

LATER PREHISTORIC SETTLEMENT IN THE
WESTERN ISLES OF SCOTLAND

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Declaration

I declare that the work undertaken in this study and the composition of the thesis were carried out solely by myself.

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Abstract

This study aims to establish an understanding of the nature of settlement development in the Western Isles in the period from c.1000 BC - 800 AD. A new classification of the sites is formulated to deal with the specific Hebridean context and with the restrictions of the available evidence. This provides a framework for analysis and replaces previous schemes, imported from elsewhere in Scotland, which have tended to confuse the settlement patterns and the settlement development of the area.

The large number of older excavations are reassessed in the light of both new approaches to classification and interpretation, and the evidence of recent survey and excavation. A coherent settlement sequence can be seen to emerge, showing a development of monumental architecture in the mid-1st millennium BC from a background of non-monumental domestic settlement: this monumentality persists for several centuries in the form of the atlantic roundhouses and wheelhouses before being gradually replaced by non-monumental, cellular and linear structures in the 1st millennium AD.

Structural, locational and spatial analyses combine to demonstrate patterns of settlement development which show the progressive adaptation of Hebridean populations to the changing socio-economic context. The development of architecture is shown to be linked to contemporary social and economic processes. The environmental context of settlement development is shown to be of great significance in shaping broad trends of settlement development, while the specific responses of human groups indicate the importance of social factors.

The final part of the study proposes possible models for the interpretation of settlement change. Material culture, including architecture, can be seen to be used actively in the negotiation of social relationships, both within the islands and between the islanders and the emerging states of Scotland in the 1st millennium AD.

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PART ONE
INTRODUCTION AND BACKGROUND

Chapter One

Introduction

General Introduction

The later prehistoric settlement sites of the Western Isles of Scotland form part of one of the richest archaeological landscapes in the British Isles. The quantity of preserved sites and the quality of individual site preservation are outstanding even in the context of Highland Britain: the added bonus of waterlogging of large numbers of sites and the richness of the artefactual record, relative to the rest of Scotland, gives the area the potential to become one of the major areas for research-based archaeology and the evaluation of interpretative and theoretical approaches. These factors are shared with much of Atlantic Scotland but in the case of the Western Isles the degree of landscape preservation and the absence of later agricultural damage, together with the relative lack of exploitation by early antiquarians, increase the archaeological potential. The lack of syntheses of the data to modern standards and the absence of credible models of settlement in the islands have prevented the full realisation of the area's potential. The present study treats the evidence for later prehistoric settlement patterns in the area in the context of these problems.

Definition of terms

Before embarking on the study of the later prehistoric settlement of the Western Isles it is first necessary to set out precise definitions of the terms used. This is especially important given the possible ambiguity of each of the terms in the title.

Later Prehistoric

Later prehistory is here taken to comprise the 1st millennium BC and the 1st millennium AD prior to 800AD, the conventional beginning of the Norse period. This definition of later prehistory requires some

further explanation and defence. There is, as will be discussed below, no settlement evidence securely dated to the late 2nd millennium BC or to the early 1st millennium BC: this period forms a notable gap in the settlement record of the islands. The Beaker settlements of Northton (Simpson 1966) and the Udal (Crawford 1985), dated to c.1700 - 1500bc, are not succeeded by any known, full Bronze Age settlement sites in the Western Isles. The next settlement with structural evidence of occupation which can be reasonably securely dated comes from the pre-dun occupation on the islet in Loch Bharabhat, Valtos, Lewis in the mid-1st millennium BC, with a C-14 date of $600 \pm 50bc$ (App.1).

The settlement break isolates the early part of Hebridean prehistory, the neolithic and Beaker periods (in the absence of known Palaeolithic and Mesolithic occupation), from the later part. The character of the archaeological record for the later part of the prehistoric period in the islands is entirely different from that of the earlier; the dominance, from the mid-1st millennium onwards, is on settlement archaeology, in sharp contrast to the funerary bias of the earlier periods. A notional date of 1000BC can be set for the start of the present study and as a convenient, though not in itself significant, date for the beginning of the later prehistoric period. Later prehistory in this sense comprises the periods often referred to in the literature as the Late Bronze Age, the Iron Age and the Dark Age, Early Christian, Early Historic or Pictish periods.

Recent excavations have hinted at links between the settlement patterns of the earlier and later prehistoric periods in the islands (e.g. Armit 1988b) and the settlement break may well be the result of research priorities in the past. Aspects of this problem will be discussed in the following chapters. Nonetheless the definition of the Hebridean Late Bronze Age, Iron Age and Dark Ages as a relatively coherent later prehistoric period is an essential analytical device at this preliminary stage.

The date of 800AD for the end of the study marks the conventional approximate date of Norse incursions and settlement. The evidence,

from the Western Isles themselves, for the nature of these incursions is very slight. Norse material culture and settlement forms are sufficiently distinct to prevent confusion with late pre-Norse settlement (Lane 1983) and discussion of the Norse material will be restricted to the nature of its impact on native societies.

The later prehistoric period is taken to date from the first appearance of the characteristic structural and material assemblage of the Hebridean Late Bronze Age and Iron Age, in the early or mid-1st millennium BC, until the beginning of the Norse period c.800AD. The origins of later prehistoric settlement patterns in earlier prehistory and the fate of native settlements in the period of Norse dominance will be examined in the discussion chapters.

Western Isles

The Western Isles are relatively easily defined as the modern political and administrative unit of that name comprising the Long Island, from Lewis in the north to the smaller islands to the south of Barra i.e. the Outer Hebrides (Ill. 1.1). The islands of this group are closely linked to each other by short sea crossings and form a coherent geographical unit. The islands of the St. Kilda group have not been included.

Settlement

For the purposes of this study, settlement sites will be taken to be only those sites with some structural evidence for actual human habitation. This definition excludes a number of site types which may otherwise be defined as indicators of settlement, such as field systems and middens devoid of structural remains. These other site types will not form part of the main study.

Aims of the Study

The central aim of the thesis is to disentangle the mass of settlement evidence for the Western Isles in the later prehistoric period which

has been subject in the past to classification systems imported from other areas; it will be argued that these systems have prevented an unbiased evaluation of settlement types and settlement patterns in the area and have led to a stagnated prehistory. Inappropriate frameworks for the evidence have hindered the design of appropriate research programmes and appropriate targeting of rescue priorities.

The first stage is the structuring of a classification system designed for utility within the area, which is sufficiently flexible to avoid stifling future interpretation. From there, a relative chronology and examination of the functional, chronological and structural relationships between settlement sites can be approached. A provisional chronology of material culture can also be attempted.

The second aim is the formulation and of models dealing with developing settlement patterns in the area which can provide a starting point for future research designs in the absence of current serious or credible models for the area. The achievement of the first aim is a prerequisite for this.

A Hebridean Approach

The approach taken to the material in this thesis is essentially that of the examination of monuments in relation to their context; this includes environmental context, the context of past archaeological interpretation, and particularly the context of relationships with each other. It is also a specifically Hebridean approach; the relationships with monuments outwith the Western Isles have formed almost the sole classificatory and analytical tool in the past. It is a deliberate decision, within this work, to bring in outside comparisons at a secondary stage in the analysis rather than at the primary stage of site classification and the attribution of function and chronology. The reasons for this decision are discussed in Chapter Four, and in the discussion sections at the end of Chapters Six to Ten for individual site types.

This approach can usefully be contrasted with that described by Iain Crawford for his work at the Udal, North Uist, most specifically stated in his pamphlet of 1985. Crawford explicitly set out, at the Udal in 1963, to initiate a long-term excavation which would provide an archaeological sequence of structures and artefacts, analogous to a pollen core through the whole prehistoric sequence, giving a sample of the cultural development of the area from the earliest occupation until c.1700AD. In his 1985 publication Crawford claims to have achieved the aim of setting up a sequence of material culture by reference to which other sites can be dated and assessed when the Udal is published. The statement that "almost all significant new archaeological information is produced by excavation" (Crawford 1985, 17) underlies Crawford's approach. Crawford's view of the archaeological record is that it forms in a continuous and unchanging way akin to the uniform deposition of forms of environmental evidence; the only valid archaeological objective, as seen by Crawford, is sequencing material culture as ammunition for the historian to construct an unspecified form of regional history. Archaeology in this view is purely descriptive and it is far from clear what useful contribution it can make to any form of relevant and interpretative history.

Such a simplistic and essentially unarchaeological treatment of excavated evidence has distorted the settlement record of the islands and led to a number of unwarranted assumptions which have tended to obscure the potential value of the results of the excavations at the Udal. For example, a change in artefactual evidence at around 100 - 300 AD was interpreted by Crawford as entailing an invasion by Scotto-Picts (Crawford 1974); in retrospect, after excavations at Eilean Olabhat, North Uist (Armit 1988b) and Cnip, Lewis (Armit 1988a), this artefactual 'break' is seen to be the result simply of a gap in the Udal stratigraphy. This case will be discussed in detail in later chapters but it is cited here as being symptomatic of an over-reliance on the situation on one site, outwith even its local settlement context. Changes in the use of the site relative to wider settlement patterns between different periods, as well as differences between periods of intensive settlement and periods of abandonment or

sporadic use, mean that the simplistic approach which sees the cultural remains or the lack of them at any given period at the Udal, as typical of the whole of the Western Isles, will inevitably distort and prejudice the evidence.

The present study acknowledges the contribution made by the Udal project in terms of structural and material sequences, particularly through the work of Alan Lane on the later prehistoric period (Lane 1983) but approaches the actual development of our understanding of the period through the relationships between sites and endeavours to make full use of the great archaeological advantages of the Western Isles. The large numbers of extant field monuments, and the rich body of excavated data, have been largely ignored in the course of the interpretations of the results of the Udal project. Excavation will be treated as one of a range of ways in which 'new' archaeological information can be generated; it will be argued that the pursuit of excavation, as at the Udal, without the initial construction of settlement development models and in a random, core-sampling way, is of very limited use in the area under consideration. That the Udal remains entirely unpublished some twenty-five years after the start of the project indicates the problems involved in becoming committed to an open-ended large-scale excavation without specific research direction.

The Udal sequence shows the development of the land use on one patch of machair over several millennia with no indication of how any of the various settlements of various periods which were sited there related to their surrounding landscapes and with no information on the location of sites of intervening periods. The importance of the eventual published artefactual and structural sequence is not in question, although much of its value has inevitably been superseded in the 1980s, but the formulation of a research strategy for the whole of Hebridean archaeology based on the Udal approach, proposed by Crawford, denies the richness and potential of the region and squanders the limited resources available to research. The Udal has been the sole long-term research project in the Western Isles prior to the establishment of the Edinburgh

University's Callanish Archaeological Research Project and the Loch Olabhat Research Project in North Uist. It is in this context that the present study begins.

Thesis Structure

The thesis is divided into four parts comprising thirteen chapters. Part One provides an introduction to the aims of the study and sets the context, both of previous research in the area and of the environmental background. Part Two re-evaluates the evidence of the excavated sites in the light of recent work, both excavation and survey, organised according to the preliminary classification system formulated in Chapter Four. This system attempts to provide a framework for analysis by classification at several levels, including construction method, morphology and spatial organisation, without the imposition of assumptions of functional, chronological or cultural relatedness between classified types. The abandonment of certain preconceptions drawn from outside of the Western Isles allows for a more coherent picture of many of the excavated sites to emerge. Each of the defined classes are examined, on the basis of the re-evaluated excavated evidence and the available data from field survey, in terms of their structure, chronology and function; the validity of the defined classes of settlement site is assessed at this stage and the utility of further subdivisions is discussed.

Part Three deals with the application of a number of techniques to elucidate further the Western Isles settlement sites. These are discussed under the headings of structural, locational and spatial analysis. Each has been used extensively in areas of Atlantic Scotland but here the applicability and utility of a range of analytical techniques will be examined in relation to the problems of the single area under study.

In conclusion, Part Four discusses the results of the re-evaluation and analysis and goes on to propose potential models for settlement patterns throughout the period. The results of the study will be set within the context of current theoretical approaches and its

implications for the prehistory of areas outwith the Western Isles will be discussed.

In the chapters which follow, individual sites will be cross-referenced to the catalogue (App.4). This will take the form of the catalogue reference code in brackets after the name of the site. Where sites with multiple distinct structural forms (which have more than one catalogue entry) are referred to, the entry most relevant to the particular discussion will be used.

Chapter Two

Environment and Archaeology in the Western Isles

It is essential in the consideration of the settlement patterns of any period in any area to develop an understanding of the environmental background and to consider all of the ways in which it might affect use of that area by human populations. Whilst it is recognised that environmental factors are not the only forces affecting prehistoric society and economy, the environmental background of the Western Isles provides its own set of economic possibilities and restrictions, establishing a context, changing over time, within which societies of all periods must operate. In addition to defining the available range of economic and settlement potential, the environment of the Western Isles has had a great part to play in determining the archaeological visibility of the various site types. Differential destruction has prejudiced the development of archaeological interpretation, particularly through the effects of deposition and erosion of soils in different areas, and through coastal change.

Great changes are known to have taken place in the Western Isles since they were first occupied human populations, in terms of climatic deterioration, sea-level change, peat growth and machair formation. The rate and chronology of change, however, and their effects upon human settlement are not fully understood. Later chapters will stress the role of environmental factors as important influences on later prehistoric settlement patterns and settlement changes, so it is necessary to discuss the environmental evidence in some detail.

For the purposes of this discussion it is convenient to divide the environmental features of the Western Isles into two groups. Firstly there are those features which on our archaeological timescale can be regarded as constant; features of location, solid geology and topography which were the same in later prehistory as they are today. Secondly there are the changing features of the Western Isles environment which are of central importance in the study of

prehistoric settlement patterns and which will necessarily take up most of this discussion: these include climate, soils and vegetation, and coastal change. This chapter will first describe the 'constant' environmental factors and their influence on human settlement, and then assess the evidence for the changing features in an attempt to present a picture of the environment as it was in later prehistory while retaining an awareness of the problems involved. Finally attention will be directed to the effects of environmental forces on archaeological perceptions of prehistoric settlement.

Location

The Western Isles form a distinct geographical and geological unit lying off the west coast of the Scottish mainland separated from the Inner Hebrides by the Minch (Ill. 1.1). The chain of islands is some 210km long from the Butt of Lewis to Barra Head and the main islands are separated only by narrow straits, which have always made sea-communication relatively easy.

The Western Isles belong to the Atlantic Province, linked to other areas of western Britain and Ireland by the western seaways and to the Orkneys and Shetlands in the north. It is important not to see the islands as a peripheral part of Scotland which, as a political or cultural unit, is wholly irrelevant to the later prehistoric period, depending as it does on the vagaries of relatively recent history. The Western Isles are geographically and geologically unrelated to the central belt of Scotland and from the Neolithic onwards the cultural unity of the Atlantic West is a recurrent theme. On this view the Western Isles need not be peripheral. It can be argued that it is their essential unrelatedness to central and eastern Scotland which has led to their misuse by Scottish mainland authorities over several centuries resulting in their being seen as wholly peripheral today.

Geology

Geologically the Western Isles are extremely homogeneous, consisting almost entirely of Lewisian gneiss (Ill. 2.1), one of the

oldest rock formations of Europe. The long island chain is the surface expression of a ridge of Lewisian rock which stretches as far as the west of Shetland. The weathering of this rock has produced an undulating landscape and has yielded thin acid soils. The rock contains no appreciable metal deposits and is not outstanding as a building stone. It is notable that one of the first areas settled in the Neolithic was the only substantial area of non-Lewisian rock in the island chain ie the area around modern Stornoway (Henshall 1972, 118). The undulating inland areas containing large numbers of small, shallow lochs are characteristic of the islands, often fringed on the West by strips of machair, grass-covered shell sands separated from the sea by modern dune systems. The east coast by contrast is much rockier, with bare hills rising sharply from the sea, and these eastern areas have generally been avoided by settlement in recent centuries.

Climate

The climate of the Western Isles is mild in comparison with the Scottish mainland due to their location and topography. Precipitation is high although spread very evenly throughout the year. Mean air temperature varies little, with snow and frost rare. Perhaps the most obvious climatic feature of the islands are the extremely high winds which persist throughout most of the year. The climate, as elsewhere in Britain, has clearly been subject to major change since prehistoric times, but an analysis of prehistoric climate can only be approached through a study of indirect evidence such as soil, pollen and faunal history. For the purposes of this discussion the changes in the prehistoric climate will be examined in the context of the evidence from soil and pollen studies.

Soils and Vegetation

The central feature of the Hebridean landscape today is the marked division between the white and black lands ie the heavily settled coastal strips and patches of machair and the much more extensive inland peat-covered areas. Both of these soils are of relatively recent formation and their rate and chronology of appearance and

dominance are central to any understanding of past settlement patterns. Illustration 2.2 shows the distribution of modern soil types on Barra and South Uist, simplified from data made available by the Macaulay Institute in Aberdeen. This indicates the extent of the main soil types divided principally between the shelly sands of the machair and the peaty soils and blanket peats of the rest of the islands.

The blanket peat and peaty gley soils which cover much of the inland areas of the islands, and are overwhelmingly the dominant soils in terms of overall area, have been the principal restrictive factor in the economic development of the islands in their recent history. The formation of this peat has been caused by a combination of wetness and poor drainage, creating anaerobic conditions which inhibit the decomposition of organic material. This has resulted in the formation of a highly infertile, acidic and poorly drained soil which supports a very restricted range of vegetation and prevents the growth of trees. The peat-covered areas are extensive in all of the main islands but are at their most extreme in the northern part of Lewis where, in the absence of substantial areas of machair, the blanket of peat has covered virtually the whole land area: the only exceptions are where the efforts of post-medieval farmers have carved out small areas of improved land around individual townships. For agriculture today the peat is an extremely hostile soil, being rated normally at 6W or 7W on the MacAulay land assessment scale (Glentworth 1979, 132) and 5W at best on the shallow slopes which can be slightly better drained. Large areas of the islands today are entirely useless to agriculture or viable only for rough grazing.

Apart from the machair, which will be discussed below, and the anthropogenic soils, the non-peat covered areas in the Western Isles are limited to very small and isolated patches, e.g. at Ness in the north of Lewis where non-calcareous gley soils occur (Glentworth 1979, 132) and on the hill-slopes of southern Harris around Leverburgh and Rodel, where the brown earth soils provide relatively good grazing (Glentworth 1979, 132). The absence of peat beneath excavated chambered tombs (Henshall 1972, 506), the

occurrence of submerged wood deposits, and tree stumps found in peat cuttings all confirm that the present-day dominance of peat is a relatively recent feature. The development of the peat and its associated vegetation and the nature of the preceding soils and vegetation types have been studied in two recent pollen analyses at sites in the west of Lewis (Ill. 2.3); by Birks and Madsen at Little Loch Roag (Birks and Madsen 1979), and by Bohnke and Cowie at Tob nan Leobag near Callanish (Bohncke and Cowie forthcoming, Bohncke 1988). Additional information derives from work on mollusc remains from the multi-period settlement site of Northton in Harris (Evans 1971). Perhaps the most important recent work is that on macroscopic sub-peat plant remains from Lewis (Wilkins 1984).

The analysis of pollen samples from the Little Loch Roag mire (NB 142 248) near Miabhaig in the west of Lewis was carried out by Birks and Madsen, two botanists from Cambridge University, in an effort to establish the vegetation history of Lewis in the Flandrian period. The site was chosen because of its proximity to the standing stones of Callanish, some 11km distant, and because of the absence of peat cutting in the immediate vicinity. The main finding of their work relevant to this study was the absence of arboreal pollen, of any period, sufficient to suggest that there had been woodland in the area. The 18% of arboreal pollen recorded as the highest for any zone of the Flandrian is dismissed by the authors as the result of windblown mainland pollen (Birks and Madsen 1979, 836). In zone LLR-2, from 9140BP to 4450 - 3250BP, the Loch Roag pollen study indicates an open grassland vegetation, with stands of willow and tall herb communities in damper areas and isolated stands of birch and hazel scrub (alder being accounted for by windblown mainland pollen) with *plantago lanceolata* becoming established as a constant feature of the pollen diagram from c.3350BP (Birks and Madsen 1979, 839). In zone LLR-3 (3250BP to the present), whilst isolated birch copses remained, the predominant vegetation reflected in the Loch Roag sequence is a "mosaic of grassland" (Birks and Madsen 1979, 839). The conclusion of the authors is that vegetation in Lewis has changed very little over the last 5000 years, encompassing the entire later prehistoric period, and that all of the

arboreal pollen can be accounted for by isolated birch and hazel scrub and pollen blown from the mainland of Scotland.

There are a number of reasons for disputing this point of view. The reconstruction offered by Birks and Madsen fails to account for the clear evidence of tree stumps found in peat (see below) and submerged in some areas: they themselves accept that birch, alder and hazel occur at the base of blanket peats at Bragar and Barvas on the north-west coast of Lewis, areas exposed to the full force of the westerly gales which Birks and Madsen claim prevented any Flandrian afforestation of the islands (Birks and Madsen 1979, 827). If the westerly gales are to be blamed for the lack of Hebridean woodland then clearly the areas most likely to have supported some degree of tree growth are the areas on the sheltered east coast and in the inland valleys. The Little Loch Roag site is situated on the west coast in precisely the location least likely to have supported woodland and cannot be taken to provide a typical picture of vegetation conditions in Lewis. The contribution of pollen from the east coast, when faced by the extreme westerly winds, is likely to have been minimal and the absence of any land mass contributing pollen from the west could account for the lack of arboreal pollen on west coast sites. The Little Loch Roag mire would have collected what was primarily a very local pollen sample from one of the areas of Lewis least likely ever to have supported woodland. Its relevance to other areas of Lewis and to the Western Isles as a whole is highly questionable. The Loch Roag study is further contradicted by the other environmental studies which have taken place in Lewis and Harris.

Work by John Evans on the land snail remains from the multi-period machair site of Northton in Harris suggests a very different environmental picture to that proposed from the pollen analysis at Little Loch Roag. Species of shade-dwelling mollusc dominate, particularly in the earlier neolithic levels. Evans postulates an initially forested environment becoming more open, presumably through human interference, in the Later Neolithic and Beaker 1 phase (Evans 1971, 58). Evans sees actual woodland regeneration in

the ensuing Beaker 2 phase prior to Iron Age clearance. This Northton work, though not based directly on soils or vegetation but on the study of mollusc species and their modern habitats, is clearly at variance with the treeless Flandrian moorland envisaged by Birks and Madsen. The results from this site are supported by the results from the other major site upon which recent environmental work has been carried out, at Tob nan Leobag in Lewis.

The site of Tob nan Leobag is a small promontory close to the standing stones of Callanish and some 11km from the Little Loch Roag valley mire. Pollen analysis was carried out on this site in 1978 and 1979, in conjunction with the excavation of later prehistoric field boundaries in advance of peat cutting. The results here present a very different picture of Flandrian vegetation development to that given by Birks and Madsen. In pollen zone CaN-1 (up to 5320bc) the Leobag sequence shows a very high percentage occurrence of birch pollen reflecting the existence of substantial stands of birch, probably in the low-lying and now submerged areas around Great Bernera and Callanish. The occurrence of oak and elm is ascribed to windblown mainland pollen and while the evidence for native pine is inconclusive from the pollen study, the occurrence of pine boles under the peat in other parts of Lewis suggest that it too would have occurred at this period (Birks and Madsen 1979, 827). Areas of Lewis wooded certainly with birch and possibly with pine appear to have existed even in the exposed west of the island in early Flandrian times. In sub-zone CaN-2a (5320 +/- 100bc to 5000bc) forest fires appear to be common over a considerable period, indicating probable human activity. An expansion of willow occurred at the expense of birch, followed in sub-zone CaN-2b by the first appearance of cereal pollen and a decline in rowan, willow and birch, although the latter remained above 14%. Towards 2000bc a further reduction in birch may reflect local anthropogenic use of timber and the inundation by the rising sea of the low-lying sheltered wooded valleys (Bohncke and Cowie forthcoming, 21). During the last two millennia bc indicators of pasture, e.g. white clover, occur along with cereal pollen and herbs associated with agriculture and the pollen record as a whole suggests heavy use of the area (Bohncke and Cowie

forthcoming, 24). Significantly, these indicators decrease towards the end of zone CaN-3 in the latter centuries bc and the pollen record is witness to a regeneration of birch. If it was possible for birch to recolonise an area on the exposed west coast of Lewis even in the last centuries bc, the implication is that in the easterly areas and more sheltered parts of inland Lewis natural woodland would have been entirely capable of surviving at least to this period despite the effects of climatic deterioration. From 0-800ad, in zone CaN-4, a regional increase in heather is marked, while local conditions become wetter, although cereal pollen persists until near the end of this zone (Bohncke and Cowie, forthcoming, 24).

The results from the Leobag peninsula present a very different picture of vegetation history to that given by the Little Loch Roag study. Leobag is perhaps the more reliable site for several reasons: the sample site itself lies in a more open area with less chance of a purely local and atypical sample; it is in an area known archaeologically to have been settled throughout prehistory; and its results accord with the observed sub-peat, macro-vegetation evidence which are inexplicable by the Loch Roag model of vegetation development.

Leobag is still far from an ideal site from which to derive information on the vegetation history of Lewis. The strength of the prevailing westerly winds make it unlikely that Leobag can provide any information on the conditions on the east side of the island and the problems of differential spread and differential production of pollen of various species, common to all pollen analysis, are heightened by the extreme conditions.

The only published environmental work which does examine the eastern half of the islands is that by Newell (1988) on the pollen sequence associated with a field wall at Sheshader in Lewis (Ill 2.3). Unfortunately, only one C-14 date was associated with this sequence so it cannot be tied in to the archaeological sequence with any confidence. The Eye peninsula, on which the sample site is located, lies in the only eastern part of the Western Isles demonstrably

settled during the Neolithic and is thus atypical of this side of the islands (cf. chambered tomb distributions Henshall 1972). The intensity of settlement here relates the area more to the western part of the islands than to most of the east coast, which appears to have remained unsettled throughout prehistory. Nonetheless periods of birch and hazel wood and/or scrub were demonstrated in the sample (Newell 1988, 88) and from the available date, Newell suggested that blanket peat growth may have begun around 2200BC (1988, 88). The pollen study showed intensive anthropogenic interference in woodland clearance including episodes of burning, weeds of cultivation and species associated with animal grazing. Although of interest in its demonstration of intensive human activity, the Sheshader sequence does not help in addressing the question of woodland survival on the east coast.

The most significant recent analysis is that by Wilkins (1984) based on a study of macroscopic arboreal remains from sub-peat contexts at forty sites in Lewis and Harris. A number of tree stumps were collected for study from these sites, all from within 50cm of the base of the peats. Sample collection was dependant on suitable depth of peat-cutting in each area and the gaps on Wilkins' distribution of sites need not relate to an absence of forest cover. Pine, birch and willow were found at several sites and each sample was interpreted as representing the woodland cover at its site prior to the covering of the site by peat. Dating of the samples produced markedly different concentrations for the samples of each species, with willow samples concentrating from 7190 - 6600BC, birch at 6030 - 3080BC and pine at 2920 - 1960BC. The preservation of the samples suggested relatively fast peat growth and it is likely that the dates for each sample are reliable for the termination of woodland in their immediate environment.

The distribution map of Wilkins' sites indicate a striking pattern of peat encroachment on the Hebridean Flandrian woodland. The early encroachment on willow and birch woodland occurs at the margins of the area of the distribution and does not affect the pine sample sites, concentrated in areas more remote from expected human settlement,

until the Neolithic. This suggests that while pine forest developed from the birch woodland in some areas, in others peat encroachment was already halting all tree growth.

Importantly for the later prehistoric period it indicates that pine forest persisted in many areas of Lewis into the 2nd millennium BC and presumably, in well-drained areas of the Harris Hills or sheltered areas of Harris itself, for some time after that. The Harris Hill valleys would not be exploited for timber while easily accessible woodland remained in Lewis and Harris, and better drainage would prevent natural peat encroachment, so it is probable that substantial woodland resources remained into the late 2nd millennium at least.

From the end of the Neolithic timber was becoming, if not a scarce resource, then at least one which required increasing effort to obtain. This factor may contribute to an understanding of some aspects of the archaeology of our period.

Reviewing Birks and Madsen in the light of the incontrovertible and substantial presence of pine forest in the islands, it becomes clear that their dismissal of the local pollen contribution to their *spectra*, and to the arboreal component in particular, must itself be dismissed. Their arboreal *maxima* correspond well with Wilkins' findings of the woodland composition through the Flandrian as peat encroached at the forest margins. The occurrence of willow prior to c.5000BC, the dominance of birch from c.5000BC to 3000BC and then the first appearance of pine at 3350BC, all correspond to the woodland pattern suggested by the macroscopic remains. The occurrence of hazel in the Flandrian woodland is thus also to be expected on the basis of the pollen results, although this species did not survive macroscopically. The problem in the pollen studies is the very low absolute values, corroborated by Wilkins in his study of pollen from his site 13 yielding macroscopic remains of pine boles. The most probable explanation for the low absolute values is the action of prevailing winds from the Atlantic over long periods, displacing much of the local pollen and preventing westward pollen movement on any scale (Wilkins 1984, 258).

More analyses are required, particularly from the east coast and the upland areas and sheltered valleys of the North Harris Hills, to settle the rate and chronology of woodland decline on prehistoric Lewis, although a broad outline may now be discerned, for Lewis and Harris at least. Various other factors do point to the existence of woodland areas even on the exposed west coast during the later prehistoric period; wild cat and blackbird were identified from an iron age site in 1936 (Barber 1985, 19) while on the east coast the North Tolsta crannog (M.3) in the drained Loch Osabhat was described as an artificial island formed of wooden stakes (Blundell 1913, 298), as was the site in Loch Airidh na Lic (RCAHMS 1928, No.51; M.6).

Work in its initial stages in the Uists has set out to study the environmental history of the islands through the analysis of pollen cores from machair lochs and infilled lochs on the peat/machair interface (Hirons 1986). The preliminary results from the machair loch site of Askernish in South Uist and the bog at Balemor in North Uist indicate a complex and varied number of local environmental situations with strong indications of anthropogenic interference at an early stage in the Neolithic or Mesolithic. Such early human interference in the natural vegetation pattern of the Uists may help to explain the lack of recorded arboreal vegetation on the west side of the islands. The dating of the Uist cores and the expansion of the project should eventually enable a far fuller picture of vegetation development in the Uists to emerge. Further work on a range of environmental material underway at Sheffield University, and the study of waterlogged macroscopic environmental material, insects and pollen from the Loch Olabhat excavations will also greatly increase our knowledge of the developing prehistoric environment (Armit 1988b).

The development of the present inland peat soils and vegetation would appear to have occurred fairly recently although it is clearly difficult to date directly. Woodland can be traced, even in the least conducive areas, until the latest centuries BC at least, on the basis of the Leobag results, interpreted in the light of Wilkins' findings; birch

regeneration took place in these areas even at a very late stage. Initial peat growth would have begun in ill-drained areas and hollows and would have expanded at the expense of woodland in a progressively wetter and cooler climate, with the likelihood of a strong anthropogenic dimension from the Neolithic at least. The peoples of the later prehistoric period in the Western Isles would have been living at a time of woodland retreat and peat growth; this process is central to an understanding of later prehistoric settlement patterns.

The machair lands upon which agriculture in the islands has been centred for many centuries are spread over some 8% of the Uists and Barra with smaller patches in Lewis and Harris. This machair land, consisting of white shell sands, contrasts sharply with the black peat covered inland areas. The machair is characteristically low-lying and formed of gently undulating sand hills consolidated by a vegetation of grasses fringed on the shore side by modern unvegetated sand dunes. In terms of agricultural potential the wealth of the machair is only relative to the adjacent, barren peatlands. The machair is highly unstable and prone to wind erosion when devoid of vegetation, as when ploughed. Drainage too is a problem with summer drought, due to rapid drainage through the sand, alternating with winter flood as the water table rises. The winter machair landscape is studded with temporary machair lochs which add to the problems of erosion by undercutting the sand hills. The alkalinity of the sand further reduces the machair's agricultural value to an overall value of LUC3 (Glentworth 1979, 136). Cultivation has largely depended on the mixing of the sand with peat, seaweed or dung, both to reduce the alkalinity and to reduce the susceptibility to erosion.

Although the machair is a geologically recent formation it has played a part throughout its development in the environmental background to human settlement of the Western Isles. The history of machair development is one of constant erosion and redeposition of material throughout the greater part of the Flandrian period. The machair consists of glacial sands, marine shell and other skeletal material which appear to derive principally from the now submerged shallow

areas off the west coast of the islands, where from 13-18 miles out into the Atlantic, the sea-bed has been stripped of glacial sand. This theory assumes a rising sea-level and the evidence to support this assumption is discussed below. It is not probable that any other sources could account for the material which forms the machair as no sizable rivers drain into the Atlantic from the islands, and erosion of the Lewisian rock is not rapid enough to account for a substantial amount of the material. Much of the development of the machair landscapes is accounted for by the instability of the shell sands in an extremely windy climatic regime. The sub-machair relief appears continuous with the black lands further inland and the machair appears to have been deposited over a relatively uniform area by wave action scouring the sea-bed as sea-levels rose (Ritchie 1979, 112). This sea level change is confirmed by the lack of the raised beaches common on the Scottish mainland and in the Inner Isles, by the intertidal deposits of organic material including birch stumps at sites like Vallay, Pabbay and Berneray (Ritchie 1966, 81) and by the historical accounts of land lost to the sea in relatively recent times e.g. at Baleshare and Udal (Barber 1985, 82), which show that the process is still continuing. Deposits of soft glacial drift at HWM at sites in South Uist, e.g. Orasay and Vorrán Island (Ritchie 1966, 80), demonstrate that sea level is now at its highest Flandrian level and is still advancing, albeit very slowly.

From the study of inter-tidal and submerged organic deposits it is estimated that the relative sea-level in the Western Isles has risen by some 4 - 5m. since 3100BC, producing the characteristic Hebridean coastal pattern of tidal strands, fords and off-shore islands (Ritchie 1985). The action of this rising sea level, as well as greatly reducing the area of the islands, has thrown material from the submerged land surface up onto the shore creating, and continually pushing back, the machair. Ritchie estimates that 75 - 80m of sea level rise has taken place in the Flandrian (Ritchie 1979, 112) although the great majority of this occurred prior to the later prehistoric period. Even a relatively small rise in sea level could cause enormous changes in the machair landscape and slow but steady change was in progress throughout prehistory. The possibility exists of land bridges between

many of the islands even into the later prehistoric period: the Uists and Benbecula in particular may have formed one large island. The shallow sloping west coasts appear to have been far more vulnerable to land loss than those of the east, which show no sign of significant change in later prehistory.

Two key archaeological areas can shed light on the effects of the forces of coastal change both during and since the later prehistoric period. These are the areas of Vallay Strand in North Uist and the Valtos Peninsula in the west of Lewis. The locations of many of the archaeological sites in and around Vallay Strand (see Ill. 12.4), many of which were excavated by Erskine Beveridge in the early C20th, show that the local landscape has been subject to great change since the later prehistoric period. Sites like Garry Iochdrach (W.7) and Foshigarry (W.4) lie too near the present HWM to be practical for settlement and are regularly flooded, and the floor levels of excavated sites such as A Cheardach Bheag (W.16), in South Uist, lay below the present water table. The great concentration of sites on and around the large expanse of inter-tidal sand which is Vallay Strand strongly suggest that when the sites were occupied the area was a large machair plain drained by the two streams which still exist at low tide on either side of Vallay itself. The drowning of Vallay Strand would not have required any appreciable rise in sea level (although a rise of some magnitude is probable), but could have been accomplished by the forces of erosion and redeposition acting upon the local machair which, as the Udal stratigraphy shows, was extremely unstable in the later prehistoric period. The breaching of coastal sand dunes on either side of Vallay would have led to wholesale flooding of the low-lying machair plain, creating the inter-tidal expanse of Vallay Strand and casting up new sand dunes over the sites on higher ground around the present HWM. A change related to only a minimal rise in sea level could by this means have a catastrophic effect on the human settlement potential of a sizable area of land, of relatively high fertility, over a very short period of time.

The Valtos peninsula in West Lewis highlights another of the ways in which the processes of machair development can distort the prehistoric settlement pattern. The wide beach of Traigh na Berie shows all of the signs of continuing erosion which conform to Ritchie's model B of machair development, suggested for sites in South Uist (Ritchie 1966, 112). The occurrence of steep hills immediately behind the machair has led to the piling up of sand, forming machair slopes rising up to these hills at their nearest points to the beach and to the infilling of two lochs, Loch na Berie and Loch na Cuilc, which lie between the machair and the high ground. The retreat of the coastal dunes continues today both at Berie, where the coastal sites recorded by the RCAHMS in 1928 (RCAHMS 1928, Nos. 84 and 98) have disappeared, and at the neighbouring beach of Cnip where the rate of erosion was of the order of 1m per year until the recent construction of a sea-wall. The eroded material is continually redeposited further inland but the local topography prevents the development of a true machair plain. Probing of Loch na Berie has revealed that the Berie broch (A.L19) lies on a rocky island in what originally was a much more extensive loch, now reduced to a reed filled marsh, lying behind a machair plain stretching considerably further seawards (Harding and Topping 1986, 34). Sand has accumulated in the loch from the side nearest the coast, filling it to the extent that the broch is now joined to the shore for most of the year. When the Berie site was occupied the sea would have been at a somewhat lower level and the dunes would have extended several hundred metres further away from the site. Alternating bands of sand and peat formed in the flooded periods have, since the later prehistoric period, virtually obliterated a loch which acted as a settlement focus. The site's classification as an island broch had to await excavation in 1985.

The landscape of the Berie beach area and the other beaches of the Valtos peninsula have changed dramatically over the past 2000 years. Large areas of former machair have been lost and with them have gone the recorded traces of a number of settlement sites and doubtless many which were never recorded; the sand redeposited from those eroded areas now covers and therefore obscures the sites

which survive on the remaining machair and similarly distorts the landscape which would have existed in prehistory. The form and size of the two surviving lochs have been altered beyond recognition and any lochs which may have existed further towards the sea will have been entirely obliterated. The processes which can be seen to have drastically affected the Berie settlement picture were also at work in many other less well-studied areas and must be taken into account in a study of prehistoric settlement in coastal areas of the islands as a whole.

Archaeological Visibility

The environmental changes discussed in this chapter have greatly affected the development of settlement studies in the islands. The instability of the machair has led to the erosion of much of the iron age coastline, and coastal sites, while the consequent redeposition of the eroded material has further hampered study by obscuring sites further inland. Peat on the black lands has covered vast inland areas making the identification of sites extremely difficult and often impossible by conventional means. The acidity of the peat and the alkalinity of the machair means that preservation on the sites of different areas favours different materials, making comparison difficult.

Despite these problems the Western Isles do have advantages in terms of site identification and classification which make this study not only possible but well-suited to the area. The use of stone for building combined with the lack of particularly destructive later agriculture have meant that the state of preservation of many structures of the later prehistoric period is remarkably good. The limitations of the evidence, occasioned mainly by the forces of environmental change, must be taken into consideration to prevent too great a reliance on the completeness of the survey data, which may result from a superficial examination of the high degree of preservation and clarity of the preserved and recorded structures. Distributions are clearly and inevitably distorted for machair sites and for low-lying sites in areas of blanket peat. The completeness or

otherwise of distributions of the various site types will be discussed in the individual chapters concerned with those sites.

The Later Prehistoric Environment - A Summary

During the later prehistoric period, the environment of both the coastal and inland areas of the Western Isles was undergoing complex processes of change which are still in operation. The two major processes of deforestation and peat growth on the one hand, and machair development on the other, being largely independent, cannot be co-ordinated justifiably on the basis of the evidence currently available: both, however, were central forces in the economic and settlement activities of communities throughout the later prehistoric period. The evidence for woodland, particularly on the east side of the islands, persisting into this period has been shown to be strong. It may be during our period that the tree cover on the west was becoming exhausted, perhaps through overuse as well as through the effects of a wetter climate, encouraging peat growth and making woodland regeneration increasingly difficult.

Throughout the later prehistoric period the environmental processes which shaped the historic environment of the islands were in progress and settlement patterns and economic patterns over this period would have had to continually adjust to the varying restrictions imposed by these forces. It is impossible at present to isolate one chronological section of prehistory and compare directly the settlement situation and the corresponding stage of coastal and inland vegetation and soil development: in subsequent chapters an attempt will be made to identify the trends and patterns observable from the settlement record and to examine those patterns in the light of the environmental processes discussed here.

Models based on environmental determinism cannot, in themselves explain the detail of material culture change as recent post-processualist critiques have pointed out (e.g. Hodder 1986), but this should not be allowed to deny the importance of environmental factors in restricting the range of available economic strategies. A

society pursuing a set of social and economic strategies within the context of one environmental regime may well be forced into radical changes by environmental change of the magnitude demonstrated in the Western Isles. Settlement patterns can only develop if they are adaptive (by definition since if they were not adaptive they would not survive to develop). The environmental background remains a vital conditioning factor in the interpretation of settlement pattern change. The specific response, in terms of specific forms of material culture, will depend on many factors beyond those which are purely environmentally adaptive. Part Four of this thesis will discuss the role and value of processual, and particularly environmentally based, forms of interpretation, and of post-processual modes of explanation in the contexts of this period and area.

Chapter Three

History of Research

The present confusion in settlement studies in the Western Isles is a legacy from the way in which the history of archaeological research in the islands has progressed. Specific excavations have often been undertaken on the basis of non-archaeological factors and systems of classification of the Hebridean monuments have long been dependant on classifications of monuments in other areas where more recent work has taken place. In much the same way as environmental features, such as peat or machair, distort the evidence and reveal false concentrations, so the vagaries of research patterns over the past century have had a substantial effect on the received archaeological picture. The literature, mostly over 40 years old, cannot be taken to reveal a representative sample of Hebridean sites or even a random one. To understand how our present sites and monuments record has accumulated it is necessary to consider the reasons and motives behind past research and to identify the biases which have been introduced into the archaeological record.

In the Western Isles, until recent years, individual projects have never been related to overall research strategies. The archaeology of the islands has evolved gradually and sporadically through the interest and work of a number of individuals successively over more than a century, each working within the context of different archaeological approaches, and with diverse techniques drawn from the mainstream of British archaeology. In this chapter the history of archaeological research in the Western Isles will be divided into four phases which, although not strictly chronological, represent the main stages in the evolution of the present archaeological situation.

Phase One - Initial Fieldwork

The first serious work on the prehistory of the Western Isles was published in 1890 by Captain F.W.L. Thomas, a serving naval officer and amateur antiquarian, based on his extensive travels to

archaeological sites in Lewis and Harris. Thomas' surveys were highly selective but relatively well recorded and provided valuable and detailed descriptions, particularly of structures which have since deteriorated. It is unfortunate that he concentrates virtually exclusively on the most obvious structures, the brochs and duns, includes few plans and ignores the context of the central structures within the sites as a whole.

Some years after Thomas' publication the antiquary Erskine Beveridge built a house on the island of Vallay, which is joined at low tide to the mainland of North Uist. Beveridge, who had already published material on the archaeology of Coll and Tiree (Beveridge 1905), went on, in the years from 1897 until his death in 1920, to excavate a very large number of sites on North Uist, concentrating on the area around Vallay Strand, and to carry out an extensive survey of the island. The results of his most prolific period of work were published in 1911 in his lavishly illustrated book, 'North Uist' (Beveridge 1911), which contained over 150 black and white photographs of sites of all types on the island. Excavations carried out after this publication, at Dun Thomaidh, Foshigarry, Garry Iochdrach and Bac Mhic Connain, were published after his death by Graham Callander (Beveridge 1930 and 1931). These excavations and surveys still provide the main database for the archaeology of North Uist. An unparalleled concentration of sites was excavated in the Vallay area, albeit to a very rudimentary standard of recording, providing a huge body of data which has never been properly assessed, perhaps due to its volume and the idiosyncrasies of the excavations which vary in quality and thoroughness between sites.

Beveridge concentrated his work on the machair wheelhouse sites and over a period of some fifteen years excavated 19 sites in North Uist. This campaign on North Uist, and particularly on Vallay Strand, has resulted in a great distributional bias towards that area. Most of the sites were visible only as grassed-over machair hills which Beveridge excavated initially to determine their nature, and continued to excavate fully if he found them productive or interesting. Without this trial and error approach which Beveridge

had the time to adopt, it is most unlikely that a number of his sites would have yet been located. This is the situation which undoubtedly exists in a number of other machair areas throughout the Western Isles, e.g. in the closely comparable area of Uig Sands. The archaeology of Vallay cannot be compared to any other area without stressing the importance of this distributional bias.

The RCAHMS survey of the Outer Hebrides published in 1928 was based on survey work carried out between 1914 and 1925 at what was clearly a far from ideal time for an orderly and organised field survey. This work sought to catalogue and classify all of the prehistoric and historic monuments of the Western Isles and form the basic reference work for the islands. Although by its size and scope it is of central importance, the RCAHMS report has a number of serious shortcomings. The fieldwork was carried out in a piecemeal fashion over many years and in several areas was very quick and erratic. Barra and its surrounding islands were covered in only ten days (including two Sundays when presumably no work was possible), covering 38 sites, which can have given time only for very brief visits to known sites and which must have ruled out field-walking. Many of the island duns of the Western Isles were not visited due to the lack of a boat and this inhibited the proper recording of a whole class of site. The following quotation is revealing about the difficulties the RCAHMS surveyors faced:

"In some cases a partially submerged causeway could be used though only at the cost of a wetting; very rarely a boat was available; more often the remains were inaccessible without special provision and observations consequently had to be made from the shore." (RCAHMS 1928, v)

When these sites were visited the descriptions concentrated on the central structures to the virtual exclusion of the other features of the sites.

Apart from the efforts of Thomas, Beveridge and the RCAHMS survey, archaeological research in the Western Isles prior to the

1940s was very limited. Excavations were carried out at Galson (Edwards 1923) and at the North Tolsta crannog, reported by the Rev. Odo Blundell (Blundell 1913) who was trying to extend the distribution of Scottish crannogs to the Western Isles. Blundell recorded a number of other artificial islands in the Western Isles as crannogs and it appears to be as a result of his very brief work that the RCAHMS included crannogs as a term in their classification system covering island sites which lacked classifiable central structures and which appeared to be partly or wholly artificial. They did not account for the relationship of these sites to the other forms of island structure which also appear to be sited on artificial islands.

The initial period of archaeological fieldwork in the Western Isles was one of data collection. Excavation and survey were dependant on mainly non-archaeological factors and the whims of individuals; these were principally visitors to the islands like Thomas and Blundell, and Beveridge operating in the area around his own home. The RCAHMS collected further reports on known sites but could not afford the time for extensive survey to correct the distributional biases already inherent in the data. The basic site distribution preserves the activities of the early workers and places undue emphasis on particular areas and types of site.

It was during this early period that the greatest number of excavations took place and the majority of the Hebridean later prehistoric assemblage was collected. Very little was done to classify this material or the sites from which it came. Beveridge, who dominates this early phase of research, was not apparently interested in classification or in the wider comparisons of his sites. The initial formulation of the classification of Atlantic Iron Age sites and material was left to those like Joseph Anderson and his contemporaries, whose main research interests lay in the Northern Isles and particularly in the Orkneys. This initial use of sites in the north as type sites for monument classes, which were then extended to cover the Western Isles, has continued to plague Hebridean archaeology throughout its development.

Phase Two - Interpretation and Data Gathering

The initial phase of data gathering and antiquarianism ended with the publication of the RCAHMS report in 1928 which laid the foundation for all later work. A gap in terms of original fieldwork in the later prehistory of the Isles lasted from 1925 until 1946 when Sir Lindsay Scott began excavations on the aisled roundhouse at Clettraval in North Uist. Scott's work marked a new phase of research, based on the excavation of specific sites to attempt to answer specific problems in the prehistory of Atlantic Scotland. Scott had been greatly influenced by Childe's 'Prehistory of Scotland' (Childe 1935) in which he had defined the 'castle complex' of Atlantic Scotland, encompassing brochs and duns, and had put forward the hypothesis that they and their associated material culture derived from diffusion from south-west England.

In his paper '*The Problem of the Brochs*' (Scott 1947) Scott had sought to trace the development of brochs from a wider tradition involving wheelhouses and other structures, deriving ultimately from south-west England. Using a brief survey of the brochs of Barra and Harris, Scott devised a developmental sequence which he then attempted to test by the excavation of Clettraval. This latter site produced quantities of decorated pottery which formed the basis for a general typological series which Scott was to apply to the Western Isles as a whole. Scott had progressed from the days of Thomas and Beveridge by developing a more planned approach to his research. He treated all of the later prehistoric sites of the islands together, recognising basic similarities in the structure and the material which lay behind the typological division of brochs, duns, wheelhouses etc., and was dismissive of the approach which segregated 'broch towers' from other types of site. This approach of Scott's was a valuable contribution which has been largely ignored by later workers until recently (cf. Barrett 1981). By placing the much vaunted uniqueness of brochs into perspective and arguing for brochs as one element of a wider settlement tradition with most brochs as relatively low defended farmhouses, his contribution was considerable, although his enthusiasm was perhaps carried too far in his refusal to recognise

any chronological basis to the division of brochs and wheelhouses in general.

The great problem of the legacy left by Scott to the prehistory of the Western Isles was that, by his use of the Hebridean brochs to argue for brochs as a varied, dun-related group of structures of various heights and forms, he led later workers, mainly working in other areas, to believe that it was the Hebridean brochs specifically which were somehow degenerate or untypical. The Western Isles were the only major broch area not to be visited by Euan MacKie in the course of his thesis research in the early 1960s because of his belief that the brochs there were atypical and dun-like (MacKie 1965, 94).

By Scott's time the main concerns of broch studies were the typological classification and structural development of the monuments and the analysis of the minutiae of their diffusion from the south-west of England, which had become a very strongly held dogma by the 1940s. Shortly after Scott's work at Clettraval, a further major wheelhouse excavation was carried out by T.C. Lethbridge at Kilpheder on the South Uist machair. Lethbridge used his excavation report to launch an attack on Scott's interpretation of the structural reconstruction of wheelhouses and to put forward the unusual idea that the wheelhouse was an elaborate windbreak for an internal tent used by the Iron Age colonists (Lethbridge 1952, 180). More importantly, Lethbridge was the first to claim that wheelhouses were chronologically successive to brochs in the Western Isles, even if for very subjective reasons; he saw the brochs as the initial strongholds of invaders with the wheelhouses developing from them at a later, more settled stage.

More influential was Alison Young, Scott's immediate successor in the Western Isles, who developed his ideas and carried out excavations at the wheelhouse of Tigh Talamhanta in Barra (Young 1952) and at the nearby site of Dun Cuier (Young 1955), which she classified as a galleried dun. Young followed the accepted tradition of the time in regarding brochs as a special category of site which demanded rigorous definition, and even proposed her own

classification system (Young 1961). This proposed the division of the brochs into Classes I and II of which only Class II, with their relatively small internal diameters and defensive locations, occur in the Western Isles. The galleried duns were supposed to represent a degeneration of this type of broch (Young 1961, 176) with a greater diversity of form. Young took a step backwards from Scott by divorcing brochs from the context of the hundreds of dun sites, with which they are geographically and structurally associated, basing this division principally on the results of her excavations at Dun Cuier which produced late material of the C6th and C7th (Young 1955, 304). As we shall see below, this material derives from secondary occupation of the site and Dun Cuier was originally a broch in the traditional terminology. The interpretation of Dun Cuier is of central importance in the discussion of the relationship between brochs and duns and will be dealt with fully in a Chapter Five.

Young's view, that the Hebridean brochs were built by recently arrived colonists who proceeded to build wheelhouses when conditions became more stable and then resorted to the use of duns in the face of later incursions by the Dalriadic Scots, went unchallenged at the time and became firmly established in the literature. Young retained Scott's views on the ultimate southern English origin of brochs but replaced his theories on the integrity of the Hebridean Iron Age drystone building tradition with a view of successive structural forms built in response to inferred historical situations. The late date of Dun Cuier was used to separate the broch tradition from that of the galleried and, by implication, the island duns. Since Phase 2 the emphasis in Atlantic Scottish prehistory has shifted to the Northern Isles with the result that, for the Hebrides, the structural sequence proposed by Alison Young and Scott's Cleittraval sequence have become fixed in the general literature.

The work of Young, Lethbridge and Scott represents the main theoretical and interpretative progress of the 1940s, 1950s and early 1960s, but a number of other excavations also took place during this period. Most notable among these were the excavations carried out as a result of the building of a rocket range in South Uist and

Benbecula by the MoD. Several machair sites were excavated including a number of wheelhouses.

The main aim in this second phase of archaeological research was to relate the archaeological record of the islands to events and developments in England, supposedly nearer to the centre of the prehistoric world. The assumption was that the north was, in prehistory as now, a peripheral and dependant area where sophisticated structural and material forms introduced from southern England soon degenerated into less accomplished forms. Scott envisaged a rapid colonisation over a century or less, followed by a slow, painful decline into land congestion, cultural degeneration and raiding, giving rise to the development of broch towers. The development of the whole Iron Age drystone building tradition within Atlantic Scotland was not considered as a serious possibility at this stage.

Phase Three - the 1960s and '70s

After the 1950s the attention in Atlantic Scottish studies was focused away from the Western Isles. The dominant figures in this third phase were Euan MacKie, working mainly in the Inner Hebrides and publishing widely on the origins and culture of the broch builders, and J.R.C. Hamilton working in the Northern Isles, notably at Clickhimin and Jarlshof. As MacKie, who dominated broch studies in the West, failed even to visit the Western Isles in the course of his thesis research (MacKie 1965, 94) and Hamilton's fieldwork was based in the North, the resulting interpretations and hypotheses on brochs, duns and wheelhouses tended to identify the Inner Hebrides and the Northern Isles as the core areas.

The main preoccupations of this period were with the structural typology of the brochs and their architectural evolution. Their south-western origin and their function as defensive structures were affirmed by most workers at this time. Unlike Scott, who considered brochs as one element in a wider structural range, MacKie abstracted brochs from their context as part of prehistoric

landscapes and treated them as a uniform phenomenon which could be meaningfully studied in isolation, throughout Atlantic Scotland. Brochs were defined by very rigorous criteria based on architectural detail; landscape study was largely ignored. The most extreme manifestation of this is in the treatment, by MacKie, of the brochs in Glen Beag on the mainland opposite Skye; sites which were evenly spaced along a narrow glen represent, according to MacKie, the beginning and end of the broch-building tradition, with Dun Grugaig as an alleged semi-broch and Duns Troddan and Telve as solid-based broch towers at the end of the broch sequence (MacKie 1965, 109). That MacKie does not consider the implications of this theory in terms of landscape study is indicative of the general lack of concern for site context in this phase of broch studies. The purpose of this study is not to set out to challenge the various interpretations of brochs on a national basis but to examine brochs as elements within the settlement patterns of one area. The approach adopted by MacKie may be usefully cited as the antithesis of the present work and serves to illustrate how architectural typology has dominated all other aspects of the Atlantic Scottish Iron Age.

Throughout the period very little fieldwork was carried out on the later prehistory of the Western Isles where excavation tended to concentrate on earlier periods (e.g. Northton, Rosinish, parts of the Udal). Small scale excavations at Toe Head (Simpson 1966), Dun Carloway (Tabraham 1976), and parts of the Udal sequence represent the main work done in the 1960s and 1970s. The typological site sequence proposed by Alison Young went unchallenged and, with increasing age, settled into the archaeological literature. MacKie's work placed wheelhouses later than brochs, mainly on the basis of the evidence from the Northern Isles, but he accepted Young's views on the late date of duns which enabled him to avoid dealing with the problem of the structural parallels between the brochs and duns of the Western Isles. This period was one of stagnation for the archaeology of the Outer Isles during which little fieldwork was undertaken and even less work attempted on interpretation and synthesis.

Phase Four - Recent Work

In recent years the field of broch studies has again attracted attention with the excavation of sites, such as Bu and Howe in the Orkneys, which have tended to cast doubt on the previously held theories concerning brochs. Work over the past few years in the Western Isles has again begun to tackle the problems of Hebridean prehistory through specific research projects. Work by Cowie and Bohncke at Tob nan Leobag sought to provide a picture of the environmental history of the region linked to the archaeological monuments on the peninsula (Cowie and Bohncke forthcoming). Iain Crawford's work at the Udal in North Uist has been in progress since the early 1960s and seeks to trace the settlement history of one small and well-defined area. This site, when finally published, will be of considerable value in terms of the succession of structural forms and material culture. Unfortunately by the nature of the single-site or single-area approach the settlement patterns of any period are not reflected and we are presented with a chronological section demonstrating activity at one small location without any indication of its place in the wider settlement system. In terms of the Iron Age settlement patterns the evidence from the Udal has not affected the traditional model simply because it fails to tackle the basic problems of the relationships between site forms and between inland and coastal settlement.

Since 1985 a research project has been underway centered on the Edinburgh University Archaeological Field Centre at Callanish Farm in Lewis. This has involved land and air survey, land and underwater excavation and the setting up of an experimental farm, all designed to investigate the later prehistory of the region. Initial field survey demonstrated that there were many features in common between the various sites classified as island duns, brochs and crannogs in Lewis and Harris (Armit 1985). Excavation at the site of Dun Bharabhat in West Lewis (A.L18), combining land and underwater techniques, has begun to indicate that island duns and brochs may be very difficult to separate typologically and chronologically (Harding and Topping 1986). Excavations at this

site, at the nearby Berie broch (Harding and Armit 1987; A.L19) and at the iron age settlement complex at Cnip (Armit 1988a; C.1), together with field survey, are aimed at producing a settlement study of an area which combines a large number of recorded settlement sites of various types.

Patrick Topping's doctoral thesis on later prehistoric pottery in the Hebrides broke down the Scott's Cleittraval sequence, by examining the stratigraphic evidence from the excavated sites which produced large amounts of pottery. This revealed that the numerical analysis which produced the sequence was flawed, being based on too few sherds in certain cases and on unproven stratigraphic connections between spatially unconnected parts of the site (Topping 1985). The removal of the support of this pottery sequence eliminated the last justification of Alison Young's structural typology. Another doctoral thesis, by Alan Lane, has set out a convincing sequence for the late pre-Norse and Norse pottery of the region, based on the material from the Udal (Lane 1983), and this has clarified the chronological position of a number of sites.

Recent work in North Uist at the sites on Loch Olabhat, carried out by the writer since 1986, has revealed a further complication in the classification of later prehistoric settlement types (Armit 1986, 1987 and 1988b): the site of Eilean Domhnuill a Spionnaidh (M.13), classified previously as an island dun of the later prehistoric period, showed on excavation only early neolithic occupation material. The implications of this site for settlement study and classification will be discussed below in Chapter Ten. The settlement at Eilean Olabhat (C.19) has also produced material datable to the later prehistoric period (Armit 1988b).

A number of rescue excavations carried out by SDD/HBM on sand-dune erosion sites in the Uists has continued to add to the corpus of excavated material. The site of Hornish Point in South Uist (W.14), with its succession of wheelhouses, is particularly important in terms of its chronology as will be discussed in Chapter Six. Survey work both by Sheffield University, in Barra, and by the Loch Olabhat

project, in North Uist, has begun to show a previously undemonstrated density of sites in the areas under study.

Summary

The mistrust of the old hypotheses and the lack of any convincing model of prehistoric settlement is reflected in the confusion of the most recent book on the archaeology of the Western Isles: here, without any archaeological evidence or argument, John Barber suggests that brochs, duns and wheelhouses may all be constituents of one hierarchical settlement pattern as the abodes of, respectively, chiefs, sub-chiefs and ordinary farmers (Barber 1985, 60). This view ignores not only the wealth of chronological material but also the distributions and numbers of the sites concerned. It is in this context that the present study begins. The lack of a convincing and testable model of later prehistoric settlement, involving all of the settlement forms, is a serious handicap to the planning of any research project. In the following chapters the structural and material evidence from the many early excavations will be reassessed without the restrictions imposed by the initial assumption of south western origin or of any subjective assessment of varying architectural 'worth' between structural types. This re-examination will be aided by evidence from field survey work, the recent excavations and by the application of structural, locational and spatial analysis, where applicable, to the site distributions. The history of research shows that the value of past work in the islands lies primarily in the wealth of structural and material remains. Previous syntheses have been hampered by the belief in diffusion from the south and by the geographical extension of inappropriate typological schemes from other areas. It is essential to return to the original material and to reconsider it in the light of present, more flexible approaches to Atlantic Scottish prehistory.

PART TWO
THE DRYSTONE STRUCTURES

Chapter Four

Preliminary Classification

The Western Isles are particularly rich in prehistoric field monuments: the long traditions of drystone building, which persisted from the earliest prehistoric settlement of the islands until as recently as the end of the nineteenth century, have resulted in the formation of landscapes covered by the grassed-over remains of abandoned settlement and burial sites. To attempt any analysis of settlement sites and their distribution over particular, archaeologically defined, periods we must first define the criteria of selection. It is essential to be explicit about which types of site have been included in the present study and why others have not.

Euan MacKie has written, in reference to brochs specifically, that "unless the term is defined exactly any discussion becomes too diffuse to be constructive" (MacKie 1984, 108). It will be argued below that rigid adherence to typological classification can often lead to the discussion becoming too specific to be constructive, with classifications introduced to rationalise interpretations rather than as tools for study. The analysis, in isolation, of artificially segregated groups, can lead to a form of tunnel-vision when the validity of the classification system in defining exclusive groups is too readily assumed. The relationships between the types of site which our classification systems define are at least equal in importance to relationships between sites belonging to any one type.

Nonetheless MacKie is correct in that we must have a classification system in order to define the groups of data used in various analyses and to give concrete form to our interpretations. It must be stressed, in relation to the classification of brochs and duns in particular, that classification systems are tools to be used during archaeological analysis and not facts inherent to the data.

Systems of classification are not, in themselves, the problem; rather it is the use made of such systems in the analysis and interpretation

of data which can become obstructive to an objective understanding of that data. In the case of the brochs it has long been the practice to define the type by a rigorous classification system; sites which are adjudged to fit the required criteria (often on the basis of good preservation) are then removed from the context of the other monuments with which they are associated, to compare them with sites from widely different local contexts which also happen to fit the same prescribed criteria. From analyses of this artificial distribution, conclusions are drawn, largely without reference to the associated monuments in any individual area. The perceived nature of the problem of the brochs, involving questions of architectural typology, has dictated the way in which data has been gathered and the classification of the sites themselves. The preliminary classification which will be developed in this chapter will attempt to group the sites without assuming that there need be any special treatment of the sites which have been previously thought to belong to the category of brochs, and have been thus divorced from the context of the other sites. Preliminary classification will be on the basis of observed features from field survey and the limited excavation evidence, prior to a detailed consideration in subsequent chapters of the nature of the settlement systems of which these sites were a part.

This study is concerned with sites which can be reasonably securely interpreted as having been used for human habitation. It excludes therefore, in the primary consideration of the evidence, sites which may have been stock or field enclosures, find scatters and isolated middens. It is acknowledged that these sites may be taken as settlement evidence in a wider sense but the evidence from these types of site in the Western Isles is not sufficiently clear as to date or function on any one site, or sufficiently coherent in terms of site distribution, to enable any detailed analysis at this stage. The sites discussed here are those which have structural evidence of later prehistoric settlement.

The dating of sites to the later prehistoric period, or indeed to any archaeological or historical period, on the basis of surface traces is inherently problematic especially in an area as poorly understood as

the Western Isles. It is not necessarily the case that structural or morphological features need relate to a specific archaeological period. In the case of the many hundreds of occupied island sites in the Western Isles this problem is particularly acute, as it is clear from excavation, such as that at Eilean Domhnuill, Loch Olabhat in North Uist (Armit 1988b; M.13), that these locations were a favoured settlement focus from at least the early third millennium bc. The problems in classification vary in detail between the various site types and will be discussed more fully below. It is important here again to take note of the numerous sites without extant structural remains, which may nonetheless have originally formed part of the same settlement systems as their more obvious neighbours. It will be important to assess the nature and distribution of such sites in relation to the settlement distribution patterns examined in the following chapters.

Before defining the classification system it is useful to review the way in which the material has been classified in the past. The first attempt at classification was by the RCAHMS and was formulated to accommodate the results of their Hebridean survey. This was based on the state of knowledge at the end of the long period of antiquarianism in the area. The next important classification of brochs and duns was MacKie's, from his paper of 1965: although it did not devote much attention to the Western Isles, this classification was central to later work. The classification of the monuments of the Western Isles apart from the brochs and, to a lesser extent the duns, has not been reassessed since 1928 and is in need of updating in the light of large amounts of new data from the islands and from related monuments in other areas.

The RCAHMS survey recognised the basic unity of the structures classified as brochs, duns and promontory forts (RCAHMS 1928, xxxv). The group of Defensive Constructions into which these monuments were placed is used interchangeably with the term 'dun' so that, in effect, brochs are being classified as a specialised form of dun (RCAHMS 1928, xxxv). The other main group of relevance here is the group classed as 'earth-houses' which was taken to include such

variants as the wheelhouses. No precise criteria were given for these two wide groupings other than that earth-houses were drystone buildings constructed just under ground level. Presumably the term 'Defensive Constructions' was thought to be self-evident. The two main groups were thus defined on the one hand by assumed function and on the other by construction technique. The earth-house category had no real subdivision but the division of the Defensive Constructions is of interest as it has to some extent survived.

The first subdivision of the Defensive Constructions was the group of Galleried Duns. These were defined as drystone forts with galleries and/or cells within the thickness of their walls but with irregular or oval plans which prevented them from identification with the brochs. The brochs themselves were defined by the combination of a series of specialised architectural features including circularity, galleries and cells within the walls, long narrow entrances and guard chambers. 'Forts in Lochs' represent the class which came to be known as island duns; there are no set criteria given for their definition except that 'Late Duns', a sub-class, are separated by virtue of rectilinear central structures, outer walls with boat noosts and occasional use of lime-mortar (RCAHMS 1928, xl). The other two groups of Defensive Constructions were the Seashore Forts and Promontory Forts; the Promontory Forts were simple walls across the landward side of promontories while the Seashore Forts had walls surrounding a whole promontory.

This early stage in the classification of the monuments was generally imprecise and unsystematic, based variously on location, structural typology and assumed function, combined in an intuitive fashion to group the inventory of surveyed sites. A prime example of this is the use of the term 'crannog' to designate, as if as a separate site type, any artificial island with collapsed stone but insufficient preserved structure to be classified as an island dun. It has, however, been the only attempt to deal specifically with all of the later prehistoric monument types of the Western Isles.

Subsequent work in the Western Isles did not attempt a full-scale re-evaluation of the classification, although Scott did define wheelhouses more specifically as a separate class and subdivided them into wheelhouses and aisled roundhouses (Scott 1948). MacKie's study of the brochs of Atlantic Scotland (MacKie 1965) was the next major work affecting the classification of the Hebridean sites and the way in which they were perceived by archaeologists.

MacKie's work dealt with brochs at a national level. Inheriting a long tradition of broch studies, MacKie's initial preoccupations were with the definition of brochs on architectural grounds as a means of defining a distribution which could then be used to construct hypotheses on the origin and spread of the type. These were basically the aims of several preceding generations of broch scholars of a school represented most forcibly by Joseph Anderson who pioneered work on the interpretation of the brochs (1883). The basic requirement for the study of brochs, as MacKie saw it, was a strict definition of what does and does not constitute a broch (MacKie 1965). MacKie's work was initially set out in 1965 and pursued in a series of subsequent papers (e.g. MacKie 1971, 1974, 1975, 1980). In his most recent restatement of his case (1984) he refers back to his original classification of 1965. In this earliest paper, MacKie divides the "small stone forts" of Scotland into two groups on the basis of the presence or absence of specialised architectural features (MacKie 1965, 100). Those lacking the defining characteristics of brochs are described as duns, which can contain galleries within their walls but which lack the supposed regularity and homogeneity of the brochs. MacKie assumed that these 'duns' varied widely in age and in their cultural context (MacKie 1965, 100) and they are not subject to any internal classification; from that point the duns play no further major part in MacKie's hypothesis, except as a reservoir to contain sites, such as Crosskirk in Caithness (Fairhurst 1984), which on excavation fail to fulfil the stringent criteria for structure and dating which MacKie requires for acceptance as a broch (MacKie 1984, 125).

MacKie followed the long archaeological tradition of seeing the brochs as a highly distinct, highly specialised group of tower-like

structures, their height made possible by their main defining characteristic, the technique of hollow-wall building. By the use of this technique two concentric walls tied together at intervals by rows of lintels, forming super-imposed intra-mural galleries, enabled the structure to be built to a great height whilst retaining considerable structural stability. The further elaborations and subdivisions on the basis of architectural typology are not of particular relevance to the Western Isles and need not be discussed here: the implications of the Western Isles data, and the interpretations put forward in this study, for the wider field of broch and broch-related studies, including MacKie's ideas, will be discussed in later chapters. For any given structure in the field to fit MacKie's definition as a broch it must display a number of architectural features. Central to the definition is the requirement that structures must show positive evidence of having had at least one upper intra-mural gallery (MacKie 1972, 59). In practice this means that a site must have preservation up to a level above the floor of the upper gallery for some part of its circuit as even the presence of intra-mural stairs may simply mean that there was access to a relatively low wallhead.

This definition in itself, as with any definition, is not objectionable, although its utility is open to question. It defines a group of sites on the basis of clearly set out criteria. It is in the use to which this and other classifications of the monuments of Atlantic Scotland have been put that the problems arise. From his work on the architectural typology and distribution of the sites defined as brochs by this means, and on the basis of further subdivisions within the group on architectural grounds, MacKie feels justified in invoking "the facts of structural detail and geographical distribution" to help defend his hypotheses (MacKie 1984, 120). Clearly the definition of sites described above and their analysis reflects only assumptions of the relevance of structural and architectural detail and geographical distribution, since the initial definition of the sample of sites used reflects pre-existing ideas on the nature and number of brochs and on their homogeneity. If the definition of brochs was widened, or indeed further restricted, these 'facts' would quickly change.

There are several ways in which, in the Western Isles, we may feel that the MacKie definition of brochs distorts the perceived settlement pattern, and why we may wish to adopt a different approach to the study and classification of the 'small stone forts' in the area. The first and most obvious objection to MacKie's definition is that it is not applicable in the field. Factors of preservation dictate that although relative to elsewhere in Britain the preservation of later prehistoric monuments is extremely good in Atlantic Scotland, it is rare for a drystone structure to survive to any great height for almost two millennia in an area where drystone building has been virtually continuous. An abandoned structure soon becomes a quarry for stone for later constructions; within living memory, archaeological sites in the islands have been systematically robbed of their building stone. Under these circumstances it is only occasionally that a broch will have been allowed to survive up to its first floor level. As well as stone robbing, the collapse of a massive structure like a broch will inevitably obscure the galleries and other defining characteristics. Even if one accepts that the brochs were a distinct and homogeneous type separate from the other types of 'dun', one must concede that employing MacKie's criteria will drastically under-represent the numbers of brochs in any area. A denuded or collapsed broch will almost inevitably be indistinguishable from an ungalleried drystone structure in a similar state of disrepair. If one accepts that this inability to distinguish between such sites will occur then one cannot speak in terms of 'facts' of geographical distribution.

The second main difficulty with the traditional school of broch studies, of which MacKie has been the most authoritative representative, is that the classification systems in practice have employed a qualitative judgement on the architectural merit of sites and the relationship of this to site function. It has often been assumed that brochs represent the dwellings of an elite or else the periodic refuge of a wider community, or indeed both. In this context there has been a marked reluctance to allow too many brochs to 'exist'. In the Western Isles any site which cannot be shown to have possessed those architectural features characteristic of the brochs

has been assumed to be a dun which, as we have seen in the discussion of the history of research in the islands, has meant that it has been interpreted as belonging to a later and degenerate manifestation of the tradition which produced the brochs. Thus the number of duns has swollen while the number of brochs has been kept at its lowest possible level. The view that duns are heterogeneous and unclassifiable at a detailed level has helped this situation to develop. This problem will assume primary importance in Chapter Five, which will show that there is no archaeological evidence to suggest that a distinct class of drystone ungalleried duns existed in the Western Isles in the mid-1st millennium AD, or indeed at any other time.

In the Western Isles, MacKie accepted 9 sites as definite brochs, with 2 further probable sites and 17 further possible sites. This maximum total of 28 brochs fitting MacKie's criteria leaves well over 100 sites as 'duns' so it becomes imperative that one understand this class of site and its relationship with the brochs to determine whether or not it really is a distinct grouping.

MacKie's scheme is intrinsically likely to underestimate the number of brochs in any area due to factors of preservation, and does not attempt to deal with the classification of duns. Instead it employs the concept of a large class of undifferentiated duns to accommodate sites which, for architectural reasons, fail to qualify for the broch class. The validity of any discussion of brochs at a wider level must depend to a great extent on the relationship between this wider class of site and the brochs themselves. This central problem has not been addressed in the broch-orientated literature. In formulating a classification system for the present study it is essential to deal with this problem and to avoid pre-judging the relationship between sites in a subjective evaluation of architectural features.

A broader classification has been proposed for the roundhouses of Atlantic Scotland as a whole (App.1) using the term 'atlantic roundhouse' to cover the range of roofed structures known variously as brochs, semi-brochs, duns and galleried duns. This system allows

for greater variety of construction and makes no initial assumptions of origins or function: it includes any free-standing, thick-walled drystone roundhouse in Atlantic Scotland. Within this class one can recognise 'complex atlantic roundhouses' by the presence of the architectural traits of hollow-walled construction (broch architecture') and within this the 'broch towers', MacKie's 'brochs', where the techniques of broch architecture are combined to create a tower-like multi-storey roundhouse. This is the terminology used in the following discussion.

The preliminary classification system presented in Ill. 4.1 has been formulated to divide the structures of the later prehistoric period in the islands on the initial basis of structural form and then on the basis of the arrangement and partition of space within the structure. It has not been assumed that brochs, or any other type of monument, need represent a distinct and specialised class. The system is designed to give flexibility of classification and to avoid qualitative labelling of sites whilst allowing enough division to make the data manageable in the following discussion. It has not set out to define types of site such as brochs at an initial stage. The purpose of the classification is not to give defined form to site types already assumed to exist on the basis of archaeological tradition but simply to provide a framework within which the monuments of the Western Isles can be meaningfully discussed. It will be the task in subsequent chapters to assess whether or not the divisions made on the basis of structure and space have meaning in terms of function, chronology and other archaeological concerns. Later chapters will examine the validity of more specific subdivisions within the broad categories of site defined here.

The present system is designed purely as a research tool. It is not assumed that these categories have meaning other than as a convenient means of defining structurally-related monument forms. It is designed to deal only with the monuments of this one area and it is accepted that classification on the basis of alternative criteria such as location or size could be equally valid in studies related to

different aspects of the archaeological record. There is nothing definitive about the classification.

The first step in the classification of Ill. 4.1 is the defining of that group of structures in the Western Isles characterised by the use of coursed drystone walling, which would appear to include all of the structures of the later prehistoric period as well as of many subsequent periods. It does not include the structures noted at earlier prehistoric sites such as Eilean an Tighe (Scott 1950), or Eilean Domhnuill, Loch Olabhat (Armit 1988b), where structures appear to have been based on boulder settings which seem unlikely to have supported coursed walling; these related structures will be discussed in Chapter Ten. It also omits structures constructed of stone-faced turf banks although some of these, e.g. at Druim nan Dearcag, North Uist (Armit 1988b), may belong in the very latest pre-Norse period. The numerous hut circles recorded in the islands are also ruled out for this reason. There have been no excavations of hut circles in the Western Isles and evidence from elsewhere would tend to favour an earlier date for this group.

The second level of classification is the division of this very broad range of structures into two principal types; those which can reasonably be interpreted as roofed or potentially roofed structures, and those which, through size and/or irregularity, could not be other than unroofed enclosures.

The roofed structures can be further subdivided into four basic structural forms; rectilinear, circular or oval, linear or passage-like, and cellular. No rectilinear structures are noted as belonging to the prehistoric period of the Western Isles as yet and this group is dominated by the many hundreds of blackhouse settlements which are a principal feature of the Western Isles landscape. For the basis of this study this rectilinear group is not further subdivided.

The linear/passage form of structure is restricted to the types generally referred to in the literature as souterrains and earth-houses. These are divided into two classes on the basis of

dimensions. Those which are less than 1m wide and roofed with lintels are classed as linear passages. Those which are greater than 2m in width, and too wide to be roofed with lintels, have been classed as linear house structures. The reasons for this subdivision will become clear in Chapter Eight. The linear house structures could equally be classed as rectilinear structures by their proportions but their subterranean construction and relationship to longer linear structures elsewhere create an argument for them to be kept distinct from the vast numbers of above-ground rectilinear structures of all periods in the Western Isles.

The circular and oval drystone structures account for the bulk of the sites which have been interpreted as being of later prehistoric date. These require further subdivision to organise the subsequent discussion effectively. This level of classification is based on the internal organisation of space; sites with a radially partitioned internal area, based on the construction of regularly spaced drystone piers, appear to constitute a well-defined subdivision separate from sites with open central areas. This radially partitioned group can be manageably discussed at this level of classification. In the Western Isles radially partitioned sites have previously been classified as wheelhouses and aisled roundhouses, although in other areas, notably the Orkneys, many sites classed as brochs would fall into this group. This subdivision on the basis of spatial organisation is a purely organisational device at this stage of analysis. For convenience and consistency of terminology these sites will be referred to as wheelhouses throughout this thesis.

The group with open interiors encompass the sites variously known in the literature as brochs, duns, island duns, galleried duns etc. These are the atlantic roundhouses in the terminology described above and they will be classified as such here. This organisational division will be examined in later chapters to assess its meaning for later prehistoric settlement analysis in the islands. It must be stressed at this stage that the descriptive classification proposed here cuts across previous classifications which have tended to combine several levels of classification e.g. architecture,



preservation, chronology and dimensions. The present classification divides the monuments according to those morphological and other features which are most often visible through field survey: it is recognised that alternative classifications with alternative criteria (e.g. on the basis of access analysis or internal spatial patterning) may be equally valid in other analyses. It is important to avoid confusing the levels and criteria of classification.

The fourth subdivision of the drystone roofed structures are the 'cellular' structures. These are defined as being formed of one or more cells enclosed by a wall which follows the shape of the internal spatial arrangements. Unlike atlantic roundhouses, where the main cell is central to the structure and where its position is dictated by the nature of the walling, the cellular structures may form irregular agglomerations of cells within regular or irregular walling.

The other group of structures which come into consideration for the later prehistoric period are the drystone enclosures. Within this extensive category it is possible to recognise two recurring forms which may be linked to settlement of this period. The promontory forts and walled islets are defined by their location and relatively massive construction. Both types are formed of walls which follow the course of the promontory or island on which they are built, normally resulting in an irregular shape; both types may also consist of discontinuous lengths of walling rather than simple circuits. By analogy with sites in other areas and by the comparison of structural features with other forms of later prehistoric settlement, the promontory forts, defined by location, can be studied along with the monuments classified above. In the absence of any dating material and of any closely comparable sites elsewhere, the walled islets will be discussed in Chapter Ten along with other 'miscellaneous structures'.

The term 'monumental' will be applied to certain types of structure in the following chapters. In the context of the present study, this term will be taken to describe any structure in which the investment of skill and labour in construction greatly exceeds the requirements

of structural stability. It can also describe, but is not exclusive to, structures which are so constructed or located as to be highly visible in the landscape.

Chapters Five-Ten will go on to discuss the monuments, arranged according to the preliminary classification presented here, to analyse the structure and dating of each class. From there will be assessed the archaeological meaning of the various structural forms, and their chronological, spatial and locational relationship to each other, in order to construct a model of the development of settlement patterns in the area.

Chapter Five

Atlantic Roundhouses

The majority of the later prehistoric structures of the Western Isles are circular and oval drystone roofed structures. Those which fall into the category of open interior roundhouses, as defined in Chapter Four, are known variously in the literature as *brochs*, *galleried duns*, *island duns* and *forts* and comprise 140 recorded sites (Ill. 5.1). This discussion uses the atlantic roundhouse terminology as described in Appendix 1. This terminology will be employed in preference to the more strictly accurate but cumbersome 'open interior roundhouse'. Site types belonging to previous classification schemes will be set in italics to avoid confusion.

The division between the atlantic roundhouses and wheelhouses, discussed in the following chapter, is problematic, especially as regards monuments known only through field survey where radial partitions may be difficult to detect. Atlantic roundhouses in the Northern Isles commonly contain radial partitions. An additional complicating factor is the possibility of unrecognised timber radial partitions in the 'open' interior roundhouses. The division is organisational rather than archaeological at this stage; the relationships between the various types will be discussed in the Parts Three and Four.

The following discussion will begin with surveys of the thirteen excavated sites and then review additional data derived from the field survey evidence.

Much of our information on the atlantic roundhouse sites of the Western Isles derives from excavations carried out in the early part of this century and the quality of the evidence is highly variable. Of the relatively recent excavations of the 1970s and '80s, two, Dun Bharabhat and Loch na Berie, are not yet complete and the third was conducted on a very limited scale in one cell of Dun Carloway. The

discussion presented here is necessarily hampered by the lack of recently excavated sites as the older excavations were seldom recorded in sufficient detail to support extensive reinterpretation.

The sites will be examined individually from north to south through the island chain. They will be discussed in terms of their overall site structure, their internal structure, material culture and chronology.

Excavated Sites

A.L12 Dun Carloway, Lewis NB 1901 4122 (Tabraham 1976)

Introduction - Dun Carloway is the best known and most completely preserved of the Hebridean atlantic roundhouses. It has long been regarded as one of the archetypal *brochs* and is one of the tallest surviving prehistoric structures in Scotland. Excavation in 1971 was restricted to one intra-mural chamber at risk from the effects of masonry consolidation.

The site stands on a rocky hillside at c.50m OD. The present wallhead, at some 9m in height, commands an extensive view across much of the coast of West Lewis, although the structure itself is obscured from view by the dark hillside. Although imposing from the immediate vicinity the site is not obvious from any great distance.

Site Structure - There are no signs of multi-period construction at this site and it is perhaps for this reason that it has survived so well. The massive-walled roundhouse was built using characteristic hollow-wall construction and is, by MacKie's typology, a *transitional broch*, i.e. it has galleries and cells for only part of its basal circuit (Ill. 5.2). The overall diameter is 14.3m at the base and the central cell has a diameter of 7.4m (RCAHMS 1928, No.68, 18-20). The wall thickness varies from 2.9 - 3.8m overall at the base.

The original height of the structure was probably little in excess of the surviving height as the gallery narrows to an almost inaccessible width towards the wallhead.

Internal Structure - The interior of the roundhouse was dominated by an open central cell containing an outcrop of rock in its north-eastern sector. This cell gave access into five cells or galleries. Gallery B gave access to an upper floor by means of a staircase running up over Gallery C. Galleries A and C were self contained with access only through the central cell. Gallery D on the ground floor was entered only from the south wall of the entrance passage and formed a 'guard cell'. A fifth gallery is represented by a blocked entrance between Gallery A and the main entrance but its extent is unknown. Blocking appears to be relatively recent and is not indicated on the RCAHMS plan of the site. Details of the first and upper floors are less well known as the surviving walling at that height occupies only a third of the circuit.

Only Gallery A was excavated and it is only here that there is any evidence for function although, as will be seen from the artefactual material and the C-14 dates, there is no evidence that this represents its original function. The excavator interpreted Gallery A as a pottery kiln because of the association of the position of the hearths with wall-voids and the absence of metal-working debris and domestic refuse. Doubt has been cast on this interpretation by Alan Lane who cited the lack of wasters, the small size of the sherds (indicating disturbance and re-deposition) and the mixed nature of the pottery assemblage as evidence of the use of the chamber as a rubbish tip (Lane 1983, 265).

There seems to be no reason why, over the long duration of the use of the chamber, both of these interpretations should not have applied. Lane's hypothesis does not account for the presence of coherent hearths and the correlation of ash spread with the wall void, while the rubbish deposit idea is more plausible in accounting for the remainder of the material. None of the stratified deposits contains any material which can reliably dated before the mid-1st millennium AD, although the structural evidence demonstrates beyond reasonable doubt that Dun Carloway was built many centuries earlier (App.1). It is not therefore possible to demonstrate the primary

function of the chamber; although the wall-voids appear almost certainly to be original, their primary function may well have been for storage and only one (No.1 in Tabraham 1976, Fig.3) had any demonstrable link with the supposed pottery kiln.

Material Culture and Chronology - The excavated material does not appear to relate to the original occupation of the site. Clearly a structure of this sort would have been a focus for settlement until relatively recent times and the periodic clearing out of the cells and galleries and displacement of deposits would render it unlikely that any primary material would survive. Given also the small scale of the excavation it is not possible to conclude much from the material.

The pottery from the site is of a type commonly associated with the mid-late 1st millennium AD (App.3). The assemblage is characterised by round-shouldered jars with flaring rims but notably includes shorter everted rims (e.g. Close-Brooks 1976, Nos. 5 and 57). Lane also noted the presence of a diagnostic Viking-Age platter sherd (Lane 1983, 265, Close-Brooks 1976, No.43) in a layer stratified below a double cordoned globular jar of late Iron Age or Dark Age type. This double cordoned vessel (Close-Brooks 1976, No.49) is closely paralleled in contexts dated AD 124 - 273 (GU 2327), at the 68% confidence limits, at Eilean Olabhat (Armit 1986, Fig.5) and at Dun Cuier (Young 1955, 308, Fig.10 No.92). The mixture of types, in view of the likely use of the chamber at some stages for depositing rubbish, suggests that the assemblage derives from periodic cleaning of the interior.

The only other find from the site was part of a disc-shaped rotary quern from context AG of the excavated chamber.

A C-14 date was obtained from a deposit of mollusc shell towards the top of the chamber deposits. The medieval date of 1300+/-150 ad (GX 3428) has no relevance to the original occupation of the site, serving only to reinforce the mixed nature of the material. None of the material from the excavations can justifiably be used to date the construction of the structure.

A.L18 Dun Bharabhat, Cnip, Lewis NB 0988 3531 (Harding and Topping 1986)

Introduction - Dun Bharabhat in Uig parish in West Lewis is one of three sites on which excavations have been carried out so far through the Callanish Archaeological Research Centre. The excavations began in 1985, running parallel to the excavations at Loch na Berie some 500m distant.

The site lies on an islet in a small loch set among the hills behind the broad beach, Traigh na Berie. The site is not easily accessible from the beach, involving a steep, although short, ascent of a ravine in the hills, down which runs the outflow from the loch. The causeway from the islet reaches the shore directly opposite this access from the beach. Clearly the site has not been designed with convenient access to the machair and the sea as its main consideration. All other approaches to the site must be made through the surrounding hills, presently a maze of ill-drained peat-filled hollows. Although the site lies close to potential agricultural land it has been sited in such a way as to render access from that land more time-consuming than is necessary. Its siting gives a view out to sea, although only to a restricted area of the Traigh na Berie.

Site Structure - The site consists of a small islet some 18 x 14m in extent, upon which sit the remains of an atlantic roundhouse recorded initially as a *dun* (RCAHMS 1928 No.72, 21): its wall galleries and intra-mural staircase show it to be a complex atlantic roundhouse (Ill. 5.3). A causeway some 20m long connects this islet to the shore. Both the structure and the causeway had suffered through extensive stone-robbing, in the construction of an adjacent sheep fank, but large quantities of stone remained both inside the structure and in the water around its perimeter, indicating an originally massive superstructure.

The structural evidence excavated at the site, so far, can be divided into three principal phases; pre-dun occupation, the roundhouse

itself and secondary modifications in the interior of this roundhouse, post-dating its collapse. The main structure at Dun Bharabhat is central to the arguments presented later in this chapter and must be discussed in some detail. The secondary modifications, forming a cellular structure, will be discussed in Chapter Seven.

Perhaps the most significant feature of the excavation of Dun Bharabhat is the difference between its observed surface traces and its revealed structure. Prior to excavation the site appeared to be a typical ungalleried *island dun*; it was small in size; it had no visible traces of any cells or galleries; it had no tradition or local knowledge of having had any such feature, despite its use as a quarry; and its unimpressive remains consisted of a large heap of collapsed stone with occasional facing stones visible amid the rubble. In short the structure appeared to be an archetypal *dun* of the sort found widely throughout the islands. It was partly for this reason that the site was selected for excavation as an initial part of a project examining the various forms of structure of the region.

The site was taken to be an *island dun* of a form distinct from the *brochs* and of a type therefore which had not been subject to modern excavation. That this site, deliberately selected for its unimposing state, its non-monumentality and its apparent representativeness of the *island dun* class of structures, should be shown on excavation to contain extensive intra-mural galleries and cells, is potentially of great significance for the classification and archaeological interpretation of this class of field monument.

The central structure on the site shares a number of features with the *brochs* as defined by MacKie and others, but combines other features which would deny such an interpretation. It is of small overall size; only 11m in external diameter and 5.5m internally, significantly smaller than the traditional *broch* in the Mousa mould. The building technique is of the *broch* type; its two concentric drystone walls each averaging 1m in thickness, separated by intra-mural galleries of the same width around virtually the whole of the circuit at ground level, are tied by drystone walling at the entrance,

by an intra-mural staircase and, on the pattern of other sites with such features, by capstones roofing the galleries (although those have not survived *in situ* on this site).

This pattern of construction reflects the traditional model for a ground-galleried *broch* as defined by MacKie (MacKie 1965) in a somewhat scaled-down version. The technique argues for an original multi-floored construction giving a combination of stability and height through a minimisation of the mass of stone used and an effective channelling of the weight. The presence of the intra-mural stair of seven steps again strongly suggests upper levels of occupation, although it could, on the pattern of many larger *galleried duns* in Ireland and south-west Scotland, simply provide access to the wallhead. Other *broch* features at Dun Bharabhat include the low entrance passage with a rebate for the door, bar-holes and a pivot-stone indicating the original position of a wooden door at the inner edge of the outer wall.

Apart from its small size, Dun Bharabhat, displays features which would make its interpretation as a *broch* difficult. The width of the entrance to the structure is 1m, extending to 1.4m inwards from the rebates. This is relatively wide but the opposite entrance to Gallery 2 is exceptionally so, measuring from 1.6m to 2m in width, although narrowed by an orthostat at a secondary stage in the site's occupation. This entrance seems to present unnecessary difficulties in roofing with a lintel and must have been occasioned by some functional factor in the need for access to Gallery 2. It is possible that the widening of this gallery entrance relates to the secondary modification of the site which occurred after the collapse of parts of the original structure; this possibility will be explored further in Chapter Seven. The entrance to Gallery 1, at 0.7 - 1.2m in width, is much more in the range which one would expect to enable easy human access whilst not placing an unreasonable strain on the lintel.

The atlantic roundhouse which dominates the islet lies between the causeway and an 'annexe' or extension. The entrance to the roundhouse leads onto this 'annexe' and some form of walk-way must

have existed to enable access from the causeway to the rear of the roundhouse. Excavation of this area has been carried out both on land and underwater and the latter work especially has begun to show indications of a long structural sequence underlying the level of the main roundhouse with well-preserved organic remains. Fragments of walling and a hearth on land behind the roundhouse entrance may be connected with the primary use of the main structure but at the present stage of excavation this relationship is not clear and the nature of these structures remains uncertain.

Structurally Dun Bharabhat is an anomalous site which possesses virtually all of the requirements necessary to define it as a *broch* but which combines these features with exceptionally small size, a distinctly non-monumental siting and structural features which, if original, would have restricted possible height and stability. In the atlantic roundhouse terminology the structure is a complex roundhouse. This structure would appear to represent only the most archaeologically visible stage in a lengthy settlement sequence of which it was neither the first nor the last representative. This re-use of a single settlement focus over long time periods is a theme which is relevant to almost all of the excavated sites discussed in this study. Its importance in the context of the early excavations where such sequences were not expected or recognised is of crucial importance in the consideration of chronology.

Internal Structure - The interpretation of the internal features of Dun Bharabhat is made especially hazardous by the displacement of stratigraphy caused by the collapse of the walls prior to the deposition of the latest occupation levels. These latest levels appear to be associated with secondary modifications to a number of structural features and clearly do not relate to the same structural form as is under discussion here. These later levels will be examined in Chapter Seven.

The only feature which can so far be recognised as original to the construction of the roundhouse is a central clay hearth defined by edge-set stones. This hearth was rebuilt many times throughout the

use of the structure. The spatial organisation of the structure is based around a dominant central cell, some 5.5m in diameter and with an area of 23.7m², seemingly unpartitioned and with a central hearth. This cell gave access into 3 intra-mural chambers; Gallery 3, running for approximately a third of the circuit in the north-east, was the longest; Gallery 2, only slightly shorter ran along the south and west; Gallery 1 was in effect only a small cell slightly over 2m in length giving access to the stairs. Each of these peripheral chambers or galleries had only one entrance into the interior and none were interconnecting.

Material Culture and Chronology - Three C-14 dates have been obtained from the roundhouse deposits (App.1). These are the first C-14 dates relating directly to the occupation of an atlantic roundhouse in the Western Isles and provide far earlier dating evidence than the conventional picture of *island dun* or *galleried dun* chronology would suggest. The dates give a *terminus post quem* for construction and *terminus ante quem* for the collapse of the structure. GU 2436 calibrating to 807 - 671BC, at the 68% confidence limit, and with a centroid of 733BC provides the *terminus post quem*; this derives from pre-roundhouse occupation material directly under the roundhouse floors. GU 2434 and 2435 with centroids at 31BC and 143BC respectively date the post-collapse occupation. The construction and occupation of the atlantic roundhouse is likely to date to the period from the C7th - C3rd BC (given that substantial primary occupation debris accumulated before the C-14 dated secondary deposits).

The ceramic assemblage from Dun Bharabhat includes a wide range of decorative motifs familiar from other Hebridean-later prehistoric sites. These have recently been shown to have little positive dating value at present, without substantial well-stratified assemblages (Topping 1985 and App.3). Motifs include applied cordons, ring bosses, chevron and other linear incision but lack ring-headed pin impressions and arcaded 'Clettraval Ware', as defined by MacKie at Dun Mor Vaul in Tiree (MacKie 1974, 159).

Apart from pottery the site has yielded glass beads of Guido's types 8 and 13. The small yellow bead of class 8 from Gallery 3 is of a widely recognised but poorly dated type (App.1); Scottish parallels include examples from Dun Mor Vaul (MacKie 1974, 147) and Clickhimin (Hamilton 1968, Fig 41). Crucibles of the ubiquitous triangular type have also been recovered but again their distribution is wide, both chronologically and geographically.

A.L19 Loch na Berie, Lewis NB 1035 3525 (Harding and Armit 1987 and 1988)

Introduction - The remains of a suspected *broch* were recorded by the Royal Commission (RCAHMS 1928 No.69, 20) in Loch na Berie at the foot of the hills which surround the machair of the Traigh na Berie. Excavations by the Callanish Archaeological Research Project began in 1985 and are still in progress.

The area and its reconstructed environmental history have been discussed above, in Chapter Two: the loch in its present form is little more than a peaty marsh for most of the year, although with the rise of the water table in winter it assumes the character of a shallow machair loch. Coring of the area suggests that the loch was formerly of much greater extent. This hypothesis fits with the expected picture formed on the basis of Ritchie's theories on the mechanisms of machair development (cf Chapter Two). The original loch would have been filled up by the retreating machair blocked by the surrounding hills. This process would have occurred over a very long period, and indeed is still continuing, with periods of sand movement alternating with periods of relative stability, resulting in the observed pattern of alternating bands of windblown sand and peat in the loch cores.

The excavated structures lie on what would have been an islet in the original, much larger, Loch na Berie. The siting is therefore superficially similar to that of the nearby Dun Bharabhat as both are structures built on islets in relatively small lochs. The siting at Berie is in fact considerably different; the Loch na Berie site lies only a few

metres above present sea level and would always have commanded an extensive view over much of the Traigh na Berie. The position of the Berie causeway, leading westwards to the foot of the adjacent hills, may however have entailed a relatively extended walk around the loch to reach the flat machair plain and it is, in this respect, similar to that of Dun Bharabhat, sharing an apparent disregard for convenience of access to potential agricultural land as a factor in siting. It is important to note that the causeway in its present form cannot be original to the construction of the original roundhouse on the site. It lies at a level at least 1m above that of the foundations of this structure and must relate to the intrusive cellular structures. From the position of the islet relative to the probable original extent of the loch, it seems likely that this would also have been the only viable route for a causeway in the earlier period.

Site Structure - The site as revealed by surface traces prior to excavation was an extremely unimposing one although, unlike Bharabhat, local knowledge of its original character had been preserved through the Royal Commission Inventory. The identification as a *broch* was originally doubtful, primarily because of the small size of the inner diameter and the width of the entrance (Armit 1985, 15). Excavation revealed these features to be the result of secondary modification in the construction of a series of cellular structures within the original roundhouse. These cellular structures are discussed separately in Chapter Seven.

The main roundhouse, which by its monumental construction, enabled the site to remain archaeologically visible above the infilling loch, fits the definition of a *broch* even in its strictest application although excavation has not yet progressed to primary occupation of the interior. It is a *transitional broch* in MacKie's terminology with an overall diameter of c18m, with outer and inner concentric walls both 1m in thickness and an intervening gallery of similar width. It is a broch tower with the whole range of the features of broch architecture in evidence (Ill. 5.4 and 5.5).

The structure has been extensively robbed but the rising peat and sand around it have preserved it to a probable height of over 3m in places: excavation has, therefore, begun at first floor level (Ill. 5.4). Gallery capstones of the first floor gallery level have been revealed *in situ* around almost the whole of the circuit. The ground floor plan contains a remarkable 7 separate cells and galleries linked by a staircase to the first floor. This staircase continues upwards to a (now destroyed) second floor level. A scarcement ledge of 35cm width has been uncovered at present ground level, continuous around the interior. The position of the 1st floor gallery entrances relative to the stairs show that the 1st floor must have been at the level of this scarcement.

This incontrovertible evidence of the existence of an upper level indicates that the structure is clearly a transitional *broch* by MacKie's definition and a broch tower in the terminology used here.

Internal Structure - Any description of the internal structure of the Loch na Berie roundhouse must recognise the importance of the multiple floor-levels as a constraint on interpretation. The first floor has disappeared and leaves only two entrances, one to the intramural gallery which surrounds it and one to the stairs leading up and down. The second floor is entirely lost. The ground floor has seven cells or galleries leading off the main cell, which can be split into three groups. The first is the 'guard-cell', different from the rest in appearing to be accessible from the entrance passage. Secondly there is the elongated gallery segment, entered at a point opposite the main entrance, which gives access to the stairs to the first and second floors. The remaining five cells are of various sizes and do not appear to interconnect. The sketch plan of the ground floor (Ill. 5.5) is based on the upper parts of the cells which are visible below the 1st floor capstones.

Subdivisions of the large internal central cell will not become clear until after substantially more excavation. This central cell of 10 x 11m in diameter is exceptionally large compared to the central cell at Dun Bharabhat which is only 5.5m in diameter. The Berie

roundhouse, with an interior area of 86.5m² compared to 23.7m² at Bharabhat, was more than three times as large in terms of enclosed space. Such massive differences of scale must clearly be accounted for in any interpretative model and will be examined in Part Three.

Material Culture and Chronology - The majority of the material recovered from the site in the excavations carried out prior to the end of 1988 relates to the secondary, cellular structures and will be dealt with in Chapter Seven. Only the deposits excavated in the first floor gallery constitute material older than these structures but even this material need not relate to the primary occupation of the massive roundhouse: any number of intervening levels may separate the two structural horizons.

The putatively primary material consists of pottery of a very different character from that of the interior of the cellular structure; in contrast to the total absence of decoration on the later assemblage the gallery pottery is profusely decorated and made in a harder fired ware. The motifs represented include a wide range similar to those of Dun Bharabhat and characteristic of the traditionally Hebridean Iron Age assemblages (App.3).

A.NU3 Rudh an Duin, Vallay, North Uist NF 7857 7617 (Beveridge 1911)

Introduction - The site of Rudh an Duin, lying on a low rocky promontory on the south-east side of the island of Vallay, was excavated by Erskine Beveridge prior to 1911. Beveridge describes the site as a "*broch* or *broch-like* structure" (1911, 216, [my italics]). Very little information is given and it appears that the site did not capture Beveridge's imagination sufficiently to provoke full excavation. The site was not excavated to bedrock and it is likely that occupation layers continued below the level to which Beveridge excavated. The site remained obscure in subsequent studies (classed as a *dun* in RCAHMS 1928 No.184, 57, and accepted as such by MacKie 1972, 129).

Rudh an Duin has been subjected to severe tidal erosion prior to and since its excavation. High tides flooded the interior at the time of the excavation to a depth of 0.5m. The roundhouse lies on a small rocky promontory jutting into Vallay Strand, joined to Vallay itself. The local geomorphology has been discussed above (Chapter Two): Rudh an Duin would have been situated, prior to the drowning of the Strand, on either a rocky eminence above the machair plain or, perhaps more likely, on an islet in a loch behind the coastal ridge which the present island of Vallay would have formed. It would have been sheltered from the sea by Vallay, commanding an extensive view across the machair plain.

Site Structure - The sole recorded structure from Rudh an Duin is the atlantic roundhouse. This structure was very badly dilapidated; part of its circuit had disappeared even on the interior, on its south-east side, and all but the north-west part of its external wallface had been lost through erosion.

As at Dun Bharabhat and Loch na Berie, the surface traces of the site gave little indication of its structural character; Beveridge recalled that the site had "a rather unpromising aspect" (1911, 215). Excavation revealed the remains of a massive circular drystone roundhouse of exceptionally large dimensions (an external diameter of c24m and an internal diameter of c14m) preserved to a maximum of 1m in height on its inner face. Beveridge noted the presence of two concentric walls on the east side of the circuit and although his plan appears to confuse the course of the two, it is clear that on this part of the circuit at least there was a ground level intra-mural gallery. The plan hints at a continuation around the south and south-west but in the absence of clearer recording it is only possible to say that a ground gallery existed for part of the circuit.

Rudh an Duin is a complex atlantic roundhouse with the characteristic low narrow entrance passage, apparently roofed by lintels, which Beveridge found only slightly displaced. Clearly the presence of upper levels could not be demonstrated in such a badly damaged structure. In the traditional terminology Rudh an Duin

would be a transitional or ground-galleried *broch*, of exceptionally large size.

The site is unusual in having no evidence of later occupation. Beveridge habitually recorded such structures on his many other excavations even if he did not attempt to unravel their sequence or relationship to each other: this suggests that at Rudh an Duin there was no secondary rebuilding.

Internal Structure - Apart from a covered drain there are no internal features which can be related to the occupation of Rudh an Duin. The large central cell, some 14m in diameter, is not divided by any stone partitions and contains no hearth, at least in the excavated levels. It is not clear how much damage the tidal submersion of the site will have done to the more fragile internal structures but it is likely that if any internal stone partitions had existed Beveridge would have noted them.

The means of access to the gallery was not recorded and it would appear that no gallery entrances were traced in the surviving internal circuit.

Material Culture and Chronology - The material from the site has no recorded contexts. The ceramic assemblage included sherds with incised and applied decoration belonging to conventional Hebridean Iron Age types. One sherd, GT7 in the Royal Scottish Museum, is considered by MacKie to be from a carinated vessel of Iron Age 'A' type, dating from the period after 400BC (MacKie, 1972, 129).

The only find which distinguishes the assemblage is the 'two-edged longsword' of which fragments were found, in the remains of a wooden scabbard, close to the northern wall in the interior of the structure (Beveridge 1911, 217). The few details available relating to this find do not enable detailed reconstruction; the greatest blade width appears to have been 59mm with a 25mm wide flat tang in a rounded cross-piece or guard.

