break which might indicate a period either of weathering or of turf growth. (Admittedly, turf might have been stripped for use in the construction of the wall, bringing with it a few small objects from Phase I). The implication is that the people who lived in the palisaded enclosure also built the fort. It is considered that the excavation evidence carries more weight than a single radiocarbon date, and that the timber-laced fort at Craigmarloch should have a date much closer to that of the palisade - compare McKie's (1969) dates for Dun Lagaidh and Finavon.

### *The Vitrified Fort*

There can be no doubt that the vitrified wall represents the remains of a timber-laced rampart which has been burnt. There are strong indications that transverse timbers, and at least one longitudinal timber, were present. There is also the possibility that vertical timbers were enclosed within the stonework. As has been shown, the earlier palisade was in places supported by a bank of stones and clay, which, on the flanks, takes the form of a substantial terrace. From this it might not be a large step to the construction of a stone-faced, clay-and-rubble cored wall also enclosing vertical timbers.

The Craigmarloch wall differs markedly from those of excavated Highland examples. At Creag Phadrick (Small & Cottam, 1972) and Langwell (Nisbet 1973, 1974; and forthcoming) the walls are upwards of 20 feet (6.10m) thick, and have been built entirely of stone with horizontal timber rafts, resulting in massive and very solid vitrification. The examples at Finavon (Childe 1935) and Rahoy (Childe & Thorneycroft, 1938) are comparable to the latter.



Craigmarloch, with its internal kerbs and core incorporating clay and turf, and also its suggestion of vertical timbers, seems to be paralleled rather by the Ayrshire sites, such as The Knock, (Largs) and Auldhill (Newall 1969). A similar structure, with rough double kerbs, a bottoming of cobbles and a core incorporating clayey material, was found in the poorly preserved vitrified wall at Castle Point, Troup (personal observation during excavation by J. C. Greig). This wall was 12 feet (3.66m) thick at maximum. There was however no hint of vertical timbers here.

For the site as a whole, perhaps the best parallel is Huckhoe in Northumberland (Jobey, 1959, 1968). At Huckhoe a multiple stockade with terminals approaching the "hairpin" plan was overlaid by a stone enclosure wall without any indication of an intervening level or turf line: the conclusion was drawn that the wall succeeded the palisade with no significant time-gap. The wall was about 10 feet (3.05m) thick at base, and had an outer face backed by rubble and a rather indefinite inner face or kerb. The native pottery from the stockade trenches is similar in colour and texture to the Abernethy/Dunagoil type, and has a waxy feel (Jobey, 1959, 230). Some of the rim and base sherds illustrated can be matched with specimens from Craigmarloch. The stone objects - a saddle quern, rubbers, pounders, a stone disc etc. - would be appropriate in an Abernethy context, as would be the flint scrapers, which are vaguely comparable to those from Finavon. No jet or shale rings were recorded, however. C-14 gave a date of about 580 BC for the primary phase (Jobey 1968).

As regards the timber-laced fort, Dun Troon, near Crinan, is very similar to Craigmarloch in size, topographic location and general features; the finds from it (saddle querns, flint scrapers "of Neolithic type", pounders, polishers, whetstones and a piece of jet or lignite) constitute a typical Abernethy assemblage, minus the pottery, which may have been missed by the excavators (Christison et al. 1905). In the absence of any dateable finds, it is only conjectural that the site was occupied in the Early Historic period.

# Human impact on the vegetation around Walls Hill.

*Susan Ramsay*

## Summary

*Pollen analysis of a peat profile from Walls Hill Bog has provided a detailed picture of environmental changes in the Walls Hill / Whittliemuir area over the past five thousand years. Evidence for human impact on the vegetation, in particular woodland clearance and agriculture, has been detected in the pollen diagram and, in conjunction with accelerator radiocarbon dating of the peat, it has been possible to tentatively relate these vegetation changes to known archaeological remains in the area.*

## Introduction

This paper provides a brief account of the environmental history of the area around Walls Hill / Whittliemuir, Renfrewshire as determined by pollen analysis. The work presented here is part of a larger study concerned with the changes in woodland cover and agriculture in west-central Scotland over the past 4000 - 5000 years (Ramsay, 1995). The site was initially investigated as part of a study of Whittliemuir Midton Reservoir and a nearby farmstead site carried out by Archaeology Projects Glasgow (now Glasgow University Archaeological Research Division) in 1991 (Pollard, 1991). *R. Tony Pollard*

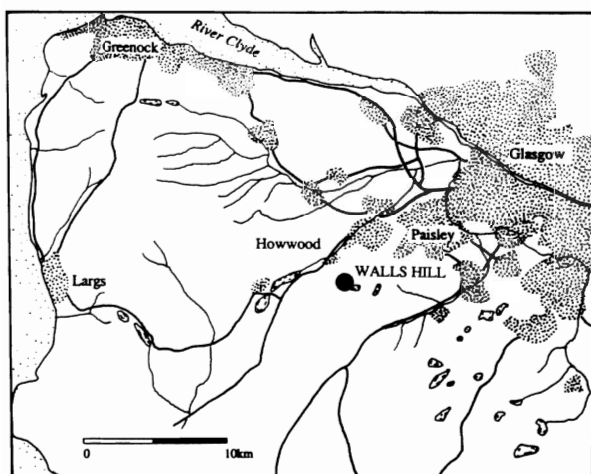


Figure 1 - Location map

## The Site

Walls Hill Bog (NS 419 591) is situated near Howwood, 9.5 km south west of Paisley at a height of 180 m OD (Fig. 1). The bog is a remnant of a larger area of peatland which was substantially reduced in size in the mid nineteenth century by the construction of Whittliemuir Midton Reservoir.

A column of peat was taken for pollen analysis and radiocarbon dating from a long peat face formed by the reservoir bank and the remains of the bog.

The majority of the bog is now very dry and almost entirely colonised by *Calluna vulgaris* (heather), although one small area remains waterlogged and consequently supports several important species of bog plants including *Narthecium ossifragum* (bog asphodel), *Vaccinium oxycoccus* (cranberry), *Potentilla palustris* (marsh cinquefoil), *Menyanthes trifoliata* (bogbean), *Drosera rotundifolia* (round-leaved sundew) and several species of *Sphagnum* (bog moss).