A.NU4 Dun a Ghallain, North Uist NF 7479 7598 (Beveridge 1911)

Introduction - This site was one of two islets in Loch an Eilean incompletely excavated by Beveridge prior to 1911. The sites were briefly described, though without plans, in his book 'North Uist' (Beveridge 1911, RCAHMS 1928 No.191, 60)). The islet is the westmost of the two in Loch an Eilean, on undulating ground less than 1km from the present north coast of North Uist. The loch is now a marsh, inaccessible both by foot and by boat. It has not therefore been possible to make any independent observation to supplement Beveridge's account.

Site Structure - The natural islet upon which the structures lie appears to have had a causeway to the shore, now just traceable in the marsh; Beveridge mentions that it may have had a causeway to Eilean a Ghallain, some 70m distant, although he is not clear about the evidence either for this or for the apparent doubt which he expresses (1911, 196). The irregular plan and construction which Beveridge describes, appears to refer only to the internal structure, described as being probably a "secondary lining inserted within an older and more substantial structure" (1911, 197). Such details as are recorded of this intrusive structure are discussed below in Chapter Seven.

The excavation of Dun a Ghallain tells us nothing of the form of the original structure other than that there existed, on this islet, a massive-walled drystone structure which formed a focus for secondary settlement.

Internal Structure - There are no recorded details of the site's internal structure.

Material Culture and Chronology - There is no full description of the material from the site and no context for the material which is recorded. The report mentions only 'lozenge-shaped' iron rivets, a decorated 'dirk' and a curved knife (which presumably derive from

the secondary levels), cetacean vertebrae and part of a large quern or mill-stone.

A.NU6 Eilean a Ghallain, North Uist NF 7483 7589 (Beveridge 1911)

Introduction - This islet lies in the same loch as Dun a Ghallain, to the eastern side of the latter site, and was partially excavated by Beveridge in the same period prior to 1911. The same locational factors and constraints on the interpretation of the site apply as to the neighbouring site (RCAHMS 1928 No.192, 61).

Site Structure - According to Beveridge, (1911, 197), the islet has a 40m causeway. The site was dominated by a circular drystone structure some 12.75m in external diameter and with walls of from 2.3 - 3.3m in thickness. No further information is available except that the interior contained "several minor erections", of which no details are recorded (Beveridge 1911, 197), and a paved entrance on the east side, facing the causeway. The excavation appears to have been on a very small scale and it is unlikely that the nature of the walling was investigated. On present evidence the structure can only be regarded as massive-walled roundhouse of unknown specific structural type.

Internal Structure - No details of the internal structure of the site are recorded.

Material Culture and Chronology - The only recorded finds from the site are pottery of unknown form, an unknown quantity of bone, hammerstones and a whetstone.

A.NU7 Dun Thomaidh, North Uist NF 7564 7562 (Beveridge 1930)

Introduction - Our information on Dun Thomaidh is the result of a fortnight's excavation by Erskine Beveridge in the summer of 1914, the results of which were collated and published after the excavator's

death by J. Graham Callander. The original imprecision of excavation and recording was thus compounded by being published, from notes, by someone with only secondhand knowledge of the site.

Dun Thomaidh lies in a location similar to that of Rudh an Duin in relation to its local topography, on a tidal islet on the opposite, south-west end of the island of Vallay. Like Rudh an Duin, this would have been an islet in a loch or a rocky outcrop on the machair plain. This symmetrical siting of Dun Thomaidh and Rudh an Duin in relation to Vallay and the original machair plain is striking. Again like Rudh an Duin, the islet on which Dun Thomaidh sits is subject to tidal submersion.

Site Structure - The only feature which is clear from Beveridge's plan is that the excavated structures were the result of a number of periods of construction and occupation (Ill. 5.7). The site is a mass of wall fragments and passages which Beveridge was unable to disentangle, a fact which is scarcely surprising given the scale of the site and the duration of the excavation. Clearly such a maze of structures, built at various levels and inadequately recorded, can be open to multiple interpretations and it is not possible to define phases or a sequence in the site structure. It is possible only to point out some regularities which are relevant to the wider study of the Hebridean sites. The mass of small cells on the west side of the large roundhouse will be considered in Chapter Seven with the other Hebridean cellular structures. Discussion here will be restricted to the central roundhouse and the surrounding walls.

The plan of Dun Thomaidh suggests that an original roundhouse with evidence of intra-mural galleries, built on an islet enclosed by a drystone wall, has been re-used for the construction of secondary cells both within and around it. The roundhouse would have been some 14.6m in external diameter but the plan gives no useful indication of its internal diameter. The passage from the south-east to north-west of the circuit suggests an original intra-mural gallery. Beveridge records that the remainder of the circuit, on the north-east, was the most extensively damaged due to quarrying (1931, 317).

The other recorded cells and passages do not seem to form any coherent structure and appear to confuse secondary phases of construction.

The original entrance may have been on the west as indicated on the plan, although it is impossible to be sure that this is not a secondary feature. The entrance at the north is also a possibility and this is diametrically opposite the causeway (not shown on the plan) on the pattern of many other island dun and broch sites.

The surrounding wall of the islet was poorly preserved but may be taken to define the original extent of the islet on which the structure was situated. The substantial causeway which linked the site to the shore reportedly had a regularly squared end some 4m from the islet itself; this is a feature which will be discussed again in relation to other atlantic roundhouse sites.

Internal Structure - The published plan and description give insufficient information with which to attribute any of the interior features to the roundhouse phase of occupation.

Material Culture and Chronology - No material is specifically attributable to the atlantic roundhouse. The most significant finds from the site were the querns; two saddle querns and fragments of a rotary quern came from unknown contexts. These finds may indicate that activity on the site began relatively early in the Iron Age, prior to the local quern replacement (App.1).

A.NU13 Garry Iochdrach, North Uist NF 7724 7427 (Beveridge 1931)

Introduction - This site was excavated by Beveridge in 1912 and 1913. It consists of a wheelhouse which appears to be intrusive into an atlantic roundhouse (Ill. 5.8). The wheelhouse is discussed in Chapter Six.

Site Structure - The plan of Garry Iochdrach defies detailed interpretation but the surrounding gallery does suggest the presence of an original complex roundhouse. It appears to make no sense in relation to the wheelhouse. The gallery on the plan makes little sense as an atlantic roundhouse gallery and the question must remain unresolved at present. Examination of the site on the ground does not clarify the situation.

Internal Structure - The internal structure of the original roundhouse was never excavated.

Material Culture and Chronology - No material is attributable to the atlantic roundhouse.

A.NU14 Cnoc a Comhdhalach, North Uist NF 7708 7413 (Beveridge 1911)

Introduction - The radially partitioned structure at Cnoc a Comhdhalach is discussed in Chapter Six. It appears that this structure may have been inserted into a pre-existing atlantic roundhouse. Cnoc a Comhdhalach was excavated by Beveridge in the first decade of the C20th and is reported briefly in his book 'North Uist' (1911, 200-7). Beveridge believed the radially partitioned structure to be intrusive into a pre-existing "*broch-like* structure" (1911, 202, [my italics]).

The site lies on a knoll 30m from the west shore of Vallay Strand. It lies on undulating ground and would have commanded an extensive view over what is now the Strand.

Site Structure - The radial piers, if secondary, were inserted into a massive-walled drystone structure which, from its surviving north-west circuit and indications in other parts of the wall, was constructed by building two concentric walls separated by an extensive intra-mural gallery and possibly a 'guard' cell at the south-east (Ill. 5.9). This hypothesis is strengthened by the fact that these cells and galleries do not have access into the central chamber and

are seemingly irrelevant to the use of the radially partitioned structure.

Internal Structure - The internal structure of the possible early phase of occupation on this site is not known.

Material Culture and Chronology - None of the excavated material can be attributed to specific occupation phases.

A.NU17 Eilean Maleit, North Uist NF 7748 7388 (Beveridge 1911)

Introduction - This site was excavated by Beveridge prior to 1911. The main structure on the site as shown by the plan was a radially partitioned roundhouse described in the next chapter; it is included here because the plan indicates a construction involving regular intra-mural cells arranged around parts of the circuit which are not apparently linked to the interior during the phase of radial partitioning which Beveridge investigated (Ill. 5.10). Beveridge himself, as at Cnoc a Comhdhalach, without explicitly stating his grounds, believed the piers to be secondary features (1911, 202).

Site Structure - Where the wall is complete, on the south-western quarter of its circuit, the dimensions and position of the cells suggest that an original galleried wall has been modified or re-occupied. The site records do not enable any more detailed investigation of this possibility. It can therefore only be suggested that a complex atlantic roundhouse with an open interior may have pre-dated the radially partitioned structure at Eilean Maleit.

Internal Structure - There is no evidence for the internal spatial organisation of a pre-radial phase at Eilean Maleit.

Material Culture and Chronology - The material from the site was not assigned to contexts.

A.NU20 Buaile Risary, North Uist NF 7665 7278 (Beveridge 1911)

Introduction - The structures at Buaile Risary are unusually poorly understood even by the standards of Beveridge's excavations. The site is included here only to indicate the possibility that it may have contained an atlantic roundhouse.

The site lies on the slopes of Beinn Risary facing north across Vally Strand. The structures are on a large mound which gives an extensive view across the north coast of the island.

Site Structure - The main roundhouse was of drystone construction and some 11m in overall diameter. No plans exist and the details of the internal structures are not sufficiently clear to permit reconstruction. Beveridge's measurements of the inner cells entail that at least one of the rectangular cells was in the walling of the main roundhouse (Beveridge 1911, 210) but in the absence of a plan it is not justifiable to claim this as evidence of hollow-walled construction or an original intra-mural cell. The description given of rectangular and square chambers suggests intrusive, and perhaps relatively recent, reoccupation of the structure. The Royal Commission reported that the walls of the main circular structure were 2m wide (RCAHMS 1928 No.193, 61) but present surface traces give no indication.

Internal Structure - The published report gives insufficient information upon which to base any interpretation of the interior organisation of the structure.

Material Culture and Chronology - Finds from the site included decorated pottery, a small triangular clay crucible, flint and stone objects and iron rivets. None of this material was recorded from specific contexts and it is entirely unhelpful in understanding what was clearly a multi-period site. One unusual find was a rounded oblong pebble with an ogam inscription. This was reported to have come from a separate structure on the mound, which is not described

in detail, and is the only find with any significance for dating; the ogam inscription may belong to the C6th AD or later, but clearly this has no relevance to the dating of the possible roundhouse.

A.NU51 Dun Ban, Grimsay, North Uist NF 8699 5695 (Thomas 1890)

Introduction - Dun Ban, Grimsay, was the first atlantic roundhouse to be excavated in the Western Isles, although excavation was restricted to emptying it of stone. The site was noted by the antiquary Capt. F.W.L. Thomas whilst serving with the Royal Navy in the islands. He records that, during a period when the wind was too high for surveying, a team from H.M.S. Woodlark were sent to investigate the dun. This small-scale and spontaneous excavation took place at some time prior to 1890.

Dun Ban lies on the summit of a steep-sided, natural outcrop islet in Loch Horneray on Grimsay, an island connected to North Uist at low tide. The loch is surrounded by hills from beyond which it is not visible.

The small hill adjacent to the shore, immediately to the south of the site, overlooks the roundhouse structure and gives a view of the substantial stone causeway, capped with massive flagstones, which links the site to the shore. This causeway is now submerged by up to 1m, indicating a substantial loch level change since the occupation of the site. The entrance to the roundhouse faces this causeway directly, in contrast to the arrangement at sites like Dun Bharabhat and Loch na Berie; the nature of the islet in this case would have prevented access around the structure to a rear entrance. The location of the site does not appear to add to the defensive qualities inherent in the structure itself.

Site Structure - Prior to excavation the site was described by Thomas as a "huge cairn, covered with brambles and sweet herbage" (1890, 400). It was excavated because of its convenience rather than any intrinsic interest in this particular site. From surface traces the

site appeared as an unimposing mound, with no indication of structural complexity, but was shown on excavation to have possessed a range of architectural features which led to its acceptance as a probable *broch* by MacKie (1972, 172, Ill. 5.11).

The massive-walled complex roundhouse, which dominates the island, is some 15m in external diameter. Its interior is filled with structures which can, with hindsight, be interpreted as secondary modifications to an original hollow-walled roundhouse. Thomas did not recognise the multi-period nature of the site. Chambers 'h' and 'f' on the original plan appear to represent, from their size and position relative to the enclosing walls, the butt ends of two ground level, intra-mural galleries. Thomas records that they were corbelled and this would be consistent with the gallery terminals on numerous other sites. Chamber 'h' contains the first three steps of stairs which would have originally led to the next floor.

The belief that the internal cells, 'g', 'd' and 'e', were integral to the structure seems to have prevented the investigation of the remainder of the roundhouse wall, which Thomas believed to have been solid, so it is not possible to know the extent or number of the galleries. Nonetheless it seems clear that at Dun Ban we have a massive-walled, complex atlantic roundhouse. The overall wall thickness would have been of the order of 3.5 - 4m, including a gallery of some 1.6m in width.

Internal Structure - The nature of the excavation, clearing of stone rather than actual digging, and the belief in the unitary nature of the revealed structures, prevent any interpretation of the original internal arrangements of the structure. Clearly there was a large, circular, central cell giving access to at least two non-communicating cells or galleries. One of these cells, 'h', contained access to a further floor or to the wallhead. The arrangement of the cells in the secondary occupation will be discussed in Chapter Seven.

One important feature is the intrusion of outcrop rock into the central cell. This rock dominates the south-west of the interior,

rising up to 1.6m from what Thomas took to be the floor level. A sloping rock shelf in the north-west of the interior formed natural 'steps' and may have formed a part of the internal division of the site. Such outcrops are common on the Hebridean sites, most notably at Dun Carloway where a large outcrop emerges from the interior on the north-west of the structure, and at Dun Cuier.

Material Culture and Chronology - Finds from the site comprised an unknown number of pot sherds, which were apparently coarse and undecorated, and a few waterworn pebbles.

A.B4 Dun Cuier, Barra NF 6708 0345 (Young 1955)

Introduction - Dun Cuier was excavated by Alison Young, initially as an adjunct to the excavation on the wheelhouse, Tigh Talamhanta, in Allasdale. The site is of central importance in this study as its interpretation by Young led to the formulation of the hypothesis that the *duns* of the Western Isles represent a mid-1st millennium AD return to fortified settlement long after the abandonment of the *brochs*. If the date of the occupation at Dun Cuier is as the excavator suggests, in the C7th AD, then the case for a separation of *duns* and *brochs* into two chronologically distinct settlement systems would seem to be justified. It is of great importance to examine in detail the excavator's interpretation of the site.

The problem rests with the question of whether the structure is a single-period construction or represents the re-use in the mid-1st millennium AD of a much earlier site.

The site is located on a steep rocky knoll above the valley of Allasdale commanding an extensive view of the surrounding land and an long stretch of the Barra coast. The roundhouse is consequently visible from most of the surrounding area. The rock rises in terraces towards the site and anyone approaching would be visible from some distance.

Site Structure - An examination of the published plan and the site on the ground suggests that the site is a massive-walled roundhouse built with two concentric walls and an intervening gallery, with many of the features characteristic of broch architecture (Ill. 5.12). The site is 19.5m in mean external diameter with an overall wall thickness of c. 5.25m containing a gallery 0.8m in width. The width of the gallery appears from the surface evidence to have been underestimated due to the instability and partial collapse of the inner of the two main walls, which has begun to lean outwards into the gallery. The internal diameter, excluding the slighter innermost wall, averages 9m. It contains a scarcement ledge and a low, narrow entrance passage. It is important then to consider the arguments used by Young, and later by MacKie, to classify the site as a *galleried dun* bearing no direct relationship to the *broch* class.

Young claimed that the gallery contained no stairs and so could not have given access to an upper level; this is without foundation as only one small slit trench was excavated through the gallery and it could not have been known what lay under the grassed-over rubble around the remainder of the circuit. Young stated that the scarcement was flimsy and not able to support an upper floor; the scarcement is 32-35cm in width and securely bonded into the wall. This is an important point since the scarcement of Dun Carloway, one of the 'archetypal' *brochs* and certainly the most widely accepted representative of the class in the Western Isles, is far narrower and less substantial (RCAHMS 1928, 19). On examination of the site itself in 1987 (pers. obs.) it was seen that many of the first floor gallery capstones are still in position and are eroding out of the side of the mound as the outer wall falls away. This is particularly marked to the south of the entrance. Dun Cuier appears to have had at least one upper level and the size and solidity of the scarcement, despite Young's comments, only serve to reinforce this interpretation.

Young attempted to explain the double-walling of the structure by maintaining that the outermost wall was a retaining device; it does not touch the innermost of the two main walls, except at the entrance, and it is difficult to see how it could have served such a

function. In this connection it is important to note that the section ABC in Fig. 6b of the Dun Cuier report does not accord with the plan in Fig. 6a, nor indeed with the present surface evidence. On this section it appears that the inner of the two main walls is substantially wider than the outer wall, leaving no space for the intervening gallery creating the misleading impression that the outer wall may indeed be a retaining wall. There is no evidence that the two main walls served any different function on this site than similar concentric walls on any other complex roundhouse. Young maintains further that there was no access to the gallery from the interior of the structure. As the slight, innermost wall of the structure, which rose to the level of the scarcement, was not removed during the excavation, it is not justifiable to claim that there was no access through the inner of the two main structural walls.

Without access to the gallery it is difficult to support the idea that the third, innermost wall formed part of the same design as the outer walls. The different character of the construction and the scale of the wall suggest that it was a secondary modification, most probably revetted into pre-existing material: its flimsiness of construction seems unlikely to have enabled it to stand unsupported. Young's assumption that this slight, inner wall was integral to the original structure led to the misclassification of a structure which appears to have been a complex roundhouse, or even a broch tower, re-used in the building of an intrusive cellular construction.

A re-examination of the excavation report, and of the site on the ground, suggests that it is closely similar to the structure at Loch na Berie, where a secondary thin skin of walling has been inserted into a pre-existing roundhouse to create a smaller cellular structure. Additional evidence for the link in building form and general site context between the two sites emerges from the re-examination of a reference made to the nature of the material found between the innermost wall and the inner roundhouse wall; Young stated that the space formed between these two walls on the south side appeared initially to have been entered by steps (Young 1955, 301); this idea was discounted when it became apparent that the steps were founded

on the greasy earth which was assumed to represent the occupation material of the 'chamber'. On the pattern of the construction at Berie (see Chapter Seven) this would seem to suggest that the cellular structure was backed into pre-existing material; this would account for the irregular backing of the cellular wall and explain how the steps came to be founded on occupation material.

The re-interpretation proposed here suggests that the bulk of the material from the excavation, now to be regarded as a mixed assemblage, would derive from this later cellular structure. From the misclassification of the structural character of a *broch* came the attribution of a late date to the whole class of *duns* in the Western Isles. The readiness to accept a quick solution to the dating of the site without thorough excavation, the method of excavation by digging a central hole without exploring the gallery fully, and the failure to remove the secondary walling, all contributed to a misunderstanding of the site and a consequent mis-dating of a whole class of monument.

The structure of the inner wall will be further discussed in Chapter Seven now that it can be seen to be intrusive into the main roundhouse or broch.

Internal Structure - Very little can be said about the interior organisation of the Dun Cuier roundhouse prior to its secondary modification: as has been indicated above, the entrances to the galleries and the subdivisions of those galleries are not known since the intrusive inner wall was left in place throughout the excavation. There was a large central cell, with an area of 67.9m², leading into extensive intra-mural chambers. There is no evidence for radial partitioning of this original roundhouse interior. The scarcement and the scale and construction of the structure would suggest at least one upper storey.

One feature which would have affected ground-floor spatial organisation is the protrusion of outcrop rock into the interior, as at Dun Ban, Grimsay, Dun Carloway and other sites.

Material Culture and Chronology - The bulk of the diagnostic material on the site relates to the secondary occupation and will be discussed in Chapter Seven. The material was not divided by structural phase so it is only from parallels elsewhere that some finds can be suggested as belonging to the primary occupation. The extent of the excavation of the interior is unclear. It is possible that excavation did not progress to the primary deposits in all parts of the interior, especially where these may have lain substantially below the foundations of the intrusive walling.

The nature of the flooring, certainly natural outcrop for large areas of the interior, would have made the periodic clearing out of the structure easy and it is unlikely that much primary material would survive under these conditions. The galleries, to which the intrusive structure gave no access, would seem the most likely part of the site to yield material relating to the primary occupation of the roundhouse.

The pottery from Dun Cuier has been examined and re-evaluated repeatedly since its original publication. Young expressed three differing interpretations (Young 1955, 1959, 1976), Close-Brooks considered it in reference to the material from Dun Carloway and Lane and Topping both attempted to re-interpret the assemblage with regard to its importance for the Hebridean Dark Age and Iron Age respectively (Lane 1983, 253-7, Topping 1985, 151-7).

The re-interpretation of the structural evidence presented here accommodates the inconsistencies in the assemblage. Young initially regarded the pottery as a unified assemblage of the C7th AD, characterised by large vessels with weak flaring rims and long flaring rims, with occasional decoration in the form of applied wavy cordons. The pottery was of an apparently uniform fabric, ring-built of reddish paste from local sources, with a small element in a greyish fabric. Inconsistencies were apparent in the form of a few small incised sherds (106-8) and one clear example of ring-headed pin stamped

decoration (sherd 109), as well as a number of sherds with inturned rims (sherds 66-81).

In the excavation report for A Cheardach Bheag, Young widened the date of the assemblage to encompass the C5th- C7th AD (Young 1959), and in a general account of Hebridean Iron Age pottery (Young and Richardson 1966, 47) she divided the Dun Cuier assemblage into two chronological phases; the first with long flaring rims and occasional applied decoration, and the second with weakened rims and an absence of decoration. It appears that Young was unsure of the stratigraphy of the site to the extent that the retrospective division of the pottery into two chronological phases was considered permissible, although no stratigraphic information is included in the pottery report.

Lane saw the assemblage as thoroughly mixed, incorporating Dark Age and earlier elements (Lane 1983, 255). The nature of the Dark Age pottery will be discussed in Chapter Seven. Elements which are alien to that tradition (App.3) appear to be represented by the very small sherds with incised decoration and ring-headed pin stamping (sherds 106-9).

The lack of contextual information prevents any real correlation of the potentially early sherds with the structural sequence, but the small size of the sherds may be indicative of redeposition and disturbance of primary layers. The decoration of pottery with ring-headed pin impressions is paralleled at a number of sites and may cover a wide chronological period. Early examples of this motif occur in the Phase 1A deposits at Dun Mor Vaul, dated to the C5th - 6th BC (MacKie 1974, 128).

Of the non-ceramic assemblage only a few finds can be attributed to the pre-cellular phase. A saddle quern, found amid tumbled stone outside the structure, may indicate some activity on the site prior to c.200BC (App.1) but need not relate to primary occupation of the roundhouse itself.

While we cannot date the atlantic roundhouse at Dun Cuier due to the absence of contextual information, it is clear that none of the later finds are likely to relate to the period of primary occupation. This later assemblage is discussed in Chapter Seven.

Survey Evidence

The evidence from field survey gives additional information on the atlantic roundhouses but is largely restricted to site structure and location. Information on internal structure is slight and material culture and dating evidence are generally absent.

The survey evidence will provide much of the data for Chapters 11-13. The discussion which follows here deals with more general points, particularly of site structure.

Distribution

Atlantic roundhouses are widely distributed throughout the Western Isles with examples known on each of the main islands (Ill. 5.1). Their size and distinctive plan (round or oval rather than the rectilinear shape of the mass of later field monuments) have made them relatively easy to locate. Their locations, characteristically small islets in lochs or rock outcrops, have also aided discovery. All of these factors have resulted in a large corpus of sites with fewer of the inherent research biases which afflict the distributions of other field monuments. Nonetheless concentrations in some areas do appear to reflect patterns of research. For example, the distribution of 52 sites in North Uist compared to only 22 in South Uist, despite roughly similar land mass and quality of land appears to reflect the activities of Erskine Beveridge in North Uist. Barra and Benbecula also appear to be relatively well-explored archaeologically. South Uist has always been under-researched and the situation in Lewis and Harris is similar; recent fieldwork in Lewis has located a number of previously unrecorded sites. It is likely that the corpus is considerably below the original number of sites in several of the islands but it will be argued in Chapter Twelve that the North Uist

and Barra distributions may approach the original distributions to some extent.

Site Structure

The sheer number of extant sites provides a great deal of information on site structure but this inevitably creates difficulties of interpretation given the widely variable states of preservation of the sites and the problem of assessing contemporaneity of site features. The atlantic roundhouses will be treated here as one group; the recurrent site features will be discussed to give an indication of the range and regularity of these features and assess their significance for site function.

Intensive field survey in Lewis in 1984 demonstrated a site-complexity previously unrecorded (Armit 1985). It has not been possible to repeat this degree of survey coverage throughout the islands; therefore the site features recorded have a bias towards Lewis. This does not indicate that these features do not exist elsewhere but rather demonstrates the range of features which intensive field survey might be expected to yield in the other islands. The additional details on the outer walls, cross-causeway walls etc. of the North Uist sites, for example, have come largely from the more sporadic fieldwork which has been possible on that island.

Galleries/Cells, Stairs and Scarcements; Of the 140 atlantic roundhouses recorded, 38 have visible evidence of having contained intra-mural cells and/or galleries. Of these 11 have been excavated. Every excavated site where the wall has been examined has been shown to contain galleries or cells. The numbers of sites with these features must therefore be far greater than the 27% indicated by surface traces.

Intra-mural features, as has been discussed in Chapter Four, are always difficult to trace by field survey. They can be hidden by collapse, grassed-over and indistinct, removed by stone-robbing, exist only at robbed-out upper levels, hidden by later structures etc.

In this context the 27% figure appears to be relatively high and must reflect a considerably higher presence of the complex roundhouse form.

Intra-mural stairs are subject to the same problems of discovery as intra-mural cells, with the added problem of being confined to a restricted part of the circuit. Nonetheless, several unexcavated sites can be seen to contain intra-mural stairs. In Lewis for example, Dun Bharabhat, Great Bernera (Ill. 5.13; A.L17), Dun Cromore (Ill. 5.14; A.L26 and Dun Borve (Ill. 5.15; A.L8), all contain this feature.

Scarcement ledges are visible only where structures survive to first floor level. Even then they can be obscured by rubble or be grassed-over. They are present at a number of unexcavated sites including Dun Loch an Duna, Bragar (Ill. 5.16; A.L11), Dun Bharabhat, Great Bernera (Ill. 5.13; A.L17) and Dun Borve (Ill. 5.15; A.L8), all in Lewis.

Enclosing Walls and/or Annexes; These are very common features on atlantic roundhouse sites. 35 sites have either a walled or open annexe area at the rear of, or around, the main structure. These annexes do not contain any of the clustered structures common on northern atlantic roundhouse sites.

These annexes vary widely in size and are characteristically located to the rear of island sites, away from the causeway e.g. Dun Bharabhat, Cnip (Ill. 5.3), Dun Loch and Duna, Bragar (Ill. 5.16) and Dun Loch an Duin Carloway (Ill. 5.17; A.L15). In these cases it appears that the annexe is being deliberately shielded from the main access to the site; any approach to the annexe would entail passing below the roundhouse walls.

The original size of these annexes is difficult to gauge due to fluctuations in loch levels, which have submerged structural features in some cases. The only excavated annexe is at Dun Bharabhat, Cnip (the annexe of Dun Thomaidh was not examined below the cluster of late cellular structures); this revealed the presence of slight

structures of indeterminate function and date, possibly earlier than the roundhouse itself. In the case of Dun Cromore the annexe in front of the roundhouse appears to represent an earlier structure (see below). In some cases the existence of annexes, particularly those restricted in size, may indicate the presence of a sequence of earlier structures stratified under the roundhouse. In other cases such as Dun Loch an Duna, Bragar, and particularly where they are walled, the annexes appear to be associated with the function of the site in its roundhouse phase. At Bragar in particular the overall plan suggests contemporaneity as the enclosure walls adjoin the roundhouse and the overall size and position of the annexe suggest a separate functional area demarcated behind the roundhouse.

Several atlantic roundhouses on non-islet locations also have walled annexes, e.g. St. Clement's Dun, Rodel (Ill. 5.18; A.H10) and Dun Bhuirgh, Borve (Ill. 5.19; A.H4), both in Harris, and Dun Mara in Lewis (Ill. 5.20; A.L2). There may be a local dimension to these enclosed areas since it appears that none of the Barra roundhouses were associated with an enclosed annexe (with the possible exception of Dun Scurrival, A.B1, where early reports indicate a possible outer wall).

The problem of the function of the annexes is complicated and obscured by the occurrence of much later structures which utilise the building stone from the roundhouse and the level building area of the annexe. In cases such as Dun Loch an Duna, Bragar, and Dun an Sticer, North Uist (A.NU1), large rectilinear structures occupy the extensive, flat, rear annexes. Nonetheless there appears to be no evidence of contemporary settlement within the annexes on the Orcadian model. The most likely function at present appears to be for storage structures or for livestock.

Harbours/Boat Noosts; The access to almost all of the islet-sited atlantic roundhouses was by substantial stone-built causeways. Only two such sites are known with no trace of a causeway; Dun Shiavat (A.L7) and Dun Bharabhat, Croulista (A.L20), both in Lewis. In the former case it appears that raised loch levels, due to drastically

altered drainage, may have submerged any causeway; the water level now rises above the wall foundations. A similar situation may apply at Croulista but it is less easy there to account for the raising of the loch level. Overall, the access to the islet-sited atlantic roundhouses is overwhelmingly by causeway.

Nonetheless many sites provide evidence of alternative access by boat in the provision of harbour walls or boat noosts. Examples in Lewis include Shader (Ill. 5.21; A.L9), Dun Cromore (Ill. 5.14; A.L26) and Croulista (Ill. 5.22; A.L20). This alternative access appears to have been simply to enable immediate access to areas across the loch other than the area adjacent to the causeway, or may have been used in periods of flooding if the causeway was inaccessible.

Cross-Causeway Walls and Additional Causeways; Seven sites have evidence for defensive blocking walls across their causeways. Of these, four are in Lewis and were first noted in the 1984 survey and it is probable that many more sites throughout the islands have such features. The common submerging of causeways and robbing of the walls has meant that most such features are presently submerged. This type of feature is not confined to later prehistoric sites; similar cross causeway defences, in timber, were replaced several times at Eilean Domhnuill, Loch Olabhat, in the Early Neolithic (Armit 1988b).

Dun Loch an Duna, Bragar (Ill. 5.16), has the most imposing array of causeway defences with three separate cross-walls. These three are all in different states of preservation and only the outermost is above present water level so they may well represent successive phases of rebuilding.

Much less well-preserved cross-walls are detectable at Dun Loch an Duin, Carloway (Ill. 5.17; A.L15), Dun Bharabhat, Galson (Ill. 5.23; A.L5) and Dun Loch an Duin, Lower Bayble (Ill. 5.24; A.L25) all in Lewis.

Two sites in Lewis have extra causeways in addition to the main access causeway. At Dun Borranish (Ill. 5.25; A.L24) a residual causeway, parallel to the better preserved one, appears simply to represent an earlier phase of construction. At Dun Bharabhat, Galson (Ill. 5.23; A.L5), three additional causeways radiate out from the islet below present water level. These have no recorded parallels and their function is entirely unclear.

Causeway Gaps; A second form of causeway defence is represented by the sites with gaps deliberately built into their causeways, normally where the causeway reaches the islet. Only four sites have clear evidence for this feature; in the state of preservation of the great majority of causeways such gaps would not generally be noticed. In other cases the gap between causeway and islet will be overgrown or infilled with collapsed masonry.

The feature survives at Dun Loch an Duin, Shader (Ill. 5.21; L9) and Dun Loch an Duin, Carloway (Ill. 5.17; L15), in Lewis, where the causeways end abruptly before reaching the islets, and was noted at Dun Thomaidh (A.NU7) and Dun nan Gealag (A.NU48), both in North Uist.

It is probable that the gaps would have been crossed by a timber bridge which could be raised to prevent access. This, as with the cross-causeway walls, need not be a defensive feature but could equally well be designed to keep livestock on or off the islet.

Secondary Occupation; The great majority of atlantic roundhouses have some form of secondary occupation within or around the roundhouses themselves. The roundhouse provided both a source of building stone and a sheltered location for the insertion of slighter structures. All of the excavated structures, with the probable exception of Rudh an Duin, have secondary occupation of some form.

Secondary structures include the wheelhouses and cellular structures of the later prehistoric period and the rectilinear structures of the

medieval and post-medieval periods. In some cases, e.g. Dun Barraglom (Ill. 5.26; A.L21), a medieval 'baile' or township may be sited over the roundhouse, while sites such as Dun an Sticer, North Uist, Dun Aonghais, North Uist (A.NU18), and possibly Bragar, have substantial medieval tacksmen's houses built over their remains.

Contemporary Occupation; In no case in the Western Isles is there any unambiguous evidence for the contemporaneous existence of any other domestic structure on an atlantic roundhouse site.

Earlier Occupation; As indicated above a number of the sites have indications of earlier occupation. The clearest example from the excavated sites is Dun Bharabhat, Cnip. The suggestion of a long sequence through the 1st millennium BC is supported by evidence from field survey.

Several islet-sited atlantic roundhouses lie in lochs which contain smaller residual islets, often artificial in construction, which appear to be earlier than the roundhouses themselves. In Lewis this situation occurs at Dun Loch an Duin, Shader, where a residual islet of collapsed stone lies just below the water surface some 50m from the roundhouse. The residual islet is of similar size to the roundhouse and has a parallel causeway to the same shore of the loch. An earlier stone-built islet structure of unknown form was robbed out to construct the surviving roundhouse. A similar submerged rubble islet lies some 40m from the shore of Dun Loch an Duna, Bragar.

At Dun Cromore the walled frontal annexe is of similar construction to the wall of the roundhouse and projects into a circle of similar dimensions. It also appears to have a residual entrance which makes no structural sense relative to the surviving roundhouse structure. It appears that the surviving complex roundhouse was built over and quarried from an earlier structure of similar construction.

In many other cases, as noted above, the islets on which the structures are sited may be formed substantially of the debris of

preceding occupation. The excavation of Eilean Domhnuill, Loch Olabhat, in North Uist (Armit 1988b) has shown that similar locations were used for settlement in the Neolithic and there is no evidence to suggest that they did not persist in use from that period into the later prehistoric period. This question will be discussed further in Chapter Ten.

Discussion

Construction Method

The basic construction methods of the atlantic roundhouses of Scotland are well understood and the Hebridean examples employ the same range of structural techniques. The definition of the atlantic roundhouses, based primarily on constructional information, has been discussed in Chapter Four. The atlantic roundhouses are thick-walled, free-standing, drystone roundhouses. The complex atlantic roundhouses and broch towers incorporate features of broch architecture which combine to provide stability with height; the construction of two concentric walls, tied together at vertical intervals by lintels forming galleries, creates a structure in which the overall mass is minimised while still achieving considerable potential height. Outward battering of the walls channels weight stresses effectively, adding stability.

A range of secondary architectural features spring from this basic technique. Multiple floor levels can be inserted with access from intra-mural stairs and with relatively narrow gallery entrances piercing the inner wall. Wall-voids above the entrances spread the weight and avoid placing too much stress on the lintels. Internal scarcement ledges provide support for upper floors and possibly for roofing. Main entrances tend to be single, low and narrow to avoid creating a major weak point in the structure.

The whole design of a broch tower such as Dun Carloway or Berie suggests the existence of a considerable body of expertise in the Hebridean communities, as elsewhere in Atlantic Scotland,

concerning drystone construction. The restrictions on architecture imposed by the basic hollow-wall building technique created a degree of uniformity throughout Atlantic Scotland and produced a range of recurring features across the area. Considerable variation occurs in the internal design and combination of architectural features employed; the existence and arrangement of cells and galleries on the basal levels of the structures, for example, vary greatly throughout the Atlantic province, as MacKie noted in his search for typological and chronological variation amongst *broch* sites (MacKie 1965).

Broch architecture only makes structural sense in the context of structures of more than one floor level; all of the excavated atlantic roundhouses of the Western Isles, where data is available, appear to be complex roundhouses i.e. they employ features of broch architecture. Most of these structures therefore are likely to have been multi-storey. The inferred existence of upper floors implies the existence of a timber architectural component used in parallel with the archaeologically visible stone architecture on the majority of the excavated sites. At Loch na Berie, for example, the position of the 1st floor gallery entrances relative to the stairs demonstrates that an internal timber floor at scarcement level would have been necessary to enable access into the 1st floor gallery. The number of upper floors cannot be reliably estimated at any site since weight-relieving wall-voids cannot always be distinguished structurally from gallery entrances.

Timber roofs as well as timber floors would have been used in the atlantic roundhouses and at the height which these structures could achieve it would have been necessary to protect the lower parts of these roofs from the wind by a stone parapet. It is probable that the outer walls were slightly higher than the inner walls and protected the roofs from the wind. The pitched timber-framed roof would have drained into the outer wall or gallery.

A number of significant issues are raised by the construction of the atlantic roundhouses. The mass of stone used indicates a great

investment of labour in construction: this has led to the suggestion that the structures were built by elite groups commanding a large workforce (cf Chapters Twelve and Thirteen). The skill involved in construction has invited suggestions of a class of professional builders (MacKie 1965) although the emergence of the extended chronology has weakened this case (App.1). Above all the question is raised of why the Hebridean communities of the later prehistoric period, and their northern neighbours, should invest so much time and effort in the construction of monumental structures so removed from their traditional building forms. The questions of monumentality and its function will be addressed in Chapter Fourteen.

The atlantic roundhouses stand out from the other prehistoric building traditions of Atlantic Scotland, which tend to be semi-subterranean, to save heat, and cellular, to save timber in roofing. In terms of use within the natural environment the atlantic roundhouses cannot be regarded as well-adapted.

Some examples from the Western Isles undermine the traditional concepts of the mastery of broch architecture. Dun Bharabhat, Cnip, collapsed relatively soon after completion due to being built on too soft a foundation (consisting of older midden and structural deposits). The perception of the success of broch architecture in terms of its stability should not be conditioned by the impact of the few standing examples; the failures of the type will, by definition, be the least visible to archaeologists. Dun Carloway, an archetypal broch tower, exemplifies another point which should make us cautious in our admiration for the broch builders. Although regarded as a tower, Dun Carloway is 9m high (and was probably never much higher) and c.15m in diameter. It is therefore wider than it is high and its tower-like appearance is produced by the inward battering of its upper walls. This produces an exaggerated visual impression of height. Whilst not denying the skill in construction, the visual impact which so impresses many observers of broch towers may be exactly the impression which the builders intended the structures to have. In

terms of actual proportions none of the surviving brochs, including Mousa, is taller than it is in external diameter.

The construction of the atlantic roundhouses and particularly of the broch towers was designed to produce height and stability and was a fully fledged architectural tradition with the potential to produce truly monumental structures. This potential was achieved at the expense of other considerations such as insulation and ease of roofing.

Chronology

The absolute chronology of the atlantic roundhouses of the Western Isles is poorly defined at present. In terms of the five dating levels set out in Appendix 1 we have Level One dating, C-14, only from Dun Bharabhat, Cnìp. These dates suggest a construction and primary occupation prior to the C2nd BC with collapse of the structure in the C2nd or perhaps somewhat earlier. The structure therefore fits within the period of complex roundhouse construction for the north (App.1) which appears to commence around the C4th or C5th BC.

None of the atlantic roundhouses has yielded querns with reliable contexts or any Roman material from primary occupation; Levels Two and Three of the dating scheme are therefore unavailable. This leaves only native material culture (essentially pottery and a few beads for the Western Isles) and structural typology. It is worth noting that saddle querns, without reliable site contexts, have been found at Dun Thomaidh and Dun Cuier and may be associated with pre-quern transition activity on these sites.

Ceramic assemblages which can be reliably associated with atlantic roundhouse primary occupation are only available from Dun Bharabhat and possibly the galleries at Loch na Berie. All of the other assemblages have been shown to comprise material from later occupations along with any primary material, except perhaps the material Rudh an Duin where no details are available.

Despite the existence of 140 known sites and despite thirteen excavations of atlantic roundhouses in the Western Isles, the Bharabhat and Berie assemblages are our only indication of the ceramics associated with these monuments. The material from these sites falls within the largely undifferentiated group of later prehistoric pottery with a high percentage of decorated vessels and everted rims, characteristic of the later centuries BC (App.3). This poorly defined picture at least provides some support for the early dating of Dun Bharabhat.

It is unfortunate that we have to rely so much on the least reliable dating level defined in Appendix 1, structural typology, to provide a chronological framework for the atlantic roundhouses of the Western Isles. The excavated sites all appear to be complex roundhouses or broch towers wherever evidence is available (as it is for all excavated sites except Dun a Ghallain and Eilean a Ghallain) and conceivably all may have been broch towers. Given the relative frequency with which simple atlantic roundhouses have recently been found in excavations in the north (e.g. Bu, Pierowall, Quanterness, Tofts Ness) it is significant that no such structure has been found in the west. In terms of the chronological evaluation set out in Appendix 1, this would suggest that the Hebridean sites all date from the period of c.400BC onwards after the initial development of the elements of broch architecture. Unfortunately no further chronological resolution is possible unless the growth of clustered village settlements around certain broch towers is seen as a chronological phenomenon; this development manifestly does not occur in the west. There is however insufficient evidence in the north to claim that the single roundhouse settlements cease to be occupied in the last centuries BC and even if there were this would have no necessary validity in the Western Isles.

The atlantic roundhouses appear to pre-date wheelhouses on the few sites where the two forms occur. Unfortunately there is still in each case a measure of doubt regarding the relationship between the forms and the possibility remains that they may represent unitary structures. Nonetheless at Garry Iochdrach, Cnoc a Comhdhalach

and Eilean Maleit the sequence of atlantic roundhouse followed by wheelhouse does seem likely. At several of the sites cellular structures are constructed in the abandoned atlantic roundhouses. It is probable that the atlantic roundhouses are occupied prior to the cellular structures, which will be argued to date from the C1st BC onwards in Chapter Seven. The relationship with the wheelhouses is less clear. On the present evidence the Hebridean atlantic roundhouses appear to inhabit a chronological range from c.400 BC until perhaps the C1st BC, but the weakness of the chronological evidence is obvious.

Function

The function of atlantic roundhouses, and in particular the *brochs* however defined, has occupied the attention of archaeologists and antiquarians for well over a century. Originally the dispute centred on whether they functioned as forts, wholly defensive in intent, or as farmsteads occupied on a day-to-day basis (whether by an elite or by the wider population). The use of atlantic roundhouses as domestic with a defensive component is now generally accepted especially since Fojut's work in Shetland which demonstrated the siting of atlantic roundhouses with regard to available agricultural land (Fojut 1982).

Only one primary floor plan is available for any of the Hebridean atlantic roundhouses, from Dun Bharabhat, Cnip. The structure is dominated internally by a central hearth, and the quantities of broken pottery and midden debris are suggestive of normal domestic use. In the absence of other floor plans and detailed excavated evidence the survey record can provide limited evidence for function from a combination of architectural features and aspects of site structure.

Defense as a primary function is immediately suggested by the visual impact of tall, externally featureless stone towers with their small narrow single entrance. The visual correspondence with medieval defensive architecture provoked interpretation in terms of defence

from the early antiquaries. It is not clear however, what kind of defence the atlantic roundhouses are intended to provide or against what threat they were established.

MacKie was never specific as to the form of the threat with which his *brochs* were intended to deal but seemed to imply a form of siege warfare (1974, 98). The defensive capacities of the atlantic roundhouses however are purely passive. Once locked into a roundhouse one could only wait until the attackers had pillaged the surrounding land and stolen one's livestock. The narrow broch entrances could not easily have enabled the accommodation of stock inside. Determined attackers could presumably starve or smoke out the inhabitants relatively easily; blocking up the single entrance from the outside would be a simple means of achieving this and even the tallest broch towers could not have been far out of the range of fire-brands.

The location of many of the atlantic roundhouses on islets linked to the shore by stone causeways may have been a much more effective defensive mechanism than the architecture of the roundhouses. While the architecture of hilltop-sited roundhouses such as Dun Cuier and Dun Scurrival in Barra clearly adds to their defensive capability, these structures are no more defensive than a simple wall around the hilltop would have been. Nothing in the architecture of these sites seems necessary to improve on the natural defensive capability of the site. The simpler architecture of contour forts, utilising the natural defensive capabilities of their locations to the full, or the control of access and concentration of defense shown by the promontory forts, would have been considerably more efficient for purely defensive purposes.

Causeway cross-walls and gaps would have greatly impeded attack and enabled defence to be highly concentrated. The annexes would have provided space for storage and for stock. Surprise attack or night raids would have been easily detected by the simple expedient of guarding the causeway or lifting the bridges from the causeway gaps. The architecture of the roundhouses appears to be a device of

limited defensive application in the face of these more practical measures. We must draw on further explanations for its existence other than the purely defensive.

The density of atlantic roundhouse sites and the locational factors in their siting will be discussed in Part Three. In general terms both factors indicate that the structures were a common settlement form in the later centuries BC and were situated with the requirements of a farming economy in mind. Their density precludes their interpretation as strongholds of an elite. Nonetheless the construction methods described above show that they were not simple utilitarian, domestic structures.

The atlantic roundhouses of the Western Isles cannot be interpreted as either simple farmsteads or as simple defensive structures. They were used as a standard settlement form but with a variable defensive capacity and in the context of a monumental architecture which removed them from the purely utilitarian sphere.

Subdivision

The conventional division of the atlantic roundhouses into brochs, galleried duns, island duns etc. has been rejected above as unhelpful and misleading in the context of the Western Isles. The excavated atlantic roundhouses, where classifiable, are all complex roundhouses, and three at least, Berie, Dun Carloway and Dun Cuier are broch towers. These three sites are all *brochs* by MacKie's criteria and all of the remaining ten could be *brochs* given their state of preservation. The utility of the conventional division of *brochs* and *duns* is therefore highly questionable in this context.

No architectural division has been shown in the class of atlantic roundhouses other than differences in apparent complexity all of which are accommodated within the atlantic roundhouse architectural form as defined elsewhere (App.1). If a class of solid-walled *dun* ever existed in the Western Isles, in the mid-1st millennium AD or at any other time, it has yet to be demonstrated by

excavation. Of thirteen excavations every one has turned out to contain a complex roundhouse, despite the deliberate selection of Dun Bharabhat for its lack of complex architectural features visible prior to excavation, and despite the work of Erskine Beveridge who excavated sites almost randomly, based on proximity to his house on Vallay. Thomas too, excavated Dun Ban, Grimsay, not expecting it to be a complex roundhouse or broch tower and Young, even after excavating Dun Cuier, believed it not to be a broch tower. Only Dun Carloway was excavated in the knowledge that it was a broch tower while Loch na Berie had only the evidence of oral tradition. The lack of a solid-walled dun is therefore not the result of a history of broch-orientated research but the result of widespread excavation, often without any real research strategy; it is the nearest we are likely to achieve to a random sample of excavation. That no solid-walled dun has been found despite this pattern of research strongly suggests that the type does not exist in the Western Isles. No structural or architectural division is suggested by the examination of excavated or surveyed sites.

The chronological information on the atlantic roundhouses is too slight to provide any basis for subdivision. On the basis of structural typology the sites could all date to the same broad period of c.400BC or earlier to c.100BC or later. At present there is no evidence to subdivide them or narrow this range.

There is no justification, in the present state of our knowledge, to subdivide the atlantic roundhouses of the Western Isles. The conventional division between *brochs* and *duns*, which was the basis of the study of the later prehistory of the islands, does not stand up to the evidence of field survey and excavation. The use of the terminology of the atlantic roundhouse assimilates both of these structural classes and shows their overwhelming unity in comparison to other types of structure. This structural and architectural unity appears to extend to site function on the basis of the evidence of site structure from the survey data.

Parallels Outwith the Western Isles

The atlantic continuum of roundhouse architecture is discussed in Appendix 1. In essence the atlantic roundhouses of the Western Isles share a range of features with similar structures in the Northern Isles and north mainland, and with the west coast of Scotland. Atlantic roundhouse forms are also found sporadically in Lowland Scotland but the wider issues of the distribution of the type are outwith the scope of this thesis.

The main difference between the atlantic roundhouse sites in the Western Isles and those of the north, or at least of the Orkneys, is the total absence of clustered village settlements around the western roundhouses. In all cases the western roundhouses are single structures and in no case can any contemporary building be cited.

Elements characteristic of broch architecture are also found on non-atlantic roundhouse sites including the *duns* of Argyll and a number of Irish Late Iron Age or Early Christian forts (e.g. Warner 1983). Again the possibility of links between these latter areas and Atlantic Scotland are outwith the scope of this thesis. The atlantic roundhouses of the Western Isles lie on an axis of communication which was capable of carrying cultural information, by whatever mechanism, over wide areas throughout the later prehistoric period.

Summary

The atlantic roundhouses appear to represent a standard settlement type of the later centuries BC in the Western Isles. Their architecture raises questions on the meaning of monumentality in the domestic context and its relationship to otherwise utilitarian farming settlements. Their nature as defended monumental settlements is relatively easily described but difficult to explain, as is their relationship, chronological and functional, with the wheelhouses.

The widespread parallels of the atlantic roundhouses and in particular the different distributions of atlantic roundhouses and wheelhouses on the inter-regional scale further complicate the formulation of explanatory models.

Further analysis of selected data in Part Three will attempt to clarify the structural, locational and spatial relationships within the class and explore the relationships of the atlantic roundhouses with other structural forms.

Chapter Six

Wheelhouses

The radially partitioned roundhouses of the Western Isles have been classified in the past as wheelhouses, earth-houses and aisled roundhouses. The term wheelhouse will be used to refer to all of these types in the following discussion, in preference to the more cumbersome 'radially partitioned roundhouse'.

The wheelhouses of the Western Isles conform to a uniform construction; their circular interiors contain a number of radial drystone piers regularly spaced around the whole circuit. These radial piers appear similar on plan to the spokes of a wheel and if projected would converge on the centre of the structure. The regularity of the plans and uniformity of proportions appear to result from a specific construction method which will be discussed below.

The wheelhouses are the only known radially partitioned roundhouses in the Western Isles at present, but atlantic roundhouses in the north commonly have radially partitioned interiors. This discussion is therefore purely regional in scope. Questions of the relationships between the Hebridean monuments and those of other areas will be discussed in Part Four.

Seventeen definite wheelhouse sites have been excavated in the Western Isles. Many of these are relatively poorly recorded early excavations. The additional evidence from field survey is slight for this class, providing only nine more examples of which few are definite (Ill. 6.1). The following discussion examines the excavated sites from north to south through the islands.

Excavated Sites

W.1 Cnip, Lewis NB 0980 3665 (Armit 1988a)

Introduction - The complex of structures at Cnip included two wheelhouses, several cellular structures (Chapter Seven) and a substantial linear house structure (Chapter Eight). The site was excavated over seven weeks in early 1988 as a rescue operation in advance of the construction of a sea wall and sewerage system. The site lay on the eroding beach front of the Traigh Cnip sands in an area of formerly consolidated machair.

Site Structure - Phase 1 on the site comprised two adjoining wheelhouses of which one was never completed (Ill. 6.2). This incomplete structure, Structure 2, was left with construction material stacked in its interior and entrance and was used for a relatively short period as an outbuilding or annexe to the occupied wheelhouse, Structure 1 (Armit 1988a, 15-17). The dismantling of this incomplete structure enabled a detailed reconstruction of building methods while the survival to roof level of parts of Structure 1 provided complementary information on superstructure and roofing.

Both structures were sand-revetted and their upper parts were packed with midden material. Structure 1 was some 7m in internal diameter and contained eight aisled piers. Structure 2 appears to have been planned as a structure of similar dimensions. The bays of Structure 1 were individually corbelled, forming a ring of roofed cells around the open central area. This central area would have had a timber-framed roof resting on the ring of masonry provided by the circle of bay roofs. The building and roofing methods are discussed in more detail later in this chapter along with evidence from other excavated sites.

Internal Structure - Only Structure 1 was occupied as a domestic structure in this earliest phase on the site. Few internal features can be linked with the primary occupation since excavations of the

primary floor were limited in scale. A large central hearth seems to have been the dominant feature. No primary blocking of access to the bays was noted and no internal features were noted in the bays. At this earliest period access was possible through the aisles between each of the bays.

Material Culture and Chronology - C-14 dates have not yet been obtained from the excavation. The ceramic assemblage likewise has not yet been subject to detailed analysis. Initial observation of the pottery shows that the assemblage contains a wide variety of both incised and applied decorative motifs and is dominated by incurving and sharply everted rim forms. Vessels are generally small and globular in form; all were flat-based. The assemblage belongs to the highly decorated typological stage which is so far undifferentiated for the last few centuries BC and possibly extends into the C1st AD (App.3).

Other finds from the site were generally unhelpful in dating. Several rotary quern fragments were found built into walling which suggests a construction date after the local quern transition (App.1). A date between approximately 200BC - 100AD may be suggested for the construction of the Phase 1 structures.

W.3 The Udal, North Uist NF 824 783 (Crawford 1967/78, 1975, 1977, 1985)

Introduction - The Udal is a multi-period machair site which has been under excavation since the early 1960s (having been previously excavated by Beveridge). The wheelhouse lies on a sand-hill on an eroding headland in the north of North Uist. Details of the material remain unpublished and no archaeological plans are available. The excavator declined to make the material available for the present study.

Site Structure - The main wheelhouse at the Udal lies amid a lengthy sequence which includes pre-Norse cellular structures as well as Norse and later structures. None are stratigraphically

associated with the wheelhouse as far as can be ascertained from the interim excavation reports.

The main wheelhouse on the site appears to have been a large, sand-revetted structure with 11 free-standing piers. Although sand-revetted for much of the circuit parts of the wall on the west were double-faced and free-standing. This structure was associated with a small contemporary adjoining cell with three stone piers projecting from one wall (although the two appear to have been linked only at an early phase in the use of the wheelhouse). Another wheelhouse is indicated on some plans as lying adjacent to this structure.

Internal Structure - No information is available on the internal features of the structure.

Material Culture and Chronology - No detailed information is available on the material associated with the wheelhouse although Lane indicates that the wheelhouse levels contained pottery with everted rims and a range of decorative motifs in contrast to the later assemblage with which he was concerned (Lane 1983).

C-14 dates from the wheelhouse have not been published. Dates from the post-wheelhouse cellular structures have been claimed to centre on the C1st AD, but again the data is not fully published. The available C-14 evidence is listed in App.2.

W.4 Foshigarry, North Uist NF 7430 7636 (Beveridge 1930)

Introduction - This complex machair site, was excavated by Erskine Beveridge between 1911 and 1914, and includes three wheelhouses amongst a mass of other structures (Ill. 6.3). The site has suffered greatly through tidal erosion since Beveridge's day and it is probable that much material was lost to the sea prior to his discovery of the site. That the full depth of the sand hills can still be seen to contain super-imposed structures of drystone construction (pers. obs. 1987) shows that Beveridge's excavations revealed only a small part of a far more extensive site. The prehistoric occupation lies towards the base

of sand-hills capped by the post-medieval township of Foshigarry on the north coast of North Uist near Vallay.

Site Structure - There are three wheelhouses on the site, Structures A-C on the original plan. Structures B and C were half removed by later building operations while Structure A, although undamaged by later activity, was reduced to a third of its original size by tidal erosion. All three structures share a flimsiness of wall construction indicating that they were never free-standing but were sand-revetted.

Structure A is the best preserved of the three, standing over 2m high in its southern arc, and gave the only indications of the form of roofing of any structure on the site. Beveridge reported a considerable degree of over-sailing in the upper course slabs of Structure A, especially in bays A1 and A2, which, along with the quantity of fallen slabs in the bays, he took as evidence that the bays were originally corbelled.

Structures B and C were far less well preserved than A, being caught up in a maze of re-building and stone-robbing which Beveridge was unable to disentangle. The northern parts of the two wheelhouses were disturbed by post-medieval buildings associated with the overlying township. The degree of confusion is therefore even greater than the plan suggests.

The drain system linking the two wheelhouses would, if original, suggest that Structure C is the earlier as the drain leading from Structure B appears to be a later addition to that leading from C. Given the lack of proper recording and the structural similarities between the two, the succession is of little relevance, save to note that the two could not have co-existed in their original forms. Both structures have a confusion of piers which are unlikely all to be original, but all of the true radials (i.e. those which lead towards the centre of the structure) are free-standing, slight structures, only 0.3m to 0.35m in thickness. The relationship between B and C and the structures which surround and overlie them is problematic and probably unresolvable in the light of Beveridge's methods of

recording. It is unlikely that Scott was correct in his belief that Structure H (the linear passage discussed in Chapter Eight) predated the wheelhouses; although its level is generally below C, it rises up through the floor level of C and would have made C unusable unless it was built after the abandonment of the wheelhouse and dug down into the mound. Structure H at no point underlies any standing walling of C.

Internal Structure - Little information is available on the internal organisation of the structures. Structure A had its radial piers bonded into its enclosing wall while those of B and C were separated by an aisle. Later disturbance prevents any meaningful interpretation of the internal arrangements of B and C: the surviving bays of Structure A were floored with clay, and the central area would appear to have held a spread of ash suggesting an original central hearth.

Material Culture and Chronology - The material recovered from the site, although plentiful, is of little help in establishing the site sequence due to the rudimentary standard of the recording. The problem is exacerbated by the fact that the publication of the material was compiled only after the death of the excavator. The pottery covers a wide range of later prehistoric forms (App.3); a wide variety of incised and stabbed motifs occur along with applied wavy cordon decoration while rim forms include everted and flaring forms.

It is possible to discern a relative chronology for the wheelhouses at Foshigarry. It is unlikely that Structure A could have preceded the other two, since its high degree of preservation shows that it was never robbed. It is therefore likely that A was the last of the wheelhouses to be used although it cannot be shown that B and C were necessarily out of use by the time A was built. The spatial separation of the structures in contrast to the over-building common on other wheelhouse sites suggests a degree of contemporaneity between at least two of the structures. The position of A lower down the side of the mound supports this view. The survival of A uncontaminated by later occupation suggests a gap in activity on this

part of the site over a period sufficient to obscure the position of so much good building stone. Re-occupation on top of the mound then initiated the partial destruction of B and C; their re-use is shown by the occurrence of later material such as composite combs.

The absolute date of the structures is difficult to gauge but the recovery of a saddle quern as well as several rotary querns from the wheelhouses suggests a relatively early date, at least for Structure C, and perhaps provides further slender support for the inferred on-site succession from C to B and then to A at around the time of local quern transition (App.1). This would represent a transition at Foshigarry from wheelhouses with slight free-standing piers to one with more massive bonded piers at around the time of this artefactually defined horizon, perhaps c.200BC.

W.5 Bac Mhic Connain, North Uist NF 7695 7620 (Beveridge 1931)

Introduction - This site was excavated by Beveridge over 6 weeks in 1919 and published after his death from his incomplete notes: the account thus suffers from the same lack of precision as the Foshigarry report, although the site itself was less complex (Ill. 6.4). Extensive quarrying was carried out, especially on chamber A, during the building of Vallay House and the plan of that structure in particular must be regarded, as Scott observed, as 'tentative' (1948, 75).

The site lies on the island of Vallay itself, some 200m from the western shore, on the machair plain; it is likely to have overlooked the now drowned machair plain of Vallay Strand.

Site Structure - Structure D is the only clear wheelhouse on the site and it was also the best preserved, standing over 2.5m high in places. A series of outer cells appear to be associated with part of the occupation. Like the structures at Cnip, the Udal and Foshigarry, the Bac Mhic Connain complex was dug into existing machair hills and revetted against the sand.

The 8 piers preserved in Structure D are bonded into the surrounding wall and Beveridge noted that the upper courses indicated corbelling of the bays. The wheelhouse had been subject to extensive reconstruction, with modifications to the upper parts of the piers apparently providing a more solid base for the corbelling. This strengthening of the structure may have been carried out at any point in the use of the wheelhouse which clearly extended over a considerable period: well over 1m of deposits filled the chamber and, at a late stage, a furnace had been dug down into the centre.

Structure D does not represent the earliest activity on the site as Beveridge records finding midden material under the floor level; the finds, which are unstratified, could in part derive from these underlying levels. Structure D is demonstrably earlier than any of the other structures which Beveridge managed to record at Bac Mhic Connain. Three superimposed drains were traced from the entrance passage of D and it is the uppermost (well above the original floor of D) which leads in to A, B and C. Chambers B and C may indicate progressive extension of the entrance of D to avoid the build-up of sand blocking the entrance. It is not possible to determine the true structure of A, which was quarried and used as a rubbish tip prior to excavation, but there are vague indications of possible radial piers (Ill. 6.4). When this building was in use it is unlikely that D was habitable due to the accumulation of material inside. It is probable that, as the furnace indicates, D was used only as a sheltered hollow for a workshop. We may then be seeing at Bac Mhic Connain the successive use of a number of wheelhouse structures on the same site over a long period.

Internal Structure - The internal organisation of the wheelhouse focuses on the central area from which all access to the bays was controlled. The piers, by the nature of their construction, allowed no access between bays. It is therefore relatively easy to demonstrate the patterns of access within the structure. No information is available on the possible differences in use between bays. None of the recorded internal features can be shown to relate to a specific

phase of occupation. It is apparent that access to some of the bays, which were bridged by lintels, would have been impossible after the accumulation of substantial occupation debris (the lintel of Bay 4 was only 0.5m above the 'original' floor level).

Material Culture and Chronology - A saddle quern was found in the filling of Structure A; this appeared to have fallen in from the walling and it is likely that the activity on the site began prior to the local quern transition (the only other quern stones found were of the rotary variety). A number of clay and stone moulds, as well as confirming on-site metal-working, indicate a possible date in the Roman period for the post-domestic occupation. Bac Mhic Connain also produced one fragment of the rim of a Samian bowl.

A whalebone mirror handle from the site has parallels to bronze items in Ireland (Raftery 1984, 209) and an almost identical bronze version at Lochlee (MacGregor 1976, No.272), and falls into the early part of Warner's EIA2 style (Warner 1983, 164) perhaps in the C1st or C2nd AD. The Ogham inscribed bone knife handle and perhaps the bone die indicate later activity and it is not possible to link the Roman period material to any phase of the site's use, save to note that the metal-working material may be contemporary with the furnace and thus later than the initial use of Structure D, perhaps in the C1st or C2nd AD.

None of the artefacts has any secure connection with the construction or primary domestic use of the wheelhouse.

W.6 Sollas (Machair Leathann), North Uist NF 8035 7577 (Beveridge 1911)

Introduction - The Sollas wheelhouse lies on the broad machair plain, the Machair Leathann, overlooking Vallay Strand. It was excavated initially by Beveridge, after its discovery by a local shepherd, and re-excavated by Atkinson in the 1950s; this later work still awaits publication. A number of discrepancies between Beveridge's plan and that of Atkinson must make us wary of the

reliability of Beveridge's plans on other sites as well as at Sollas, but nonetheless it is only from his work that published material is available (Ill. 6.5 is Beveridge's plan).

Site Structure - The main structure on the site is a wheelhouse, c.12m in internal diameter, with 12 unbonded piers linked to the surrounding wall, and to each other, by paired lintels. This leaves a central area with axes of 7-8m. The lintels, where preserved, showed a consistent height of 1.3 - 1.5m and no sign of corbelling was noticed in the outer wall.

The wheelhouse had an extended entrance passage and an adjoining smaller cell which appeared to be of secondary construction, its entrance passage being founded on midden material.

Internal Structure - Beveridge notes that 7 of the bays were blocked by walling at their inside edge and, although Scott takes this to indicate a simple kerb, Beveridge is quite clear that it was a total blocking, and access to several of the cells could only be achieved through the narrow aisle between the piers and the outer wall. The central area did not therefore channel all access to each bay individually. A more complex pattern of access can be postulated than for sites with bonded piers, e.g. Bac Mhic Connain and Foshigarry A.

The main importance of Atkinson's re-excavation lay in the discovery of a large number of pits dug into the floor of both the central area and the bays. These ranged in size from 1m to only a few cm in depth, and many were found intercutting and with a variety of contents, ranging from deposits of burnt bone and pot, to one containing a vessel full of mouse skeletons (Topping 1985, 224). The pits demonstrate a strong ritual element in the occupation of the wheelhouse.

Material Culture and Chronology - Rotary querns were in use throughout the occupation. One fragment (not illustrated by Beveridge) was said to be incised with a 'rude Latin Cross'; the

dating significance of this, and its relevance to the structure, is unknown. Insufficient information is available to assess the chronological value of the ceramic assemblage.

W.7 Garry Iochdrach, North Uist NF 7724 7427 (Beveridge 1931)

Introduction - Garry Iochdrach was excavated by Beveridge in 1912 and 1913 and published posthumously. The wheelhouse lies on the west side of Vallay Strand partly below the present high water mark. It lies on an eroding rocky coastline overlooking the drowned machair of the Strand. The possible atlantic roundhouse which it occupies has been discussed in Chapter Five.

Site Structure - The main prehistoric element of the site is a substantial wheelhouse (Ill.5.8). An outer enclosure wall, noted by Scott (1948, 73), is as likely to belong with the associated later structures as with the wheelhouse. The wheelhouse appears to be partly free-standing and partly built into the hillside. Parts of the outer wall survived to a height of around 1.6m and the best preserved piers were of a similar height.

The plan and description of the outer wall at Garry Iochdrach defy interpretation; the thin surrounding wall appears to serve no structural purpose and does not appear to be a separate settlement structure. It is possible that in this, as in other cases, Beveridge excavated by means of a central hole and did not explore the outer of the two walls fully; an underlying atlantic roundhouse has been postulated (Chapter Five). Sadly the quality of the recording makes it impossible to put forward a convincing structural sequence for this site, except to say that the wheelhouse is clearly not the only structure present.

Internal Structure - Internally the structure contains 7 short radial piers separated by an aisle from the enclosing wall (except for one bonded pier on the east side). These leave a central area some 7.9m in diameter containing a central hearth. The majority of the bays

were blocked by kerbs of uncertain height built of slabs placed on end.

Material Culture and Chronology - Finds from Garry Iochdrach cover a lengthy period. The latest occupation may be shown by a coin of Constantius II, dating from the C4th AD, found in the passage. None of the finds can be related to the primary occupation of the wheelhouse.

W.8 Cnoc a Comhdhalach, North Uist NF 7708 7415 (Beveridge 1911)

Introduction - Cnoc a Comhdhalach was excavated by Beveridge between 1905 and 1907 and published briefly in 1911. The atlantic roundhouse in which the wheelhouse is revetted is discussed in Chapter Five.

Site Structure - The central wheelhouse, enclosing an area of 7m, appeared to have been inserted into a pre-existing free-standing structure which incorporated hollow wall construction (Chapter Five, Ill.5.9). The wheelhouse contained 7 unbonded radial piers linked by paired lintels to the surrounding wall; all of the structural elements survived to a height of 1.3 - 1.5m. A long low entrance passage extended out from the entrance through secondary modifications of the walling, containing cells and steps, to a raised wall area. Almost 2m of debris inside the structure testified to a lengthy occupation which again reduces the archaeological value of the poorly recorded material remains.

Internal Structure - The wheelhouse contained a central hearth and a kerbed perimeter at the inner ends of the bays. No other internal features were noted.

Material Culture and Chronology - No artefactual material can be attributed to any phase of the site's occupation.

W.10 Eilean Maleit, North Uist NF 7748 7388 (Beveridge 1911)

Introduction - Beveridge excavated the summit of the central stony mound of Eilean Maleit after the site was quarried for stone to build a nearby bridge. A very brief account of the work appeared in his book 'North Uist' (1911). Eilean Maleit is a rocky tidal islet in Vallyay Strand connected to the shore by a substantial stone causeway. It is probable that, prior to the drowning of the Strand, the islet would have lain in a machair loch. The atlantic roundhouse on the site has been discussed in Chapter Five.

Site Structure - A free-standing wheelhouse, 8m in internal diameter and with 9 piers, dominated the islet (Ill.5.10). The probable presence of an underlying galleried structure is discussed in Chapter Five. This structure contained a number of free-standing piers with 3 bays blocked off from the central area on the north side. The form of roofing is unknown, due to the structure's state of preservation, and similarly the relationship of the numerous surrounding cells to the wheelhouse remains unresolved: some appear to be galleries of the atlantic roundhouse while others may be associated with the wheelhouse.

Internal Structure - No details were recorded of the internal features of the structure but the patterns of access are important in their contrast with most other wheelhouse sites. Three of the bays appear to be entirely walled off from the central area while the two by the entrance are bonded and the remaining four aisled. Access patterns were therefore not all channelled through the central area.

Material Culture and Chronology - No information is available on the artefactual material or dating of the site.

Clettraval, North Uist NF 7489 7136 (Scott 1948)

Introduction - This site was excavated by Scott in 1946 and 1948. The publication was the first major wheelhouse excavation report to

make a serious attempt at reconstruction and interpretation. The wheelhouse lies on a hillside location a few km south of Vallyay Strand, built over a chambered tomb.

Site Structure - The wheelhouse lies amid a complex of other structures with which the excavator believed it to be contemporary, forming a farmyard with outbuildings and an enclosure wall (Ill. 6.6). There is however no evidence that these structures were all contemporary however, and the site seems to have been a focus for activity from the Neolithic through to post-medieval times.

The central structure was a free-standing wheelhouse with aisled piers joined by lintels to the main surrounding wall (Ill. 6.7). This left an aisle 0.6m wide and a central area 4.3m in diameter. Traces were found in the collapse pattern which Scott took to be evidence of a collapsed stone architrave between certain of the piers.

The site underwent four identifiable phases of use of which the first two involved the use of the wheelhouse in its original form. Phase 1 was the initial construction and occupation followed by partial rebuilding and reduction of the roofed area in Phase 2. The surrounding farm buildings and wall appear to represent a continuation of the periodic reuse of the site of phases 3 and 4 and have no demonstrable chronological connection with the occupation of the wheelhouse in its original form.

Internal Structure - The central area of the wheelhouse contained a central hearth which appears to have been replaced several times. Several of the bays were wholly or partially paved and most were kerbed.

Material Culture and Chronology - Pottery from the site, which was used to construct the traditional Hebridean Iron Age sequence, has recently been subject to stringent review (Topping 1985). The problems of poor recording and inadequate sample size have been highlighted to the extent that it is not possible to recognise any trends in the pottery throughout this site's occupation. The ceramic

assemblage comprises a range of the decorated and everted rim forms of the later centuries BC (App.3).

The initial construction of the site may be related to the loss of a broken globular bead of translucent green glass found under the floor of bay 9. This type, rare in Scotland, is Guido's Class 7, group ii or iii, which she dates to the Roman or early post-Roman period (but see discussion of bead dating in App.1).

W.12 Bruach Ban, Benbecula NF 787 567 (Scott pers.comm.)

Introduction - The wheelhouse site of Bruach Ban was destroyed in the construction of the airport at Balivanich in Benbecula during the 1950s. Prior to this the site was excavated over seven and a half days in 1956 by Mr. JG Scott. Mr. Scott kindly supplied the information from which this account is compiled. The site lay on the machair plain behind the coastal sand dunes on Benbecula and was revetted into a pre-existing machair hill.

Site Structure - The structures on the site comprised the main wheelhouse, some fragmentary subsidiary walling and the remains of what may have been an adjoining wheelhouse.

The main structure was a wheelhouse some 10m in internal diameter divided by radial drystone piers, some of which were aisled. Apart from the main northern entrance, an entrance led from the west bay into a further, unexcavated roundhouse structure which had indications of at least one radial pier and a curving outer wall. This entrance had been blocked. The situation provides a close parallel to the first phase wheelhouses at Cnip. A third entrance, to the east, was not investigated.

Internal Structure - No internal features were found apart from a hearth at a high level in one of the bays, interpreted by the excavator as indicating late squatter activity. It is probable that the primary floor levels of the wheelhouse were not reached during the brief excavations.

Material Culture and Chronology - Finds from the excavation are lodged in Glasgow's Kelvingrove Museum and an inspection of these provided a limited amount of information on chronology. In general the material represents a standard but undiagnostic assemblage of later prehistoric bonework and pottery. A rotary quern upperstone found *in situ* dates the latter part of the occupation to the period after the local quern transition (App. 1).

The pottery includes vessels decorated with applied cordons and bosses, fingernail impressions and impressed finger-prints. The rim forms are characteristically weakly everted. The incised decoration of the last centuries BC is absent and the assemblage finds its closest parallels for decoration in the Phase Three pottery from Cnip, though the rim forms might suggest a slightly later development. This would indicate that the earliest floor levels were not excavated. The pottery typology would favour a date in the C1st or C2nd AD for this secondary assemblage.

W.13 Bruthach a Tuath, Benbecula NF 787 566 (compiled from excavator's notes)

Introduction - This site was excavated by Mr J.C. Wallace over a period of less than two weeks in 1956. The brief and incomplete excavation was carried out in advance of destruction to make way for the Balivanich airfield. The site lies within a few hundred metres of Bruach Ban and prior to excavation was a low machair mound on the plain behind the coastal sand dunes. Mr Wallace's notes for publication were donated to the National Museum of Scotland after his death and provide the basis for this account.

Site Structure - Apart from the wheelhouse there were two structures recorded on the site; a linear passage discussed in Chapter Eight and a small unexcavated boulder structure which cannot be stratigraphically tied in to any part of the site sequence.

The primary structure on the site was a wheelhouse with 7 surviving aisled piers of a probable original 10. The wall was sand-revetted and c.8.8m in internal diameter, surviving to a maximum of three or four courses in height. The SE entrance appears to have led out into a complex extended entrance passage.

The piers survived up to c.0.7m in height. At least one aisle had been deliberately blocked in antiquity, as was the case on a number of other sites, best demonstrated at Cnip.

Internal Structure - Like many of the older excavations it is not clear that the primary levels of the Bruthach a Tuath wheelhouse were excavated. No central hearth was found but a major concentration of peat ash in the centre may indicate a hearth below. Two of the bays contained hearths which appear to have been secondary and possibly belong to a period after the structure had been abandoned as a permanent settlement.

At least two, and probably three, bays contained postholes in a central position, indicating the use of timber posts to prop up the bay roofing.

Material Culture and Chronology - The decoration on the ceramic assemblage was restricted to applied wavy cordons, bosses and fingernail impressions on rims. No incised decoration is recorded apart from one sherd with a horizontal groove above an applied wavy cordon. One sherd has circular impressions possibly made using a ring-headed pin. No details on vessel forms are available. Typologically the assemblage may be early 1st millennium AD but the absence of sufficient rim sherds makes closer dating impossible. The assemblage does indicate that primary levels on the site may not have been excavated.

W.14 Hornish Point, South Uist NF 758 470 (Barber et al 1989, Barber forthcoming)

Introduction - Hornish Point on the north coast of South Uist was excavated by the Central Excavation Unit of the Scottish Development Department in 1981 as part of a wider programme of work on eroding coastal sites. This discussion is based on a preliminary stratigraphic report made available by Mr. John Barber.

Site Structure - The site consisted of extensive midden and cultivation deposits containing 8 structures of which 3 may be interpreted as wheelhouses. Only Structure 5 had clear structural evidence of having been a wheelhouse; this was an arc of walling some 8.5m in length, possibly indicating an original diameter of c.7.5m, with four surviving radial piers. The structure was sand revetted and stood to 1m in height. Three of the piers abutted the wall while one was aisled.

Internal Structure - The floor levels of the structures were not excavated, so nothing can be said about the internal structure of the wheelhouse.

Material Culture and Chronology - A group of C-14 dates were obtained from Hornish Point and these are discussed in detail in App.1. Structure 5 was stratified below contexts yielding a consistent series of dates concentrating in the period from 400 - 200 BC. The centroids of dates GU 2015, 2024 and 2025, which directly seal the wheelhouse, were 253BC, 241BC and 353BC respectively. A *terminus post quem* is provided by GU 2027 dating from 474 - 402 BC at 68% confidence limits. A date in the C4th or early C3rd BC appears to be the most probable for Structure 5.

The ceramic assemblage from the site appears to comprise a wide range of decorated and plain forms characteristic of the later centuries BC.

W.15 A' Cheardach Mhor, South Uist NF 7571 4128 (Young and Richardson 1959)

Introduction - A' Cheardach Mhor, situated on the Drimore machair of South Uist, was excavated in 1956 in advance of the MoD rocket range development.

Site Structure - This wheelhouse was sand-revetted and contained 11 piers which were unusual in abutting the surrounding wall without being bonded into it (Ill. 6.8). It is possible that the structure was originally aisled but adjusted to provide additional roof support, although the method does not result in as stable a structure as a properly bonded wheelhouse. The upper courses are oversailed up to the preserved height of 1.3m with some clay used as mortar, either as an additional stabilising influence on the wall or to keep out water. A large stone embedded in clay in the middle of the entrance, and two internal whalebone post supports, may confirm that difficulties with the roof necessitated makeshift additions to the roof support system.

The occupation of the site was divided into 5 successive phases of which only the first, sealed by a layer of clean sand, involved the wheelhouse in its primary form. Subsequent occupation followed the construction of smaller structures from the wheelhouse stone, and extended into the C5th or C6th AD (Chapter Seven).

Internal Structure - The central area of the wheelhouse had a central and a peripheral hearth. The abutted piers were equivalent to bonded piers in terms of channelling all access through this central area.

Material Culture and Chronology - A rotary quernstone below the floor level of the primary wheelhouse dates the whole excavated sequence to the period after the local quern transition (App.1); a used saddle quern in the walling indicates that either there was a preceding phase on the site or else the stone was quarried from an earlier structure. Yellow glass beads, one found on the wheelhouse floor and the other unstratified, may date the primary occupation to

the late C1st BC or C1st AD (Guido 1978, 76) although the use of these bead types for dating is problematic (App.1). The ceramic assemblage shows a wide range of applied and incised decorative motifs characteristic of the later centuries BC (App.3).

W.16 A' Cheardach Bheag, South Uist NF 7577 4037 (Fairhurst 1971)

Introduction - A' Cheardach Bheag, situated on the Drimore machair some 500m south of A' Cheardach Mhor, was excavated by Horace Fairhurst in similar circumstances and in the same year as the latter site.

Site Structure - The site consisted of one major wheelhouse and one adjoining subsidiary piered structure, built over earlier occupation debris (Ill. 6.9). The excavation of this early occupation along with the lowest occupation levels of the wheelhouses was hampered by the high water table which made stratigraphic excavation virtually impossible.

The main wheelhouse was a sand-revetted structure with 12 bays separated by unbonded radials surviving up to 1.3m in height, the upper courses over-sailing by some 120mm. Fallen slabs indicate a considerable degree of corbelling in the bays in contrast to the lack of fallen slabs in the central area.

This first building was occupied through phases 1A-2B with progressive lengthening of the entrance passage into a forecourt with a cell, presumably in response to sand build-up. In phase 2B a small adjoining cell was built, to which access was obtained through the main wheelhouse. This secondary structure was a smaller, less well-built wheelhouse only 6m in internal diameter, probably with five bays with lintels linking the piers to the wall at a height of 1.3m.

Internal Structure - The central area was c.5.5m in diameter and contained a central hearth and the unusual feature of a 'kerb' of

unburnt, red deer mandibles placed overlapping, teeth downwards, into the floor.

Material Culture and Chronology - The assemblage from the primary deposits includes vessels decorated by incision, stabbing, and the ubiquitous applied wavy cordons. The assemblage lacks channelled decoration, applied bosses, ring-headed pin stamps and applied cordons under the rim. The secondary assemblage appears to contain less decoration and a reduction in the number of everted rims which characterise the early assemblage. The early assemblage would appear to date to the last century BC or C1st AD, immediately prior to the appearance of the less decorated assemblages of the early centuries AD (App.3).

A worked bone pommel from the secondary wheelhouse may be attributed to the C2nd or C3rd AD (Topping 1985), for the secondary occupation of the site. The querns from the site were exclusively of rotary type.

W.19 Usinish, South Uist NF 8433 3326 (Thomas 1870)

Introduction - The site of Usinish lies on the east side of South Uist in an area otherwise largely barren of recorded field monuments; the site is one of a group of structures recorded by Thomas.

Site Structure - The wheelhouse was partly free-standing, with a wall some 2m wide, and partly cut into the hillside; it was already half destroyed when Thomas visited the site. Five piers remained of an estimated ten, and these were unbonded, standing to a height of c.1.5m, leaving a central area 5m in diameter (Ill. 6.10). An adjoining passage or cell appears to have been excavated into the hillside, leading out from the wheelhouse.

The principal difficulty with this is the interpretation of Thomas's restored elevation which shows corbelling as the roofing method over the central area as well as over the individual bays. Scott accepted this reconstruction, pointing out that Thomas was an experienced

surveyor and hardly likely to invent such features, but it is unlikely for several reasons. The state of preservation was such that corbelling, if it ever existed, could not have been standing when Thomas arrived; Thomas was used to recording the beehive houses of the Hebrides and therefore in a reconstruction would be likely to invoke the roofing method which he was accustomed to seeing, especially as he had no idea of the relative age of his prehistoric structures. The remains of corbelling in the bays may have encouraged his reconstruction. In any event it is not possible that Thomas could have seen corbelling over the central area and it is unlikely that unbonded piers only 0.5m in thickness could have supported the enormous weight of stone required to corbel the central span. It is preferable to see Usinish as a structure similar to other wheelhouses, with corbelled bays and a timber-roofed central area.

Internal Structure - No details of the internal structure of the wheelhouse are known.

Material Culture and Chronology - No material was recovered from the site.

W.22 Kilpheder, South Uist NF 7327 2026 (Lethbridge 1952)

Introduction - Kilpheder was one of three adjacent wheelhouse sites noted by Lethbridge in the South Uist machair. Lethbridge also noted a number of other wheelhouses on the island but provided insufficient information to enable relocation.

Site Structure - The excavated structure was a sand-revetted aisled wheelhouse (although Lethbridge believed it was built on an old land surface, it is probable that a level surface was created with midden material as at other sites e.g. A' Cheardach Bheag) with a clear central area 5.5m in diameter (Ill. 6.11). The piers rose to 2.5m in height oversailing in the upper courses and linked to the surrounding wall by paired lintels. The inner faces of the piers were dressed and concave, the latter presumably a feature designed to channel the

lateral thrust of the roof into the piers. A number of entrances into probable cells or passages were noted but not excavated.

Internal Structure - The central area of the wheelhouse contained a substantial hearth. The bays were generally kerbed and three contained substantial pits.

Material Culture and Chronology - A *terminus ante quem* for the occupation of the structure is provided by a Romano-British brooch on the ledge in an aumbrey in Bay 3. This brooch has a close parallel at Newstead where it was dated by Collingwood to the mid-C2nd AD (Collingwood 1953, 225). The Kilpheder example had been repaired prior to its abandonment so it may have been deposited towards the end of the C2nd or later. The initial construction is shown to be relatively late by the occurrence of a broken rotary quern in the walling of the wheelhouse. The pottery from the site was not given proper contexts during the excavation, so this potentially valuable assemblage is of no use in establishing a stratified pottery sequence.

W.25 Tigh Talhamanta, Allasdale, Barra NF 6768 0220 (Young 1952)

Introduction - The Allasdale wheelhouse in Barra was initially excavated by Sir Lindsay Scott and completed by Alison Young after Scott's death. The site lies on a terrace at 130m above sea-level.

Site Structure - The site was surrounded by an enclosure wall and associated with a variety of less substantial structures. There is no indication that any of these are contemporary with the wheelhouse. The wheelhouse itself is a free-standing structure, 8m in overall diameter, with 7 aisled piers connected by lintels to the outer wall, and with signs of corbelling in the upper courses (Ill. 6.12). Several of the piers exhibit signs of rebuilding and the occupation material was divided into an earlier and a later phase separated by a thick layer of ash, interpreted as collapsed roofing material, over the beaten clay floor of the interior.

The chronological association of the wheelhouse with the other structures on the site is unclear; the 'souterrain' is the only clearly-linked structure, leading down from the interior of the wheelhouse into a semi-subterranean passage 9m in length. The entrance to the adjacent 'kilnhouse' appears to have smashed through the wheelhouse wall; this structure may well represent part of a much later farm complex focused on the site due to the availability of good building stone.

Internal Structure - The interior of the wheelhouse was dominated by the large central hearth. All of the bays were kerbed except for those which led into the main entrance and into the linear passage entrance.

Material Culture and Chronology - Three small yellow annular beads, one from the ash in the rebuild wall so presumably in use in the early period, may place the site's primary occupation in the late C1st BC or C1st AD (Guido 1978, 76) although severe reservations about this form of dating have been noted (App.1). The ceramic assemblage includes a variety of decorated forms.

Survey Evidence

Wheelhouses are difficult to identify positively in the field since their definition depends so much upon the recognition of slight and generally subterranean internal features. The survey evidence does not therefore greatly extend the number of known sites. Some, such as Calum MacLeod's wheelhouse (W.2) and A' Cheardach Ruadh (W.12), have been partially examined by excavation in the past and are more or less positively identified, but the majority are represented by circular mounds of the appropriate size often associated with midden deposits and later prehistoric pottery.

Distribution - All but four of the twenty-six excavated and unexcavated wheelhouses are situated on the machair and, even allowing for the possible increased occurrence of the type on

unexcavated upland sites, the weight of excavation evidence suggests that the machair was the preferred siting for these structures. The construction of the type, examined below, was ideal for the machair but problematic for above-ground upland sites.

There are two great concentrations of sites which are related to non-archaeological factors; the Vallay area of North Uist was the centre of Beveridge's excavation activities and the Drimore machair of South Uist was the area of the MoD Rocket Range development of the 1950s. The recorded distribution of sites is unlikely to reflect directly the original distribution.

Site Structure - No information on site structure is provided by the survey evidence from the wheelhouse sites.

Discussion

Construction Method

The clearest evidence of the processes of wheelhouse construction come from Structures 1 and 2 at Cnip. From the dismantling of the unfinished wheelhouse and an examination of the superstructure and roofing of Structure 1 most of the construction phases can be described. The reconstructed Structure 1 is shown in Ill. 6.13 using the evidence of the surviving roofed cells to project the complete circuit of the superstructure. The process can be broken down into a number of stages;

1. The first stage in the construction of the wheelhouses was the excavation of a large circular pit which was to form the interior of Structure 1 (the pit for Structure 2 was not excavated until Structure 1 was completed). This pit was cut into a pre-existing sand-hill of naturally accumulated windblown sand. A linear trench was also excavated from the main pit to the side of the sand-hill to form the entrance.

2. The construction material for the lower parts of the walls was placed in the pit and stacked in the interior. This was how the stone was found during the excavation of Structure 2. Stone was similarly stacked in the entrance passage.

3. The sides of the main circular pit and the entrance passage were lined with a stone revetment wall only one stone in thickness. These stones were graded with the smaller stones at the bottom. This building phase was carried out from inside the excavated pit with stone from the stacks. These walls were footed directly on the sand with no foundation trench; no packing was used behind this lower part of the wheelhouse wall which was backed directly into sand. During this stage, in Structure 2 at Cnip, a complete pot, the skull of a great auk and two large cattle vertebrae were placed behind the wall packed against the sand.

4. When these lower parts of the wheelhouse wall were completed the piers were set out and built up to the same level. This level was immediately below the level at which the piers were to be bonded into the outer wall with lintels. A small orthostat in place of one of the piers at Cnip suggests that the piers may all have been marked out in advance of this phase of building. The piers were founded directly onto the clean sand as with the walls. The stones of the piers were graded in width and narrowed towards the bottom. They widened as they rose enabling a lintel to bridge each bay at a height of c.3.5 - 4m above floor level.

Both piers and walls were entirely drystone built. At other sites the occasional use of clay is reported but it appears rather to be a superficial 'plaster' to hold back water seepage, than a 'mortar'.

5. At a level of c.1.5m above floor level (although each pier varied), paired lintels were used to bridge the aisle between piers and outer wall. This formed the base for progressive corbelling of each individual bay. The space between the corbelling stones was filled with irregular rubble while relatively flat slabs (though by no means

ideal building stone) were used to reduce the corbelling span level by level.

This part of the construction process was the most difficult to accomplish and would have entailed building up the piers and outer wall at the same rate. Corbelling has to be weighed down to remain stable so the wall packing of midden material used to pack the upper parts of the Structure 1 wall must have been added at this stage. It is also probable that some form of scaffolding, and internal structural supports, may have been required. Only actual experiment will determine how easily the process of corbelling could be accomplished.

6. With each cell individually corbelled a self-supporting ring of cells would have been created, packed in its upper parts with midden material. The open central area would then require roofing in timber (Ill. 6.13). A pitched roof is the most likely reconstruction as this would allow water to drain down over the cell roofs into the sand-hill. The timber roof would have to cover only the limited span of the central area, some 4m in the case of Cnip. The bays could have been capped with turf at a lesser pitch which could have allowed gradual drainage into the sand.

The Cnip reconstruction highlights a number of features of wheelhouse construction which combine monumentality with utility. The structural is monumental in a number of ways. The height of the structure from floor to apex of roof, assuming a 45° pitch, is some 6m or more, clearly far more than is necessary for utilitarian purposes especially since the construction technique will not easily allow multiple floors. The construction of the wall and piers appears deliberately to create difficulties in the grading of the stones with the smallest at the base. Although visually imposing this is extremely difficult to construct in a stable fashion, as the ubiquity of secondary buttresses and insertions of posts demonstrates. The construction of cellular structures (Chapter Seven) amply demonstrates that far simpler means of construction in the machair environment were available.

The use of unbonded piers, leaving an aisle around the outer wall, appears to be a de-stabilising influence. Many wheelhouses, including Cnip Structure 1, show signs of lintel cracking or collapse over the aisle and on most sites at least some of the aisles appear to have been blocked at a secondary stage. All of the excavated aisles at Cnip had been filled in apart from those under the surviving roofing. The bonded pier wheelhouses appear to be more stable. It is possible that the bonded pier structures were built late in the period of wheelhouse construction as structurally more stable forms. This question will be discussed below.

As well as these monumental features the wheelhouses at Cnip and elsewhere exhibit more utilitarian aspects of construction. They are semi-subterranean, thus providing good insulation, and the individual roofing of bays enables a considerable saving of timber when compared with the roofing of atlantic roundhouses.

The Cnip structures appear to be typical of the less well-preserved Hebridean machair wheelhouses. Where sufficiently preserved these all show indications of corbelling. This begins above the bonding of the piers to the wall with paired lintels at the aisled sites and is also demonstrated at Bac Mhic Connain D and Foshigarry A, which have bonded piers. There is no evidence for any other roofing technique among the Hebridean wheelhouses, although at Jarlshof in Shetland a wheelhouse with a radically different roofing method was built. This latter site is discussed below.

In the free-standing wheelhouses at Clettraval and Allasdale, as well as the wheelhouses revetted into atlantic roundhouses, the construction appears to have been similar, with the massive outer wall acting in place of the sand-hill for structural support and drainage.

Chronology

C-14 dates from wheelhouses are so far restricted to the dates from Hornish Point and the Udal (App.1 and 2). The Hornish Point dates are particularly important as this relatively large group derives from contexts deposited before and after the construction and use of the wheelhouse. As has been suggested above, a date in the C4th or C3rd BC seems probable for Structure 5. This date contradicts the traditional mid-1st millennium AD dates for the wheelhouses proposed on the basis of artefactual evidence. In accordance with the evaluation of chronological evidence given in Appendix 1, this evidence from Hornish Point is treated as being the most reliable available dating evidence from Hebridean wheelhouses (App.2).

Two dates were obtained for immediately post-wheelhouse occupation at the Udal and these are briefly mentioned by Crawford (1986, 9); the dates suggested a C1st AD date for this 'squatter' occupation.

Future C-14 dates from other excavated sites, especially from the sequence at Cnip, will be needed to confirm this earlier dating of wheelhouses and clarify their chronological range. The only C-14 dates so far available clearly suggest that the type was in use prior to the last century BC and possibly several centuries earlier.

Additional evidence of potential chronological significance comes from the occurrence of querns on wheelhouse sites (App.1). This pertains to the second level of dating evidence defined in App.1. In the Hebrides the rotary quern is the common form associated with wheelhouses, with examples being found on the majority of sites, but there are contexts in which saddle querns have been found. At Foshigarry a saddle quern was recovered from Structure C, which has been argued to be the earliest wheelhouse on the site. At Bac Mhic Connain a saddle quern was recovered from a high level in the fill of the wheelhouse, a position consistent with the hypothesis that it had constituted part of the wheelhouse wall which had collapsed at a late

stage in the site's history. At A' Cheardach Mhor a broken saddle quern was found built into one of the wheelhouse piers.

The quern evidence would suggest that Foshigarry C was the earliest of the excavated examples to be constructed. This would place the construction of Foshigarry C prior to c.200BC (App.1), a dating broadly consistent with that of Hornish Point. The sites of Kilpheder and A' Cheardach Mhor, with unbonded and abutted piers respectively, were constructed after the local quern replacement, as both incorporate rotary querns in their construction material, in the walling at Kilpheder and under the floor at A' Cheardach Mhor. The quern evidence suggests a similar picture to the C-14 dates with construction of wheelhouses both before and after the transition period. The two forms of dating combined suggest construction from the C4th or C3rd BC and abandonment of some sites (e.g. the Udal) by the C1st AD.

At the third level of dating evidence (App.1) a fragment of Samian Ware, with no clear context, from Bac Mhic Connain is the only Roman-associated find yielded by the Hebridean wheelhouse sites.

The traditionally late date given to wheelhouses has its origins in the 1955 paper by R.B.K. Stevenson on metalwork (part of the fourth level of dating as defined in App.1 - native material culture), and in particular pins, from Atlantic Scottish sites. Stevenson argued that a number of finds from wheelhouses could be used to provide a date in the C3rd to the C7th AD (Stevenson 1955, 294). This evidence applies to several sites and it is worth examining each piece of evidence in turn.

Native pins of mid-1st millennium AD date with Irish parallels, including hipped pins, were found at Foshigarry and Sithean a Phiobaire. Unfortunately the Sithean a Phiobaire material has no context at all and in all probability derives from a site with a long and complex sequence of occupation, as is the case with almost all wheelhouse sites. At Foshigarry the late pins could come from any part of a sequence covering many centuries and as many structural

forms. The material from Kilpheder, which was fully excavated, lacked secondary occupation and also lacked late pins. There is no reason to link any of the Hebridean hipped pins to the wheelhouse structural form. The same problem of context applies to the devolved bone comb from Foshigarry and ascribed to a late 1st millennium AD date (Stevenson 1955, 287).

The case of the projecting ring-headed pins from Hebridean contexts is different. Stevenson accepted that this form had its origins in the early 1st millennium AD but argued that the Hebridean examples, whether as pins or indirectly as pin-stamping on pottery, develop after the Lowland Scottish series (which evolves for some three centuries) due to inferred time lag. It is argued that they persist for a further two centuries in the Hebrides. This allows Stevenson to date the Hebridean wheelhouse, projecting ring-headed pins some five centuries later than their Lowland Scottish parallels at sites like Traprain, in order to bring them forward into a period in which they could be contemporary with the late hipped pins allegedly associated with the same wheelhouse sites (Stevenson 1955, 288). There is no justification for assuming any time lag and the proposal of up to five centuries seems particularly pessimistic. The evidence for a late date rests solely with the late hipped pins with no clear context and no demonstrable or likely association with the period of wheelhouse construction. Nonetheless these ideas seem to be at the root of the persistent late dating of wheelhouses which has been conventionally used ever since (e.g. Ritchie and Ritchie 1981, 117).

The earliest typologically dated artefacts from Hebridean wheelhouses are three yellow glass beads of Guido's Class 8 from Allasdale and two similar examples from A' Cheardach Mhor, which Guido dates from the late C1st BC to the C1st AD (Guido 1978, 181). The beads appear to come from the primary occupation at both sites. Similar beads come from Dun Troddan and the excavated Skye *brochs* as well as *dun* and *crannog* sites, which may be of importance for the dating of wheelhouses relative to the broch and dun sites further south, although a similar bead, not seen by Guido, was reported in the pre-*broch* levels at Clickhimin. A typologically

slightly later green glass bead, of Guido's Group 7 iii, occurs at Clettraval in an unclear context, either on the primary floor or under the paving, and has been dated to the Roman or early post Roman period, although it is the only representative of this type in Scotland (Guido 1978, 169).

The problem with the dating of such beads in an Atlantic Scottish context is the tendency still to assume diffusion and time-lag. The mere fact of being found in Scotland is sufficient to add a century on to the date, as if any individual bead moved up the west coast at a constant rate from its source in Southern England. The lack of a clear source of such beads and their low incidence suggests that many of our assumptions concerning their dating are unwarranted. It is as easy to suggest from their context and distribution that these particular bead types were of Scottish origin and that we should invoke a time-lag on the English examples. Such a proposal would be entirely unsupportable but is no less valid than the current dating practice. It is unfortunate that we must still depend on allegedly exotic artefact types to provide the basis of our chronology; clearly it would be desirable to have a broader base of non-artefactual dating.

At Bac Mhic Connain a whalebone mirror handle was found and dated to the Early Irish 2 phase of Warner's typology of Irish metalwork, which lies in the C1st or C2nd AD (Warner 1983, 168), but unfortunately the piece has no precise context from the site sequence. Most of the very rich bonework found on Hebridean wheelhouse sites has remained unstudied due to the lack of proper archaeological contexts. It is hoped that future excavations can do more to clarify the chronological value of this material.

None of this artefactual material can be shown to have direct relevance to the problems of wheelhouse dating; the earlier dating suggested by the C-14 and quern evidence is in no way contradicted. The ceramic assemblages from the wheelhouse sites can provide a further source of chronological information (App.3).

Where ceramic assemblages can be reliably associated with primary wheelhouse occupation they are exclusively of the undifferentiated type characteristic of the later centuries BC, with everted rims and a relatively high frequency of decoration. At Cnip this type of assemblage is also associated with the post-wheelhouse cellular structures, suggesting that the wheelhouse here was out of use prior to the latter part of the currency of this pottery type. This may suggest abandonment of the wheelhouse form (though not the site) in the C1st AD. A similar situation seems to apply at the Udal (Lane 1983) where C-14 dates discussed above may indicate abandonment in the same period. Similar assemblages are associated with wheelhouse occupation at Clettraval, Hornish Point, A' Cheardach Mhor, A' Cheardach Bheag, Kilpheder and Allasdale. The weight of this ceramic evidence suggests that the main period of wheelhouse construction and use ended in the C1st AD or earlier.

A combination of the C-14, quern and ceramic evidence indicates a chronological currency for wheelhouses from the C4th or C3rd BC until the C1st BC or C1st AD. None of this evidence supports the traditional late dating of Stevenson and others, which is founded on unreliable artefactual associations from poorly recorded excavations. Nonetheless the chronology of these structures remains insecure, dependant on the combination of a large number of individually slight elements. Further C-14 sequences, including the sequence from Cnip, should clarify the situation.

Function

All of the excavated wheelhouses where reliable evidence is available suggest a domestic function for the wheelhouses. The widespread occurrence of central hearths suggests that the central area represents the domestic focal point of the structure, with the surrounding bays serving other related functions; outbuildings and adjoining cells again appear to be linked to the domestic function of the structures. The generally large ceramic assemblages are suggestive of casual domestic breakage. The relative ubiquity of the type within confined areas such as Drimore and the Vallay Strand

also suggests that the wheelhouses were a standard domestic settlement form of their period.

No wheelhouse site has produced evidence of a specialised or non-domestic function in its primary phase of use, although Bac Mhic Connain had been used for metalworking at a late stage in its occupation. The ritual deposits of deer jawbones at A' Cheardach Bheag, pits at Sollas and a complete decorated pot and bones behind the wall at Cnip Structure 2, all suggest that ritual or religious practices could also be focussed on the wheelhouse settlement and construction. Nonetheless each of these deposits occur on sites where the remainder of the excavated material indicated standard domestic use.

The function of the structures will be examined in more detail in Part Three when structural, locational and spatial relationships between sites are considered.

Subdivision

The internal classification of wheelhouses can be based on two main variables; free-standing or revetted enclosing walls and unbonded or bonded piers. The first of these divisions appears to be determined by location rather than any other factors. The Hebridean machair sites are invariably revetted into sand-hills and the two clearly free-standing examples, at Clettraval and Allasdale, are both situated on hillside locations far from the machair. The sites at Cnoc a Comhdhalach, Eilean Maleit and Garry Iochdrach are also free-standing but in these cases the wheelhouse does not appear to be the original structure on the sites and the structural effect is equivalent to revetting a new construction into a sand-hill.

The structural and material similarities between the sites far outweigh the one locational difference of revetted or free-standing walls. Revetting was the favoured technique where suitable sand-hills or disused structures were available but the builders of

wheelhouses did not allow themselves to be limited to this narrow range of locations.

The variation between bonded and unbonded piers cannot depend simply on location, and may be more significant in developing a meaningful typology. The occurrence of both variants at different points in the sequence at Foshigarry indicates that we may be able to discern a developmental sequence. At present there is only relative chronological evidence for the division: in terms of absolute chronology we cannot differentiate between the two forms. The development of bonded piers would seem to be a logical progression from a structural point of view, giving more stability by channelling weight stresses more effectively from the roof into the outer wall or revetment. This relatively straightforward structural alteration need not imply anything more than a refinement of building techniques at different sites at different periods in response to structural deficiencies in pre-existing wheelhouses. It would be dangerous to postulate a chronological range over which the change occurred. Nonetheless the Foshigarry sequence is matched by that at Jarlshof in Shetland (see below) and may indicate that the progression from unbonded to bonded pier construction was a widespread occurrence. Clearly however, not all unbonded pier wheelhouses were succeeded by bonded pier versions.

It is in the use of space that the major changes must have taken place between wheelhouses with bonded and unbonded piers. To attempt to understand these changes we must consider why wheelhouses were ever built with unbonded piers. The technique could have resulted from the derivation of the wheelhouse ground plan from timber roundhouses with the piers taking the place of wooden posts; this is the explanation assumed by past workers. This interpretation would see the development of bonded piers as a purely structural innovation as the weaknesses of a straightforward translation from timber to stone became apparent. The problem with this superficially attractive idea is that wheelhouses were developed in areas with a long tradition of drystone construction stretching back to the early Neolithic and with no developed tradition of timber building. Unless

we postulate the arrival and sudden dominance of a wholly new and alien population with no background of drystone building this idea cannot be sustained.

The skill of building at sites like Kilpheder and Cnip denies us this interpretation of a people struggling to build stable structures in an unfamiliar medium and the clear connection of the wheelhouses with the atlantic roundhouses in aspects of their material culture precludes any dramatic change of population. The only structural evidence cited for the alleged derivation of piers from wooden posts was for the aisled house at Jarlshof but, as will be discussed below, the excavated evidence does not support Hamilton's conclusions. It would appear that the builders of the early wheelhouses accepted the loss of stability necessitated by the use of unbonded piers deliberately and adapted to the use of bonded piers at a later stage.

This leads us to a consideration of the use of space inside the wheelhouses and to the principal difference which would have distinguished the internal organisation of a bonded pier wheelhouse from one with unbonded piers i.e. the lack of access between the bays. It is clear from a number of sites, notably Sollas and Eilean Maleit, that several bays would have been inaccessible from the central area with access possible only through the narrow aisles. In this way space would have been divided into units of various sizes arranged around a central area containing the hearth. This spatial organisation could divide areas of differing function, segregating some from the central area and allowing varying amounts of space for distinct units in much the same way as the interior of a broch could be divided between central space, galleries and cells. By contrast, the bonded pier wheelhouses made available a central area surrounded by small discrete cells of equal size necessarily all leading out from the centre. This would necessitate a considerable change in the organisation of the internal space of the wheelhouse and this may explain the reluctance of the original wheelhouse builders to adopt a technique which, although structurally more sound, did not allow the internal spatial divisions by which they were

accustomed to organising their dwellings. The spatial differences between the two forms will be explored further in Chapter Twelve.