## Archaeology

Walls Hill Bog (Fig.2) is situated 700 m to the north east of Walls Hill fort (NS 411 588), a probable Iron Age hillfort which occupies the rocky summit of Walls Hill, highest point 229 m OD. Excavations by Newall (1960) revealed two early Iron Age occupations with circular timber framed houses. The size of this fort suggests that it

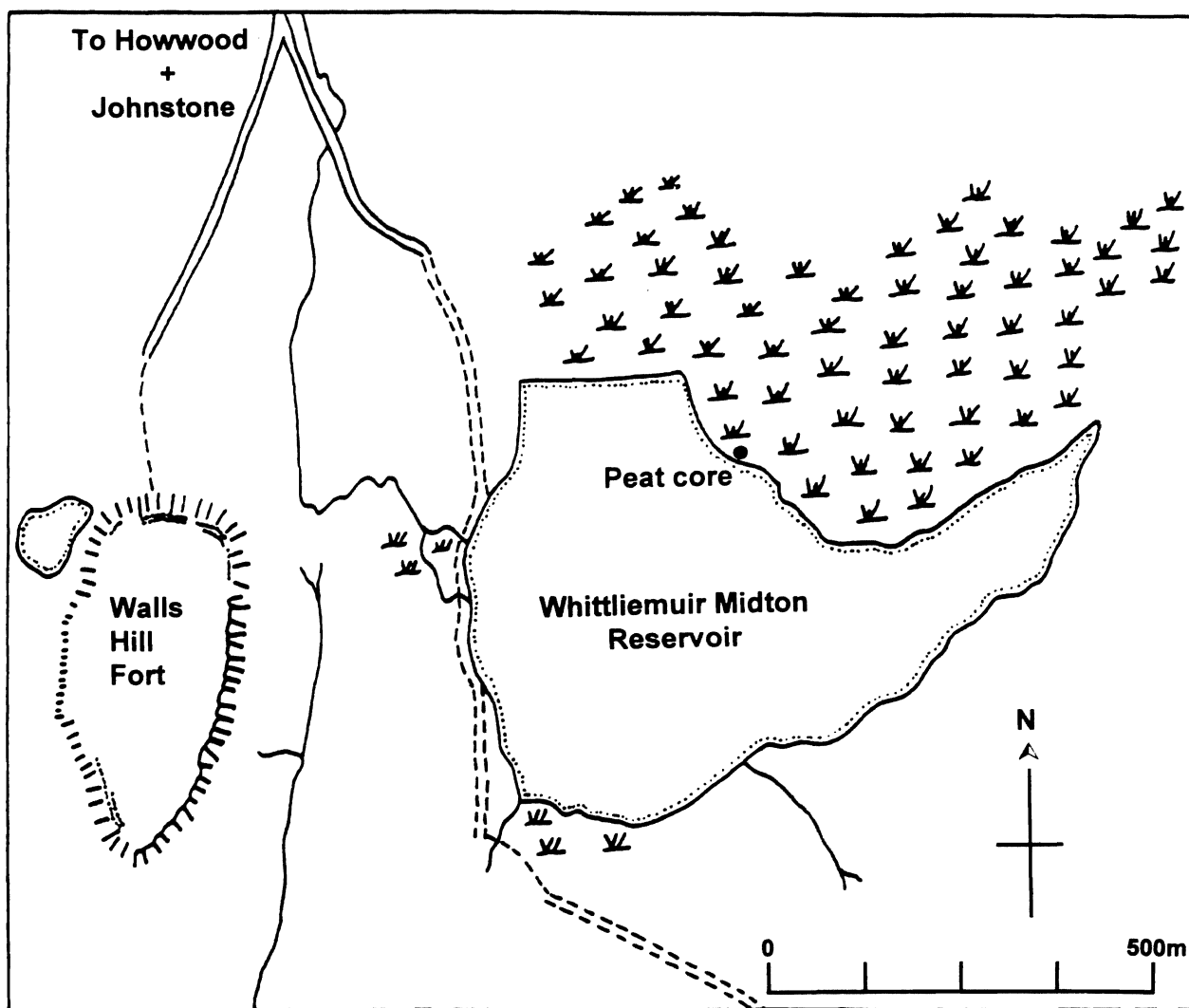


Figure 2 - Map of the Walls Hill/Whittliemuir area

may have been a tribal stronghold, not necessarily permanently occupied, but available in times of threat. Newall (1960) states that the site was exploited in the first century AD and perhaps somewhat earlier and suggests that the initial occupation ceased on the arrival of the Romans since the fort overlooked the Antonine Wall which lies only 16 km to the north. Newall also suggested that the site was reoccupied between the 4th and the 11th centuries. Between the fort and the bog there is a farmstead site which was occupied sometime between the 18th and 19th centuries and perhaps earlier.

### Pollen Analysis and Peat

This study involves the technique of pollen analysis which depends on the fact that each year plants produce pollen or spores with characteristics which make them identifiable under the

microscope. If these spores and pollen grains fall onto the surface of a peat bog they are covered over by the growing peat, becoming preserved by the waterlogging and low oxygen conditions, forming a record of the plants growing around the bog. Samples are taken throughout the depth of the peat, treated chemically to leave only the pollen, and then studied under the microscope to identify and quantify the pollen types present. From this information it is possible to produce a picture of the vegetation surrounding the site when each pollen sample was deposited. By combining this technique with radiocarbon dating it is possible to attach independent dates to the changes in the vegetation cover and to tentatively relate these changes to known archaeological remains in the area.

## Results

The results of this study are presented as a pollen diagram (Fig.3) with only the most important plant types illustrated. The y-axis of the diagram corresponds to peat depth (and hence time) while the x-axes correspond to the percentage of total pollen that each pollen type represents. Calibrated radiocarbon dates (quoted as cal BC / cal AD) for peat from the section are given on the right hand side of the diagram. The pollen diagram has been divided into a number of zones to make discussion of the vegetation changes easier.