The typologically transitional site of A' Cheardach Mhor has piers which abut the surrounding wall of the structure without being bonded into the walling. It is probable that this would have given an added measure of stability over unbonded piers but it cannot have been as secure as bonded piers. It is not clear whether the pier design is a secondary feature of the site (although this would certainly account for the odd arrangement and provide some evidence to suggest a chronological dimension to variations in pier construction) or whether a recognition of the structural advantages of bonded piers became apparent during construction. At other sites there is evidence of secondary blocking of some of the aisles, between the piers and the walls, which would have resulted in a structure similar to A' Cheardach Mhor. The clearest examples of this are at Cnip and Sollas and similar alterations are apparent at A' Cheardach Bheag. The sum of this individually slight evidence supports the idea that a gradual realisation of the limitations of the unbonded pier building technique led to its replacement by pier bonding in later wheelhouses and to the alteration of existing buildings.

Parallels Outwith the Western Isles

The closest parallels to the Hebridean wheelhouses are the structures from two sites in Shetland, Jarlshof (Hamilton 1956) and Ward Hill (Smith pers.comm.). Both of these sites contain structures almost identical in construction, scale and structural detail to the Hebridean examples. As well as these Shetland wheelhouses there are a number of radially partitioned atlantic roundhouses from the Northern Isles and Caithness. These share elements of spatial patterning with the wheelhouses but the specific construction techniques and the architectural repertoire of the wheelhouse are absent.

The Jarlshof sequence for the period in question comprises a series of three successive wheelhouses, in turn successive to a complex

atlantic roundhouse. The chronology of the site sequence is discussed in Appendix 1. The chronological evidence suggests similar dating to that discussed above for the Hebridean wheelhouses.

Wheelhouses 1 and 2 at Jarlshof have evidence of the same construction and roofing technique found at Cnip. The bays of Wheelhouse 2 survive with roofing intact and are corbelled, leaving a small central span. Both of these wheelhouses have bonded piers and may be relatively late in the wheelhouse building period if a chronological dimension to the structural typology is accepted.

The 'aisled house' at Jarlshof was claimed by the excavator to be a transitional structure in the evolution from brochs to wheelhouses and ancestral to the common wheelhouse form. Hamilton believed that the drystone piers replaced original timber posts which had held a timber gallery around the open central area (this was derived from Hamilton's similar reconstruction of broch interiors). The argument was supported by the existence of a scarcement ledge, one of the characteristic traits of broch architecture, around the inner face of the 'aisled house' wall. Hamilton however had not removed the piers and so could not have known if they had replaced timber posts: the post-holes cited to support his case occur in a seemingly random spread with only one on the arc of the proposed timber gallery. Nonetheless the existence of the scarcement ledge rules out the corbelling of the bays on the Hebridean model. The paired lintels linking the piers to the surrounding wall are at scarcement height and it appears that the effect was to create a level foundation for a second storey or for roofing. The structure does show that we cannot assume that all of the Hebridean wheelhouses will be roofed in the same way and structural variation may be more common than their very uniform ground plan suggests. Had the 'aisled house' been less well-preserved it would have appeared identical to the Hebridean series.

The only other definite wheelhouse in the north is at Ward Hill, Shetland, found by Beverley Smith in 1988 after its partial destruction (pers. comm.). This site was not excavated but

photographs of the exposed sections record a structure of similar form to the Jarlshof wheelhouses.

The absence of wheelhouses in areas such as the Orkneys is potentially as significant as their presence in Shetland. Given the numbers of excavations in the Orkneys it seems unlikely that wheelhouses could have altogether escaped detection if they had ever been built in the islands. This is particularly significant in view of the regularity of their discovery in the Western Isles. It does appear, albeit from this negative evidence, that wheelhouse construction was restricted to the Western Isles and the Shetlands.

Summary

The wheelhouses of the Western Isles appear to have been a characteristic domestic settlement form in the period from the C4th or C3rd BC until the C1st BC or C1st AD. Most appear to have been sited on previously unoccupied locations (although most have considerable post-wheelhouse occupation), generally in the machair with a scatter of inland examples known. The structures were monumental in scale and construction but showed a respect for the cold and wind of the Hebridean climate and a concern with timber conservation. Like the atlantic roundhouses they appear to represent a monumental domestic architecture too ubiquitous to be associated with an elite group. Again like the atlantic roundhouses they generally represent single-structure settlements although often with associated smaller cells.

The major difference from the atlantic roundhouses was that wheelhouse architecture abandoned all semblance of defence; island locations appear to have been avoided with only Eilean Maleit occupying a location of this type; the wheelhouses were unenclosed and their roofs projected at ground level; no protection from aggression is offered by the wheelhouse structural form and their monumentality is entirely inwardly projected.

Direct evidence of contact with areas outside the Western Isles is restricted to the Shetland wheelhouses but the striking structural parallels here show close links. These links do not appear to have been restricted to one isolated episode since the change from unbonded to bonded piers occurs in both areas. The Orcadian links demonstrated by the atlantic roundhouses are noticeable by their absence among the wheelhouses.

Chapter Seven

Cellular Structures

Cellular structures are known from twenty-eight sites in the Western Isles of which fifteen have been excavated (Ill. 7.1). In the older literature they have tended to be referred to as 'earth-houses' or simply dismissed as squatter structures in abandoned wheelhouses or atlantic roundhouses. The group have never been discussed in detail. No excavation has actively sought to examine a cellular structure and the excavations have generally been by-products of work on structures of other types.

Excavated Sites

C.2 Galson, Lewis NB 44 59 (Edwards 1923)

Introduction - The extensive middens on the west coast of Lewis by the township of Galson contain the remains of structures of many periods. The middens continue to yield material after every storm and a depth of several metres of deposits is visible (pers. obs. 1987). The structures described here, excavated by A.J.H. Edwards in 1923, were adjacent to the cultivated machair between the sea and the wall of the 'Sand Park' field: they do not represent the totality of this site. The cellular structures had disappeared by 1969 when only deposits of midden were reported in the vicinity (NMR).

Site Structure - Four sites, A-D, were examined by Edwards but of these only Site C revealed substantial structural evidence of occupation. The excavated area of Site C contained a small complex of cellular structures all roofless when found and with walls of c.0.5m in thickness (Ill. 7.2). The excavator believed that the structures were free-standing and formed one larger overall building but the excavation does not appear to have explored the outer wall; once walls were located only the interior was excavated so it is equally possible that the structures were sand-revetted.

All of the cells were small, the largest being only some 2.3m in diameter internally (Chamber 1). All had low lintelled entrances to the south.

Adjacent to this complex was a long narrow lintelled passage-like construction some 7m in length and with a maximum width of only 0.5m. Its height, to the lintelled roof, was only some 0.75m: it appears to be likely from these dimensions that the structure was a drain or linear sump underneath another structure which was not recognised by the excavator.

Internal Structure - Few internal features are reported from the structures but it is important that Chamber 3 is reported as having two possible 'seats' in the wall. This would be a close parallel for architectural features at cellular structures at Loch na Berie, Cnip and Dun Cuier (see below). Each of the cells were partially paved.

Material Culture and Chronology - Slag, bones, charcoal and pottery are reported from the midden and structures. The pottery is described in some detail. The assemblage has no precise contexts but is split into a group from the structures and one from the midden. The pottery from the structures comprises a range of flat-based globular jars with everted rims, and straighter sided vessels with upright flat or rounded rims. Decoration included applied wavy and plain cordons and one piece of classic 'Clettraval Ware' with incised arches above a wavy cordon (Edwards 1924 Fig.8;19). Other vessels had finger-nail impressions and incised decoration.

A range of later prehistoric material was found in the midden around the site; this included several bone combs, querns and a ring-headed pin.

Only the pottery is of any help in dating the structures. The presence of everted rims and varied motifs suggests a relatively early date prior to the mid-1st millennium AD (App.3). The flaring rims characteristic of pottery from the C2nd AD onwards are absent and the quantity of decorated sherds would suggest an earlier date. This

assemblage is similar to that of Phase 3 at Cnip, and typologically earlier than assemblages from Berie, the Udal and Eilean Olabhat, all discussed in this chapter.

C.3 Cnip, Lewis NB 0980 3665 (Armit 1988a)

Introduction - The cellular structures at Cnip occupy Phase 2 of the site sequence. The wheelhouses and a linear house structure from the site are discussed in Chapters Six and Eight respectively.

Site Structure - The cellular structures comprise six separate structures built after the main wheelhouse had fallen into disrepair (Ill. 7.3). They were sealed by the construction of Structure 8, the linear house structure described in Chapter Eight. All were sand-revetted and all, with the exception of the re-used wheelhouse, utilised a lower course of vertical slab-revetting surmounted by conventional coursing. Roofing of Structure 3 was by lintels; the other structures appear to have had timber roofs resting on the sand surface at the top of their revetted walls.

The two main structures of this phase were the re-used wheelhouse, Structure 1, and the newly constructed Structure 4 which overlay the wheelhouse entrance cell. Structures 3, 5, 6 and 7 were small storage units dispersed around the site, all of which were too small for occupation but which reinforce the cellular arrangement of the settlement in this period.

The extent of occupation in Structure 1 at this phase is unclear due to the restricted area available for excavation. It appears that several of the bays were blocked off and occupation was probably concentrated in the central area. Structure 4 was constructed during Phase 2 as a second domestic focus. It was a relatively substantial structure measuring 4 x 3m internally.

Internal Structure - The two domestic *foci*, Structures 1 and 4, were dominated by central hearths. Structure 4 had a succession of

three hearths and had been rigorously cleared of debris on a number of occasions (Ill. 7.4).

Structure 4 had a number of significant internal features. The vertical slab walling was graded so that the largest slabs were across the hearth from the entrance, focusing attention on this area. Built into the wall on the east side was a small box-like shelf, possibly one of a pair, which is paralleled at Berie and Dun Cuier.

Material Culture and Chronology - The Phase 2 deposits contained a large ceramic assemblage and a number of bone and antler-working deposits and small artefacts. The pottery has not yet been fully analysed but a preliminary study indicates a relatively high number of decorated sherds and a high percentage of everted rim vessels. The assemblage is little different from that of Phase 1 on preliminary examination.

In terms of relative chronology the cellular structures at Cnip occupy the period between the two wheelhouses and the Phase 3 linear house structure. The ceramic assemblage is typologically earlier than the Eilean Olabhat assemblage, dated to the C2nd or C3rd AD (App.3), which is in turn earlier than the plain flaring-rim ware of sites like Berie and the Udal.

The cellular structures include discarded rotary querns in their walling and thus post-date the local quern transition.

C.4 Dun Bharabhat, Lewis NB 0988 3531 (Harding and Topping 1986)

Introduction - The sequence of occupation at Dun Bharabhat terminates with a period of modification of the atlantic roundhouse after it had ceased to be viable in its original form. The excavations of parts of the site are still in progress and conclusions are provisional.

Site Structure - A phase of occupation within the roundhouse was recognised as having occurred after the partial collapse of the walls (Harding and Topping 1986, 28) and was probably contemporary with the reconstruction of part of one of the galleries, forming a small cell. The structural evidence for this cellular phase is slight and comprises this latter cell and the roundhouse interior (Ill. 5.3).

The central cell of this cellular structure was the roundhouse interior and it does not appear to have been re-faced (it was already very restricted in size; c.5m in internal diameter). The collapse of the walling would have entailed that the structure could not have achieved any great height. Rafters could have been bedded in the roundhouse gallery forming a low and makeshift roof.

It is unclear how much of the periphery of the roundhouse was used in this phase. Gallery 1 was blocked by a slab feature in the secondary floor and Gallery 3 appears to have been full of collapsed rubble (except where cleared to build the small cell). The status of Gallery 2 is unclear but there is no direct evidence for its reuse.

Entrance to the cellular structure may have been through the reduced walling of the south-western sector, facing the causeway. This may explain the unusual width of the Gallery 2 entrance which may have been deliberately extended at this secondary stage. An orthostat set within the doorway appears to form part of a secondary entrance construction. If this were the case the newly constructed small cell, with its internal niche, would be visible directly across the hearth from the entrance in the same way as features at the cellular structures at Berie, Dun Cuier and Structure 4 at Cnip. Nonetheless the evidence is ambiguous and largely circumstantial. The disturbance caused by structural collapse has greatly confused the stratigraphy at Dun Bharabhat and reconstructing the plan of individual phases is difficult.

Internal Structure - The main cell was dominated by a central hearth, with a slab-built 'box' on the south wall being the only other internal feature. As mentioned above the small secondary cell led

out from the east of this central cell and contained a small niche in its south wall. One other feature of the interior was an arc of disarticulated animal teeth extending for 0.6 - 0.7m around the hearth. This is paralleled closely in the wheelhouse at A' Cheardach Bheag (W.16) where a line of deer jaw-bones were set around the hearth (Fairhurst 1971, 80).

Material Culture and Chronology - The secondary occupation is dated by two C-14 determinations (full details in App.1) to the final two centuries BC.

The latest occupation on Dun Bharabhat is represented by a large ceramic assemblage which has not yet been subject to detailed analysis. Preliminary accounts suggest that it contains decorated vessels indistinguishable from the earlier examples.

A glass bead of Guido's Class 13 (Guido 1978) was associated with the secondary floor levels but this cannot be precisely dated (the C-14 dates from this site in fact provide the most secure dating for the type).

C.5 Loch na Berie, Lewis NB 1035 3525 (Harding and Armit 1987 and 1988)

Introduction - A sequence of cellular structures were constructed inside the remains of the atlantic roundhouse at Loch na Berie, described in Chapter Five. The final two of these structures have so far been excavated (Structures 1 and 2 here) and it is apparent that further structures remain stratified below these inside the roundhouse. This account is therefore incomplete, describing only the latter part of the sequence of cellular structures.

Site Structure - Structures 1 and 2 share a number of constructional features although Structure 1 was far better preserved (Ill. 7.5 and 7.6). Structure 2 appeared to have been deliberately levelled to enable the construction of Structure 1 leaving only those elements which were to be incorporated in the walling and internal features of

the latter structure. The construction of Structure 1 should be viewed as only the most complete phase of rebuilding in a sequence where reconstruction was perennial. Both show indications of refacing and replacement of walls and the incorporation of different cells throughout the use of the structure.

Both structures were built of vertical slab walls, surmounted by conventional coursing, revetted into the remains of the roundhouse and earlier, unexcavated, cellular structures. Structure 1, which survived virtually intact, also incorporated a conventional coursed wall for part of its circuit to enable the construction of two niches (see below). The slab walling is a recurrent feature visible in a number of Hebridean cellular structures including the nearby site of Cnip.

Structure 1 comprised one large principal cell some 6.5m in diameter and a smaller curving cell around its northern and north-eastern arc. Several rebuilding phases had progressively modified this second cell. Structure 2 is less easy to reconstruct in plan but appears to have had a similar arrangement of a central oval cell with a linear subsidiary cell leading out from its northern wall. Both structures' walls were revetted against pre-existing occupation debris and packed with upcast from the interior. This created a level platform behind the walls which would have formed a base for the roof. The surviving roundhouse inner wall would have provided some shelter for this roof. It does not appear that the galleries were used during the occupation of these structures (Ill. 7.7).

The cellular structures appear to have been occupied when the site was still an islet in the original, larger, Loch na Berie. The visible stone causeway to the west shore lies at a level significantly higher than the original roundhouse base and is likely to have been progressively raised as the loch level rose and the cellular structures replaced the primary roundhouse occupation.

Internal Structure - Structure 1 could be reconstructed in some detail. It was entered by a re-paved entrance through the original

roundhouse entrance. Straight across the large central hearth, from the entrance, were two niches or shelves built into the western circuit at a height of c.0.8m above the primary floor. These niches form a detailed architectural parallel with Structure 4 at Cnip and with the secondary structure at Dun Cuier (below). Kerbing around part of the southern interior may have revetted some form of bedding as has been suggested for other sites including the Udal. A small box-like slab construction on the north-west may have formed some similar kerbing and certainly was protruding above the primary floor, but its primary function was as part of the lower Structure 2 wall.

This central cell of Structure 1 was the domestic focus of the site and the peripheral cell to the north contained no surviving internal features.

The central cell of Structure 2 was also entered by the original roundhouse entrance and contained a large central hearth. It also contained a further hearth to the south-west and may conceivably have been subdivided at a constriction in the wall. To the north of the main hearth was a line of kicked-over kerbstones defining an area of less compact earth; probably some form of bedding as suggested for Structure 1. Two wall recesses may have had a function parallel to the niches of Structure 1. The peripheral northern cell, as for Structure 1, had no internal features.

The two structures were constructed to the same general plan and using the same structural technique. It is probable that they fulfilled identical functions for successive generations of the same family unit.

Material Culture and Chronology - A number of finds of chronological significance have been recovered from the cellular structures along with a substantial ceramic assemblage. No C-14 dates have yet been obtained.

A bronze penannular brooch from Structure 2 floor deposits has no precise parallels but some general observations by Conor Newman

(pers. comm.) help to set it in context. The brooch, missing its pin, is completely flat but otherwise similar in form to the wider class of zoomorphic penannular brooches. One side of the brooch is finely incised with hatching in a series of curvilinear panels: the expanded terminals have incised cross-hatching within lozenge-shaped panels.

The lozenge panels with incised decoration and the small size of the piece are comparable to Fowler's Type G penannular brooches (Dickinson 1982) and the western Scottish distribution of this group may also be significant (Newman pers.comm). The Berie brooch is two-dimensional in design, unlike the rounded Type G forms, and comparisons can also be cited with the wafer-thin Irish disc-pendants suspended from looped pin-heads (Newman pers.comm.). The Type G brooches are generally now dated to the C5th and C6th AD and they perhaps provide the main recognisable cultural and decorative context for the Berie brooch.

From the same deposits came a small bronze penannular brooch of Fowler's Type H. This has a broad chronological currency in the second half of the 1st millennium AD and parallels in the conventionally Pictish assemblages of the north.

A further significant bronze find, in this case from the floor deposits of Structure 1, was a set of tweezers finely incised with lines following the outline, and with a row of punched dots. The tweezers were found complete with fragments of a small ring attached. An almost identical set was found in the excavations of Whitby Abbey (Peers and Radford 1943, 61). The Whitby example forms part of a wider Northumbrian series and is dated (although without precise site context) to the period of c.650 - 875 AD, on the basis of coins from the same assemblage, which supports the historical dating of the site. The very close similarity in size, form and decoration would seem to indicate a similar date of c.650 - c.800 AD for the Berie tweezers (the latter date being imposed by the absence of recognisably Norse or Norse-related material at Berie). This accords well with the ceramic evidence.

Also from Structure 1, or from the final phase of Structure 2, are two partly vitrified crucibles of Laing's Type 8 (1975, 252). These have parallels at a number of sites in Early Christian contexts, including Ballinderry 2 crannog in Ireland (Laing 1975, 251), and further support a dating in the second half of the 1st millennium AD. Fragments of composite bone combs also support this broad dating.

The large ceramic assemblage from Berie still awaits analysis but its broad characteristics are fairly well established. The pottery from Structure 1 is entirely without decoration apart from very few small sherds which are likely to have been redeposited during the disturbance of the recurrent building phases. The vessels have characteristically flaring or upright rims and short everted rim vessels appear to be absent. The pottery is generally very coarse and poorly fired. Overall the assemblage belongs to the final pre-Norse typological group (App.3) found at a number of sites including the Udal and Dun Cuier, exclusively in association with structures of cellular type.

The ceramic assemblage from Structure 2 is similar although a number of sherds indicate the occasional use of applied cordon decoration. Forms are similar to those from Structure 1 and decoration is very rare. The closest parallel for the assemblage is that from Eilean Olabhat (see below). The assemblages from both of these cellular structures are entirely dissimilar from those of the roundhouse galleries which have produced a much wider variety of forms and decoration and a much higher proportion of decorated sherds.

A combination of all the material evidence suggests a date for these two structures in the period from the mid-1st millennium AD to the immediately pre-Norse period. It is presently impossible to estimate the duration of the occupation but it may well have covered several centuries. Structure 1 is likely, on the basis of the metalwork, to date to the period when Northumbrian influences were available on the west of Scotland and therefore possibly after the Northumbrian conquest of Galloway in the late C7th or early C8th AD. A C8th

century date may be most probable but the occupation of the structure could have encompassed a much wider period. The brooch from Structure 2 may indicate a date in the C5th or C6th AD but the pottery has decorative features which may place the start of occupation somewhat earlier. The complete absence of any Norse or Norse-related material appears to indicate abandonment of the site prior to the Norse incursions and therefore probably prior to c.800AD.

C.10 The Udal, North Uist NF 824 783 (Crawford 1967/78, 1975, 1977, 1985)

Introduction - The excavations at the Udal in North Uist have never been fully published and the following information is derived from a series of interim reports; further artefactual information is derived from Alan Lane's doctoral thesis on pottery from parts of the site (Lane 1983). The excavator has declined to provide further information or answer questions on stratigraphy and construction and this restricts interpretation. No archaeological plans or photographs have been either published or made available. Mr Crawford did not wish his sketch of the structures to be reproduced in this thesis.

Site Structure - The cellular structures appear to have been the first structures built on the UN area of the site and have no stratigraphic link with any earlier material despite claims, by the excavator, that the Udal contains a complete sequence from 3000 BC - 1700 AD (Crawford 1985, 7). These cellular structures were succeeded directly by Norse structures in the early part of the C9th AD at the end of the period under consideration.

The interim reports are generally unspecific but some broad conclusions can be reached. Crawford recognised seven main structural *foci* (Crawford 1973, 2), consisting of spatially separate sand-revetted cellular structures, each of which was frequently rebuilt over a lengthy period. The spatial separation would seem to suggest that some at least may have occupied contemporaneously.

Crawford proposed a typological and chronological progression from simple oval cells with single 'satellite' cells, to larger oval cells (c.6m in length) with 'symmetrically' sited satellite cells on their ends. This second phase is claimed to be succeeded by a 'basic figure of eight heavily embellished with minor satellites' (Crawford 1973, 3). No evidence is cited for this sequence. It is very difficult to accept that the structures on Crawford's sketch (1973, 9) fall into any such groups: all five illustrated (a further one disappears into the section) appear to have different arrangements of cells and entrances which defy such simple grouping.

No information is given as to the nature of the construction other than that they are sunk into the sand. Mr Crawford would not say if the walls were formed of coursing or slab revetting. In the absence of such information it is impossible to compare detailed architectural traits with other sites such as Berie, Cnip and Dun Cuier.

An unspecified number of 'minor house structures' were also noted (Crawford 1973, 3), some 2.4m square with central hearths but with no evidence of walling. Crawford also reports the occurrence of palisaded areas associated with the cellular structures.

Overall the cellular layout and slight, revetted construction has parallels in the structures at Berie and Dun Cuier. The number of structures, if contemporary, indicates that this site contained a larger settlement unit than either of these two sites.

Other possible cellular structures were constructed in the abandoned wheelhouse on the US site at the Udal (pers. obs. 1988). No details of structure are available.

Internal Structure - Each of the structures has a central rectangular hearth and most appear to have kerbed areas flanking these hearths, as was the case at Berie Structures 1 and 2. No further information can be reliably adduced from the sketch plan.

Material Culture and Chronology - Several C-14 dates were obtained from unspecified contexts associated with the cellular structures: these are listed in Appendix 2. In sum they indicate occupation between the late C3rd and early C9th AD. This accords well with the dating of the cellular structures at Berie and Dun Cuier and is later than the Eilean Olabhat dates. The pottery from the site supports both this absolute and relative dating.

The information on the ceramic assemblage from the cellular structures comes primarily from Alan Lane's doctoral thesis (Lane 1983). This discussion treats only the material from the UN site. Lane identified the characteristics of the assemblage from the 'Dark Age' contexts as comprising straight-sided or shouldered jars with upright and flaring rims. All were flat-based, relatively coarse and poorly-fired and the assemblage was entirely undecorated. The assemblage was succeeded on the site by Norse pottery of entirely different manufacture and with a distinct repertoire of forms. The closest parallel for the pre-Norse assemblage is the Structure 1 assemblage from Berie. The Udal provides a date range for this pottery from c.400-800AD on the basis of the spread of C-14 dates and historical evidence for the date of Norse incursions (App.3).

Other finds included a penannular silver ring and a gold pin. Composite combs were also found, supporting the C-14 evidence for a date in the second half of the 1st millennium AD.

There appears from the ceramic evidence to be a gap of occupation on the Udal from the immediately post-wheelhouse period until the mid-1st millennium AD when the cellular structures of the UN site were occupied and the plain ceramic assemblage was in use. This gap appears to account for Crawford's belief that the Dark Age material and structural assemblages were so radically different from those of the preceding period that an invasion must have taken place (Crawford and Switsur 1977). The question of invasion or continuity will be discussed below.

C.11 Foshigarry, North Uist NF 7430 7636 (Beveridge 1930)

Introduction - The cellular structures at Foshigarry comprise D, E and F on Beveridge's plan. The complexity of this part of the site is evident from the excavation report and the plan and descriptions must be treated with caution.

Site Structure - Structures F and E were two adjoining sand-revetted cells. Structure F was some 5 x 3m in size while E was 4 x 2m (Ill. 6.3). The two were apparently entered through the linear structure (H) described in Chapter Eight. Structure D was spatially distinct but possibly connected by a passage to E, and was 4 x 2.5m in size. This latter cell contained the remains of collapsed corbelling.

Internal Structure - All three structures contained a number of wall shelves or aumbreys and all were partially paved. No hearths were recorded.

Material Culture and Chronology - No material is specifically attributed to these structures. In terms of relative chronology they appear to be later than the wheelhouses and contemporary with part of the use of the linear structure.

C.12 Sithean an Altair, North Uist NF 77 76 (Beveridge 1911)

Introduction - Sithean an Altair was partially excavated by Erskine Beveridge prior to 1911. The work was conducted on a small scale and is briefly reported in his book, 'North Uist'. The site lies on the island of Vallay in the machair behind the present sand dunes.

Site Structure - The cellular structure, described as an 'earth-house' by Beveridge (1911, 118) lay beneath two small cists in a machair mound. Beveridge excavated three small chambers and a short passage or gallery. The plan makes little structural sense and the various elements within it may not belong to the same structure.

Overall the complex of cells was c.6m by 4m at its maximum dimensions (Ill. 7.8).

Internal Structure - The likelihood that Beveridge confused elements of different structures or only partially excavated a larger complex makes the interpretation of internal structure unhelpful. No hearths or other internal features were found.

Material Culture and Chronology - The assemblage of material from the excavation is not described in detail but Beveridge does mention the presence of 'raised' decoration on the pottery (1911, 120). This may suggest applied motifs characteristic of the later prehistoric period.

C.14 Dun a Ghallain, Grinish, North Uist NF 7479 7598 (Beveridge 1911)

Introduction - The cellular structure at Dun a Ghallain was constructed inside the roundhouse described in Chapter Five. The re-occupied roundhouse lay on an islet in Loch an Eilean near Grinish.

Site Structure - Details of the structure were poorly recorded and no plan was published. The cellular structure was apparently revetted into the ruined roundhouse in a similar fashion to the cellular structures in Dun Cuier and Loch na Berie. It was irregular in shape and c.12m in internal diameter

Internal Structure - The only internal feature recorded was a drain running under a paved floor.

Material Culture and Chronology - No finds are specifically attributed to the cellular structure but it seems probable the recorded finds derive principally from its floor levels. None of the finds are helpful in dating the structure and the relationship with the roundhouse is the only chronological indicator.

**C.15 Eilean a Ghallain, Griminish, North Uist NF 7483 7589
(Beveridge 1911)**

Introduction - The cellular structure on Eilean a Ghallain again seems to have been constructed inside a roundhouse (Chapter Five). The re-occupied roundhouse lay on an islet in Loch an Eilean near Griminish and adjacent to Dun a Ghallain.

Site Structure - No structural details are recorded except that several 'minor erections' occupied the interior of the roundhouse (Beveridge 1911, 197).

Internal Structure - No details of internal structure were recorded.

Material Culture and Chronology - The finds from the site were not reported in any detail. As with Dun a Ghallain, the secondary relationship of the cellular structure to the roundhouse is the only chronological indicator.

C.16 Dun Thomaidh, North Uist NF 7483 7598 (Beveridge 1930)

Introduction - The series of cellular structures at Dun Thomaidh were constructed in the roundhouse described in Chapter Five.

Site Structure - A series of cellular structures on the islet occupy two spatial concentrations. The first lies inside the atlantic roundhouse and consists of a maze of passages and cells which Beveridge did not understand and which cannot be disentangled from his plan (Ill. 5.7). The second concentration lies on the eastern exterior of the roundhouse and consists of a cluster of five cells in three groups, each with separate access.

Internal Structure - Cells 'd' and 'e' may have been the domestic focus with 'd', the largest in the complex, containing a central hearth. No internal features can be associated with the remaining cells on the east of the islet.

The cells inside the roundhouse appear to have contained drystone pier divisions irregularly arranged. All of the cells in both complexes appear to have been at least partially paved.

Material Culture and Chronology - None of the finds from Dun Thomaidh had specific contexts and no chronological information is available for the cellular structures other than that they are later than the atlantic roundhouse on this site.

Two saddle querns may indicate activity on the site prior to the local quern transition (App.1) though this seems unlikely to be associated with the cellular structures which are demonstrably late in the site sequence.

C.19 Eilean Olabhat, North Uist NF 7500 7530 (Armit 1986 and 1988b)

Introduction - The site of Eilean Olabhat in North Uist was partially excavated in 1986 (Armit 1986 and 1988b) as part of the Loch Olabhat Research Project and excavations are not yet complete. The site lies on a promontory which was originally an islet in Loch Olabhat.

Site Structure - The site comprises a sequence of structures surmounting the former islet of Eilean Olabhat, some 80 x 60m in size. The earliest of these has not yet been excavated but appears to have been of cellular construction. This structure was succeeded by the two small cells which are under discussion here (Ill. 7.9). Finally the site was occupied by two structures of turf and earth construction with slab-facing. These were associated with probable medieval pottery.

The association of individual phases of occupation with structures elsewhere on the islet is unclear at the present stage of the excavations. The islet was partially enclosed by a drystone wall on its landward side and other structures may lie unexcavated outside the area of current work.

The largest of the two cells was only some 2m in diameter and survived sufficiently to indicate corbelling to a height of just over 1m. The second cell was c.1m in diameter and less well preserved. Neither structure can be claimed as a domestic structure but from their site context it is likely that they relate to adjacent settlement activity not yet located by excavation. The cells acted as dumps for midden debris and, most importantly, the debris of bronzeworking activity. They also provided substantial quantities of charcoal which have so far produced the only C-14 date for an important transitional phase in the ceramic typology of the islands (App.3).

Internal Structure - No internal features were noted within the small cells. It is important that neither showed evidence of burning on the walls; they do not appear to have been used at any stage of bronze manufacture.

Material Culture and Chronology - Two C-14 dates have so far been obtained from the Eilean Olabhat excavations. A date of AD 124 -273 (GU 2327, at the 68% confidence level) relates to the cellular structures and metalworking deposits while the second date of 101 BC - 33 AD (GU 2326) relates to underlying occupation levels not yet fully excavated (App.1). The cellular structures would therefore seem to have been in use in the C2nd or C3rd AD.

A small ceramic assemblage from this phase on the site is of typological significance. The pottery is dominated by flaring rim vessels with decoration restricted to applied cordons. The most complete vessel is a globular jar with a flaring rim, decorated with two applied cordons (Ill. 7.10). This assemblage is typologically later than the short everted rims with restricted decoration, as at Cnip Phase 2, and later still than the more varied decoration of the later centuries BC (App.3). It precedes the plain flaring rim assemblages of the later phase at Loch na Berie and the Udal. The C-14 date, GU 2327, is from the same context as the illustrated vessel.

The cells also contained quantities of metalworking debris including triangular crucibles (earlier than the types from Structure 1 at Loch na Berie), tuyere and a number of two-piece clay moulds. The only clearly recognisable artefact from these moulds was a developed handpin with four bar-like 'fingers' arranged in a straight line across the top of the solid semi-circular plate. This is the first C-14 date clearly linked to handpin production and the date is several centuries earlier than expected. Stevenson would place such a pin in the second half of the 1st millennium AD. More dates will be required to clarify the chronology of the type but, following the hierarchy of dating set out in Appendix 1, the C-14 date is taken here to be the most reliable form of dating for the site.

C.22 Unival, North Uist NF 800 668 (Scott 1947a)

Introduction - The cellular structure at Unival was excavated by Sir Lindsay Scott as an adjunct to his excavation of the Unival chambered tomb in 1935 and 1939. The structure was built over and among the remains of a chambered tomb on a slight terrace at c.80m O.D. on the hill of Unival.

Site Structure - Only one post-tomb phase of occupation was noted by Scott, this consisting of the cellular structure referred to as the Iron Age house in his excavation report. This structure was relatively slight in construction and formed of coursed drystone walls. It consisted of two rectilinear cells with several associated recesses (7.12).

The structure was revetted into the cairn material and faced internally. Its walls stood to less than 1m in height.

Pits in the cairn contained later prehistoric pottery and the de-roofed chamber contained burnt material suggesting use as a cooking pit. Other possible later prehistoric structures were visible on the mound but were not excavated. Occupation was not therefore confined to the cellular structure.

Internal Structure - The northern of the two cells measured c.3 x 2m internally and had two external entrances and a separate entrance into the southern cell. Access to this southern cell, of similar size, was only available through the former. The first cell contained a hearth near its north wall and two small recesses to the south. It may have been the main domestic focus. The second cell also contained a hearth but was interpreted as a grain-drying area by Scott as its internal arrangement, with a raised paved platform at one end, and the absence of burnt bone suggested parallels with similar structures in the Faroes.

Material Culture and Chronology - The only artefactual material which clearly post-dated the primary use of the tomb was an assemblage of later prehistoric pottery. Scott does not identify any of this material as definitively associated with the cellular structure so the association is largely circumstantial. Nonetheless only the pottery is helpful in dating the structure.

The assemblage appears typologically uniform and relatively late in the later prehistoric sequence. Flaring and upright rims are characteristic and only one small everted rim is present (Scott 1947a, Fig.3). Incised decoration is entirely absent. Decoration is confined to applied wavy cordons except for two sherds with rough fingernail impressions on their rims. This latter form of decoration cannot be readily paralleled from the 1st millennium BC pottery and the general vessel forms and decoration suggest a mid-1st millennium AD date possibly typologically parallel to the assemblage from Eilean Olabhat (App.3).

C.23 Dun Ban, Grimsay, North Uist NF 8699 5695 (Thomas 1890)

Introduction - The cellular structures at Dun Ban were excavated by Capt. Thomas in the belief that they represented the primary roundhouse occupation. The details of phasing are therefore very difficult to extract from his brief report. The atlantic roundhouse of

Dun Ban, within which the cellular constructions are located, is discussed in Chapter Five.

Site Structure - From Thomas's plan it appears that the cellular structures were dominated by a central cell some 4 x 4m in size and irregular in shape. This gave access to two peripheral cells ('d' and 'e') and to the re-used galleries of the roundhouse. Little structural information was recorded but Thomas noted that the walls of some cells indicated possible corbelling of the roofs.

Internal Structure - The nature of the excavation precludes any interpretation of the internal arrangements of the cellular structures. These may well be related to a long period of occupation.

Thomas does note that the interior of the cells often contained intruding peaks of outcrop rock which must have been a feature of the primary floors. This situation is paralleled at Dun Cuier (A.B4) and Dun Carloway (A.L12).

Material Culture and Chronology - No details are given of the material from the excavation. All that is known of the chronology of the cellular structures is that they were post-roundhouse.

C.24 A' Cheardach Mhor, South Uist NF 7571 4128 (Young and Richardson 1959)

Introduction - The wheelhouse of A' Cheardach Mhor has been described in Chapter Six. This section discusses the later reoccupation of the site involving the construction of cellular structures.

Site Structure - Three phases were isolated by the excavator as representing this reoccupation (II, III and IV). Phase II and III have only fragmentary walling and no recognisable structure was preserved. Phase IV involved the insertion of a small cell (possibly c.3m in original diameter) with a slab-revetted wall surmounted by coursing (Ill. 7.12). The cell has its closest parallels in size and

construction with the small Phase 2 cells at Cnip. Other fragmentary walling around and within the abandoned wheelhouse may represent unrecognised associated cells.

Internal Structure - No internal features were recorded.

Material Culture and Chronology - Only one sherd of pottery was associated with Phase IV. This was originally identified as a Mediterranean import; this attribution was disputed by Alcock and is not now widely accepted (1984, 17). The Phase III pottery is represented by one vessel which has an applied wavy cordon and short everted rim of a form similar to the Phase 2 pottery from Cnip. This latter pottery also derived from the cellular reoccupation of a wheelhouse site.

A cast bronze pin with a bronze wire free-ring head was possibly associated with the Phase IV cell. It is dated, on the basis of a parallel at Lagore, to the C5th or C6th AD (Topping 1985).

Overall the cellular phase can only be broadly dated to the post-wheelhouse period on this site and possibly to the C5th-6th AD with the association of the bronze pin.

C.28 Dun Cuier, Barra NF 6708 0345 (Young 1955)

Introduction - The site of Dun Cuier has already been discussed in Chapter Five and a reinterpretation of the sequence proposed. The new interpretation isolates the structure defined by Young's inner wall as a cellular structure revetted into the remains of an atlantic roundhouse. The following discussion is based on this reinterpretation.

Site Structure - The cellular structure was dominated by a large central subcircular cell some 8m in internal diameter occupying almost the whole of the roundhouse interior (Ill. 5.11). Its entrance, as at Berie, re-used the roundhouse entrance. A second doorway appears to have led out towards the north, possibly to a small

peripheral cell, but this is not clear from the plan. The wall of the cell was of conventional coursing.

The galleries of the earlier roundhouse appear not to have been used in this phase. MacKie's objection to the early dating of the site, based on the presence of early pottery at a high level in the gallery, misunderstands the nature of the reoccupation (1989, 117): as at Loch na Berie, the galleries were used only as dumps for material derived from refuse, cleaning and construction activities.

Outcrop in the floor appears to have led the excavator to believe that the primary levels had been reached. The presence of outcrop at sites like Dun Carloway (A.L12) up to 1m above floor level show that this need not have been the case. It is possible that further cellular structures existed prior to this structure's occupation.

Internal Structure - Several internal features are recorded which all appear to be associated with the cellular structure. A large central hearth dominates the interior. Several stone settings in its vicinity may indicate rebuilds. In the western arc across the hearth from the entrance are two niches or shelves built into the wall as at Loch na Berie Structure 1 (although these are more widely spaced). Again as at Berie an alignment of stones flanking the hearth on the south may be the remains of kerbing.

The cellular structure occupation material was deposited over a layer of machair sand which had been laid as a deliberate levelling deposit over the collapse of the atlantic roundhouse. Young, and subsequently MacKie (1989), believed that this material represented a boulder foundation, but this assumes that the cellular structure was a primary construction. The low level of the scarcement suggests that the primary atlantic roundhouse material lies substantially below this sand and below the rubble from the collapse of the primary structure. This misunderstanding accounts for MacKie's other principal objection to the reinterpretation of Dun Cuier i.e. the lack of a post-hole ring which he saw as being indicative of *broch* interiors (1989, 117). The reinterpretation of Dun Cuier proposed in

Chapter Five sees the excavated floor deposits as entirely post-roundhouse.

Material Culture and Chronology - The material from the site was a mixed assemblage from all phases. The presence of many plain flaring rim vessels indicates a termination date in the late pre-Norse period (App.3) and Lane identified vessels with form and decoration indicating the presence of typologically earlier assemblages (Lane 1983, 255).

Other finds from the site support the dating of the latest occupation to a late stage of the pre-Norse period. A high-backed composite comb has Irish parallels in the second half of the 1st millennium AD e.g. at Lagore (Young 1955, 316). Two double-edged composite combs are of broadly similar date.

Survey Evidence

Thirteen unexcavated cellular structures are recorded, mostly by Beveridge and the RCAHMS on the basis of reports from local people. Some general points can be made regarding distribution and site structure but little additional evidence is available from these sites.

Distribution - The heavy concentration of cellular structures in North Uist appears to reflect the work of Erskine Beveridge. The remainder are evenly spread throughout the islands (Ill. 7.1). The slight construction of the walling of these structures and their tendency to be subterranean or revetted, has made discovery an almost random occurrence dependant on erosion, excavation or other accidental discovery (as at Scolpaig where the cellular structure was discovered when a horse fell through its roof).

The structures are found in most of the available environments, machair, moorland, hilltop and islet, although the moorland examples are difficult to distinguish from medieval and post-medieval shielings.

Site Structure - The unexcavated sites have very little recorded information on site structure. Most are groups of up to three circular or oval cells, often corbelled and always small in size, linked by passages. All appear to have been subterranean in construction. Some, e.g. Tigh nan Leachach (C.27), Usinish 2 (C.25) and Vallaquie 2 (C.18), have evidence of corbelling.

In the absence of properly recorded structural detail it is possible that a number of these structures may be unrelated in chronology or function to the excavated cellular sites. Elements of later medieval and post-medieval landscapes may well be confused in some instances with the cellular structures.

The association of many of the cellular structures with passages of various dimensions indicates a connection with the linear passages. This connection will be explored in Chapter Eight.

Discussion

Construction Method

All of the structures apart from Eilean Olabhat appear to have been constructed by revetting; many were revetted into abandoned wheelhouses or roundhouses while others, e.g. the Udal and Galson, were revetted into sand-hills. Two basic walling techniques were employed; slab-revetting and conventional coursing. In most early excavations the walling method was not recorded.

The conventionally coursed cellular structures comprise Dun Cuier, Dun Bharabhat and Unival (the walling technique at the Udal is not known). These structures were all revetted into pre-existing stone structures; the first two into atlantic roundhouses and the third into a chambered tomb. The walls at Dun Cuier and Unival appear to have been only one stone in width. A central floor area was cleared of rubble and the wall used as a revettment to hold back the debris. At

Dun Bharabhat the circuit of the central cell simply reused the existing roundhouse wall.

The slab-revetted cellular structures comprise Cnip Phase 2, Berie Structures 1 and 2 and A' Cheardach Mhor Phase 4. The technique does not appear to have chronological significance within the period under study as Cnip Phase 2 and Berie Structure 1 may be separated by up to 800 years in construction. The basic construction was identical to that of the coursed walled structures except that the bottom course of walling was formed of large flat vertical slabs surmounted by coursing. It is not clear if any functional advantage was gained by this and the effect may have been purely stylistic. This is best demonstrated in Structure 4 at Cnip where the bottom course slabs are graded in height to the area across the hearth from the entrance.

The larger of these structures would have been roofed in timber and the extent of lintelling or corbelling is unclear. Structure 3 at Cnip was found with lintels *in situ* but no trace of lintels or collapsed corbelling was found in any of the other small cells on the site. The rafters of the timber roofs of the large revetted structures such as at Berie and the Udal, would have rested on the ground surface behind the revettment wall and water would have drained from the roof into the surrounding material (the packing and previous occupation debris at Berie and the sand at the Udal).

The cellular design of the structures entailed that no spans greater than c.6m ever had to be roofed, and the requirements of timber conservation may well have been a major consideration in construction. Preserved walls at Cnip and Berie indicate an original height of <2m for the walls and this presumably was designed to give adequate headroom around the walls under the pitched roof whilst minimising the height of the roof above the external ground surface. These three structural traits combine to indicate a non-monumental form of architecture built with regard to three important environmental concerns; the lack of easily available timber, the cold and the wind.

Chronology

The chronology of the excavated cellular structures is well defined in comparison to other site types, by the pottery typology, which becomes more closely datable in the 1st millennium AD (App.3). Level One dates, i.e. C-14, are restricted to three sites, Dun Bharabhat, Eilean Olabhat and the Udal. Quern evidence is rare but there is no evidence of cellular structures being in use prior to the local quern transition. Non-ceramic artefactual evidence, principally in the form of metalwork, provides further evidence to amplify the C-14 and pottery dating.

The earliest dating for the cellular structures comes from the C-14 dates from Dun Bharabhat, discussed above, which indicate occupation in the C1st BC and possibly earlier. The pottery from this site is of the undifferentiated decorated everted-rim dominated forms characteristic of the later centuries BC in the Western Isles. Of the other structures only Phase 2 at Cnip has definite ceramic associations of this early type, which is more characteristic of wheelhouse and atlantic roundhouse occupation; one sherd of classic 'Clettraval Ware' (App.3) from the structures at Galson however may indicate a similarly early date at that site. The plan of the cellular phase at Bharabhat is very similar to the Figure-of-Eight structures at the Udal which date from the C3rd AD onwards at the earliest. This would seem to support the case against premature subdivision of the class on structural grounds at this stage.

These three sites Dun Bharabhat, Cnip Phase 2 and Galson may have been occupied as cellular structures from the C1st BC and are unlikely to post-date the C1st AD. Dun Bharabhat and Cnip Phase 2 clearly post-date an atlantic roundhouse and wheelhouse respectively. Further cellular structures post-date wheelhouses at the Udal, Foshigarry and A' Cheardach Mhor, and atlantic roundhouses at Dun Cuier, Berie, Dun Ban, Dun Thomaidh, Dun a Ghallain and Eilean a Ghallain: in no case is the chronological relationship reversed.

The C-14 dates from Eilean Olabhat show the continued occupation of cellular structures through the early centuries AD and the pottery from Unival and A' Cheardach Mhor phases II and III indicate broadly similar periods of occupation.

Evidence of later dating comes from three sites; Berie, the Udal and Dun Cuier. C-14 dates from the Udal indicate continuous occupation throughout the period of c.400 - 800 AD terminating with the Norse incursions. The artefactual evidence for Structures 1 and 2 at Berie indicates occupation over the same period, possibly starting somewhat earlier from the presence of typologically earlier pottery in Structure 2 contexts. The Northumbrian influenced tweezers may indicate an abandonment of Berie as late as the end of the cellular structures at the Udal. The pottery from Dun Cuier shares its range of forms and decoration with the Berie assemblage and the presence of the high-backed comb indicates a late abandonment. All three of these sites appear to have had continuous occupation from c.400AD or earlier until the Norse incursions c.800AD.

Function

The majority of these structures appear to have functioned as domestic house structures, often with small outbuildings or lined pits. At Eilean Olabhat and A' Cheardach Mhor only these outbuildings are recorded although at both it is likely that they were associated with more extensive settlement.

Substantial central hearths are characteristic of the excavated examples and peripheral kerbing, interpreted as demarcating areas of bedding, is recorded at Berie, Structures 1 and 2, the Udal and Dun Cuier. The material from all of the excavated structures indicates routine domestic use; assemblages are dominated by fragmentary pottery vessels, large bone assemblages (unless in acidic soils) and a matrix of sand and hearth debris.

Subdivision

None of the discussion above suggests the need to subdivide the cellular structures at this stage. Chronologically they occupy a single span of some 8 or 9 centuries; structurally they appear all to share basic traits; architectural features, such as the building and positioning of niches, occur over the whole period and in structures of both basic wall construction types; the plans tend to conform to the same basic design and no functional distinctions can be drawn.

Parallels Outwith the Western Isles

A number of parallels can be cited for the 1st millennium AD occurrence of cellular structures of this type from both Scotland and Ireland. The clearest parallel to the Hebridean group is House 4 at Buckquoy in Orkney (Ritchie 1976), dated to the C8th AD, which has the Figure-of Eight shape and vertical slab revetted wall characteristic of the Hebridean structures. This site has been described as Pictish and appears to represent the typical Northern Isles house form of the Orkneys during the period of historically documented Pictish influence, if not control. Similar house forms appear to be present at Birsay in Orkney (Hunter 1986). Earlier house types of similar form exist in the clustered villages around some of the Orcadian broch towers e.g. Gurness (Hedges 1987) and Howe (Carter *et al* 1984) where construction involving slab revetting combines with cellular house plans. At Jarlshof in Shetland (Hamilton 1956) the 'passage-houses' and their outbuildings of the mid-1st millennium AD appear to have incorporated slab-revetting.

The cellular plan of these 1st millennium AD structures cannot however be described as a Pictish trait. At Deer Park Farms in Ulster a sequence of timber-built Figure-of-Eight structures occupied the centre of a waterlogged ring-fort (Lynn 1987) in the homeland of the Scots. This structure parallels the plan, scale and internal arrangements of the cellular structures at the Udal and Berie and dates to the same period in the second half of the 1st millennium AD.

The main cell is dominated by a central hearth and flanked by kerbed beds; the entrance to a smaller subsidiary cell leads out from the opposite side of the hearth from the main entrance.

Summary

The cellular structures appear to have been constructed and occupied from the C1st BC until the beginning of the C9th AD. No typological progression is indicated by the examination of structure and dating in this chapter. Even very specific architectural traits such as the construction of wall niches opposite the main entrance, the use of vertical slab revetting and the basic Figure-of-Eight plan recur from the earliest cellular structures at Dun Bharabhat and Cnip, to the latest at Berie and Dun Cuier.

The structures appear to represent the standard house forms of the period successive to that dominated by the monumental roundhouses (the atlantic roundhouses and wheelhouses); the occurrence of cellular structures on sites previously occupied by these monumental forms in the absence of any reverse instances argues for minimal chronological overlap.

The house type is non-monumental and appears to be built with practical concerns in mind. Similar structures in both the Northern Isles and in Ireland indicate that we should be wary of attributing the structures to historically documented peoples or cultural groups and the application of the label Pictish to the northern examples should be treated with caution.

In the architecture and the artefactual material of the cellular structures, connections can be found with the historical Pictish areas, with Ireland and with Northumbria (the Berie tweezers). Part Four will return to the integration of the cellular structures both with the wider Hebridean settlement development and with the archaeological and historical picture developed in other areas.

Chapter Eight

Linear Structures

The linear structures of the Western Isles have been previously classed as 'souterrains' and 'earth-houses' (Ill. 8.1). The terms were used almost interchangeably in early accounts and never fully defined. The criteria for the definition of linear structures has been set out in Chapter Four. Fifteen sites are recorded in the Western Isles of which two are linear house structures and thirteen are linear passages.

Seven linear structures have been excavated although only at Drimore (L.13) and Vallay (L.9) was the linear structure the principal or original object of the excavation; in these cases excavation was extremely limited in extent and few details are available. No deliberate attempt has been made to evaluate this structural type through research excavation.

Excavated Sites

a. Linear House Structures

L.1 Cnip, Lewis NB 0980 3665 (Armit 1988a)

Introduction - The linear house structure (Structure 8) at Cnip represents the final structural element in the site sequence prior to abandonment. It overlies and seals the cellular structures of Phase 2 (Chapter Seven) and the wheelhouses of Phase 1 (Chapter Six).

Site Structure - This structure utilised the existing Structure 1 entrance passage and much of the earlier walling for its foundations. In essence it represents the final period of *ad hoc* rebuilding of the original wheelhouse (Structure 1). The new walling was conventional coursing, replacing the slab revetting of the cellular structures. Structure 8 was some 7m in length by 2.2m wide with a paved

approach and a small cobbled path providing alternative access from the south (Ill. 8.2).

After abandonment the structure was deliberately de-roofed and filled almost immediately with sterile windblown machair sand. The walls survived, apparently intact, to c.2m in height. Roofing would have necessarily been of timber since the width was too great to be bridged by lintels.

Internal Structure - The interior of Structure 8 was divided into three sections. The section nearest the entrance was some 1.5m EW by 2.2m and contained a stone bench built into the north wall. It lacked occupation debris and appears to have served a separate function from the main central chamber. This latter chamber was defined on the west by a stone alignment which may have supported a timber or wattle partition. In the chamber were large quantities of occupation debris including much peat ash, although no formal hearth was apparent.

The innermost division of the structure was formed by the two surviving wheelhouse bays of Structure 1 which were still roofed when excavated. The deposits in these bays were continuous with the central chamber.

Material Culture and Chronology - The pottery from Phase 3 at Cnip is typologically transitional between the decorated everted rim pottery of the 1st millennium BC and the plain later pottery (App.3). Short everted rims remain characteristic but decoration is restricted to applied wavy cordons and, as at Eilean Olabhat, double cordons predominate (Ill. 8.3). The vessels are generally coarser than those of the preceding phases. The absence of incised decoration, the restriction of motifs and overall small amount of decoration indicate a transitional period typologically earlier than the Eilean Olabhat assemblage.

The ceramic assemblage would indicate a date in the early centuries AD for this structure. In relative chronological terms the structure is later than both the wheelhouses and the cellular structures at Cnip.

Aside from the ceramic assemblage, the deposits associated with Phase 3 contained quantities of cetacean bone and antler-working debris, a large terrestrial bone assemblage and quantities of slag.

b. Linear Passages

L.3 Gress Lodge, Stornoway, Lewis NB 4938 4185 (Liddle 1872, MacRitchie 1916)

Introduction - The complex passage-like structure at Gress Lodge was first reported in the late C19th. By 1969 all trace of it had disappeared. The site lay under the lawn of Gress Lodge near Stornoway on the east coast of Lewis. Its entrance was c.1m above high water mark when originally reported, c.40m from the modern house.

Site Structure - The 'earth-house' containing three chambers was the only structure reported on the site. The structure appears to have been subterranean, <1m in width and roofed with lintels. The plan, although incomplete, shows the approximate shape and dimensions of the passage (Ill. 8.4).

Internal Structure - No internal features are recorded except for a central pillar, seemingly structural, in the central chamber.

Material Culture and Chronology - Few finds were reported from Gress Lodge. In 1969, after the structure had become inaccessible, the NMR reports a find of 30 'iron age' sherds from the vicinity. The original finds include bones, shell and querns of unspecified type. The site seems likely to be later prehistoric, on the basis of the pottery, but no greater precision is possible. Lane records that the assemblage also included fragments of late medieval pottery (Lane 1983, 263).

L.7 The Udal, North Uist NF 824 783 (Crawford 1967/78, 1975, 1977, 1985)

Introduction - The linear structure on the US site at the Udal was first excavated by Beveridge (1911) and latterly by Crawford. Neither excavation was published in detail.

Site Structure - The linear structure appears to have run from the side of the US site at the Udal towards the wheelhouse (Chapter Six) which it entered through one of the latter's south-eastern bays. The structure was a passage some 20m long by 0.6m wide. Crawford reports that it was associated with the cellular constructions inside the abandoned wheelhouse (Crawford 1978).

Internal Structure - No internal features were recorded.

Material Culture and Chronology - No material was recorded. In terms of relative dating the structure post-dated the wheelhouse and is likely to have preceded the construction of the cellular structures on the nearby UN machair mound (Crawford 1978).

L.8 Foshigarry, North Uist NF 7430 7636 (Beveridge 1930)

Introduction - The site of Foshigarry has already been discussed in Chapters Six and Seven with reference to its three wheelhouses and its cellular structures. The linear structure is Structure H on Beveridge's plan (Ill.6.3).

Site Structure - Structure H was a long passage-like building revetted into the debris of Structure C as described in Chapter Six. Its chronological relationship with other structures on the site is unclear although it shared an entrance with Structure F (see Chapter Seven) with which it may have been contemporary (Ill.6,3).

Structure H was c.15m long by 0.6 - 0.7m wide and ran NW/SE with a slight curve to the east. At its south-eastern end it turned sharply

northwards for c.2m. It appears to have been wholly roofed with lintels and paved for part of its length. One entrance into the structure was from the NW end and another side entrance was accessible from the middle of the NE side wall. When roofed the structure would have been c.1m high

Internal Structure - No evidence exists of any internal divisions or features and the structure appears to have been a simple passage. It did not serve simply as an entrance to the cellular complex of structures, F,E and D, since it continued for more than half its length beyond the entrance to these structures.

The kiln described by Beveridge as belonging to this structure appears likely to belong instead to the intrusive post-medieval structures which lie above (Scott 1948, 74).

Material Culture and Chronology - In the absence of any attributable finds the structure can only be dated by a crude relative chronology. Arguments were presented in Chapter Six to suggest that Structure H was later than Structure C, the wheelhouse (though not necessarily later than all of the wheelhouses on the site): its shared access with Structure F suggests that it was in use at the same time as the cellular complex, or at least that their use overlapped.

L.9 Vallay Earth-House, North Uist NF 77 76 (Beveridge 1911)

Introduction - This structure, on the island of Vallay off North Uist, was investigated by Beveridge prior to 1911. The structure is only provisionally classed as a linear structure; it may have formed part of a different type of settlement altogether as the structural evidence is so slight. The site lies on a slight knoll in the machair behind the beach on Vallay.

Site Structure - Beveridge reported finding one wall of a curving subterranean passage, revetted into the sand. The wall ran for some 10m and survived to 0.5m in depth. Two short transverse walls were reported.

Internal Structure - No details of internal structure are known.

Material Culture and Chronology - Beveridge reported finding decorated pottery but no details are available. No information exists on the chronology of the site.

L.12 Bruthach a Tuath, Benbecula NF 787 566 (compiled from excavator's notes)

Introduction - The location and circumstances of excavation are described in Chapter Six.

Site Structure - The linear structure, the 'souterrain' in Wallace's notes, was constructed over the abandoned wheelhouse described in Chapter Six. It was entered from the interior of this ruined structure and the later hearths in two of the wheelhouse bays may relate to this linear structure's occupation.

The linear structure was entered by six steps, 0.6 - 0.7m wide, and ran SW for 4.2m at least. No further details were recorded.

Internal Structure - No internal features were recognised.

Material Culture and Chronology - The surviving excavation records do not specify what material was found in the linear structure apart from a bronze projecting ring-headed pin of wide chronological currency. Wallace did note however that all of the decorated pottery was found in the wheelhouse deposits.

The absence of a detailed ceramic assemblage and the unspecific dating of the bronze pin prevent any attempt at absolute chronology. The linear structure was clearly, however, post-wheelhouse on the site.

L.13 Drimore, South Uist NF 75 41 (Feachem 1956)

Introduction - This site was reported by Feachem in 1956 as part of the excavation programme associated with the construction of the Drimore Rocket Range in South Uist. The site lies on the Drimore machair in the vicinity of several wheelhouse sites such as A' Cheardach Mhor (W.15) and A' Cheardach Bheag (W.16; Chapter Six). The excavations appear to have been very brief and were never fully published.

Site Structure - The linear structure, reported as a 'souterrain' (Feachem 1956), was not associated with any other visible structures. It consisted of a sand-revetted passage 8m long by 1m wide and 1m deep. It was entered by steps leading down from the surface and Feachem reported that small chambers led off these steps. It may be that the linear structure was associated with a cellular complex which went unnoted or which had not survived.

Internal Structure - No internal features of the structure were recorded.

Material Culture and Chronology - No details of the material from the structure were reported although pottery and bone were recovered.

Survey Evidence

Eight linear structures can be added to the excavated sites from the evidence of field survey. Most were recorded by the RCAHMS on the basis of local reports and the fieldwork of Erskine Beveridge. Some general points of distribution and site structure can be made but no evidence is available to supplement the excavated data for internal structure, material culture or chronology.

Distribution - The subterranean nature of the linear structures has made their discovery very difficult and consequently few are

recorded. Their distribution is spread throughout the islands and reflects the activities of past fieldworkers; Thomas in the Usinish area of South Uist, Beveridge in the northern part of North Uist and the Rocket Range survey in South Uist and Benbecula. Others were reported by local people when periods of sand deflation or erosion exposed the passages. The known distribution is in no way a reliable indicator of the original distribution of the class.

The linear passages occur in both machair and moorland environments and are found at altitudes of up to 100m at Scalavat (L.14). The linear house structures are confined to the machair although, with only two known, it is not clear whether this has any real significance.

Site Structure - Little structural information can be added to that from the excavated sites. All appear to have been subterranean, either sand-revetted or excavated into hillsides. Dimensions are recorded for only two unexcavated sites; the linear passage at Paible, Taransay (L.5) was recorded as being over 7m in length but its width is unknown; the linear house structure at Vallaquie, North Uist (L.2) was some 7m by 2m. This latter structure is comparable in size with the linear house structure at Cnip.

External structures which may be contemporary have been noted at three linear passage sites; above-ground structures including a possible 'hut-circle' were recorded near the linear structure at Valtos, Lewis (RCAHMS 1928, No.96; L.2); similarly, stone-built structures of uncertain form are visible adjacent to the linear structure at Scalavat 1, South Uist (L.14; pers. obs. 1988) and the linear structure at Paible, Taransay (L.5), was said to have had an adjoining side-cell prior to its destruction.

These instances suggest that the association of linear passages with other structural elements may be more common than previously thought. As was noted in Chapter Seven, a number of cellular structures incorporate elements which, if found singly, could be classed as linear passages. It may be the case that a number of the

linear structures represent the sole surviving or the only visible elements of such cellular complexes.

Discussion

Subdivision

The excavated evidence suggests that a distinction exists in size, internal divisions and evidence for function, between the linear house structure at Cnip and the linear passages. The survey evidence shows that the site of Vallaquie in North Uist (L.2) appears to be related to the Cnip structure. The main structural difference from the linear passages is their width and, by implication, their roofing method and function. While the other sites for which dimensions are recorded tend to be c.0.6 - 0.8m in width the structures at Cnip and Vallaquie are 2.2m and c.2m in width respectively. At Cnip the linear structure appears to have been the domestic focus of the Phase Three occupation while the excavated linear passages appear to have been elements in larger, cellular, settlement units.

The linear structures have therefore been divided, on the basis of dimensions (i.e. width), into two sub-classes; the linear house structures (Cnip Structure 8 and Vallaquie) and the linear passages (the remainder of the structures for which dimensions are recorded).

Construction Method

The linear structures are all subterranean, being sand-revetted, as are all the excavated sites, or dug into hillsides, as at Scalavat 1 and 2 (L.14 and 15), Portain (L.10) and possibly Valtos (L.4). All appear to have been built of conventional coursed walling and no indication of slab-revetting has been recorded.

The major constructional divergence between the linear house structures and linear passages is in their roofing method. The passages appear all to have been lintelled at or below the contemporary ground level. Lintels remained *in situ* at a number of

sites, e.g. Gress Lodge, the Udal and Foshigarry, confirming the use of this technique. The linear house structures were too wide to be bridged by lintels and would have required timber roofs, either flat or pitched.

The linear house structures were non-monumental structures constructed with the requirements of insulation and ease of roofing in mind. The relatively narrow central span would have made roofing with short timbers possible.

Chronology

The dating of Structure 8 at Cnip has been discussed above. The pottery from the structure suggests a date in the early centuries AD. No dating evidence is available from Vallaquie. In relative terms the Cnip structure post-dates the wheelhouses and cellular structures on that site but its pottery clearly pre-dates the assemblages at other cellular structures such as Berie and the Udal. The linear house structure therefore should be seen as contemporary with part of the development of cellular structures in the Western Isles.

The linear passages have little evidence for absolute chronology but in several cases (the Udal, Foshigarry and Bruthach a Tuath) can be seen to be later than the wheelhouses on the same sites. In no instance do they appear to pre-date or be contemporary with the occupation of wheelhouses. Association with cellular structures and with the reoccupation of wheelhouses appears to be common and the majority of the linear passages seem to form elements in larger units. A date range in the same period as the cellular structures, essentially the 1st millennium AD prior to the Norse incursions, can be suggested.

Function

The linear house structure at Cnip has been interpreted as a domestic structure and a similar function can be suggested for Vallaquie on the basis of structural parallels. The function of the

linear passages is more difficult to assess. Domestic occupation can be ruled out due the prohibitively small size of the passages, all < 1m in width. This supports the view that these structures are generally, if not always, elements in a larger settlement.

Several of the linear passages may be entrance passages or connecting passages between elements of cellular structures. This may be the case for example at Foshigarry where the linear passage appears to have been utilised as the entrance to cellular structures E and F. The Foshigarry linear passage however extends past this entrance and arrives at a butt end several metres beyond these cells. Other linear passages such as those at Bruthach a Tuath and the Udal are entered **from** reoccupied wheelhouses and have only one entrance.

Storage is a possible function of these structures and one which has been suggested for the larger souterrains of south and east Scotland. The underground nature of the structures may provided a stable environment to store grain. The suitability of sand for this is however open to question. None of the finds from the excavated sites gives any indication as to function.

Parallels outwith the Western Isles

Linear structures have been recorded in several parts of Scotland in the later prehistoric period. The closest parallel, both geographically and structurally, for the Hebridean structures is the site of Tungadal in Skye (Miket pers. comm.) excavated by Roger Miket in 1988. This site comprised a linear house structure associated with a linear passage, entered from its interior. Pottery from the site was similar to that of the early centuries AD in the Western Isles. The excavations there may help in the interpretation of the Western Isles data. The structures at Tungadal highlight the different functions of the two types of structure; the linear house structure is clearly domestic and has a segmented internal structure, as at Cnip, while the linear passage or 'souterrain' leads off this and appears to serve a storage function (although interpretation still presents unresolved

difficulties at Tungadal due to the problem of flooding in the linear passage); the linear passage here is a subsidiary domestic structure forming part of a larger settlement unit as appears to be the case for the Hebridean linear passages.

The souterrains of southern and eastern Scotland appear to be similar in scale and construction to the linear house structures of the Western Isles. Excavation however has not produced evidence for their use as domestic settlement structures and has suggested a storage function. No real evidence exists for a functional or cultural link with the Hebridean examples.

The 'wags' of Caithness provide another possible parallel for the linear house structures but their function and chronology are as ill-established as the Hebridean linear structures.

Summary

The linear passages of the Western Isles are poorly understood in both their function and chronology although their construction methods and association with larger settlement units are relatively well established. They appear to be a phenomenon associated with the appearance and occupation of cellular settlements and probably served a specialised function within those settlements. Their date range seems to equate with that of the cellular structures and they are structurally difficult to disentangle from this latter group which often contain rectilinear or linear cellular elements. It is tempting to equate them with the galleries of the complex atlantic roundhouses in function. Their spatial relationship with the domestic *foci* of the cellular structures as peripheral linear extensions, too constricted and elongated for routine domestic occupation, suggests a similar role within the settlement to the roundhouse galleries. While useful in stressing spatial and organisational continuity across chronological periods and structural forms, this does not get us closer to the function of these structures. A combination of archaeological experiment (with storage etc.) and future excavation will be required to advance our knowledge.

The linear house structures are easier to interpret as *foci* of domestic occupation but less clear to understand in the context of the development of cellular structures and wider settlement patterns. With only two sites known and only Cnip Structure 8 excavated, it is difficult to interpret the relationship between this group and other Hebridean settlement forms. The Cnip structure dates to a period when cellular structures were the dominant settlement type and forms the final phase of continuous occupation on a settlement which had been laid out in cellular form. The possibility of a close relationship in structure and function with the Tungadal structure in Skye (which appears from survey work to be representative of the Skye souterrains - Miket pers. comm.) further complicates the issue. It is clear however that the material culture of Cnip Structure 8 lies in the mainstream of the Western Isles and the settlement develops from conventional Western Isles structural precursors. There appears to be no question that the linear house structure is an externally imposed form.

With so few sites known it is currently only possible to note the existence of a parallel house-building tradition of linear or rectilinear revetted structures during the period of development of the cellular structures. The far greater number of cellular structures documented, despite similar circumstances of preservation and similar lack of targeted research, argues for a dominance of the cellular settlement form.

Chapter Nine

Promontory Forts

None of the promontory forts of the Western Isles has yet been excavated and information is therefore very sparse. Some observations can be made on the basis of the surface evidence regarding patterns of distribution and site structure.

Survey Evidence

Distribution - Twenty sites are known from the field survey evidence and these are heavily concentrated in Lewis where thirteen sites are recorded (Ill. 9.1). One is known from Harris, two from North Uist and four from Barra. The Lewis concentration is likely to be the direct result of Trevor Cowie's unpublished coastal erosion survey of the late 1970s rather than any original locational factors.

The structures tend to occupy steep-sided promontories where access is easily controlled. The active erosion of many such promontories, which made them suitable locations, makes their archaeological visibility very limited. In most cases only landward walls can be expected to survive. This, combined with the tendency of early workers to focus their attentions on the more monumental settlement forms, has led to a probable under-representation of promontory forts in the archaeological record.

Site Structure - The Hebridean promontory forts are characteristically univallate with encircling or landward walls sealing off the promontory from landward approach. Only Rudha na Berie (Ill. 9.2; P.7) and Dun Mara (Ill. 5.20; P.2), both in Lewis, were clearly multivallate. The three walls which cut off the promontory of Rudha na Berie appear to be part of one design and form a strong defensive barrier. Dun Mara, an atlantic roundhouse with external promontory walls, has two parallel walls which suggests a similar defensive capacity.

The promontory forts often enclose or seal off large areas, e.g. an irregular 240 x 100m at Rudha na Berie. The present enclosed dimensions are minimum figures for the original size of these enclosures.

Several sites appear to have been reoccupied at various periods and for various purposes, e.g. Dun Mara contains intrusive rectilinear structures, Rudha Shilldinish contains lazy-beds and rectilinear houses (Ill. 9.3; P.12) and Casteil Odair (P.15) has evidence of post-medieval shielings.

Discussion

Construction Method

In the absence of excavation it is generally impossible to describe the construction method of these structures. The structure at Barra Head Lighthouse (P.20) is of drystone construction and incorporates a number of features characteristic of broch architecture (see below). A number of other sites e.g. Casteil Odair, North Uist (P.15), indicate that drystone construction was often employed. Most of the structures are represented on the surface, however, by grassed-over banks.

Chronology

Almost nothing is known of the chronology of the Western Isles promontory forts. No C-14 dates are available and no artefactual material can be linked to their use. The only chronological indicator is structural typology.

The Barra Head Lighthouse site (RCAHMS 1928, No.450) displays the characteristic traits of broch architecture in the context of a promontory fort rather than a roundhouse (Ill. 9.4). This structure is represented by a 20m long arc of walling sealing off a promontory on the island of Berneray, one of several small islands to the south of Barra. The wall is up to 5m wide and contains 2 super-imposed intra-

mural galleries along its southern arc, as well as the low entrance passage with bar-holes characteristic of complex roundhouse entrances. The structure is clearly linked to the architectural tradition of the atlantic roundhouses and would be tentatively dated to the period when complex roundhouses were constructed, c.400BC - 0 (App.1). The absence of an atlantic roundhouse on the island suggests that this structure may have served a similar purpose to the Barra roundhouses.

Of the remaining promontory forts only Dun Bhilascleiter in Lewis (RCAHMS 1928, No.34; P.3) has any indications of sharing elements of broch architecture with the atlantic roundhouses. Reports here suggest the former presence of an intra-mural guard cell. One further site, Dun Mara (P.2), an atlantic roundhouse sited on a promontory, has external banks which are similar to those of the promontory forts and which may suggest a functional or chronological link. The very simple morphology of the promontory forts however means that they may well represent several different chronological periods.

These three sites provide the only evidence from the Western Isles of a later prehistoric date for the promontory forts. This very slender evidence is somewhat amplified by work in other areas, discussed below.

Function

There is no unambiguous evidence for the function of these sites. Their location is immediately suggestive of defense, and in this they are more efficient in design and economy of labour than the atlantic roundhouses. Promontory forts could accommodate livestock, provide storage space and give the inhabitants alternative routes of access (i.e. to sea) not available to defenders in a roundhouse. Defense of a large area could be concentrated and access easily controlled.

Few of the sites have evidence for internal contemporary buildings which may have supported permanent settlement. If these were of lean-to type they would have been obscured by the collapse of the walls and in any case they may have been relatively slight and not readily visible to the archaeologist. Some sites, e.g. Casteil Odair have internal structures but there is no way to assess contemporaneity from field survey alone. The lack of excavation prevents the interpretation of function on this class of site.

Subdivision

The structures can be divided into two groups on the basis of surface morphology. The first comprise structures where the wall surrounds, or shows signs of having surrounded, the entire promontory, and the second where only the landward side is walled. Encircling walls will be prone to erosion however, and the landward walls will often be all that survives so it is not clear that this subdivision is of real significance. It may also be related to factors of topography and the presence or absence of naturally defensive locations. The evidence at present is too slight to sustain the subdivision of the Western isles promontory forts on this basis.

The conventional division between the univallate and multivallate forts is derived from areas outside the Western Isles (e.g. Lamb 1980). With only two known multivallate examples it seems premature to divide the Hebridean examples on this basis.

Parallels Outwith the Western Isles

Promontory forts occur widely in Atlantic Europe and elsewhere and may have a wide chronological currency and a variety of functions. The closest parallels to the Hebridean promontory forts appear to be those of the Northern Isles, interpreted by Lamb as predominantly of Iron Age date (1980). These include multivallate examples, paralleling Dun Mara (P.2) and Rudha na Berie (P.7), and a range of univallate examples. The northern sites also demonstrate links with the broch architecture of the atlantic roundhouses and Shetland

blockhouses. Lamb's study placed the northern multivallate promontory forts in the wider traditions of Atlantic European sites but undermined the Venetic connections which had fixed their chronology to the Caesarian period (Lamb 1980). These northern structures therefore provide some slight support for a dating of the Hebridean promontory forts broadly to the later prehistoric period.

Chapter Ten

Possible Related Structures

Introduction

There are several groups of structures which may form part of the later prehistoric settlement patterns of the Western Isles but which do not fit into the categories defined in Chapter Four, or for which there is no dating evidence. The principal forms are the walled islets and the miscellaneous structures (principally causewayed natural islets and crannogs).

Walled Islets

The walled islets comprise a group of 22 structures which have conventionally been classed with the *island duns* but which, by their size, irregularity or slight walling, could never have been roofed structures (Ill. 10.1). These structures were recognised as a distinct group in the field survey of Lewis and Harris carried out in 1984, where 4 examples were recorded, all with an eastern distribution which they share with the causewayed islets (Armit 1985). The walled islets are linked to the shore by causeways in the same way as the islet-sited atlantic roundhouses and the causewayed islets.

These structures are islet enclosures and share their surface morphology with the promontory forts, some wholly enclosing the islet and some restricted to walling on the closest side to the shore, e.g. Dun Hermidale, South Uist (WA.18). Like the promontory forts they tend to be irregular, following the edge of the islet. The size of these structures varies considerably and examples are recorded from 274 x 70m, at Dun Loch an Duin, Scalpay (WA.4), to only 21 x 19m at Dun Loch an Duna, Leurbost (WA.2). At some sites, e.g. Dun Scor in North Uist (WA.13), several islets may be connected by stone-built causeways.

Dun Loch an Duin, Aird, in Lewis (WA.1), is one of the few walled islets with recorded evidence for structural complexity. This site is now entirely destroyed but a plan survives from the late C19th (Thomas 1890, Ill. 10.2) which is sufficiently detailed, with measurements supplied, to suggest the former presence of a complex entrance. At the entrance the wall thickened from 1.5m to 4m and survived to 3m in height. This wall appears to have contained an oval guard-cell.

At Dun Loch an Duna, Leurbost (Ill. 10.3; WA.2), also in Lewis, a small corbelled cell survives built into the circuit of the wall. This structure has suffered through medieval re-use which has left traces in the substantial, intrusive rectilinear structure and the boat noost smashed through the original wall. A hut-circle, 5m in diameter, may be linked to earlier occupation but its date is entirely unknown.

These structures have never been examined through excavation and their chronology is entirely unknown. Many have evidence for internal structures, often very slight and clearly intrusive, but no evidence for contemporary internal occupation. These structures will be examined in Chapter Twelve, with the miscellaneous structures, with reference to their spatial relationships with known later prehistoric settlement forms.

Miscellaneous Structures

Large numbers of sites have been recorded as *island duns* on the basis of their location and surface morphology but in the absence of any indication of a drystone roundhouse. In some cases these featureless islets have been classed as crannogs, where they are obviously artificial, but normally they were thought to be poorly preserved examples of the island dun class.

A major reassessment of these structures was necessitated by the excavations at Eilean Domhnuill, Loch Olabhat, North Uist (M.13), which began in 1986 (Armit 1986, 1987, 1988b). This site is an artificial islet, linked to the shore by a stone causeway in the manner

of many atlantic roundhouse sites. The structures on the islet comprise a long sequence of early neolithic house structures, built variously with turf and earth, timber and boulder-footed walls. The implications of this site are significant for interpretations of the settlement patterns of all periods in the Western Isles. It is now clear that the occupation of these causewayed islets, whether natural or artificial, can date back to the Early Neolithic and may cover the entire prehistoric period.

The islet sites which lack any traces of substantial drystone constructions have been classed as a separate group from those with evidence for atlantic roundhouse construction. There are 52 examples recorded; 9 from Lewis, 1 from Harris, 3 from Benbecula, 7 from South Uist and 32 from North Uist. None are known from Barra.

Apart from Eilean Domhnuill, only the North Tolsta crannog in Lewis (M.3) has been examined: both of these sites confirm the potential for early dating of islets which lack evidence of monumental architecture. The North Tolsta crannog was exposed in loch drainage operations in the late C19th and was described by Blundell (1913). The structure was an artificial timber islet containing evidence of internal structures. No dating evidence is available but its timber construction would seem to argue for a relatively early date given the scarcity of timber in later prehistory.

Eilean an Tighe, excavated by Scott (1950) and not included in the catalogue here, was an early neolithic settlement site (interpreted in the original report as a pottery manufacturing site) although the absence of a causeway and the small and narrow dimensions of the islet meant that this excavation was not regarded as jeopardising the unity of the later prehistoric 'island dun' class.

The importance of the distribution of these sites, in North Uist in particular, to interpretations of prehistoric settlement development will be assessed in Chapter Twelve.

Summary

The occurrence of walled islets and causewayed islets raises a series of problems in the context of the preceding examination of atlantic roundhouses. The recognition that many atlantic roundhouses were the archaeologically most visible elements in much longer settlement sequences means that we are faced with a range of islet settlement sites where occupation was never in the form of a monumental atlantic roundhouse. The relationship of these slighter structures to the atlantic roundhouses could take several forms and at present there is little justification for regarding these sites as a unitary phenomenon.

Various possible relationships include the following;

1. The slighter structures may be contemporary non-monumental elements of the same settlement patterns as the atlantic roundhouses, representing the same communities.
2. The slighter structures may be later structures built after the abandonment of the atlantic roundhouse form.
- 3 They may be earlier structures, representing sites of similar function to the atlantic roundhouses, which had ceased to be occupied by the period of monumental building.

The excavations of Eilean Domhnuill, Eilean an Tighe and the North Tolsta crannog favour the third possibility. The walled and causewayed islets, however, may cover a very wide chronological range and may be linked only by negative traits. The question of the relationship of these sites to the later prehistoric settlements will be examined in Chapter Twelve in the context of their spatial distribution.

PART THREE
ANALYSIS

Chapter Eleven

Structural Analysis

The purpose of this chapter is to explore the relationships within and between the structural forms defined in Part Two, on the basis of their observed structure. The quantity of available information which can be used for this sort of analysis is greatest for the atlantic roundhouses and wheelhouses and the analysis of these forms will form the basis of this chapter. Cellular and linear house structures are limited to a very few variables of use in this type of analysis and they will be discussed briefly towards the end of the chapter. The promontory forts and walled islets, as unroofed enclosures, cannot be assessed on a comparable basis to other classes.

Atlantic Roundhouses

Analyses of atlantic roundhouse structure in the past has been based on the prior division of sites into architecturally defined classes; in particular it has been the sites defined as *brochs* which have been subject to detailed analysis while the *duns* have generally been avoided.

The first major work on the structural aspects of the atlantic roundhouses was Angus Graham's study of *broch* architecture and structure, published in 1947. Graham's paper included discussions of the patterning of traits such as guard cells, scarcement ledges and intra-mural cells and galleries, from *brochs* throughout Scotland where observations had proved possible. He also compared the internal diameters for approximately circular sites, which gave a sample of 132, significantly higher than his samples for other variables. Graham distinguished two broad 'strains' in the overall *broch* population, corresponding with the western and northern parts of the Atlantic province.

Sir Lindsay Scott introduced height as a further factor in the classification of the *brochs* (1947). The shortcomings of his

classification were pointed out by his contemporaries (Scott 1947, 35-6) and summarised by Martlew (1982). The unquantifiable and widespread occurrence of stone-robbing means that we can never hope to estimate original height from surviving structures and their surrounding rubble. Scott included no formal numerical or statistical analysis of structure in his work.

MacKie's work on the *brochs* developed Graham's ideas and methods and included some study of *broch* dimensions (MacKie 1965). MacKie developed his numerical methods beyond those of Graham by working with two basic variables, wall thickness and diameter, and with wall proportion or wall base percentage, which was a product of these two basic variables. MacKie's results (presented in MacKie 1965, Fig.3) were used to infer regional groupings within the plotted relationships of wall proportion to external diameter. Like Graham and Scott, MacKie was concerned with *brochs*, as he defined them, on a national level: consideration of structures outwith his strictly defined *broch* category was largely avoided. The pre-selection of sites for separate consideration on the criteria of surviving architectural features has already been argued to be misleading. In the context of the Western Isles sites it will be important to consider the range of atlantic roundhouses and to examine the unity or possible divisions within the class.

The most recently published work on the structural analysis of *brochs* was that by Martlew (1982). This study used a number of techniques, most notably cluster analysis, to explore the typology of the structures classified as *brochs*. This study however did not tackle the basic problem of the integration of these structures with the mass of unclassified but related structures in their regional contexts. MacKie's classification was again taken as the basis for the selection of sites and indeed MacKie's sample of sites from his earlier work was re-used in Martlew's analysis. It is difficult to see how real progress can be made if the underlying assumptions of this classification scheme remain unchallenged. Nonetheless Martlew did recognise some regional variants within the sites studied. The

Western Isles *brochs* seemed to constitute a reasonably coherent group of relatively thin-walled structures (Martlew 1982, 265).

The variables which are available for use in analysis from the majority of atlantic roundhouse sites comprise only diameter and wall thickness. For the reasons described in previous chapters, the specific architectural features of broch architecture are not preserved or visible on the vast majority of sites, but the cumulative evidence of excavation suggests that they were originally very widespread. It would not be a particularly meaningful exercise to restrict analysis to the few known broch towers or to the complex roundhouses alone.

The purpose of this section is to assess the validity of the atlantic roundhouse class as a device to embrace the range of structures divided by previous typologies. A range of simple analyses on the basis of surface morphology and excavation can provide an indication as to whether the previous architectural typologies can be observed within the atlantic roundhouse class. The tests have been selected to provide information on the size range and available living space of the structures and to indicate the degree of monumentality insofar as this can be interpreted from field evidence. Cluster analysis, such as that employed by Martlew, has been avoided since both the variables involved and the number of sites are relatively few and easily assessed in univariate analysis. It is potentially misleading to combine variables when the problems and inadequacies of each set of data on individual variables demand cautious treatment.

The sites selected for study are the atlantic roundhouses of North Uist and Barra. Analysis is restricted to these islands for a number of reasons; these islands are the only two where sufficient fieldwork has been carried out to give reasonable confidence that the great majority of sites have been located. The database for these islands will be less open to distortion than those of other islands, such as South Uist, Benbecula and Lewis, where data gathering has been sporadic and restricted. The use of North Uist and Barra will also allow easier comparison of the results with the locational and spatial

analysis of Chapter Twelve which, for the same reasons, is restricted to these two islands.

The unity of the group of structures defined as atlantic roundhouses can be assessed for validity through the analysis of these basic variables;

1. external diameter
2. internal diameter and area
3. wall base % (percentage of the overall diameter constituted by the walls)

Other variables could be suggested. A basic one, as mentioned above, is height, which would clearly relate to function and degree of monumentality. Unfortunately as has been indicated in previous chapters, there is insufficient evidence from either field survey or excavation to make this possible. Other variables would comprise the presence or absence of particular architectural features but again these are not generally observable in the field.

The measurements used below are based on the main central cells of the structures and do not include the size of galleries and cells in calculations of internal area. In many cases, where structures are not completely circular, the mean diameter has been taken. Martlew stresses the potential importance of circularity as a defining characteristic of *brochs* although acknowledging the constraints of location (1982, 272). In the Western Isles, where so many atlantic roundhouses are built on islets, the constraints on shape are very great. It would be difficult to argue that absolute circularity is a particularly helpful guide to classification. It would however affect the structural stability of the roundhouses and their potential degree of monumentality through height, so any great divergence from circularity should be noted. Of the 38 atlantic roundhouses in North Uist and Barra, for which measurements are possible, the maximum divergence of the major and minor external axes is 6m at Dun na Dise, North Uist (A.NU41) (although this figure may be distorted - see below).

The following sections will firstly discuss the selected variables before examining the overall implications of the analysis for the atlantic roundhouse class in the Western Isles. In many cases the measurements of certain variables will be somewhat approximate due to the distortions imposed by partial collapse and the variable quality of recording.

External Diameter

External diameter is in many cases the only structural variable which can be measured from the field evidence. It has been used here to demonstrate broad size range for a relatively large sample of sites from North Uist and Barra. Illustration 11.1 shows the external diameters of the atlantic roundhouses from these two islands in the form of a stacked bar graph. Where structures diverge from true circularity the mean external diameter has been taken. The question of divergence from circularity is considered separately below. An immediately striking feature is the very wide absolute range of the diameters from 9m, at Eilean Scalaster (A.NU44) and Dun Ban Hacklett (A.NU45), to 24m at Rudh an Duin (A.NU3), all in North Uist. The distribution is a normal one with a mean of 15.6m for Barra and 14.6m for North Uist (14.9m overall mean).

There is no apparent difference in range of external diameter between the complex roundhouses and those with no visible galleries; this supports the contention in Chapter Five that the Western Isles atlantic roundhouses form one coherent series, divided principally on the basis of degree of preservation. If the complex and simple roundhouses belong to two, distinct groups, then that distinction is not reflected in the size range of the structures.

The simple roundhouses show a distribution of external diameter which appears to diverge from the normal distribution of the overall atlantic roundhouse population. There appear to be concentrations of simple structures between 8 - 9.9m, 12 - 13.9m and 18 - 19.9m. The small absolute number of sites for which external diameters can be

recorded, however, prevents any very secure conclusions being drawn on the significance of this feature. A further complication is that all the simple roundhouse sites are unexcavated and their measurements are often based on early descriptions expressed in imperial units. The conversion of imperial to metric measurements may lend a spurious sense of precision to approximations in the original data and cause clusters around certain measurements. Cnoc a Comhdhalach (A.NU14) and Dun Loch Hunder (A.NU35) are both complex roundhouses, possibly broch towers, and both also fall into the 10 - 11.9m range, as does the excavated complex roundhouse of Dun Bharabhat in Lewis (A.L18) (not included in Ill. 11.1). There is no indication of a size range difference between the complex roundhouses and the other roundhouses in these islands on the basis of external diameter. Instead the impression is of the great range within the class of atlantic roundhouses as a whole, whether complex roundhouses alone, or the whole class together, are considered.

Internal Diameter and Area

Only 23 sites have available measurements of internal diameter, enabling the calculation of approximate internal areas, compared to 38 sites for which external diameters are available. Of these 23 sites 17 are definitely complex roundhouses, for it is mainly the excavated or very well preserved sites for which measurements are available i.e. precisely those sites where there is also good preservation of architectural detail. The comparisons here between complex and simple roundhouses mean very little due to this basic problem of data recovery.

Internal area was calculated by the use of mean internal diameter and an assumption of general circularity (Ill. 11.2). Clearly this is a somewhat crude index of actual internal area but it does give the approximate order of size range and available internal space. On the basis of this calculation, a mean internal area of 58.2m^2 was derived for the atlantic roundhouses of North Uist and Barra.

The comparison of complex and simple roundhouses is of very limited value: the apparent concentration of simple roundhouses at the lower end of the scale of internal area, although overlapping the complex roundhouse range, cannot be used to support a division of the two classes. The larger structures were more likely to attract excavation until recent years, being more visually impressive and more immediately of interest to the early antiquarian workers. The larger sites therefore, have produced a greater degree of architectural information. There will thus be a tendency for the larger sites to exhibit a greater degree of architectural complexity, even if all of the sites were originally of similar construction.

The measurements are useful in highlighting the differences in scale within the complex roundhouse class. This difference in available space within the structures is of a different order to that of external diameter and reinforces the range and variety within a class united by common architectural traits. While, in terms of external diameter, the largest atlantic roundhouse is some 2.6 times as large as the smallest, this compares to a difference of c.154m² for Rudh an Duin (A.NU3), to c.15m² for Eilean Scalaster (A.NU44), both in North Uist. The smallest complex roundhouse, in terms of internal area, is Dun Loch Hunder, North Uist (A.NU35), at c.33m². This means that even between two complex roundhouses in North Uist, both of which may well have been broch towers, there is a difference of the order of 466% in internal floor space. This presents a strong argument against interpretations of origins and function of broch architecture which depend on the uniformity of the class. It suggests that the interpretation of the function of broch architecture, as one element in the settlement, must recognise great differences in scale between the sites on which it is used.

One major difficulty in the interpretation of internal area variability is the question of multiple floor levels. It is quite clear from many of the excavated sites, from the Western Isles and elsewhere, that a large proportion, if not all, complex roundhouses would have been multi-storey structures. The whole architectural design of the type lends itself to the creation of super-imposed floors. Specialised

architectural features, such as scarcements and upper gallery entrances, allow the positions of upper floors occasionally to be observed (as at Loch na Berie, see Chapter Five). What is entirely unknown is the function of these upper levels since, being necessarily of timber construction, none survives. The only possibility for survival lies in the waterlogged sites where collapsed upper floors may be preserved. Such circumstances are rare, with Loch na Berie being currently the most likely candidate. Even if such survival occurs, however, the chances of finding secure indications of function remain remote. At present it is impossible to determine whether these upper floor levels were used for domestic habitation, storage or any other of a range of possible functions. Without this information comparisons of internal diameter must be treated with caution. The vertical division of living areas, however, would represent a significant difference in the disposition of domestic space within a structure and does not undermine the range and variety within the complex roundhouse class which these comparisons suggest. Even if Dun Loch Hunder had had five storeys of domestic habitation, and Rudh an Duin only one, the latter site would still have contained a larger available area of living space (assuming a wall batter on upper storeys which would progressively reduce available space in upper floors). The larger sites, and especially Rudh an Duin and Dun an Sticer, may well be exceptional within their local contexts and this possibility and its implications will be considered further in subsequent chapters.

Wall Base Percentage

The wall base percentage represents the proportion of overall mean diameter formed by the walls at their base (Ill. 11.3). Measurements are again only approximate: it is seldom possible to measure walls at the base due to rubble accumulations and, since the walls tend to narrow as they rise, only limited accuracy will be possible. Nonetheless crude comparisons are possible between the complex and simple roundhouses, and between the Western Isles roundhouses and those of other areas.

The use of this variable is taken to provide a crude index of 'massiveness' or potential for height and monumentality. The greater the wall base percentage the greater would be the potential stable height of the structure, assuming overall circularity. The non-circular atlantic roundhouses, where divergence from the maximum to minimum diameters exceeds 1m, are particularly important in this context: to achieve a similar degree of monumentality these structures would require particularly massive wall bases to counteract the instability generated by an irregular base.

In absolute terms the wall base percentage, for atlantic roundhouses as a whole, ranges from 34%, at Dun Nighean Righ Lochlainn (A.NU21), Dun an Sticer (A.NU1) and Dun Torcuill (A.NU19), to 62.4% at Dun na Mairbhe (A.NU15), the latter lacking visible evidence of galleries. The complex roundhouses range from 34.3% at Dun Torcuill (A.NU19) to 56.3% at Bal na Craig (A.B11).

The range of wall base percentage shows no apparent difference between the complex and simple roundhouses, reaffirming the picture derived from external diameter, and more cautiously inferred from the internal areas.

The fact that measurements are possible from some of the simple roundhouses may suggest that they are preserved sufficiently well to indicate that they were genuine solid-walled structures. Six sites come under consideration here, all in North Uist; Eilean a Ghallain (A.NU6), Dun Grogarry (A.NU24), Dun Mhic Rhaouill (A.NU26), Eilean Scalaster (A.NU44), Dun Nighean Righ Lochlainn (A.NU21) and Dun na Mairbhe (A.NU15). Of these only one, Dun Nighean Righ Lochlainn can be reasonably cited as evidence of the existence of simple solid-walled roundhouses in the sample. Of the others, Eilean a Ghallain was excavated by means of a central pit, as described in Chapter Five, and the nature of the walls remains entirely unknown; Dun Grogarry and Dun na Mairbhe are represented only by grassy, robbed-out mounds with occasional facing stones of the inner and outer wall faces; the remaining sites, Eilean Scalaster and Dun Mhic Rhaouill were originally described by

Beveridge, who did not describe or investigate the nature of the walls, and they cannot now be independently examined. Dun Nighean Righ Lochlainn was described in some detail by the Royal Commission, and it does appear to have been solid walled, although the much-disturbed interior could obscure an inner wall.

Illustration 11.4 shows the relationship between wall base percentage and mean external diameter. Sites marked 'C' are the complex roundhouses. Although no clear relationship between the two variables is indicated, the patterning of the complex and simple roundhouses does indicate that the latter are on the fringes of the distribution, although not forming a coherent grouping themselves. The size of the sample prevents any meaningful interpretation of this. Illustration 11.5 displays the same data with the structures where the walls diverge from circularity by $>1\text{m}$ indicated by the letter 'D'. This shows that the non-circular structures form part of the same overall grouping in terms of the relationship between these two variables. These structures are, as a group, no more nor less massive and monumental than their circular counterparts on the basis of either absolute wall base percentage or the relationship of wall base percentage to mean external diameter. Whilst not exceeding the degree of massiveness of their circular counterparts, these structures could well have been of a degree of monumentality well within the range of variation covered by the atlantic roundhouse class as a whole.

Ill. 11.6 shows the relationship of wall base percentage and internal area in the atlantic roundhouses. There is a slight tendency for wall base percentage to decrease somewhat with increasing internal area. The trend is not absolute, and there are outliers, notably Rudh an Duin where the wall base percentage is relatively great given the internal diameter, and Dun Nighean Righ Lochlain (A.NU21), where the wall base percentage is relatively low, despite a small internal area. Both of these however are special cases, with the former being an exceptional site in terms of all the structural variables considered, and the latter being potentially misunderstood in terms of its surviving and visible structure. It is again important that there is no

divergence between the simple and complex atlantic roundhouses in terms of the relationship between these two variables. Illustration 11.7 further demonstrates that there is no significant divergence between the circular and non-circular atlantic roundhouses in terms of these variables.

The implications of the trend are that the smaller sites, in terms of internal area, tended to be more massively constructed and therefore had greater potential for height than the larger structures. When taken in conjunction with the possibility of upper occupied floor levels, this implies that the comparison of ground floor areas may be misleading. Constraints of space, for example, may have led to the construction of smaller diameter roundhouses with more upper floors in certain locations. These structures may therefore not have been so much smaller than the large diameter structures in terms of overall available space. It should be remembered however that the trend is very slight and little weight can be placed upon its interpretation.

Circularity

The three structures in the sample with the greatest divergence from circularity are all demonstrably galleried structures and therefore complex roundhouses. The greatest divergence from circularity occurs at Dun na Dise, North Uist (A.NU41) where the major and minor axes are 20m and 14m respectively. These measurements may, however, be distorted by the collapse around the eroding edge of the islet on which the structure sits. The problems at this site highlight the dangers of placing too much weight on circularity as a definitive characteristic of architectural complexity and of placing too much reliance on structural data from sites in widely varying states of preservation.

Dun Chlif (A.B3) and Dun Scurrival (A.B2), both in Barra, have major and minor axes diverging by 4m in each case. Dun Chlif appears to have been built to a non-circular plan because of the restrictions imposed by a cramped outcrop island location. In the

case of Dun Scurrival the irregularity may relate to secondary modification or the desire to maximise the occupied area of the flat hill-top on which it is located. The reasons for non-circularity may vary greatly from site to site and it appears that all of these sites have more in common, structurally, with the circular complex roundhouses than they do with each other. No case can be made for separating out a solid-walled group on the basis of irregular plan, from the sites considered here.

Atlantic Roundhouse Function and Variation

The simple analyses carried out above have a number of implications for our interpretation of the function of atlantic roundhouses in the Western Isles. The wide range of variation reflects differences in the scale of construction of these structures. The capacity for accommodation of people was greatly variable within both the complex and simple atlantic roundhouses. Whether this indicates that accommodation was intended for varying population sizes or whether space was used differently and involved a different range of functions on different sites, will be considered in subsequent chapters. Theories based on the unity of scale and construction of the *brochs* as a class, must suffer as a result of the demonstration of the wide variability in scale in the Western Isles.

Attempts to isolate the complex roundhouse class by structural features alone have proved impossible. The variable most likely to differentiate a *broch* class would initially appear to be wall base percentage, since this most directly reflects potential height and is thus an index of the degree of monumentality. Instead this variable demonstrates almost exact correspondence between the simple and complex roundhouses. The external diameter of the two sub-groups covers the same range, again indicating a correspondence in scale of construction. Only internal area seems to differentiate the two sub-groups, with the simple roundhouses clustering at the lower end of the scale; the sampling problems discussed above, however, negate this result, as does the inferential evidence of scale from the external diameters of sites where the internal area is currently unknown.

Overall the analyses indicate a wide range in scale of construction but no evidence for a differentiation between the structures where complex architectural features are visible and those where they are not. This supports the arguments advanced in previous chapters for the artificiality of the *broch/dun* division in the Western Isles and supports the classification of all of the structures as atlantic roundhouses, potentially with architecturally definable sub-groups given an adequate database.

The analyses conducted here have some effects on the interpretation of regional variation proposed by MacKie (1965). The Western Isles wall base percentage range overlaps with the Shetland site range with the inclusion of Dun na Mairbhe. The Western Isles complex roundhouse wall base percentage mean is also boosted by the inclusion of Bal na Craig (A.B11), data which was unavailable to MacKie. The inclusion of the greater number of sites brought about by the abandonment of the very strict *broch* definition tends to mask some of MacKie's distinctions. Dun Torcuill (A.NU19), however, has the lowest wall base percentage for the Western Isles in both MacKie's and the present analyses.

Wall base percentage remains low overall for the Western Isles; 13 sites are below 50%, compared to only 2 over 50%, for Western Isles complex roundhouses. This compares to 5 below 50% and 12 greater than 50% for the Shetland *brochs*, on the basis of MacKie's figures (1965, 105). Even allowing for the different criteria applied to site selection this appears to imply distinctly local concentrations of structural traits.

Wheelhouses

No detailed structural analysis has been carried out on the wheelhouses of the Western Isles or elsewhere. Several variables can usefully be considered to identify consistency and variability in the class and to compare aspects of their structure with the atlantic roundhouses. The relationship of sand-revetted to free-standing

wheelhouses can be considered in terms of some of these variables. The relationship of wheelhouses with bonded piers to those with unbonded piers cannot be assessed, since only Bac Mhic Connain and Foshigarry A have bonded piers and the latter has insufficient structural data for incorporation into most of the analyses below.

The variables for consideration are;

1. internal diameter and area
2. central area diameter
3. number of piers

External diameter is not generally applicable for this class which are, in almost all cases, revetted into sand hills or earlier structures. As in the case of the atlantic roundhouses the measurements are taken on the basis of the central domestic unit in cases where galleries, souterrains or cells are attached to main structure.

Internal Area

Illustration 11.8 shows the range of internal areas of 18 of the Western Isles wheelhouses, where internal diameter is known. The mean internal area of this group is 63.0m^2 compared to 58.2m^2 for the atlantic roundhouses of North Uist and Barra. This represents a considerable measure of correspondence in scale although one should not overlook the great range of variation, particularly within the atlantic roundhouse class. The wheelhouses have a lesser range of variation in internal area than the atlantic roundhouses; their closer correspondence in scale mirrors the very regular architecture of the class. Sollas is the largest example, with an internal area of 113.1m^2 , compared to Cnip 1 and 2 and Cnoc a Comhdhalach with internal areas of approximately 38.5m^2 . This is an order of difference of approximately 300% compared to c.466% for the atlantic roundhouses.

Comparison of internal areas of the wheelhouses and the atlantic roundhouses is clearly very hazardous; the comparability of the two

types is impossible to assess at the present state of knowledge. As well as the presence of additional floors in the atlantic roundhouses, a further problem in comparability comes from our lack of knowledge of the function of the main cells relative to the settlement as a whole, in either class of structure. The recurrence of a dominant central cell in both classes, with peripheral galleries or cells, suggests that the main cells may have played a similar domestic role, but this is still far from proven. All that can be said is that if the focal cells of the two types played this similar role as domestic focus, then the two types of structure are directly comparable in scale and share a wide range of variation from the mean internal area (although this latter is far more marked in the atlantic roundhouses).

Whilst more regular in scale, the wheelhouses still cover a wide range of variation in internal area. This more limited range may be related to the fact that wheelhouse architecture is exclusively single-storey in the Western Isles and the scope for increased vertical division of living space, found in the atlantic roundhouses, is absent. Instead we may see equivalent spatial units represented in a horizontal rather than vertical extension of the settlement.

Number of Piers

The number of piers have been plotted relative to the internal area of all of the wheelhouses, for which measurements can be made, in Illustration 11.9. The sand-revetted wheelhouses are indicated by the letters 'SR' and the free-standing by 'F'. The graph shows that the number of piers rises with increasing internal area. This is entirely as one would expect from a structural point of view, in order to preserve stability with increasing size. There is no difference in this trend between the sand-revetted and free-standing examples although the free-standing wheelhouses, as a group, tend to be smaller and therefore have fewer piers than the sand-revetted examples. This may indicate that the sand-dune environment was more conducive to the development of this form of architecture than the non-machair areas, with the free-standing, non-machair wheelhouses being outliers of the group in at least a geographical sense.

In absolute terms the number of piers ranges from seven to twelve and seems to be related principally to the requirements of roof support. The larger wheelhouses required more piers for increased stability of the stone corbelled cells. The size of cells therefore, and spacing of piers, stayed relatively constant with increased size of the wheelhouse internal area.

Central Area Diameter

Illustration 11.10 shows the relationship between the diameters of the central areas of the wheelhouses and their overall internal diameters. This shows a relatively constant relationship reflecting a very high degree of similarity in form and proportions between the wheelhouses. Again this graph demonstrates the generally smaller size of the free-standing wheelhouses.

Wheelhouse Function and Variation

Overall the wheelhouses are remarkably constant in proportion and design. This is presumably because, as discussed in Chapter Six, so much of wheelhouse structure is determined by the necessarily strict imposition of a rigidly prescribed architectural form.

One notable feature of the analyses is the clustering of the free-standing wheelhouses at the lower end of the size range. There are two alternative explanations for this if we assume it to be a genuine reflection of the original range of sites. Free-standing wheelhouses may be smaller because they are in less amenable areas for construction, the absence of the sand-hill environment affecting the potential for stability of a large structure. It may alternatively be the case that the free-standing sites, situated principally on the inland areas of the islands, are in areas marginal to the economies of the wheelhouse-builders and thus are smaller as a reflection of smaller population group, less access to labour and/or lower status.

The other principal feature to emerge from the analyses was the correspondence in scale, of available internal space, between the wheelhouses and the atlantic roundhouses. The interpretation of this close correspondence must be accompanied by qualifications based on the lack of comparability of the two forms, especially in the potential of the atlantic roundhouses to have additional floor levels. Nonetheless the similarity, in the size of what presumably was the principal domestic space, is striking.

Cellular Structures and Linear House Structures

The irregularity of the cellular structures prevents meaningful comparison with the wheelhouses and atlantic roundhouses in most of the forms of analysis above. This limitation in itself highlights the distinctiveness of the type from the foregoing forms. In very few cases is there sufficiently detailed information available to reconstruct internal area and other variables comparable with those above are not available.