### Zone WH-1

The base of the peat section is estimated to date from approximately 2000-3000 cal BC. This zone shows that the native woodland of this area was mainly birch, oak and alder with lesser amounts of pine, ash and elm. Pine in this area was probably confined to drier areas of peat bogs since it could not compete with the other tree species on better soils. The reservoir was almost empty of water when this site was initially sampled and this resulted in two pine stumps, along with numerous birch stumps and branches being exposed on the peaty reservoir bed. The pine was subsequently

radiocarbon dated to 2920-2705 cal BC making them the only reliably authenticated ancient pine stumps to have been found west of Glasgow and confirming information from the pollen diagram that pine was growing on the bog itself during this period. There is little evidence for human impact on the landscape during this period although the high values for heather may indicate that some woodland clearance had taken place earlier.

### Zone WH-2

The first evidence for human impact on the vegetation of the area is found during this period (approximately 1500-400 cal BC). This takes the form of small temporary woodland clearances (small declines in tree pollen corresponding with slight rises in grass pollen and associated weedy species). These clearances would have lasted for no more than a few hundred years with the pollen evidence suggesting that it was unlikely that any significant cereal cultivation was undertaken around the site, probably due to the very poor nature of the local soil, and that these clearings were, instead, used for woodland pasture. There are at least four temporary clearance episodes discernible in this zone. These are very similar to a sequence of clearances noted by Turner (1975) at Bloak Moss, Ayrshire 14km to the south. It is

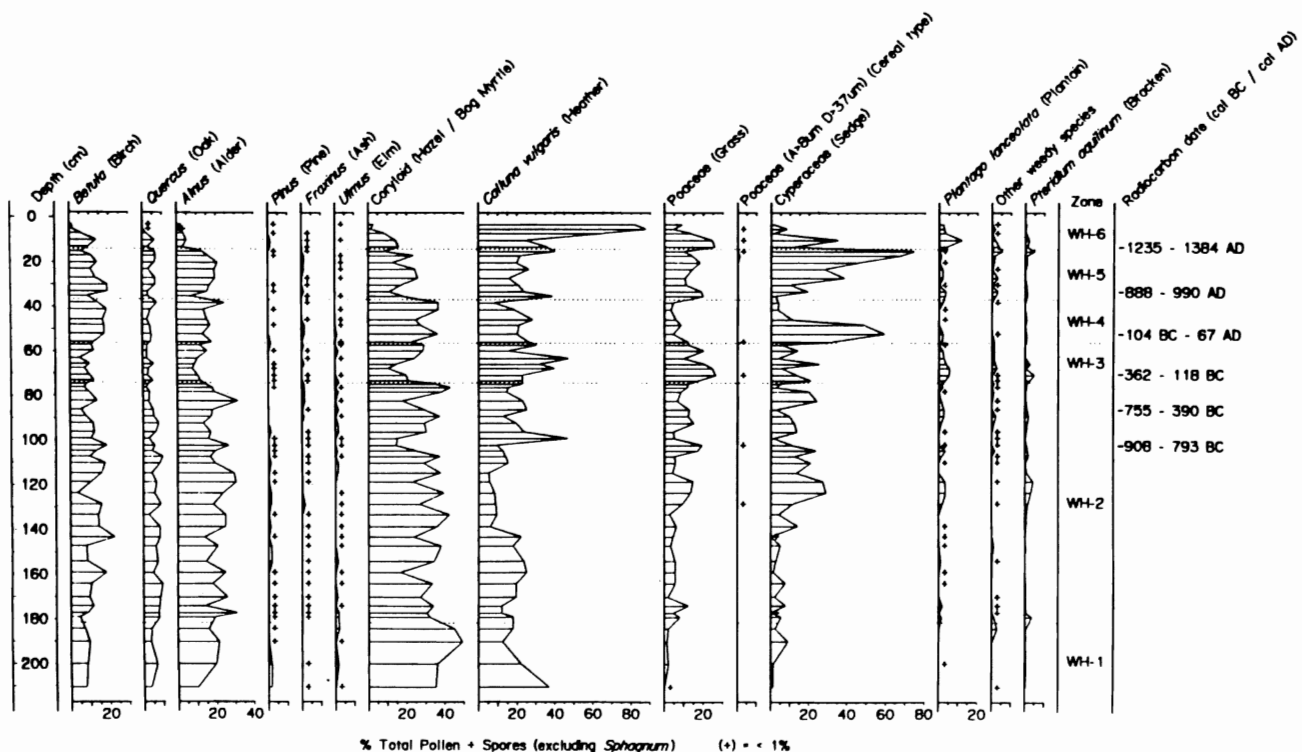


Figure 3 - Walls Hill Bog pollen diagram

possible that these clearances, noted at both sites, were the result of small populations moving around the area, clearing woodland and exploiting the cleared land as grazing for animals until the land became exhausted at which point they would move to another site.

### Zone WH-3

This zone is characterised by a sharp decline in tree pollen suggesting widespread woodland clearance in the vicinity of the site. There are corresponding increases in grass pollen and associated weedy species, such as buttercups, docks, daisy types and, in particular ribwort plantain, an indicator of grazed land. Again there is little evidence of arable cultivation. This clearance phase lasts from approximately 400-40 cal BC making it late Iron Age and almost certainly pre-Roman in origin. It is likely that this clearance phase is contemporary with the occupation of the hillfort and so may have been undertaken for defensive purposes - to give a clear area around the fort - as well as for agricultural practices. High levels of heather in this zone suggest that any defensively cleared land may not have been farmed but allowed to revert to heather heathland. Woodland regeneration takes place at the end of this zone

### Zone WH-4

This zone shows further woodland regeneration with declines in both grass and heather pollen indicating that both agricultural land and heathland were becoming wooded again. It would appear that the land around the bog was completely abandoned during this period. This zone spans the period from either the mid first century BC or the mid first century AD until approximately 800-900 cal AD. This gives a period of almost a millennium during which there is no recognisable human activity, detectable by pollen analysis, in the area.

### Zone WH-5

This zone shows a return of human influence to the area with declining tree pollen and a rise in grass and weedy species as before. Again the evidence is for pastoral rather than arable agriculture. This clearance episode, dated to 888-990 cal AD, did not last long and by 1000-1100 cal AD woodland was again regenerating.