The internal area of the cellular structures is presented for the principal cells of certain sites where measurements can be made (Ill. 11). This is obviously somewhat unsatisfactory given that the very nature of cellular structures will tend to give less emphasis to the central area which is much more clearly defined by the architecture of an atlantic roundhouse or wheelhouse. The poor quality of the database restricts the calculation of internal area to only three sites; Dun Cuier (A.B4), Berie Structure 1 (A.L19) and Dun Bharabhat (A.L18). Other sites are excluded from this discussion through the incomplete available plans (e.g. Cnip Phase 2, A' Cheardach Mhor), the lack of accurately drawn published plans (e.g. the Udal) or the lack of evidence to suggest that the principal cell, or cells, of a cellular complex had been excavated. The two linear house structures are included for comparison with the cellular structures in terms of their internal area.

The very small sample prevents any meaningful conclusions being drawn from this exercise except to note that the scale of the

structures is generally very small compared to the atlantic roundhouses and wheelhouses. The cellular structures cluster at the low end of the range for these other two forms of structure.

The two linear house structures have two of the lowest three internal areas for any structures considered in this chapter, the other being the North Uist atlantic roundhouse, Eilean Scalaster (A.NU44).

Summary

The principal features to emerge from the structural analysis of the atlantic roundhouses and wheelhouses of the Western Isles can be summarised as follows;

1. The structural analysis of the atlantic roundhouses gives no support to the subdivision of the class into separate *broch* and *dun* classes with its consequent implications for function and date. Instead an overall unity is implied albeit encompassing a very wide range of scale. Possible distinctions may be encompassed but these are not the ones identified in the past.
2. The structural analysis does lend support to the unity of the Western Isles atlantic roundhouse class as a group, distinct from other regional groups, in particular those of the Northern Isles. It should be remembered however that the methods of site selection differ in either case and this will affect the reliability of the comparison. In addition to this it should be stressed that the introduction of sites other than MacKie's *brochs* tends to erode the differences rather than strengthen them.
3. Close structural relationships are demonstrated within the wheelhouse class for the Western Isles. This is to be expected from the rigid architectural conformity dictated by the construction method.
4. Within the wheelhouse class the free-standing examples, essentially those outwith the machair environment, tend to be the

smallest in the group. This implies a distinction which may be based either on simple factors of construction difficulty or on more complex social and economic factors.

5. The wheelhouses and atlantic roundhouses demonstrate a close correspondence in terms of the scale of living space they provide, if the fundamental assumption is made that the ground floor central cells provide the principal living space in each case.

6. The cellular and linear house structures are significantly smaller, as a group, in terms of the internal space they provide for domestic purposes. This may be the result of the fragmentation of the settlement at these sites into cells which take on functions combined in one cell on the atlantic roundhouse and wheelhouse sites. In any case it implies a different form of settlement and one which may represent a smaller population group on the level of the individual site.

The following chapter will examine the spatial dimension to the relationships between and within the classes of site discussed here and the final chapter will attempt to assess the patterns of structural, locational and spatial variation in the light of the examination of excavated and survey evidence discussed in Part Two.

Chapter Twelve

Locational and Spatial Analysis

Introduction

Techniques of locational analysis have been used in archaeology to assess the significance of environmental factors in the site location. The increasing influence of processual archaeology in the 1970s, with its emphasis on site/environment relationships, encouraged the utilisation of techniques derived principally from human geography and plant ecology. In this chapter the applicability of locational analysis will be discussed for the questions under examination and an attempt will be made to use particular techniques to elucidate settlement patterns using groups of sites from the Western Isles.

While locational analysis has been used to relate sites to their environment, the techniques of spatial analysis have been used in archaeology to explore the inter-relationships between the siting of related monuments. In Atlantic Scotland such techniques have been widely used on the chambered tombs and the *brochs*. This concentration on monumental stone structures has been a factor of the archaeological limitations of such techniques, which depend on the survival of a large proportion of the original population of the sites under study. In addition to the inter-site level, spatial analysis can also be carried out at the intra-site level as Foster has recently attempted for some of the Orcadian broch towers (Foster 1989).

Previous Applications in Atlantic Scotland

No attempt will be made here to present a comprehensive history of spatial and locational analysis in Atlantic Scotland. The development of these aspects of archaeological study has been well charted elsewhere, in the context of a case study on Atlantic Scottish material (Martlew 1981). Instead it will be useful to discuss the more immediately significant recent contributions as they relate to the present study.

The stone-built structures of Atlantic Scotland have attracted several researchers in the field of locational and spatial analysis. Martlew went so far as to claim that the *brochs* may be the 'only prehistoric settlement distribution suitable for detailed spatial analysis' (1981, 16). The neolithic funerary monuments of the area have also witnessed similar study in recent years involving similar methods and assumptions. The principal feature which has led to a concentration of spatial studies in this area is the excellent survival of the massive stone structures. The factors liable to distort distribution patterns are discussed below, but the sites combine an original massive scale of construction with a relative absence of destructive later land-use. The completeness of distribution relative to much of the rest of British prehistoric archaeology makes the monuments of the area particularly suitable for work of this kind.

The first of the recent analyses of the Atlantic Scottish sites relevant to this discussion, was a study of the social organisation of Iron Age Caithness through the assessment of land carrying capacity relative to site distributions (Heisler 1977). This approach will be assessed below in the light of the data from North Uist and Barra. Martlew, in 1981, used the Caithness *brochs* as a case study in the evaluation of a series of locational and spatial techniques. Noel Fojut's study of the 'geography' of the Shetland *brochs* applied a similar range of techniques in an attempt to elucidate the decisions made by their in the process of site location (Fojut 1982).

Recently published research on the Atlantic Scottish Iron Age has tended to move away from inter-site spatial and locational analysis to focus on the intra-site level. Reid (1989) and Foster (1989) have both focused on the spatial configurations of sites in an attempt to derive information on social organisation and change. These approaches will be examined in the context of the Western Isles material.

Applicability in the Western Isles

The Western Isles, at first glance, seem a promising area for locational and spatial analysis. The advantages of island groups in spatial studies, as self-defining bounded landscape units, has long been recognised (e.g. Fojut 1982, 38): this boundedness, however, brings problems with particular spatial techniques, e.g. nearest neighbour analysis (see below). The quality of site survival, too, suggests that the results may be more meaningful in terms of the later prehistoric settlement patterns than in other areas.

The completeness of distribution in the Western Isles is most prone to attrition through the following factors;

1. Subsequent Settlement
2. Stone-Robbing
3. Peat Growth
4. Machair Movement
5. Coastal Erosion
6. Misidentification

Each of these potential causes of bias in the site distributions will be assessed below where relevant to the specific cases examined. On the whole, however, the quality of site survival is very good. This quality of survival is a necessary precondition if detailed analysis of site/landscape and inter-site relationships is to be attempted.

A series of questions can be addressed through locational and spatial analysis in the Western Isles. One is the relationship between monumental and non-monumental structures. The distributional factors which distinguish the monumental atlantic roundhouses from

the miscellaneous structures and walled islets on the one hand and the wheelhouses on the other, are potentially significant for the interpretation of the phenomenon of monumental construction in the later prehistoric period. The relationship between the complex and simple atlantic roundhouses can also be addressed by these means.

Overall there are two principal underlying aims in the present chapter;

1. the definition of environmental factors affecting the siting of settlement.
2. the definition of differential locational and spatial factors between different site types which may shed light on the different relationships of sites to their environment and to each other.

The atlantic roundhouses of North Uist and Barra are the best preserved populations of later prehistoric monuments in the Western Isles for reasons outlined in Chapter Eleven. These structures have, therefore, been used in the analysis of the atlantic roundhouses. The distribution and survival of monuments on North Uist also enables the analysis of the relationship between the atlantic roundhouses and the miscellaneous structures and walled islets on the island.

The wheelhouses of Vallay constitute a sample of sites from an almost uniquely intensively studied area. Although unsatisfactory in not including any upland wheelhouses, this area is the only one in which locational and spatial analysis of a wheelhouse distribution is possible. There is, no equivalent group of cellular or linear house structures or promontory forts, with which to conduct such analyses so this chapter is principally restricted to the groups of sites mentioned above.

It is necessary to assume for the purposes of the present chapter, that the sites within a given class (with the exception of the miscellaneous

structures) were in occupation contemporaneously. The durability of the structures concerned, and the labour investment in their construction, argues for prolonged usage: the dating evidence, albeit principally from outwith the Western Isles (App.1), also suggests that we may be justified in seeing the majority of sites within a class, as overlapping in their periods of occupation. The degree of landscape organisation demonstrated below, and the evidence cited in previous chapters for the long duration of settlement foci, combine to support the validity of this assumption.

Site/Landscape Relationships

General Distribution - North Uist

The distribution of atlantic roundhouses in North Uist is shown in Ill. 12.1. The open circles represent sites which are either imprecisely located or which cannot be positively identified as atlantic roundhouses rather than other forms of massive stone structure. The present inter-tidal sands are indicated as shaded areas which would probably have been dry machair in the later prehistoric period. The 60m contour is indicated.

Of the factors which may be expected to distort the original distribution pattern of the atlantic roundhouses in North Uist, the most significant are likely to have been stone-robbing and coastal change (both machair redeposition and tidal erosion). The first of these has been discussed above and is not considered to constitute a serious problem. The massive construction of the structures makes total removal difficult while the common location on knolls and islets makes the identification of even very robbed-out structures possible. In addition, the preservation of local memory through place-name evidence can provide clues to 'missing' sites. Coastal change is a more serious problem. The redeposition of the machair sands may conceal atlantic roundhouses sites but, if so, it is very surprising that none has been found in an eroding machair context as is the case with the majority of wheelhouse sites. This constitutes

strong circumstantial evidence for the lack of impact of sand movement on the atlantic roundhouse distribution.

The 'hard' coastlines, on which the known atlantic roundhouses tend to be sited, have not been so drastically affected in the past two millennia as to make the removal of roundhouse sites likely. The submersion or erosion of the 'soft' machair coastlines would constitute a serious problem were it not for the evidence cited above that the atlantic roundhouses seem not to be found in the machair environment itself. Overall, there appears to be a strong case to suggest that the atlantic roundhouse distribution is a relatively good representation of the original later prehistoric distribution.

A number of features of site location are observable from initial examination of the distribution of sites in North Uist. The atlantic roundhouses show a series of locational tendencies, some of which will be examined further below. There is a clear coastal distribution with almost no sites on the central spine of the island, and a total avoidance of the eastern low-lying interior with its a maze of lochs. The high ground of the island is avoided, with only one site lying above the 60m contour (this site being a dubious example, South Cletraval (A.NU25)).

The roundhouses show a general linear spread of distribution along the north coast from Portain to the Vallay Strand. A cluster of sites occupies the Hougharry/Tigharry area, north of a gap in the distribution, in the area around Kirkibost. From Baleshare to Eaval in the east, is a further string of coastally located sites. The atlantic roundhouses occupy the majority of the historically inhabited areas of North Uist with the notable exception of Lochmaddy. This east coast township occupies an area where there is little evidence of any later prehistoric settlement, on a rocky coastline fringing areas of blanket peat-bog.

Ill. 12.2 shows the complex roundhouses indicated by the letter 'C'. Their distribution is an instructive one and sheds some further light on the relationship between simple and complex roundhouses

discussed in Chapters Five and Eleven. The greatest density of complex sites lies on the Vally Strand and all five were excavated by Beveridge. Of the remaining five sites, three are the best three preserved atlantic roundhouses in the island (Dun an Sticer (A.NU1), Dun Torcuill (A.NU19) and Dun Loch Hunder (A.NU35)): only two sites of the general unexcavated, poorly preserved atlantic roundhouse distribution have evidence of intra-mural galleries. The implication is that complex architectural features are found where circumstances allow, and it would be unwise to assume that these circumstances have fortuitously produced the original distribution of complex roundhouse sites. Had Beveridge built his house on Baleshare instead of Vally, our picture of North Uist complex roundhouse (and for that matter wheelhouse) distribution might be very different.

The comparison of the distributions of the miscellaneous structures, walled islets and promontory forts with that of the atlantic roundhouses reveals an interesting series of dissimilarities (Ill. 12.3). For large areas of the island the distributions of the miscellaneous structures and walled islets on the one hand and the atlantic roundhouses on the other, appear to be complementary. There is a general spread of the former sites along the north coast, but these appear to be further from the coast than the atlantic roundhouses. The area around Hougharry and Tigharry, where the atlantic roundhouses have a dense distribution, has only one miscellaneous structure. A cluster of both miscellaneous structures and walled islets on Baleshare is in an area of roundhouse settlement but from there eastwards the distribution is again in non-roundhouse, inland areas. The most noticeable difference is the density of both miscellaneous structures and walled islets in the eastern low-lying area around and to the west of Lochmaddy, in an area totally avoided by the atlantic roundhouses.

There are two major implications of these distributional differences; the first is that the absence of atlantic roundhouses in the inland and eastern areas does not appear to be the result of a lack of fieldwork and there does seem to be a genuine avoidance of these areas; this

gives more weight to the use of the observed distribution pattern of the atlantic roundhouses. The second is that the miscellaneous structures and walled islets appear to avoid the best land in the island, that inhabited and intensively exploited in the historical period. This could be due to either an original genuine avoidance of these areas, if for example they were occupied at that period by the atlantic roundhouses, or to a lack of survival in these areas.

With only two promontory forts in North Uist it is difficult to comment meaningfully on distribution patterns. Both are coastal and lie within the atlantic roundhouse occupied areas. This adds little, however, to our knowledge of the relationship between the classes.

Ill 12.4 shows the distribution of wheelhouses in the Vallay Strand hydrological catchment area. The approximate boundary of the catchment is indicated on the distribution map. The site of Sithean Mor has been included on the map as it comprises a substantial machair mound with some stonework and may well be a wheelhouse site; its structural remains were not sufficiently diagnostic for inclusion in the catalogue. With only seven definite sites and one possible example it is dangerous to draw too many conclusions from the observed distribution, especially since the inland wheelhouses (such as Clettraval (W.11) and Tigh Talhamanta, Allasdale (W.25)) are not known to occur in the catchment. Nonetheless some general points can be made.

There is a tendency for siting on the modern high water mark, which is likely to have equated to the periphery of the later prehistoric machair plain. Beveridge's thorough exploration of the archaeology of this catchment has meant that there is a reasonable probability that all of the wheelhouse sites are known and represented on the map: it is therefore, a distribution comparable to that of the atlantic roundhouses in terms of completeness. In Ill. 12.5 the wheelhouse distribution is overlain by that of the atlantic roundhouses present in the same hydrological catchment. The numbers and siting of the two types of monument are strikingly similar. Four of the atlantic roundhouse sites, including one dubious example, lie further inland

than the wheelhouse distribution but the difference is marginal. The implications of the distributions within the Vallay catchment will be discussed in subsequent sections of this chapter.

The factors liable to distort settlement distributions are more serious in relation to the wheelhouses than to the atlantic roundhouses. As well as stone-robbing, there is the problem of sand cover wholly obscuring the sites. This is very clearly the case in a number of excavated sites revealed only by subsequent erosion (e.g. Cnip (W.1)). Misidentification is also a serious problem since the diagnostic traits of wheelhouse architecture are rarely visible without excavation. It is only the uniquely thoroughly excavated nature of the Vallay sites which permits locational and spatial analysis of any sort. The problems of submersion and coastal erosion, too, introduce difficulties; the wheelhouses at Foshigarry, for example, have entirely disappeared through coastal erosion since 1900. Other sites may have been similarly destroyed. Only the coherence of the distribution can be advanced as a reassuring feature but this may be misleading. These problems should be borne in mind in subsequent analyses.

General Distribution - Barra

The distribution of atlantic roundhouses in Barra (with the adjacent islands of Fuday and Vatersay) is shown in Ill. 12.6. The completeness of distribution and the effect of the various potential sources of distortion are much the same for the Barra roundhouses as for those of North Uist. With the exception of the Eoligarry area there is little sign of substantial coastal change in Barra, or its nearby islands, and the coastline appears substantially as it would have been in the later prehistoric period.

The distribution of atlantic roundhouses appears to be relatively well-preserved and largely unaffected by the most destructive forms of natural distortion of the pattern. The principal problems relate to the site of Dun a Sleibh (A.B10) which is a site of dubious identification: the place-name on which the identification has been

based in previous sources may relate to the relatively recently located Dun a Kille (A.B9) in the same general locality.

The general distribution pattern is somewhat different from that of North Uist. There is less obvious coastal dominance in siting: instead, those sites which are near the coast tend to be actually on the coast while other sites may be well inland, insofar as this is possible on an island of Barra's size. The whole of the western side and centre of Barra are occupied by a spread of atlantic roundhouse sites. There is, as in North Uist, an avoidance of the east coast, which is significantly rockier and less hospitable than the west, and the settlement occupies broadly those areas inhabited in historical periods (with the exception of the later fishing centre of Castlebay). The higher ground, as in North Uist, tends to be avoided although the hillier nature of the island makes this less pronounced; Bal na Craig (A.B11), for example, lies above the 60m contour.

Ill. 12.7 shows the distribution of complex roundhouses ('C') relative to simple atlantic roundhouses on Barra. The dominance of complex sites relates to the generally well-preserved nature of the sites compared to those of North Uist. More sites are preserved with substantial walling intact and with complex features visible.

Nature of Site

The nature of the locations of the atlantic roundhouses of is shown in Ill. 12.8. The locations of the structures are markedly different in the two islands: the great majority of the North Uist roundhouses are located on islets, with less than 30% on a variety of other locational types. In Barra there is greater variety, with coastal and hilltop locations as common as islets. It is important however that every loch of any size in Barra does contain an atlantic roundhouse and so the concentrations on other locations may simply reflect availability. The implication is that islet locations were favoured for atlantic roundhouse settlements but that other locations where access could be controlled (e.g. hilltops and coastal promontories) were used as necessary. The avoidance of the machair is striking, especially in

North Uist, with its great area of machair. This avoidance is probably to be explained in simple structural terms, i.e. that the sand environment did not provide any suitable foundation for a massive free-standing stone structure; it need not indicate a lack of exploitation of the machair by the inhabitants of these settlements.

Ill. 12.9 shows the same information for the miscellaneous structures of North Uist demonstrating the 100% occurrence of islet siting, in the latter case by definition. In the case of the miscellaneous structures, the discovery of sites has been aided by an islet location, given the lack of any structure which would be observable on land. The graph for location may therefore be somewhat misleading.

The known wheelhouses of the Western Isles have an overwhelming concentration on machair locations (Ill. 12.10). Only a small number of moorland examples and one islet site are recorded and the latter is an islet in a machair area. This locational range presents a stark contrast with the atlantic roundhouses of both North Uist and Barra. In Barra the relative lack of machair makes the contrast less significant, but in North Uist it is very marked. The revetted nature of wheelhouse architecture is well-suited to the machair environment which provides sand-hills into which the structures can be set. By contrast, the massively constructed atlantic roundhouses require a relatively firm base of outcrop rock, found most easily on islets, knolls, hilltops or coastal promontories. This contrast highlights the differences between the two structural forms which appear to have developed to fill two distinct niches within the Hebridean environment.

Solid Geology

The homogeneity of the Western Isles precludes the use of this variable to assess environmental influence on site location. The islands are formed largely of Lewisian gneiss, a stone of no particular constructional utility, with relatively insignificant occurrences of metamorphic rocks. Both Barra and North Uist are formed of this rock type with no significant areas of other formations.

Slope/Drainage

The types of site utilised for atlantic roundhouse construction militate against the usefulness of this variable in assessing site location. The islets and knolls upon which the atlantic roundhouses were preferentially sited render this variable largely irrelevant. Similarly the wheelhouses under consideration, being situated in the relatively flat machair environment, were all situated in well-drained sand-hills where the degree of slope was largely irrelevant.

Land Quality

The drastic changes in the soil formations of the Western Isles, in both their nature and distribution, since the later prehistoric period have been discussed in Chapter Two. Peat growth, the leaching of soils, machair development and the effects of climatic change have all contributed to the creation of a wholly distinct character for the modern Hebridean landscape. In addition to natural deterioration, which may have had anthropogenic involvement, there is extensive evidence for the reclamation of peat-covered areas in historical and-6ü early modern periods. Given this background it would be highly misleading to attempt to assess the later prehistoric settlement distributions for their relationship to land of varying quality in the area today. In the present state of knowledge there is no way to allow for the tracts of agricultural land which will have been covered over by the retreating machair, drowned by peat growth or otherwise obscured.

This discussion of general site distributions has already mentioned the broadly coastal distribution of atlantic roundhouses and wheelhouses in North Uist. It would seem likely that this would have been related to the concentration of better quality land in the coastal belt, although not necessarily the machair itself, where the high alkalinity of the soil may have made this an unfavourable choice for agriculture. Prior to the onset of peat growth on the coastal belt, the non-machair coastal fringe may have been the preferred agricultural

land. Gradually, as the factors mentioned above became ever more deleterious to the farming of the inland areas, the relative importance of the machair may have increased. The miscellaneous structures and walled islets, by contrast, occur also in areas where the land quality must always have been relatively poor, on the eastern lowland areas around present-day Lochmaddy. This landscape is fragmented by hundreds of small lochs and would have suffered first from the onslaught of peatland expansion.

In Barra the high-quality land is likely to have been concentrated in the major valleys but atlantic roundhouses also extend in their distribution into less hospitable areas around the west coast. The agricultural value of these areas in prehistory is unknown but evidence of later cultivation is common, in the form of lazy beds.

At present the relationship of sites to land quality can be assessed only on subjective grounds, and only broad trends can be discerned. The patterns can be more clearly assessed for relationship to less changing landscape factors such as distance to the coast and altitude.

Distance to Coast

This section follows Fojut (1982, 45) in plotting the distance to the coast of the Western Isles sites against a near-random sample of the Ordnance Survey grid intersection points for each island. Although not strictly random, these points are clearly unrelated to archaeological features and the landscape of the islands under consideration, and they form a convenient comparison with the archaeological sites.

The atlantic roundhouses of North Uist show a clear tendency to be located close to the coast. 93% of the structures lie less than 1km from the coast compared to only 56% of the random sample of points (Ill. 12.11). None of the roundhouses in North Uist is more than 2km from the sea although 24% of the random sample exceed this distance. In Barra most of the available land lies very close to the

coast but still the atlantic roundhouses lie much closer on average than the random sample points (Ill. 12.12).

Both the miscellaneous structures and walled islets of North Uist exhibit a pattern of coastal distribution distinct from that of the roundhouses, which amplifies the initial observations made on the basis of general distributions (Ill. 12.13). The coastal factor is much less dominant for these classes of site, both having examples from 3 - 4km inland. The Vallay wheelhouses by contrast are, without exception, within 1km of the coast (Ill. 12.14).

Distance to Water

The growth of peat and the deposition and movement of the machair have disrupted prehistoric drainage across huge tracts of the Western Isles to such an extent that no reconstruction of distance to fresh water can realistically be attempted for the later prehistoric sites. The tendency for atlantic roundhouse sites to be situated in lochs would again seriously prejudice the study if it were possible to reconstruct the later prehistoric drainage. This siting is likely to be based on a range of factors, defensive, symbolic and psychological, and only perhaps incidentally related to the need for a convenient fresh water supply. The correlation between atlantic roundhouse sites and fresh water would therefore be likely to be significantly greater than for other types of site, without this having any necessary implication for the reasons for siting the structures.

Altitude

Ill. 12.15 shows the altitude of the North Uist atlantic roundhouses relative to the near-random sample of OS grid intersections for the island. There is a concentration of 75% at under 10 OD compared to only 28% of the random points in this band. Only 5% lie above 30m OD and all of these are dubious sites; this compares with 26% of the land area above 30m. In Barra the situation is less marked although there is still a concentration at the lower end of the range and few roundhouses above 70m OD relative to the random points (Ill.

12.16). This appears to reflect the hilltop locations of many of the Barra sites and the general spread of sites across a greater proportion of the interior of the island than in North Uist. It suggests that altitude may be a less important factor in siting than distance to the coast, which would inevitably produce a preponderance of low-lying sites in North Uist but not necessarily in Barra, where the high land is close to the coast.

The miscellaneous structures and walled islets show a distinct concentration on the low-lying areas (Ill. 12.17), but their islet locations would preclude location in the higher areas.

The wheelhouse altitude range presents an interesting pattern of two seemingly distinct concentrations; a dominant low-lying cluster at below 20m OD and almost entirely below 10m OD, with a smaller concentration above 70m OD (Ill. 12.18). It is not clear, however, that this is a representative distribution since it includes all of the known Western Isles wheelhouses which, as has been discussed, do not necessarily form a coherent sample of the original population. If we can take it as representative it would indicate a sharp division in land use between sites occupying the low-lying land, principally the machair coast, and a band of upland sites, principally on the central spines of the islands. This might indicate a division of land and resources between two contemporary groups of sites exploiting distinct aspects of the Hebridean environment. If genuine, this division would indicate a development from the atlantic roundhouse settlement pattern, which appears to have been based on sites of approximately equal size and with similar resources, to a more formal division between sites with more specialised economic functions.

Definition of Site Territories

In the discussions which follow, the term territory will be used somewhat loosely to describe the area over which an individual site exerted influence. The meaning of the term and its social and

economic implications remain necessarily vague in the present context and the term is used primarily for convenience.

Thiessen Polygons

Thiessen polygons have been used in the past in attempts to define territories associated with individual sites: the sites are seen to act as central places with control over the surrounding area and resources based on distance, dictating ease of transport and movement. The limitations of Thiessen polygons in archaeological applications have been examined elsewhere (e.g. Martlew 1981) and will not be rehearsed in detail here. The assumption of a uniform flat plain as the setting for analysis is a particularly relevant constraint in the Highland context, however. The implication that the sites are single central places within a definable territory, and relate to at least a strata of society on a one site to one group level, is similarly dangerous in a prehistoric context. As Martlew points out (1981, 33), Thiessen polygons merely separate areas which are closer to one site than another. To progress beyond this limited piece of information we have to apply assumptions regarding the relevance of these areas to the societies under study. If we consider that distance was the principle limiting factor on the exploitation of resources then we may attribute a broad economic reality to the polygons. Similarly, ease of movement for defence rather than economic exploitation may be interpreted as a means of giving meaning to the defined area. The reintroduction and acknowledgement of a degree of subjectivity is required if Thiessen polygons are to have any validity at all in the present context.

Thiessen polygons have been plotted for the atlantic roundhouses of North Uist and Barra and for the wheelhouses of the Vallyay catchment. Uncertain sites have been omitted. The technique is used here essentially as a heuristic device to enable the formulation of models of site catchment.

The atlantic roundhouses of North Uist show interesting patterns when Thiessen polygons are plotted around them (Ill. 12.19). The

area along the north coast from Portain to the Vallay Strand hints at a possible pattern of land organisation. Portain itself is divided into two near-equal halves by the polygons, each of the site's 'territories' containing equivalent stretches of coast and a similar division of upland and lowland. Following the coast west from Portain the sites appear to form a linear band, all with coastal access and with the polygons defining strips of land running inland to the hills. In the Newtonferry peninsula the territory boundaries trace the central spine of the hills and allow broadly equivalent access to coast, machair and pasture for each site. This pattern of narrow strips of land from coast to hills is more pronounced along the middle of the north coast until it reaches the Vallay Strand where the island of Vallay disrupts the pattern. Here sites focus on the strand itself rather than open coast, until the pattern resumes to the west.

The Hougharry/Tigharry group of sites has a less clear pattern but may represent a similar land division, as may the sites on Baleshare. The gap between these groups again appears very pronounced. The sites to the east of Baleshare appear to have larger territories conforming less to the strip pattern and may imply a different land holding pattern in this poorer area of the island, with its irregular coast and fragmented landscape.

Overall there appears to be a pattern of relatively evenly spaced sites on the north coast, possibly reflecting a well-organised land division system with evenly divided territories, both in size and resources. The pattern implies a use of varied resources by each settlement; coast, machair, coastal lowland and the hills to the south. The evenness of the territories implies a broadly equal land holding for each structure and a similar economic base. Relative to other sites on the island the size of territories implies that this was an area under less pressure for land than elsewhere. On both Baleshare and the Hougharry/Tigharry area, territories are significantly smaller although under the distortions of the polygons, a similar pattern may be hinted at (the requirement to draw the boundaries as perpendicular to the bisectors of the lines between sites will

naturally distort any landscape pattern based on long, narrow strips of land).

Used heuristically, the polygon method can suggest a specific landscape division for North Uist and one which springs naturally from the resources available in the islands, which are varied but not individually rich. Historically, Hebridean populations have tended to be non-specialist in their economic patterns, and have exploited the whole range of available resources on a seasonal basis. Although the climate and soils may have been significantly better in later prehistory there is no reason to suspect that similar wide-ranging economic systems may not have been practised. The atlantic roundhouse settlement pattern, both from general observations and with the aid of the polygons, suggests that these were sites of broadly equivalent territorial control, exploiting a wide range of resources and with minimal specialisation. Considerable variation appears even within North Uist itself, however: the eastern sites, outwith the north coastal belt, occupy larger areas but without the availability of machair. The Baleshare and Hougharry/Tigharry groups are more crowded than those of the north although similar territory types may be postulated.

In Barra the atlantic roundhouses present a somewhat different picture with the application of Thiessen polygons (Ill. 12.20). The territories are of broadly equivalent size to those of the north coast North Uist sites, but the landscape organisation which the distribution and polygons imply is different and related to the topography of the island. Barra is divided into a number of valleys and distinct landscape units and is more fragmented topographically than North Uist. The atlantic roundhouses appear to each occupy one of those landscape niches. The polygon centred on Dun Cuier (A.B4) for example corresponds almost exactly with the Allasdale valley. Dun na Kille (A.B9) and Bal na Craig (A.B11) occupy equal portions of the Borge valley (although interestingly Bal na Craig is the sole site without obvious coastal access). The sites are remarkably evenly distributed and appear central to each of these landscape units. Outside this pattern are three sites, Dun Ban

(A.B12), Dun Chlif (A.B3) and Beinn Tangavat (A.B14), all of which are coastal and occupy marginal areas with stretches of rocky coast backing onto steep hillsides. Medieval or post-medieval cultivation rigs on each of these areas however, demonstrate that they were not without agricultural potential, though not as rich as the valleys.

The relative lack of machair in Barra makes this a much less important resource than in North Uist. It is concentrated in specific areas (most notably Eoligarry) which would have made any organised attempt to divide it formally between settlements difficult. There is thus more scope for differences in emphasis in site economies here than in North Uist.

In Barra the atlantic roundhouse territories appear to be dictated by natural land divisions and the settlement pattern gives the appearance of having evolved to occupy naturally provisioned niches. In North Uist, by contrast, the continuous machair plains of the north and west coasts provide no such naturally defined territories. The land divisions there, insofar as they can be postulated from the distribution of sites and overlaying of polygons, suggest a more formal division of land, with a regularity which suggests cooperative action at some stage in its establishment, rather than gradual and natural evolution.

The site territories of the Vallay wheelhouses are noticeably similar in size and type to those of the roundhouses (Ill. 12.21) although the distribution appears to be focused more definitely on the machair (Ill. 12.5 shows the wheelhouses with the atlantic roundhouses of the same area indicated). There is a close correspondence in the pattern of polygons which is to a large extent caused by the reuse of Garry Iochdrach, Eilean Maleit and Cnoc a Comhdhalach as wheelhouse sites. The Udal appears to inherit the territory of Dun Skellor if one takes the polygons at face value. Sollas bears a similar relationship to Dun Toloman, Sithean Mor to Dun Thomaidh, Bac Mhic Connain to Rudh an Duin and Foshigarry to Dun and Eilean a Ghallain. Clearly such sweeping equations are unsupportable on the basis of

the Thiessen polygons alone but they do indicate a broad continuity in the scale and resource range of the areas around the sites.

Visibility - A separate method of assessing site territories, at least where intervisibility is relatively minimal, is the plotting of areas of visibility from the sites themselves. In the context of monumental structures, which appear to have been constructed deliberately to be visually impressive, it might be expected that settlements will be sited to be visible from as much of their territory as possible, as well as to enable a constant watch over their land holdings.

The visibility ranges of the atlantic roundhouses of Barra has been plotted in Ill. 12.22. Boundaries of visible areas are shown as accurately as can be gauged from the Ordnance survey maps of the area, using a 10m height for the structures (this height is an absolute maximum and provides a maximising view of visibility); shaded areas represent areas outwith the view of known atlantic roundhouse sites. In the cases of Dun na Kille and Bal na Craig, and of Baigh Hirivagh 1 and 2, the visibility areas of the pairs of sites are virtually identical and are shown each as one area. Areas which are visible but not accessible from individual sites, e.g. where separated by sea channels, have not been included within that site's visibility area. The North Uist sites have not been plotted because of the problems of intervisibility clusters which would make the pattern unintelligible; in addition the movement of machair in the occupied areas will have obscured contemporary visibility patterns. The latter problem applies with even more force to the Vallay wheelhouses.

In Barra, the patterns of site visibility show a pattern which, when combined with the information derived from the Thiessen polygons (Ill. 12.20), may shed some light on land divisions. There is a close correspondence for some of the sites in the more fertile valley areas: the visibility area of Dun Cuier (A.B4) corresponds almost exactly with the Thiessen polygon around the site and with the Allasdale valley; Dun Scurrival (A.B2) seems to have a slightly larger territory (at the expense of Dun Chlif (A.B3)) if the visibility data is preferred; Dun na Kille (A.B9), Bal na Craig (A.B11), Dun Mhic

Leoid (A.B13) and the two Vatersay roundhouses (A.B15 and A.B16), all have closely similar visibility areas and polygon-defined territories; Dun Loch an Duin (A.B5) and Loch nic Ruaidhe (A.B8) in the east have a similar correspondence. This recurrence of territories defined by different methods suggests that we may be approaching some understanding of the actual territories of these settlements.

The sites which 'lose' territory on the basis of visibility areas are those situated in marginal coastal locations; Dun Ban (A.B12), Dun Chlif (A.B3) and Beinn Tangavat (A.B14). These three sites appear to lie outwith the prime land of the island and occupy small territories of poorer quality than the other mainland Barra sites. Similarly the islands around Barra, with the exception of Vatersay, might be seen as equally marginal. There appears to be a core of substantial and naturally defined territories concentrated on Barra and Vatersay, each occupied by an atlantic roundhouse, with a periphery of settlement areas occupying smaller, marginal territories around the rocky coast of Barra and on the surrounding islands. The construction of atlantic roundhouses was not restricted to the groups in the larger territories.

Few substantial areas of Barra are outwith the view of the atlantic roundhouses. In this context the absence of visibility areas covering the south-eastern part of the island is interesting. It is possible that other atlantic roundhouse sites lie undiscovered in these areas: perhaps a more likely possibility, however, is that they primarily represent rough grazing associated with individual sites (especially perhaps Beinn Tangavat (A.B14), Loch nic Ruaidhe (A.B8) and Bal na Craig (A.B11)), or alternatively were used as a communal facility.

On Fuday and south Vatersay, areas lying outwith the immediate view of the respective roundhouses on these islands appear likely to have been grazing land associated with the settlements. It may be that visibility over agricultural land was considered as a prime locational factor while grazing lands were less important. In this context the land between Beinn Tangavat (A.B14) and Dun Ban

(A.B13) would appear to be grazing for one or both of these sites, thus extending their respective territories to a size approaching that of the more obviously well-sited settlements. Dun Chlif (A.B3) may also gain a coastal strip of land by this subjective reallocation, as might the two sites at Baigh Hirivagh (A.B6 and A.B7). Nonetheless these sites all appear marginal relative to the valley sited settlements.

Nearest Neighbour Analysis

This technique has already been used on the atlantic roundhouses of both Caithness (Martlew 1981) and the Shetlands (Fojut 1982). The Caithness study had the advantage that the relatively large inland site distribution avoided the problem of the proximity of coastline which seriously prejudices this form of analysis (Martlew 1981, 26). This problem of the 'edge effect' of a fragmentary landscape was also acknowledged by Fojut in his work in Shetland where the degree of edge effect is similar to that in the Western Isles (1982, 40).

For the groups of sites under study in the Western Isles the problem of the fragmentation of the landscape is unusually great. In Barra the entire population of atlantic roundhouses is closer to the coast than to its nearest neighbour. The Vallay wheelhouses are similarly, without exception, closer to the coast than to their nearest neighbour while of the North Uist atlantic roundhouses, 35 of the 43 definite examples have the same problem. This acts effectively to prevent any meaningful interpretation of the results of nearest neighbour analysis.

Intervisibility

The sites do not appear to have been sited in such a way as to provide visibility to and from each other. Following Fojut's analysis of intervisibility in the Shetland *brochs* (Fojut 1982, 41), lines of intervisibility were plotted among the atlantic roundhouses of North Uist and Barra and the Vallay wheelhouses (Ill. 12.23, 12.24, 12.25); this exercise assumed a 10m height for the atlantic roundhouses to

provide a maximising view of intervisibility and to facilitate the plotting from available Ordnance Survey maps. It must be remembered that the average atlantic roundhouse height would undoubtedly have been lower, in all probability considerably lower, than 10m. The Vallay wheelhouse intervisibility diagram is plotted on the basis of visibility from ground level.

The North Uist atlantic roundhouses have three clearly defined intervisibility clusters, centred around Vallay, Hougharry/Tigharry and Baleshare (Ill. 12.23). As one would expect, these clusters correspond with the relatively flat machair plains where visibility extends for several kilometres in most directions from a 10m vantage point. Where the terrain is less level the sites tend not to be intervisible. The two Portain sites would almost certainly not have been intervisible at a height of less than 10m and the small group in the north-east similarly depends strongly on the optimistic view of original height. The south-eastern sites are without exception out of sight of each other and several of the sites along the north coast are similarly outwith the view of neighbouring sites. There appears to have been no significant desire to construct these roundhouses in locations to provide maximum visibility of neighbouring settlements: the clusters are all essentially predictable from the topography of the island.

The pattern in Barra again suggests that intervisibility was fortuitous rather than deliberate (Ill. 12.24). Three sites are not visible from any other, two pairs of sites were intervisible, and two intervisibility groups occur; these latter are centred on Dun Scurrival and Dun na Kille but it would be difficult to conceive of site locations along that coast which would avoid generating groupings of this sort. The evidence overall does not suggest that intervisibility was a significant factor in atlantic roundhouse siting on either of the islands.

The Vallay wheelhouses appear to have had minimal intervisibility despite the small area of their distribution and the relatively flat machair environment (Ill. 12.25). Their generally sand-revetted nature would have precluded visibility from any great distance.

Carrying Capacity

There have been a number of attempts to assess land carrying capacity relative to site distributions in Atlantic Scotland. These have been carried out principally in Caithness (Heisler 1977, Martlew 1981) and the Shetlands (Fojut 1982). Heisler's work has been criticised as being founded on unreliable assumptions; the most basic of these is perhaps the assumption that absolute population size has a direct relationship to social complexity (Martlew 1981, 26).

The weaknesses of Heisler's work also derive from the very large number of arbitrary figures required to formulate his calculations. In calculating the maximum energy yield from the potential crop and domestic animal resources within a given area he used the C19th production figures with a purely arbitrary estimate of the contribution of marine and riverine resources. Clearly this latter assumption highlights an important problem for Atlantic Scotland as a whole, but especially in the attempt to apply similar methods of analysis to island groups with an even greater historical reliance on these resources. Further assumptions are involved the calculation of population structure and the resulting calorific requirements of a reconstructed population (Heisler 1977, 130). The final division of potential energy yield by the energy requirements of the population gives a maximum population figure which can be used to estimate a number of individuals associated with an average roundhouse site. The assumptions however are so many, so interdependent and so poorly founded that there seems to be little value in the application of this degree of detail which results in a spurious semblance of accuracy, as when the figure of 203 people per *broch* is quoted (Heisler 1977, 131). Heisler's final conclusions, that 'EACH BROCH COULD NOT HAVE BEEN AN INDEPENDENT CHIEFDOM' (Heisler 1977, 134 (his emphasis)) hardly seem to require his preceding analysis to adduce.

Fojut's system of calculating carrying capacity was more geared to the site specific resource base of the Shetland *broch* sites (Fojut

1982, 53). The potential of each site was assessed and then potential population figures for sites arrived at. Fojut's analysis perhaps gets closer to the original potential of the sites but there are still major problems in the assumptions of land usage, the spatial relationship of used land to the settlement, the maximisation of resources and the problem of marine resources.

For Barra and North Uist it is impossible to assess the available resources for site territories in later prehistory. The changes in land quality and soil formations and distributions have been discussed in Chapter Two and mentioned above. Neither Heisler's nor Fojut's methods can be used for these areas. It may, however, be possible to arrive at a scale order figure for population potential by a comparison with historically recorded figures. Since any assessment of land productivity would be almost pure assumption the only defensible approach at present is simply to compare minimum and maximum figures with the distribution of sites.

In 1755 North Uist had a recorded population of 1909 people (Sinclair 1791-99, xxxviii). The economy of this population was a transitional one between a purely subsistence agricultural, pastoral and fishing economy and the growth in importance of the kelp industry. The population is therefore somewhat higher than the medieval population would have been. The areas occupied by this medieval population appear to correspond closely to the area occupied by the atlantic roundhouse territories, perhaps with a more clearly coastal distribution (Crawford 1965), the one significant difference being the complete absence of medieval settlement in the eastern low-lying areas. These factors of kelp, contraction of settlement area, together with climatic deterioration and coastal change, combine to make comparison of prehistoric and C18th populations difficult, with some factors boosting population and others reducing it. Nonetheless it is useful to consider the implications of this scale of population for the atlantic roundhouse distribution. The benefits of this form of analysis are that the assumptions are explicit and the limitations of comparability are

kept to the fore; no assumptions are made about environmental change.

A later prehistoric population of 1500 - 2500 might be a reasonable estimate on the basis of the 1909 figure for 1755. 51 atlantic roundhouses occupy the area where this 1755 population was recorded and thus a figure of 29 - 49 is arrived at for the mean population of a roundhouse territory. While this is clearly a very approximate figure it does indicate the scale of population associated with the atlantic roundhouse sites. It would require a very substantial later 1st millennium BC population indeed, and one far in excess of even the kelp-boosted early C19th figures, to justify the suggestion that atlantic roundhouses were some form of tribal centres for example.

In Barra the relationship of historic to prehistoric population figures has similar problems. Instead of kelp, which was less important in Barra than North Uist in 1755, an equivalent problem is commercial fishing based on Castlebay, which has no indication of any prehistoric occupation. Unfortunately the figures are not sufficiently subdivided to remove the Castlebay population from the calculations. The figure of 1150 for the population of Barra in 1755 is therefore likely to be a high estimate of its subsistence agricultural and marine carrying capacity. A range of 600 - 1500 may be suggested as possible for the later prehistoric population. The figures include all of the islands around and to the south of Barra itself. these figures would give a range of 33 - 83 for the population of an average atlantic roundhouse territory, with the upper figure likely to be an over-estimate of the absolute maximum. The lower figure is close to the low figure of 29 for North Uist and, on balance, these lower figures may perhaps be more realistic for the later prehistoric period. Even at the top end of the scale however we are dealing with relatively small population groups of probably 10 families or less (average family size being 7 for the recorded figures from 1799). It would appear that relatively small population groups were able to participate in the construction and maintenance of the monumental stone roundhouses.

The occurrence of atlantic roundhouses on a number of the smaller islands around Barra is particularly useful in helping to define minimum areas, and approaching a minimum population and resource base required to justify, construct, and maintain these structures (Ill. 5.1 and 12.6). The distribution shows that, for example, Vatersay could support two such sites, Fuday, Pabbay, Sandray, and Mingulay, one each, while Berneray housed a galleried promontory fort (P.20). Very few of the islands south of Barra were without such structures and it seems reasonable to assume that these sites controlled territories comprising only the islands on which they were situated. The smallest of these, Pabbay and Fuday are of a similar size to the average territories defined by Thiessen polygons on Barra itself (see below). The larger islands contain significant proportions of upland which would have reduced the value of resources relative to land area. Islands less than 3km^2 are without roundhouse sites. Pabbay has probably the minimum resource base of any roundhouse island territory. The island is approximately 3km^2 in size and has no access to other land, being between Sandray and Mingulay with their respective sites. The island has a rocky coast with no machair resource and no obvious available agricultural land. Clearly the territorial requirements of the roundhouse builders were highly variable and potentially minimal.

Vatersay, with its two atlantic roundhouses, emerges in the records of 1799 as housing two farms of uncertain population. The remaining southern islands have between 3 and 9 families each, i.e. c. 21 - 63 people. Unless the productivity of these small islands has changed beyond all recognition in the past two millennia, this would appear to be the scale order of population which was able to support roundhouse construction and use, and again it agrees well with the overall figures for North Uist and Barra.

Overall, then, we appear to have arrived at population figures for the atlantic roundhouse territories which, despite all the uncertainties involved, indicate a scale order for average populations. All the variations in site territory type and size, and the range of structural

form and size, indicate that considerable variation in actual population between sites is to be expected.

In terms of the historic populations of the medieval and post-medieval periods, the population size and variation associated with the territories of the atlantic roundhouses would be lower even than the levels of population controlled by the tacksmen. These were members of the very lowest levels of clan elite, who operated as administrators in return for land grants and privileges. Crawford records that there were some 20 tacksmen in North Uist in 1718, a figure which reduced to 16 by 1764 (Crawford 1965, 62). This compares to some 43 known atlantic roundhouses occupying essentially the same parts of the island in the later prehistoric period.

It would require extreme levels of population in the 1st millennium BC to sustain the idea that atlantic roundhouses could all represent the dwellings of a social group of equivalent status to the medieval tacksmen, far less any higher strata of a ruling elite. This is not to suggest that atlantic roundhouses were occupied by prehistoric tacksmen operating as their medieval successors did, but on a smaller scale, but rather to indicate the sorts of population levels we are dealing with in a broadly comparable tribally organised society in the medieval period. The question of how many of the roundhouse territory population actually inhabited the roundhouse itself is not so easily resolved as the question of population scale for the territory.

Intra-Site Spatial Analysis

Three recent papers have focussed on the interpretation of social change from the spatial organisation of sites in Atlantic Scotland (Reid 1989; Foster 1989, 1989a). Reid's work involved a generalised study of roundhouses in northern Britain, including the atlantic types, while Foster's papers focussed on the structures of Orkney and Caithness.

Reid stressed the importance of space within settlements as reflecting the social organisation of a society and, therefore, changes in the patterning of that space as reflecting changes in social organisation. Whilst referring to the work of Hillier and Hanson, and their development of 'space syntax' (1984), Reid did not attempt to apply their methods, concentrating instead on an attempt to demonstrate the unity of northern British roundhouse settlements by highlighting similarities in spatial organisation (1989).

A detailed critique of Reid's work is outwith the scope of this thesis but it is useful to highlight it as an example of how the abandonment of parts of the archeological record can create false similarities between distinct cultural groups undergoing distinct social development. By its wide-ranging nature Reid's work tends to apply cross-cultural generalisations to the interpretation of social space in settlements. Reid stated that the architecture of a building, its form and style 'are *simply* [my italics] means of transforming and containing space' (Reid 1989, 2). In this view the development of broch architecture from a non-monumental background of Late Bronze Age cellular structures, and its subsequent disappearance, are irrelevancies in the study of social change, which finds its real reflection in the spatial organisation of the settlements. This is of course a caricature of Reid's approach but it does highlight the dangers of the cross-cultural approach where only those features of settlement which can be formally analysed across a range of cultural contexts are considered relevant in the analysis of social change. Spatial organisation of the individual settlement is clearly important, and Reid's paper summarises much of the theory behind this approach, but the context of spatial organisation, including its architectural context, is also crucial if processes of social development are to be approached.

Foster's work has concentrated on one cultural context; the Iron Age of Orkney and Caithness (Foster 1989; 1989a). This restriction of geographical area has enabled the specific cultural and temporal context to be taken into account and has prevented the over-generalisation which Reid's analysis generates. Foster applied

Hillier and Hanson's methods to the study of the development of spatial patterning through the Iron Age of the north Atlantic Province. This involved the application of access analysis, where individual spaces are formally broken down into a pattern of access possibilities (Foster 1989). This removes the spatial organisation of the settlement from its architectural context for separate analysis. The resulting access map can be interpreted in terms of its depth, indicating increasingly hierarchical organisation of space with access to inner spaces easily controlled and channelled, and its 'distributedness' (Foster 1989) which is the degree of interconnectedness of spaces within the settlement. In crude terms, a deep access map with little branching would imply that access was carefully controlled and inner spaces would not be immediately accessible to all those entering the building; a more tree-like map with many multiply connected spaces would imply a far higher degree of mobility through the structure with less potential for restricting access to a given space.

In broad terms Foster sees the development of increasingly complex spatial arrangements in the Orcadian Iron Age settlements, from the initial roundhouses such as Bu, to a culmination in settlements such as Midhowe, Gurness, Lingro and Howe (Foster 1989, 48). This complexity involves also the development of an increasingly hierarchical structure, with the broch towers being the least accessible parts of the settlement with access most strictly controlled. Foster divided the spaces on her access maps into a number of types, e.g. rooms with hearths, carrier spaces (access to the outside world), stairs etc. which enabled some of the problems of the cross-cultural approach to be circumvented.

The function of individual spaces within a settlement is a crucial and often unknowable factor in the interpretation of access maps and of spatial organisation in general. It is a major weakness in Reid's approach, for example, that the functions of settlements across the wide historical and geographical span considered are not explored for variation in the use of space, rather than simply for its patterning. In access analysis problems may arise if we are unable to discern

functional subsystems which may cross-cut the overall settlement patterning and obscure the wider pattern. Storage space, for example, may be patterned according to different rules from sleeping space, depending on cultural attitudes to storage and to the individual commodities stored. If we cannot distinguish the functions of spaces within a settlement inter-site comparisons will be of very restricted value.

A further problem is the temporal dimension of spatial patterning in pre-modern societies. The concept of specific spaces for specific functions has been applied cross-culturally but it is not clear that it need have universal applicability. Where domestic buildings have few individual rooms, separate functions may be performed within single spaces at different times. Access to members of sub-groups in the population (e.g. age or sex groups) may be restricted at particular times. In pre-modern Hebridean societies for example, the blackhouse domestic area became a 'sacred' area of restricted access at times of childbirth. The temporal dimension to access control may have an important bearing on spatial differentiation within a settlement, but is not accounted for in formal access analysis.

In the present context the mixture of sacred and profane in the domestic context is demonstrated by ritual deposits in the floors and walls of a number of sites, e.g. the wall deposits at Cnip Structure 1 and the pit deposits at Sollas and Hornish Point. The differentiation of function and the consequent sanction and organisation of access may therefore be subject to temporal and contextual variation not represented by physical barriers.

Access maps serve to facilitate the discussion of social development within a particular temporal and cultural context but cannot dictate the acceptance of a set of cross-cultural 'ready-made' interpretations of recurrent patterns. Reid's 'well-defined and logical codes and rules' which he believes underlie settlement construction and habitation (1989, 8) are not necessary in the use of access maps at this level. Instead we must try to see development within a society by the transformation of spatial patterning in the context of non-spatial

aspects of the settlement. Foster recognises that spatial patterning is only one field of social discourse within the settlement and that others may be equally important in developing a fuller understanding of social organisation and development.

Within the sites of the Atlantic Scottish Iron Age there does exist the potential for access analysis to aid the interpretation of social organisation and change. Spatial organisation must, however, be regarded as only one aspect of the settlement and not necessarily the one which holds the key to wide-ranging interpretations of social change. Spatial organisation cannot meaningfully be interpreted outwith the context of contemporary discourses such as architecture and domestic ceramics. It would be dangerous to abandon the analysis of broch architecture, for example, which is clearly one of the most important features in the development of societies over this period. An integrated approach with each area of discourse considered should be possible, at least as a long-term aim, in an area with such excellent preservation of settlement remains.

Western Isles Applications

There are a number of limitations in the application of access analysis in the Western Isles. The most important is the lack of adequately recorded ground-plans for sites of several types. The atlantic roundhouses for example can provide only three ground-floor plans, from Dun Carloway (A.L12), Loch na Berie (A.L19) and Dun Bharabhat (A.L18), all in Lewis (Ill. 12.26). All three of those structures have stairs leading up to a first floor and the first two at least, had a second and possibly higher floors. At best access analysis can provide hints at broad patterns of spatial organisation of this class of site. Additional information can be gained from the comparison of the access patterns on the settlement as a whole, without the benefit of an excavated floor-plan, for some of the surveyed sites.

The wheelhouses are by far the best preserved group of sites, in terms of ground-plan, and access maps can be drawn for a number of

the excavated examples (Ill. 12.27). The cellular structures were excavated principally during early excavations and only a few can be adequately analysed through access analysis (Ill. 12.28). These exclude most of Beveridge's sites where his plans confuse different phases of construction. Of the linear structures, only that at Cnip can be adequately analysed; no analysis has been made of the enclosure classes, i.e. the walled islets and promontory forts and too little evidence is available for the miscellaneous structures.

Atlantic Roundhouses - Two features are immediately striking about the access maps for the atlantic roundhouses; the first is the depth of the maps despite the loss of evidence for their upper storeys, and the second is their non-distributed nature (i.e. almost all spaces within the settlement have only one route of access). The unexcavated site at Bragar (A.L11) exhibits both of these features. Access at Bragar is controlled by a series of walls across the causeway, then by a further enclosure wall, before the roundhouse and any associated structures could be reached. Although this type of deep, controlled access is prevalent on the atlantic roundhouse sites, there is no indication of the clustered associated settlements which occur in the north at Gurness, Midhowe and elsewhere. This prevents the occurrence of complex access patterns of the kind Foster recognised in the north (1989). Although timber structures may possibly have been associated with some of these sites it appears likely that the nucleated roundhouse settlements of the north never developed in the Western Isles. The small size of enclosures, where they do occur, also suggests that little contemporary settlement existed around the roundhouses.

In each of the atlantic roundhouses mapped in Ill. 12.26 most of the discrete spaces can be reached only through the main domestic focal cell: none of these peripheral cells are interconnected. Similarly, access to upper floors is only possible through this principal cell. One potential shortcoming of this analysis, however, is the possibility of timber partitions which subdivide these larger cells. Only at Dun Bharabhat has an original floor-plan actually been recovered, and this showed no indication of such partitions (see discussion in

Chapter Five), but the possibility at the larger sites should not be ruled out. In general however, the pattern appears to be one of strictly controlled access to the roundhouse (where this cannot be demonstrated, as at Carloway, it is often the result of natural restrictions on access, which are unquantifiable in terms of the analytical method), and further controls on movement within the structure itself. Movement between activity areas could only be achieved by prescribed routes, all focusing on the central domestic cell. The hierarchical division of space which Foster recognised in the broch towers of Orkney appears to be replicated to some extent in the Western Isles although the scale of the overall settlements is much smaller.

Wheelhouses - The wheelhouses present problems if one tries to attribute meaning to a simple division between distributedness and non-distributedness. Sites such as Cletraval (W.11) and Sollas (W.6) and the wheelhouses with unbonded piers in general, appear to indicate a high degree of permeability in spatial terms; multiple access routes exist for most of the spaces within the structures and access cannot be strictly controlled and channelled. However, if one examines a bonded pier wheelhouse, Bac Mhic Connain (W.5), the pattern is very similar to the atlantic roundhouses, with all movement channelled through the central cell. If it was the case that the aisles between bays were not commonly used for access, or were not regarded as normal means of communication within the specific cultural context of the wheelhouse-inhabitants, then the access patterns for the aisled wheelhouses may have been very different from that shown on the access maps.

The question of access between bays in the aisled wheelhouses is crucial to our understanding of the spatial distinctions between wheelhouses and atlantic roundhouses. In the absence of clear evidence, it would seem that if normal activities and social relationships could proceed in the spatial confines of a bonded pier wheelhouse such as Bac Mhic Connain, then the aisles are not likely to have been crucial in enabling access or at least as conscious access paths.

In this latter model the access patterns of the wheelhouses are very close to those of the atlantic roundhouses, with the main domestic cell dominating all movement within the structure. The control of access to this main cell is less pronounced than in the atlantic roundhouses, with little by way of formal access routes such as causeways or single-entrance enclosures. Instead the entrance passages to wheelhouses often form elongated tunnels with side-cells. This creates a form of procession-like entry to the inner area containing the main domestic cell, as Foster has indicated for the Orcadian broch tower sites (1989), and which we see in the Western Isles at sites like Bragar (A.L11). Sites such as Sollas, Bac Mhic Connain (Ill. 12.27) and Cnip (Ill. 12.29) all serve to emphasise this distance of the main cell from the outside world.

Unlike the atlantic roundhouses, the wheelhouses did not have upper floors but there were, in some cases, further cells and rooms leading off from one or more of the bays. Again, access was hierarchical, ultimately controlled through the main central cell. The evidence suggests that these recessed cells and rooms could be used either for storage or for additional domestic occupation; the former is the case at Cnip Phase 1 (Ill. 12.29) and at Clettraval; at A Cheardach Bheag and Sollas the latter appears to apply. In either case this lends a further degree of non-distributedness to the access plans of the structures but clearly the meaning in social terms of these variants will differ. It is important therefore to attempt to assess the access plans in terms of the observed function of individual spaces as far as is possible.

Cellular Structures - The access plans for the Western Isles cellular structures highlight a further problem in the method. The structure of several of these settlements is in part dictated by their location on the sites of older structures of other classes. This is often in the context of a continuous process of development and the structure of the earlier settlement is reflected in the cellular structures. At Loch na Berie (C.5) and Dun Bharabhat (C.4), for example, the siting on islets dictates the replication of the hierarchical appearance of the

approach to the site (Ill. 12.28). This may of course have been equally relevant to the cellular structures as to the antecedent structures on those sites, but equally it may be a fortuitous survival. Similarly at Cnip (C.3) the reused wheelhouse prescribes part of the later cellular structure's layout, although its use may have been entirely different (Ill. 12.29).

In general, the cellular structures for which access maps can be drawn, exhibit a pattern even more hierarchical than the atlantic roundhouses and wheelhouses with access almost always channelled through only one route. Dun Cuier and Loch na Berie (Ill. 12.28) demonstrate a simple straight path of access through the main cell. Dun Bharabhat has a similar pattern, as do the individual structures at the Udal. At Cnip, despite the complications of the inherited wheelhouse cells, a similar pattern can be discerned.

Cnip Sequence - The development of access patterns can be traced most fully at the site of Cnip (Ill. 12.29). The four stages of access patterning are shown in Ill. 12.29, from the initial planned, but never completed, settlement through the primary wheelhouse phase, the cellular modifications and the final linear house structure.

The planned stage, with two interconnecting wheelhouses, shows a remarkably well-distributed pattern of access with multiple routes available to most rooms within the structures. The problem of the aisles as access paths has already been discussed, however, and it clearly has considerable bearing on the interpretation of this planned settlement. Nonetheless the two separate entrance passages and the connecting passage suggest an unusual pattern of access in the Western Isles context.

Phase 1, as it was actually occupied, has a standard wheelhouse access pattern (cf. Ill. 12.26). Again the question of aisle access is a problem but the basic pattern suggests the dominance of a central cell on which domestic activities focussed. Specific activities appear to have been carried out in the surrounding bays with the principal, and possibly exclusive access, coming through the central cell. The

deepest level of accessibility was the unfinished Wheelhouse 2 (see discussion in Chapter Six) which appears to have served a storage function.

In Phase 2 the cellular adaptation of the original wheelhouse was non-distributed in form with no access possible through the aisles. The settlement had grown more complex with the addition of a second domestic focus. Neither domestic focus had to be entered to gain access to the other, and the two appear to have been largely independent units. The function of the cells in the remodelled wheelhouse again appear to have been based on specialised domestic activities such as bone-working, storage etc, all focused on the central cell which channelled all access. The most deeply recessed space was the storage unit which replaced the former Wheelhouse 2 in function, location and access relationships to the rest of the settlement.

Despite the architectural changes between Phases 1 and 2 at Cnip the arrangement of space appears to have remained relatively constant with the single addition of a second, possibly independent, domestic focus in Phase 2. Room function and access patterns appear to have continued from the earlier phase.

In Phase 3 the linear house structure represents a reduction in both the size of the settlement and its architectural and spatial complexity. The arrangement of space remains hierarchical with an entrance area leading to a main domestic focus which controls access to the two small cells at the rear. Evidence for individual function of cells was slight but there is no reason to believe that any major organisational change had occurred beyond an overall scaling down of the settlement.

The information from Cnip and the relative ease of reconstruction of spatial organisation suggests that significant results may be gained if sufficient sites or more complex sites could be recorded in this way. On the basis of one site, however, it is too early to generalise on

spatial development for the classes of monument involved on a regional scale.

Summary

With the accumulation of additional ground-plans and particularly of well-recorded information on the function of individual elements within structures, access analysis may become an important technique for tracing social change in Atlantic Scotland. This could apply at the level of the individual site as well as more generally for society as a whole. At present however its interpretation must be very restricted.

Broad similarities in terms of hierarchical arrangements of space can be traced from the atlantic roundhouses through to the wheelhouses: this trend appears to be even more pronounced in the cellular and linear structures. Together with the evidence of ceramics and site stratigraphic sequences, this supports the idea of continuity in development throughout the later prehistoric period.

Access analysis further reinforces the lack of complexity on the Western Isles atlantic roundhouse sites. The lack of development of the nucleated villages seen in the north precludes the appearance of highly spatially structured settlements such as those identified by Foster in Orkney (1989).

Discussion

It appears that the various classes of settlement studied do show different locational biases. The atlantic roundhouses and wheelhouses have a strikingly coastal distribution and indeed proximity to the sea seems to be a major consideration in siting in the later prehistoric period. The same does not apply to the miscellaneous structures which are more widely spread across the interior of North Uist. Altitude appears to be a restrictive factor in these latter structure's siting but for the atlantic roundhouses and wheelhouses it appears to be over-shadowed by the need to be close

to the coast. This coastal distribution is likely to reflect the wide range of resources exploited by the later prehistoric inhabitants of the islands. Coastal siting gives access to the machair and the sea as well as the low-lying land inland from the coast, whilst still being within range of upland pasture.

The fundamental difference in distribution between the atlantic roundhouses and wheelhouses and the miscellaneous structures and walled islets indicates important differences in the way these settlements operated economically. In Chapter Ten evidence was cited for a potentially early range of dates for many of the miscellaneous structures and walled islets. Eilean Domhnuill in North Uist (M.13), for example, has been shown to be Early Neolithic (Armit 1988b), while further evidence exists for non-monumental occupation underlying atlantic roundhouse sites (Chapter Five). In this context the locational evidence suggests a possible model for the development of settlement and economy from the earlier to later prehistoric periods, at least in North Uist.

The widespread distribution of the miscellaneous structures and walled islets across areas of the island not inhabited in the later prehistoric period would indicate that a contraction had occurred in the overall area of the island being exploited for agricultural purposes. It is possible that in the 2nd millennium BC and earlier, the entire land mass of North Uist, below approximately 20m OD, was settled and presumably farmed. This would have been in the period before the widespread development of blanket peats and before the formation of the present machair. As peat encroached throughout the 1st millennium BC, much of the interior of the island would have become economically unviable and settlement would have come to focus much more on the coastal belt. One would expect in these circumstances, a broadening of the resource base, with increasing emphasis on marine resources. It may have been at this stage that the machair first came to be regarded as prime agricultural land.

This model would suggest that settlement on the coastal belt would become increasingly dense, leading to population pressure and the possibility of conflict between communities. Territorial consciousness and the need to display control over resources would be expected to become more significant factors in settlement location and design. It may be in this context that we see the appearance of monumental architecture in the mid-late 1st millennium BC. With competition for increasingly limited resources and the need to display territorial authority, there would have been openness to the adoption of the monumental atlantic roundhouse form. Atlantic roundhouse building may have begun in the Western Isles after the complex architectural traits of broch architecture had begun to develop elsewhere (Appendix 1), but its adoption was within the context of a continuous development process in Hebridean settlement patterns. This would help to explain why monumental architecture does not appear to have developed on the settlements of the interior of the island. The earlier prehistoric coastal settlements would often survive to develop into monumental later prehistoric settlements, and new settlements would also be established in these areas. In effect, the contraction of settlement left a 'tidemark' of older, obsolete settlement locations in the interior and eastern areas of North Uist. The same pattern may be observed on the east coast of Lewis where the non-monumental structures are concentrated, with later prehistoric settlement largely confined to the west coast with its wider range of resources.

It may be that with the increasing concentration of population on the coastal belt there would have been episodes of formal land division in these areas. Possible indications of such land divisions were noted in North Uist. Whether such land division was initiated by a central authority or whether it reflects cooperative behaviour among communities of broadly equal status is a question for future research. The very large number of sites relative to the size of the population demonstrates that we cannot see the existence of an atlantic roundhouse as indicating a settlement of a necessarily high social status. Some of these sites presumably must represent the

settlements of high status families but it is not yet clear how this could be demonstrated archaeologically.

The displacement of population from the interior would presumably have been a slow process, and they may have been easily absorbed into the settlements of the coastal belt, but it is possible that these groups came to fall low in the social system and formed a bottom tier of the social hierarchy in the later prehistoric period. The roots of the development of a system of clientage may lie here, if land on the coastal belt was granted to displaced groups by the inhabitants of the coastal settlements. In this context monumental architecture may have acted as a focus for the display of control over people as well as land. The construction and maintenance of these settlements may have formed part of the clientage system, being carried out by the lower, dependent strata of society.

The pattern seems to continue into the last centuries of the 1st millennium BC and early 1st millennium AD with the development of the wheelhouses. These tend to be even more coastal in location than the atlantic roundhouses. This may indicate the total abandonment of the non-machair areas for agricultural purposes, although it may simply reflect the construction methods of the new architectural form. The density of sites may have remained substantially the same as for the atlantic roundhouses although land pressure probably intensified as the environment generally worsened. Again, the possibility of widespread unrecognised wheelhouse settlement away from the coastal belt should be stressed. Sites such as Clettraval (W.11) and Allasdale (W.25) show that the inland areas were not entirely abandoned and some specialised economic activity associated with stock-rearing may have been carried out there. The relationship of such settlements to the main coastal distribution remains unclear. The greatest visible difference in the transition from atlantic roundhouse to wheelhouse settlement is the abandonment of architectural display (at least outward architectural display) as a means of establishing territorial control.

The settlement patterns of the cellular and linear structures are unclear, but with the emergence of identifiable medieval and post-medieval settlement in North Uist, similar processes can be seen as in the later prehistoric period (Crawford 1965). Settlement was exclusively coastal and based on the exploitation of the whole range of available resources. Until the opening up of consumer markets from the seventeenth century onwards, principally for commercial fishing and kelp, the settlement development processes which are discernible in the prehistoric period appear to have continued.

The picture is somewhat different in Barra where environmental deterioration would have been less marked. Peat growth was less severe than in North Uist and the better-drained valleys would have provided land of reasonable quality throughout the later prehistoric period. There is no sign of the abandonment of areas of land: by contrast, settlement may have expanded into marginal areas, with the settlement of the surrounding islands and the marginal rocky coasts. It is possible that a worsening climatic regime caused a concentration on pastoral rather than agricultural elements in the economy and made the land less able to support the same levels of population; alternatively population growth may have prompted the movement. Local topographical and environmental factors, then, may have led to differing local responses to the worsening environmental situation in later prehistory. In both North Uist and Barra however, the indications are that the period from the early 1st millennium BC through the rest of prehistory was a period of environmental stress and economic adaptation, all of which left its mark on the settlement patterns of the period.

It is possible to trace a broad picture of long-term settlement development which can provide a context in which the development of the distinctive architecture of the islands can be understood. In the next chapter this picture will be expanded and reviewed in the light of the whole range of evidence examined in previous chapters, and in the wider Atlantic Scottish context.

PART FOUR
RESULTS

Chapter Thirteen

Conclusions

Introduction

This final chapter falls into two main parts. Firstly the main results of the preceding chapters will be discussed in terms of their implications for settlement development. In the second part some possible factors affecting settlement development will be discussed and a number of approaches will be considered in the construction of interpretative models for the data.

Settlement Types and Settlement Development

A series of distinct types of settlement have been defined for the later prehistoric period in the Western Isles. The classification of these structures, detailed in Chapter Four, has been shown to define relatively unitary groups in architectural, functional and chronological terms. These groups cross-cut previous classifications which have often been based on classificatory schemes imported from outwith the local context. In particular, the atlantic roundhouses have been argued to be an essentially unitary group. The many divisions imposed on these structures in previous classificatory schemes do not find support in the Western Isles material.

The following discussion summarises the available evidence for the nature of the settlement which these various defined types represent.

Atlantic Roundhouses

The evidence from the Western Isles suggests that the atlantic roundhouses form a unitary settlement tradition dating to the second half of the 1st millennium BC. The problems of dating the sites have been stressed in Chapter Five but essentially the available dating suggests a period corresponding to the complex roundhouse

construction period throughout Atlantic Scotland, with an absence of recognised simple roundhouse settlement. Although broch towers occur, possibly in considerable numbers, there is no indication of the development of nucleated villages focused on these structures as one finds in the Orkneys. No evidence can be adduced at present to suggest the construction of atlantic roundhouses in the Hebrides in the 1st millennium AD.

The structural unity of the type has been demonstrated by a consideration of the range of architectural features on the excavated sites. It has been shown that wherever atlantic roundhouse sites have been excavated, traces of broch architecture have been found and the lack of any simple roundhouses in this near-random sample appears significant. There is no evidence among the excavated sites for a mid-1st millennium AD *dun* class of sites as was suggested in earlier interpretative schemes.

The examination of site location and site structure among the surveyed sites similarly supports the concept of a unitary atlantic roundhouse class. The sites appear to occupy the landscapes of the islands in an organised manner suggestive of contemporaneity. The range of associated structural traits, such as annexes, cross-causeway walls etc, suggests similar functions and similar concerns. The range of locational types occupied, similarly suggests a high degree of unity in the atlantic roundhouse class. The division into *brochs* and the various forms of *dun*, with the consequent implications for dating, does not find a reflection in chronology, site structure, location or function.

The central site in the definition of a late *dun* class, Dun Cuier, has been shown to be a mis-interpreted complex roundhouse, probably dating to the mid-late 1st millennium BC (on the basis of unstratified early ceramics, a saddle quern and the architectural affiliations of the roundhouse). Many of the apparent multiplicity of monument classes, now embraced in the atlantic roundhouse class, appear to derive from the problems of field interpretation. Varying preservation and the pre-existing qualitative division of sites on the

basis of architectural worth have led to the creation of artificial monument classes.

The application of the classification scheme proposed in this thesis enables the recognition of a widespread class of monumental domestic settlements of the mid-late 1st millennium BC in the Western Isles. The architecture of these sites indicates the importance of display and of prestige within the communities of the islands. The location and site structure of the settlements implies that they were the homes of farming communities exploiting a range of economic resources. Their numbers, relative to the inferred carrying capacity of the islands, suggest that they were not directly representative of a ruling elite. The implication from the evidence discussed in Chapter Twelve is that they could be constructed and inhabited by groups of varying social status extending below a level analogous to medieval tacksmen i.e. the lowest level of the island's medieval aristocracy.

There is no reason why *a priori* we should expect an architectural form to relate solely to one social class. The evidence from the Western Isles suggests the contrary. An examination of the economic potentials of the areas of atlantic roundhouses settlement, together with the overall density of this settlement, suggests that atlantic roundhouses would have been occupied by groups of a wide range of social status. A medieval analogy, assuming broadly comparable population sizes would suggest that atlantic roundhouses were constructed by social groups equivalent in status to clan chiefs, minor chiefs, tacksmen and some tenant farmers.

The study of the atlantic roundhouses within the Hebridean context should not obscure the fact that this is a widespread monument form with close architectural affiliation with sites throughout Atlantic Scotland. The nature of these connections will be explored below.

Wheelhouses

The wheelhouses form a class united by a specific architectural tradition. The construction method described in Chapter Six dictates ground plan and to a large extent, spatial organisation. This distinctive architecture makes the class relatively easy to define.

The wheelhouses appear to date from the later centuries BC to the C1st AD. The conventional dating of the type to the mid-1st millennium AD appears to have been based on the misinterpretation of excavated sequences and the context of artefactual material on the excavated sites. The concepts of diffusion and time-lag of portable artefacts, have also contributed to the persistent late dating of the type. The C-14 evidence from Hornish Point indicates the possibility of an origin as early as the C3rd BC while artefactual material from a number of sites and C-14 evidence from the Udal, indicate occupation into the C1st AD. The type appears to persist later than the atlantic roundhouses but our chronologies are currently too poorly defined to establish the nature or duration of the overlap period when both forms were constructed.

The wheelhouses have a machair-based distribution (though with outliers discussed in Chapter Twelve) and may reflect the increased importance of the machair as a resource in their period. The evidence for their distribution, although slight, suggests a scale of territorial control and population similar to that of the atlantic roundhouses. The division between the two forms does not necessarily appear to be related to the scale or social position of the population who constructed and inhabited them.

The wheelhouses were monumental structures although their monumentality found different expression from that of the atlantic roundhouses. The wheelhouses were built with the practical requirements of their environment in mind; scarce timber, cold and wind. The atlantic roundhouses are so conspicuous in the Hebridean landscapes today, as in prehistory, precisely because of their non-

adaptive characteristics; their height, free-standing nature and overall size. The wheelhouses were sited on the machair for their proximity to agricultural land: the atlantic roundhouses combined a siting near to their most important resources with a control over access, whether by construction on islets or on hilltops or knolls. The distinction between atlantic roundhouses and wheelhouses in structural terms is the distinction between practical and well-adapted monumental architecture and conspicuous, impractical and ill-adapted display.

Like the atlantic roundhouses the wheelhouses display links with areas outwith the Western Isles. In this case however, only the Shetlands have structures of the same architectural form (see Chapter Six for discussion). The highly specific architectural technique demonstrates the strength of the cultural links which we must envisage between these two areas. The total absence of recognised wheelhouses in the Orkneys and Caithness becomes all the more striking in the face of these parallels.

Cellular Structures

The cellular structures appear to occupy the period from the C1st BC until the immediately pre-Norse period, conventionally c.800 AD. The unity of this class is initially less obvious than that of the wheelhouses and atlantic roundhouses. Their unifying characteristics include an absence of monumentality, revetted construction and a series of recurring architectural and spatial traits. Recurring architectural traits include the use of slab-revetting, while spatial characteristics include the dominance of a principal central cell, the focusing on the area across the central hearth from the entrance and the provision of paired wall-niches. Nonetheless there is less uniformity within this class than in those previously considered, at least in architectural terms. This may be due in part to the longer time-span occupied by the type.

The lack of recognition of the cellular structures as a specific class of monument until recently, has hampered their study and there is as

yet no reliable information on their distribution. Consequently inferences on population levels and social significance are not currently possible.

The cellular structures whilst non-monumental, share several structural characteristics with the wheelhouses. Their revetted construction and minimisation of roofing spans demonstrate similar concerns with insulation and timber conservation. They represent a practical architecture designed with regard to the Hebridean environment.

Like the wheelhouses and atlantic roundhouses the cellular structures demonstrate links with areas outwith the Western Isles. These links are clearest with the Orcadian sites such as Buckquoy and Birsay (discussed in Chapter Seven) but extend to non-Pictish areas such as Ulster. In the latter context, the site of Deer Park Farms contained 1st millennium AD structures of strikingly similar form and spatial organisation (Lynn 1988). Artefactual material suggests links with areas as diverse as Ireland, Pictland and Northumbria.

Linear House Structures

The majority of the linear structures of the Western Isles have been shown to be simple passages which probably formed parts of larger structural complexes: it is likely that these were often unrecognised wheelhouse or cellular complexes. Only two linear structures appear to represent genuine settlement structures and these have been discussed in Chapter Eight as linear house structures.

Like the cellular structures the linear house structures are a settlement form of the 1st millennium AD. With only two sites known and only one excavated it is impossible to generalise on questions of date or function.

The linear house structures share traits with the cellular structures: they appear to have been revetted and built with minimal roofing

spans for timber conservation. They were non-monumental structures but Cnip, like several cellular structures, was built on the site of a monumental settlement with no indication of a break in occupation.

The wider connections of these structures are not well understood. Parallels in Skye have been cited in Chapter Eight but further parallels place too great a strain on our very limited understanding of the structures in the Western Isles.

Promontory Forts

The absence of any secure dating for the promontory forts restricts any conclusions as to their relationships with other settlement forms. They appear to be related to the atlantic roundhouses in a number of instances, e.g. the use of broch architecture at Barra Head Lighthouse, the importance of access control in both monument forms, and the combination of atlantic roundhouse and promontory defences at Dun Mara in Lewis. There is little indication, however, that we have recovered a coherent sample of the original distribution of these sites or that they all belong to one identifiable period. In this context they can play little part in wider interpretations of developing Hebridean settlement patterns at this stage. They do however remain a key area for future fieldwork and integration into the regional settlement framework.

Miscellaneous Structures and Walled Islets

These two classes of site may encompass an enormous range of variability in structure and dating. At present it is possible only to separate them from the clearly later prehistoric settlement types with which they have been confused in the past. In Chapter Twelve it was demonstrated that the distribution patterns of these types of site are fundamentally distinct from those of the later prehistoric forms and the contrast between the two groups is potentially significant for the interpretation of long-term settlement pattern change in the islands. These sites occupied much wider areas of the islands than

the later prehistoric structures and appear to have exploited areas which had become economically unviable by the mid-late 1st millennium AD.

The evidence currently favours the hypothesis that the majority of these structures are earlier in date than the later prehistoric period. The structures are all non-monumental and encompass a wide variety of structural forms. The disentangling of these sites from the later prehistoric settlement types has opened up new possibilities for understanding the settlement patterns of both groups of sites.

Summary

The settlement forms defined in Chapter Four appear to relate to a series of sequential chronological periods although in each case the nature and duration of overlaps is unclear. Most of our evidence for settlement distributions and settlement pattern change derives from North Uist and Barra. North Uist is more likely to be representative of the wider Western Isles situation given its topographical nature and its size. Most of this summary generalises on the basis of the observed situation in North Uist. Nonetheless it is recognised that an increase in the evidence from other islands in the chain might show variations from the observed patterns.

From a pattern of widespread, non-monumental settlement in the earlier prehistoric period, the atlantic roundhouses emerged in the mid-1st millennium BC. These monumental structures occupy more restricted economic niches than their predecessors, restricted largely to the coastal belt in North Uist for example. From the last centuries BC into the C1st AD (by which time the atlantic roundhouses were likely to have been out of primary use) the wheelhouses were constructed, applying principles of local environmental adaptation to the concept of monumental architecture. They appear even more concentrated on the coastal belt, especially on the machair, although sporadic inland sites complicate the picture. From the C1st AD monumental architecture disappeared and was replaced by a more practical tradition of cellular structures and linear house structures,

the former greatly predominating numerically. This cellular architectural tradition persisted until the settlement patterns of the islands were disrupted by the Norse incursions in the C9th AD.

The two principal trends observable from the structures and their distributions are;

a; the appearance, transformation and subsequent demise of monumental architecture.

b; the increasing emphasis on the coastal belt as a settlement focus, reflecting a wider resource base and the abandonment of inland areas in the face of environmental deterioration.

Throughout, the scale of the settlement unit and the range and degree of variation within defined types show no sign of significant change: domestic ceramics, too, indicate continuity of cultural traditions.

The atlantic roundhouses have been the focus of most previous study. The chronological and typological division of these sites has prevented analysis of the settlement patterns of which they were all an integral part. The realisation of the unity of the atlantic roundhouse tradition and the placing of that architectural tradition in its local context provide an opportunity to examine the phenomenon of monumentality in the developing settlement patterns of the area. To explain settlement pattern change one must begin the process of integration of the evidence of the monumental structures with that of the less imposing monuments: one must also integrate the architectural and structural evidence with the whole range of available data including artefactual material and the evidence of site distributions.

Causes of Change

This section examines a range of factors which may have had a bearing on settlement development in the Western Isles. Population

change was until recently the principal explanatory mechanism invoked for the appearance of the atlantic roundhouses and other structural forms. Environmental change has been a major concern of archaeologists for over twenty years but has made little impact on the interpretation of Atlantic Scottish prehistoric settlement. The importance of the environmental framework for the present study will be discussed below. Finally the importance of social change within and outside the Western Isles will be considered in terms of its effects on the observed settlement patterns.

Population Change

Three periods of population incursion have been proposed at various times during this period in the Western Isles. These comprise the alleged migration of the broch-builders from southern England in the C1st BC, Crawford's 'Scotto-Picts' in the early 1st millennium AD and the Norse in the early C9th AD.

The Broch-Builders - The diffusionist approach to Atlantic Scottish studies has been referred to at various points throughout the text above and is discussed in Appendix One in some detail. This discussion will not, therefore, rehearse the arguments against the diffusionist interpretations at length. The belief that broch architecture was created by incomers from the south of England has its roots in the diffusionist schemes of the 1930s and '40s and has found enthusiastic proponents in Atlantic Scottish studies since that time. After Childe's initial formulation of the diffusionist hypothesis for the area (1935), Scott (1947) and subsequently Hamilton (1956) and MacKie (1965) proposed further refinements. In essence, the detailed arguments in favour of the hypothesis depended on parallels in selected traits from the material culture of Atlantic Scottish Iron Age with similar traits in the south. The parallels of certain forms of ceramics and in particular, ceramic decoration, combined with a number of items of bonework all appeared convincing to workers operating within the diffusionist paradigm (e.g. MacKie 1965). Objections to these schemes have concentrated on several different aspects of the supposed parallels and on the overall theoretical basis

of the diffusionist hypothesis (e.g. Clarke 1971; Harding 1984; Lane 1989; Armit 1990).

The background of stone architectural traditions, the duration of the development of broch architecture and the continuity of landscape utilisation and domestic material culture all argue for continuity of population throughout the 1st millennium BC in Atlantic Scotland. There is no evidence for a break in the settlement record in Atlantic Scotland at any point in this period (App.1), and the development of broch architecture manifestly takes place over a protracted period prior to the period of supposed immigration. Although the material culture parallels require explanation, the theory of migration from southern England no longer appears convincing and is certainly inadequate to explain the nature of the Atlantic Scottish Iron Age.

The Scotto-Picts - In his paper of 1977 Iain Crawford proposed that the break in settlement and changes in material culture at the Udal (C.10), in the period prior to 400AD, 'marks one of the rare total and precise watersheds in the archaeological record that are so complete as to compel an invasion interpretation' (Crawford and Switsur 1977, 129). Crawford proposed that an invasion by a 'Scotto-Pictish' people could account for the changes. This was a new concept at the time and one which was not taken up elsewhere.

It appears from subsequent work that the break in continuity observed at the Udal was a feature of the incomplete nature of the Udal sequence. The excavations at Cnip (W.1) and Eilean Olabhat (C.19) have demonstrated that the ceramic sequence is continuous from the period of the atlantic roundhouses and wheelhouses through to the immediately pre-Norse period (App.3). The development of the cellular structures at Cnip, with no break in occupation, from their wheelhouse predecessors also shows that the structural change is a gradual one. The invocation of a Scotto-Pictish invasion appears to derive from a mis-placed belief in the continuity of the Udal sequence.

The Norse - The archaeology of the Norse period for the Western Isles is still, under-developed. Only at the Udal is there evidence for the succession of pre-Norse and Norse settlement (Crawford 1977). Aside from the Udal, only Drimore has clear evidence of a Norse settlement (Maclaren 1974). Against this absence of identified settlement must be set several other forms of evidence;

- a. the ubiquity of Norse stray finds, particularly on the machair.
- b. the relatively widespread occurrence of Norse burials.
- c. the overwhelming number of Norse place-names throughout the Western Isles.

The last of these factors confirms that, without doubt, the Norse influence over the islands was immense and presumably linguistically Norse people inhabited the whole of the Western Isles at the end of the 1st millennium AD.

In the context of this thesis it is the relationship of the Norse to the pre-Norse populations which is the main subject of interest. Lane has identified a ceramic assemblage which is characteristically Norse in its range of forms and fabrics, at the Udal (1983). This assemblage is not found in association with the later prehistoric settlement structures under study here. Similarly, the longhouses and the metalwork artefacts characteristic of Norse settlement are absent from the later prehistoric structures.

None of the cellular structures has evidence for continuity beyond the 8th AD; only the Udal, Loch na Berie and possibly Dun Cuier, can be convincingly interpreted as dating so late. At the Udal, Crawford saw the Norse incursions as violent and destructive involving a complete replacement of pre-existing power structures and the imposition of Norse control (Crawford and Switsur 1977, 131). This may well be the case but it is difficult to accept some of the evidence from the Udal which Crawford uses to make the point; the Norse 'fort' which is held to be the symbol of subjugation was only 7m

across and survived to 3-4 courses high (Crawford and Switsur 1977, 131). It is difficult to see how this can be interpreted as a fort in advance of full publication.

At Loch na Berie the final pre-Norse structures were abandoned and decayed naturally, with no sign of deliberate destruction. There were no artefacts from this site to suggest any Norse contacts despite the chronological proximity of the site to the conventional Norse period. The absence of definite Norse settlement on the later prehistoric sites, other than the Udal, must suggest that there was a degree of dislocation in what had been, up until this time, a continuous process of settlement development.

The nature of the Norse takeover of the islands lies outwith the immediate scope of this thesis but its effects appear to have included the dislocation of the settlement processes described here. Whether violent invasion or gradual absorption was involved, the results were complete cultural transformation and the realigning of contacts outwith the islands.

Summary - There is strong evidence to support the idea of a Norse population movement into the islands from the early C9th AD onwards. Linguistic, place-name and other documentary evidence combine with major changes in other aspects of material culture and the apparent dislocation of settlement patterns. There is no convincing evidence of this nature for the earlier inferred population incursions. The southern-English migration has been weakened by the extended chronology while the 'Scotto-Pictish' invasion rests on a misunderstanding of the completeness of the Udal sequence.

Wholesale invasion or migration need not be the only form of population movement capable of affecting material culture and social relations. The demonstrable contacts over wide and changing areas throughout later prehistory argue for the possibility of small-scale population movement. This could take the form of the movement of individuals or small groups through marriage networks, as specialist craftsmen, through economic failure or through

inheritance or kinship networks. Some individuals and small population groups may well have been relatively mobile in the period and may have contributed to the adoption and spread of material culture, but the evidence for wholesale migration or invasion in later prehistoric Atlantic Scotland is unconvincing.

Environmental Change

The effects of environmental change on human populations have been a major focus of archaeological work since the 1960s. Processual approaches have often centred on the study of environmental adaptation of human societies and the post-processual disdain for such approaches has not fundamentally affected archaeological practice. In Atlantic Scotland, however, processual archaeology did not have a significant impact on studies of the later prehistoric period until the early 1980s with the work of Noel Fojut (1982). Instead, diffusionist models, formulated in the cultural historical tradition, prevailed throughout the 1970s and into the early '80s. There is still a need to integrate the architectural and structural evidence for settlement with its environmental background for much of the Atlantic Province, and the Western Isles are no exception.

The radical nature of environmental change in the Western Isles over the prehistoric period has been stressed in Chapter Two. The twin processes of peat expansion on the one hand and coastal change and machair development on the other, combined to give a dynamic environmental framework in which later prehistoric populations were compelled to operate. It is likely that anthropogenic factors helped to initiate and hasten the eradication of the potential of inland soils: over-grazing and over-intensive agricultural activity together with deforestation may all have contributed to the general environmental decline of the islands. A prime objective in future research must be to establish the rate and chronology of the environmental changes wrought by these processes and to compare this with settlement pattern change.

From the perspective of human economic potentials the combined result of these processes would have been a lessening of the value of inland areas and a proportional increase in the value of the coastal belt with its access to a combination of resources. The environmental processes would have appeared imperceptibly slow to the human populations of the islands and could not have formed a conscious impetus to action.

A number of general settlement and economic developments might be predicted from this broad pattern of environmental change;

- a. a change from widespread inland settlement to a more intensive settlement of the coastal belt.
- b. an increased exploitation of the machair for agriculture.
- c. the need to exploit a wider range of resources with, possibly increased emphasis on pastoralism, hunting, fishing, wildfowl and shellfish.
- d. population pressure on the reduced area of settlement and/or movement into marginal land.
- e. social dislocation and the renegotiation of power structures as relative resource values change: the social effects of these processes will be dependent on the timescale of settlement pattern change.
- f. scarcity of timber as a construction material.

These anticipated outcomes do seem to be generally applicable to the first later prehistoric settlement pattern shift from the miscellaneous structures and walled islets to the atlantic roundhouses. The economic base of the settlements is not directly witnessed through excavation due to the nature of early recording methods and the lack of survival of economic indicators such as bone and shell on many atlantic roundhouse sites. Intensification of coastal relative to inland settlement is demonstrated however, and

economic patterns inferred from site distribution would fit the anticipated outcomes of environmental change.

Interestingly the last two anticipated factors, social reorganisation and timber scarcity, may have had unpredicted effects. The pressure on resources appears to have resulted in an increased stress on territoriality and display in settlement design and construction; the adoption of atlantic roundhouses suggests that the importance of prestige and display of command on resources resulted in an architecture in which scarce timber was wantonly and conspicuously employed. This provides one indication that human action in the Hebridean context was not entirely environmentally conditioned, and not predictable from a knowledge of the environmental processes in isolation.

In the subsequent period with the development first of wheelhouses and then of cellular structures, architecture adapts to the environmental constraints described above, gradually abandoning monumentality. This later period sees a further concentration of coastal settlement and evidence for the development of a wide resource base (Finlay 1985). It also demonstrates the long-term convergence of observed settlement patterns with environmentally-based predictions. In the long-term then, broad settlement pattern shifts may relate closely to environmental dictates and constraints, but short-term settlement change, and the specific cultural responses employed, are not predictable from environmental considerations alone.

Ill. 13.1 shows a simplified model of the environmental influences acting upon settlement. Environmental constraints exert a powerful influence but their interplay with social factors creates responses from the human communities which cannot be described as environmentally determined. The phenomenon of monumental architecture which dominates the archeological perception of the period is only one of a range of possible architectural outcomes of environmental decline. The subsequent growth of cellular non-monumental architecture occurs in the context of the same

environmental processes and illustrates an alternative path which the initial human settlement response could have followed. Environmental constraints, principally the scarcity of timber, may have brought about the demise of broch architecture: the demise of monumental architecture itself, however, demands explanation in terms of factors beyond the purely environmentally adaptive.

Social Change and Material Culture

Environmental processes provided a major component in the initial 1st millennium BC shift from a widespread agriculturally based economy centred on non-monumental settlements to a coastally confined non-specialist economic system in which display and monumentality were central factors. Social relations became stressed with the dislocation of the preceding economic base. Competitive societies developed, initially employing monumental architecture in the negotiation of power relations. Environmental factors limited the range of responses open to human groups but did not dictate specific responses. This section examines the contribution of non-environmental factors to settlement change and the changing use of material culture, specifically in the legitimisation of power.

Human groups within the Western Isles in later prehistory operated within both a temporal and a geographical context. Responses to changes in their economic and social circumstances and the deployment of material culture in the renegotiation of social relations, were all framed within historical traditions and contemporary social contacts. The worsening environment of the Western Isles could enforce certain changes in economy, reflected in settlement patterns, and these may be predicted on the basis of cross-cultural parallels: an understanding of the specific developments in material culture cannot be approached in this cross-cultural way and demands the analysis of context in both its temporal and spatial dimensions.

The later prehistoric settlement forms of the Western Isles derive many of their distinctive features from the local 'historical' context. Changing environmental conditions disrupted traditional economic patterns but the specific responses of the Hebridean populations were framed within traditional practise. The practise of locating settlement preferentially on islets continued into the period of atlantic roundhouse occupation: this traditional locational pattern, with its roots in the Early Neolithic (cf Eilean Domhnuill (M.13)) persisted until the inland areas were superseded by the machair as the primary focus of settlements. The use of highly decorated domestic ceramics is another persistent feature of Western Isles prehistory which persisted until the mid-1st millennium AD.

The Hebridean context has been stressed throughout this thesis as essential to the understanding of settlement development in the area. This is especially significant at the level of the construction of a local chronological sequence and at the stage of site classification. To obtain a wider understanding of the development of societies in the Western Isles one must integrate the local sequence with wider regional and 'national' processes.

Human populations of the Western Isles operated within a wide and fluctuating regional context and the effects of events and processes within this regional area are potentially significant in understanding settlement change. A number of the major factors centred outside the Western Isles were;

- a. the Roman invasion and limited occupation of Scotland.
- b. the appearance and increasing centralisation of the Pictish and Scottish states.
- c. the advent of Christianity in northern Britain.
- d. the advent of literacy.

The Roman invasion has no apparent direct impact on the Western Isles and its impact on Atlantic Scotland as a whole is unclear. Fitzpatrick has recently reassessed the evidence for an Orcadian submission to the Romans in the Claudian period (Fitzpatrick 1989). The relative lack of Roman material indicates that, even if the Orkneys submitted to Claudius, there was no prolonged contact and no physical presence of Rome in the Atlantic Province sufficient to leave material remains.

The indirect impact of the Roman occupation of southern Scotland may have been more significant. The setting of an opposition between Roman and northern Briton may have accelerated processes of centralisation and the development of an ethnic awareness. For the communities under occupation there may have been gains to be made by forming a more integrated centralised economy to trade with the Romans. For all the communities with whom they came into contact, the model of Roman organisation became a potential influence. The impact of Roman military installations and roads must have fundamentally affected perceptions of the landscape and the possibilities for the manifestation of power. All of these processes would have had indirect effects on the Atlantic Province through its contacts with the wider northern British scene in the early 1st millennium AD.

Of the factors listed above it is the appearance and increasing centralisation of the Pictish and Scottish states which have most direct impact on Atlantic Scotland; these processes form the wider regional background, analogous to the environmental background, in which the Western Isles populations operated. Indicators of increasing centralisation have been observed in the archaeological record of the Orkneys which parallel those of the wider Pictish state (Armit 1990).

In the Orkneys, complex roundhouses developed from a background of simple roundhouse construction in the mid-1st millennium BC (Armit 1990). The early roundhouses were isolated farmsteads without any indications of settlement nucleation. In the last

centuries BC recognisable broch towers were constructed and some of these became the focus for nucleated settlement. The process of increasing architectural complexity was accompanied in the Orkneys by the progressive nucleation of settlement. Architecture appears to have played an active role in the development of increasing centralisation of power which paralleled the wider processes of incipient state formation throughout Scotland from the last centuries BC through the 1st millennium AD. By the mid-1st millennium AD Orcadian rulers appear to have functioned as sub-kings within an wider Pictish state (Armit 1990).

The part played by monumental architecture in legitimising and naturalising power structures has been discussed elsewhere (Barrett 1981, Armit 1990). Naturalisation of power however, can find expression in the manipulation of many forms of material culture and need not be restricted to monumental architecture. Where power requires demonstration at a local level, monumental domestic architecture of the kind found in Atlantic Scotland, can be effective. It presents a clear display of permanence, control over resources and forms a potential focus for the practice of clientship or other forms of subjugation. The broch towers of the Orkneys with their clustered villages appear to represent the culmination of monumental domestic architecture in the region. The spatial relationships of village to broch tower naturalise the position of the structure and its inhabitants as central, permanent and dominant, within the settlement and within society.

Widespread, 'low-status' monumentality in the Western Isles appears to be representative of power exercised at a highly localised level. Although broch architecture had the potential to display command over people and their labour, many of the atlantic roundhouses may simply have reflected power over the limited resources of the locality. The Western Isles atlantic roundhouses were symbols of power, but not of the degree or extent of power which was to be increasingly centred on elite groups during the 1st millennium AD.

Where power requires legitimisation over wider areas monumental domestic architecture is less effective. Its dominance and centrality in the lives of the Gurness community derives from its strong visual dominance over all of the activities of their everyday lives. This effect can only ever be local in a society in which movement of the population is limited. In a market economy or in any form of emerging state where central places were visited and observed by a substantial proportion of the population, the use of monumental domestic architecture could be extended. In a spatially fragmented society of limited mobility, the power of monumental architecture is not extensive: to extend power over larger areas and spatially diffuse populations the deployment of material culture had to change.

It has been customary to see the disappearance of monumental architecture in Atlantic Scotland as part of a process of cultural decline and representative of the demise of power networks in the area. In the context described above, with monumental architecture seen as a part of a wider process of power centralisation, this need not be the case. Monumental architecture can be viewed as one of a range of material cultural items through which power can be demonstrated. It can also be seen as applicable to one stage in the development of centralisation and potentially as redundant beyond that stage. With the disappearance of monumental domestic architecture in Atlantic Scotland we see the appearance of fine personal ornament, particularly metalwork and bonework, which was not a feature of the preceding period. This can be traced as early as the C2nd or C3rd AD at Eilean Olabhat (C.19) where fine metalwork was produced.

If control could be exerted over the raw materials for metal-working and provision made for the subsistence of craftsmen, control over the production and dissemination of metalwork could be concentrated in the hands of an restricted group of the population. By this means, membership of, kinship to, or subservience to particular authorities could be demonstrated by the ownership and display of material symbols of that authority: items of fine metalwork could function as badges of authority or of designated authority. The symbols of power

became portable and were not restricted in impact to the vicinity of their source. Control over the production and ownership of fine metalwork would have enabled a much wider but less intensive display of power. In this context, local power-bases incorporating architectural display may have come to be regarded as potentially subversive and their abandonment and demolition may have been actively encouraged, if not enforced. The relationship between extensive power, exerted over widening areas, and intensive, local power in Mann's sense (1986), is one of the key areas for understanding the emergence of the early Scottish states from the later prehistoric background.

The disappearance of broch architecture then, does not seem to represent a cultural decline but rather a progression to a more centralised society where the use of material culture as symbols of power has transferred its emphasis from monumental architecture to portable items. The power which could be represented by portable artefacts in the 1st millennium AD was considerably more extensive than that represented by monumental domestic architecture in the previous centuries.

It may be in this context that the wheelhouses came to be built. They represent domestic monumental architecture but of a most unprepossessing external appearance. They do not provide a means of access control as the atlantic roundhouses did and they do not visibly reinforce territorial or resource control. It could be suggested that they represent the last fading remnants of monumental domestic architecture in a situation where its original purpose had all but disappeared. Wheelhouses were not defensive or outwardly monumental and they appear to have functioned in a period when land claims were sufficiently stable to obviate the need for territorial display. It may be that the establishment of centralised control, perhaps from the Orkneys, provided an alternative, non-local means of regulating such claims and discouraged the active display of territoriality. The monumentality of wheelhouse interiors may reflect the local historical context with local groups continuing to practice the demonstration of prestige through architecture, even

after the atlantic roundhouses had become economically and socially redundant. With the dominance of the cellular structures this form of prestige display appears to have almost entirely disappeared.

It is possible that the new system of power symbolism derived from and was centred on the Orkneys, and that this is the reason for the absence of wheelhouses there: the establishment of realigned means of power display may have eclipsed monumental architecture more quickly and more completely than in the Western Isles and Shetlands, at the periphery of the emerging power structures.

The advent of Christianity in northern Britain and the closely associated advent of literacy were of fundamental significance to the developing states of the mid-1st millennium AD. Initially the Scots and subsequently the Picts, seem to have employed religious symbolism and writing further to naturalise their authority. The alliance of the Church and secular authorities has been explored elsewhere (e.g. Niece and Duncan 1989) for northern Britain. From the explicit combination of religion and secular power in Scottishly inauguration rites (e.g. Columba's involvement in the succession of Aedan to the throne of Dalriada) to the widespread use of Christian symbolism on stone monuments and portable artefacts (e.g. Henderson 1987), it is apparent that secular authority attempted its own legitimisation through its association with divine powers. This process almost certainly predates Christianity: pre-Christian religion, myths, stories, songs etc may well have portrayed the existing secular authorities as firmly embedded in a divine or pre-ordained pattern. With the advent of literacy this process this process is documented for us.

There is no visible impact of Christianity or literacy in the later prehistoric settlement sites of the Western Isles. Nonetheless, the part these factors played in strengthening and legitimising centralising authorities outwith the islands should not be overlooked as part of the contextual background in the 1st millennium AD.

Settlement Change in Context

The changing settlement patterns in the Western Isles have been examined in relation to factors of population, environmental and social change. Each of these appears to have had a substantial impact on settlement patterns, although the impact of the first appears to be restricted to the Norse incursions at the end of the period under study. The broad shifts in settlement pattern and resource exploitation appear to have been constrained and heavily influenced by the major environmental processes in progress throughout the 1st millennia BC and AD. These processes however, could not dictate the specific responses of the human populations of the Western Isles. The appearance of monumental domestic architecture and other, less visually impressive, aspects of material culture cannot be predicted from the study of environmental processes in isolation.

The evidence from the Western Isles suggests that social factors relating to the historical traditions of settlement in the islands and to the impact of socio-political contacts outwith the islands, played a major part in the development of Western Isles societies. The place of the Western Isles in a wider Atlantic Province, and ultimately in a north British and north European context, provided a set of constraints and possibilities for the expression of social relations through material culture, analogous to those imposed by the processes of environmental change. Items of material culture were absorbed where there was a perceived or unconscious social, symbolic or economic use. The adoption of material culture forms need not indicate a common perceived function or symbolism between groups and still less, a common ethnic or political affiliation.

The importance of context, in all of the forms discussed above, is central to developing an understanding of settlement development and the use material culture. It is to be hoped that the accumulating data-base will continue to provide additional information at a range of contextual levels, of a quality which will enable us to improve upon

present knowledge. With a qualitative and quantitative increase in data, new areas of material culture can be analysed (eg wood from waterlogged and underwater sites) and existing areas expanded. The Western Isles are one of very few areas where there is the hope of ultimately accumulating detailed and reliable information on a very wide range of areas of cultural development over a continuous period from the Early Neolithic to the Post-Medieval. The analysis and interpretation of this material in its Hebridean context and its articulation with wider regional and national processes should form the ultimate aim of Hebridean archaeology.