### Zone WH-6

Major woodland clearance is seen in this zone with a dramatic decline in tree pollen correlating with large increases in grass, weedy species and, in particular heather. This indicates intensive pastoral agriculture but again little evidence for arable agriculture. There is a single occurrence of Cannabis type pollen in this zone suggesting that it may have been grown as a fibre crop nearby.

### Conclusions

The Walls Hill Bog pollen diagram describes the changes in the vegetation cover of the Walls Hill / Whittliemuir area over the last 5000 years and in particular points to periods of time during which human activity was affecting the plants which grew in the area.

The natural vegetation of the area would have been mainly mixed oak, birch, alder woodland, with lesser amounts of ash, elm and pine. At this point in time there would have been very little open vegetation with only areas of heather heathland free of trees.

By the Bronze Age / early Iron Age the first effects of human interference are recorded in the pollen diagram. Small scale, short-lived woodland clearances were undertaken to produce wood pasture with little evidence for any arable agriculture being practised. The first extensive woodland clearances did not occur until the late pre-Roman Iron Age. The evidence is again for pastoral rather than arable agriculture, probably as a result of the poor nature of the soils in the area. Other sites in northern England, and southern and central Scotland have been identified by Dumayne (1992, 1993) as also having pre-Roman woodland clearance, although the pattern of clearance differs from that seen at Walls Hill. None of the woodland clearance episodes noted at Walls Hill are accompanied by any evidence for elevated levels of charcoal in the peat. This implies that woodland clearance was achieved by felling, not burning, supporting Rackhams assertion that it is almost impossible to destroy standing areas of deciduous woodland in Britain using fire as they burn like wet asbestos (Rackham, 1994).

It is considered that the period of intensification in agricultural activity probably correlates with the occupation of Walls Hill fort,

but that some of the woodland clearance may have been undertaken for defensive purposes. Newall's assertion that the fort was occupied in the first century AD has not been disproved by these results but the summary of his findings The natural defences of Walls Hill were first exploited during the first century AD, and perhaps somewhat earlier..... (Newall 1960 p.25) should probably put more emphasis on the somewhat earlier phrase. The end of this clearance phase is probably pre-Roman and more certainly pre-Antonine Wall in age. This conflicts with the theory that the fort was abandoned because of its position overlooking the Antonine Wall and suggests some other reason was behind the end of the hillfort's occupation.

For the next thousand years there is little evidence for any human impact on the vegetation around Walls Hill / Whittliemuir. The local area seems to have been unaffected by the arrival of the Romans in other parts of the region and shows no changes in vegetation cover after their departure. In fact the Roman invasion of Scotland appears to have gone unrecorded, at least in the form of changes in the pollen record, in this part of west-central Scotland.

Throughout the Dark Ages the landscape remained wooded and it was not until 880-990 cal AD that woodland clearance and agriculture were again practised in the area. This may correspond with the second phase of occupation of the Walls Hill site noted by Newall (1960) and thought by him to have occurred sometime between the fourth and eleventh centuries AD on the grounds of archaeological evidence. It is now possible to refine that estimate and say that the reoccupation was more likely to have been towards the end of Newalls time frame.

This clearance phase did not last long and woodland regeneration soon began again. However by approximately 1200 AD the landscape was again becoming increasingly cleared of woodland, there was intensification of pastoral agricultural and some, inconclusive, evidence for cultivation of cannabis. This cleared pastoral landscape has continued up until the present day.





# The Ditched Enclosure at Shiels Govan, Glasgow

**Jack G. Scott**

## Summary

*Excavation of a cropmark enclosure on the south bank of the Clyde at Shiels, Govan, revealed evidence for a Late Iron Age enclosed settlement containing traces of at least four roundhouses. Later re-use of the site may be dated to the medieval period.*

## Introduction

An air photograph taken by the late Dr. J. K. S. St. Joseph first revealed the existence of the ditched enclosure at Shiels, Govan, Glasgow (NS 523667). A cropmark in flat arable ground, about 250m south of the River Clyde (Fig. 1), appeared as oval in shape with an entrance at each end of the longer axis. Interpretation of the cropmark as a Neolithic henge seemed reasonable because of its size, shape and situation near a river.

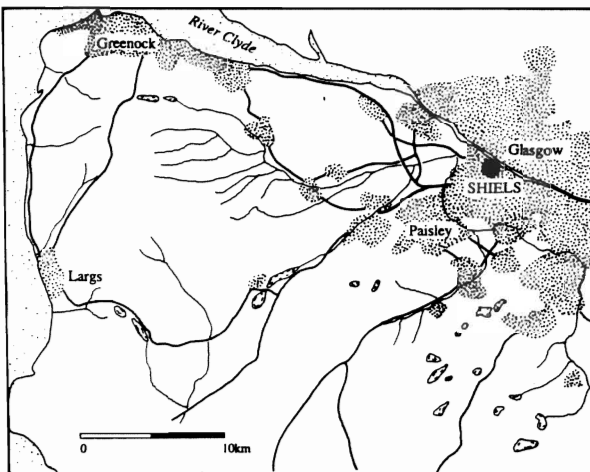


Figure 1 - Location map

Impending development of the area for industrial use led the Department of the Environment to commission a survey of the site from the Geophysics Section of the Ancient

Monuments Laboratory in January 1973, which confirmed that the cropmark might indeed represent an archaeological site. An approach was then made to Glasgow Art Gallery and Museum for me to undertake a rescue excavation on behalf of the Department. The excavation was carried out by my wife and myself, Miss H. C. Adamson, then my assistant in the Department of Archaeology, Ethnography and History, helped from time to time by Mr. R. Roddam, the museum photographer and other members of staff. Labour was provided by four men, though the number available from day to day varied from one to four. A mobile office, a shelter, a dumper truck, wheelbarrows and other equipment were delivered to site.

## Excavation

The site was not traceable at ground level. Therefore the first problem was to determine its approximate position. It was found possible to relate the oblique air photograph to field boundaries on the Ordnance Survey Lanarkshire 6-inch Sheet V N.E., and thence to produce intersects from the corners of the field towards the probable site of the monument. This location attempt was successful, and on 28 and 29 March 1973 the ground layout was established for a section to be cut by a mechanical digger across the ditch (Fig. 2).

The section was drawn immediately. It was as well that such a digger had been employed, for as soon as the bottom of the ditch had been reached water began to seep back into it, filling the lower 0.70m of a ditch originally 1.15m deep. The clean yellow sand at the base of the ditch soon

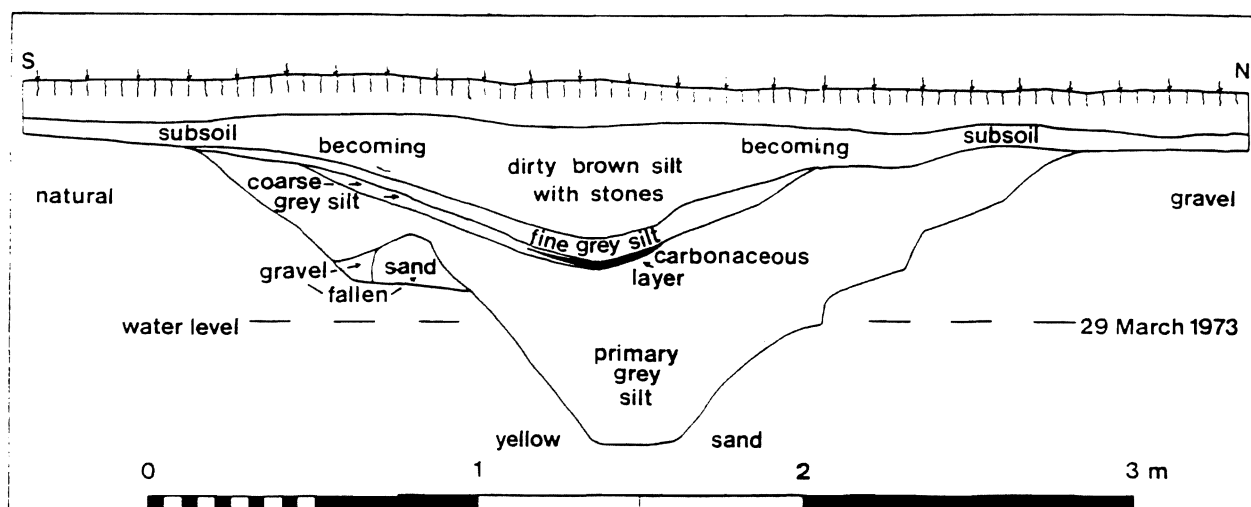


Figure 2 - Section of enclosure ditch

began to slump into the water, thus bringing down the upper banks of the ditch, fortunately not before recording had been completed (Fig. 3). The section suggests that an original V-shaped ditch, only 0.25m wide at bottom and 2m wide at the surface had been recut in its upper half to a depth of about 0.85m (that is just above the March 1973 water level and to a width of about 2.80m. This recut in turn had been cleared out to a depth of only 0.60m, at which point it had been allowed to silt up to modern level. What was quite clear was that the water table must have been much lower when the original and deepest ditch was dug.

Excavation proper began on 29 May and continued until 7 July. Two north to south trenches were laid out meeting corner to corner at the estimated centre of the enclosure, and designed to be expanded into quadrants separated by baulks. The area of ditch sectioned in March was left inside the northern baulk, so as not to compromise later excavation. It will be seen that the estimated centre was not as expected, but not so much in error as to prevent digging in quadrants, as intended (Fig. 2).

The immediate task was to establish the outlines of the ditch. The topsoil proved to be very shallow and archaeologically uninformative. Recent plough marks were found penetrating the subsoil, into which pieces of modern china and glass had been embedded, so that stratification, if any, had been destroyed. It was therefore decided to remove the topsoil to just above subsoil depth, and then to excavate to the subsoil surface in the hope that the ditch would show up as a soil stain.

About ten days of work were required to establish the dimensions of the ditch at subsoil level. Externally the ditch measured 45.50m from east to west, and 37m from north to south (Fig. 3). Internally the enclosure measured 38m from east to west and 30.50m from north to south. Since the internal area to be examined was of considerable size, and since the topsoil had been shown to have no stratigraphical value, it was decided to move it mechanically, quadrant by quadrant. A bulldozer was brought in and set to work in the north-east quadrant. It was found to be unsatisfactory, since its pushing action tended to destroy the surface of the subsoil as it was exposed. Nevertheless the information revealed was felt to justify further mechanical removal of topsoil.

The bulldozer was replaced by an International E 200 Pay Scraper, which was set to work in the north-east quadrant, where it proved to be quite satisfactory. Eventually the scraper was used to clear the south-east and south-west quadrants, too. The scraper driver was also able to operate a rotary brush to sweep the surfaces of the scraped quadrants, which was of considerable help.

The darker soil staining of the ditch terminals revealed that a causeway, some 4.40m wide at its narrowest point at subsoil level had been left unexcavated. Commanding this entrance to the interior had been a post-built timber structure which was by far the most interesting discovery of the excavation, and one which may date from the final occupation of the enclosure (Fig. 4). The structure had two straight post-built sides, 6m and 5.30m long, each curving slightly inwards at the outer ends, where one end seemed