Bibliography

List of Abbreviations

Arch. Scot. - Archaeologia Scotica
 BAR - British Archaeological Reports
 DES - Discovery and Excavation in Scotland
 GAJ - Glasgow Archaeological Journal
 PPS - Proceedings of the Prehistoric Society
 PRSE - Proceedings of the Royal Society of Edinburgh
 PSAS - Proceedings of the Society of Antiquaries of Scotland
 SAR - Scottish Archaeological Review
 SAF - Scottish Archaeological Forum
 Scott. Jour. Geol. - Scottish Journal of Geology
 Trans.Inst.Br.Geog. - Transactions of the Institute of British Geographers
 World Arch. - World Archaeology

Alcock, L 1963 Dinas Powys (Cardiff)

Alcock, L 1984 *A Survey of Pictish Settlement Archaeology in Friell and Watson* (eds) Pictish Studies (Oxford)

Anderson, J 1883 Scotland in Pagan times: Vol 2 the Iron Age (Edinburgh)

Armit, I 1985 Later Prehistoric Defensive Structures of Lewis and Harris unpublished MA Dissertation, University of Edinburgh

Armit, I 1986 Excavations at Loch Olabhat, North Uist, 1986 Department of Archaeology, Edinburgh University, Project Paper No.5

Armit, I 1986a *Kneep* DES 1986 47

Armit, I 1987 Excavation of a Neolithic Island Settlement at Loch Olabhat, North Uist 1987 Department of Archaeology, Edinburgh University, Project Paper No.8

Armit, I 1988 *Broch Landscapes in the Western Isles* SAR 5 78-86

Armit, I 1988a Excavations At Cnip, West Lewis 1988 Department of Archaeology, Edinburgh University, Project Paper No.9

Armit, I 1988b Excavations at Loch Olabhat, North Uist, 1988 Department of Archaeology, Edinburgh University, Project Paper No.10

Armit, I 1990 *Broch-building in Atlantic Scotland; the Context of Innovation* World Arch. 21 435-45

Armit, I (ed) forthcoming Beyond the Brochs; the Later Iron Age in Atlantic Scotland (Edinburgh)

Barber, J 1985 Innsegall (Edinburgh)

Barber, J forthcoming Western Isles Excavations

Barber, J, Halstead, P, James, H and Lee, F 1989 *An Unusual Iron Age Burial at Hornish Point South Uist* Antiquity 63 773-8

Barclay, GJ 1985 *Excavations at Upper Suisgill, Sutherland* PSAS 115 159-98

Barrett, J 1981 *Aspects of the Iron Age in Atlantic Scotland. A Case Study in the Problems of Archaeological Interpretation* PSAS 111 205-219

Beveridge, E 1905 Coll and Tiree (Edinburgh)

Beveridge, E 1911 North Uist (Edinburgh)

Beveridge, E 1930 *Excavation of an Earth House at Foshigarry and a Fort, Dun Thomaidh, in North Uist* PSAS 65 299-357

Beveridge, E 1931 *Earth Houses at Garry Iochdrach and Bac Mhic Connain in North Uist* PSAS 66 32-67

Birks, HJB and Madsen BJ 1979 *Flandrian Vegetational History of Little Loch Roag, Isle of Lewis, Scotland* Journal of Ecology 67 825-842

Blundell, FO 1913 *Further Notes on the Artificial Islands in the Highland Area* PSAS 47 267-302

Bohncke, SJP 1988 *Vegetation and Habitation History of the Callanish Area, Isle of Lewis, Scotland* in Birks, HH, Birks, HJB, Kaland, PE and Moe, D (eds) *The Cultural Landscape - Past, Present, Future* (Cambridge) 445-61

Bohncke, SJP and Cowie, TG forthcoming Excavation and Paleoenvironmental Survey of a Site near Tob nan Leobag, Callanish, Isle of Lewis Callanish Project Paper No.1

Bradley, R 1978 The Prehistoric Settlement of Britain (Cambridge)

Breeze, D 1984 *A Potsherd of Castor Ware from Crosskirk in Fairhurst, H* Excavations at Crosskirk, Caithness (Edinburgh)

Calder, C 1937 *A Neolithic Double Chambered Cairn on the Calf of Eday, Orkney* PSAS 71 115-154

Calder, C 1938 *Excavations of Iron Age Dwellings on the Calf of Eday, Orkney* PSAS 73 167-185

Carter, SP, Haigh *et al* 1984 *Interim Report on the Structures at Howe, Stromness, Orkney* GAJ 11 61-73

Caulfield, S 1977 *Quern Replacement and the Origin of Brochs*
PSAS 109 129-139

Childe, VG 1935 The Prehistory of Scotland (Edinburgh)

Close-Brooks, J 1976 *Small Finds in Tabraham, C Excavations at Dun Carloway Broch, Isle of Lewis* PSAS 108 161

Collingwood, RG 1953 Roman Britain (London)

Crawford, IA 1965 *Contributions to a History of Domestic Settlement in North Uist* Scottish Studies 10:2 34-63

Crawford, IA 1966 *Bosta, Bernera Mhor* DES 1966 41

Crawford, IA 1967/78 Excavations at the Udal, North Uist (Interim Reports) typescripts

Crawford, IA 1975 *Scot (?), Norseman and Gael* SAF 6 1-16

Crawford, IA 1985 The West Highlands and Islands; A View of 50 Centuries (Cambridge)

Crawford, IA and Switsur, R 1977 *Sandscaping and C-14; the Udal, North Uist* Antiquity 51 124-136

Curwen, C 1938 *An Iron Age Site at Aignish, near Stornoway*
PSAS 73 45

Dickinson, T 1982 *Fowler's Type G Penannular Brooches Reconsidered* Medieval Archaeology 26 41-88

Driscoll, ST and Nieke, MR (eds) Politics and Power in Early Medieval Britain and Ireland (Edinburgh)

Dryden, H 1857 *An Account of a Circular Building and Other Ancient Remains Discovered in South Uist* PSAS 3 124-127

Edwards, AJH 1923 *Report on the Excavation of an Earth House at Galson, Borge, Lewis* PSAS 58 185-203

Evans, JG 1971 *Habitat Change on the Calcareous Soils of Britain; the Impact of Neolithic Man* in Simpson, D (ed) Economy and Settlement (London)

Fairhurst, H 1971 *The Wheelhouse Site at A Cheardhach Bheag on Drimore Machair, South Uist* GAJ 2 72-106

Fairhurst, H 1984 Excavations at Crosskirk Broch, Caithness (Edinburgh)

Fairhurst, H and Taylor, DB 1971 *A Hut-Circle Settlement at Kilphedir, Sutherland* PSAS 103 65-99

Feachem, RW 1956 *Earthhouse at Drimore* DES 1956 38

Finlay, J 1985 Faunal Evidence for Prehistoric Economy and Settlement in the Outer Hebrides unpublished Ph.D. thesis, University of Edinburgh

Fitzpatrick, AP 1989 *The Submission of the Orkney Islands to Claudius: New Evidence?* SAR 6 24-33

Fojut, N 1982 *Towards a Geography of the Shetland Brochs* GAJ 9 38-59

Fojut, N 1982a *Is Mousa a Broch?* PSAS 112 220-228

Foster, SM 1989 *Analysis of Spatial Patterns in Buildings (Access Analysis) as an Insight into Social Structure: examples from the Scottish Iron Age* Antiquity 63 40-50

Foster, SM 1989a *Transformation in Social Space: the Iron Age in Orkney and Caithness* SAR 6 34-54

Fraser, D 1983 Land and Society in Neolithic Orkney BAR 117 2 vols. (Oxford)

Friell, JCP and Watson, WG (eds) Pictish Studies BAR 125 (Oxford)

Gelling, P 1985 *Excavations at Skail, Deerness* in Renfrew, AC (ed) The Prehistory of Orkney (Edinburgh)

Glentworth, R 1979 *Observations on the Soils of the Outer Hebrides* PRSE 1979 123-137

Graham, A 1947 *Some Observations on the Brochs* PSAS 81 48-99

Green, D, Haselgrove, C and Spriggs, C 1978 Social Organisation and Settlement: Contributions from Anthropology BAR 471 (Oxford)

Guido, CM 1978 The Glass Beads of the Prehistoric and Roman Period in Great Britain and Ireland (London)

Hamilton, JRC 1956 Excavations at Jarlshof (Edinburgh)

Hamilton, JRC 1968 Excavations at Clickhimin (Edinburgh)

Harding, DW (ed) 1976 Hillforts (London)

Harding, DW 1984 *The Function and Classification of Brochs and Duns* in Milet, R *et al* (eds) Between and Beyond the Walls (Edinburgh)

Harding, DW and Armit, I 1987 *Loch na Berie* DES 1987 60-61

Harding, DW and Armit, I 1988 *Loch na Berie* DES 1987 31-32

- Harding, DW and Topping, PG 1986 Callanish Archaeological Research Centre 1st Annual Report (Edinburgh)
- Henderson, I 1987 *Early Christian Monuments of Scotland Displaying Crosses but No Other Ornament* in Small, A (ed) The Picts: A New Look at Old Problems (Dundee) 45-58
- Henshall, AS 1963 and '72 The Chambered Tombs of Scotland Vols 1 and 2 (Edinburgh)
- Hedges, JW 1985 *The Broch Period* in Renfrew, AC ed. The Prehistory of Orkney (Edinburgh)
- Hedges, JW 1987 Bu, Gurness and the Broch of Orkney Vol 1-3 BAR 163-5 (Oxford)
- Hedges, JW and Bell, B 1980 *That Tower of Scottish Prehistory, the Broch* Antiquity 54 87-94
- Heisler, DM 1977 Carrying Capacity and Social Organization in the Atlantic Iron Age of Scotland unpublished Ph.D. dissertation, University of Missouri-Columbia
- Hill, P 1988 Whithorn 2; Interim Report
- Hillier, B and Hanson, J 1984 The Social Logic of Space (Cambridge)
- Hirons, K 1986 Preliminary Investigation of Lake Sediments from the Machairs of the Uists and Benbecula, Outer Hebrides typescript
- Hodder, I 1986 Reading the Past (Cambridge)
- Hunter, JR 1986 Rescue Excavations at the Brough of Birsay 1974-82 (Edinburgh)

- Lacaille, AD 1937 *A Stone Industry, Potsherds and a Bronze Pin from Valtos, Uig, Lewis* PSAS 71 279-296
- Laing, L 1975 The Archaeology of Late Celtic Britain and Ireland (London)
- Lamb, R 1980 Iron Age Promontory Forts in the Northern Isles BAR 79 (Oxford)
- Lane, A 1983 Dark Age and Viking Age Pottery from the Hebrides with Special Reference to the Udal, North Uist unpublished Ph.D. thesis, University of Glasgow
- Lane, A 1987 *English Migrants in the Hebrides: 'Atlantic Second B' Revisited* PSAS 117 47-66
- Leach, E 1978 *Does Space Syntax really 'Constitute the Social'?* in Green, D, Haselgrove, C and Spriggs, C Social Organisation and Settlement: Contributions from Anthropology BAR 471, 385-401
- Lethbridge, TC 1952 *Excavations at Kilpheder, South Uist, and the Problem of Brochs and Wheelhouses* PPS XVIII 176-193
- Liddle, P 1872 *Note of an Underground Structure at Gress near Stornoway and Other Ancient Remains in the Island of Lewis* PSAS 10 741-744
- Lynn, C 1987 *Deer Park Farms* Archaeology Ireland Vol.1:1 11-15
- Macartney, E 1984 *Analysis of Faunal Material in Fairhurst, H Excavations at Crosskirk, Caithness* (Edinburgh)
- Macaulay Institute for Soil Research 1982 Soil Survey of Scotland - Outer Hebrides (Aberdeen)
- MacDonald, D 1978 Lewis: a History of the Island (Edinburgh)

- MacGregor, M 1976 Early Celtic Art in North Britain (Leicester)
- MacInnes, L 1984 *Brochs and the Roman Occupation of Lowland Scotland* PSAS 114 235-50
- Maclaren, A 1974 *A Norse House on Drimore Machair, South Uist* GAJ 3 9-18
- MacKenzie, JB 1905 *Antiquities and Old Customs in St Kilda* PSAS 39 397
- MacKie, EW 1965 *The Origin and Development of the Broch and Wheelhouse Building Cultures of the Scottish Iron Age* PPS XXX 93-146
- MacKie, EW 1971 *English Migrants and Scottish Brochs* GAJ 2 39-71
- MacKie, EW 1972 *Some New Quernstones from Brochs and Duns* PSAS 104 137-146
- MacKie, EW 1974 Dun Mor Vault; an Iron Age Broch on Tiree (Glasgow)
- MacKie, EW 1974a The Origin and Development of the Broch and Wheelhouse Building Cultures of the Scottish Iron Age unpublished Ph.D. thesis, University of Glasgow
- MacKie, EW 1975a *The Brochs of Scotland* in Fowler, PJ (ed) Rural Archaeology (London)
- MacKie, EW 1975b *The Vitrified Forts of Scotland* in Harding, DW (ed) Hillforts (London)
- MacKie, EW 1981 *Dun an Ruaigh Ruaidh, Loch Broom, Ross and Cromarty* GAJ 7 32-79

MacKie, EW 1984 *Testing Hypotheses About Brochs* SAR 2 117-128

MacKie, EW 1985 *Review of Fairhurst 1984* in Ant.Jour.65 500-1

MacKie, EW 1989 *Dun Cuier Again* SAR 6 116-8

MacRitchie, D 1916 *Earth Houses and their Occupation* PSAS 51 178-199

MacSween, A 1982 A Study of Iron Age Settlement on the Isle of Skye unpublished MA Dissertation, University of Edinburgh

Mann, M 1986 The Sources of Social Power, Vol.1; A History of Power from the Beginning to A.D. 1760 (Cambridge)

Martlew, R 1981 The Analysis of Prehistoric Settlement Location Dept. of Geography, University of Leicester, Occ. Paper 4

Martlew, R 1982 *The Typological Study of the Structures of the Scottish Brochs* PSAS 112 254-276

Mathieson, J 1928 *Antiquities on the St Kilda Group of Islands* PSAS 62 127

Morrison, D 1975 Traditions of the Western Isles (Stornoway)

Newell, PJ 1988 *A Buried Wall in Peatland by Sheshader, Isle of Lewis* PSAS 118 79-93

Nieke, MR 1984 Settlement Patterns in the Atlantic Province of Scotland in the 1st Millennium AD: a Study of Argyll unpublished Ph.D. thesis, University of Glasgow

Nieke, MR and Duncan, HB 1989 *Dalriada: The Establishment and Maintenance of an Early Historic Kingdom in Northern Britain* in Driscoll, ST and Nieke, MR (eds) Politics and Power in Early Medieval Britain and Ireland (Edinburgh) 6-21

Pearson, GW and Stuiver M 1986 *High-Precision Calibration of the Radiocarbon Time-Scale 500 - 2500 BC* Radiocarbon 28 no.2b 839-62

Peers, C and Radford CAR 1943 *The Saxon Monastery at Whitby* Archaeologia 89 27-88

Raftery, B 1984 La Tene in Ireland (Marburg)

Ralston, IBM 1986 Radiocarbon Dates (Scotland) typescript

Reid, ML 1989 *A Room with a View: an Examination of Round-houses with Particular Reference to Northern Britain* Oxford Journal of Archaeology 8(1) 1-39

Renfrew, AC 1979 Investigations in Orkney (London)

Renfrew, AC (ed) 1985 The Prehistory of Orkney (Edinburgh)

RCAHMS 1928 The Outer Hebrides, Skye and the Small Isles (Edinburgh)

RCAHMS 1946 Orkney and Shetland (Edinburgh)

Ritchie, A 1976 *Excavation of Pictish and Viking-Age Farms at Buckquoy, Orkney* PSAS 108 174-227

Ritchie, A 1985 *Orkney in the Pictish Kingdom* in Renfrew (ed) The Prehistory of Orkney (Edinburgh) 183-204

- Ritchie, A and Ritchie, JNG 1981 Scotland: Archaeology and Early History (Edinburgh)
- Ritchie, W 1966 *Sea Level and Coastal Changes in the Uists* Trans.Inst.Br.Geog. 39 79-86
- Ritchie, W 1967 *The Machair of South Uist* Scott.Geog.Mag. 83 161-173
- Ritchie, W 1979 *Machair Development and Chronology in the Uists and Adjacent Islands* PRSE 1979 107-122
- Ritchie, W 1985 *Inter-tidal and Sub-tidal Organic Deposits and Sea-Level Change in the Uists, Outer Hebrides* Scott.Jour.Geol. 21 (2) 161-176
- Robinson, SW 1986 A Computational Procedure for the Utilization of High-Precision Radiocarbon Calibration Curves Open-File Report, U.S. Dept. of the Interior Geological Survey
- Sands, J 1876 *Notes on the Antiquities of St Kilda* PSAS 12 188
- Sands, J 1878 Life on St Kilda (Edinburgh)
- Scott, JG 1956 *Drimore* DES 1956 32
- Scott, L 1947 *The Problem of the Brochs* PPS XIII 1-37
- Scott, L 1947a *The Chambered Tomb of Unival, North Uist* PSAS 82 1-48
- Scott, L 1948 *Gallo-British Colonies; The Aisled Roundhouse Culture in the North* PPS XIV 46-125
- Scott, L 1950 *Eilean an Tighe; a Pottery Workshop of the 2nd Millennium BC* PSAS 85 1-37

- Sharples, NM 1984 *Excavations at Pierowall Quarry, Westray, Orkney* PSAS 114 75-126
- Simpson, DDA 1965 *Toe Peninsula, Northton, Isle of Harris* DES 1965 22
- Simpson, DDA 1966 *A Neolithic Settlement in the Outer Hebrides* Antiquity 40 137-139
- Sinclair, J (ed) 1791-99 The Statistical Account of Scotland Vol. XX The Western Isles (Edinburgh)
- Small, A (ed) The Picts: A New Look at Old Problems (Dundee)
- Stevenson, RBK 1955 *Pins and the Chronology of Brochs* PPS 21 282-294
- Stuiver, M and Pearson, GW 1986 *High-Precision Calibration of the Radiocarbon Time-Scale AD 1950 - 500 BC* Radiocarbon 28 no.2b 805-39
- Tabraham, C 1976 *Excavations at Dun Carloway Broch, Isle of Lewis* PSAS 108 156-167
- Thomas, FWL 1857 *Notice of Beehive Houses in Harris and Lewis* PSAS 3 127-170
- Thomas, FWL 1870 *On the Primitive Dwellings and Hypogea of the Outer Hebrides* PSAS 7 153-195
- Thomas, FWL 1890 *On the Duns of the Outer Hebrides* Arch.Scot. 5 365-415
- Topping, PG 1985 Later Prehistoric Pottery of the Western Isles unpublished Ph.D. thesis, University of Edinburgh

Topping, PG 1986 *Neutron Activation Analysis of Later Prehistoric Pottery from the Western Isles of Scotland* PPS 52 105-129

Topping, PG 1987 *Typology and Chronology in the Later Prehistoric Pottery Assemblages of the Western Isles* PSAS 117 67-84

Warner, R 1983 *Ireland, Ulster and Scotland in the Earlier Iron Age* in O'Connor, A and Clarke, DV (ed) From the Stone Age to the '45 (Edinburgh)

Wilkins, DA 1984 *The Flandrian Woods of Lewis (Scotland)* Journal of Ecology 72 251-258

Young, A 1952 *An Aisled Farmhouse at the Allasdale, Isle of Barra* PSAS 87 80-106

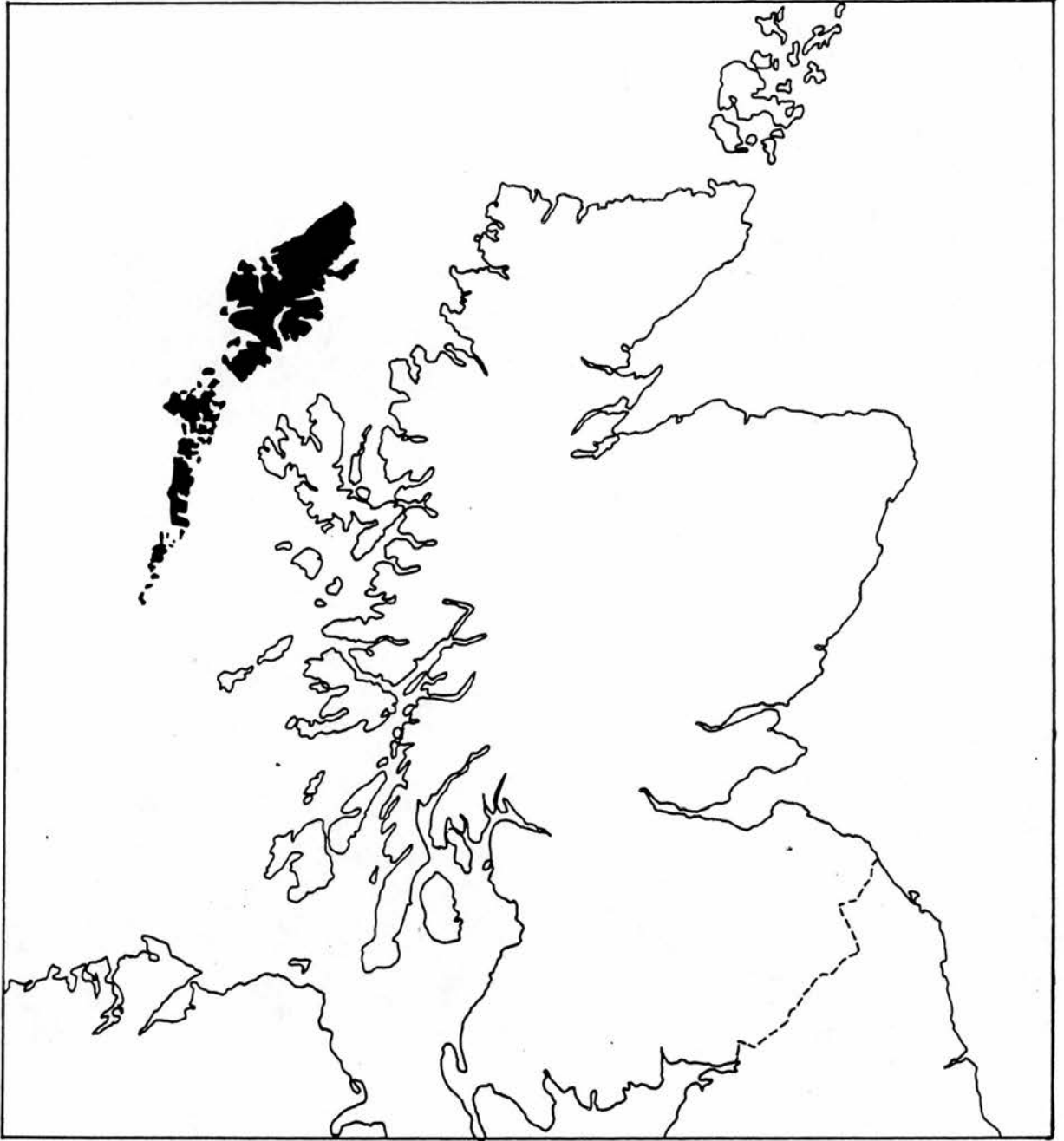
Young, A 1955 *Excavations at Dun Cuier, Isle of Barra, Outer Hebrides* PSAS 89 290-328

Young, A 1961 *Brochs and Duns* PSAS 95 171-199

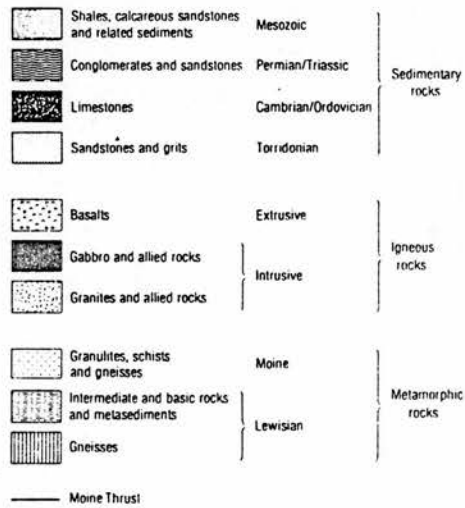
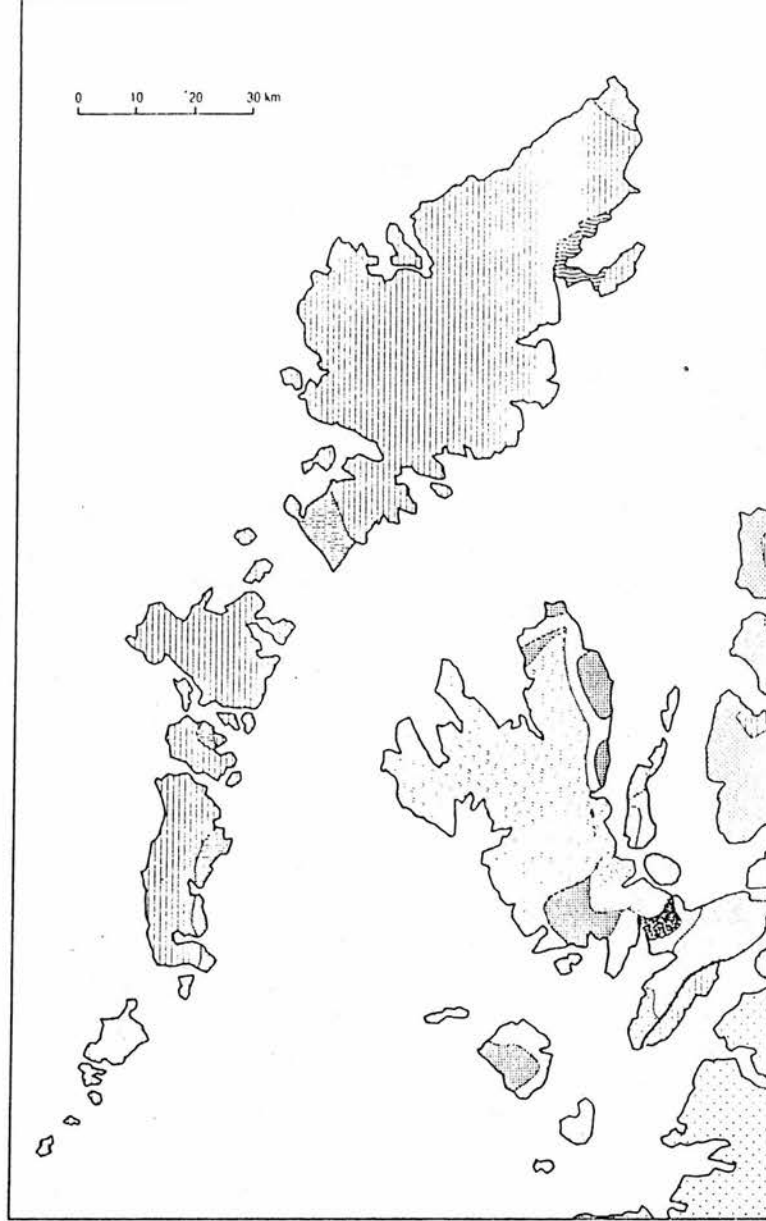
Young, A 1966 *A Sequence of Hebridean Pottery* in Rivet, ALF (ed) The Iron Age in Northern Britain 45-58

Young, A and Richardson, KM 1959 *A Cheardhach Mhor, Drimore, South Uist* PSAS 93 135-173

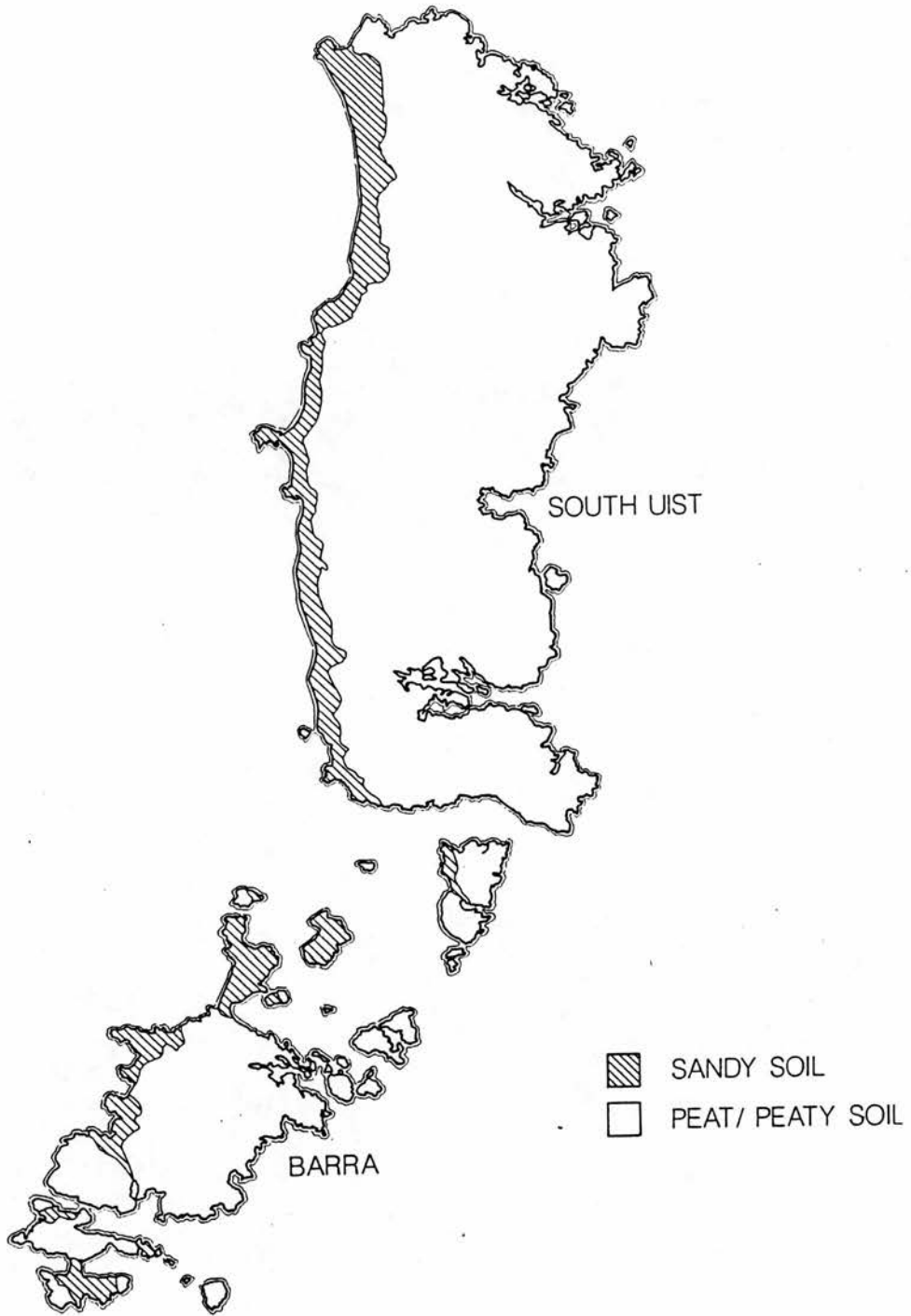
ILLUSTRATIONS



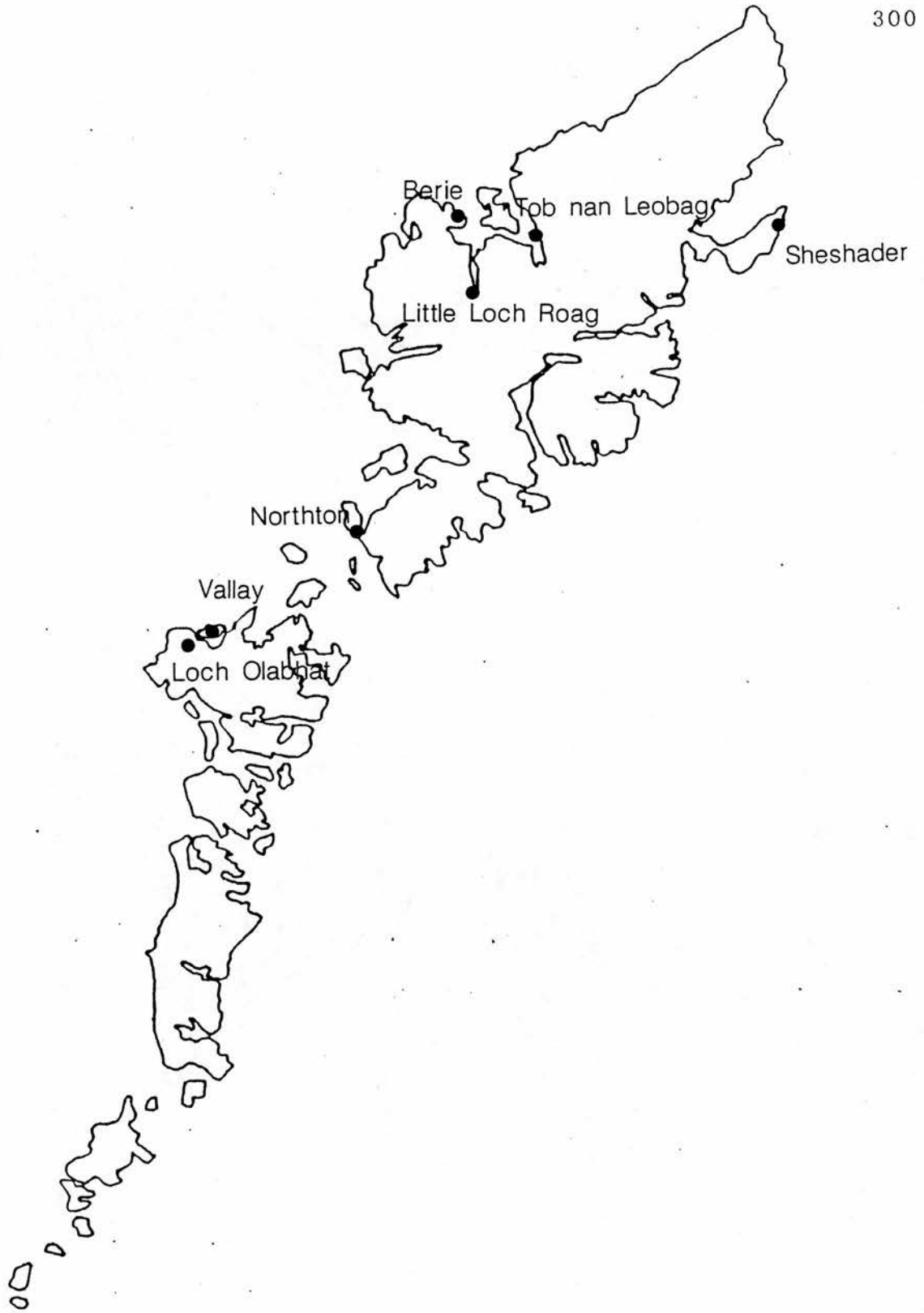
Ill. 1.1 Western Isles; Location Map



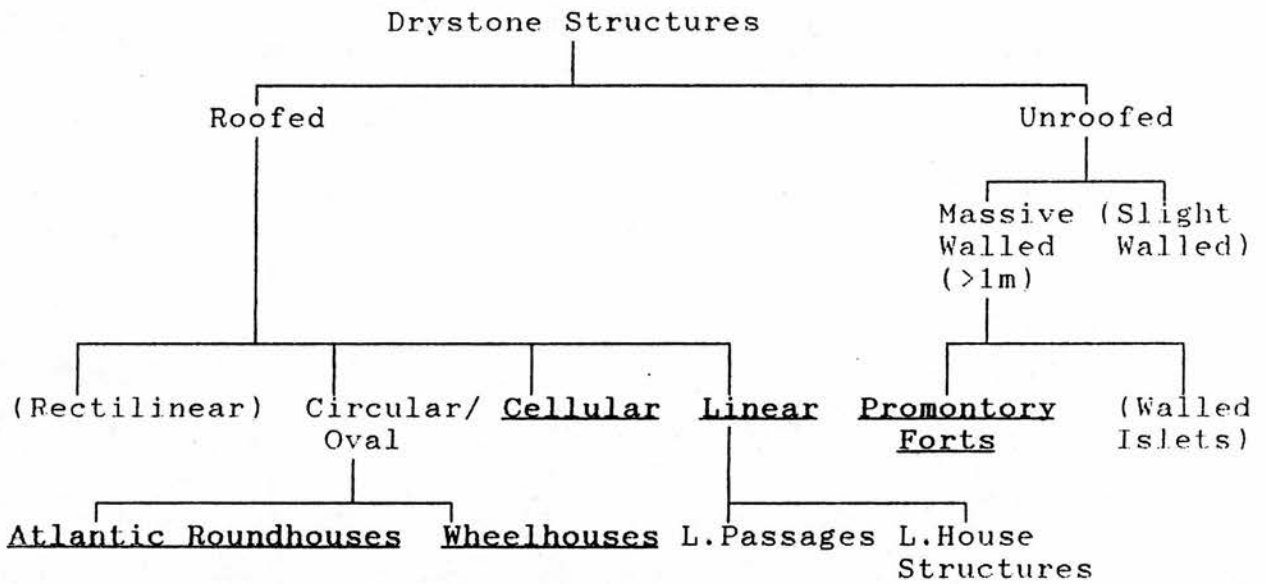
Ill. 2.1 Western Isles; Solid Geology



Ill. 2.2 Soils in South Uist and Barra



Ill. 2.3 Principal Environmental Sites Discussed in the Text

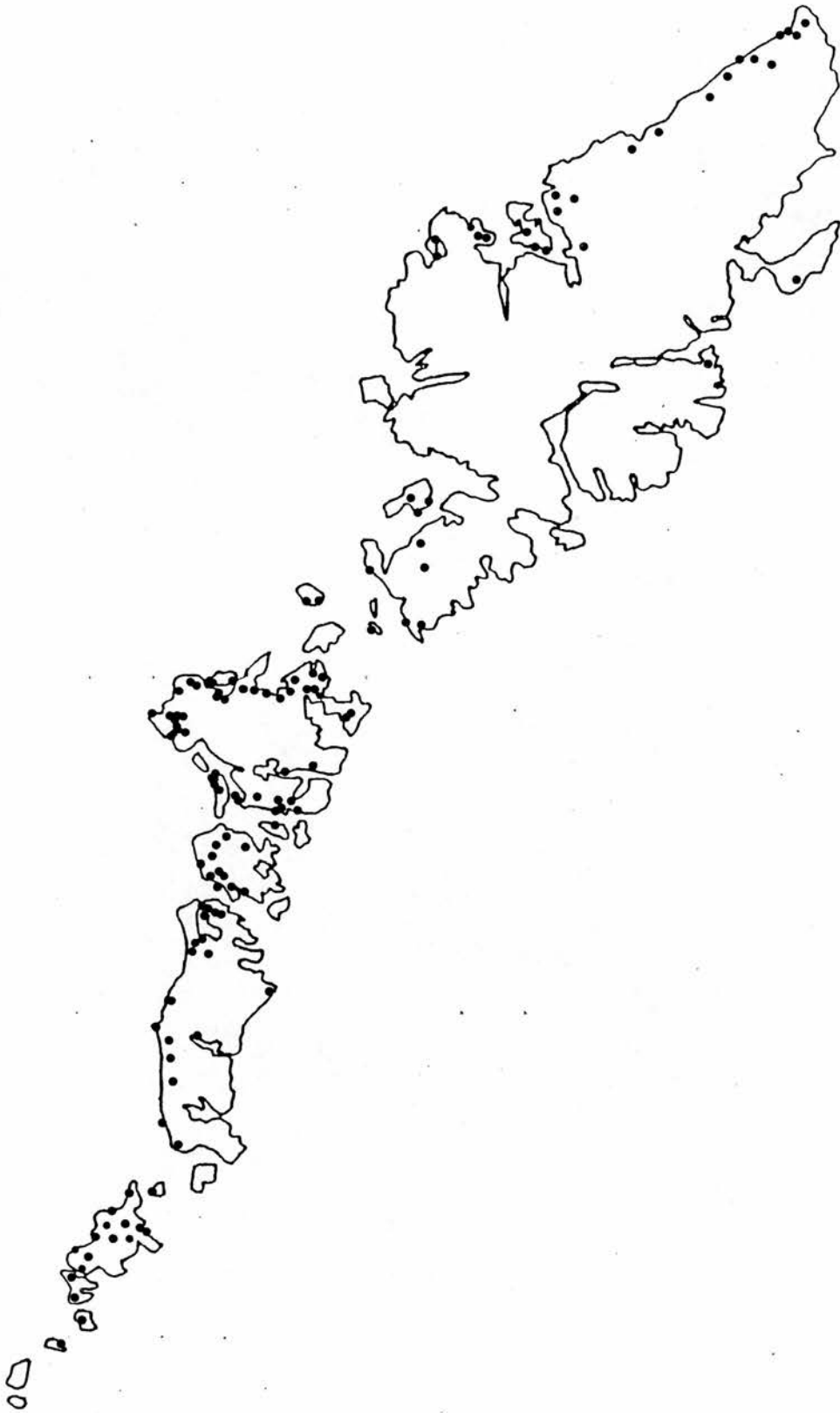


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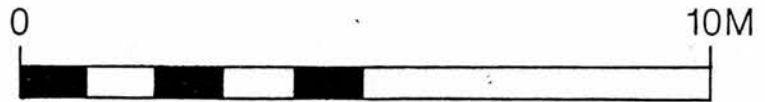
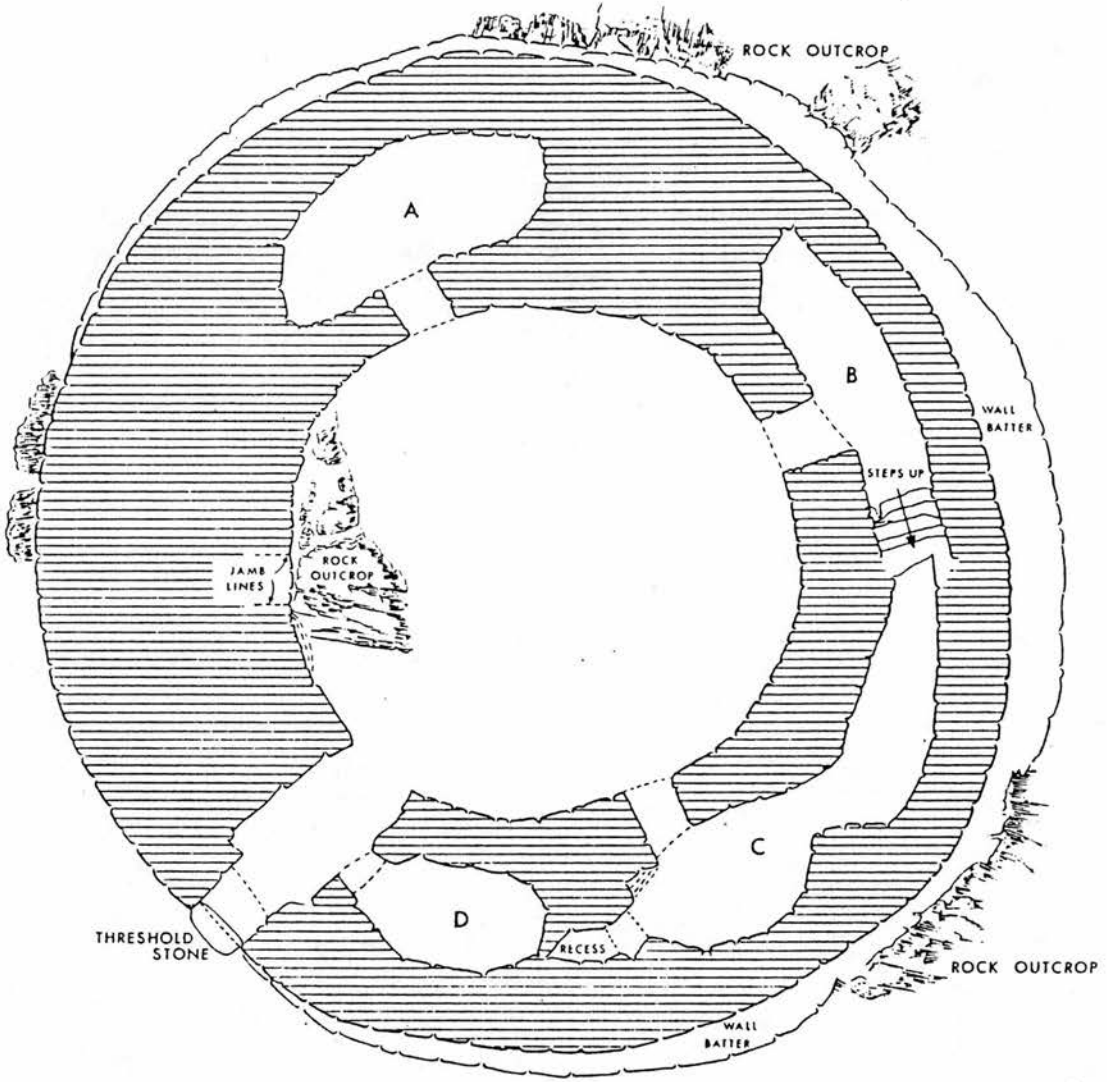
Ill. 4.1 - A preliminary classification system for the monuments of the Western Isles.

	Atlantic Roundhouse	Wheelhouse	Cellular	Linear
Dun Carloway	A.L12			
Dun Bharabhat	A.L18		C.4	
Loch na Berie	A.L19		C.5	
Rudh an Duin	A.NU3			
Dun a Ghallain	A.NU4		C.14	
Eilean a Ghallain	A.NU6		C.15	
Dun Thomaidh	A.NU7		C.16	
Garry Iochdrach	A.NU13	W.7		
Cnoc a Comhdhalach	A.NU14	W.8		
Eilean Maleit	A.NU17	W.10		
Buaile Risary	A.NU20			
Dun Ban, Grimsay	A.NU51		C.23	
Dun Cuier	A.B4		C.28	
Cnip		W.1	C.3	L.1
The Udal		W.3	C.10	L.7
Foshigarry		W.4	C.11	L.8
Bac Mhic Connain		W.5		
Sollas		W.6		
Clettraval		W.11		
Bruach Ban		W.12		
Bruthach a Tuath		W.13		L.12
Hornish Point		W.14		
A Cheardach Mhor		W.15	C.24	
A Cheardach Bheag		W.16		
Usinish		W.19		
Kilpheder		W.22		
Tigh Talamhanta		W.25		
Galson			C.2	
Sithean an Altair			C.12	
Eilean Olabhat			C.19	
Unival			C.22	
Gress Lodge				L.3
Vallay				L.9
Drimore				L.13

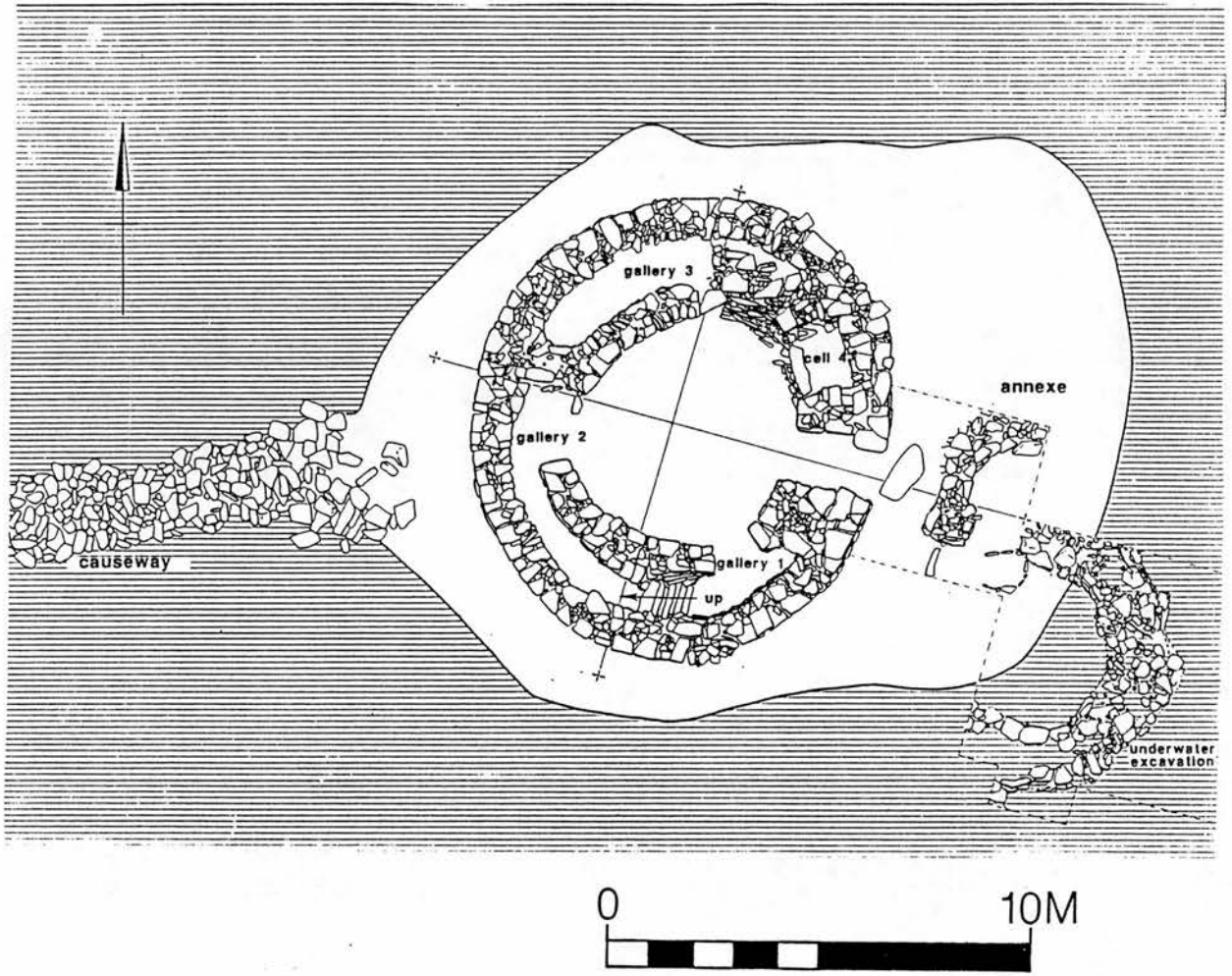
Ill. 4.2 Presence and Absence of Defined Types on Excavated Sites (codes represent catalogue references)



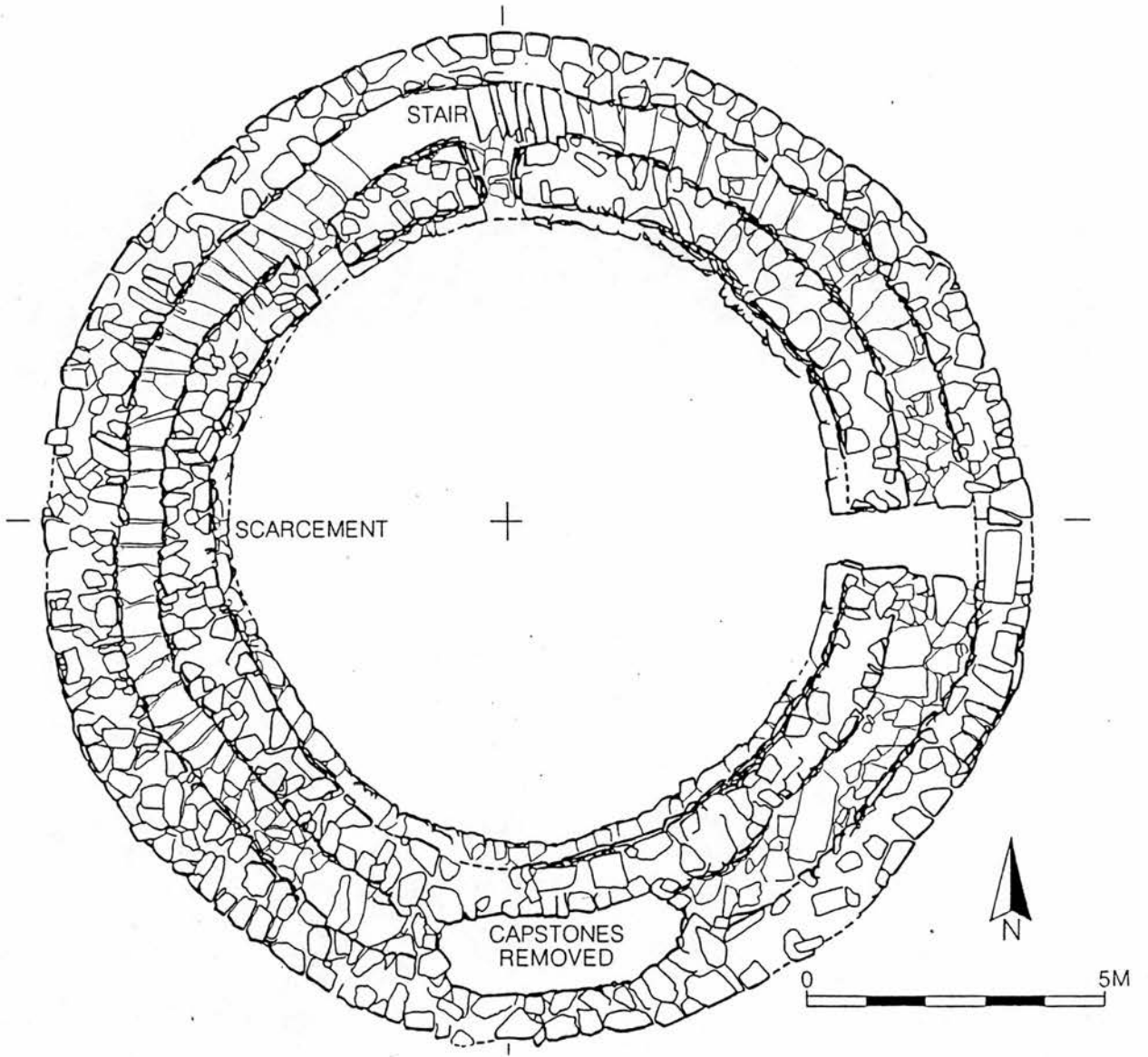
Ill. 5.1 Distribution of Atlantic Roundhouses in the Western Isles



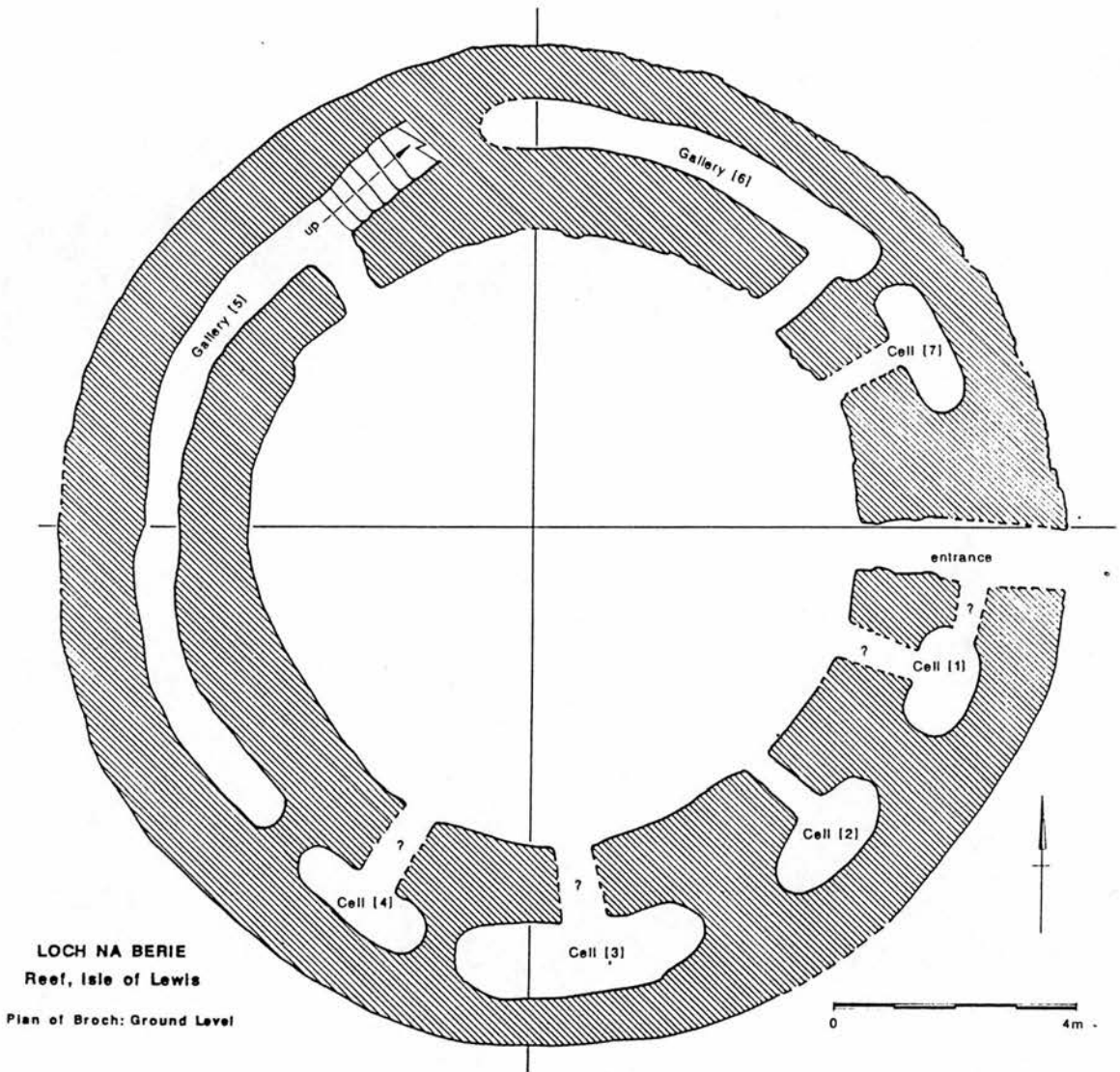
Ill. 5.2 Dun Carloway (after Tabraham 1976)



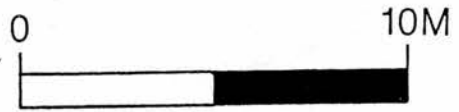
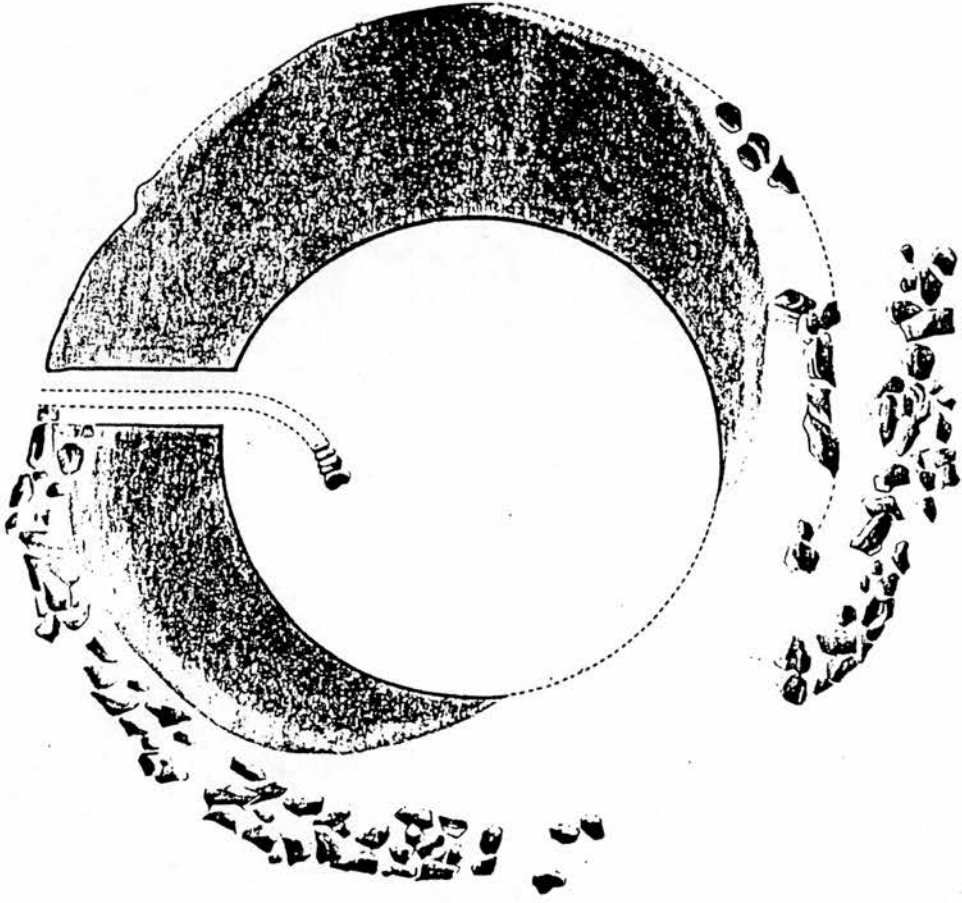
Ill. 5.3 Dun Bharabhat, Cnip



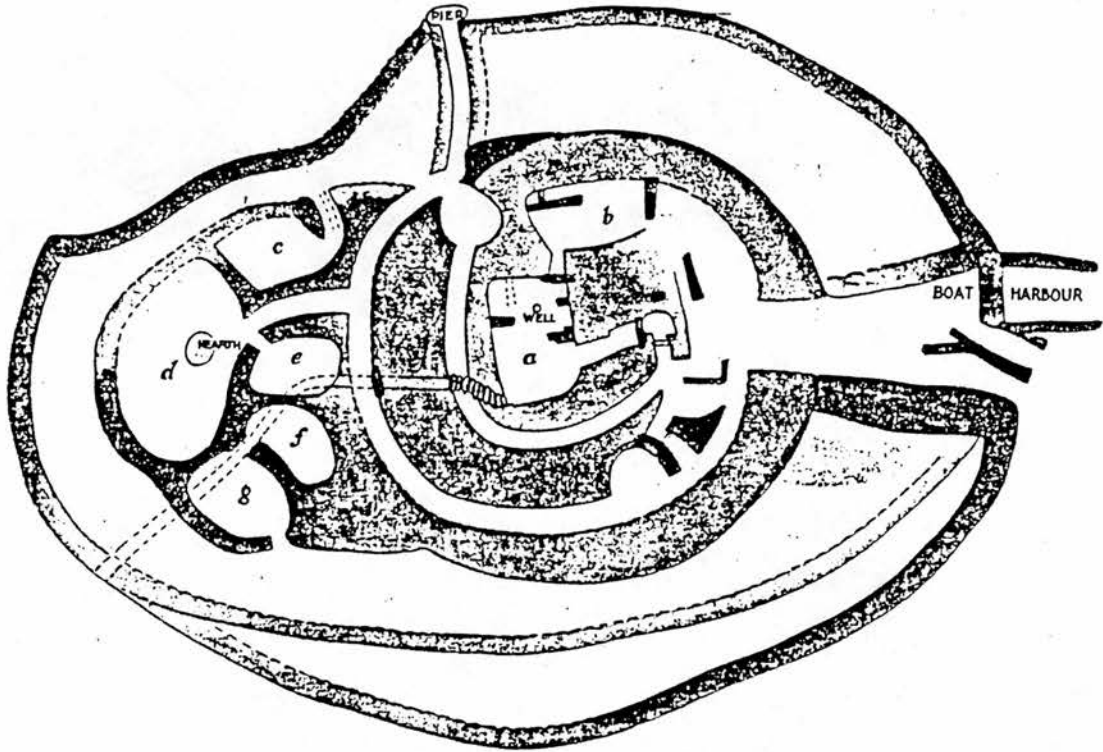
Ill. 5.4 Loch na Berie First Floor Plan



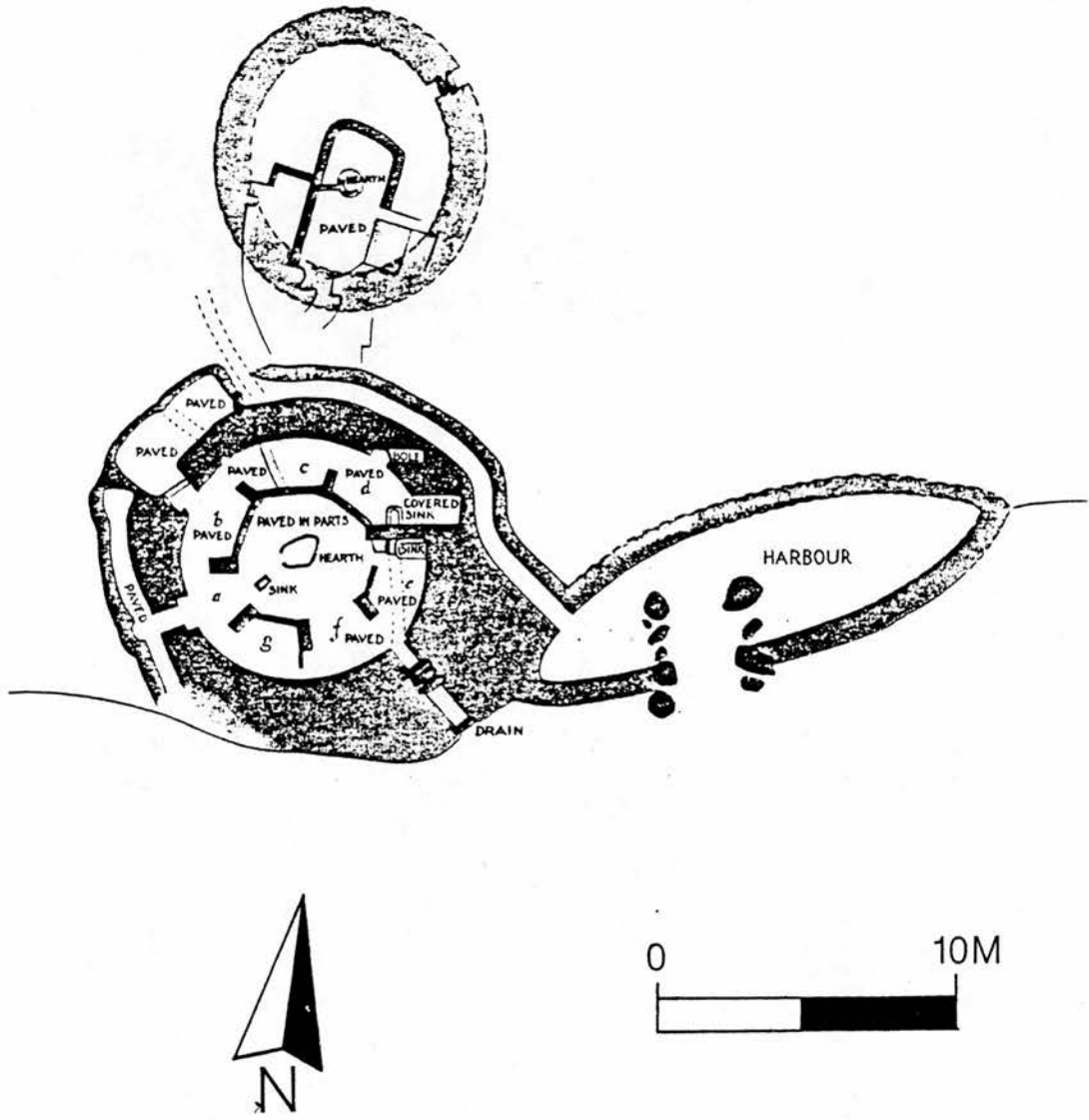
Ill. 5.5 Loch na Berie Ground Floor Sketch Plan



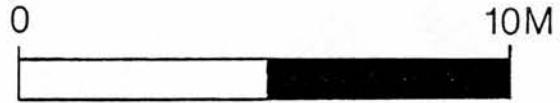
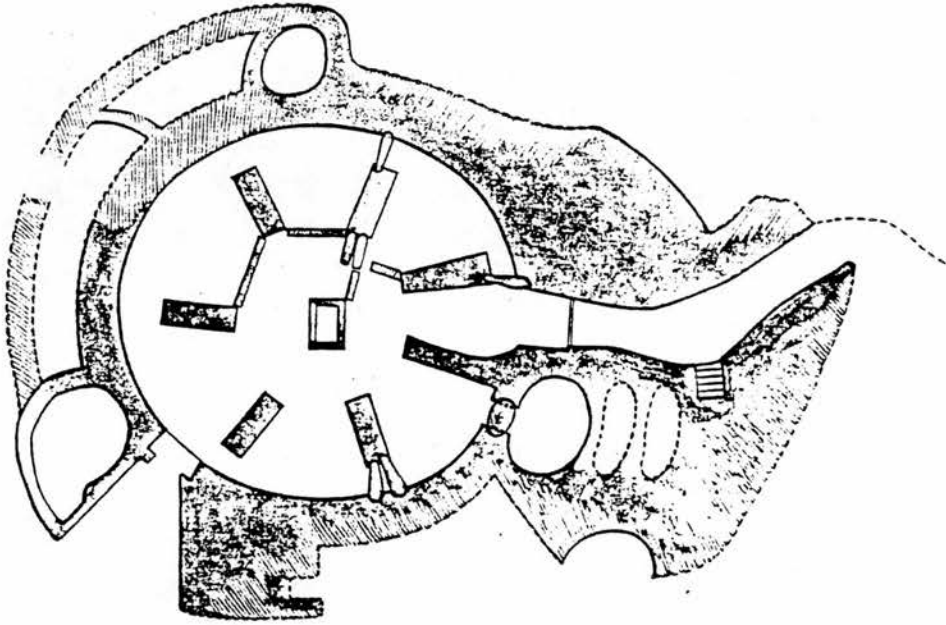
Ill. 5.6 Rudh an Duin (after Beveridge 1911)



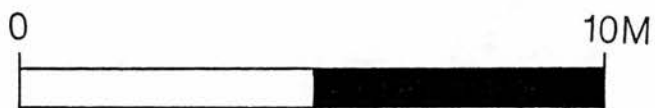
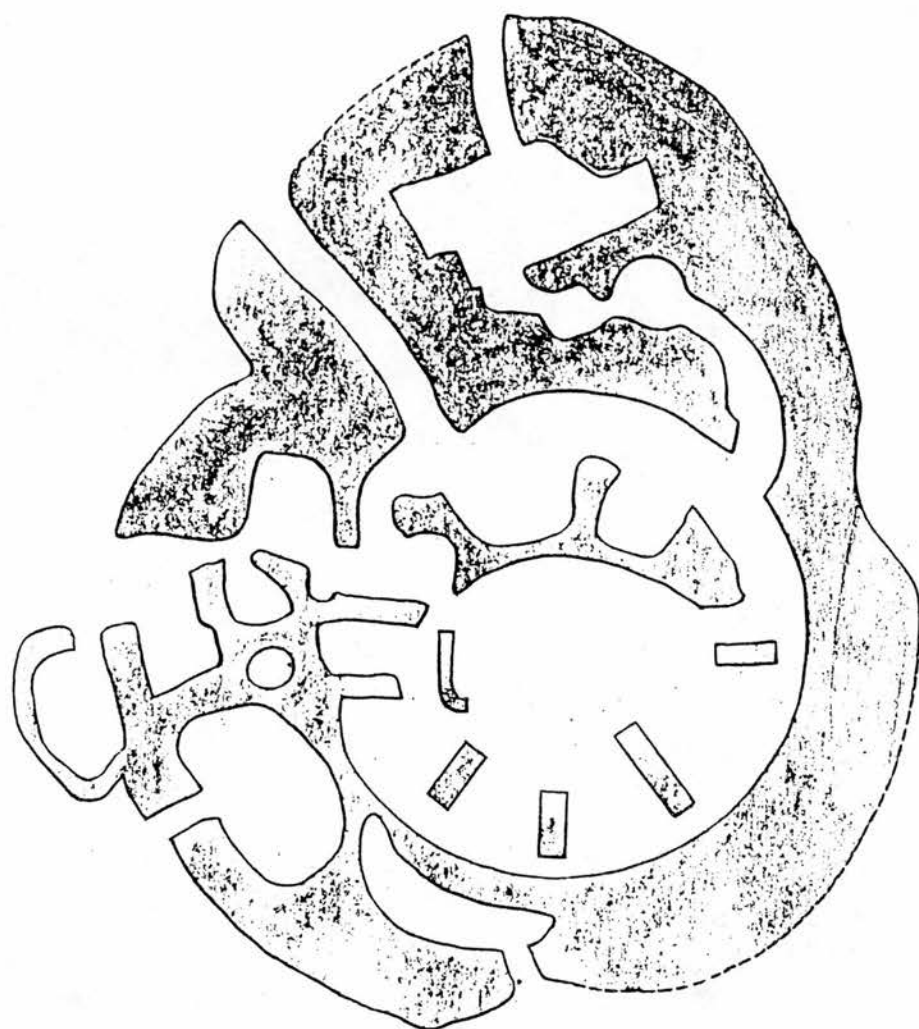
Ill. 5.7 Dun Thomaidh (after Beveridge 1930)



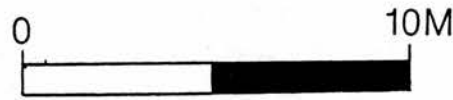
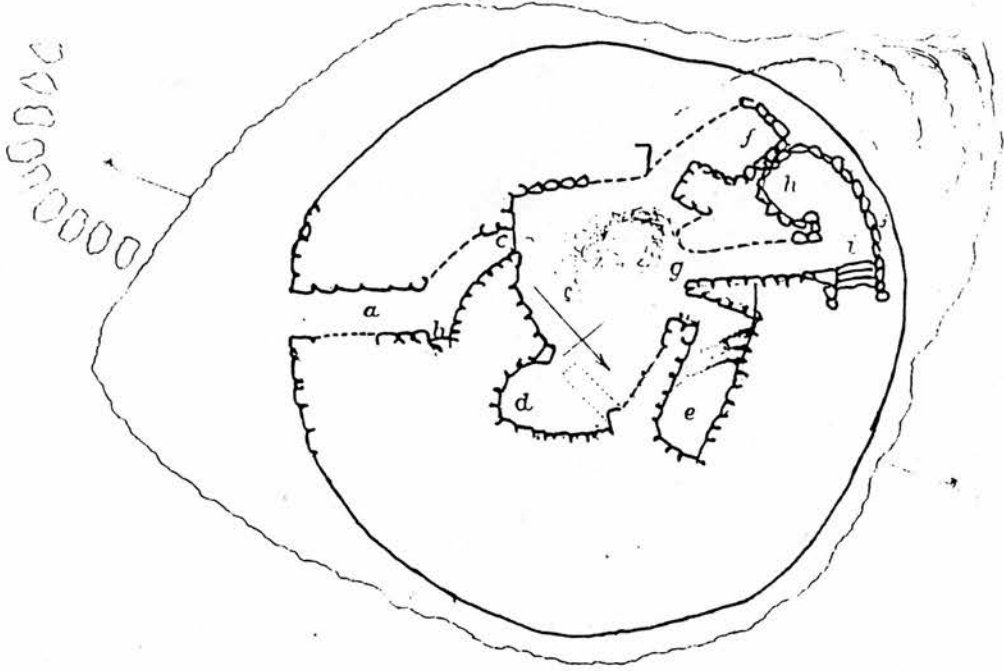
Ill. 5.8 Garry Iochdrach (after Beveridge 1930)



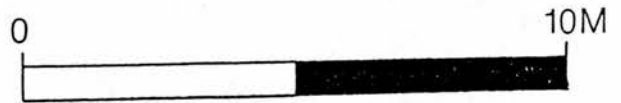
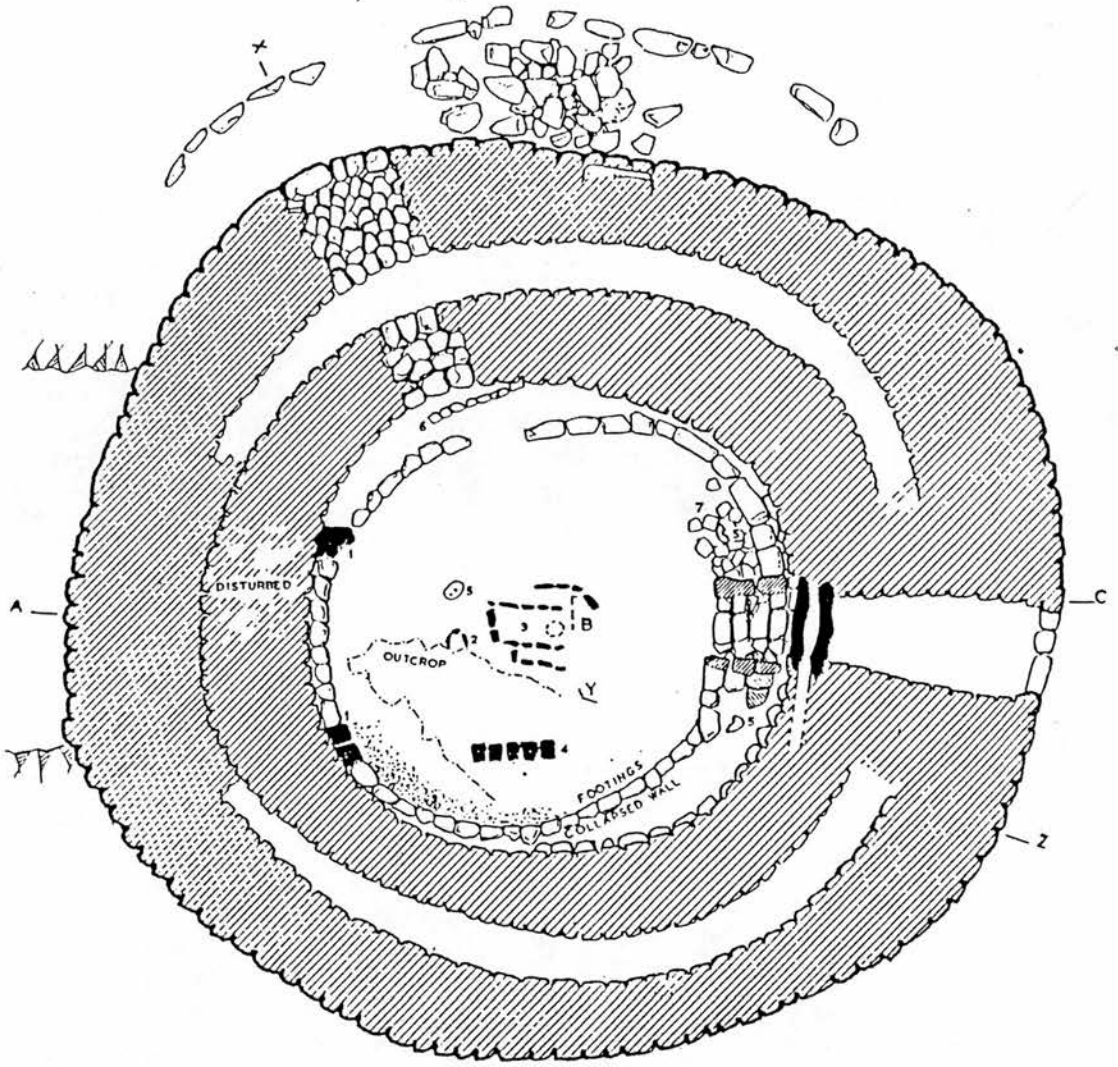
Ill. 5.9 Cnoc a Comhdhalach (after Beveridge 1911)



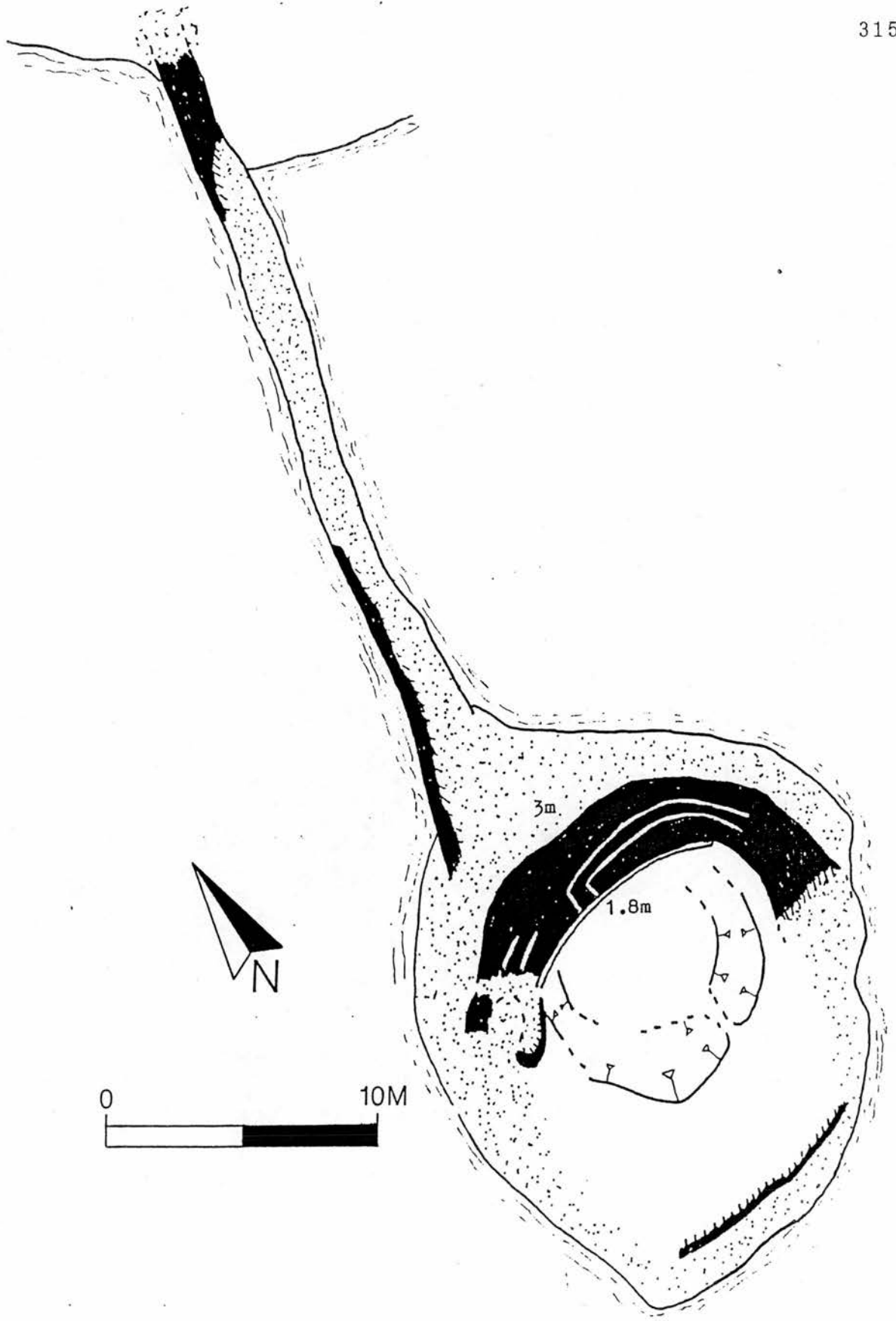
Ill. 5.10 Eilean Maleit (after Beveridge 1911)



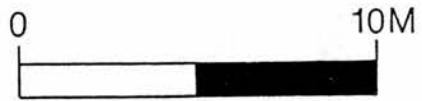
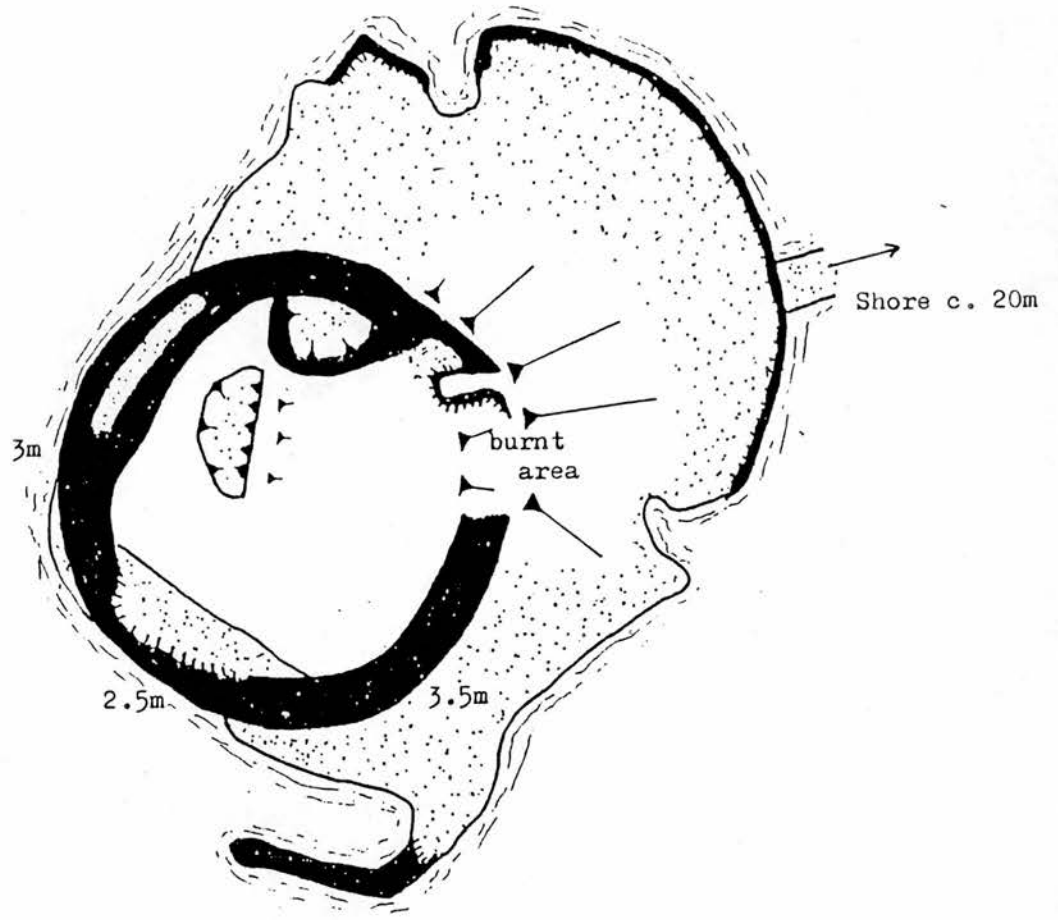
Ill. 5.11 Dun Ban, Grimsay (after Thomas 1890)



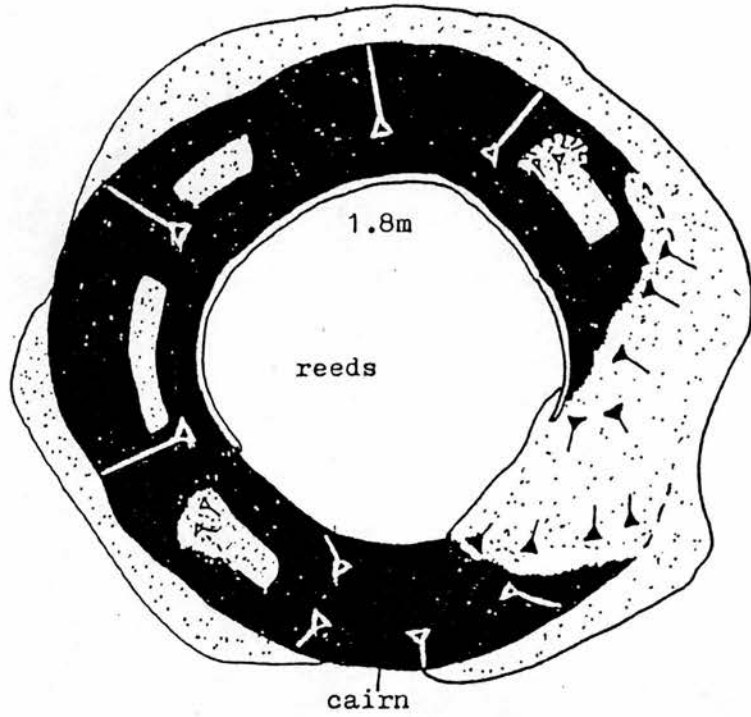
Ill. 5.12 Dun Cuier (after Young 1955)



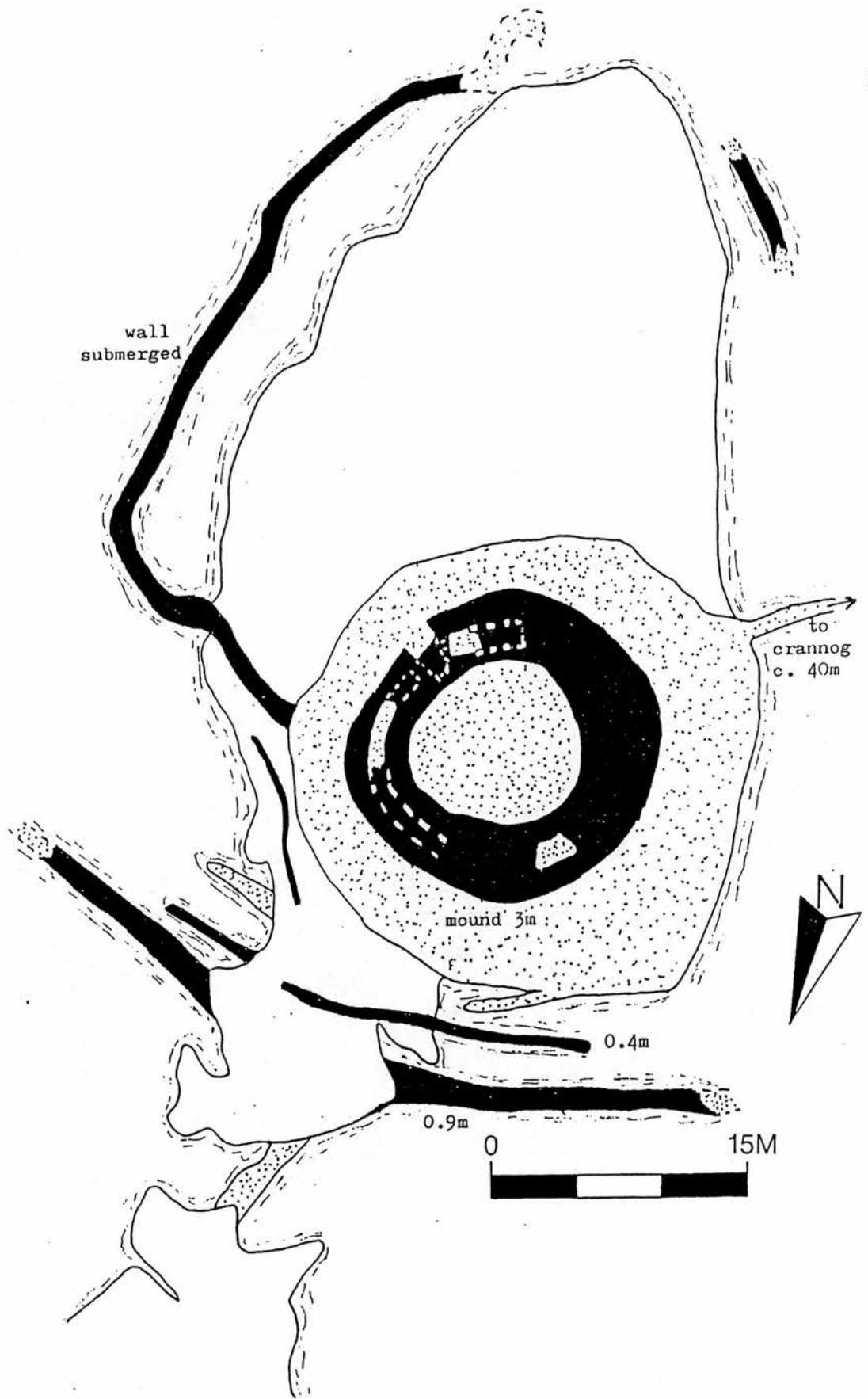
Ill. 5.13 Dun Bharabhat, Great Bernera



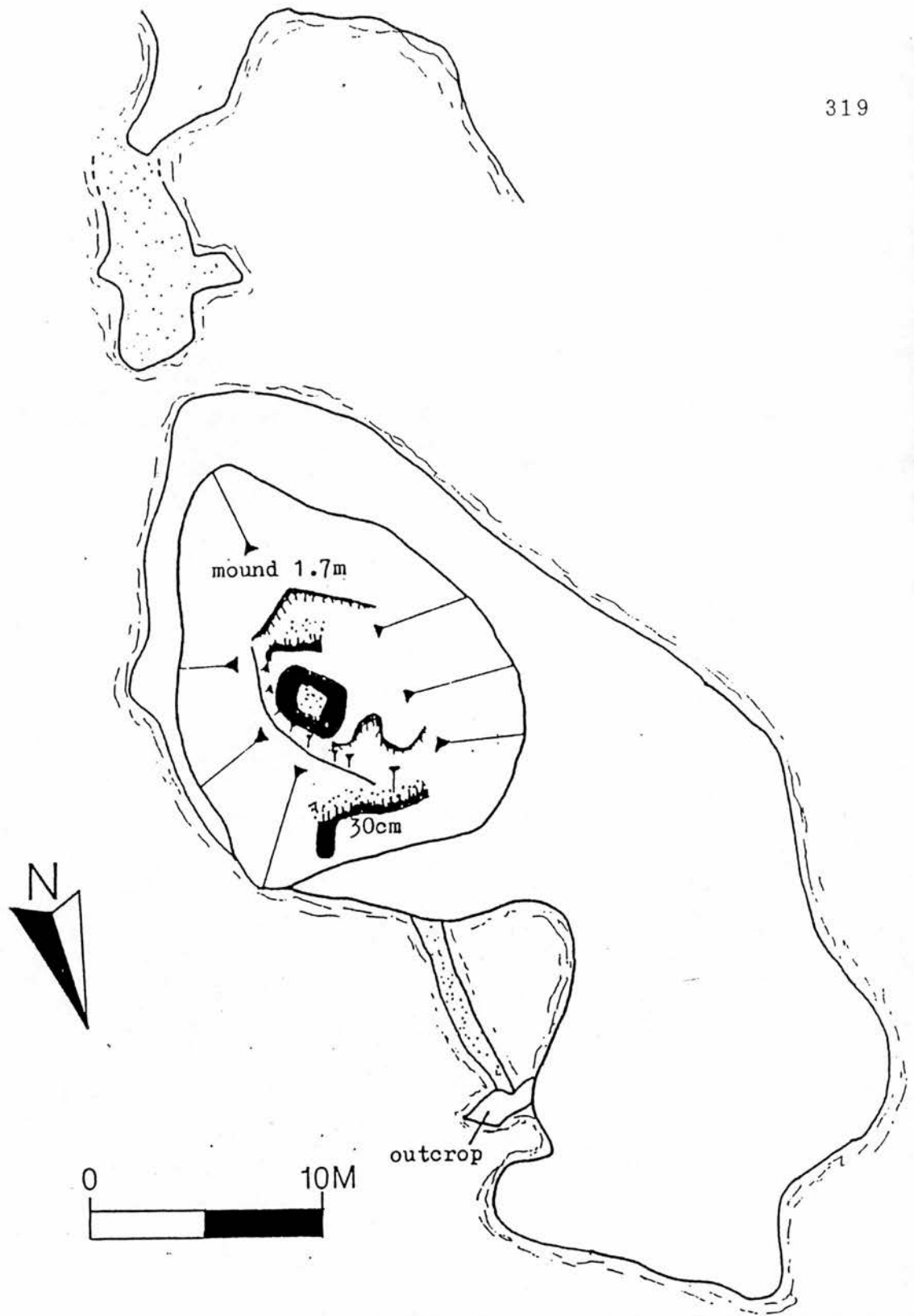
Ill. 5.14 Dun Cromore, Lewis



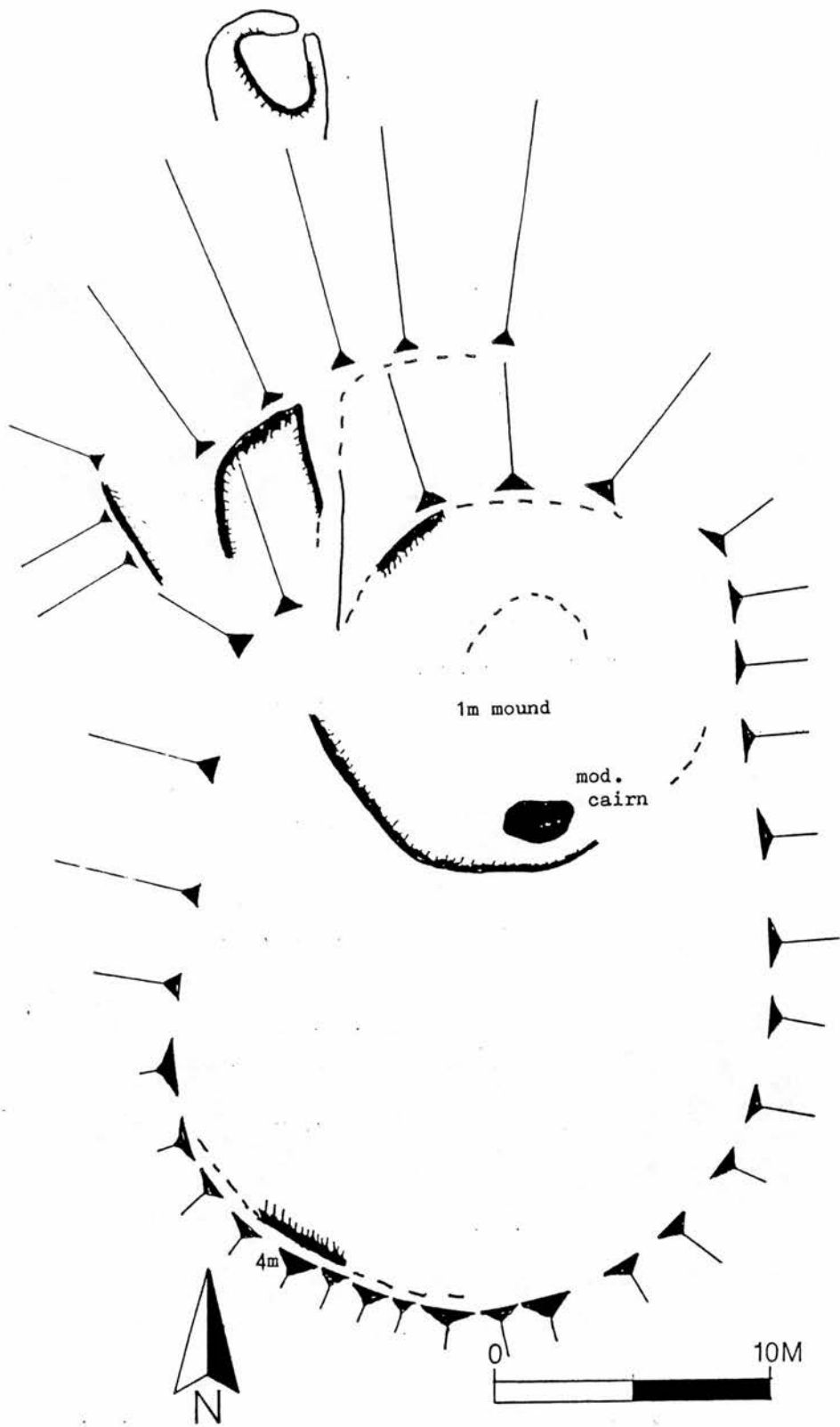
Ill. 5.15 Dun Borve, Lewis



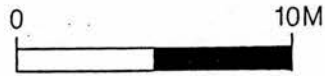
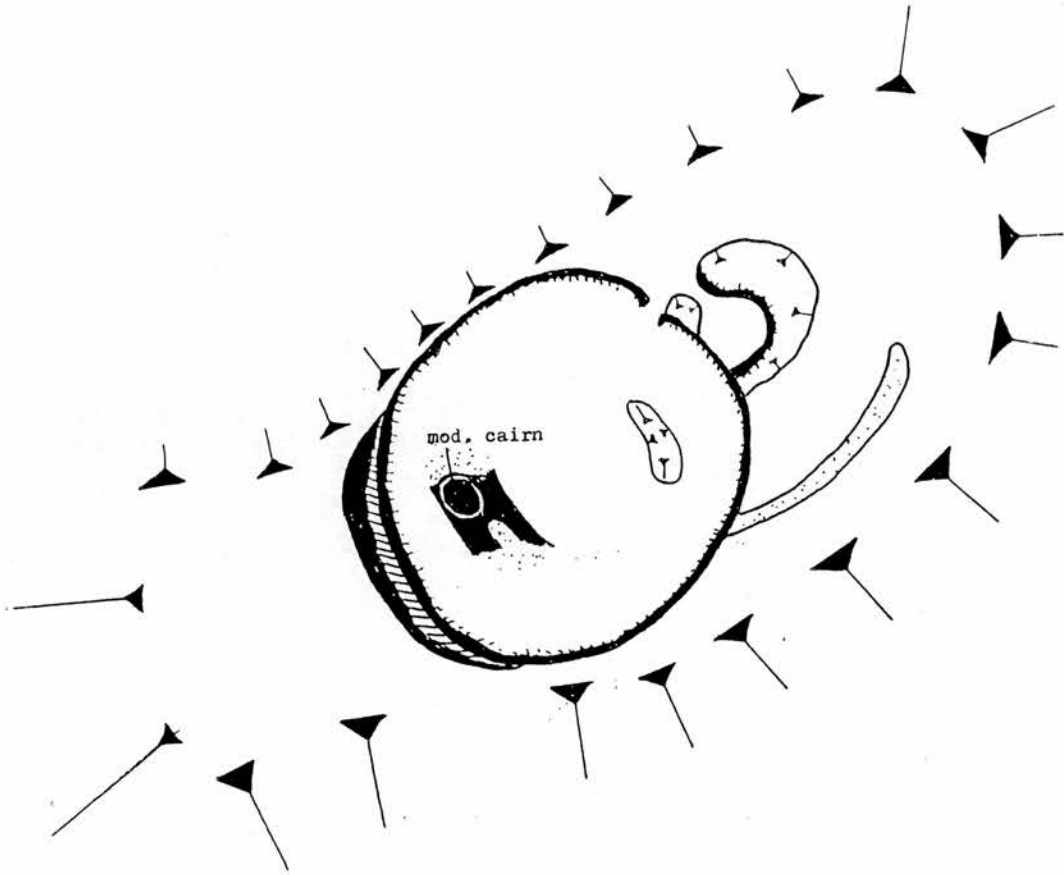
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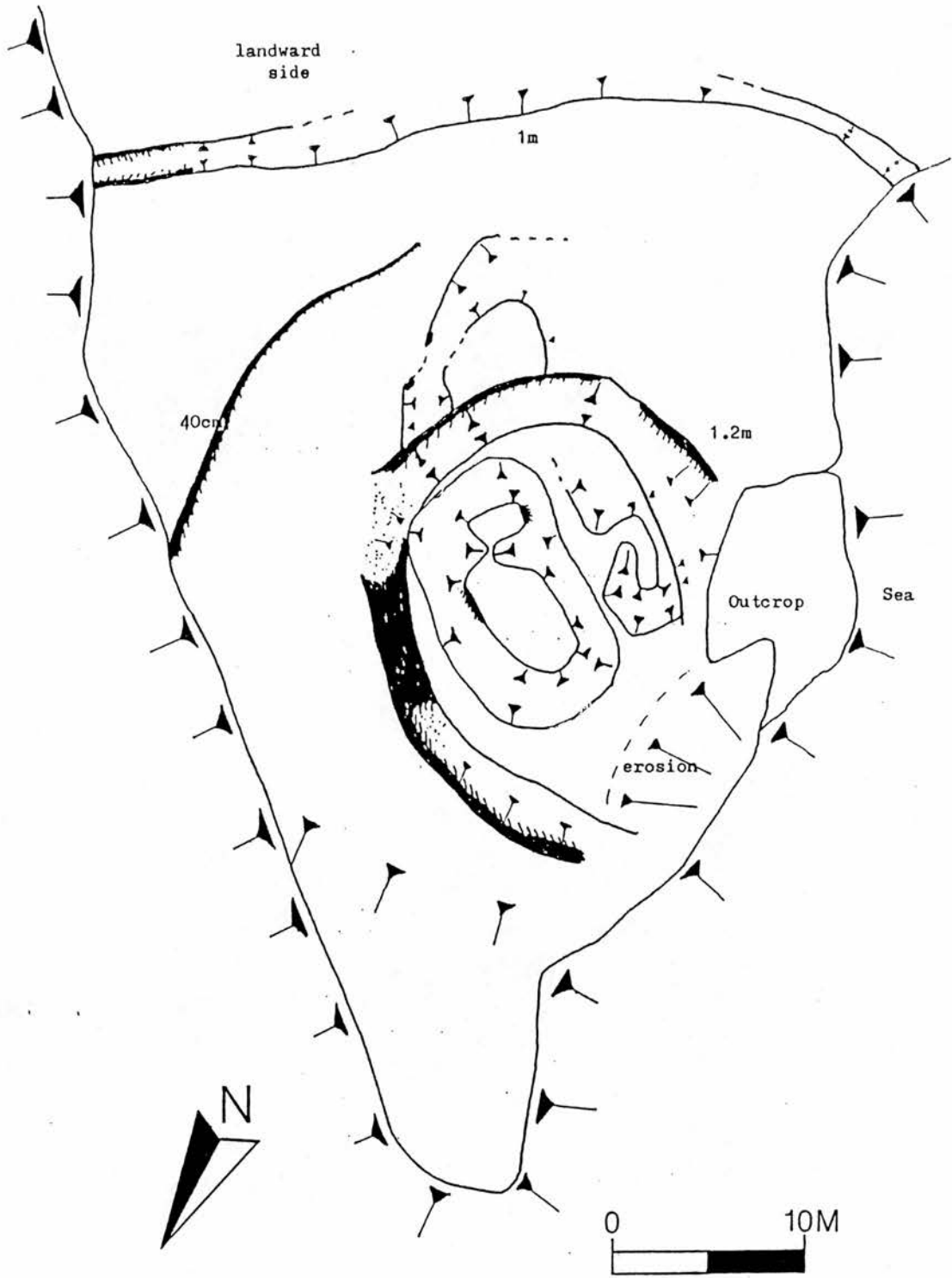
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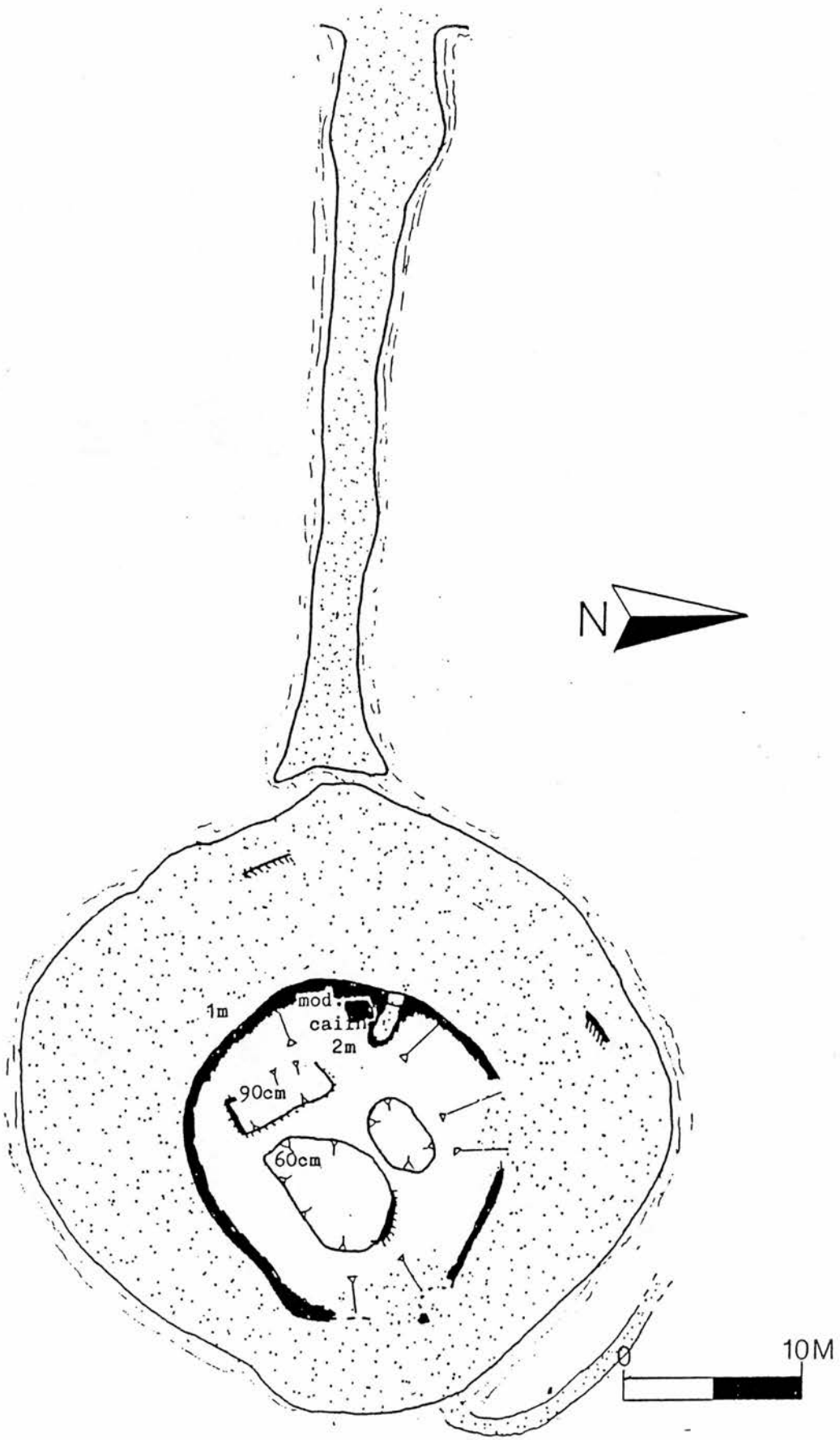
Ill. 5.18 St. Clement's Dun, Rodel, Harris



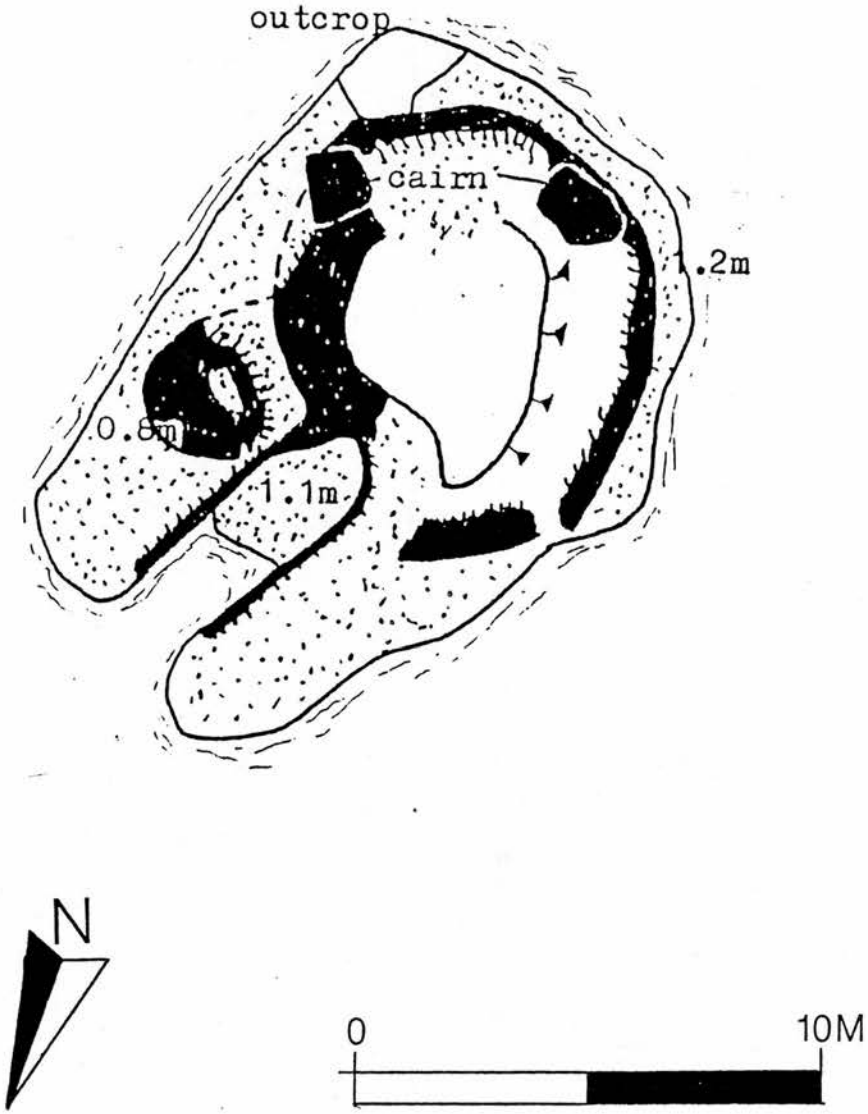
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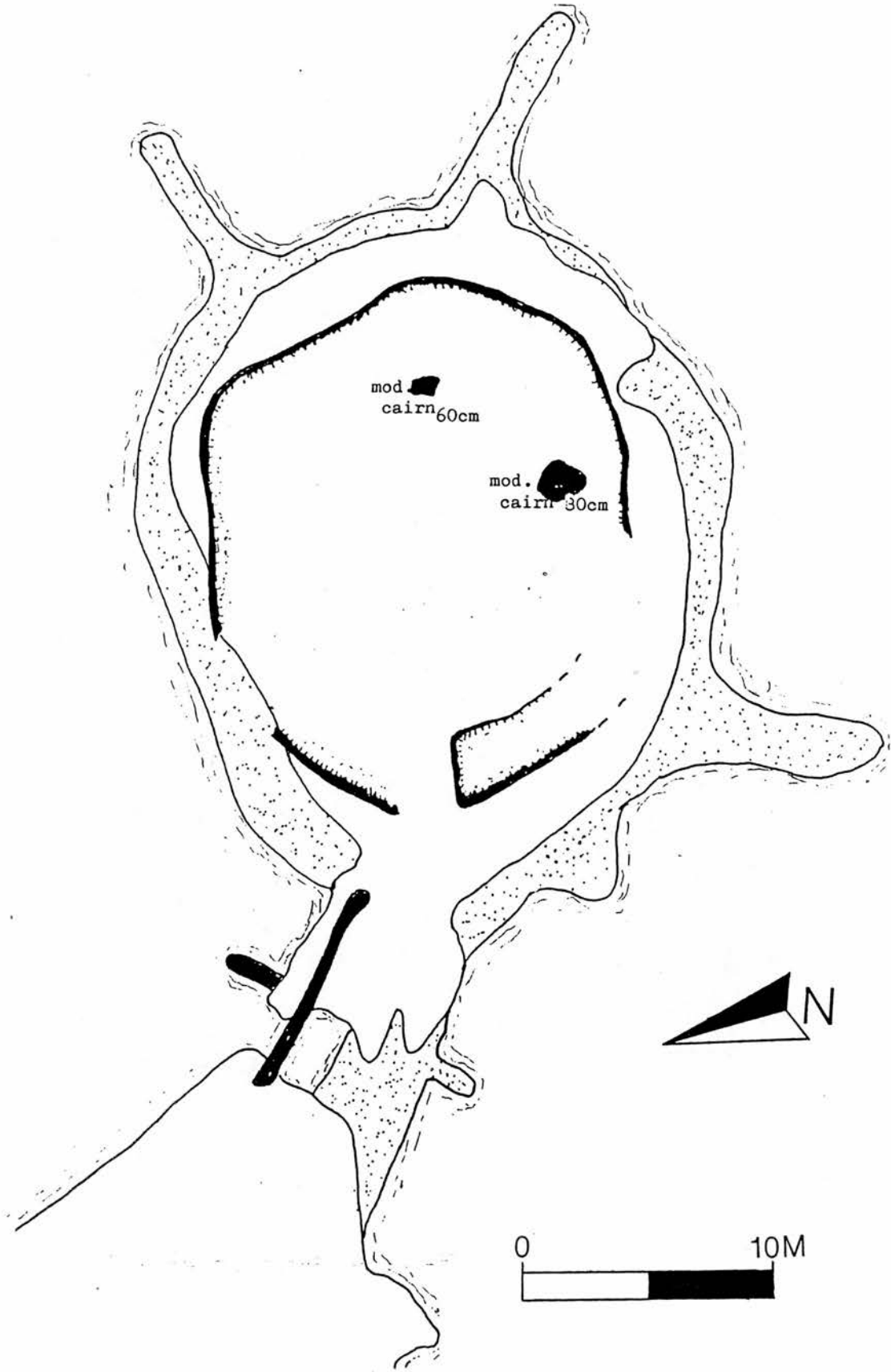
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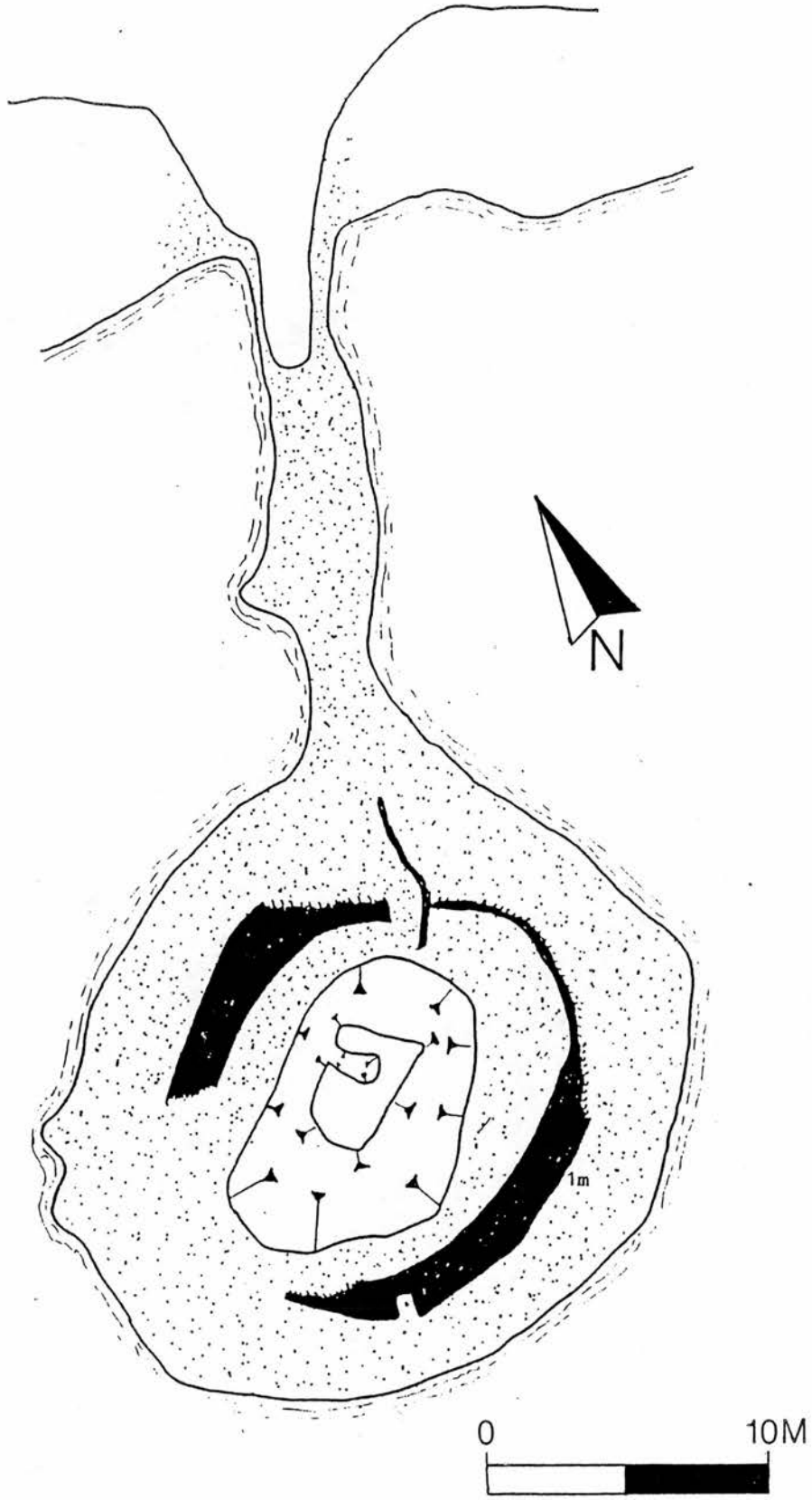
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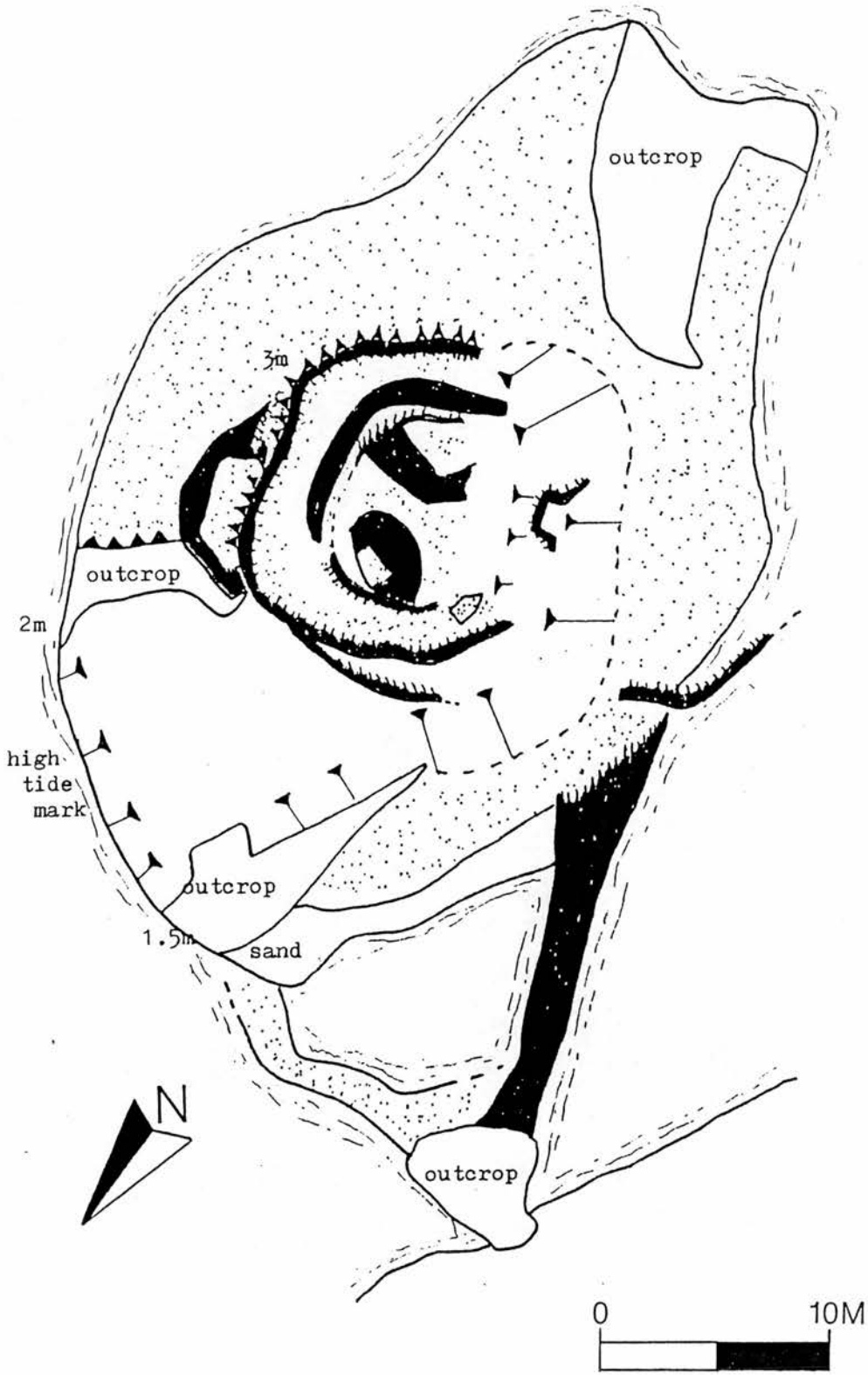
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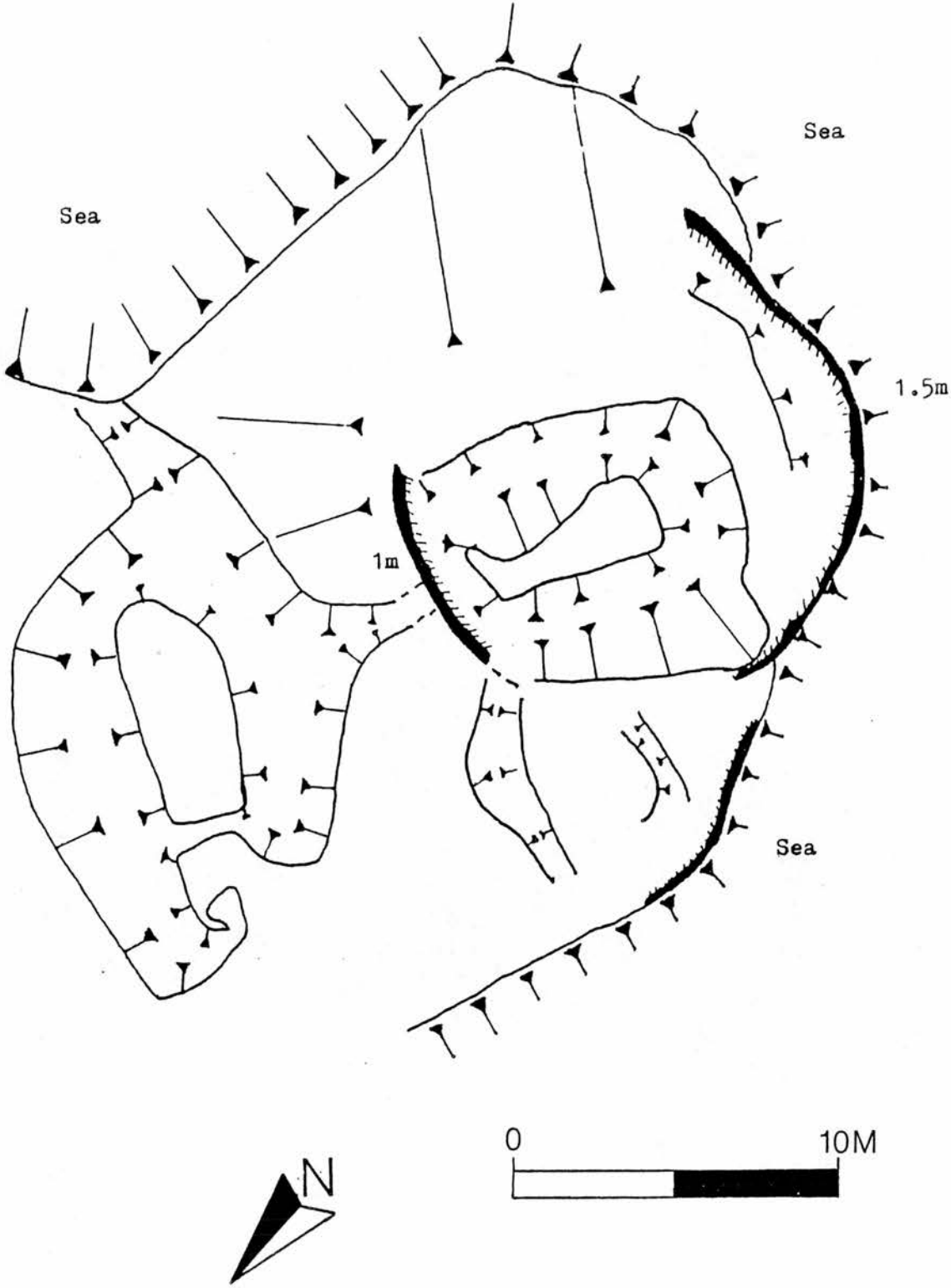
Ill. 5.23 Dun Bharabhat, Galson, Lewis



Ill. 5.24 Dun Loch an Duin, Lower Bayble, Lewis



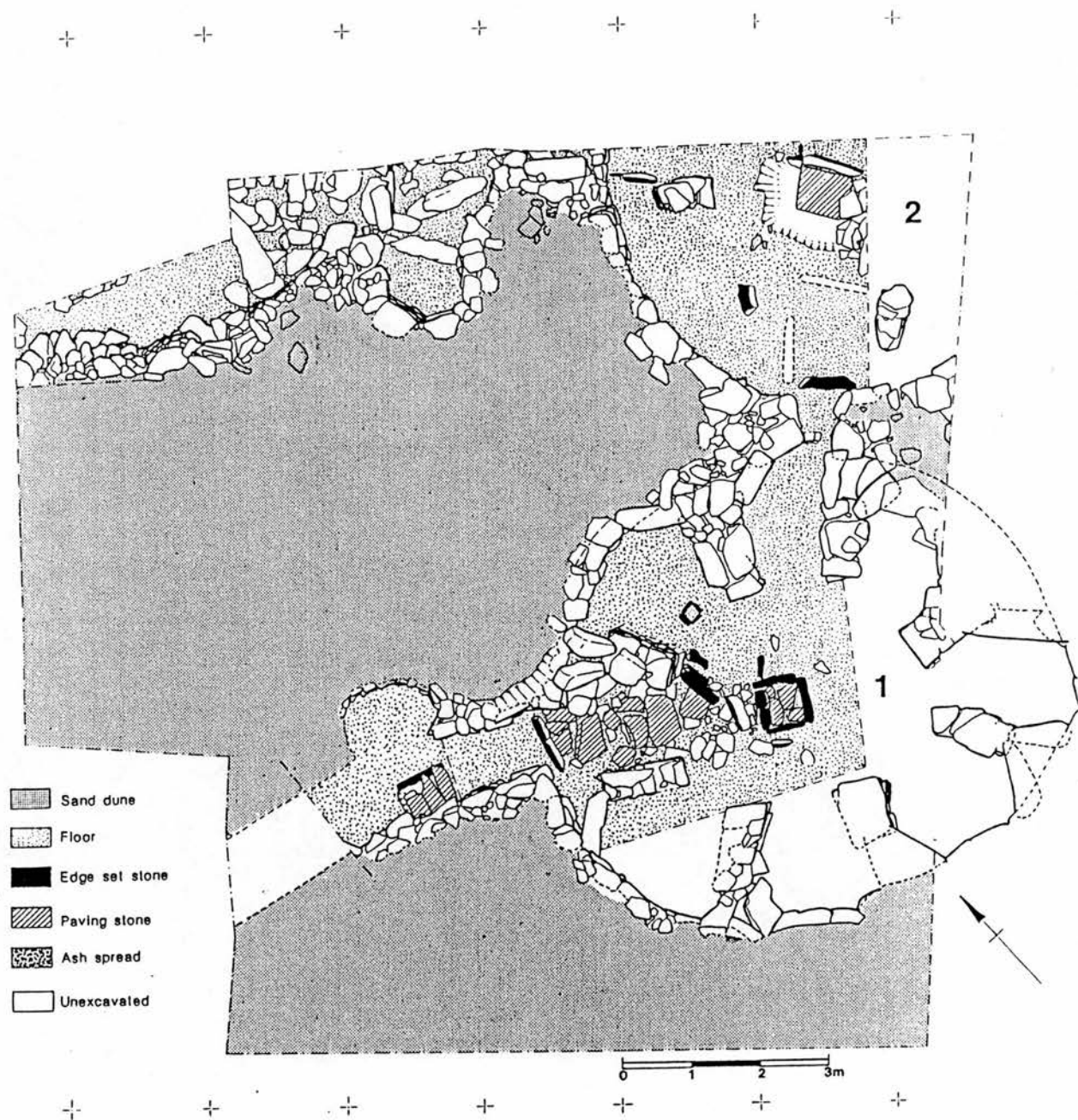
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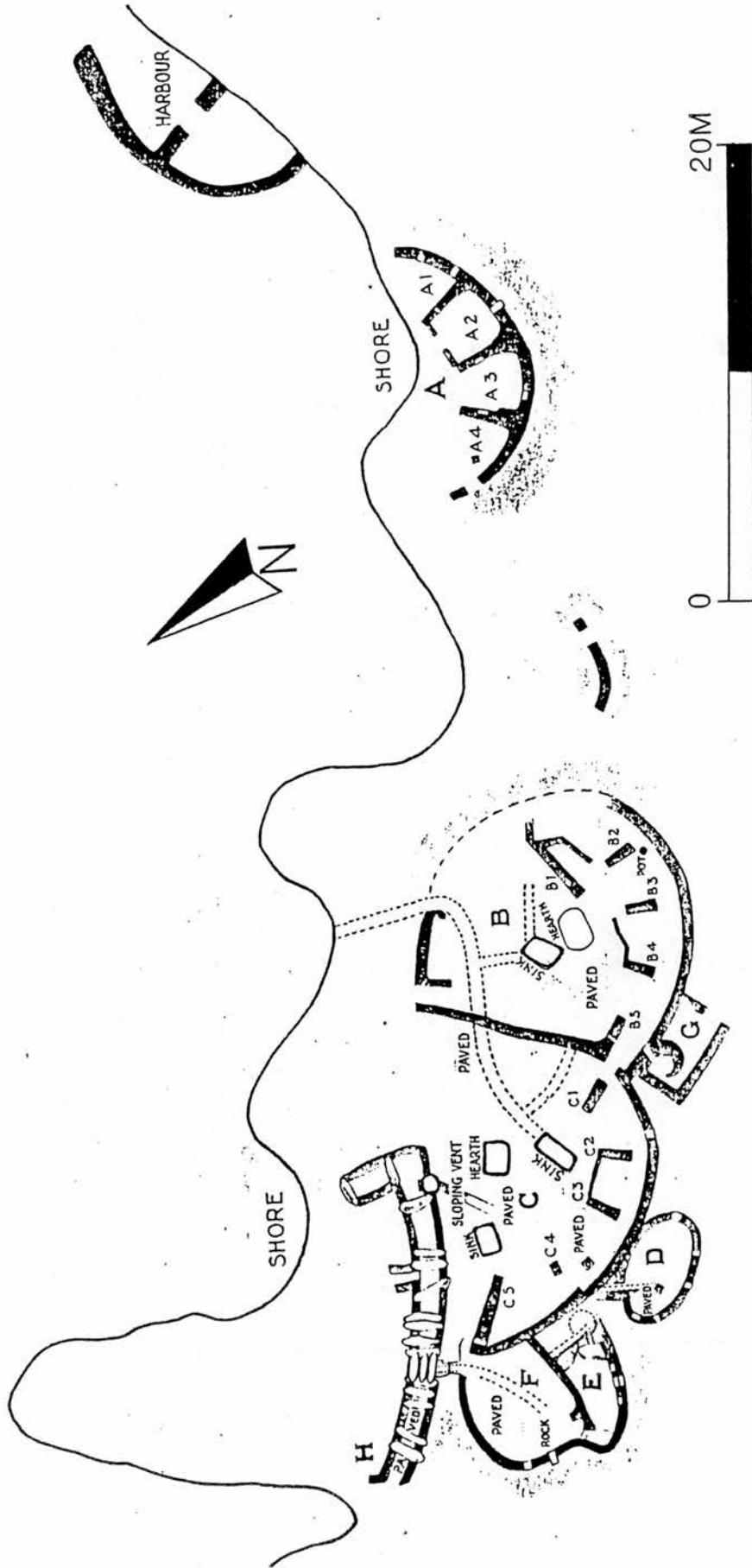
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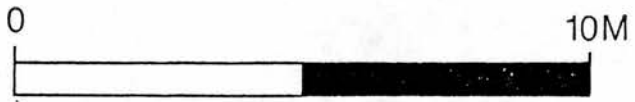
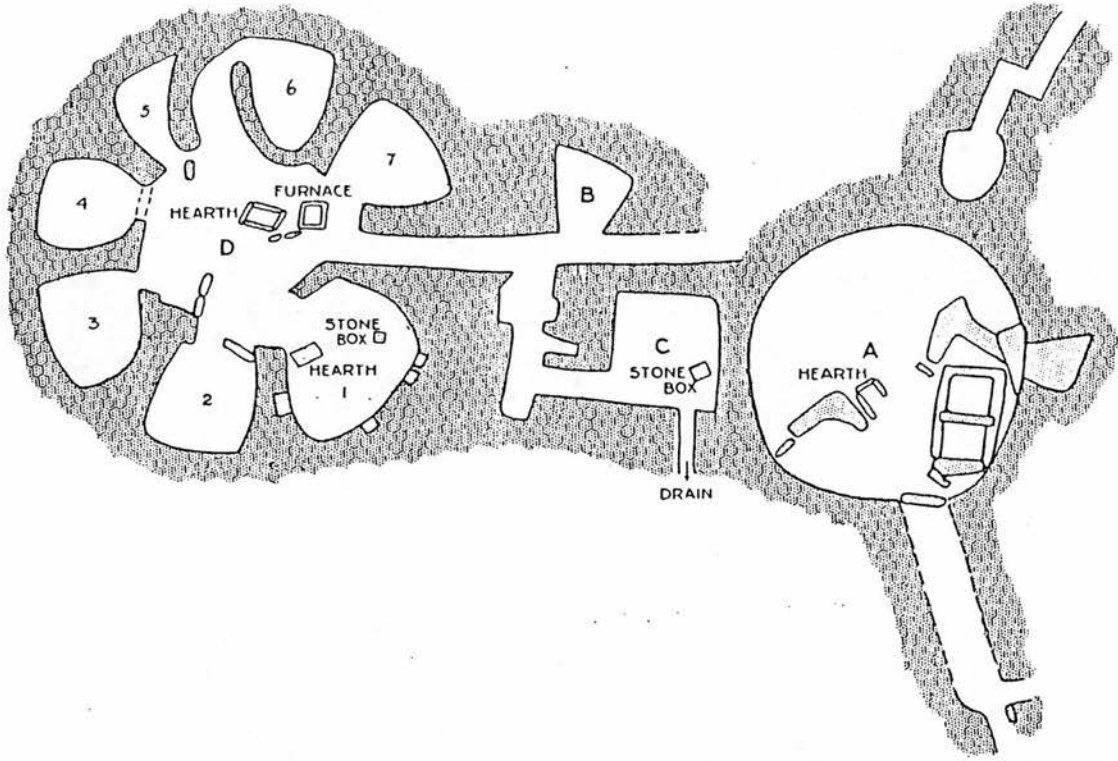
Ill. 6.1 Distribution of Wheelhouses in the Western Isles



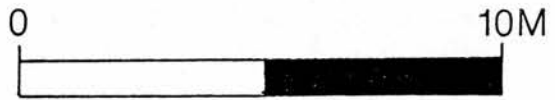
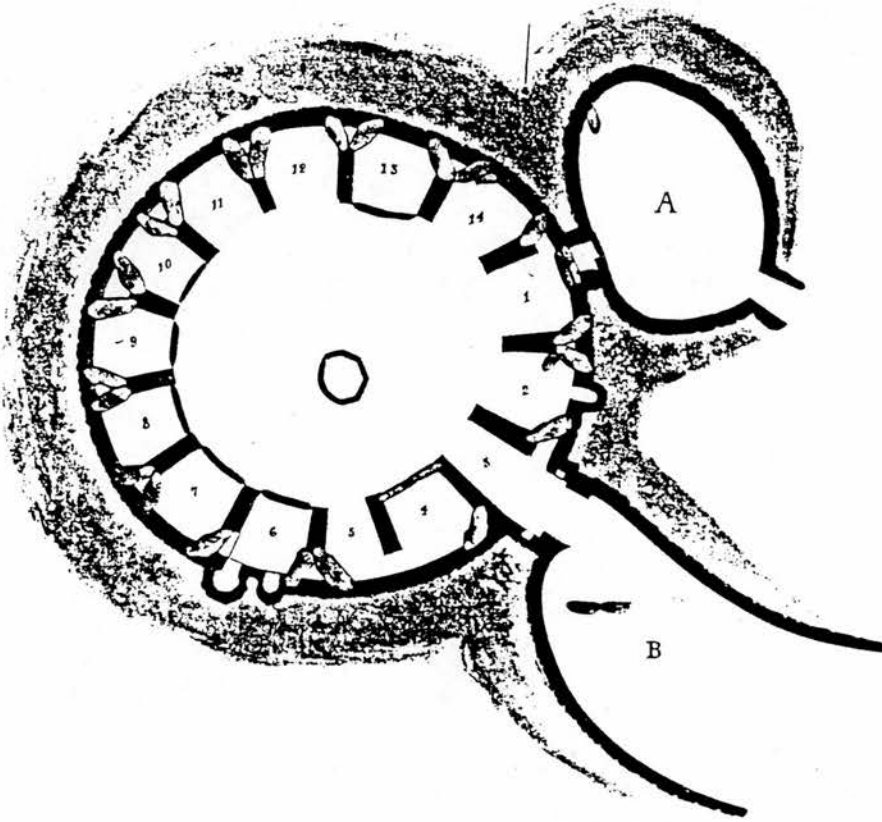
Ill. 6.2 Cnip Phase One Structures



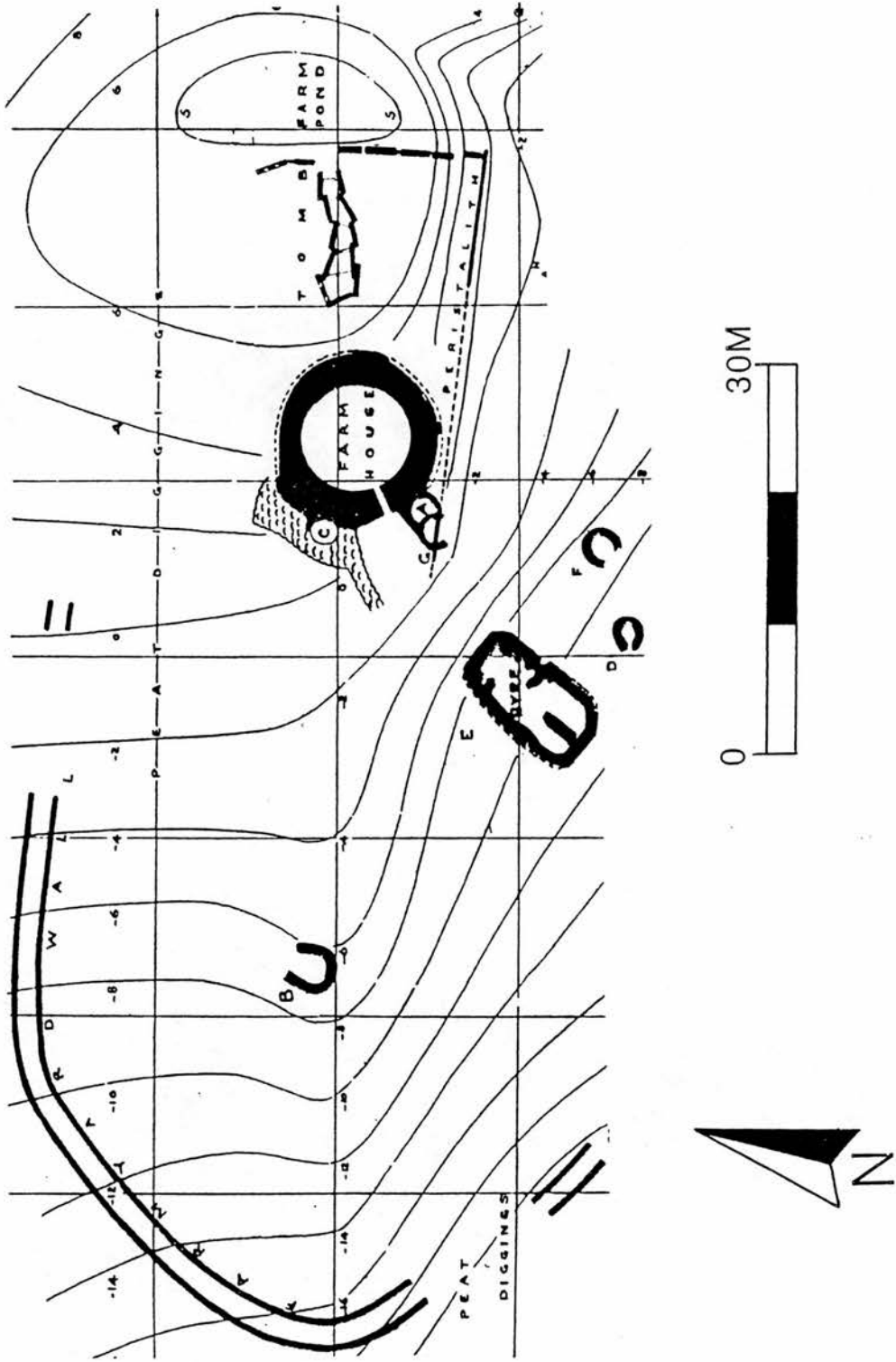
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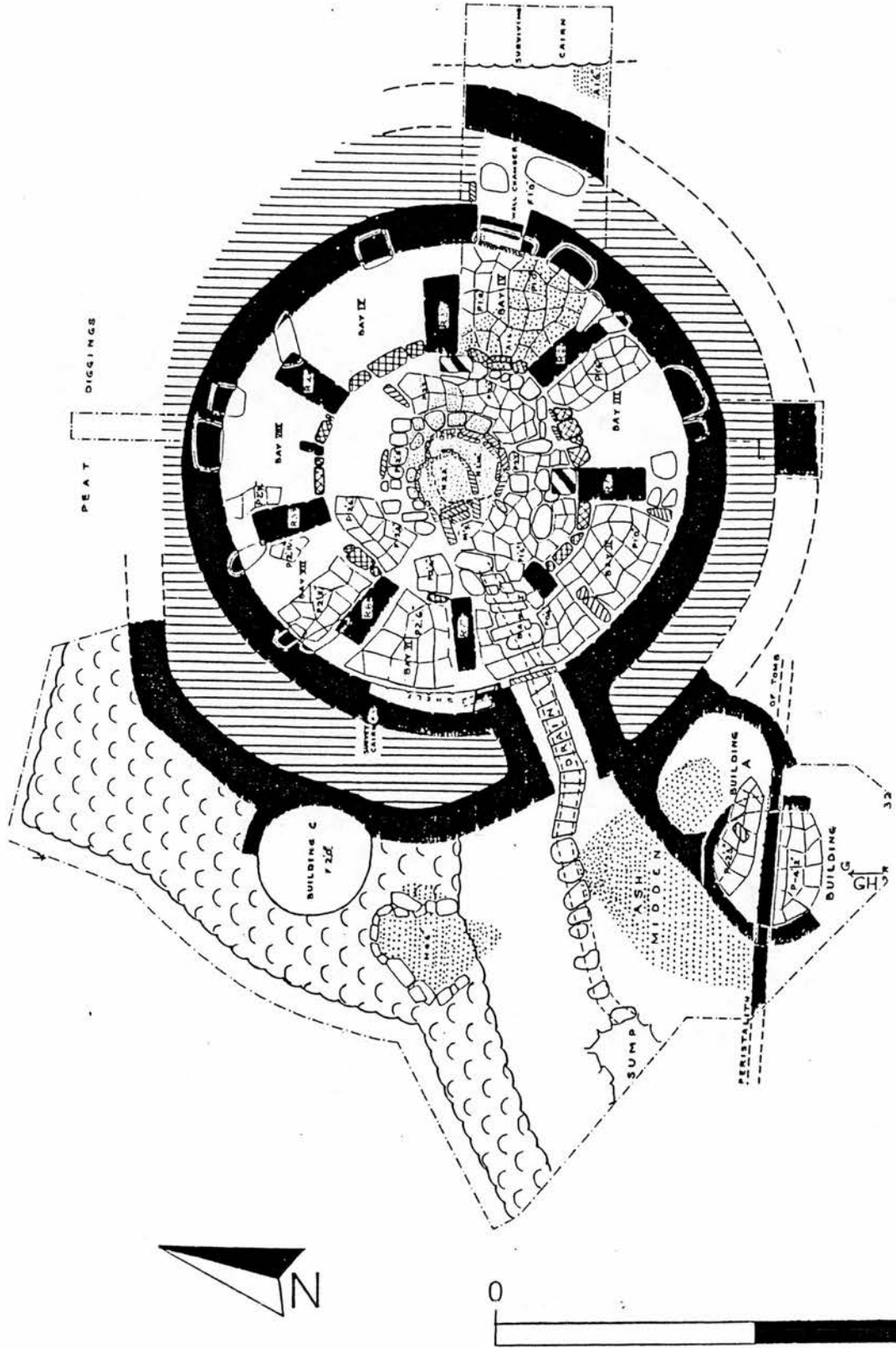
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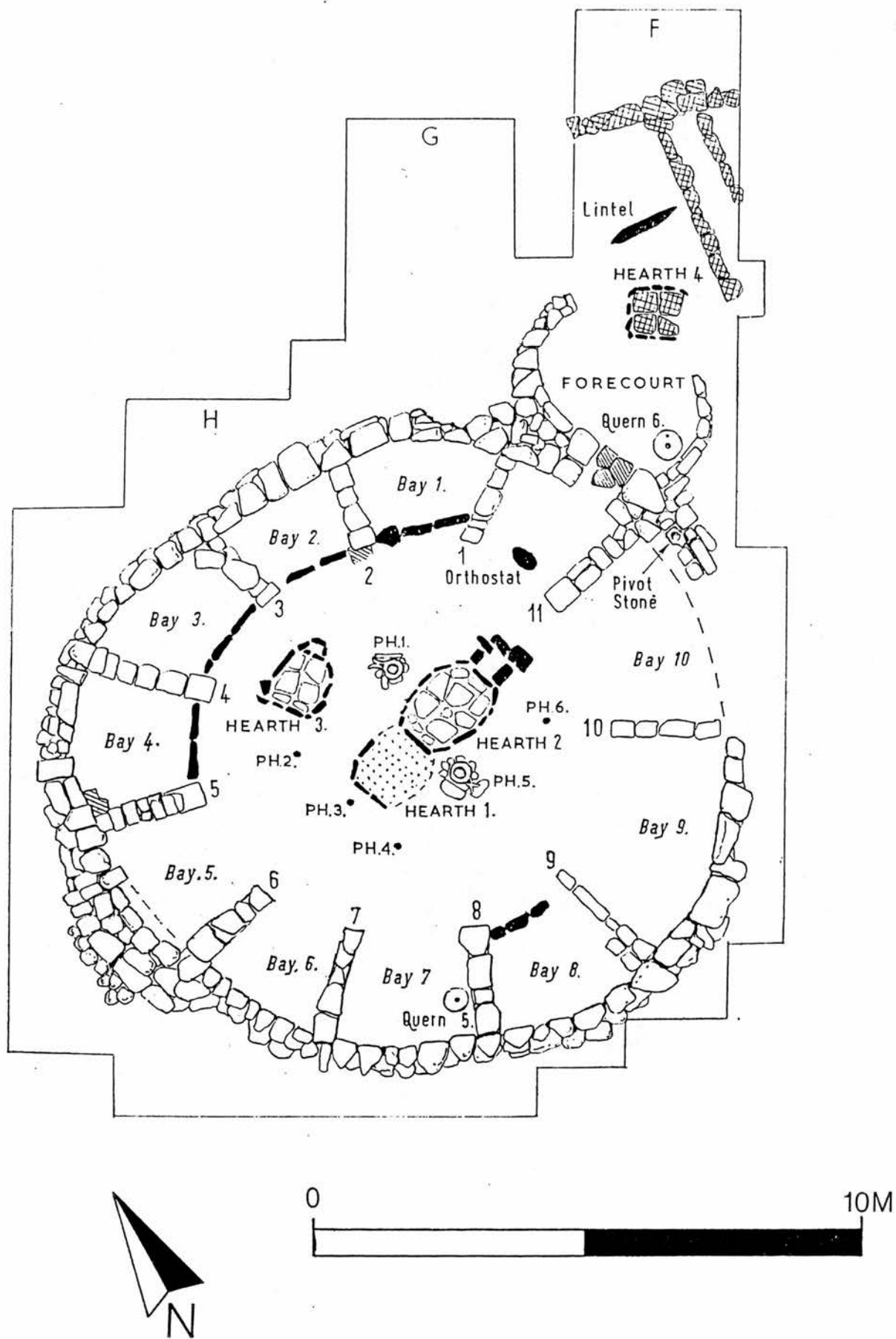
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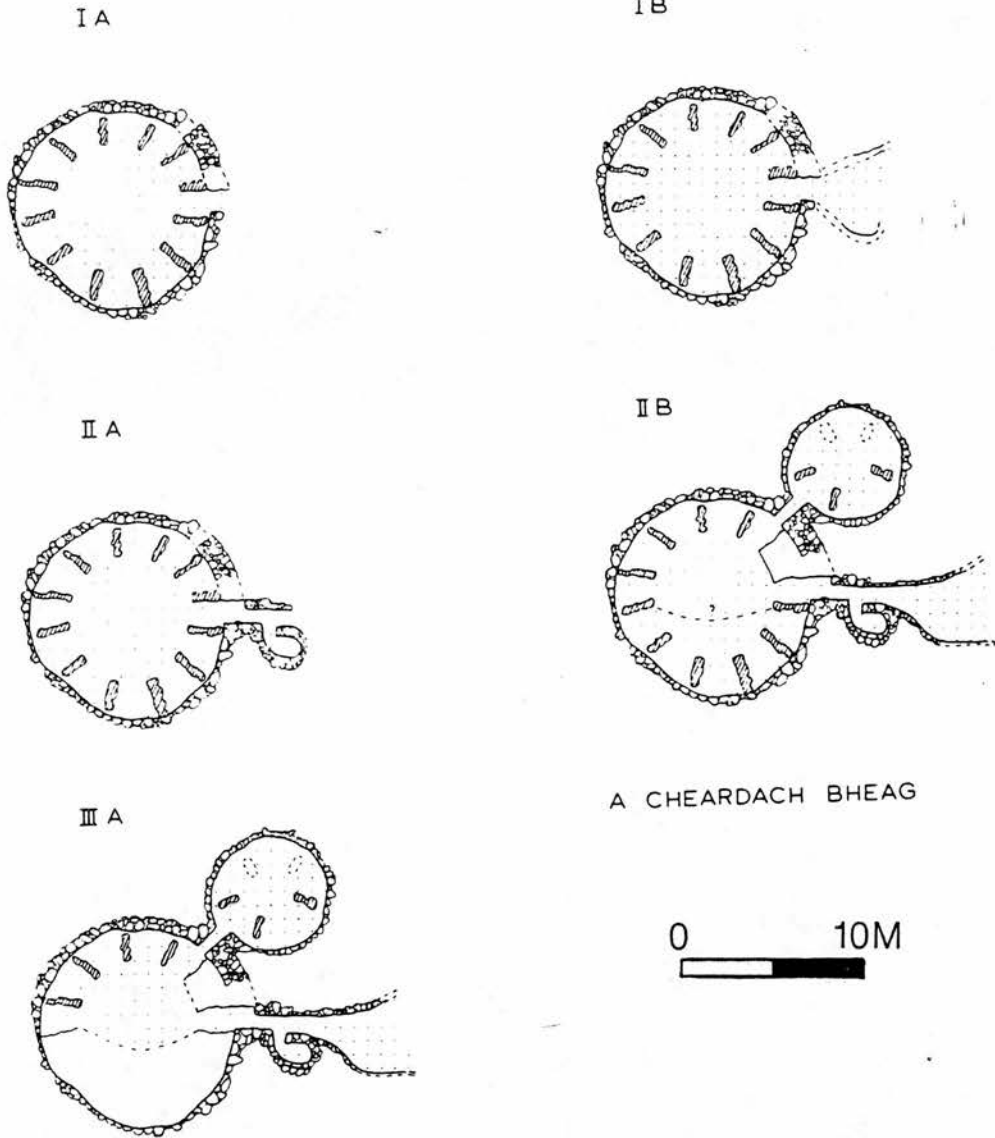
Ill. 6.6 Cletraval Site Plan (after Scott 1948)



Ill. 6.7 Cletraval Wheelhouse (after Scott 1948)

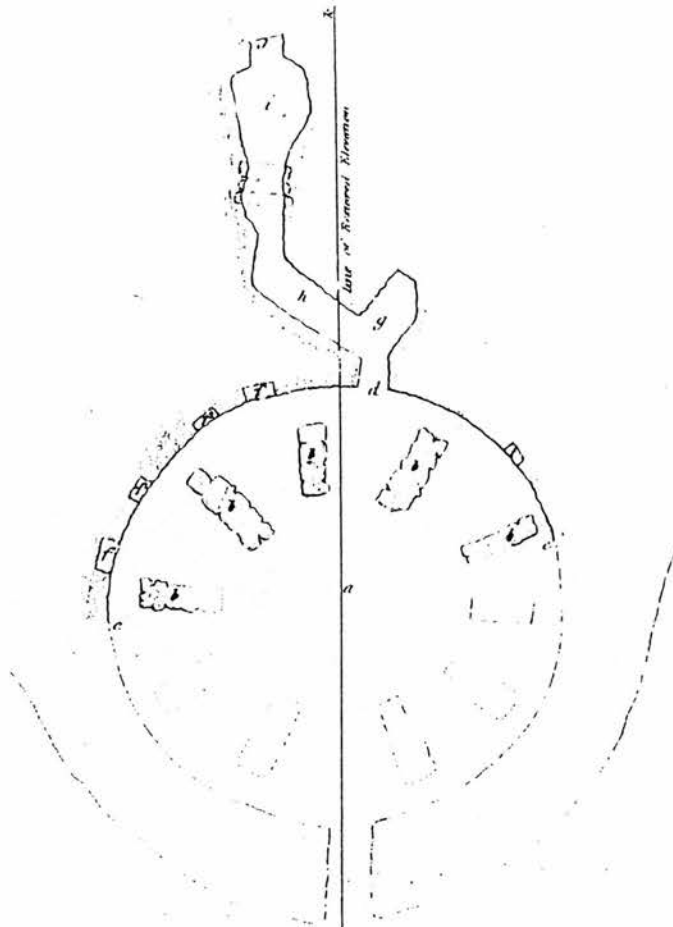


Ill. 6.8 A Cheardach Mhor (after Young and Richardson 1959)

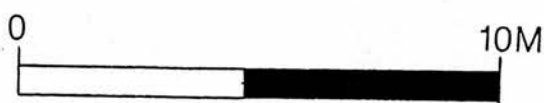


A CHEARDACH BHEAG

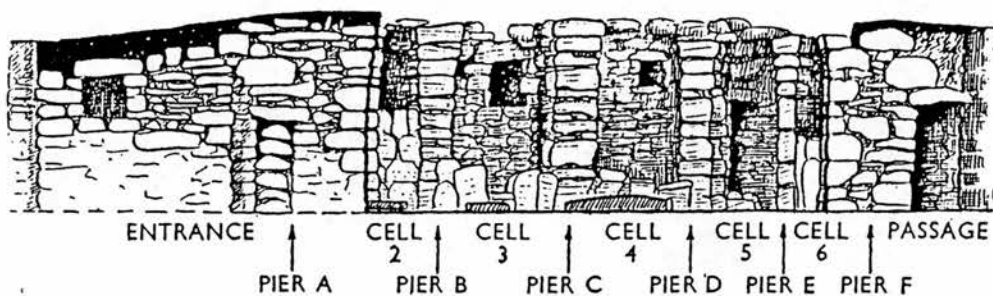
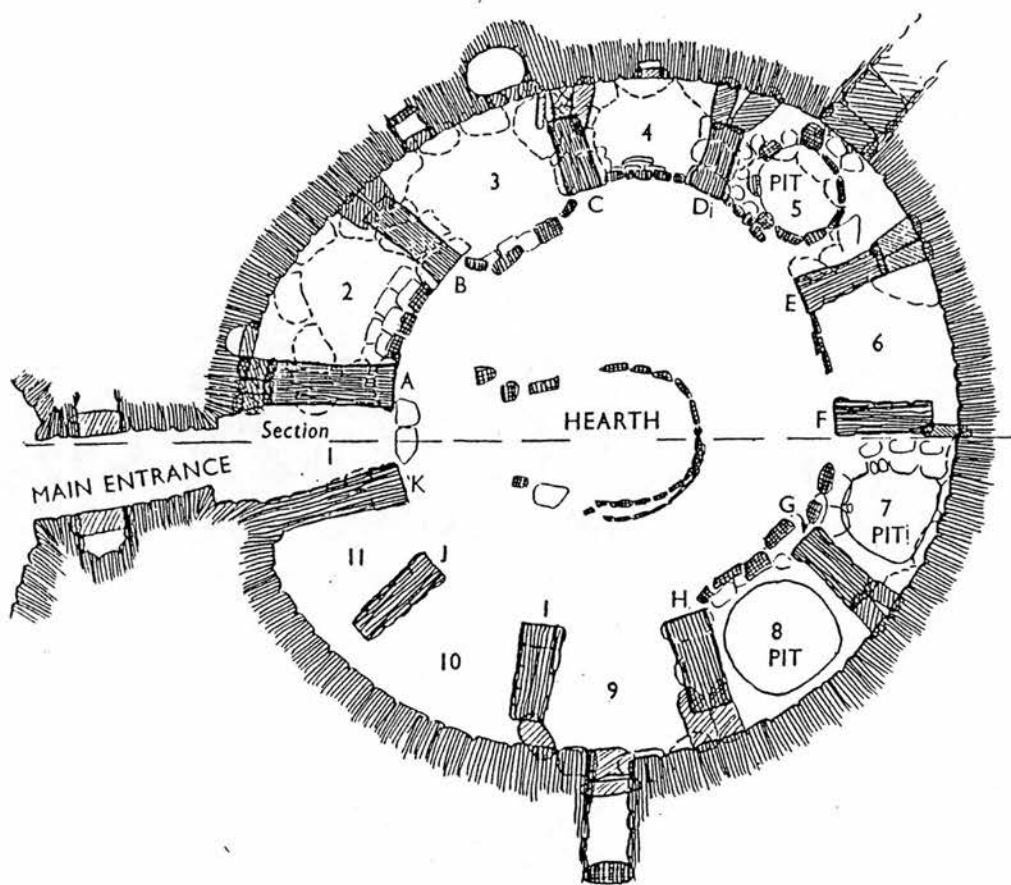
Ill. 6.9 A Cheardach Bheag (after Fairhurst 1971)



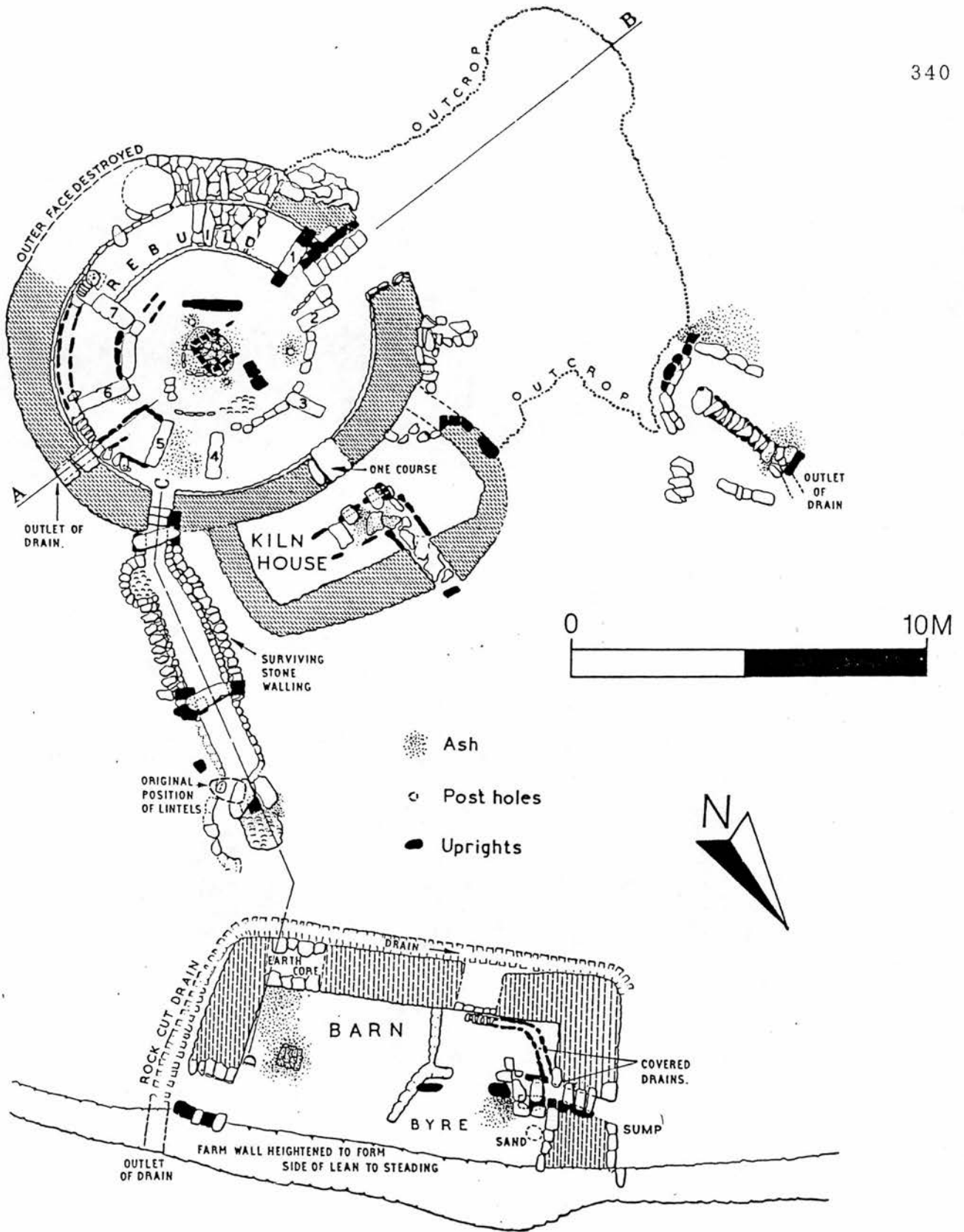
RESTORED ELEVATION OF ANCIENT ROTH AND SECTION OF DYOGEUM OR TIGH LAH, ON THE LINE a, k, NEAR MOL. A DEAS. HUISHISHI, SOUTH UST.



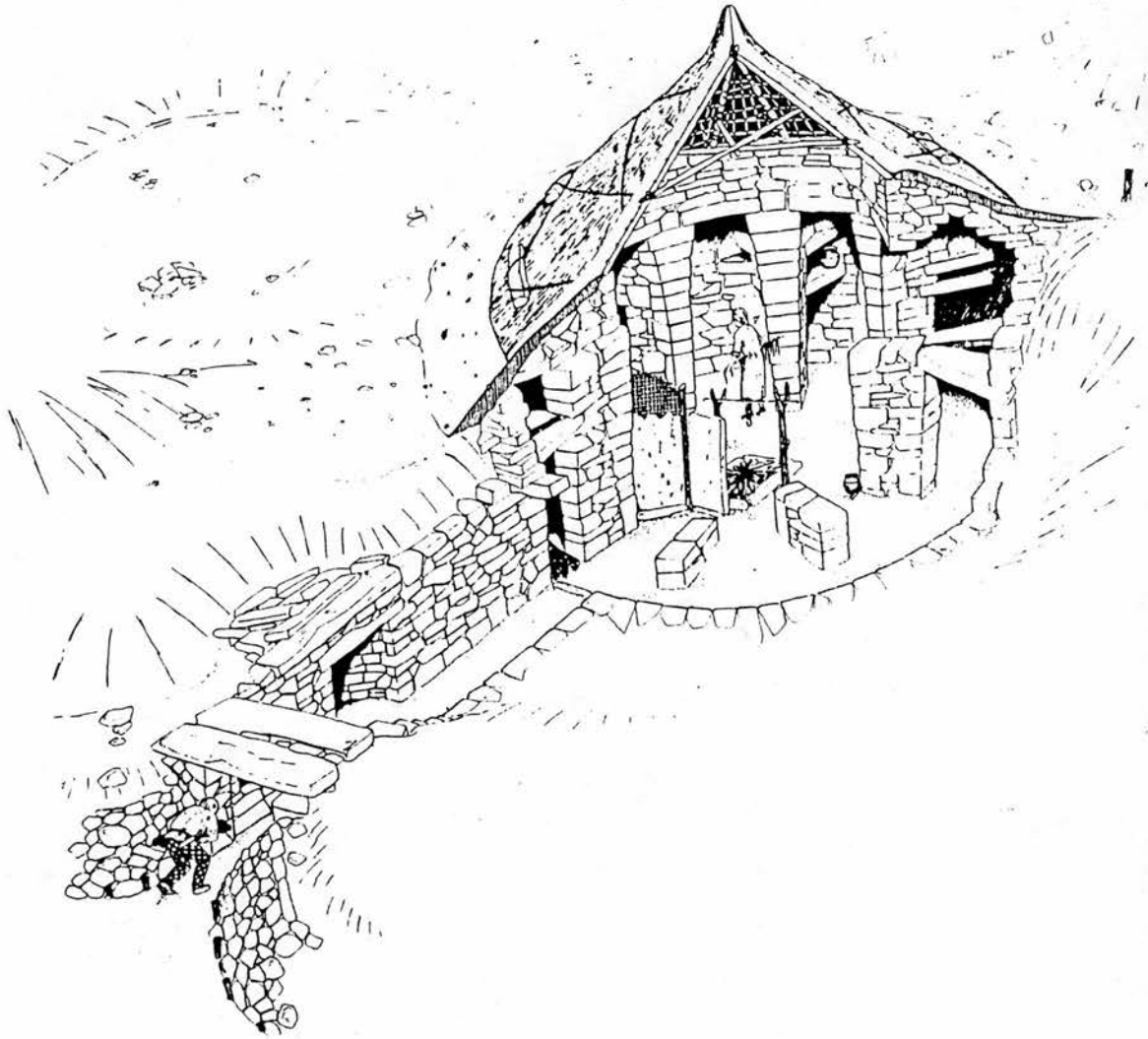
Ill. 6.10 Usinish (after Thomas 1870)



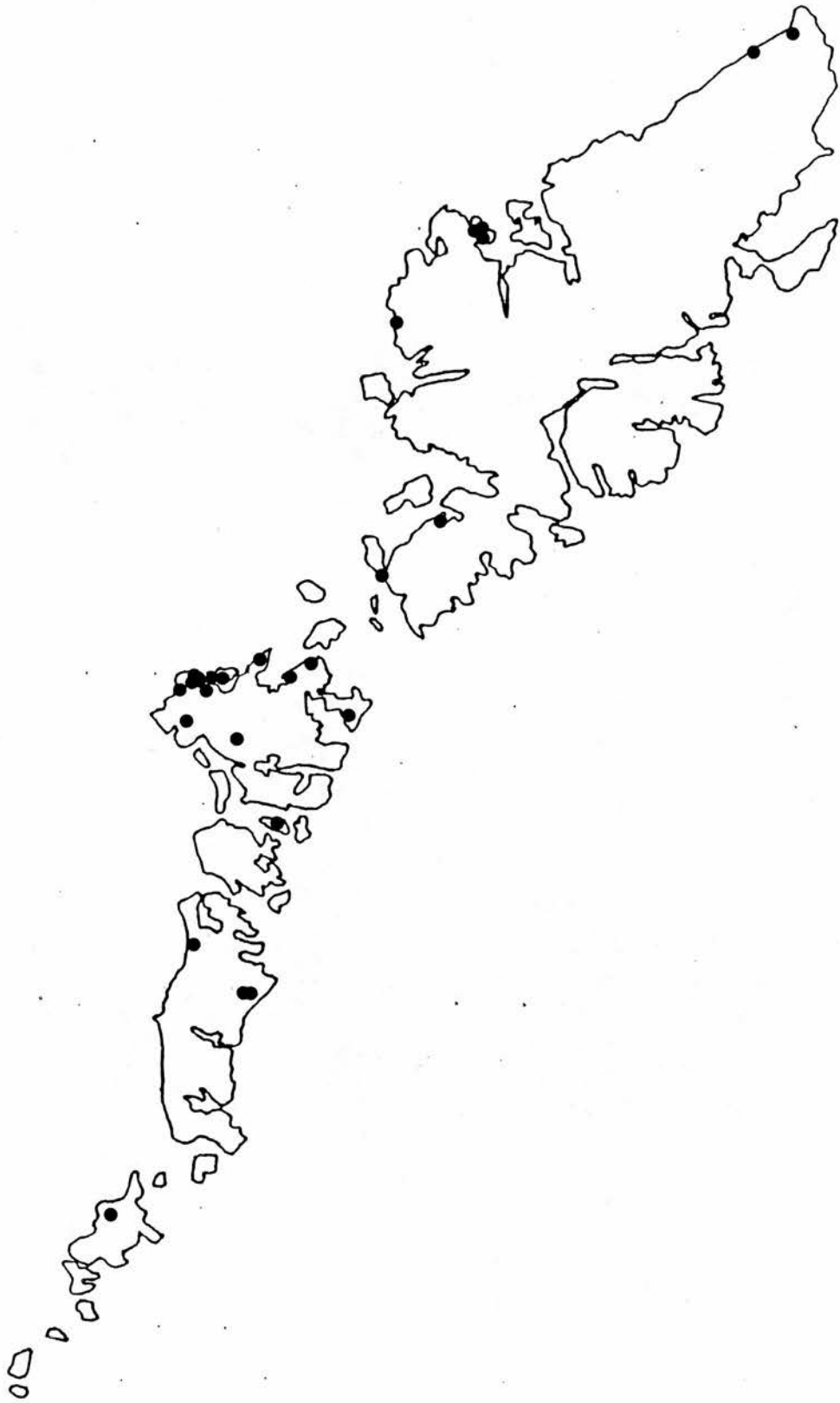
Ill. 6.11 Kilpheder (after Lethbridge 1952)



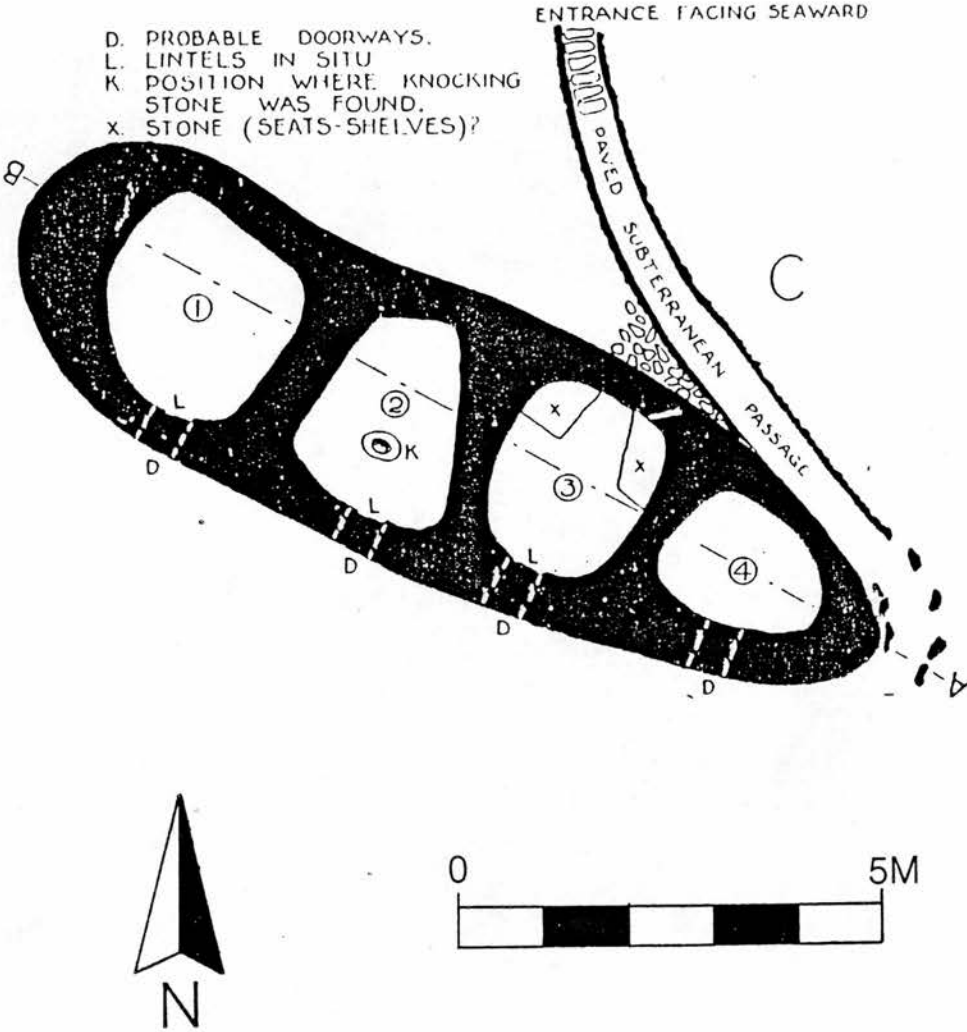
Ill. 6.12 Allasdale (after Young 1952)



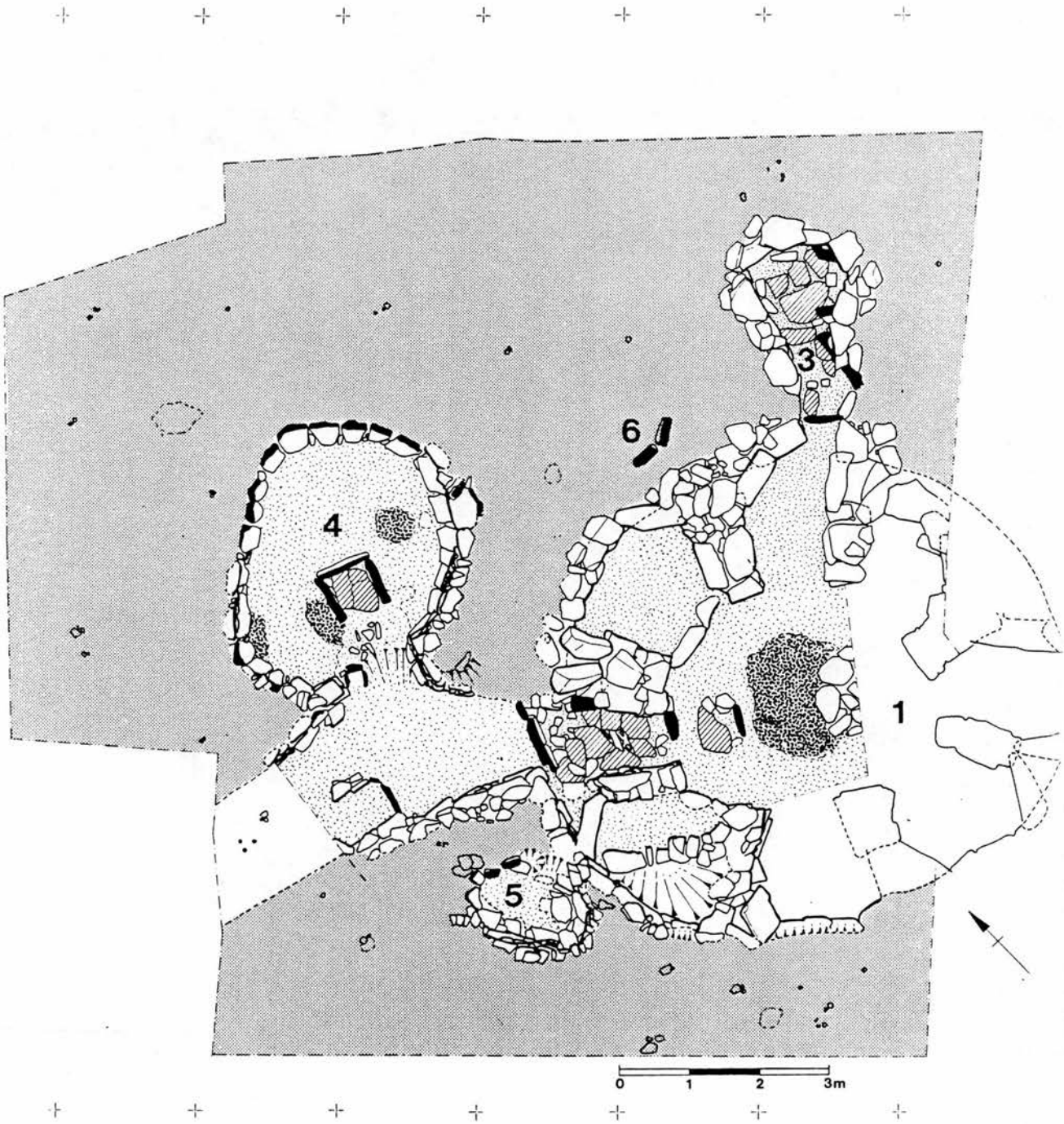
Ill. 6.13 Cnip Structure 1 Reconstruction (by Alan Braby)



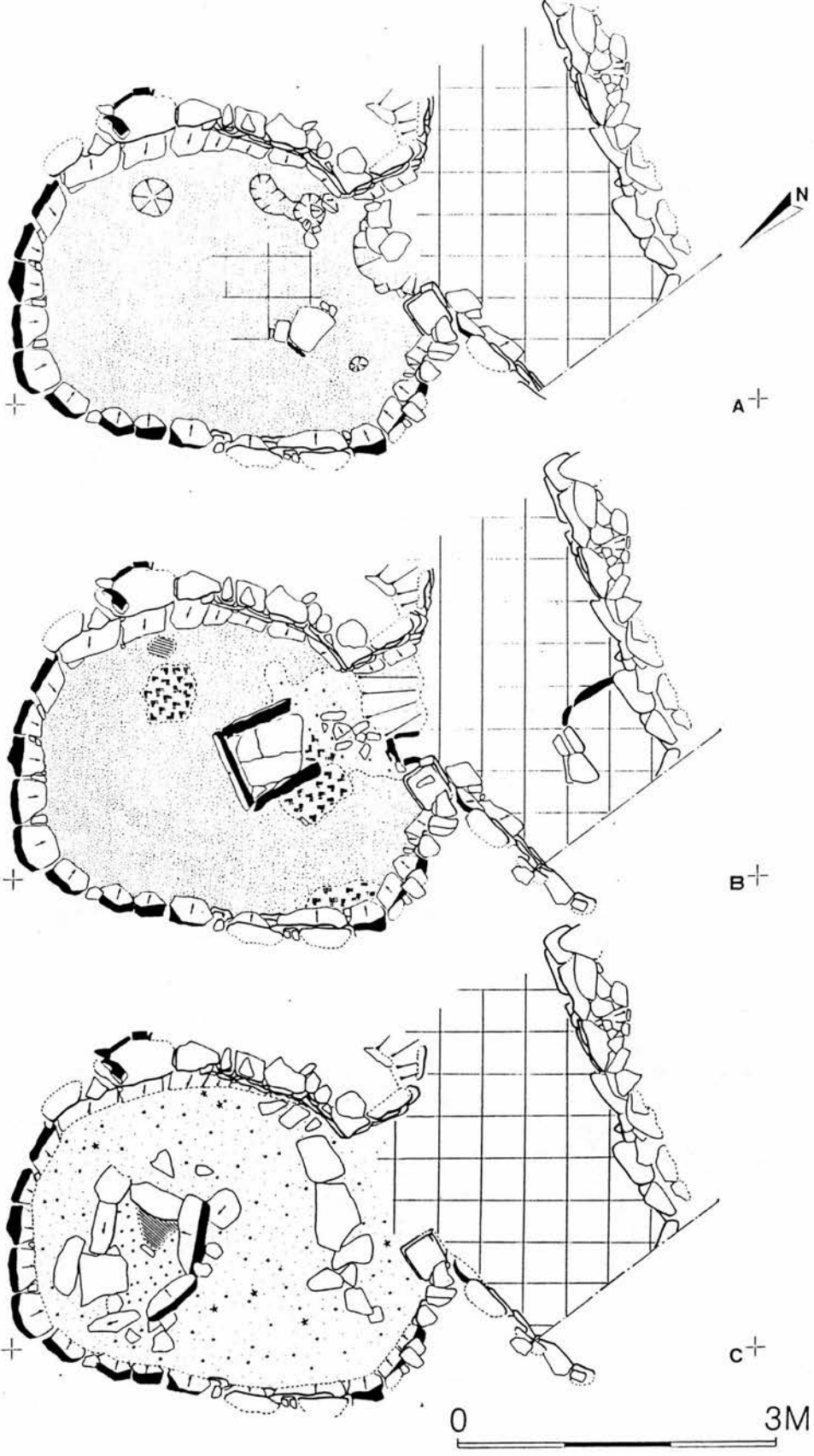
Ill. 7.1 Distribution of Cellular Structures in the Western Isles



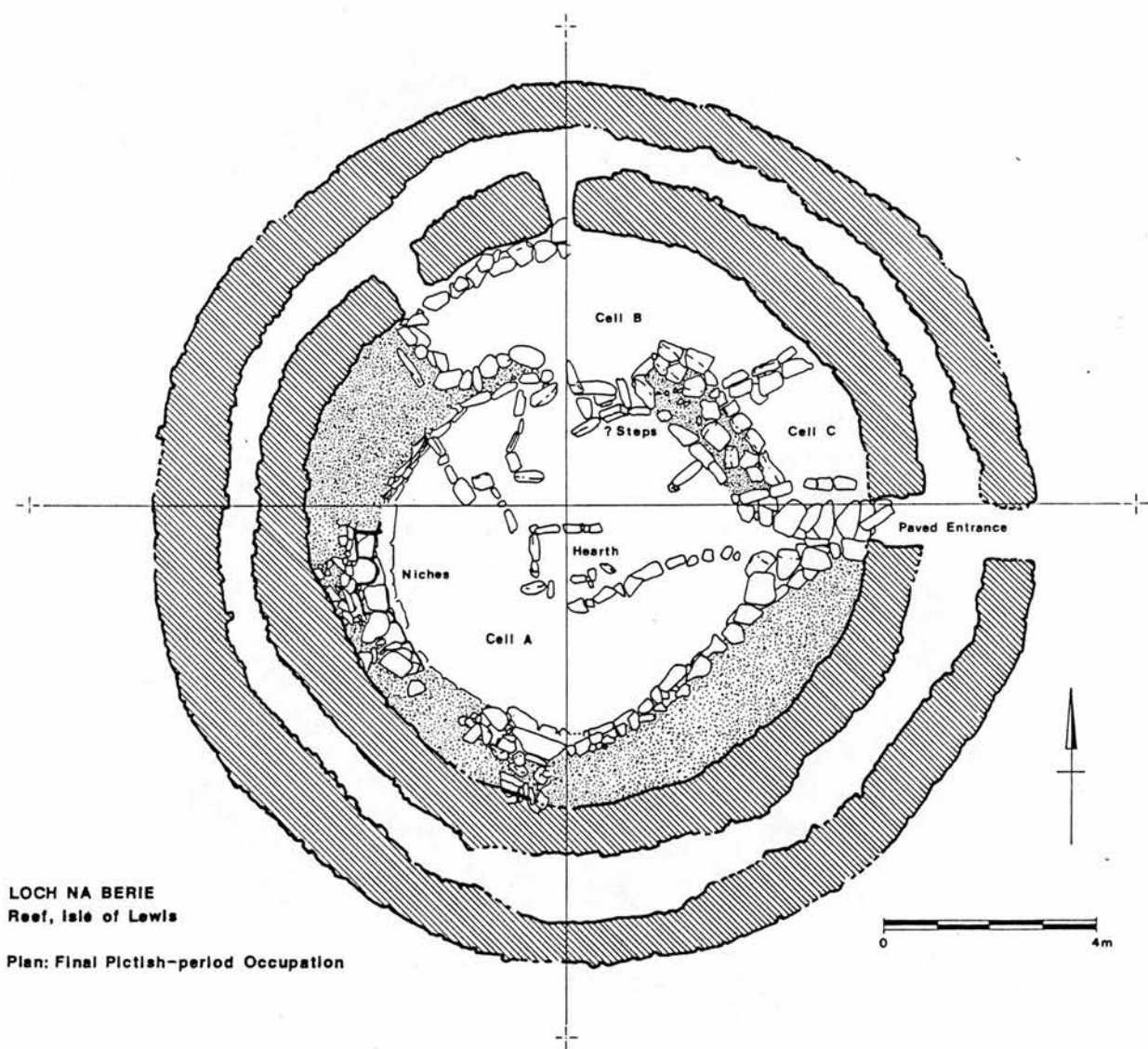
Ill. 7.2 Galson (after Edwards 1923)



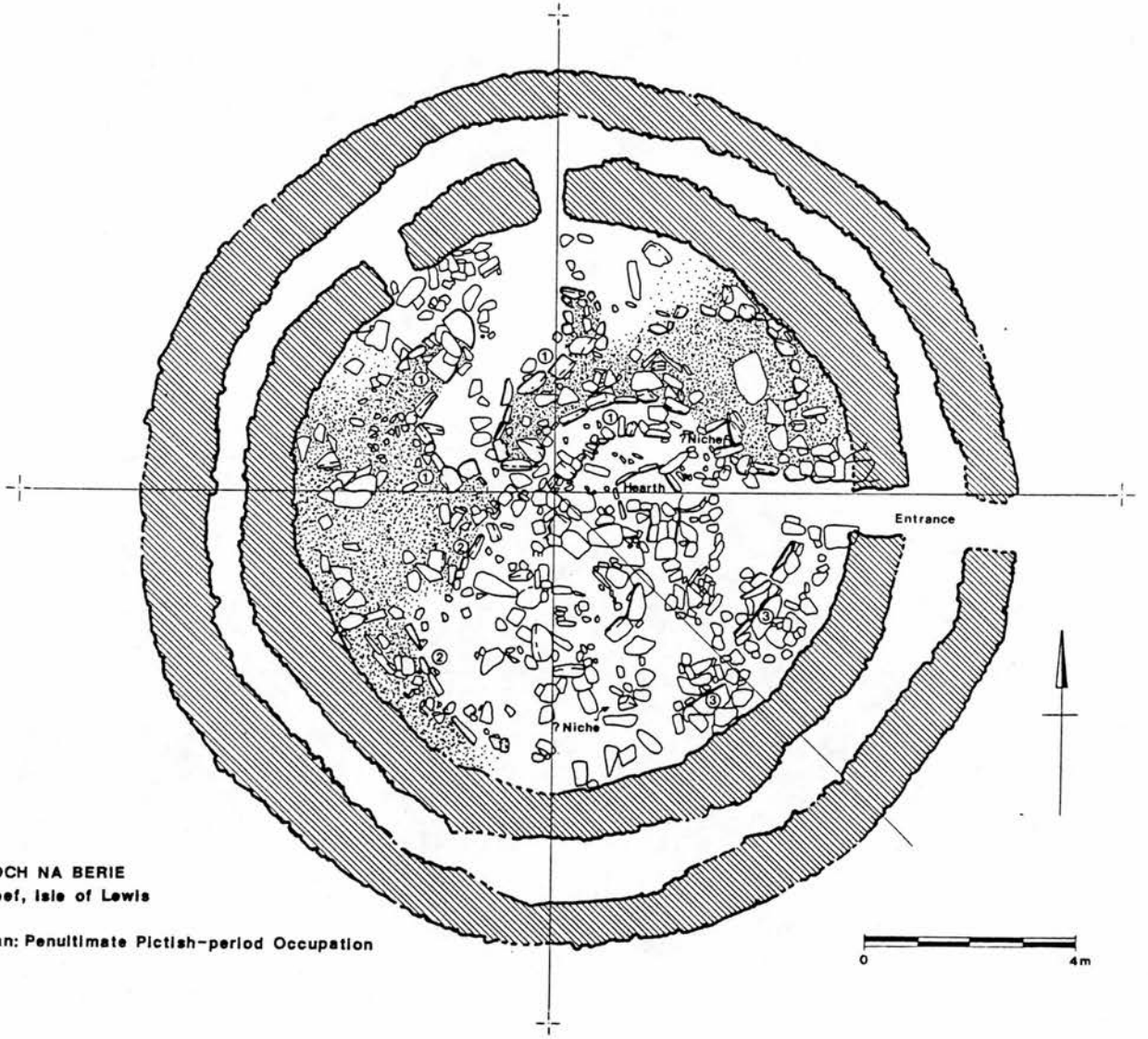
Ill. 7.3 Cnip Phase Two Structures



Ill. 7.4 Cnip Structure 4



Ill. 7.5 Berie Structure 1

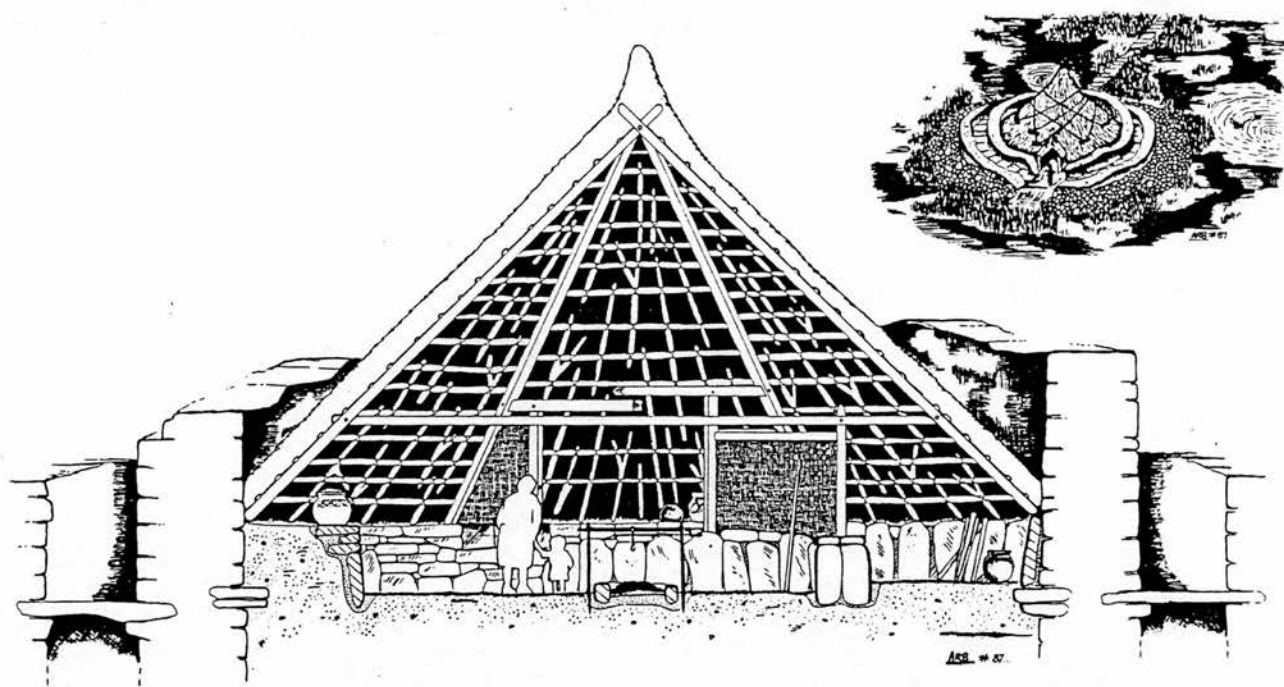


LOCH NA BERIE
Reef, Isle of Lewis

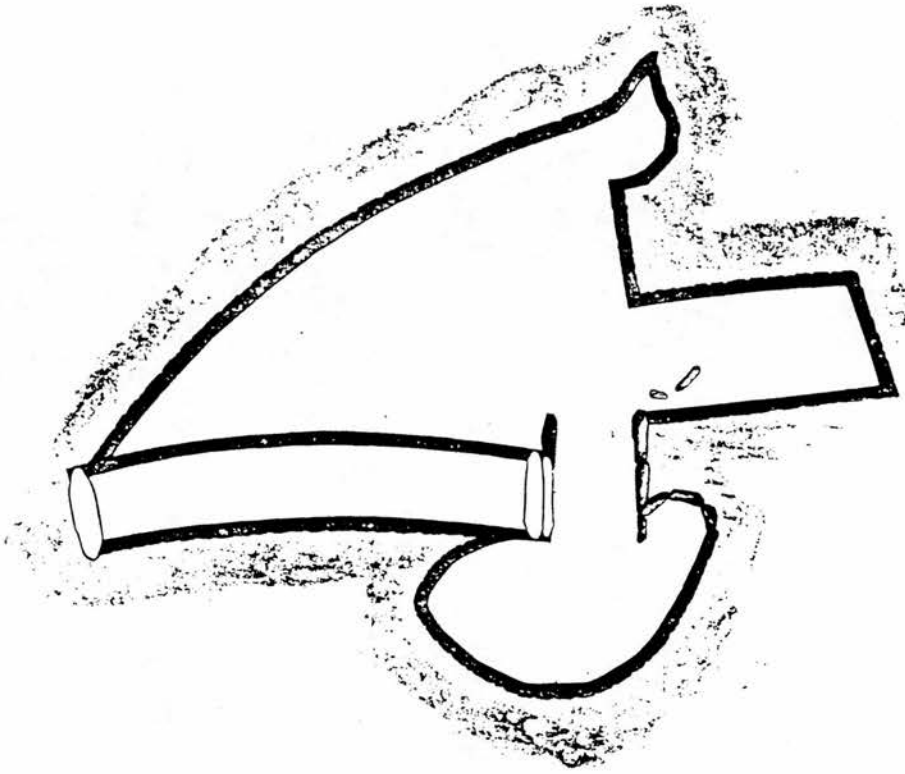
Plan: Penultimate Pictish-period Occupation

0 4m

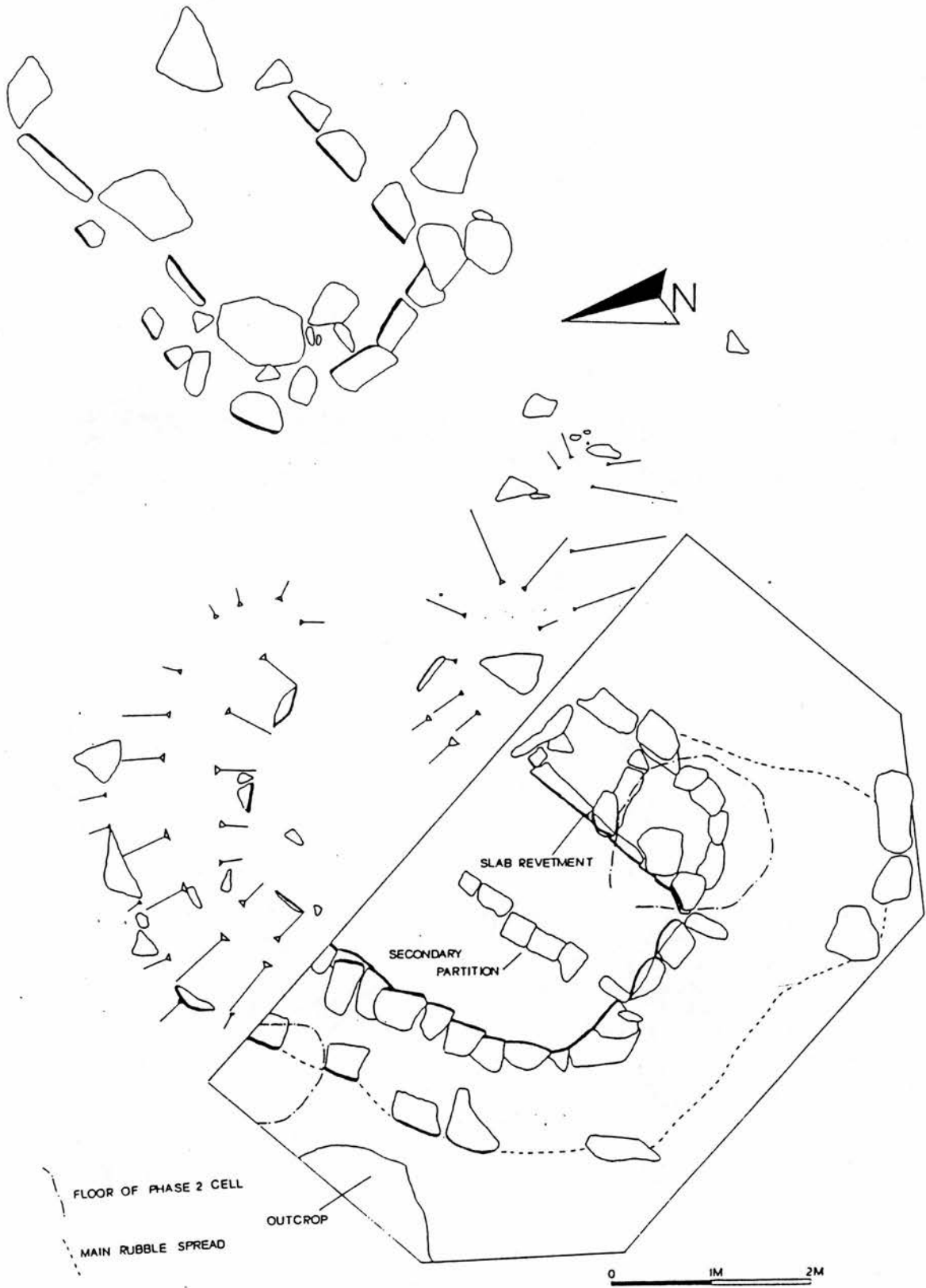
Ill. 7.6 Berie Structure 2



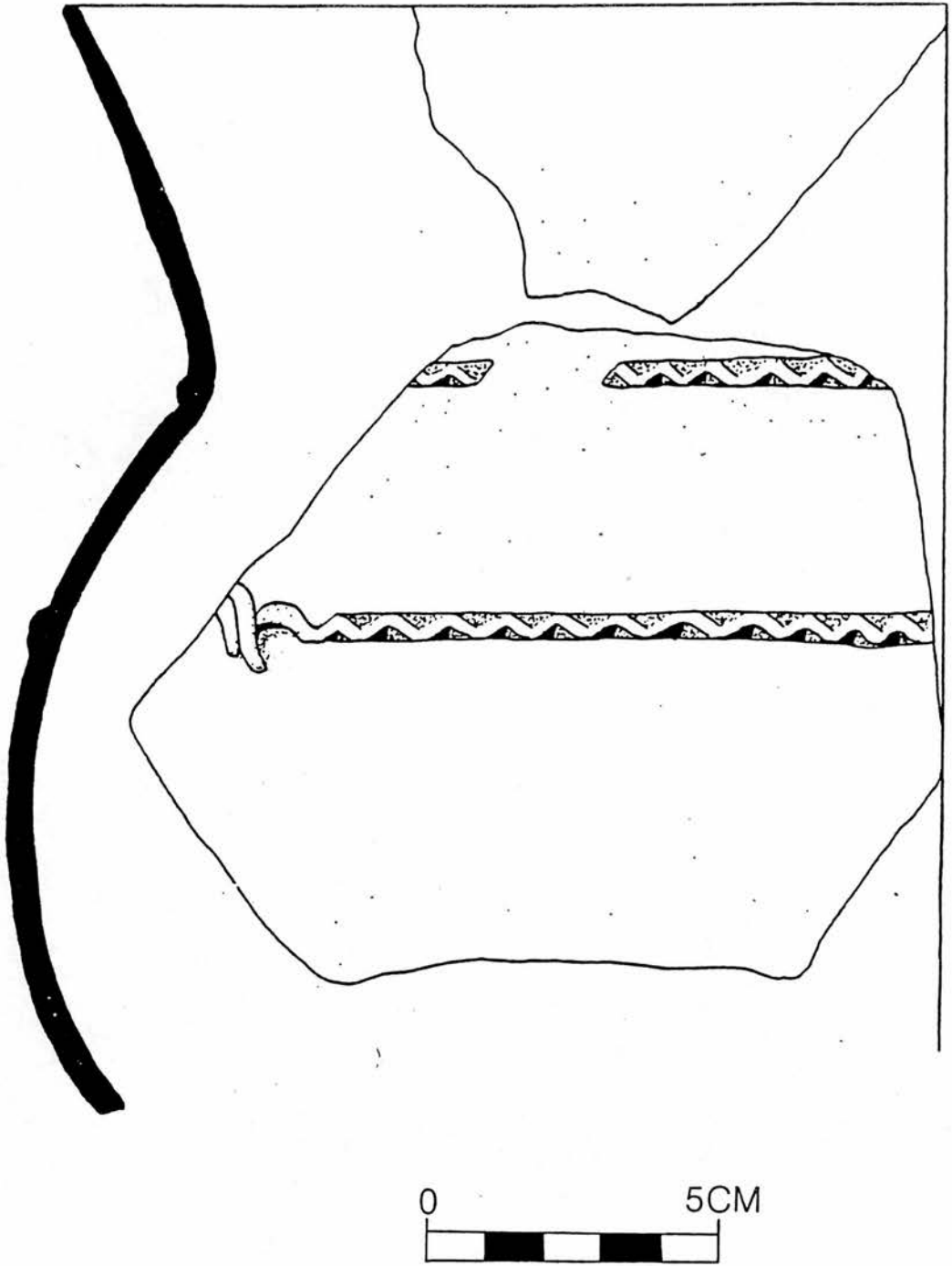
Ill. 7.7 Berie Structure 1 Reconstruction (by Alan Braby)



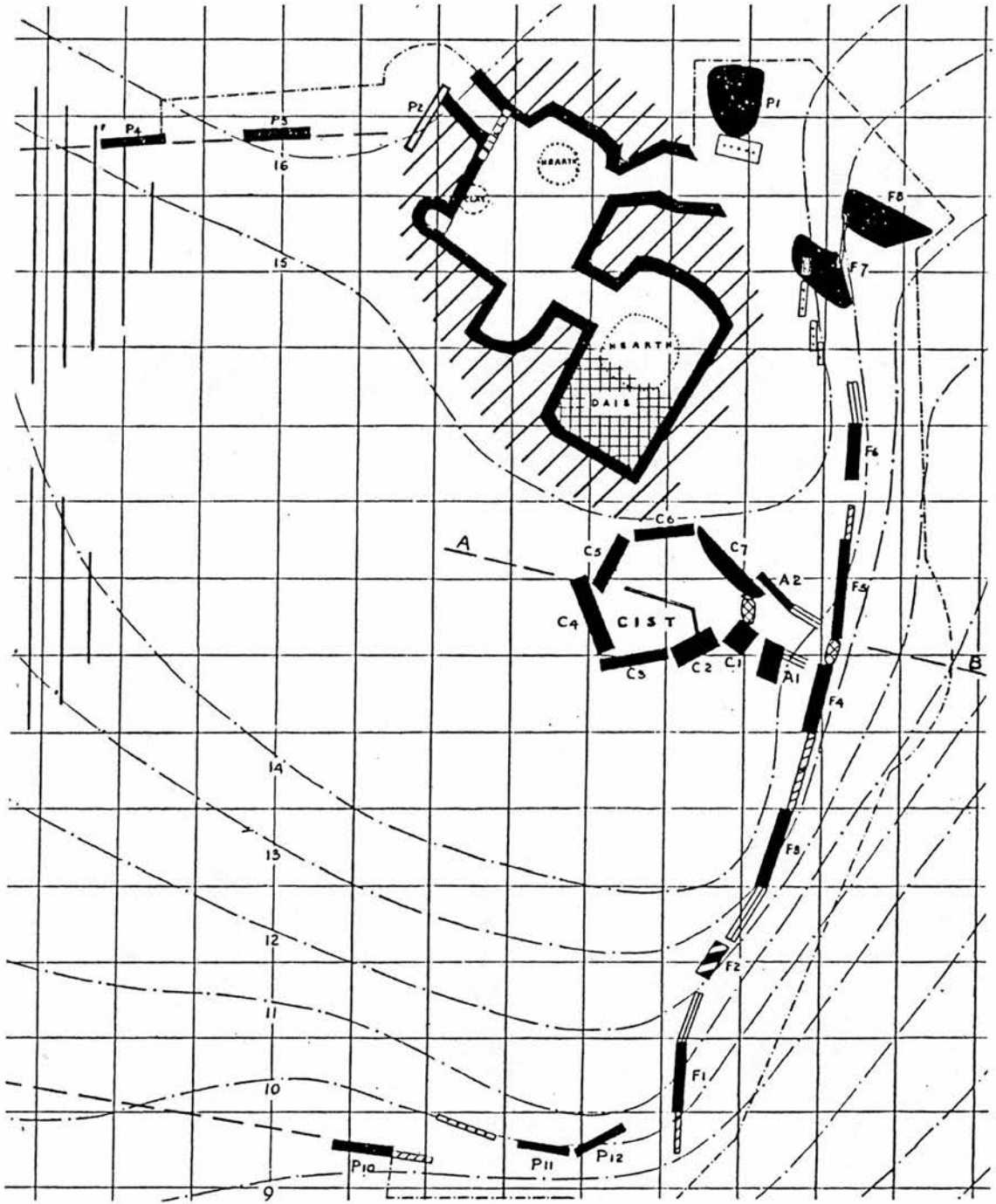
Ill. 7.8 Sithean an Altair (after Beveridge 1911)