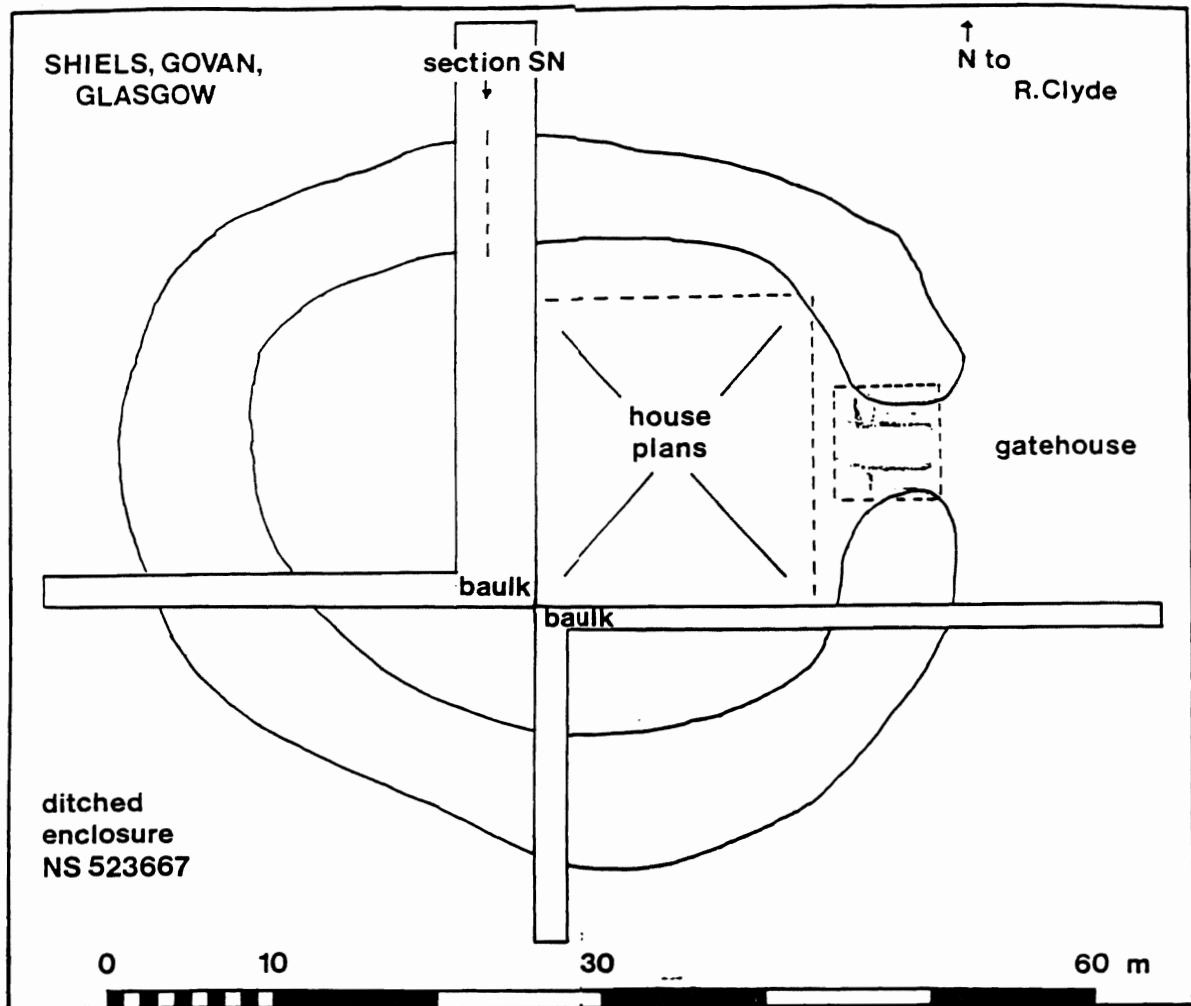


Figure 3 - Plan of site and excavated areas

to lead into a beam slot. However, the opposite end of this slot did not contact the opposite end of the structure's side, which suggests that the slot was a partially incorporated relic of a preceding structure. A further beam slot crossed between the sides almost centrally, and may be considered to be part of the structure. The inner end of the structure appeared to be entirely open.

At the inner end of the structure, on each of its outer sides, a double line of trenches, three of which had certainly held stout posts, connected with the structure. They clearly represented some form of timber rampart of substantial construction. The inner southern trench, shown in Figure 4, in fact continued along the inner edge of the ditch, so near to that edge that any upright timbers in it must have collapsed into the ditch. The innate instability of the subsoil may explain the fact that the corresponding outer trench beyond the north side of the structure appears to overlies ditch filling,

thus perhaps representing a reconstruction after collapse. It may be suggested as a possibility that the enclosure in its final stage had been surrounded by a stockade consisting of a double line of closely set timbers, even though the only evidence for this is to be found near the entrance.

The post-holes of the structure were clearly defined by chocking stones, but produced very little carbon. One post-hole was 0.25m deep below subsoil (i.e. about 0.40m below present day surface). Eleven post-holes ranged in depth below subsoil from 0.30m to 0.38m.

Two post-holes were 0.40m deep, one 0.45m and one 0.47m deep below subsoil. They were therefore sturdy enough to have held some sort of superstructure, to be discussed later. Some post-holes, but not the majority, suggested the use of squared timbers.

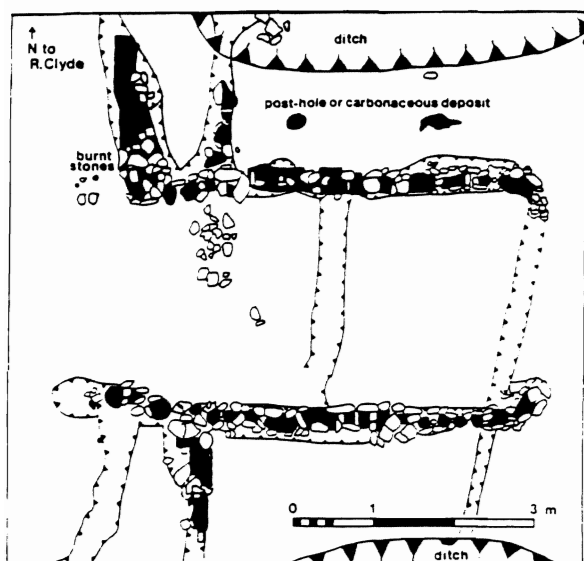


Figure 4 - Enclosure entrance and plan of gatehouse

The structure must have been provided with a gate, presumably at the outer end, of two leaves, in view of the width of the structure - at least 2.80m. The two outermost timbers on the sides of the structure had been set 0.30m and 0.40m deep into subsoil, and so perhaps were substantial enough, especially if part of a framed building, to bear the weight of gate leaves.

In the north-east quadrant stains in the subsoil revealed three circular structures (Fig. 5). Only a segment of the largest and earliest was recorded, which must have preceded the digging of the present enclosure ditch, but possibly not by very long. Its proportions suggest that it might have held a fence rather than a house wall. The other two structures were certainly houses, slightly more than 13m in diameter, one of which must have closely succeeded the other on the same site: indeed both probably used the same centre post. Both entrances face the enclosure entrance. The houses may therefore be considered as contemporary with a primary phase of the enclosure.