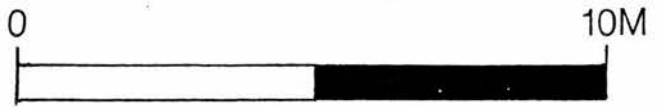
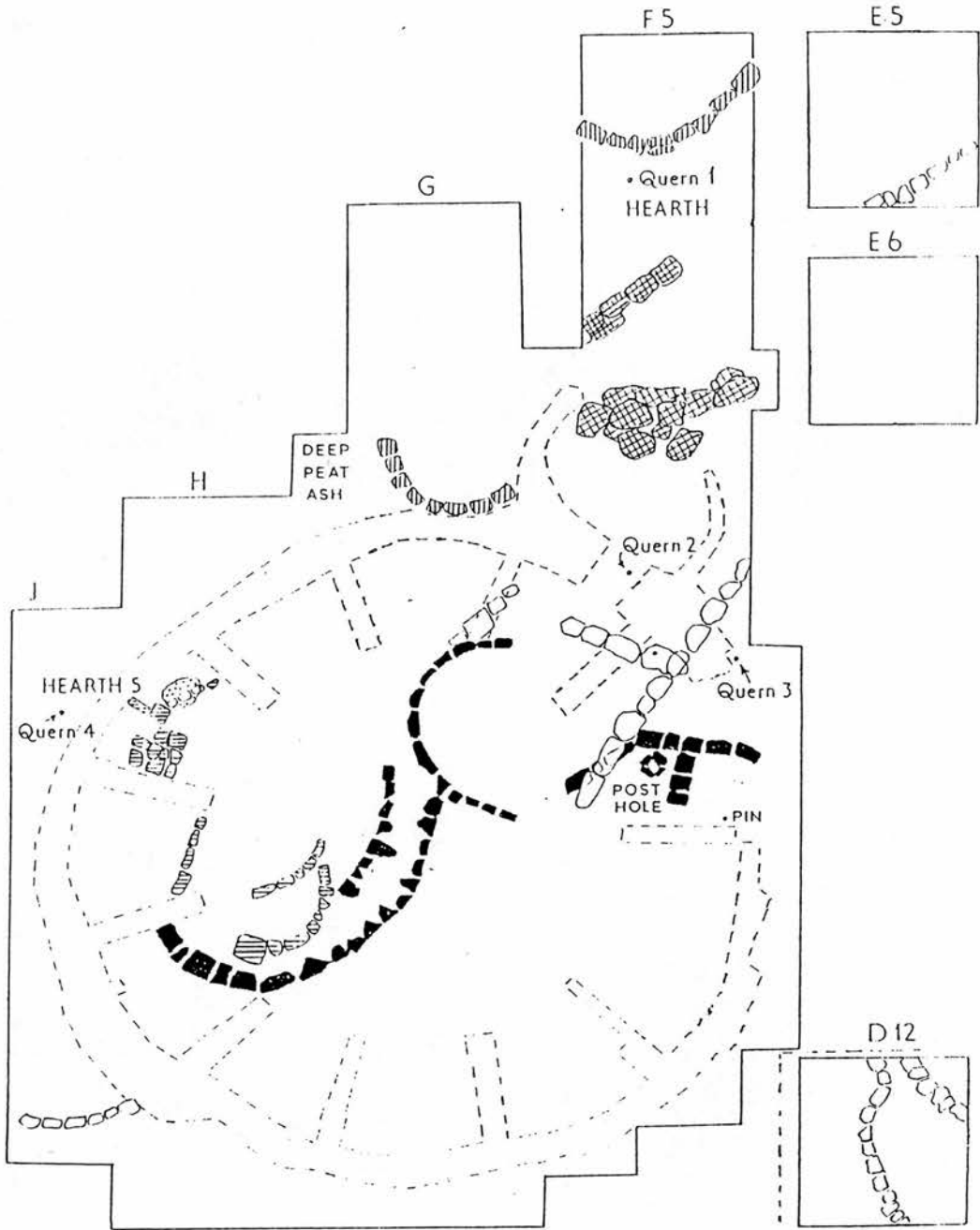
Ill. 7.9 Eilean Olabhat Cellular Structures



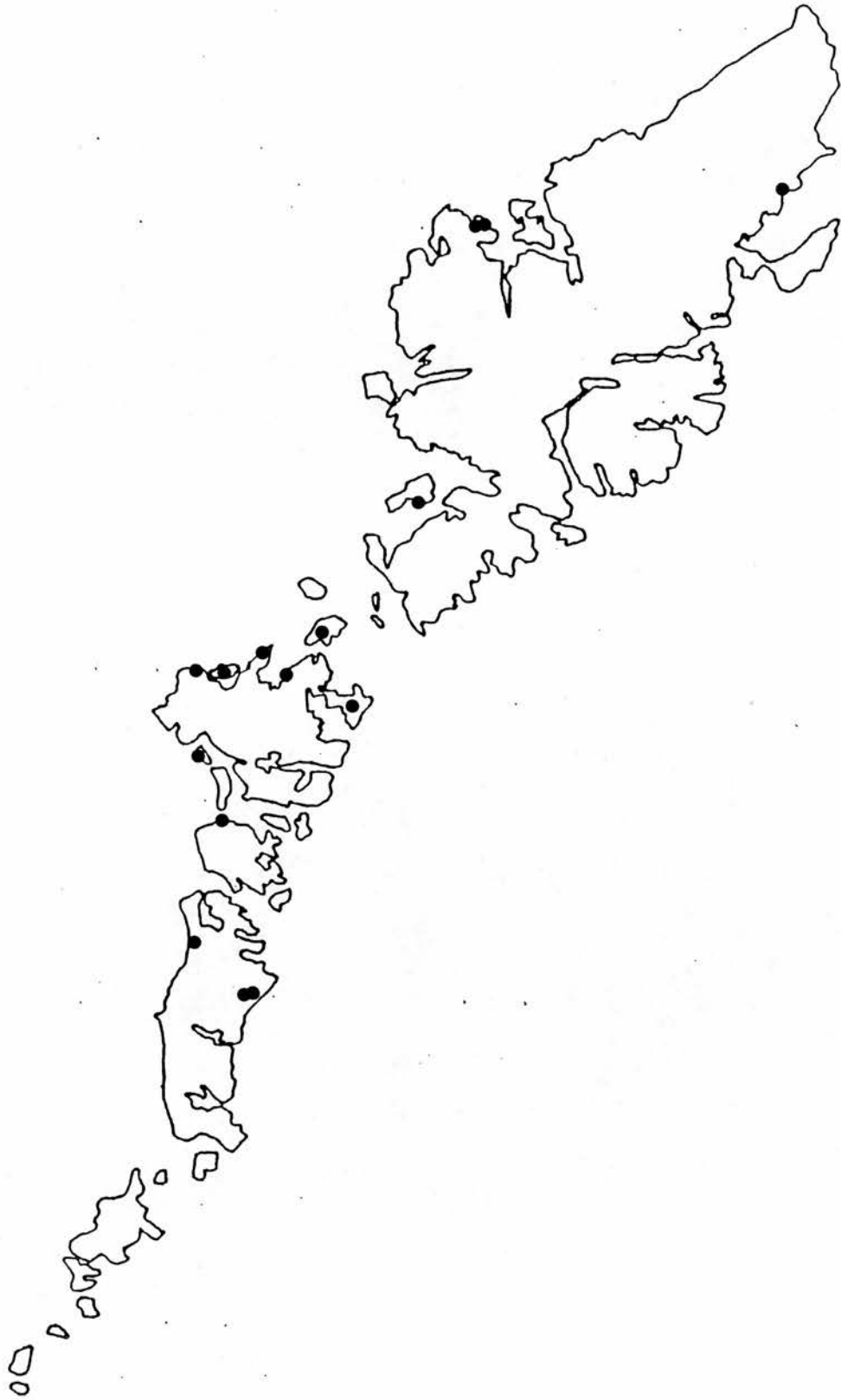
Ill. 7.10 Decorated Vessel from Eilean Olabhat



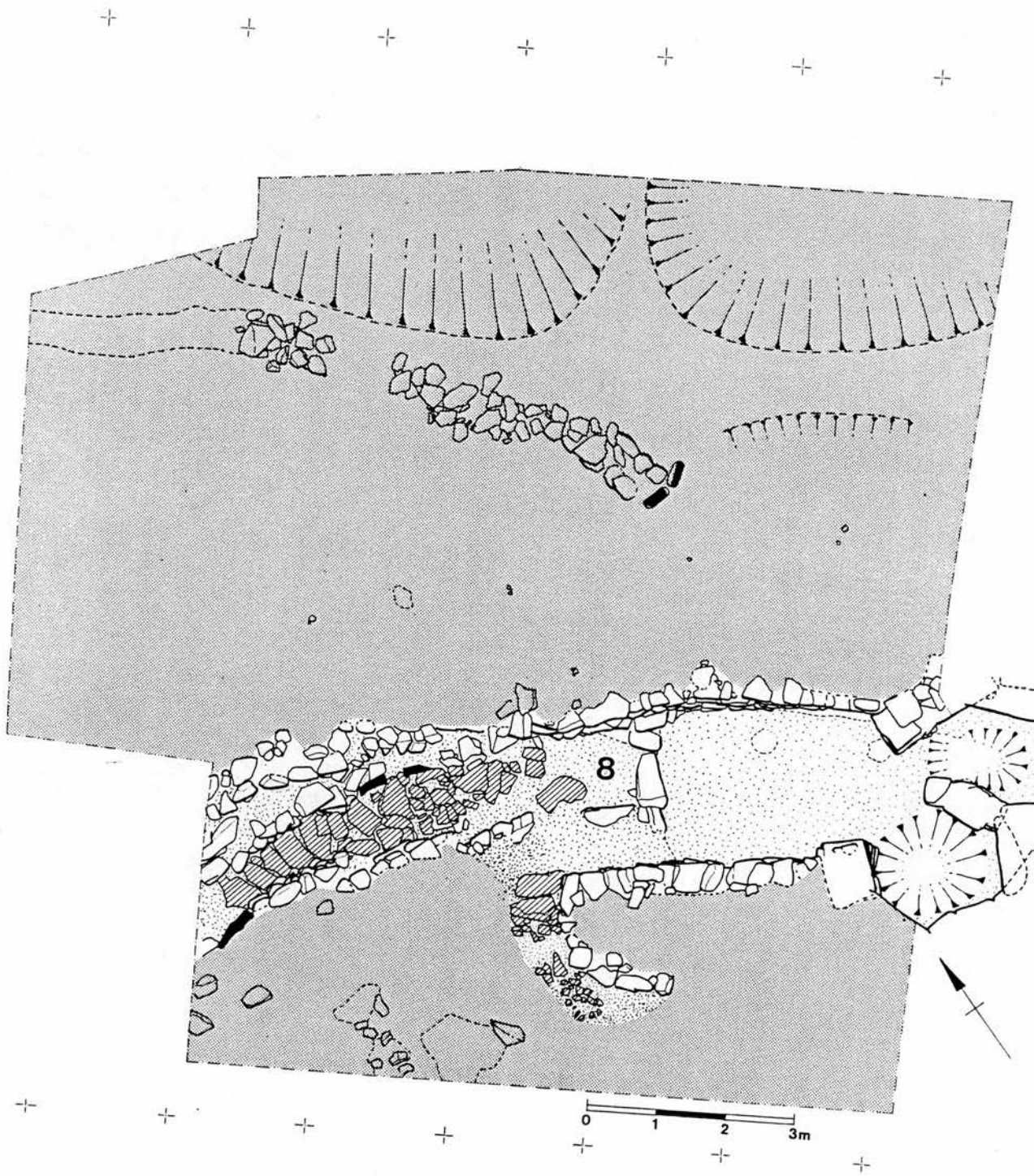
Ill. 7.11 Unival (after Scott 1948a)



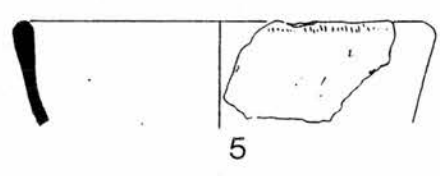
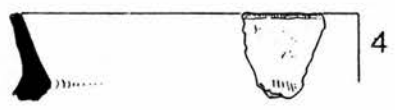
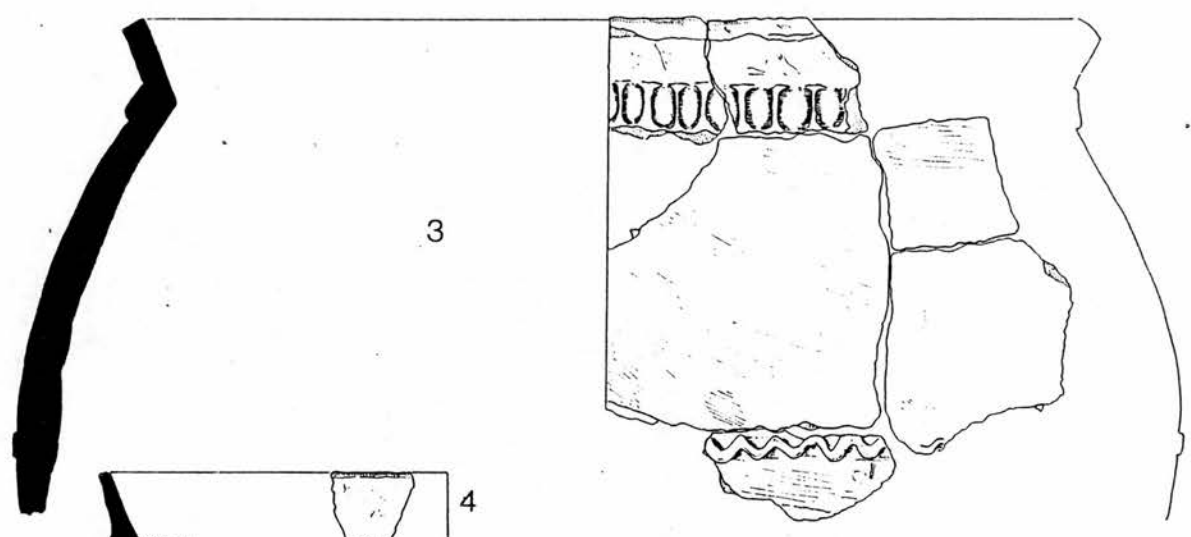
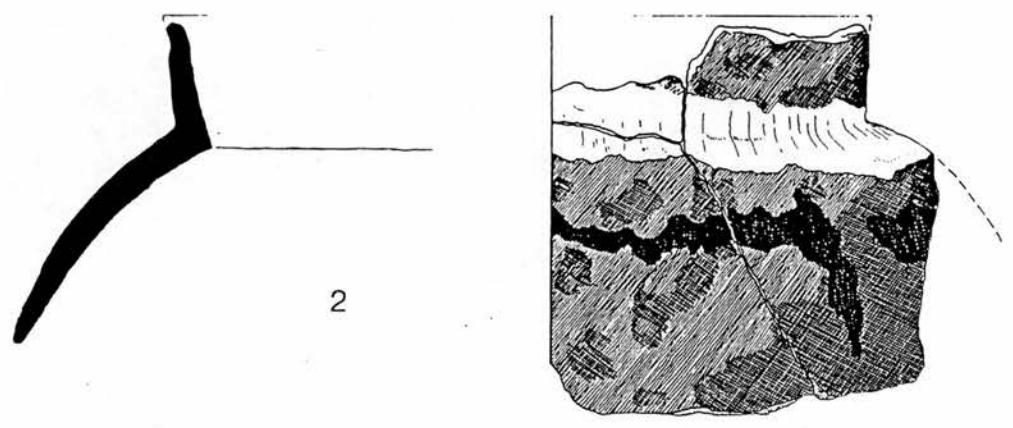
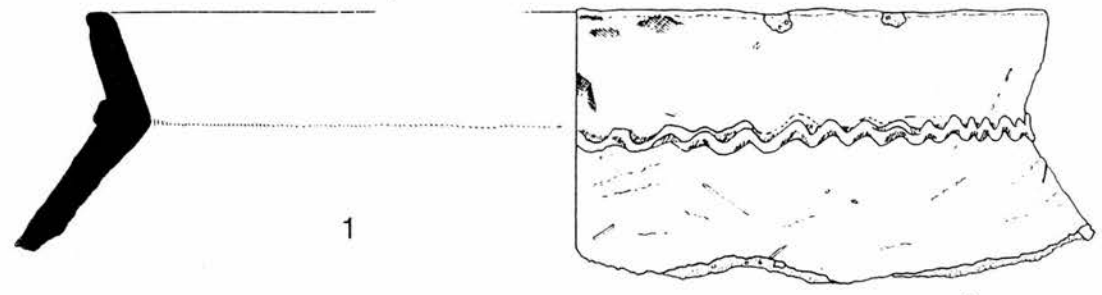
Ill. 7.12 A Cheardach Mhor Cellular Structures (after Young and Richardson 1959)



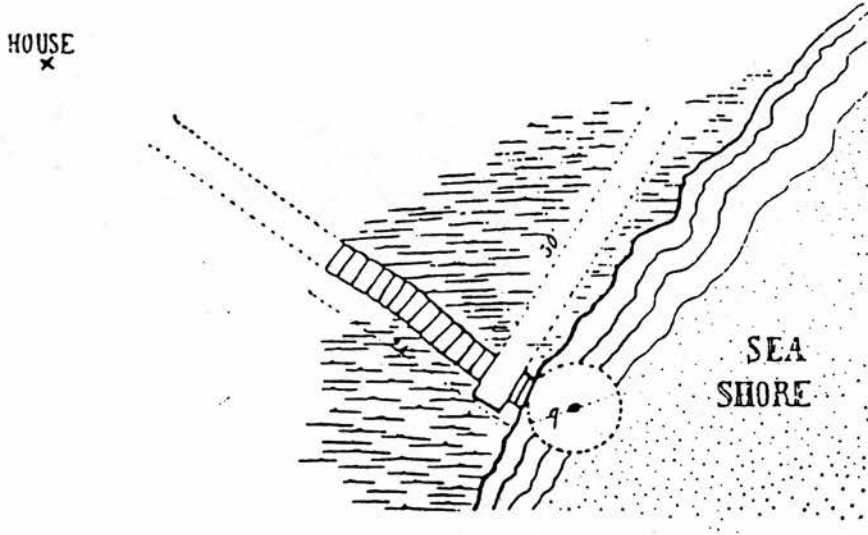
Ill. 8.1 Distribution of Linear Structures
in the Western Isles



Ill. 8.2 Cnip, Lewis, Phase Three Structures

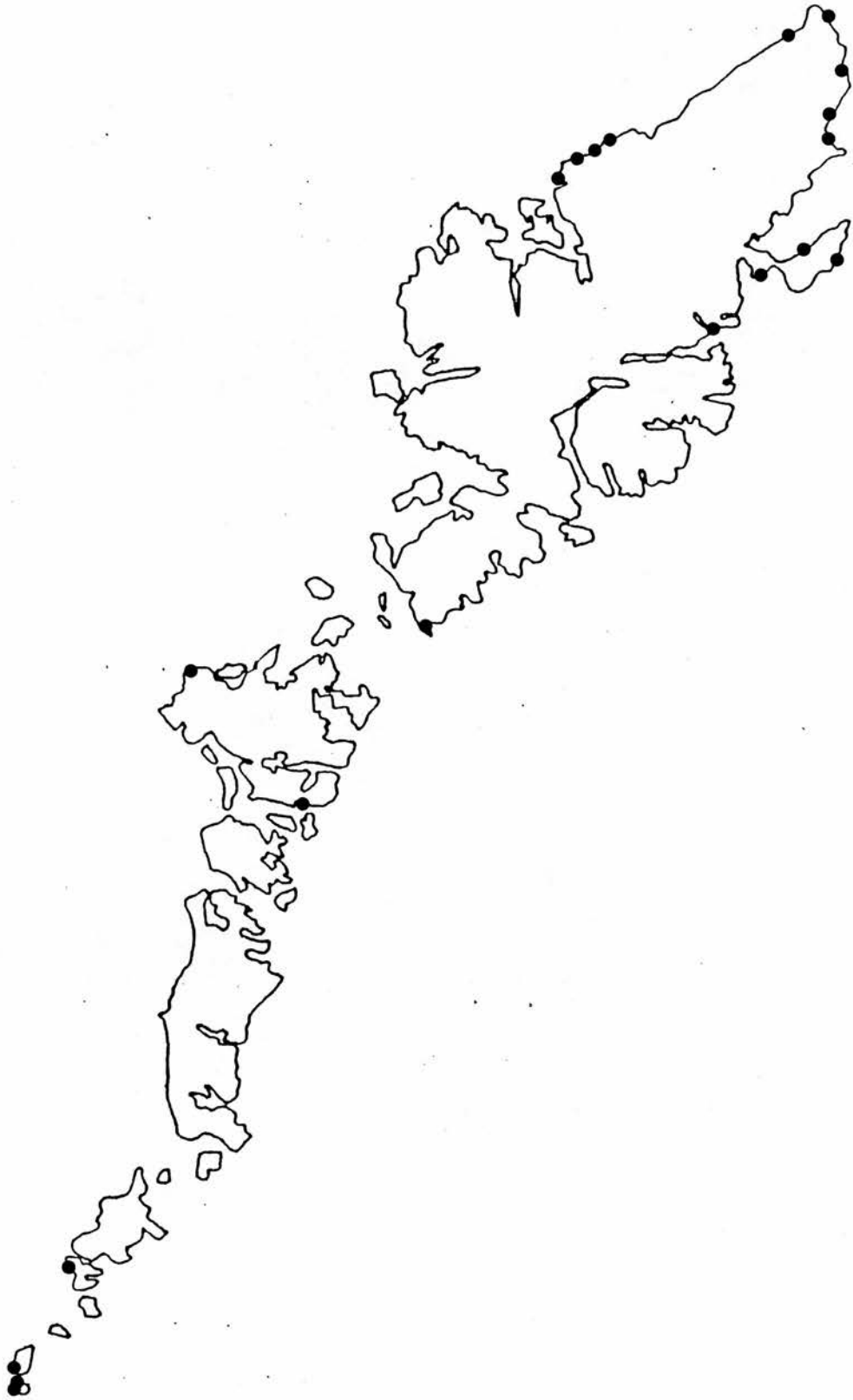


Ill. 8.3 Cnip, Lewis, Phase Three Pottery

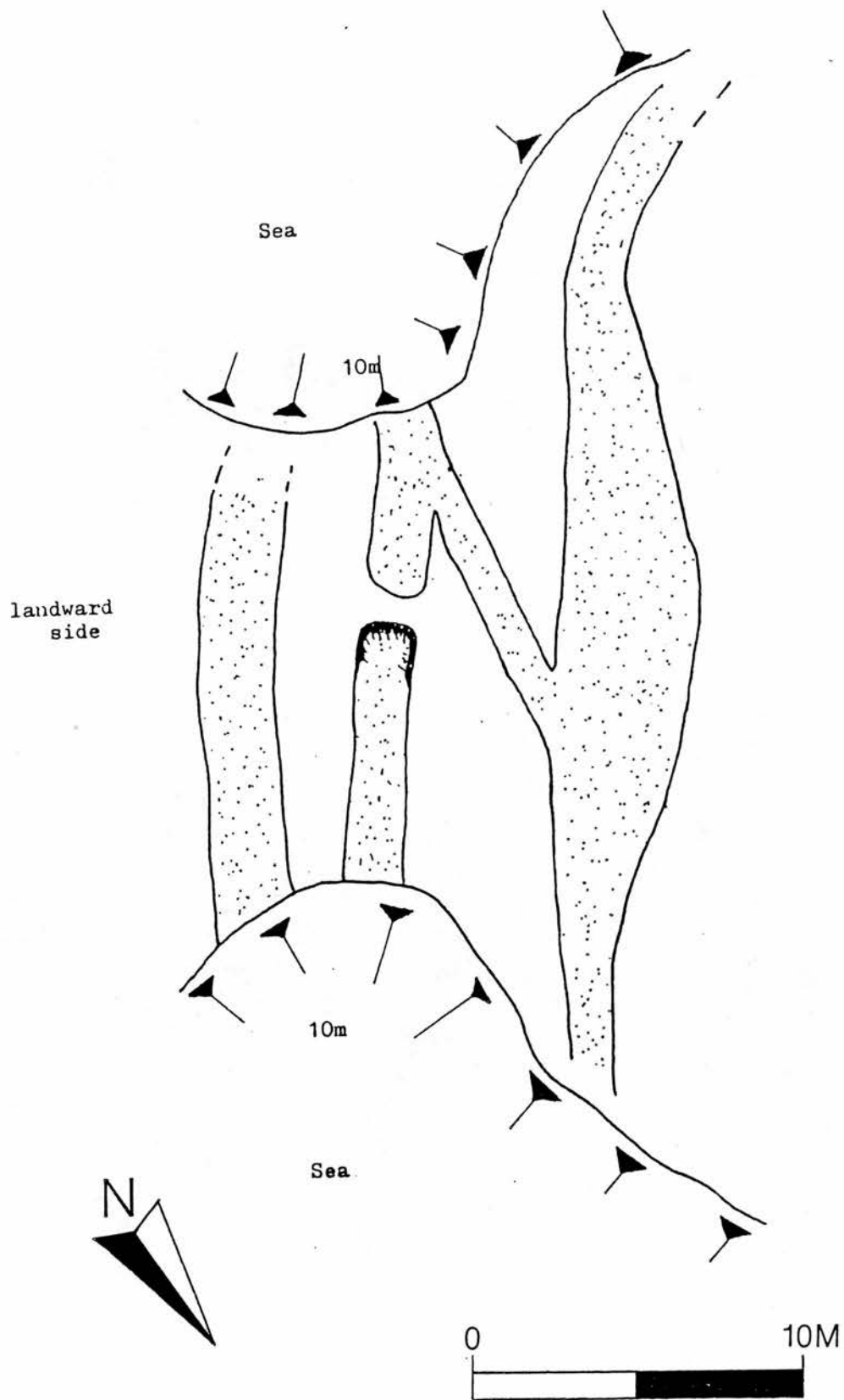


NO SCALE ON ORIGINAL DRAWING

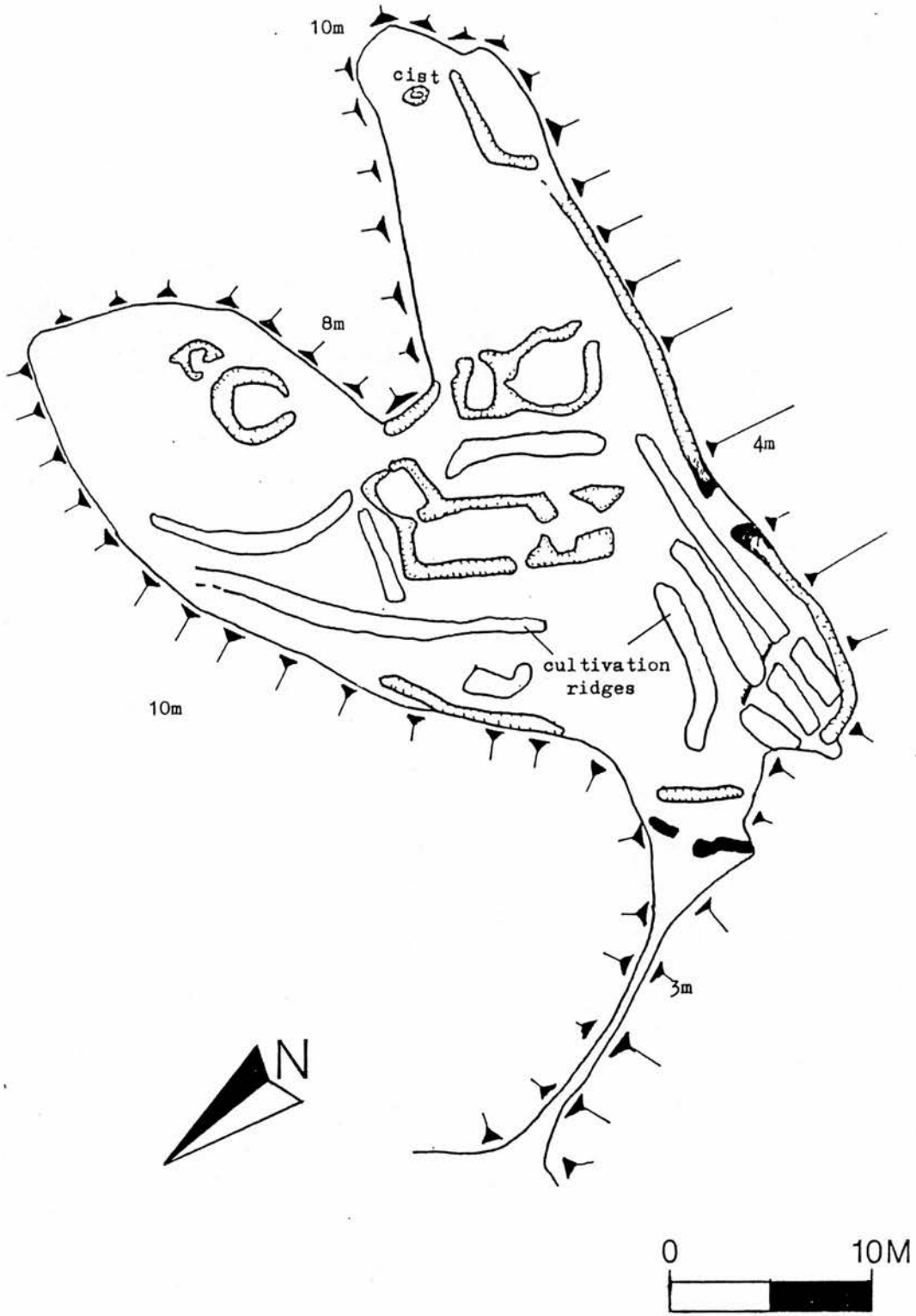
Ill. 8.4 Gress Lodge (after MacRitchie 1916)



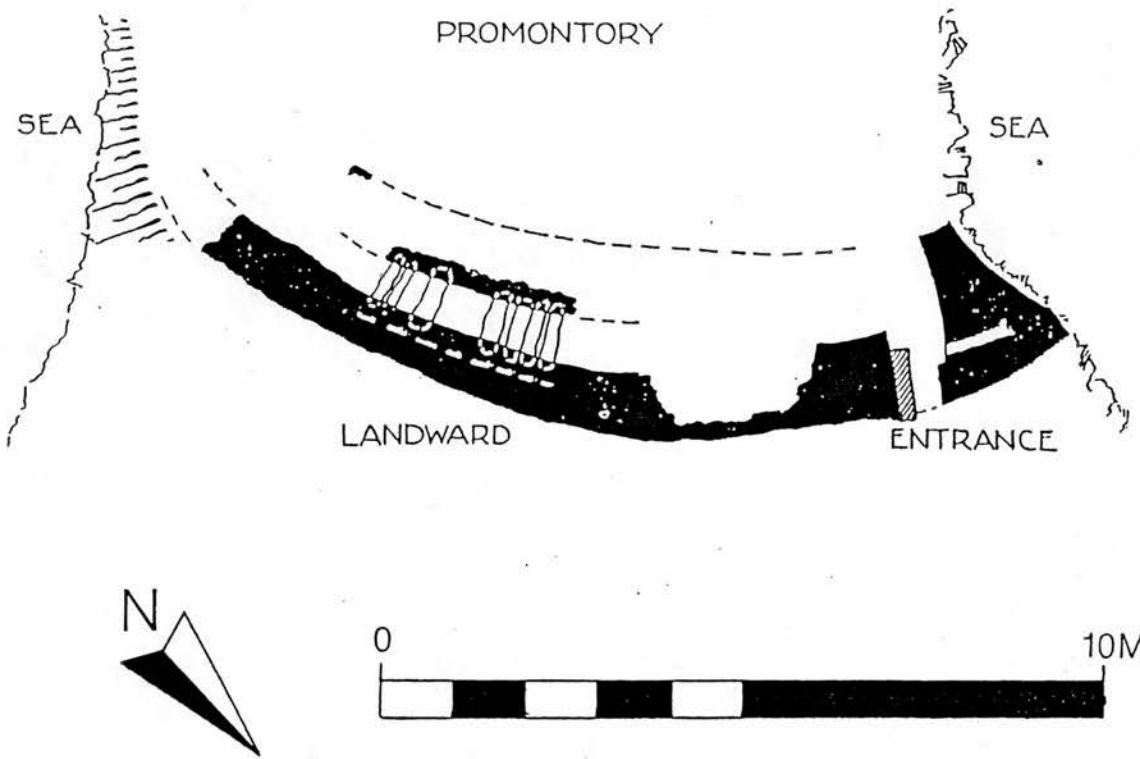
Ill. 9.1 Distribution of Promontory Forts
in the Western Isles



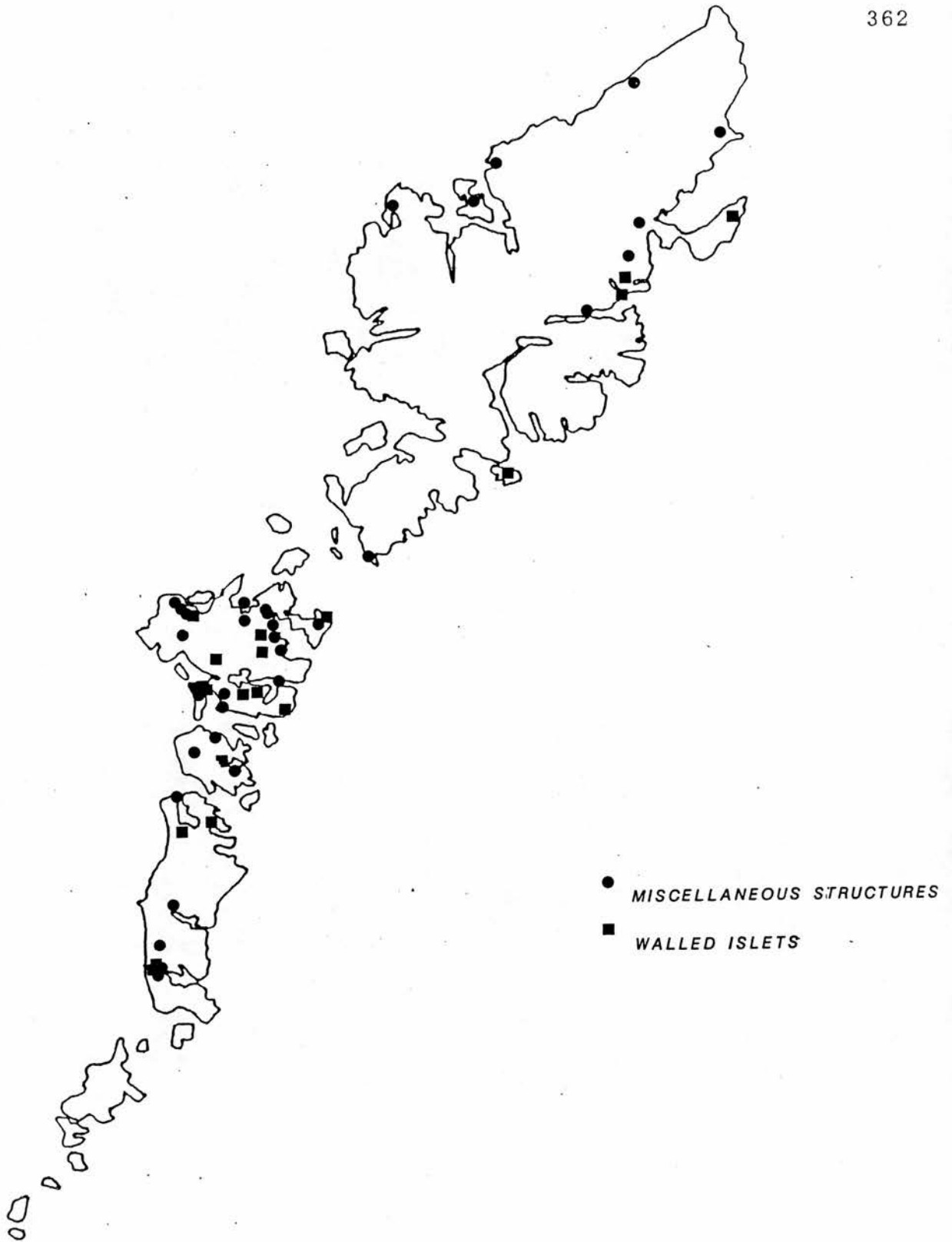
Ill. 9.2 Rudha na Berie, Lewis



Ill. 9.3 Rudha Shilddinish, Lewis

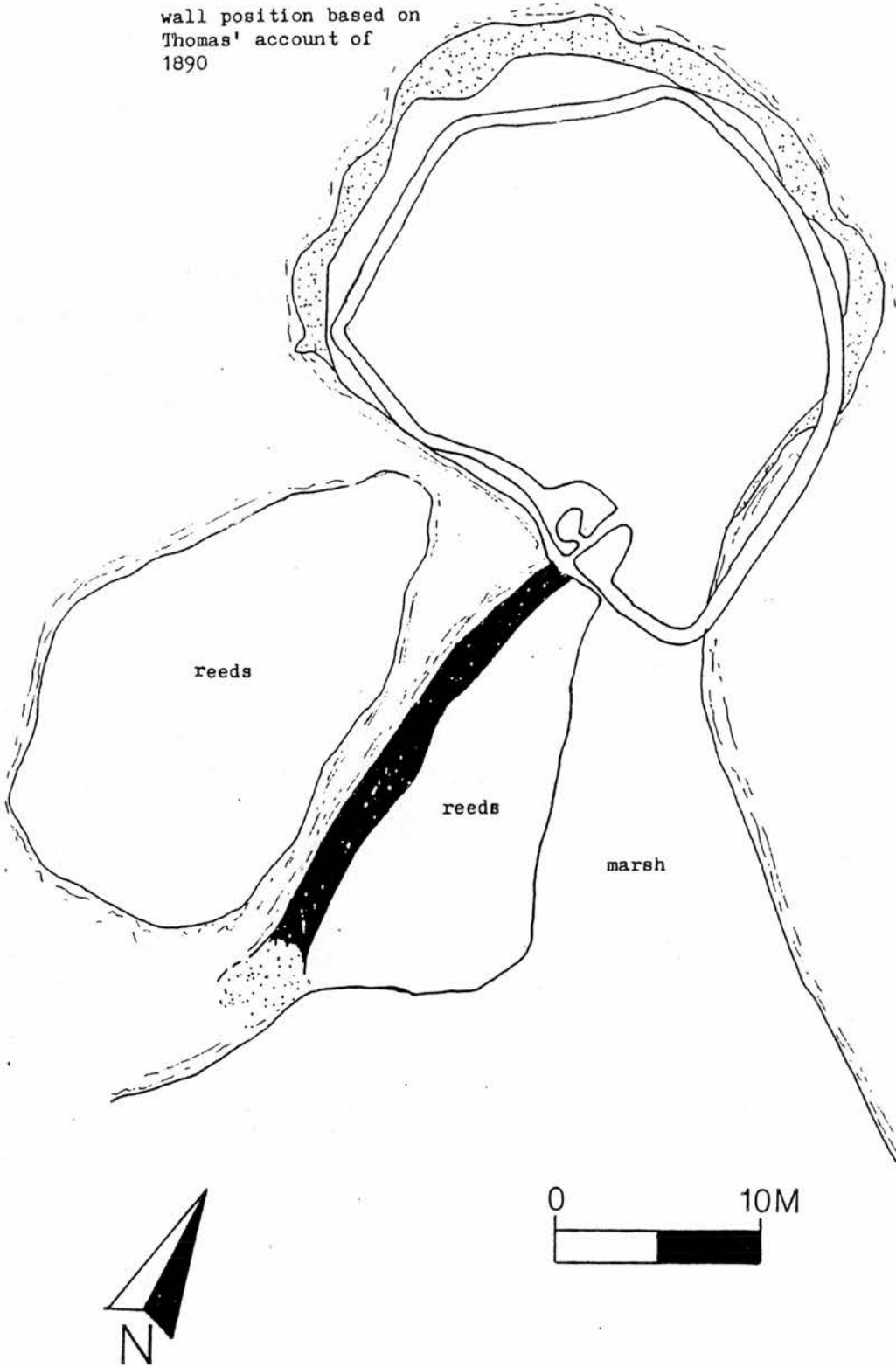


Ill. 9.4 Barra Head Lighthouse (after RCAHMS 1928)

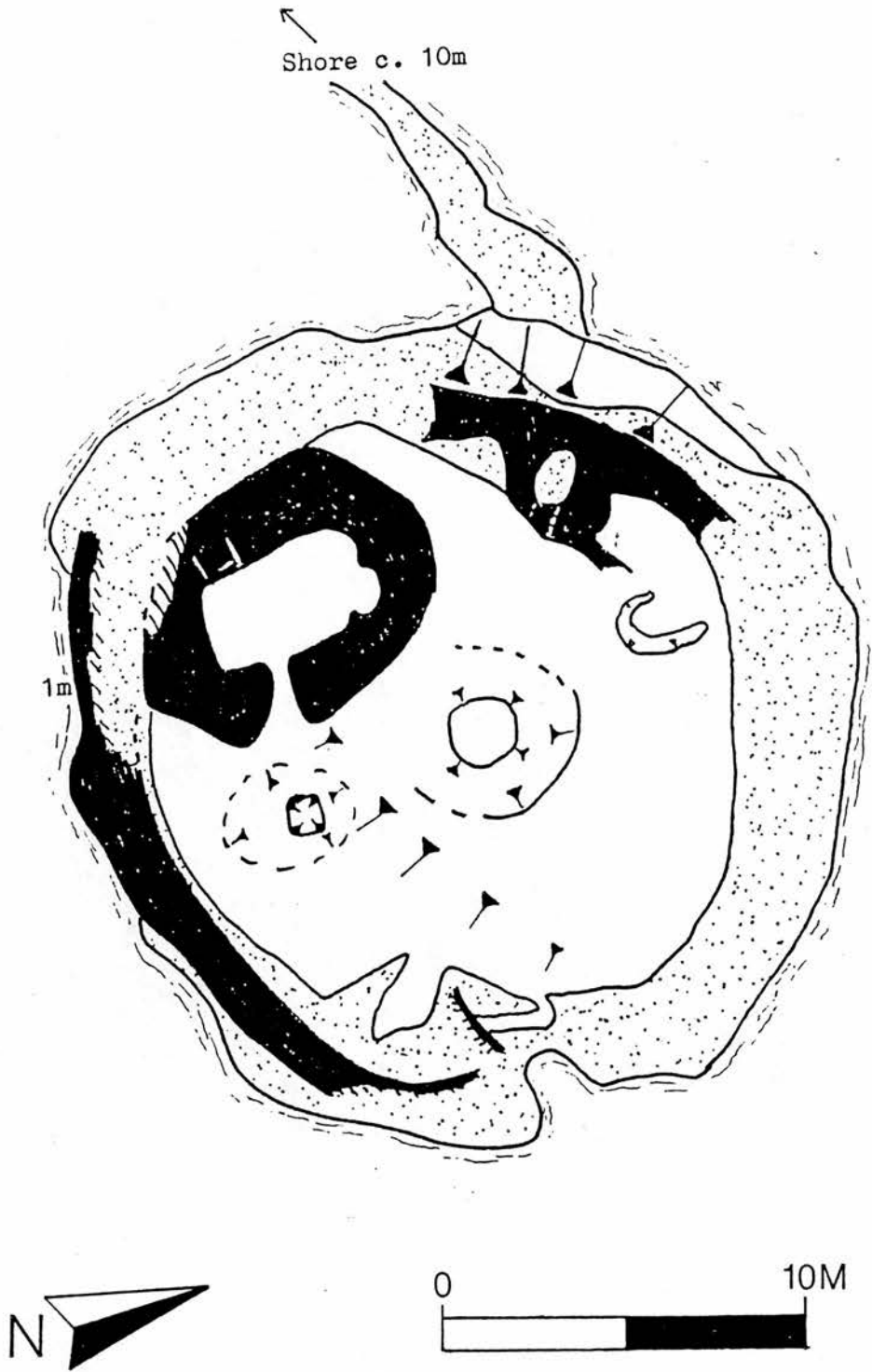


Ill. 10.1 Distribution of Miscellaneous Structures and Walled Islets in the Western Isles

wall position based on
Thomas' account of
1890

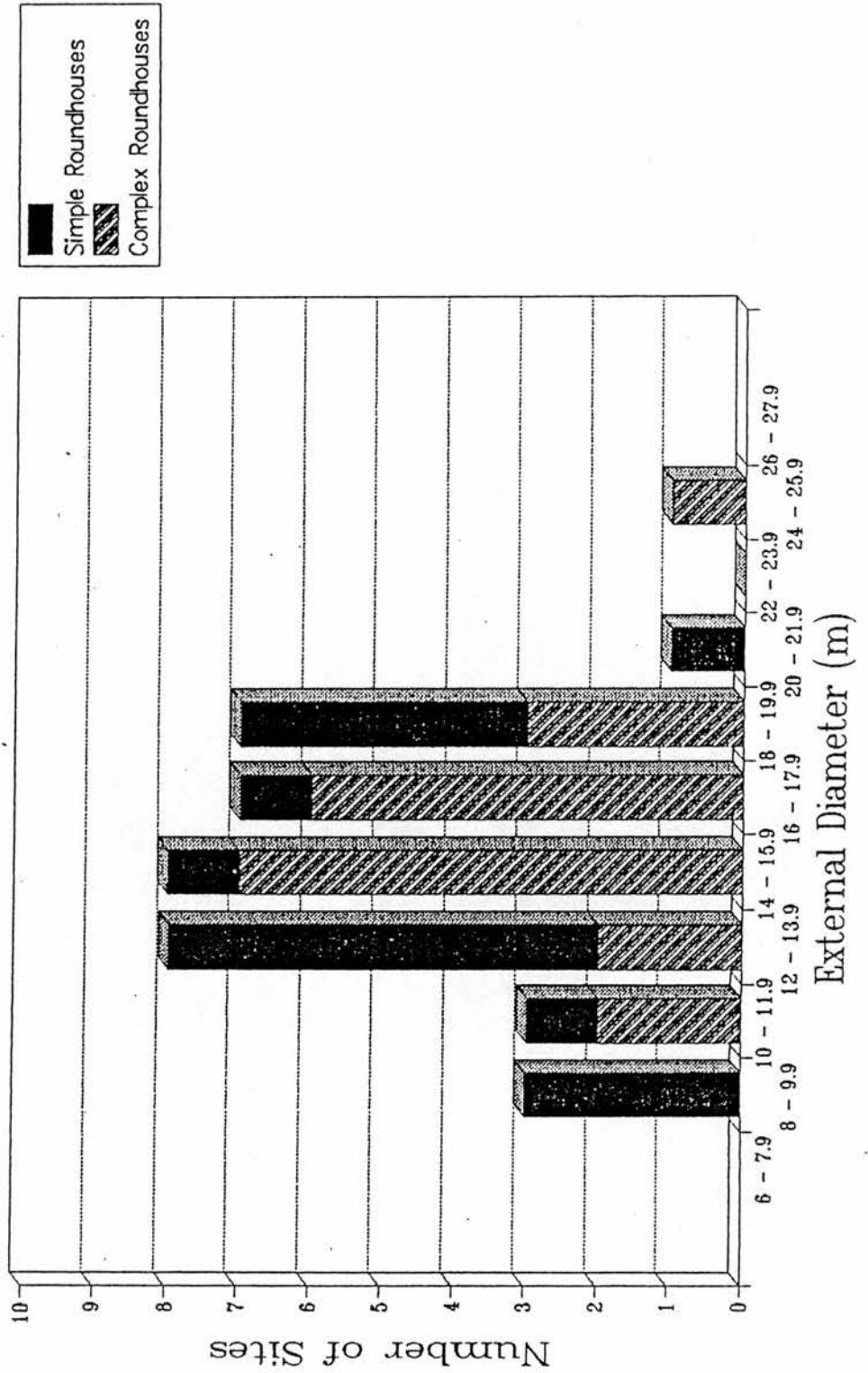


Ill. 10.2 Dun Loch an Duin, Aird (after Thomas 1890)



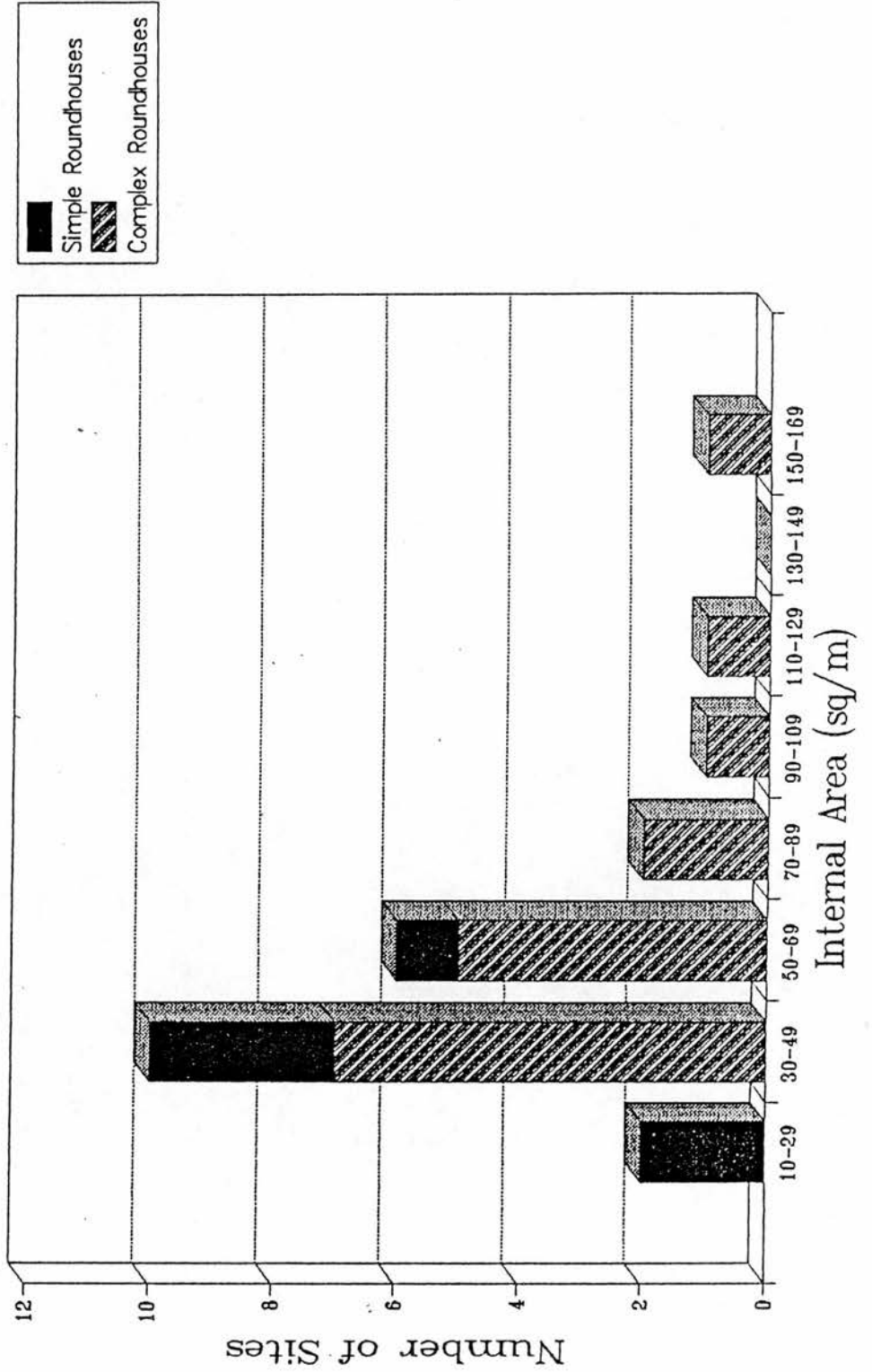
Ill. 10.3 Dun Loch an Duna, Leurbost

Atlantic Roundhouses (N.Uist and Barra) External Diameter



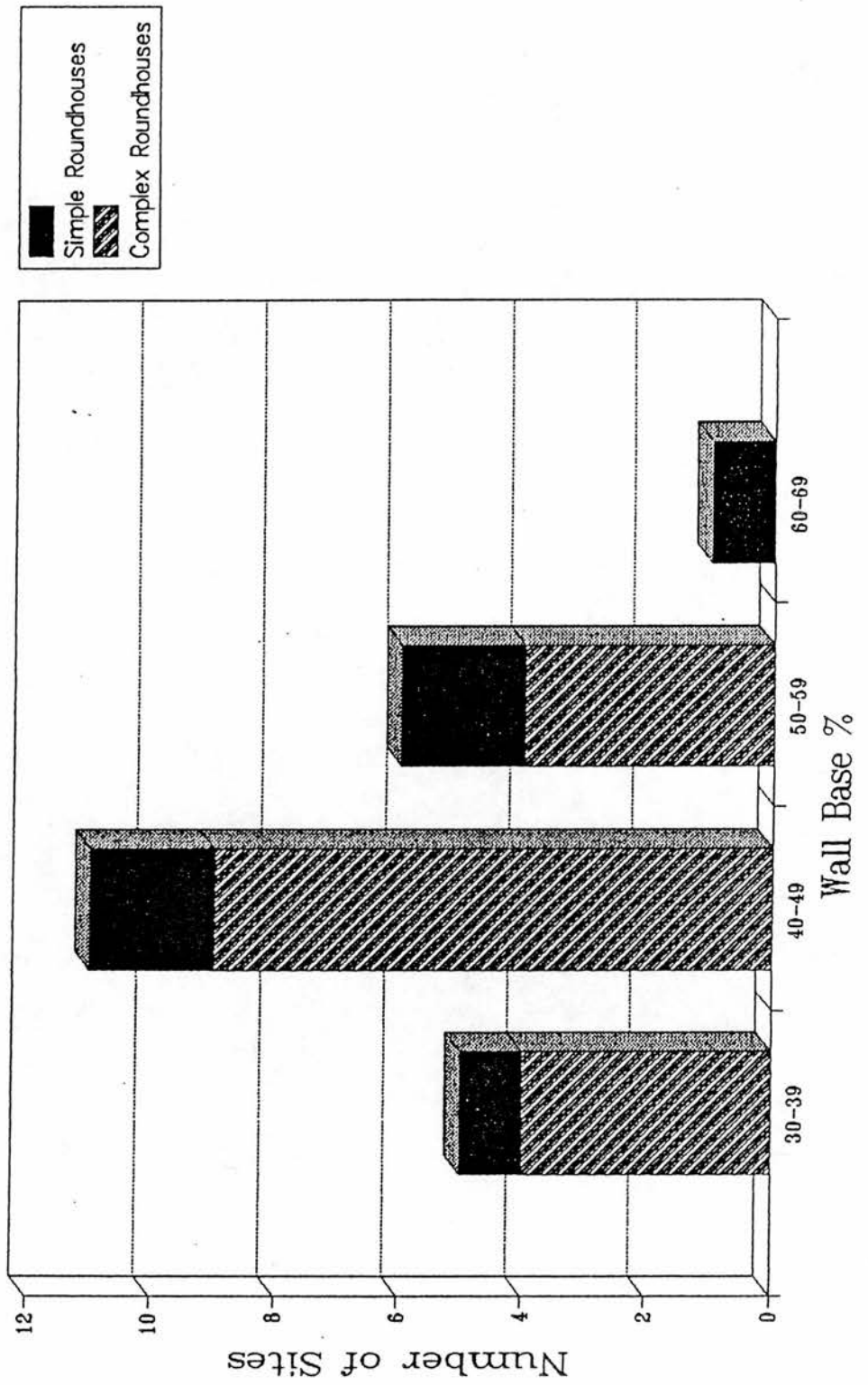
Ill. 11.1 Atlantic Roundhouses (North Uist and Barra);
External Diameter

Atlantic Roundhouses (N.Uist and Barra) Internal Area



Ill. 11.2 Atlantic Roundhouses (North Uist and Barra);
Internal Area

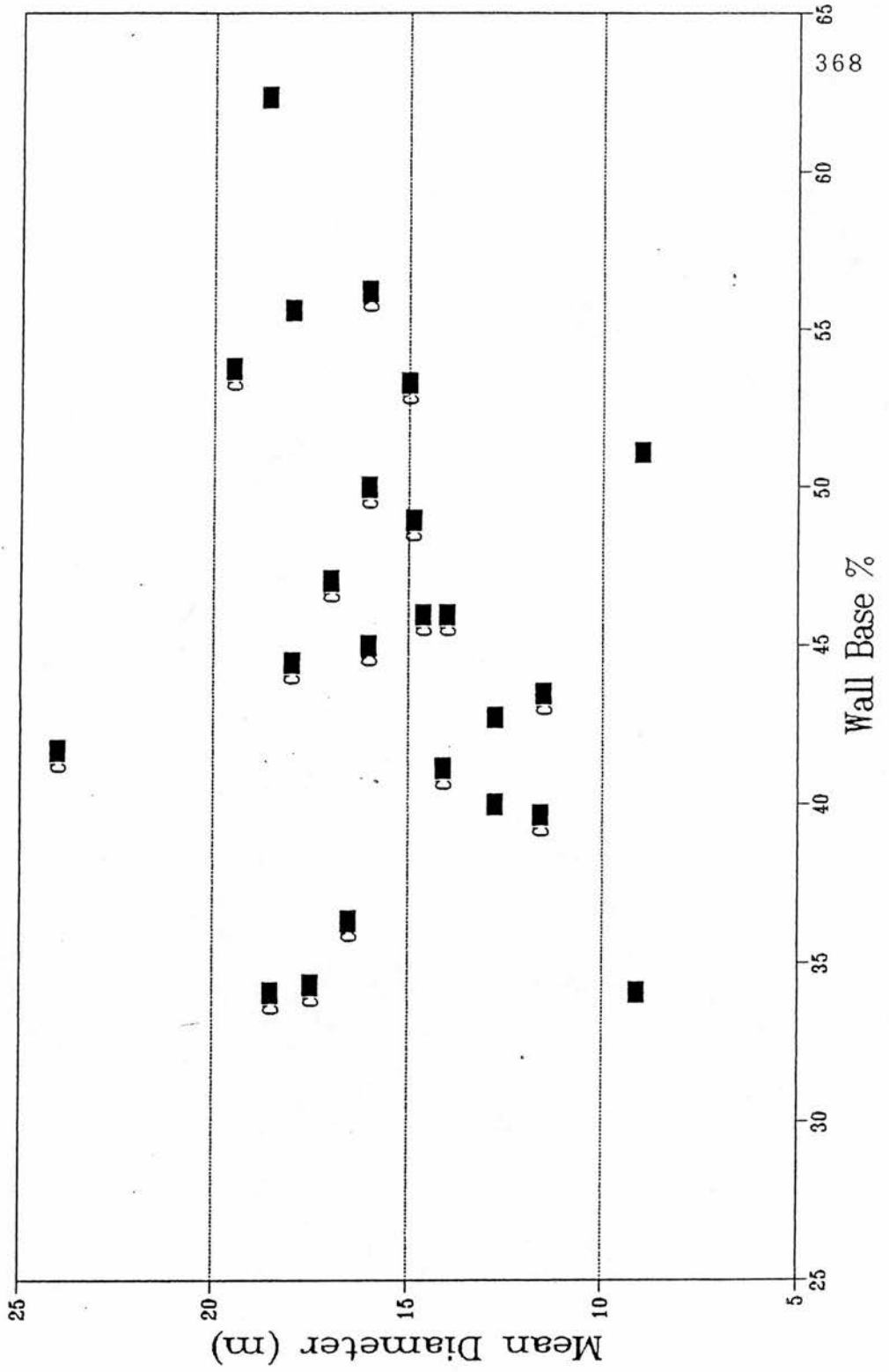
Atlantic Roundhouses (N.Uist and Barra) Wall Base %



Ill. 11.3 Atlantic Roundhouses (North Uist and Barra);
Wall Base %

Atlantic Roundhouses (N.Uist and Barra)

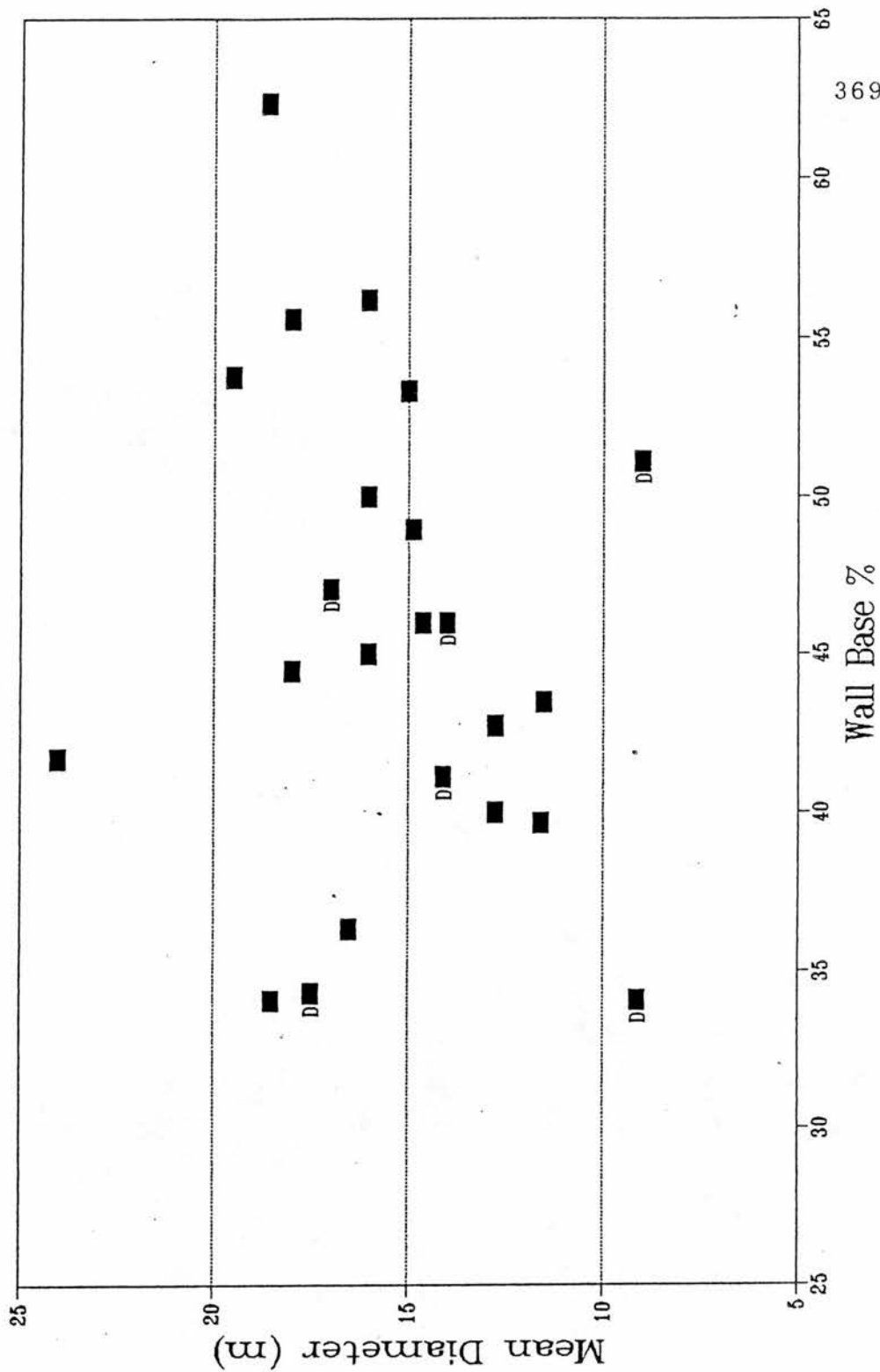
Wall Base % vs. Mean Diameter



Ill. 11.4 Atlantic Roundhouses (North Uist and Barra); Wall Base % vs Mean Diameter

Atlantic Roundhouses (N.Uist and Barra)

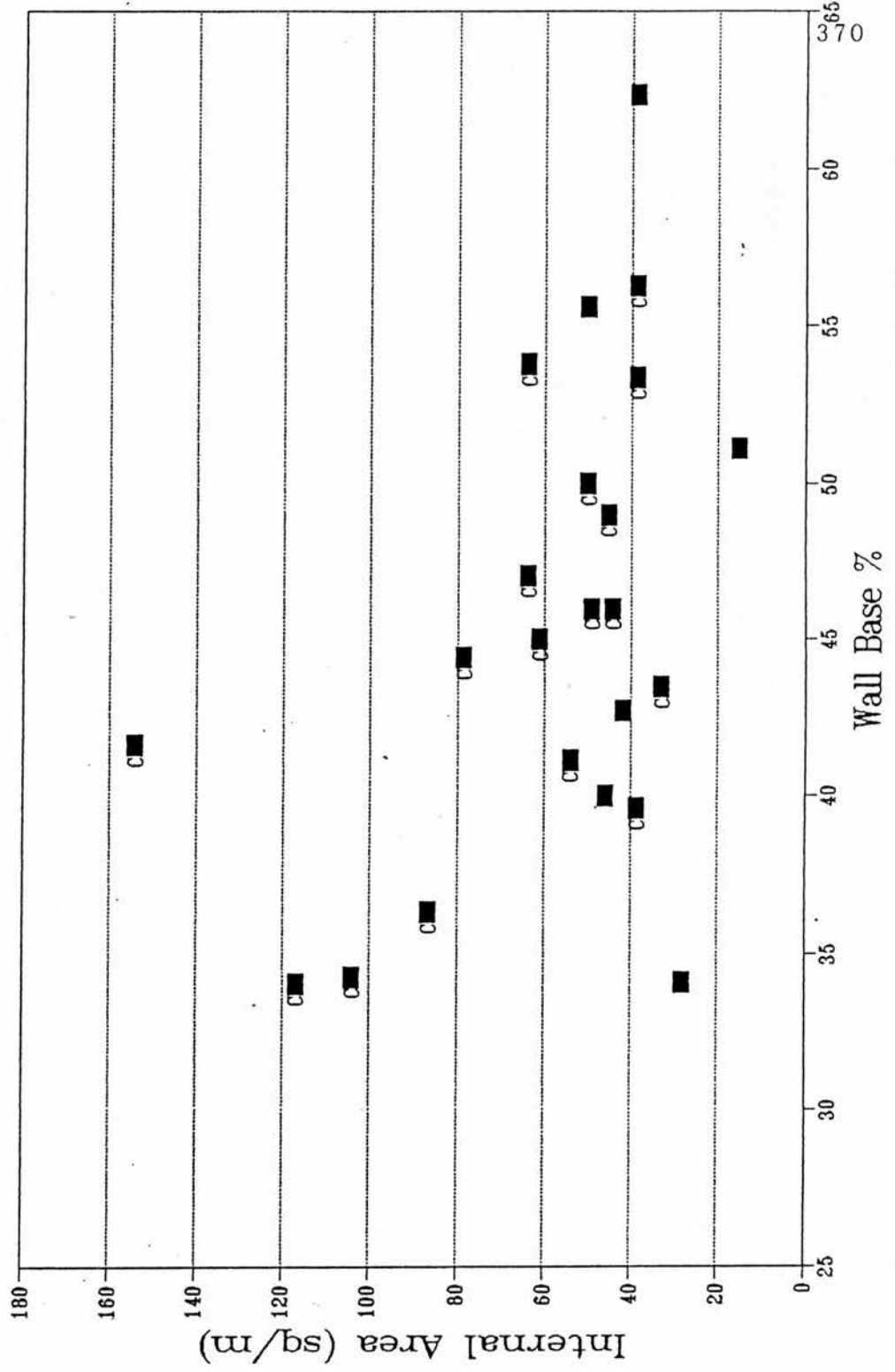
Wall Base % vs. Mean Diameter



Ill. 11.5 Atlantic Roundhouses (North Uist and Barra); Wall Base % vs Mean Diameter (showing non-circular sites)

Atlantic Roundhouses (N.Uist and Barra)

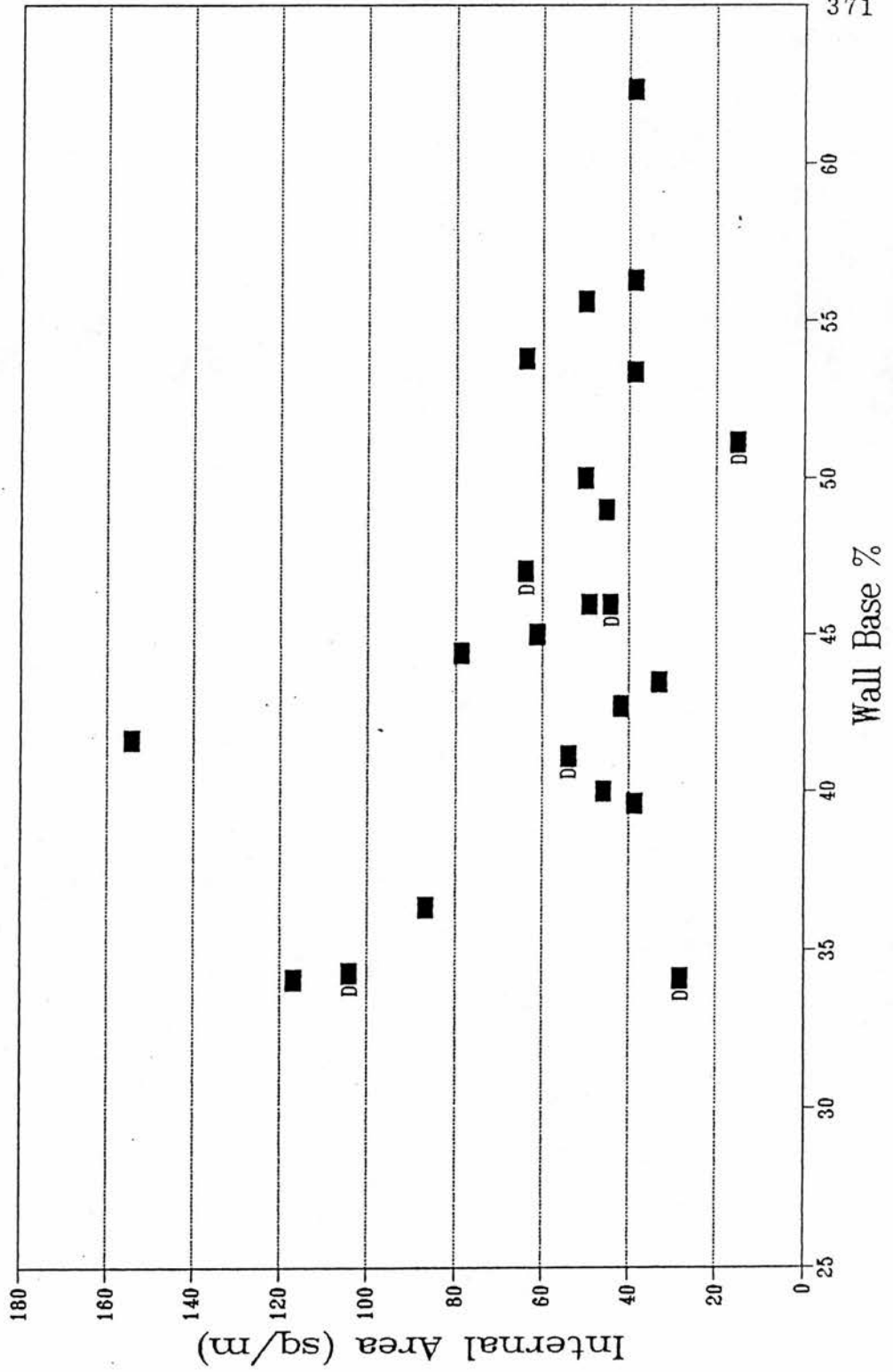
Wall Base % vs. Internal Area



Ill. 11.6 Atlantic Roundhouses (North Uist and Barra); Wall Base % vs Internal Area

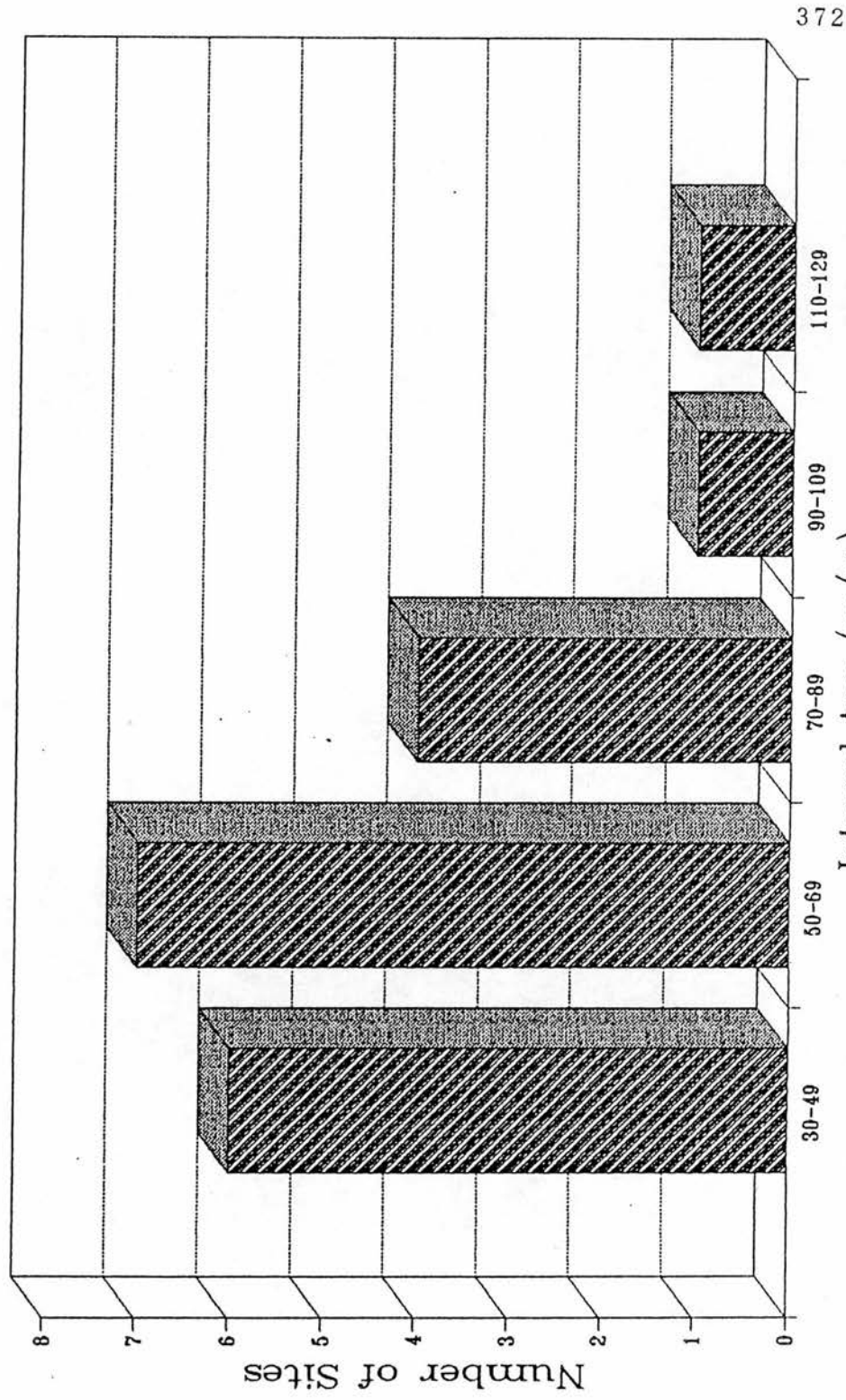
Atlantic Roundhouses (N.Uist and Barra)

Wall Base % vs. Internal Area



Ill. 11.7 Atlantic Roundhouses (North Uist and Barra); Wall Base % vs Internal Area (showing non-circular sites)

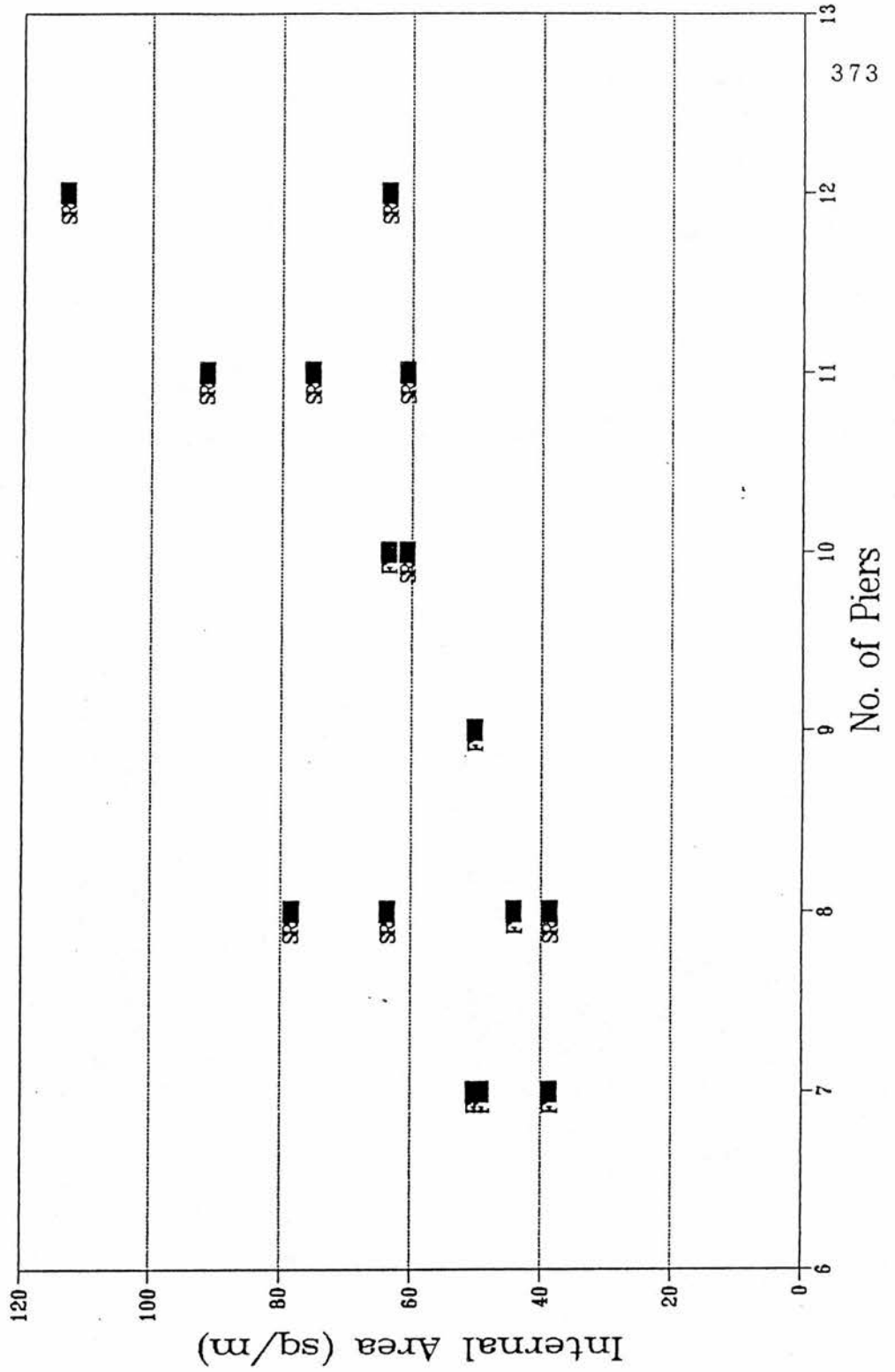
Wheelhouses (Western Isles) Internal Area



Ill. 11.8 Wheelhouses (Western Isles); Internal Area

Wheelhouses (Western Isles)

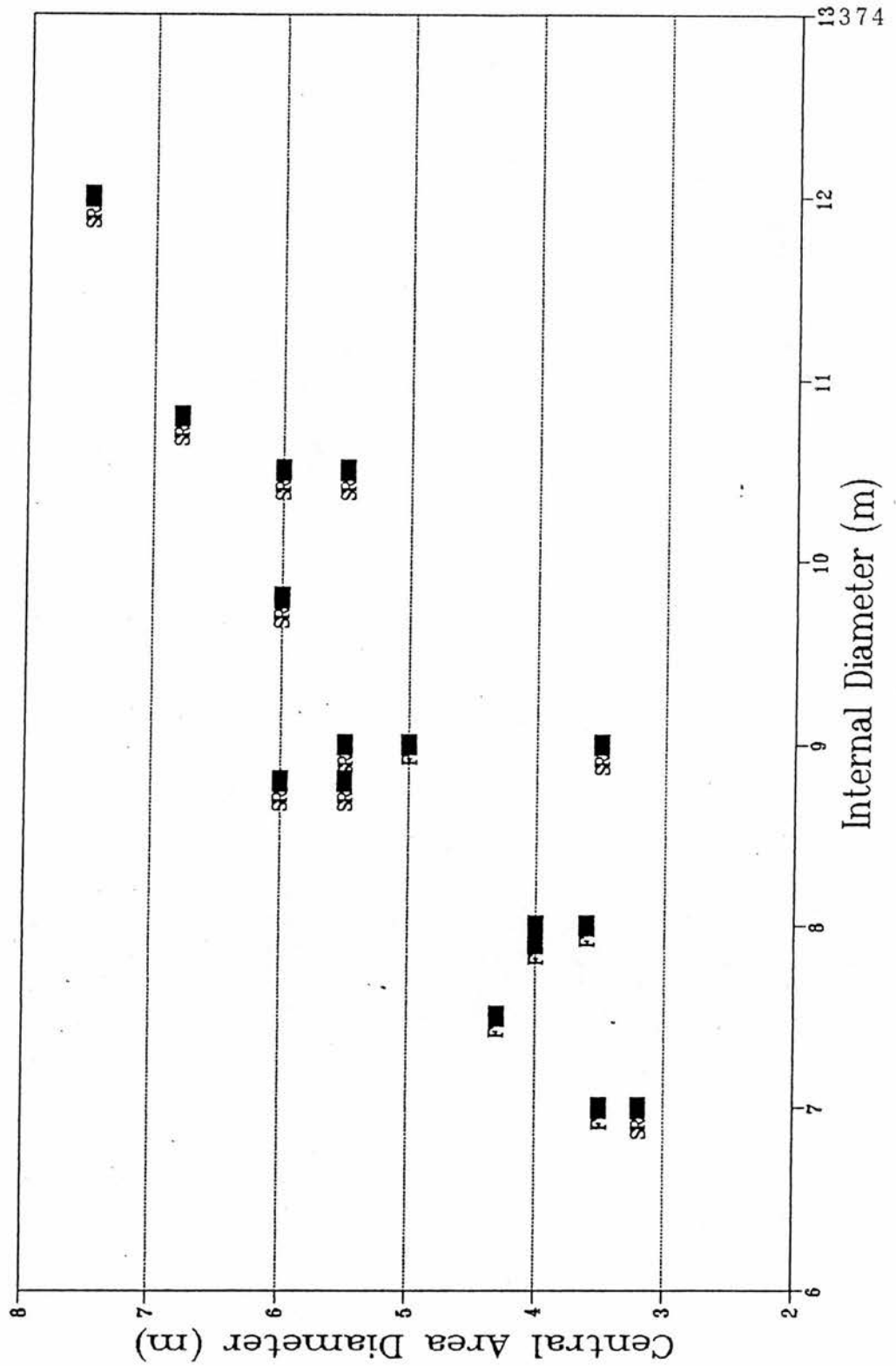
Number of Piers vs. Internal Area



Ill. 11.9 Wheelhouses (Western Isles); Number of Piers vs Internal Area

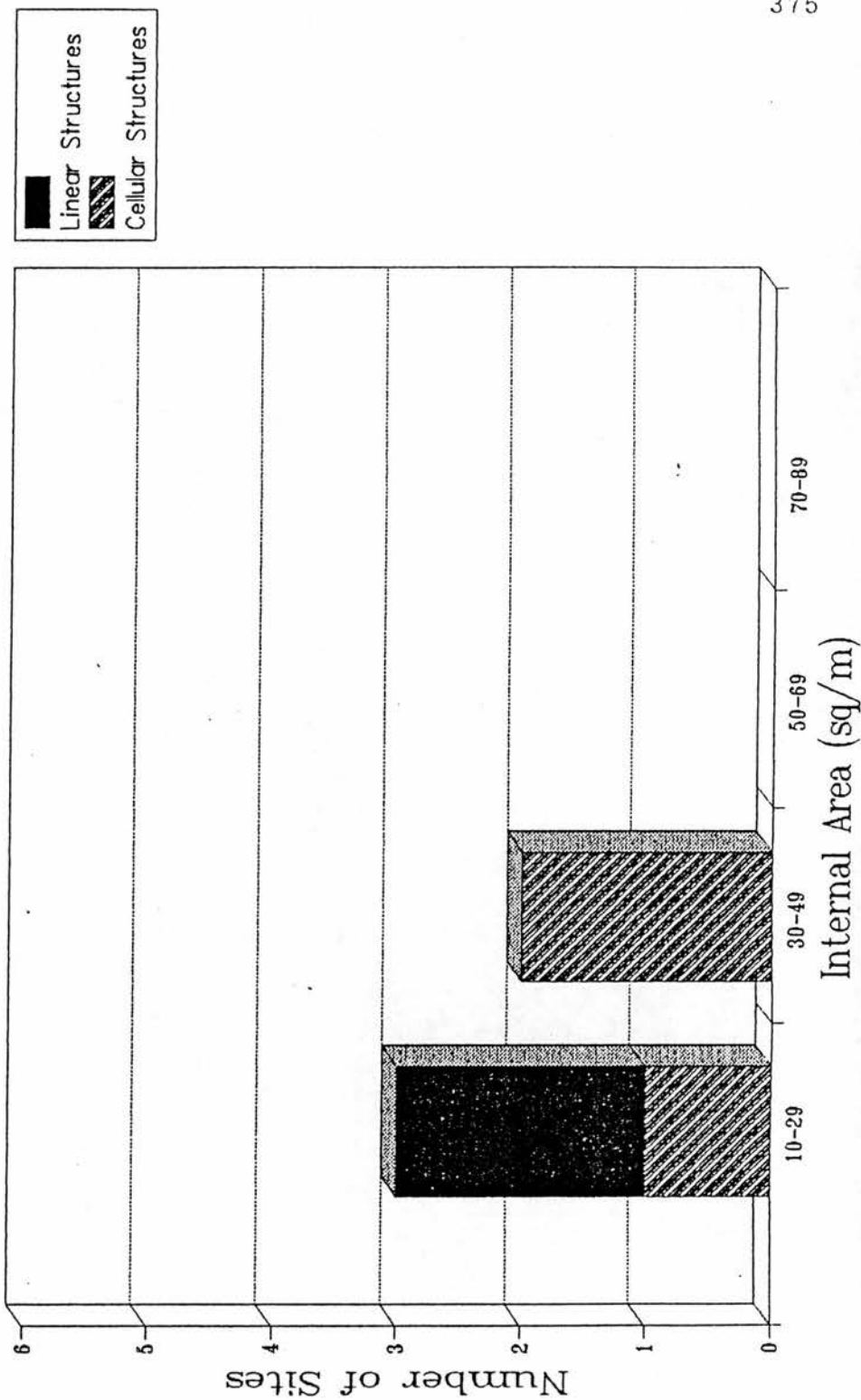
Wheelhouses (Western Isles)

Central Area Diam. vs. Internal Diam.

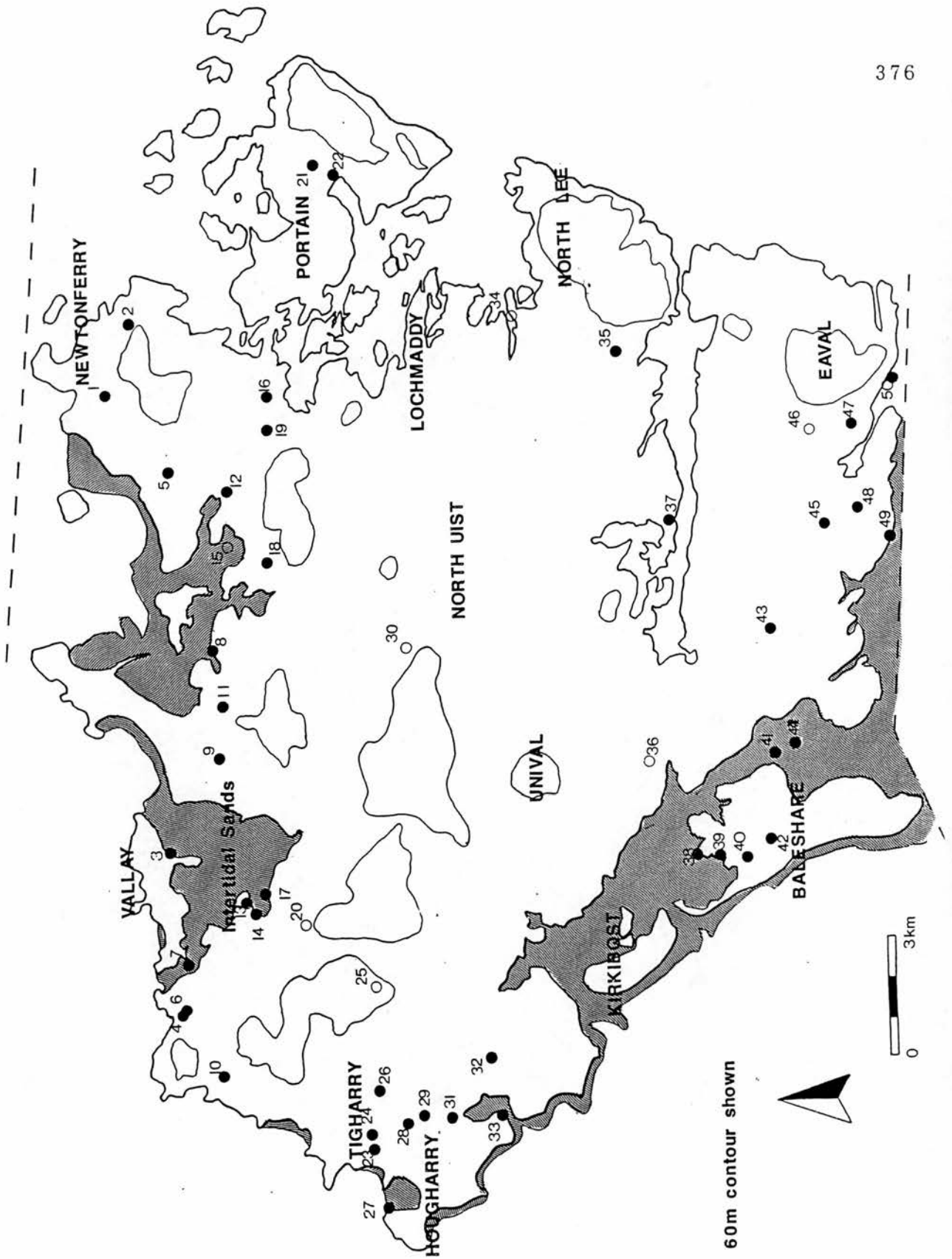


Ill. 11.10 Wheelhouses (Western Isles); Central Area Diameter vs Internal Diameter

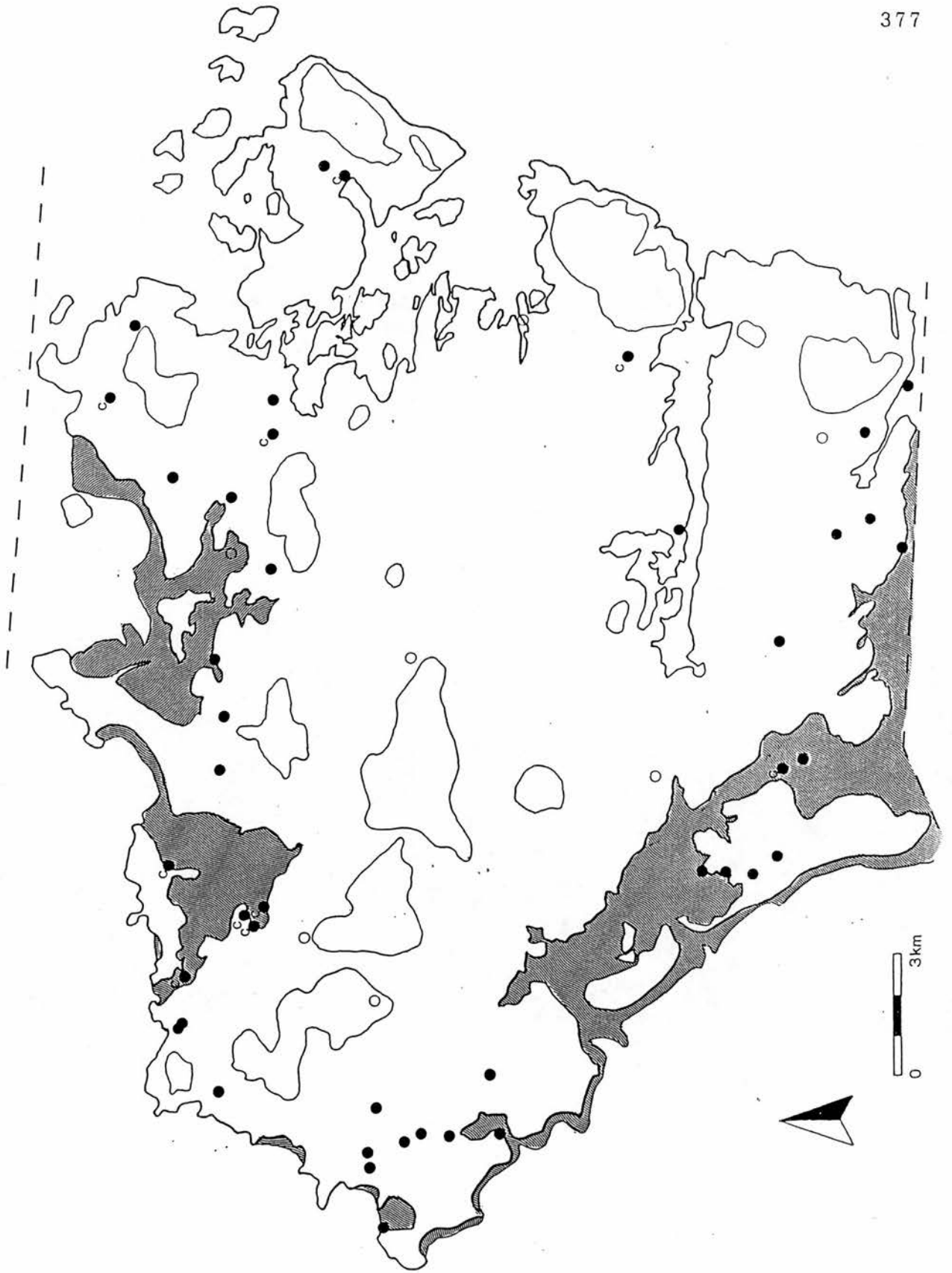
Cellular and Linear House Structures Internal Area



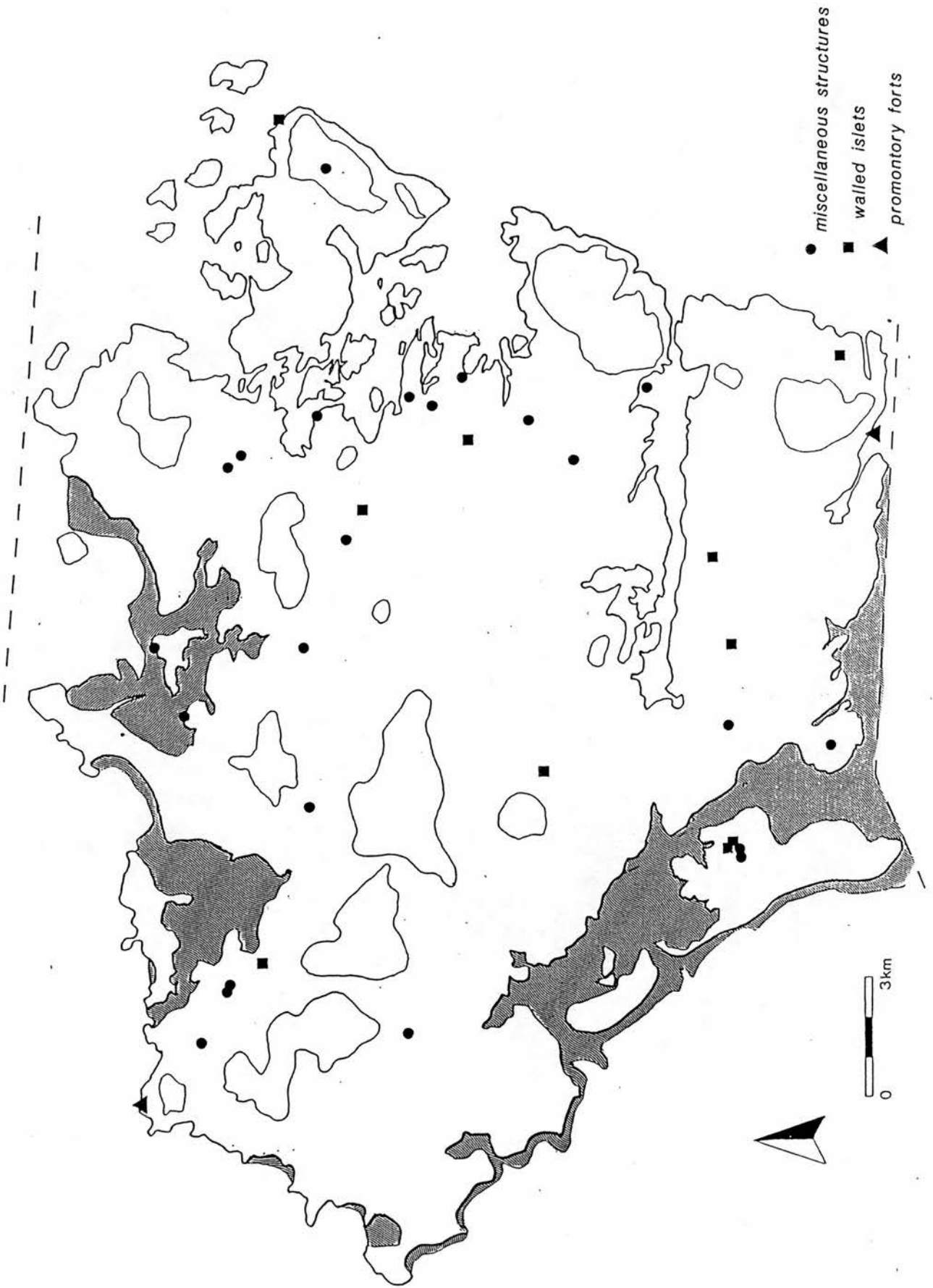
Ill. 11.11 Cellular Structures and Linear House Structures;
Internal Area



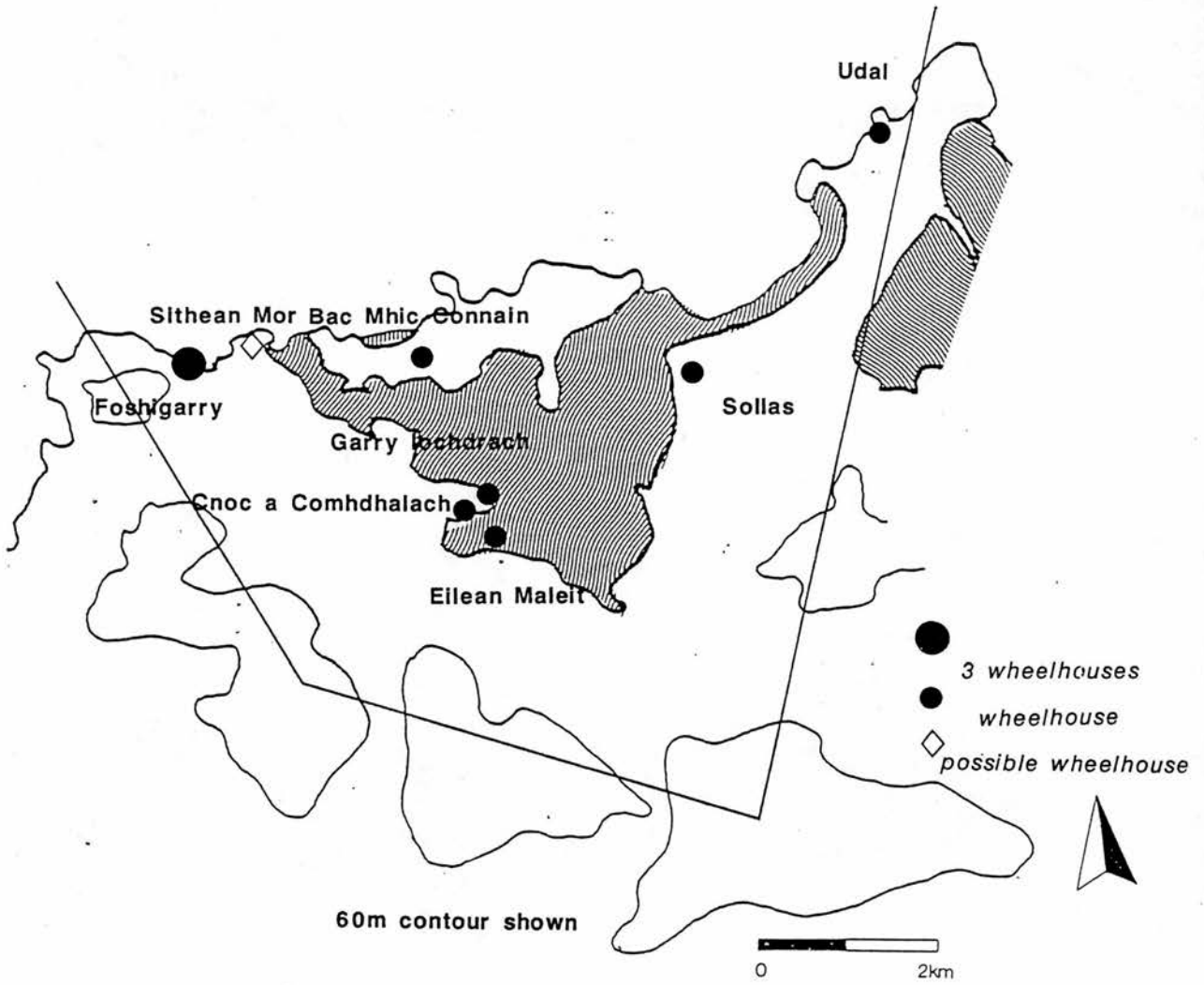
Ill. 12.1 Distribution of Atlantic Roundhouses in North Uist