Evidence for the structure of the houses was meagre. The outer slot of each must have held some sort of timber or wattle perimeter walling, but only one post-hole was found near the perimeter slot, to be associated with the later house. The 6m distance between this post-hole and the centre post-hole appears too long for a single unsupported span, but only one intermediate post-hole was encountered, 2.60m inwards from the perimeter (in line with the centre post-hole).

There was no trace of other supporting post-holes, but it seems unlikely that either of the houses could have been roofed without both outer and inner rings of posts linking with the centre post.

Gaps of about 4m mark the entrances to the houses, but no traces of doorways remained. However, near the north side of each entrance was a circular stain which seems better interpreted as marking a rotary quern stance rather than a post-hole.

In July and August 1974 the excavation was continued and completed, but with the help of students and volunteers rather than paid labourers. My wife and members of the Art Gallery and Museum staff assisted from time to time as previously, whilst Mr. J.C. Wallace acted as a supervisor for two weeks in July.

Efforts were concentrated on excavating both terminals of the enclosure ditch, and recording soil stains of houses as they appeared. This latter work could not always be systematically undertaken, for stains would show up clearly only after showers of rain, so the most had to be made of such opportunities for recording as and when they occurred. Stake holes were particularly fugitive.

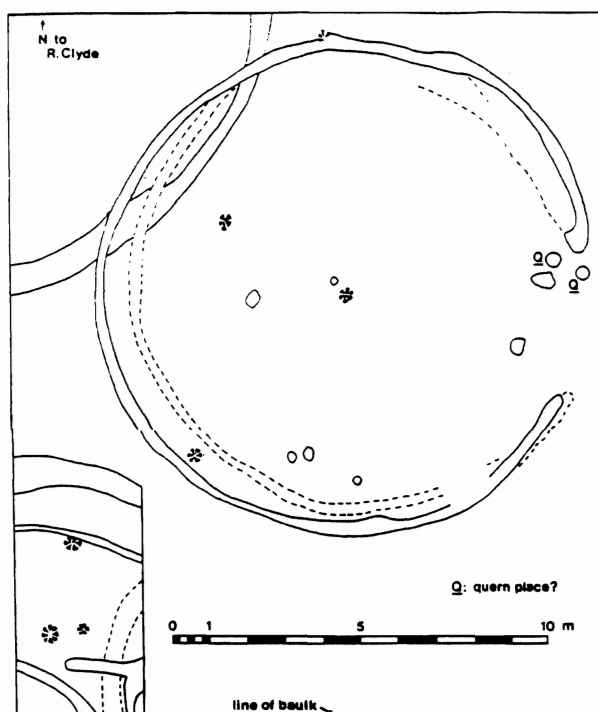


Figure 5 - Plan of houses in north-east quadrant of enclosure

Between the north side of the entrance structure and the adjacent ditch terminal a large number of stake-holes was found, seemingly dug at random. Their purpose may have been to stabilise the ground and to forestall slumping into the ditch.

Natural clay layers were encountered in the south terminal of the ditch, which must have made the sides more resistant to slumping. A succession of turf lines could be seen in the side of the ditch, down to 0.60m below main subsoil level. In the north terminal the impression was that the sides might have been deliberately lined with clay, though nevertheless they were still liable to collapse and slip, apparently detaching and sliding bodily in rafts. In both terminals groups of boulders were observed which seemed to have fallen from the inner side of the enclosure.

The bottoms of both ditch terminals proved to be waterlogged. The northern terminal produced remains of wood, moss, and other plants, along with three bovine teeth. Two wooden artefacts were recovered - a straight stick, 73.5cm long, with each end smoothed off, and what appeared to be a playing man, round and dome-shaped. Near the bottom of the ditch numerous twigs and small branches were found almost invariably lying horizontally and embedded in clay. It was difficult to visualise these as parts of discarded wattle and daub walling, but if not from the rampart they might have been portions of a strengthened clay lining to the sides of the ditch.

Altogether remains of five houses were suggested by soil stains within the enclosure. All were apparently round and of similar type. Except for the wooden and other remains from the waterlogged ditch the finds were meagre and disappointing: a broken hone, a piece of slag, a piece of ochre, pieces of burnt (possibly cremated) bone, four flint flakes (not artefacts), a squared shale object, two possible prehistoric potsherds and numerous pieces of modern glass and pottery, together with clay pipe bowls and stems.

## Discussion

Any discussion of the site must tackle the water table problem. It is well known that until a shipping channel was opened in modern times the Clyde drainage must have been far more occluded than it is today. Therefore one would have

expected that the prehistoric water table would have been higher, not lower, than that recorded in March 1973: in other words that to dig an enclosure ditch such as was found would have been impossible. The only solution I can suggest is that the whole area was heavily wooded. Mature trees' demands for water are considerable, and might have kept the prehistoric water level sufficiently low for the ditch to be dug.

Unfortunately for this theory, analysis of the waterlogged material from the ditch showed that tree pollen, mostly *Alnus* (alder), formed less than 10% of the total. By contrast values of grass (*Gramineae*) pollen rarely fell below 50% of total pollen, whilst heather, plantain, clover, buttercup, dock, sorrel and nettle were well represented, along with evidence for cereal-type grains. Radiocarbon dates of  $1930 \pm 140$  bp (SRR-576) and of  $1640 \pm 80$  bp (SRR-577) from waterlogged *Alnus* (alder) fragments from the same context as the pollen imply a Late Iron Age date for both pollen and alder. For the mature tree theory to be correct it would have been necessary for complete removal of forest cover to have been followed immediately - that is in the same season - by the digging of the first ditch, before the water table had begun to rise. From what is known of Iron Age technology at that time this would not have been possible. Thus an environmental rather than an archaeological solution must be sought. Whatever the reason for the waterlogging of the ditch it would be generally agreed that the round houses found within the enclosure are likely to be contemporary with it.

The entrance structure, however, does not fit easily into an Iron Age context, and I would suggest that it was a medieval gatehouse, or gate tower, erected when the Iron Age enclosure was adapted, probably in the 12th century, as a ringwork. Frequently such ringworks were provided with drawbridges, but at Shiels the shifting nature of the subsoil may have led the builders to leave a causeway. By placing the gatehouse on that causeway they would have stabilised it, since the posts embedded in it on either side would have held the ground between them firm.

It seems that slumping of the ditch sides must always have been difficult to prevent. Suggestions have been made - clay lining, of the ditch and stakes driven into the ground - as to how the problem may have been tackled in later times.

The later ditch was probably wider, flat-bottomed and never as deep as the first ditch. It may be considered rash to suggest a stockade consisting of a double line of upright timbers from the slight remains at the entrance, but in the absence of any evidence for inner or outer banks such a solution must be considered. So long as such a stockade was kept in good repair it would have served well, but if left to decay it would quickly have been eroded, destroying post-holes in the process. Within the enclosure there was no trace of medieval buildings, for the round houses are surely of the earlier period. However, apart from accommodation in the gatehouse there may have been medieval structures inside the enclosure which could have left no obvious clues. Medieval buildings in timber were often framed and so, like turf-built structures, rarely to be confirmed except on unploughed surfaces.

*Note.* For 12th century ringworks see RCAHMW 1991, 79-133. If Shiels is indeed a ringwork in its later phase then it is likely to have been built after 1136, about when David I gave the lordship of Renfrew to Walter fitz Alan, the first of the Scottish Stewarts (Barrow 1973, 337-61)

# Future research

*Derek Alexander*

## Data

The quality and quantity of the archaeological information on prehistoric societies in Renfrewshire is still not sufficient (as yet) to construct as detailed a picture as has been presented for other parts of the country; such as has recently produced for Skye and the Western Isles (Armit 1996), and Orkney (Ritchie 1995). The simplest solution to this problem would be to expand the available database through increased application of modern fieldwork techniques. However, in order to progress our understanding of the subject we must ask questions of even the limited data available.

## Questions

The following questions form a limited number of suggested research topics for the future:

How representative are the current distributions of known sites to actual settlement patterns in prehistory?

Does the Late Bronze Age/Iron Age settlement record represent a chronological sequence of development or a hierarchical settlement pattern?

Where is the evidence for Mesolithic activity and Neolithic settlement?

How do the archaeological remains in Renfrewshire fit into the wider picture of prehistoric settlement in western Scotland?

## Answers

To find answers to such questions archaeological research in the county must be tailored specifically, through the production of concise project designs, with defined aims and objectives, outlining the preferred methodologies

by which these can be achieved and brought to publication.

By far the most important future work which could help in answering some of the questions would be the increased use of archaeological field survey. The lack of a Royal Commission (R.C.A.H.M.S.) inventory volume for Renfrewshire is a noticeable gap in the data base of archaeological information, especially since these publications often form the starting point for further research in other areas of the country. The lack of measured surveys, especially of some of the larger enclosure sites such as Duncarnock fort, restricts the level of detailed research required to construct any social or political models for prehistoric society. Although complete survey of the entire county is out of the question, it is hoped that further survey work similar that undertaken on the Gleniffer Braes (Topen 1992) and Moyne Moor (Henry 1995) will continue to fill this gap and expand the number of known sites.

In addition to expanding the distribution of known types of sites, future survey work may identify types previously unknown in Renfrewshire, such as the possible unenclosed platform settlement on Ballageich Hill, near Eaglesham (Hunter 1994, 29). Such sites could then be targeted for future trial excavation.

The increased use of measured field survey has been mentioned above. Other survey techniques could include the increased use of aerial photography to discover new cropmark sites. Unfortunately the preponderance of fields under pasture in Renfrewshire coupled with poorly draining soils is not conducive to the production of clear cropmarks (Alexander 1992, 18). However, the use of geophysical survey, such as resistivity and magnetometry to detect buried archaeological features could be helpful in this respect. Initially research could be targeted at known sites which are either poorly preserved or only indicated by concentrations of artefacts. If the use of geophysical techniques is found to be successful,



then prominent topographic locations, of unknown archaeological potential, could be surveyed in an attempt to identify former settlement sites.

Although there are five excavated later prehistoric enclosed sites (Knockmade, Craigmarnoch, Shiels Farm, Knapps and Walls Hill) in the county, the chronological definition remains poor, since only two have produced radiocarbon dates. Further limited excavation, coupled with detailed sampling strategies to recover datable material, will be required before a better understanding of the sequence of development of these enclosed sites can be obtained.

Further systematic field walking of ploughed fields is necessary to expand our knowledge of the distribution and form of Mesolithic activity and may also help to locate concentrations of Neolithic artefacts, which could be targeted for excavation in an effort to locate the elusive settlement sites. Investigation of the possible long cairn sites would enhance knowledge of Neolithic ritual activity which may in turn be related to domestic activity.

The environmental evidence from Shiels Farm (Scott this volume, Robinson 1983) and Walls Hill (Ramsay this volume) make a very important contribution to our understanding of the surrounding environment and man's effect on the natural landscape during later prehistory. Further environmental work, pollen analyses and the recovery and study of plant remains, from excavated sites are required in order to indicate the different farming practices employed in prehistoric Renfrewshire, especially for the earlier periods.

In addition to the fieldwork, further study of artefacts recovered both from fieldwalking and excavation would be useful in understanding the resources exploited by prehistoric man in Renfrewshire.

Archaeology now forms part of the planning process (National Planning Policy Guideline 5) and the new councils that comprise the old "Renfrewshire" (Renfrew, East Renfrewshire and Inverclyde) obtain advice on archaeological matters by the West of Scotland Archaeology Service (formerly of Strathclyde Regional Council). Any development, therefore, that is likely to effect archaeological remains requires prior research and fieldwork as a condition of

planning consent. So far, however, there have been few developments within the county which have required archaeological evaluations, but this may only be a matter of time.

## Conclusion

Although the county may not be as rich in upstanding remains as many other parts of Scotland, the variety of the research work undertaken over the last 40 years, outlined in this collection of papers and the extensive work of Frank Newall, has provided a relatively detailed insight into prehistoric activity in Renfrewshire. It is hoped that in the future research can be tailored, through defined project designs and rigorous fieldwork, to answer some of the questions outlined above.

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