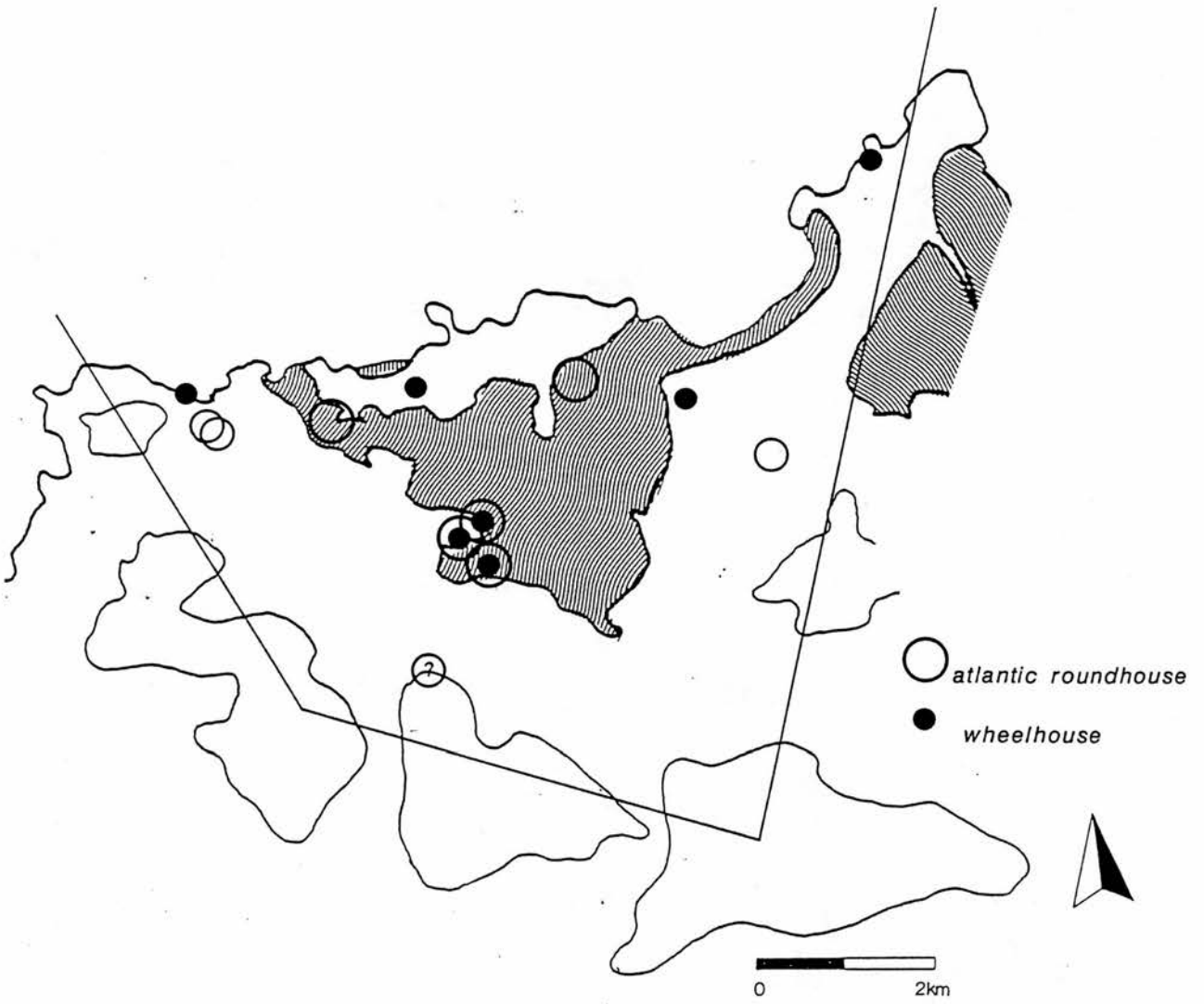
Ill. 12.2 Distribution of Complex Roundhouses (C) in North Uist



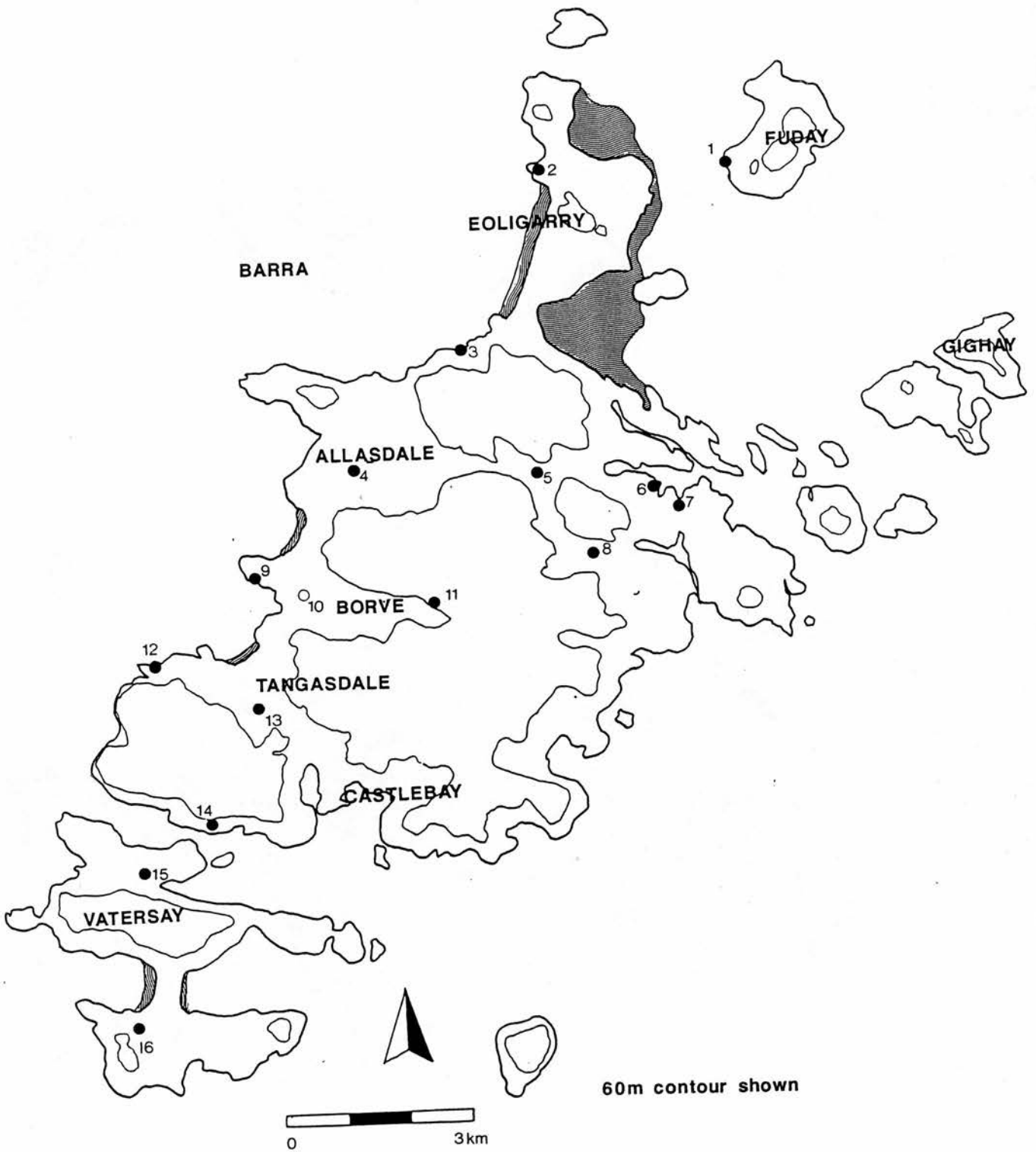
III. 12.3 Distribution of Miscellaneous Structures, Walled Islets and Promontory Forts in North Uist



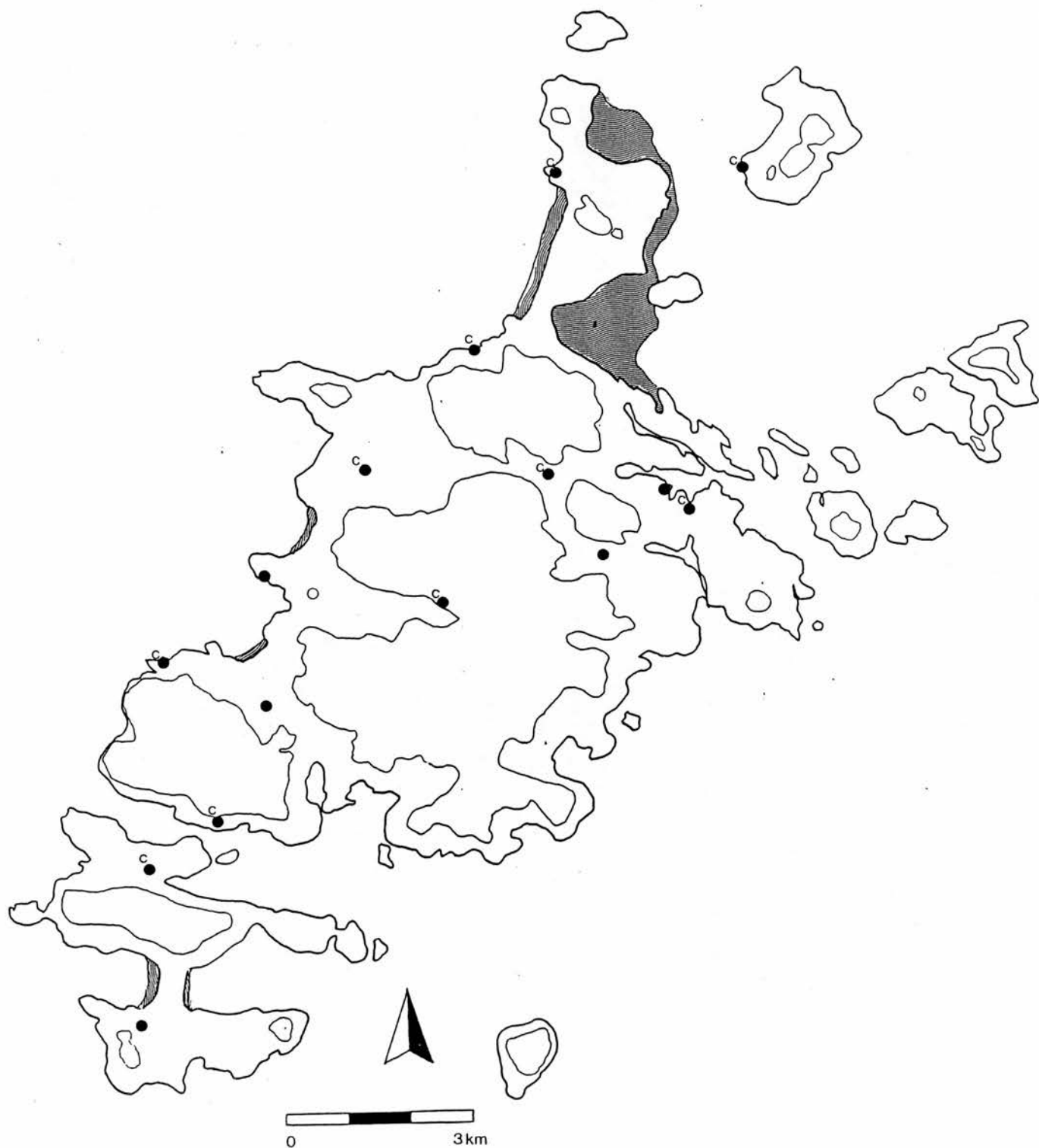
Ill. 12.4 Distribution of Wheelhouses in the Vallay Catchment, North Uist



Ill. 12.5 Distribution of Wheelhouses and Atlantic Roundhouses in the Vallay Catchment, North Uist



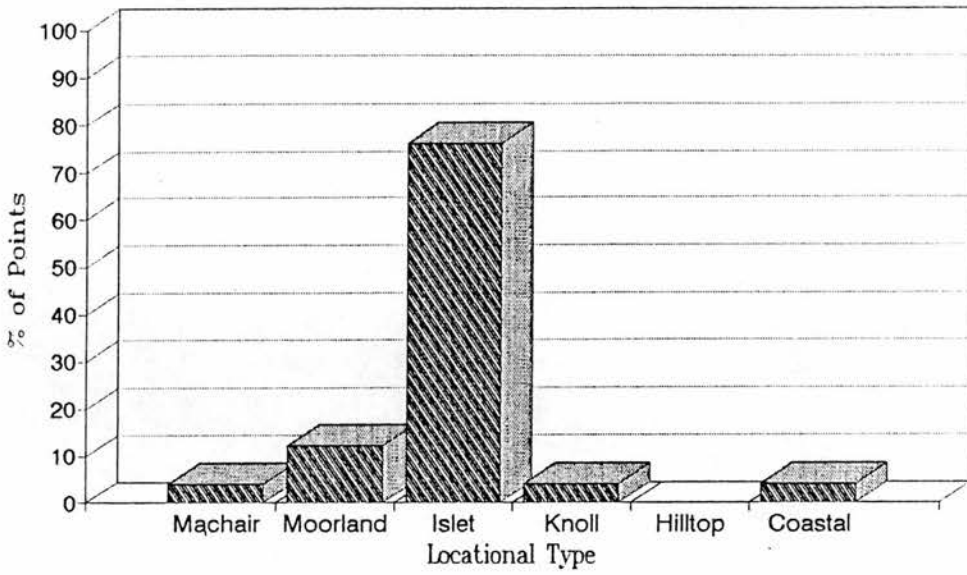
Ill. 12.6 Distribution of Atlantic Roundhouses in Barra



Ill. 12.7 Distribution of Complex Roundhouses (C) in Barra

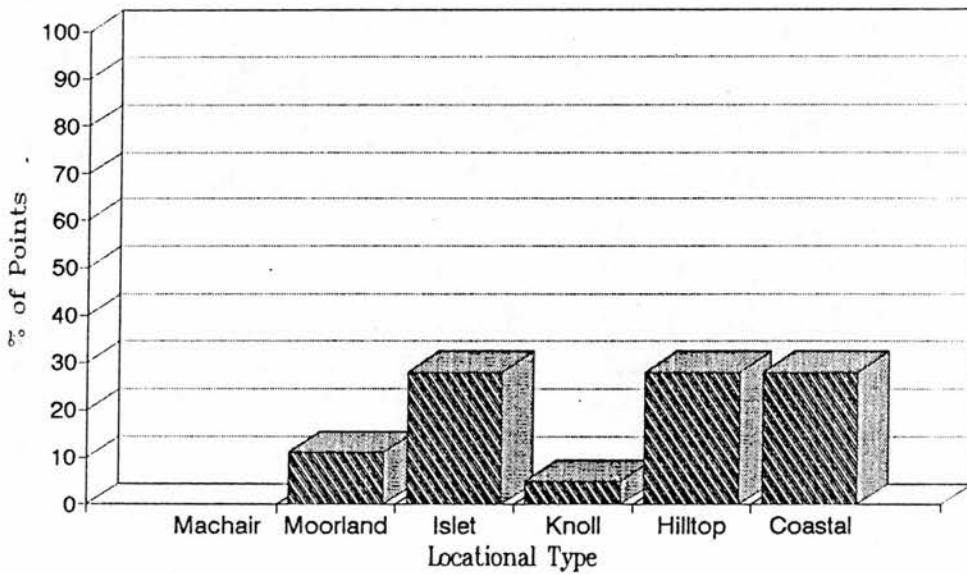
Location

North Uist - Atlantic Roundhouses



Location

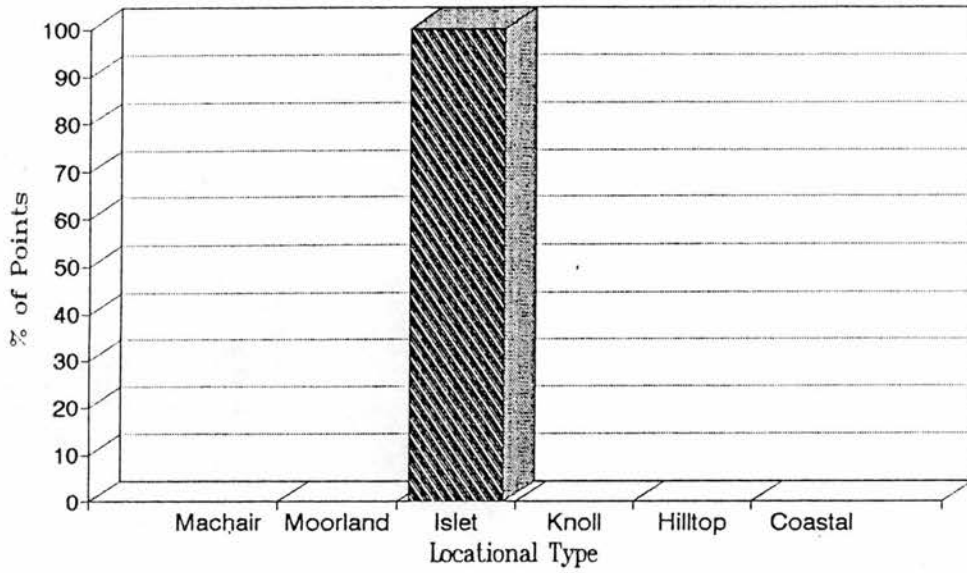
Barra - Atlantic Roundhouses



Ill. 12.8 Location of Atlantic Roundhouses in North Uist and Barra

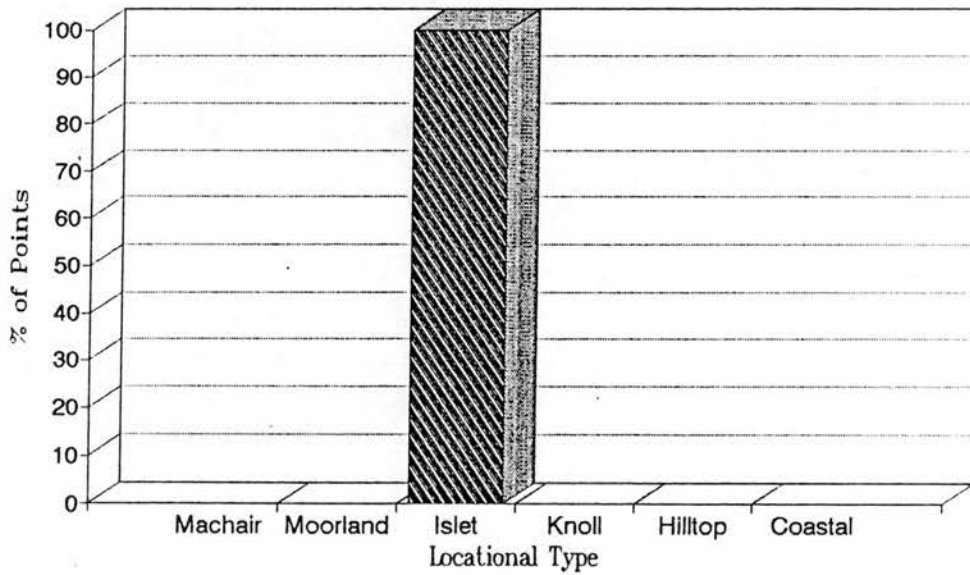
Location

North Uist - Walled Islets



Location

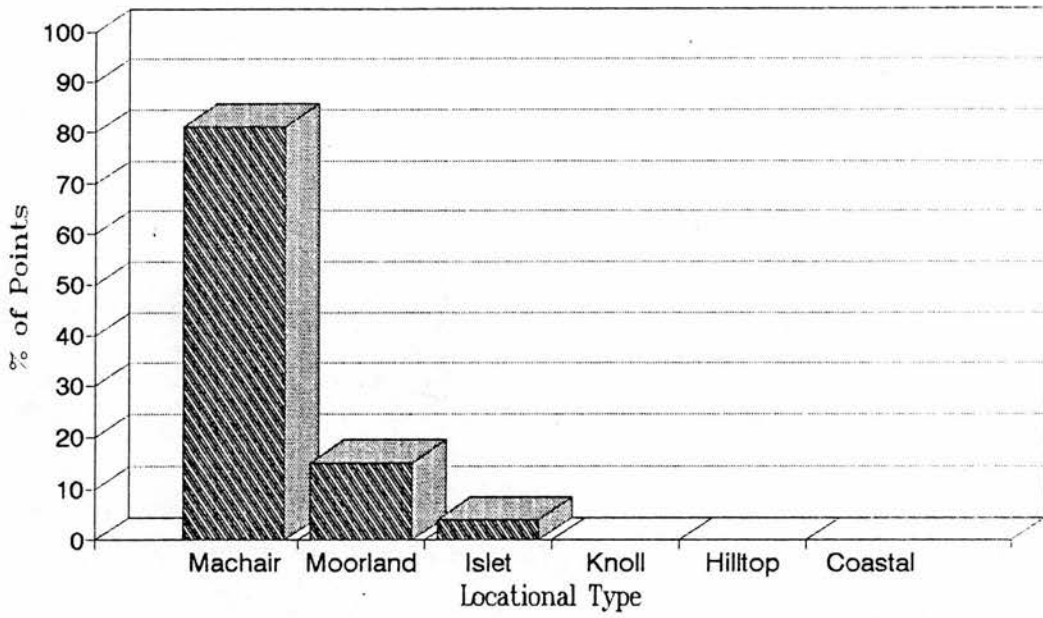
North Uist - Miscellaneous Structures



Ill. 12.9 Location of Miscellaneous Structures and Walled Islets in North Uist

Location

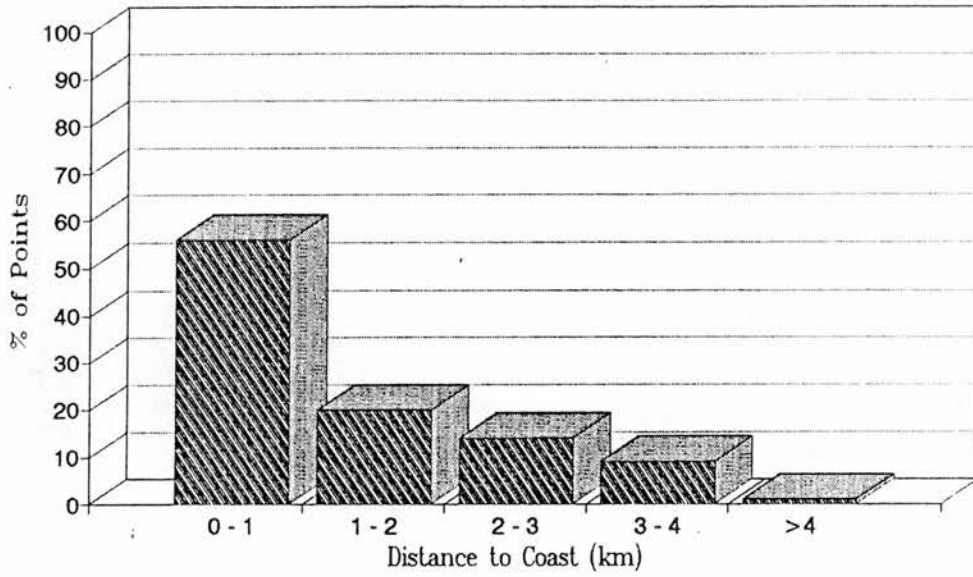
Western Isles - Wheelhouses



Ill. 12.10 Location of Excavated Wheelhouses in the Western Isles

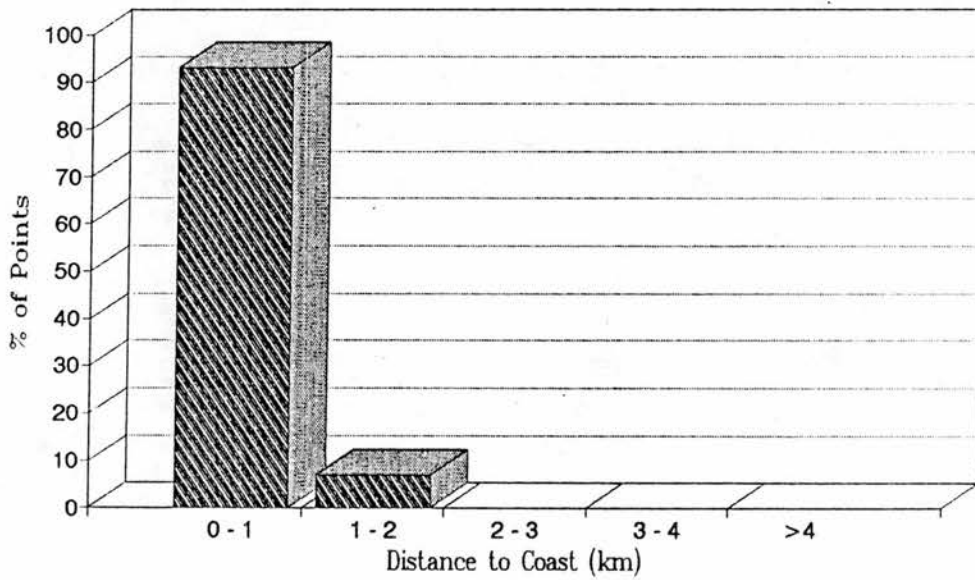
Distance to Coast

North Uist - OS Grid Intersections



Distance to Coast

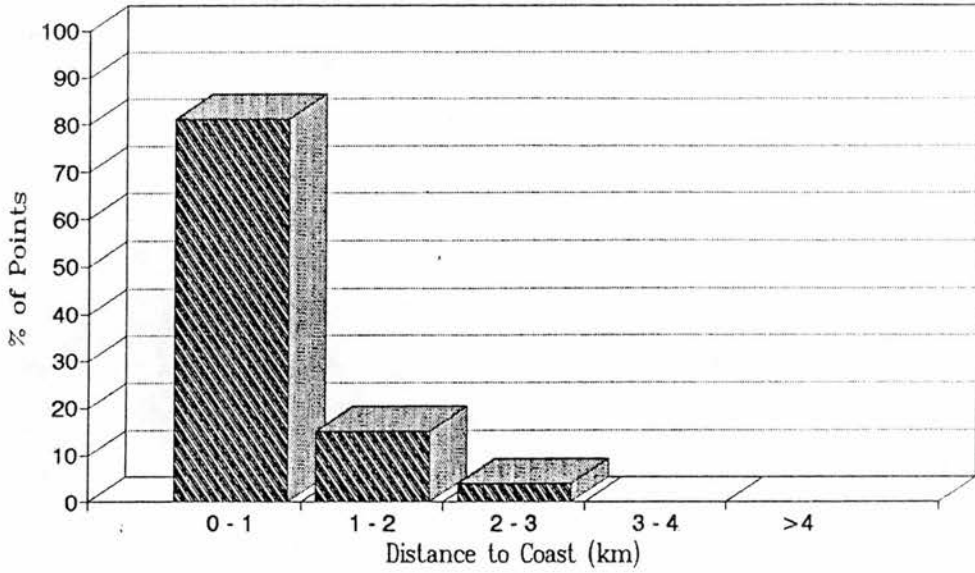
North Uist - Atlantic Roundhouses



Ill. 12.11 Distance to Coast of Atlantic Roundhouses in North Uist

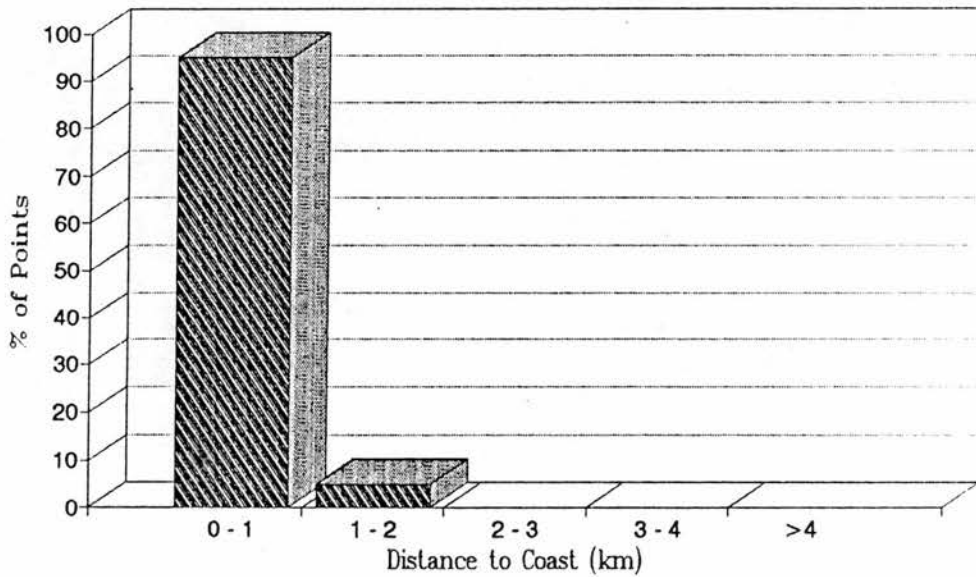
Distance to Coast

Barra - OS Grid Intersections



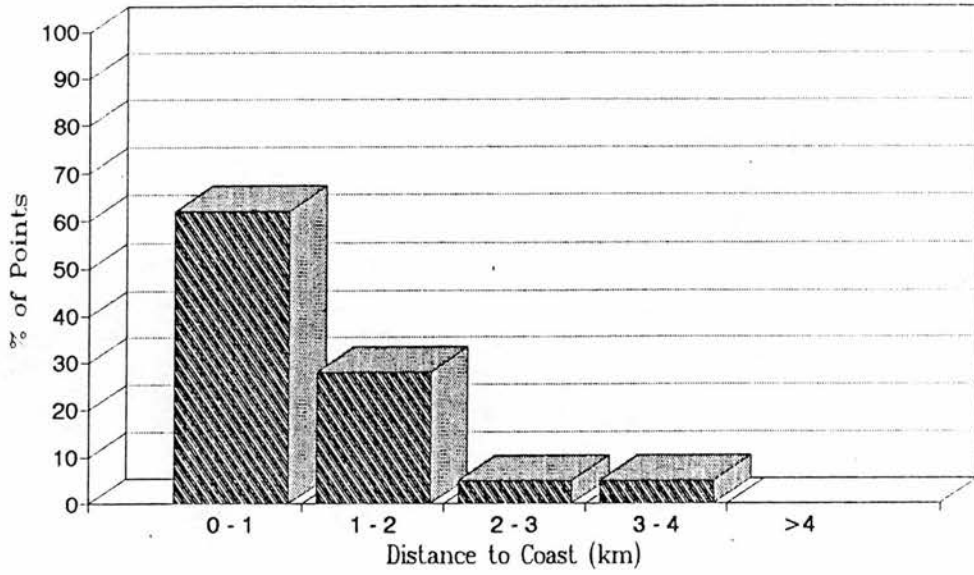
Distance to Coast

Barra - Atlantic Roundhouses

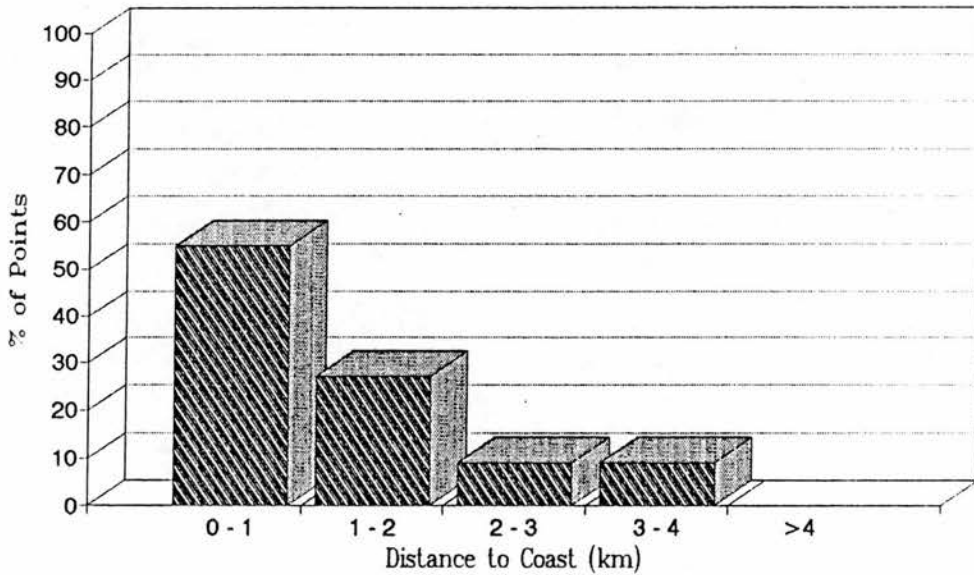


Ill. 12.12 Distance to Coast of Atlantic Roundhouses in Barra

Distance to Coast
North Uist - Miscellaneous Structures

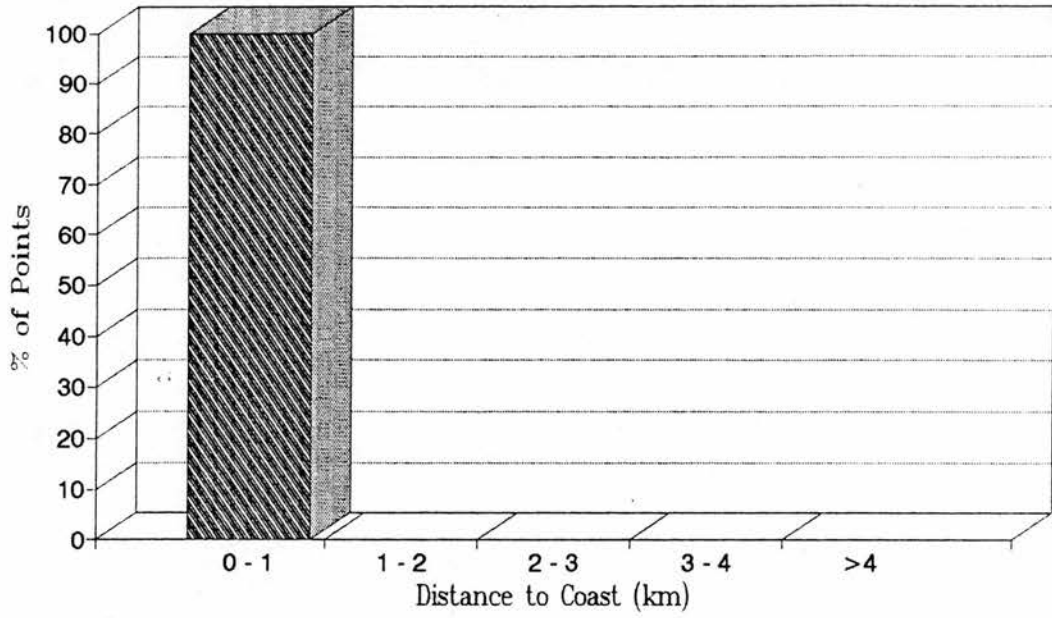


Distance to Coast
North Uist - Walled Islets



Ill. 12.13 Distance to Coast of Miscellaneous Structures and Walled Islets in North Uist

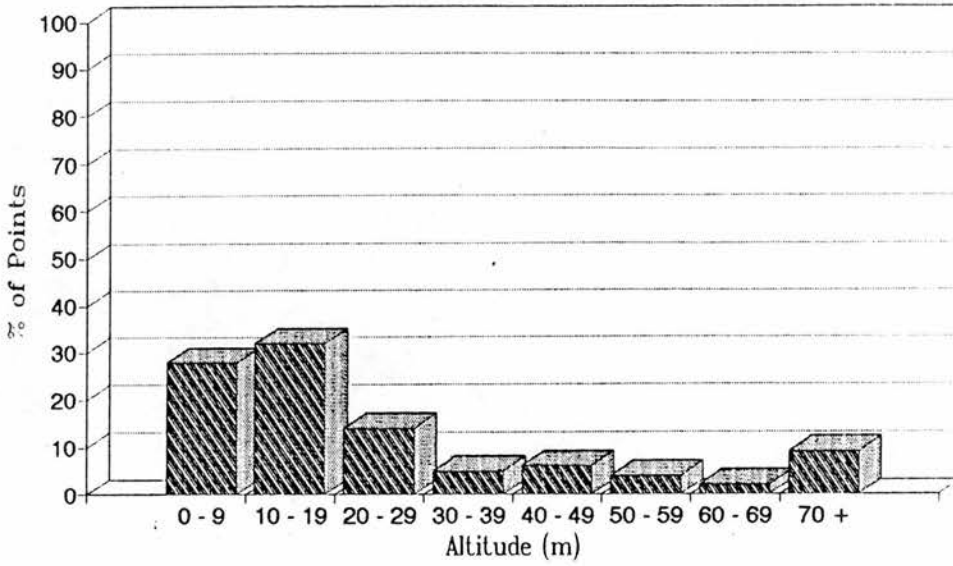
Distance to Coast Vallay Wheelhouses



Ill. 12.14 Distance to Coast of the Vallay Wheelhouses

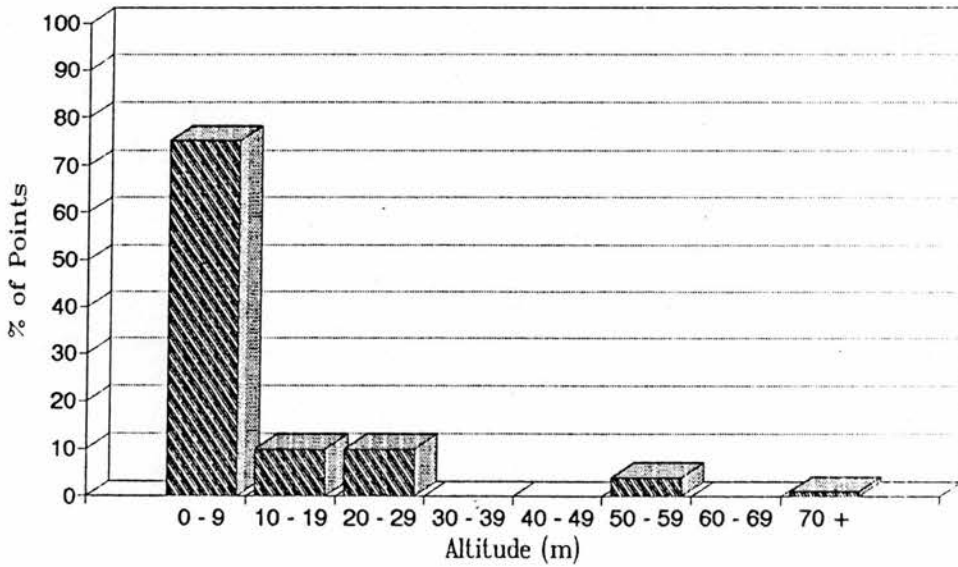
Altitude

North Uist - OS Grid Intersections



Altitude

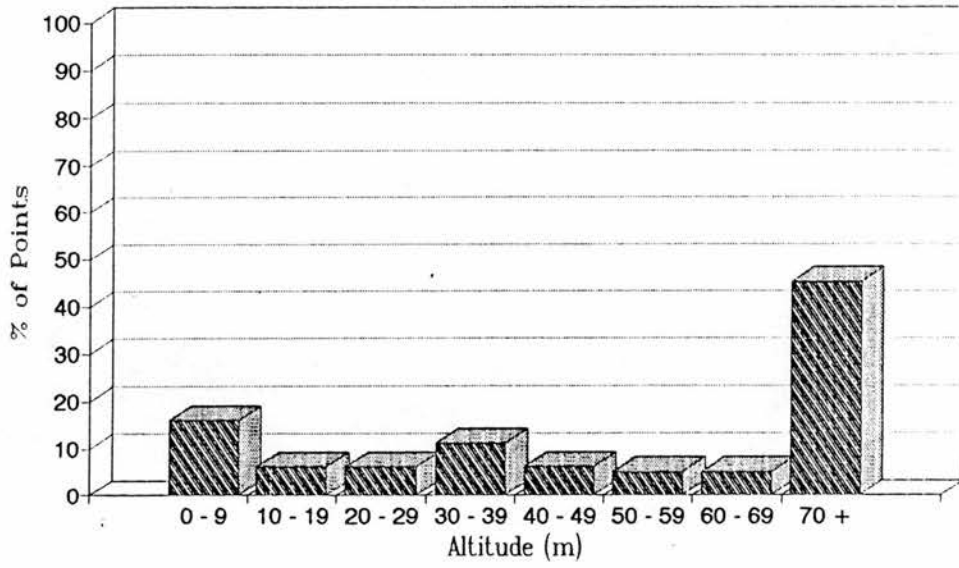
North Uist - Atlantic Roundhouses



Ill. 12.15 Altitude of Atlantic Roundhouses in North Uist

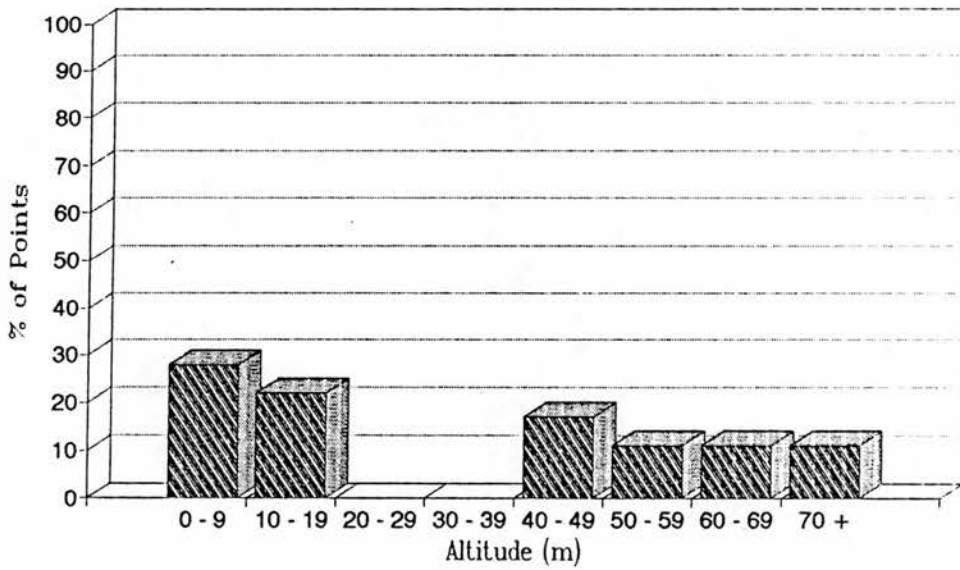
Altitude

Barra - OS Grid Intersections



Altitude

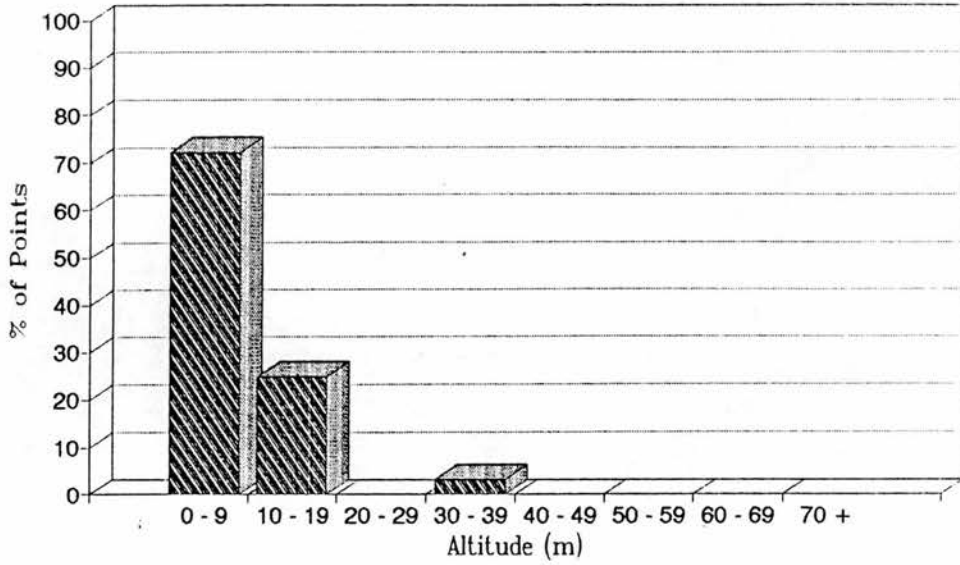
Barra - Atlantic Roundhouses



Ill. 12.16 Altitude of Atlantic Roundhouses in Barra

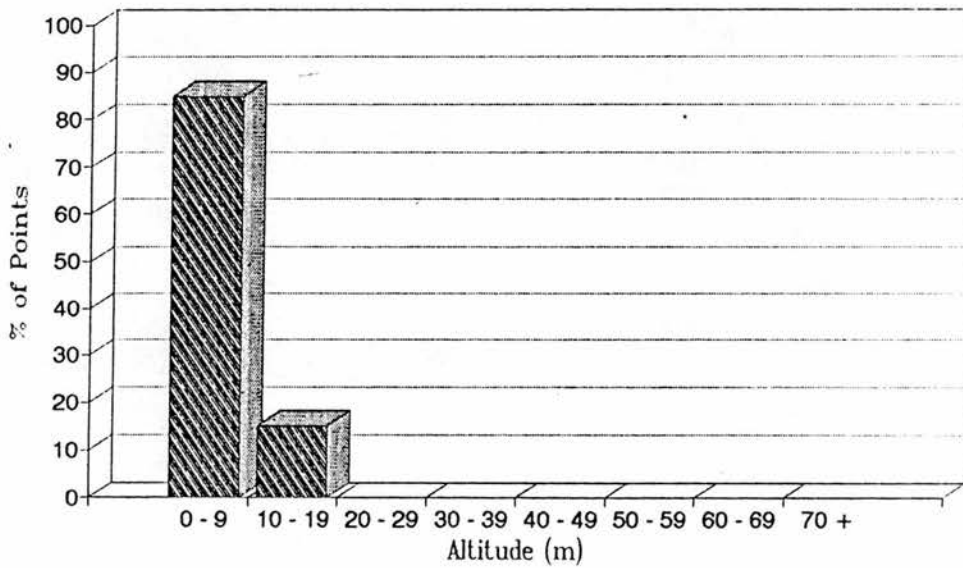
Altitude

North Uist - Miscellaneous Structures



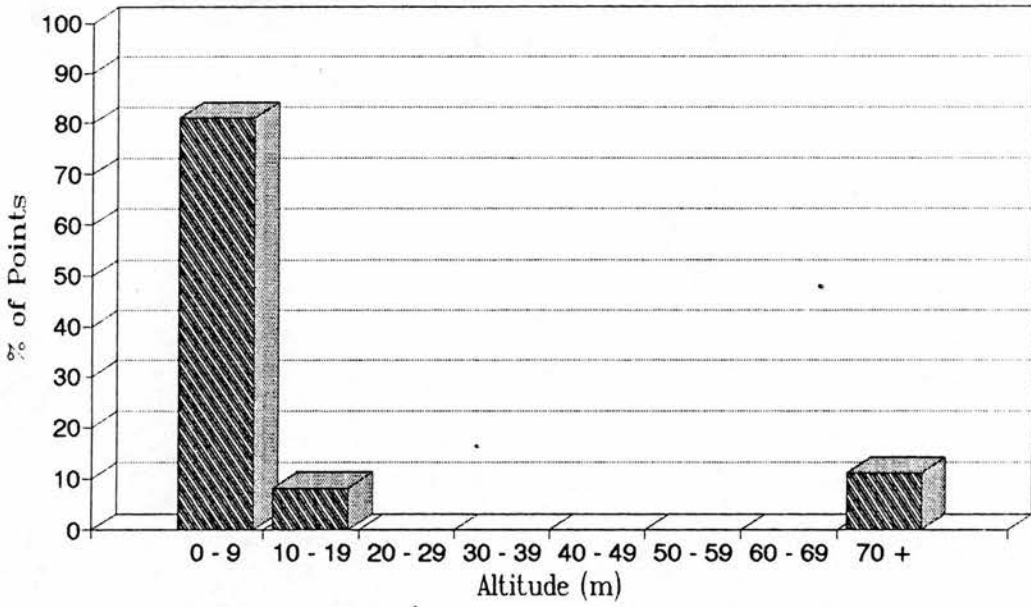
Altitude

North Uist - Walled Islets

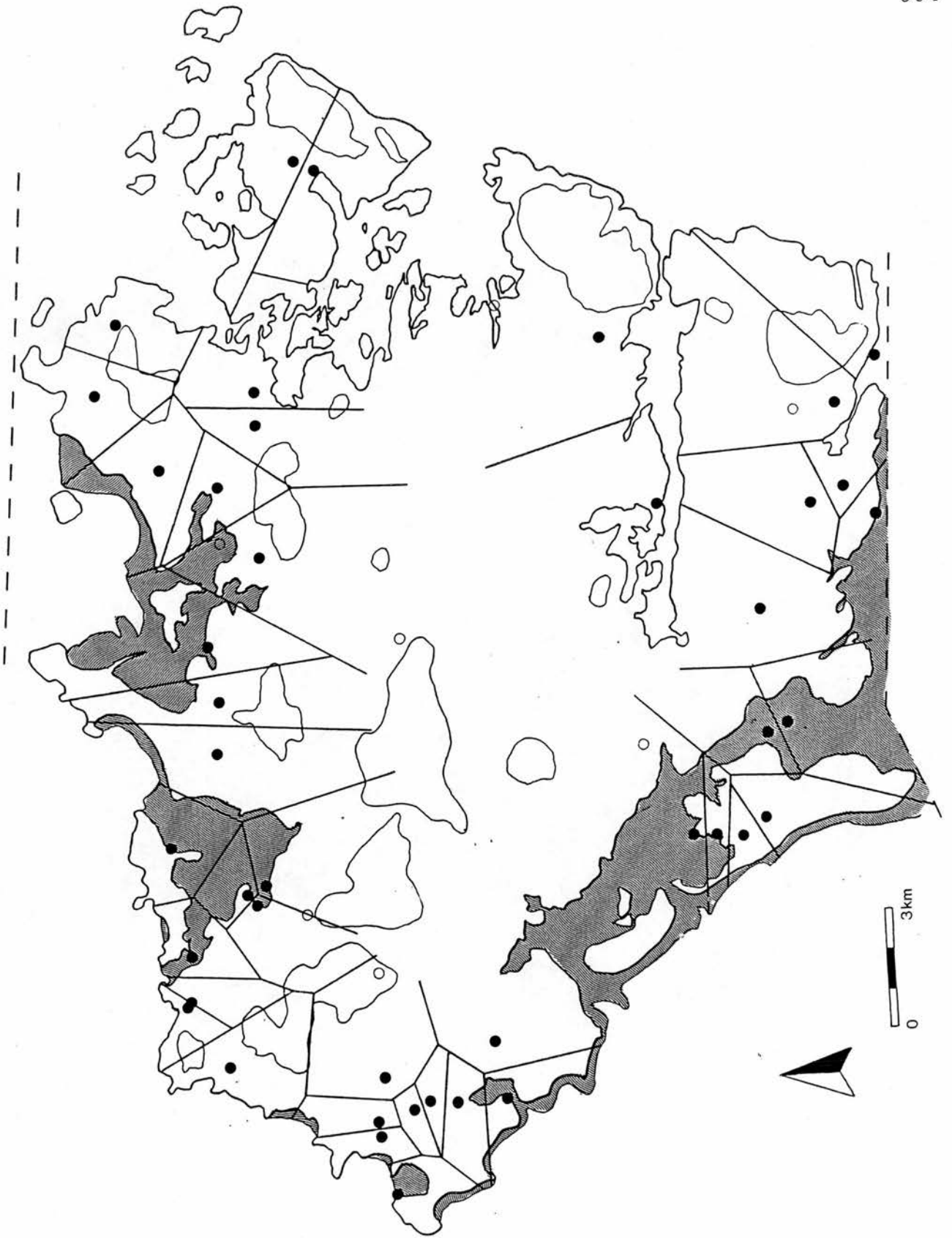


Ill. 12.17 Altitude of Miscellaneous Structures and Walled Islets in North Uist

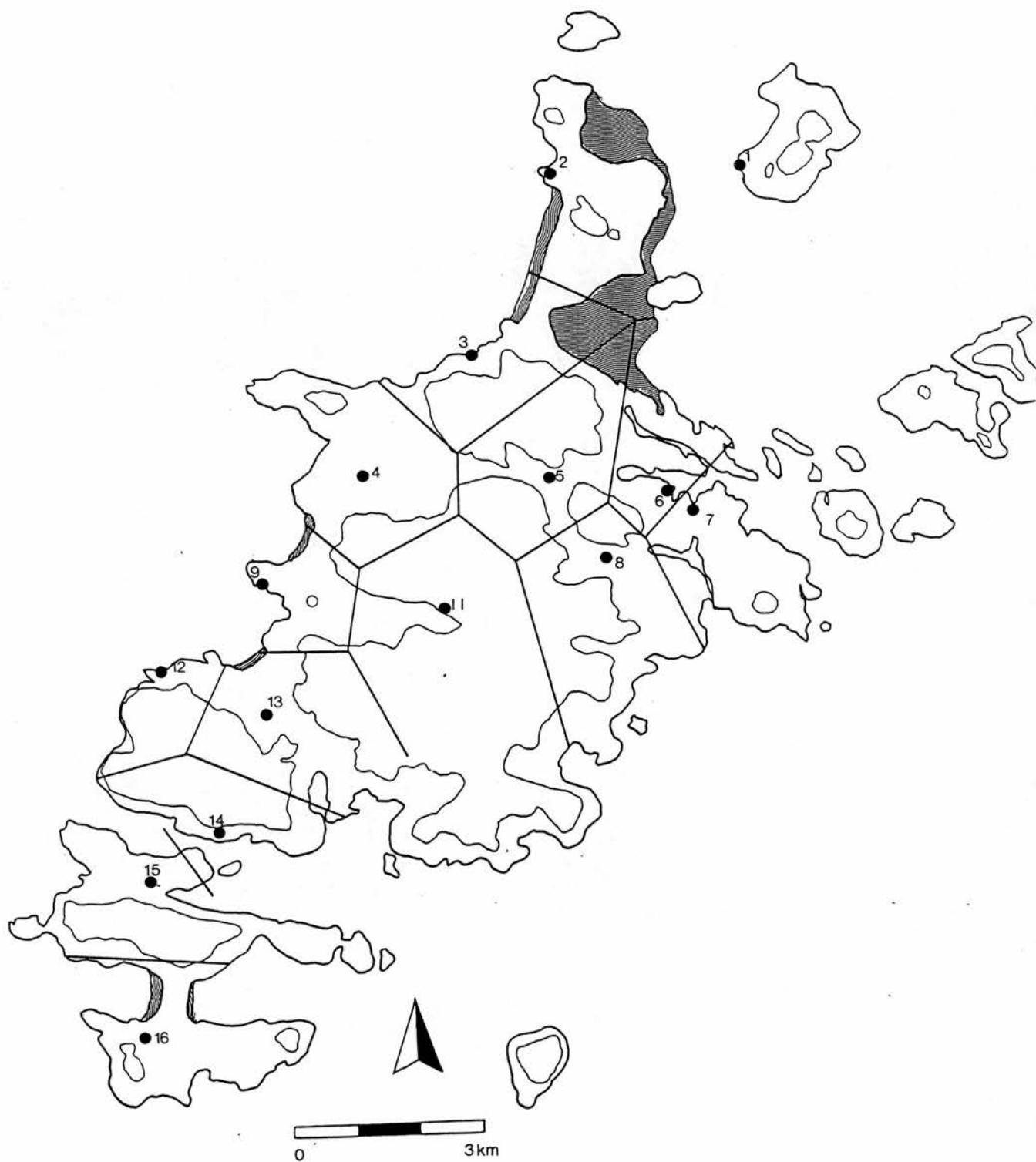
Altitude Western Isles - Excavated Wheelhouses



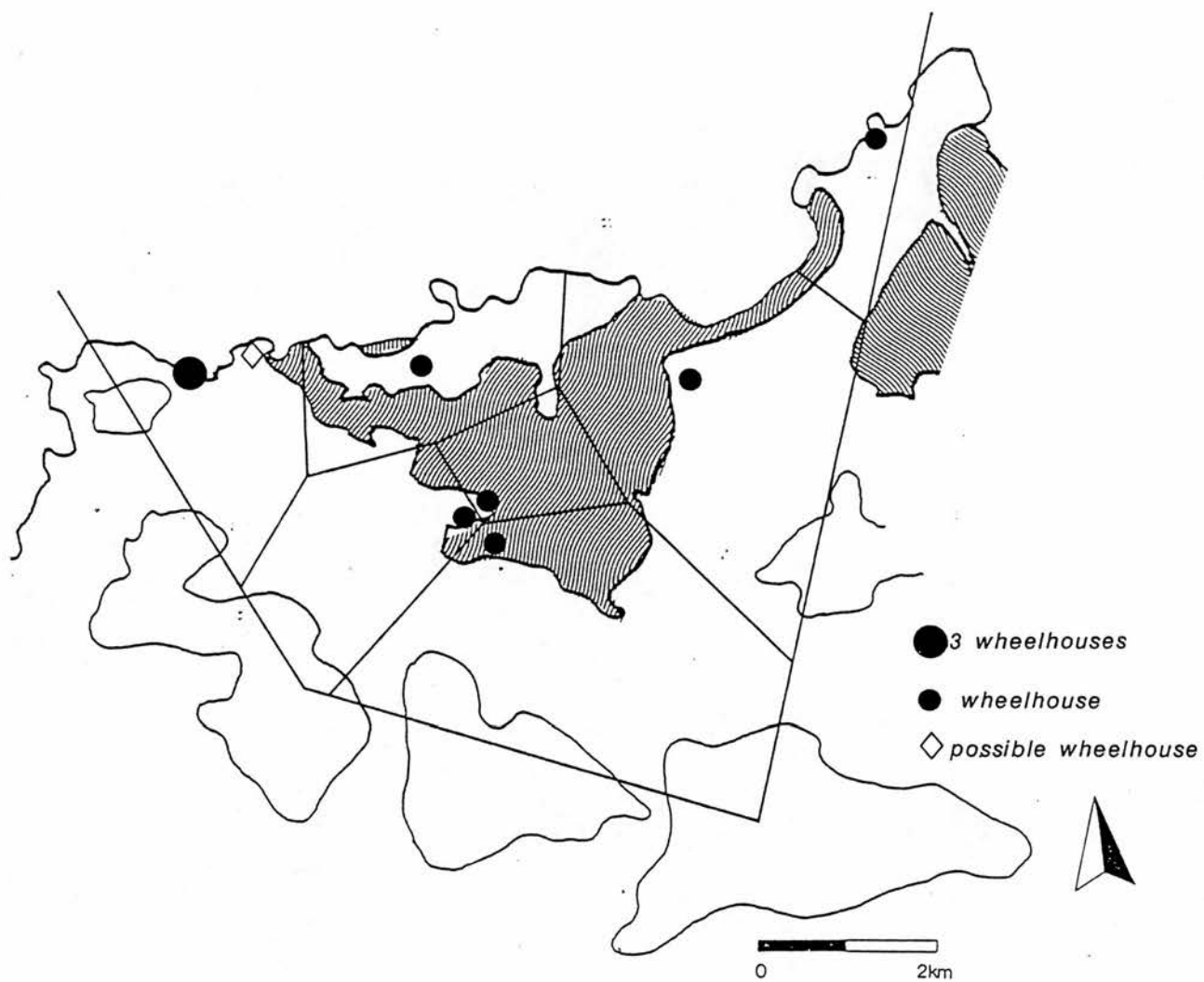
Ill. 12.18 Altitude of the Western Isles Wheelhouses



Ill. 12.19 Thiessen Polygons; Atlantic Roundhouses in North Uist



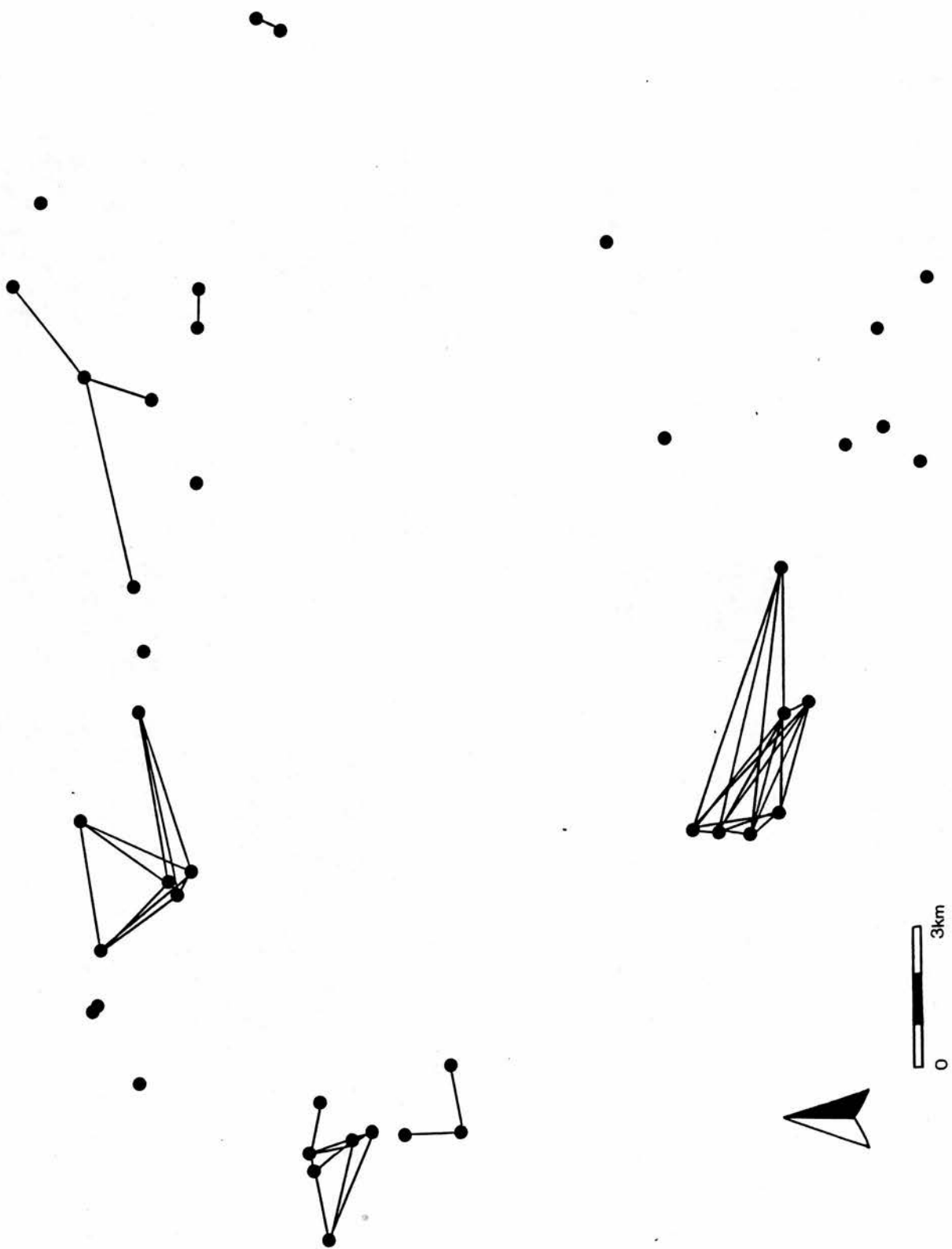
Ill. 12.20 Thiessen Polygons; Atlantic Roundhouses in Barra



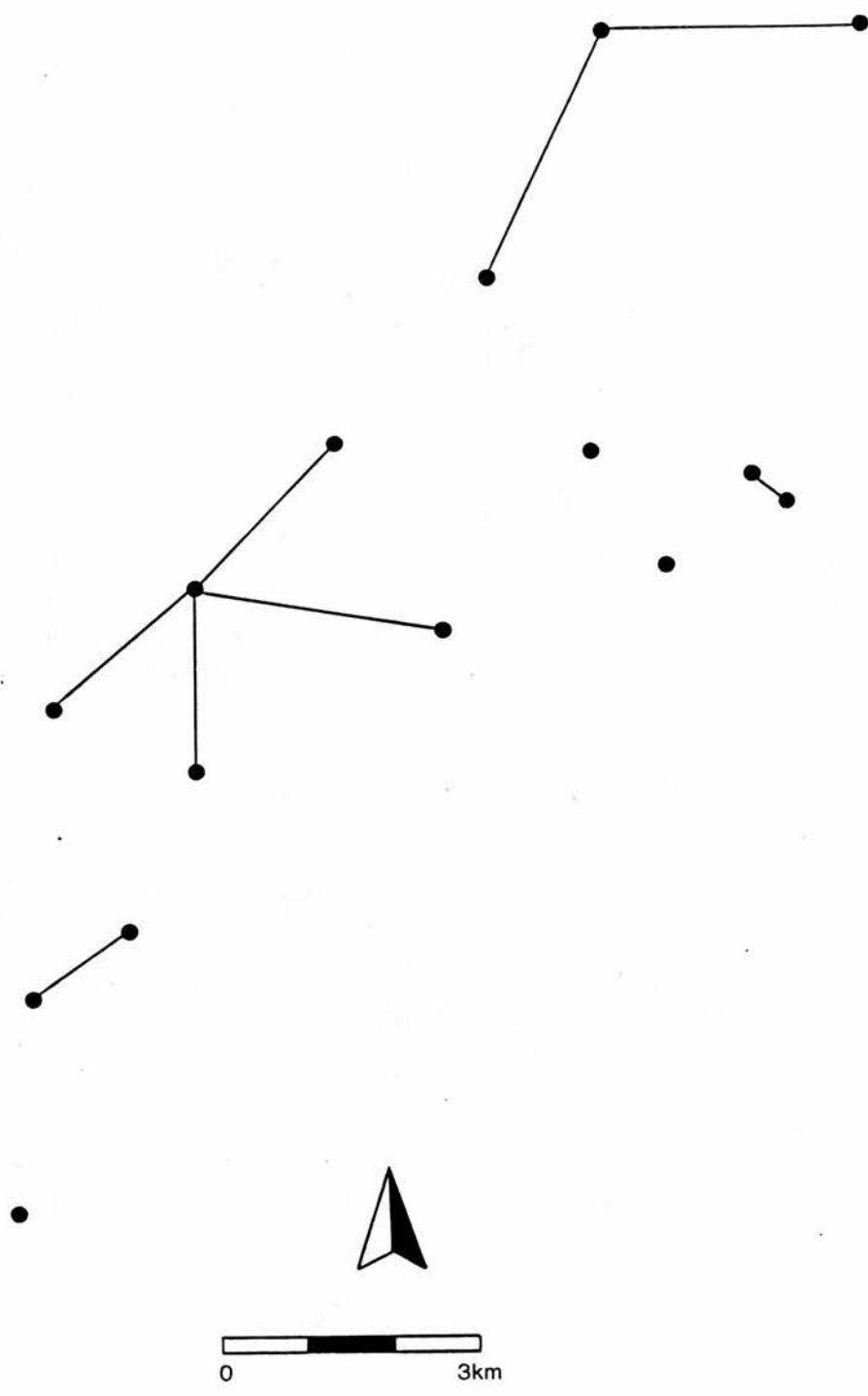
Ill. 12.21 Thiessen Polygons; Wheelhouses in the Vallay Catchment



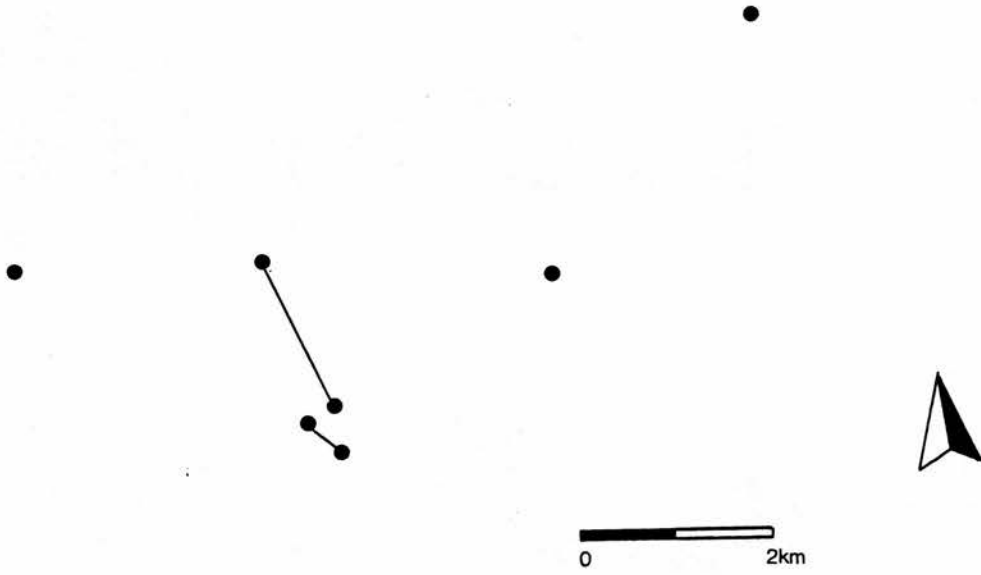
Ill. 12.22 Visibility Areas of the Atlantic Roundhouses in Barra



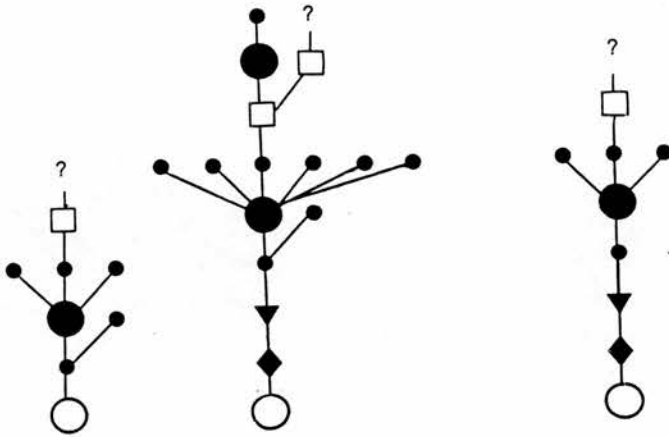
Ill. 12.23 Intervisibility; Atlantic Roundhouses in North Uist



Ill. 12.24 Intervisibility; Atlantic Roundhouses in Barra



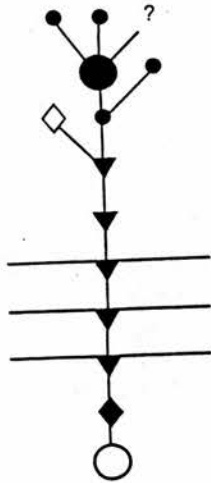
Ill. 12.25 Intervisibility; Wheelhouses in the Vallay Catchment



DUN CARLOWAY

LOCH NA BERIE

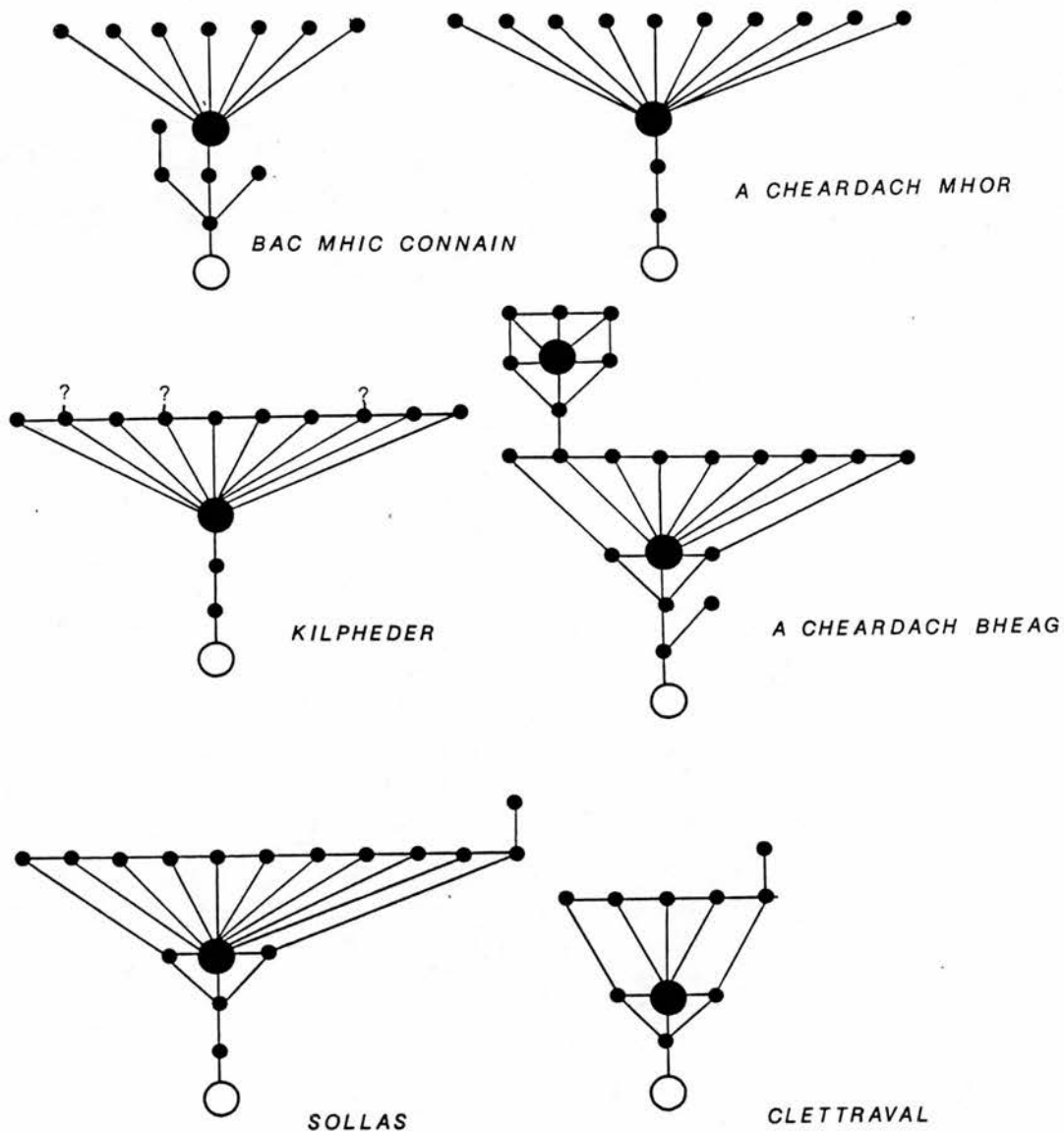
DUN BHARABHAT



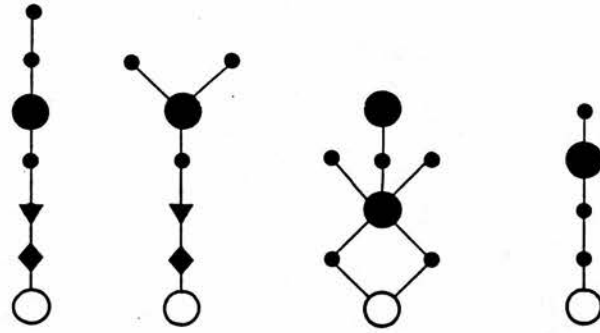
DUN LOCH AN DUNA, BRAGAR

- MAIN CELL
- ▼ ENCLOSURE/ANNEXE
- STAIRS
- ◆ CAUSEWAY
- CELL/ROOM
- CARRIER SPACE
- ◇ POSSIBLE CONTEMPORARY STRUCTURES

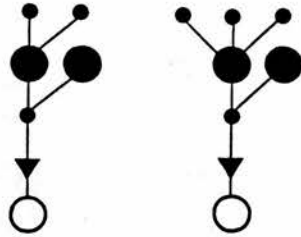
Ill. 12.26 Atlantic Roundhouse Access Maps



Ill. 12.27 Wheelhouse Access Maps



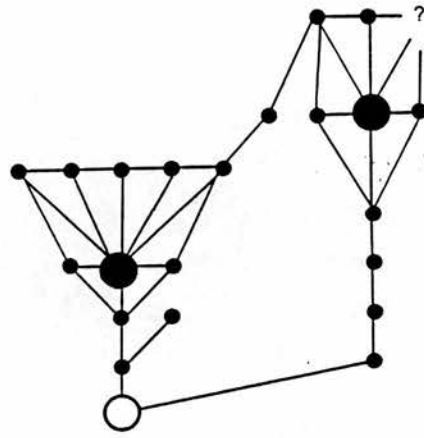
LOCH NA BERIE DUN BHARABHAT UNIVAL DUN CUIER



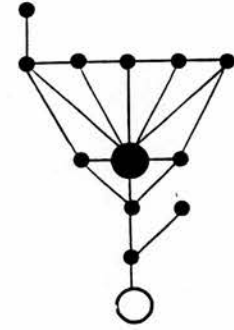
UDAL LEVEL XII (representative)

UDAL LEVEL XIV (representative)

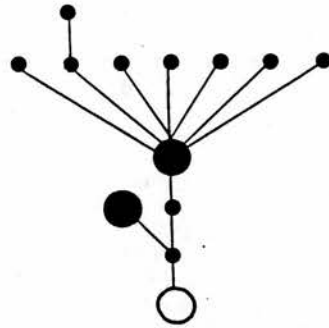
(UDAL after Foster 1989a, 47)



PLANNED PHASE 1



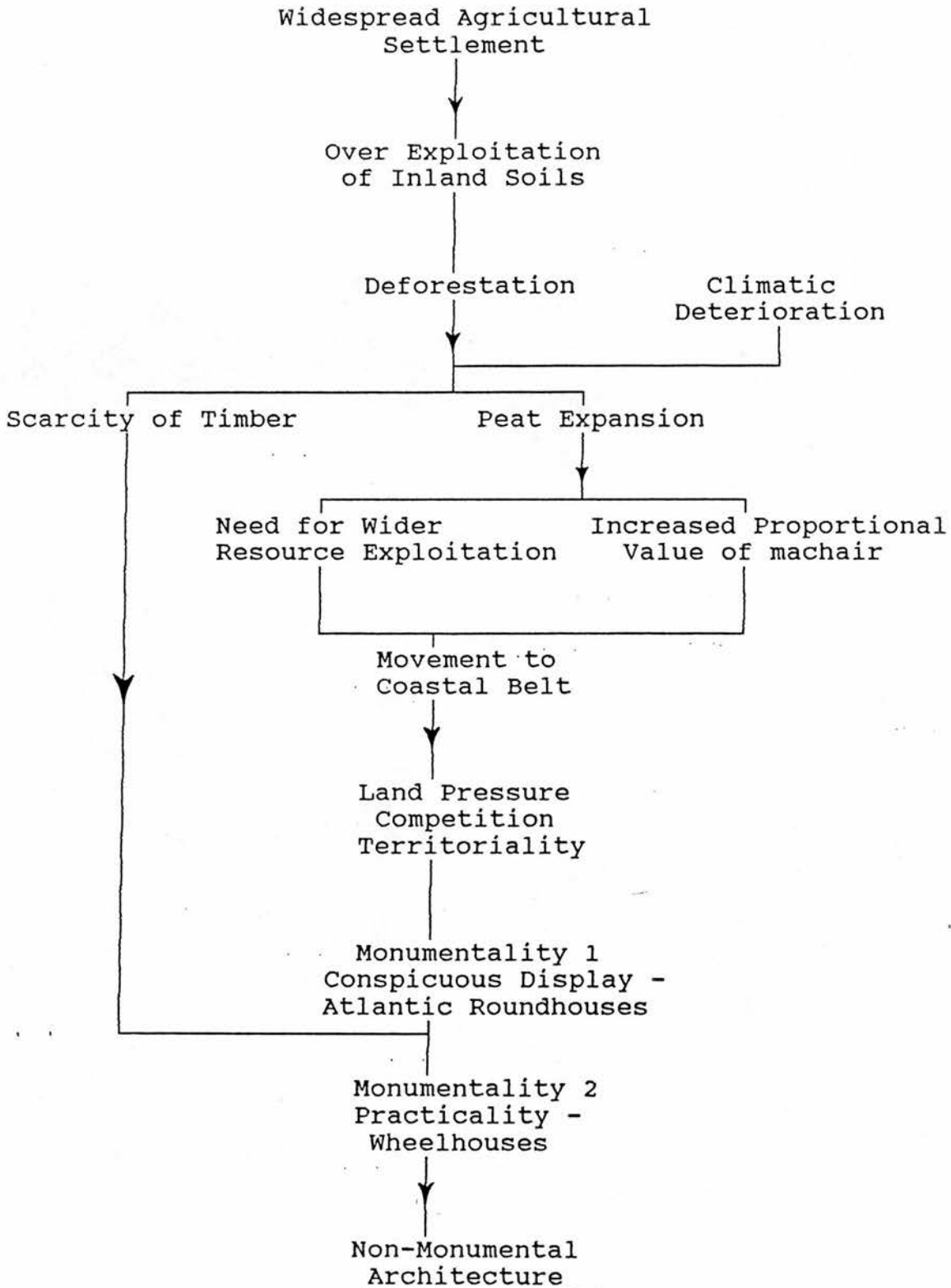
PHASE 1



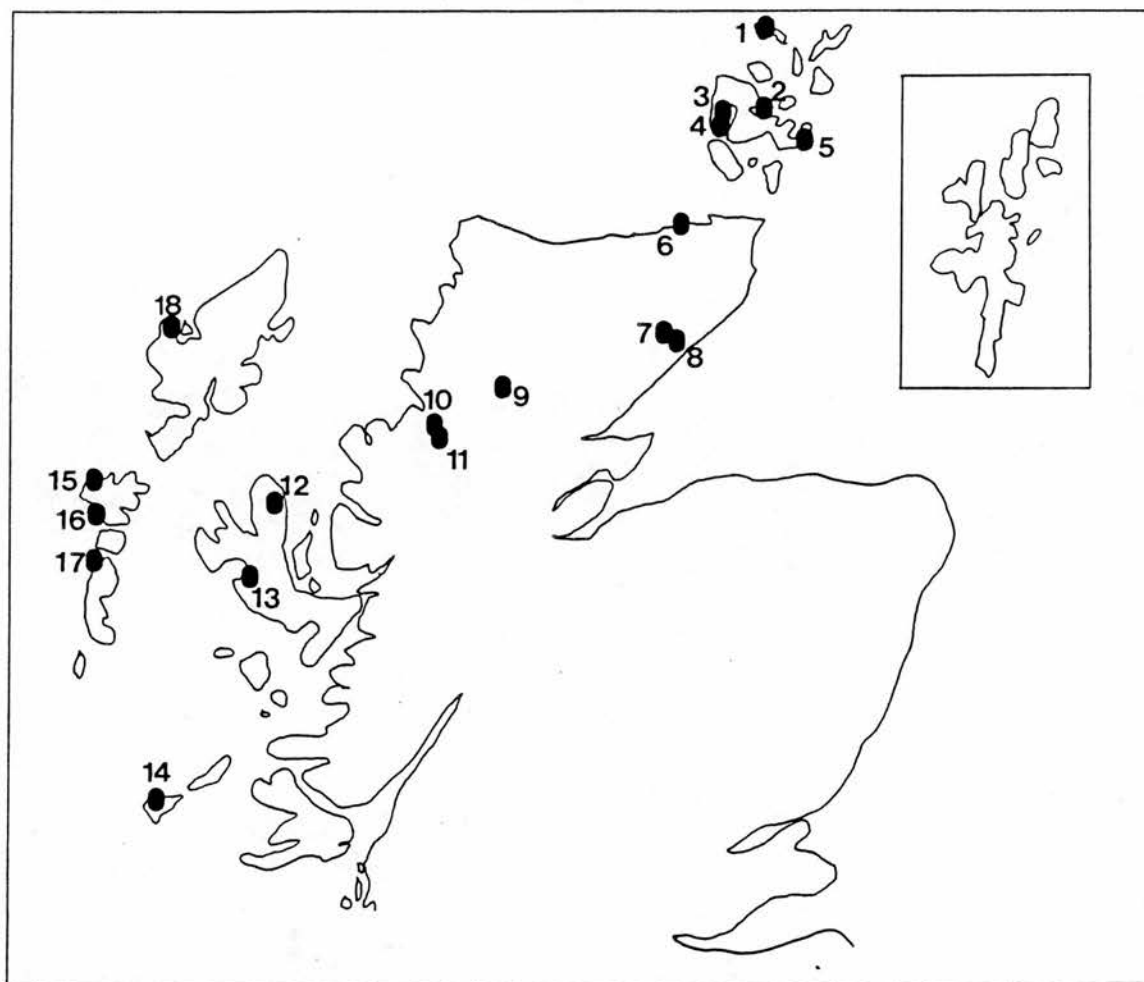
PHASE 2



PHASE 3

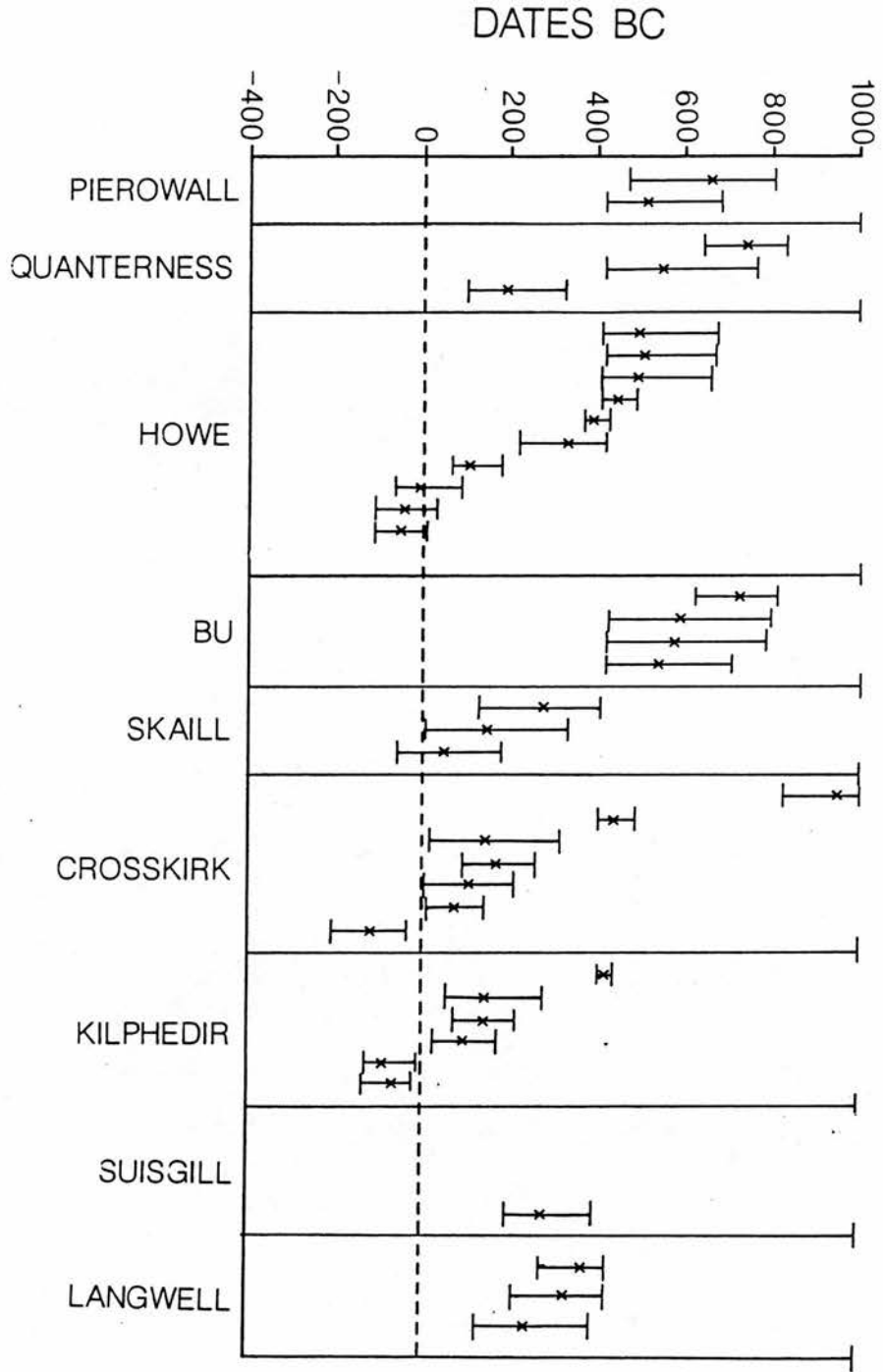


Ill. 13.1 Environmental Influences on Later Prehistoric Settlement

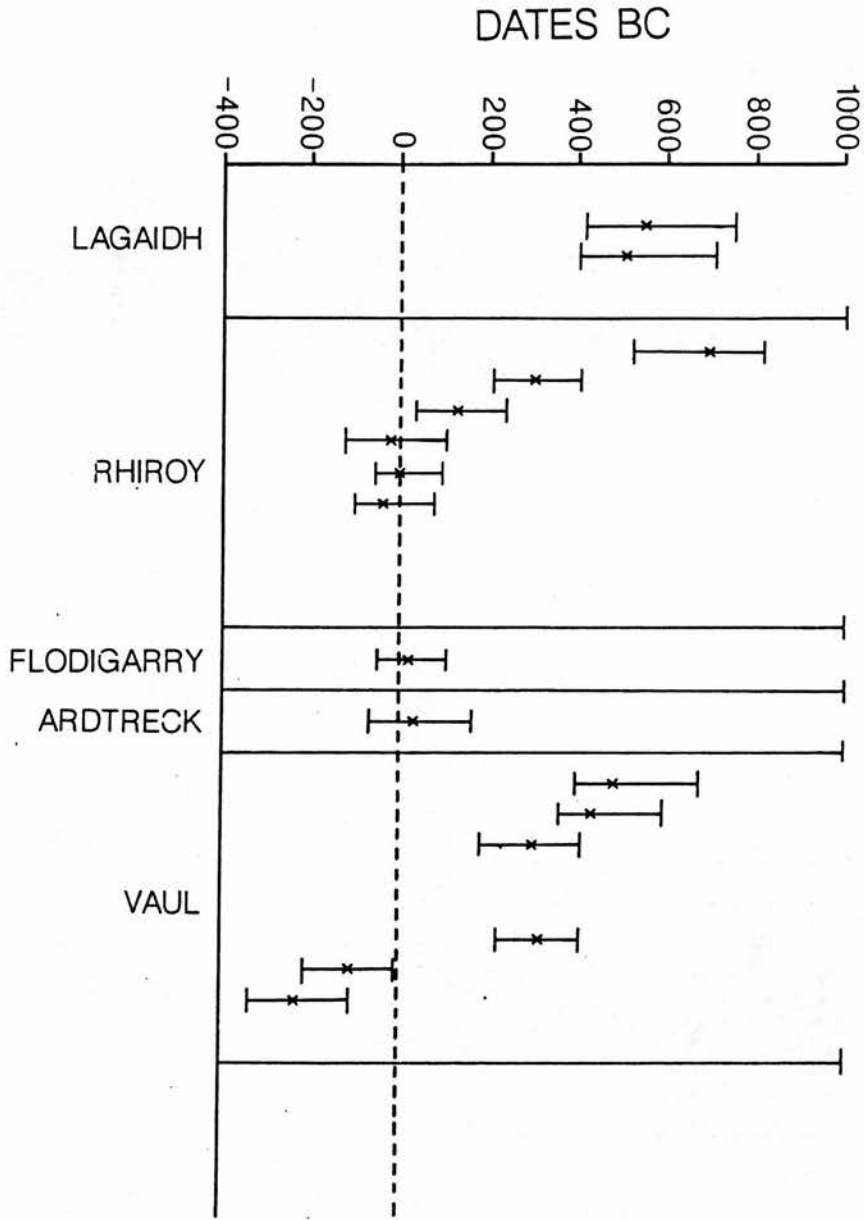


- | | |
|--------------------------|-------------------------|
| 1. Pierowall Quarry | 10. Dun Lagaidh |
| 2. Quanterness | 11. Dun an Ruigh Ruaidh |
| 3. Howe, Stromness | 12. Dun Flodigarry |
| 4. Bu | 13. Dun Ardtreck |
| 5. Skaill | 14. Dun Mor Vaul |
| 6. Crosskirk | 15. Eilean Olabhat |
| 7. Upper Suisgill | 16. Baleshare |
| 8. Kilpheder, Sutherland | 17. Hornish Point |
| 9. Langwell | 18. Dun Bharabhat |

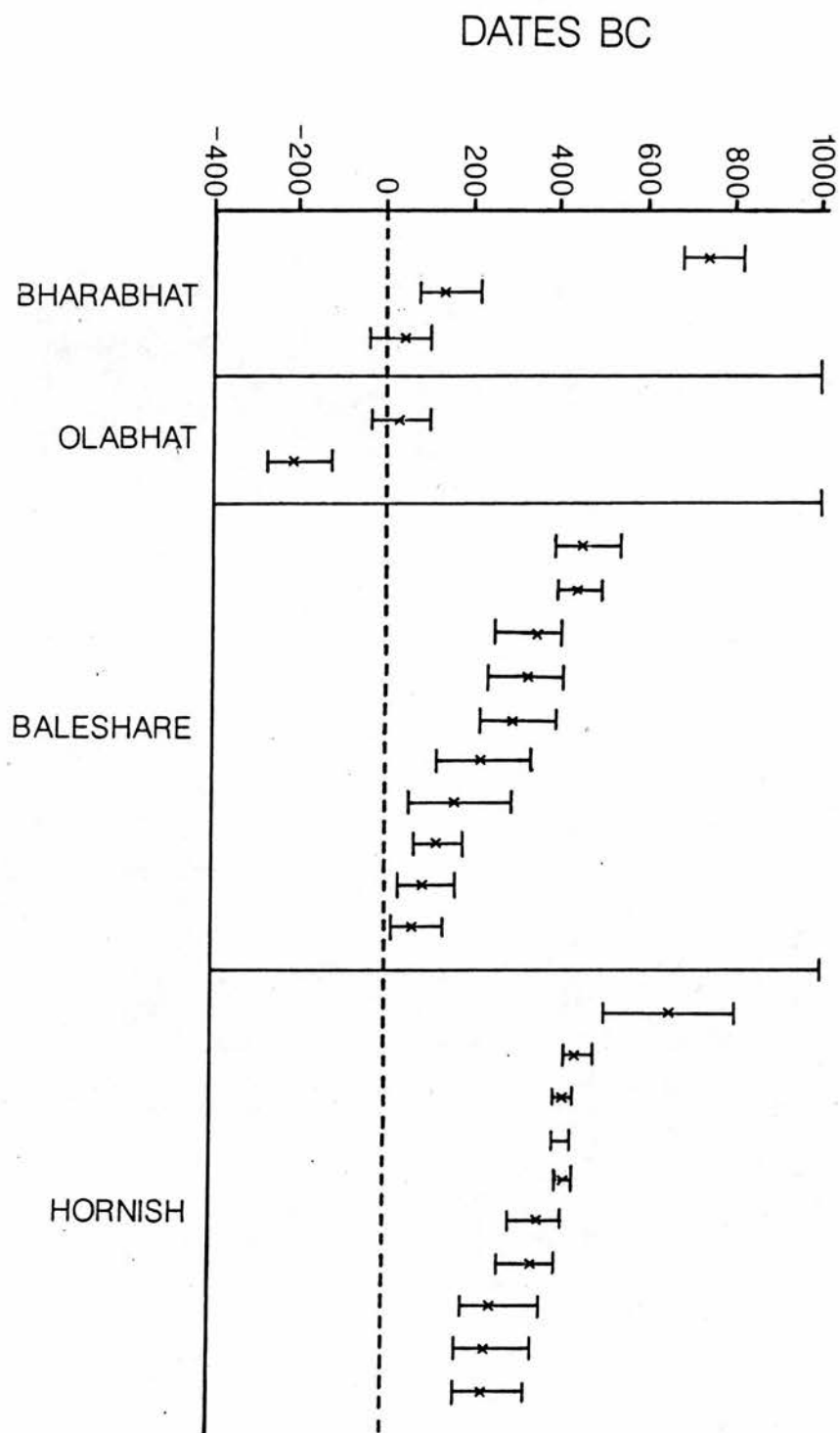
Ill. A1.1 C-14 Dated Sites in Atlantic Scotland



III. A1.2 C-14 Dates for the Northern Isles and North Mainland



III. A1.3 C-14 Dates for the Inner Isles and West Mainland



Ill. A1.4 C-14 Dates for the Western Isles

APPENDICES

Appendix One

The Atlantic Scottish Iron Age: Five Levels of Chronology

Part One

Note: this appendix comprises the text of a paper of the same name to be published in PSAS 121. The text has not been altered and therefore duplications with material in the body of the thesis will arise. Nonetheless this paper contains much of the relevant chronological information required to place the Western Isles sites in their wider context and has been included since the publication is not yet available at the time of thesis submission.

Introduction

The Atlantic Scottish Iron Age has a history of investigation stretching back to the mid-C19th when early Scottish antiquaries first became fascinated by the brochs; among the most visually striking of later prehistoric monuments in Britain. As with any such impressive monument type the brochs and associated structures were subject to a high degree of early and inadequate excavation, producing a database of structural and artefactual information which, while large in quantity, is highly deficient in quality. Roman period artefacts were noted in early work as being of relatively well known chronology and their occurrence on broch sites was taken to indicate a Roman period *floruit* of broch architecture. The concept of multi-periodicity was very poorly developed prior to the mid-C20th and even some later excavators in Atlantic Scotland, as at Dun Cuier (Young 1955, reinterpreted in Armit 1988), seem to have failed to distinguish relatively clear structural phases. The dating of the structures was based on comparisons of artefactual material with what were thought to be better-understood regions in southern England and elsewhere. Diffusion from the south was assumed to be the process by which the distinctive Scottish material and structural assemblages came into being.

The history of interpretation has been haunted by a number of preoccupations which have their roots in antiquarianism: the obsession with the original height of brochs, the over-riding concern with the detail of architectural typology and the view that the brochs were outwith the day to day settlement patterns of the period, all have their origins in the C19th. Childe's term, 'Castle Complex', coined to cover all of the small drystone roundhouses of the Atlantic Province, unwittingly sustained the emotive and subjective approach to the subject (Childe 1935). Childe's work set the Atlantic Scottish Iron Age in the context of a wider diffusionist scheme, linked to historical events in the south of England. His ideas were refined by a number of subsequent workers, most notably MacKie who attempted to trace the broch builders back to the refugees from Caesar's rout of the Veneti in 56BC (MacKie 1983, 120). Chronology has often been dictated by these interpretations.

Despite much dissatisfaction with the detailed theories of broch origins of the 1960s and '70s, the diffusionist views have proved remarkably resilient to change and the field has remained substantially unaffected by new approaches to archaeological problems elsewhere. This paper does not seek to reinterpret the Atlantic Scottish Iron Age: instead it will be restricted to the dating evidence. This data is incompatible with the diffusionist views of the '60s and '70s and requires the adoption of approaches which deal with the evidence in terms of indigenous development (albeit with contacts in several spheres of material culture with areas to the south).

The quantity of data available from the Atlantic Province, encompassing detailed structural and material information and an increasing body of evidence for economic practice and the organisation of domestic space, make it a potentially very valuable area for examining recent theoretical approaches in processual and contextual archaeology: this can only be achieved if it can be pulled from the backwaters of culture history and outmoded diffusionism.

The terminology used here to describe the drystone structures of Atlantic Scotland requires some explanation. The term *broch* has attracted such a wealth of associations and subconscious prejudices that its usefulness as an archaeological term is open to question (Armit 1988). In this paper *broch architecture* will be employed as a collective term encompassing a range of structural traits found in the drystone structures of the Atlantic Iron Age (Armit 1990); it is meant as a useful shorthand for referring to the technique of hollow-wall construction and the use of such traits as scarcements, intramural stairs, guard-cells etc. The thick-walled drystone roundhouses of the Atlantic Scottish Iron Age will be termed *atlantic roundhouses*; this term covers all those related structures previously subdivided into brochs, duns, galleried duns etc., but not including structures where elements of *broch architecture* are used outwith the domestic sphere e.g. promontory forts, blockhouses or Harding's dun enclosures (Harding 1984).

Individual structures will be classed as simple or complex *atlantic roundhouses*; the *simple atlantic roundhouses* are those which, although they may be massively built, lack evidence for the use of the specific traits of *broch architecture*; the *complex atlantic roundhouses* employ some or all of these traits in their construction and include those structures previously classed as '*broch towers*'. This latter term will be used to describe structures with palpable evidence of multi-storey construction, MacKie's brochs (1984), but does not imply a typological distinction; conditions of survival demonstrate that it is virtually impossible to separate a class of *broch towers* from other types of *complex roundhouse* in the field. Further discussion of this new terminology has been published elsewhere (Armit 1990).

The *simple roundhouses* encompass structures recently excavated in the north e.g. Tofts Ness, Bu, Pierowall etc. as well as a large range of western structures previously classed as duns. The *complex roundhouses* encompass the galleried duns of the west as well as the more familiar brochs. Wheelhouses remain a separate

phenomenon in terms of the terminology, reflecting their different architecture (Armit forth.).

Five Levels of Dating

Five different types of dating evidence will be considered: the body of C-14 dates available from relatively recent excavations; the evidence of quern types; cross-dating using Roman material; native material culture and structural typology. Having defined these forms of chronological evidence it is necessary to consider the weight to place on each: a hierarchy of dating methods can be created placing these types of evidence on descending levels of reliability.

In this paper it is argued that the C-14 evidence should be taken as the starting point for analysis. The assumptions on which the method rests are based outside the realm of Atlantic Scottish prehistory and afford a chance to shake off the value labels which have become associated with various structural forms through a century of typological schematising. The second level of dating will be the evidence of quern types; the full evidence for chronological significance of quern typology is discussed below but in essence it is a relatively uncomplicated chronological indicator which, if one takes the premise of a 'quern transition', is not subject to multiple interpretations.

The third level of chronological evidence, that of Roman-derived material, is more difficult to deal with, principally because of the generally very poor recording of the sites on which it has been most often found. Although the meaning of Roman associated material within native Scottish contexts is far from clear it is still perhaps a more reliable chronological guide than the native material culture which has resisted many attempts at typological and chronological ordering. This fourth level of dating based on native material culture will be discussed more fully below.

The final level of dating to be considered here is that which derives from structural typology. As with the native material culture we have

no justification for using structural typology as a starting point for chronology; rather it is something which must be derived at a secondary stage from more reliable data where this is available. This is why the first three dating methods, C-14, querns and Roman material, have been given primacy in this study over the theory-derived levels of native material culture and structural typology. It is of course simplistic to suggest that any archaeological evidence is other than theory-derived and the distinction amongst the forms of evidence discussed above is one of degree. The arrangement of the hierarchy presented here favours those dating forms with less inherent tendency to perpetuate outmoded hypotheses.

The relative chronological value of the dating methods is open to dispute but any contrary scheme should explicitly state which are given primacy. Traditional approaches have tended to take structural typology as Level One, the prime level of chronological reliability, and have used this to evaluate other levels of evidence (e.g. MacKie 1984).

The hierarchy of dating is designed to place the emphasis on the least value-laden sources of chronological information which do not suffer from pre-conceived ideas controlling data gathering and definition. For example structural typology can in some measure dictate results if it is used to include certain sites and exclude others at an early stage in the gathering of data; little progress can be made if we restrict our analyses to sets of data defined by pre-existing hypotheses. If we study the chronology of *broch towers* and adopt too strict a typological definition of the term at the outset (excluding sites which may not have a sufficiently high degree of preservation to demonstrate the original presence of architectural features) we will be denying the possibility of any challenge to our typological scheme. Consequently this paper will examine evidence from a wider range of available structural forms.

Atlantic Scotland will be taken to represent Piggott's Atlantic Province as far south as Coll and Tiree (Piggott 1966). Much of Argyll is deliberately omitted to avoid the particular problems

associated with that area with its very diverse and poorly understood settlement forms. This is an artificial division but one which is essential to maintain a degree of coherence.

The chronological period covered in this paper will end at 200AD, for manageability's sake, although it is recognised that this corresponds with no actual break in the archaeological sequence; the continuity of the Atlantic Scottish sequence from the early Iron Age to the immediately pre-Norse period has been stressed by the author elsewhere (Armit forthcoming).

Full references to the published reports on each of the sites are listed in Part 2 and the structural details mentioned in the text derive from these reports. References will not therefore be continually repeated in the text except where citation is required.

Level One - C-14 Dating

Radiocarbon dates are now available from sites in most parts of Atlantic Scotland and covering many of the known structural forms. Ill. A1.1 gives the location of the sites yielding C-14 dates while Ills. A1.2, A1.3 and A1.4 present the data, calibrated to calendar years by the method described in Part 2. The dates have been calibrated in order to align the C-14 derived sequence with the evidence of historically derived dates. 68% confidence levels have been used for the table and clearly we must be well aware of the pitfalls involved in the use of any individual date.

Part 2 gives details of the dates and their contexts as well as references to the full reports of each. In some cases, notably Dun an Ruaigh Ruaidh, the interpretation of the dates given here is in fundamental disagreement with that of the excavator. The reasons for such divergent interpretations are given, where applicable, in Part 2.

Patterns in the C-14 Data

The C-14 evidence for the Atlantic Scottish Iron Age is undeniably sparse and occasionally ambiguous but already clear regularities are beginning to emerge which can be used to form the basis for a chronology. It is possible that only the paucity of dates enables phases to be discerned; this must be acknowledged as a central restriction in the following description of the periods, dated very broadly from 800 - 400BC, 400 - 200BC and from 200BC - AD100, where phasing is used as a descriptive rather than analytical tool. This section is restricted to structural features; material culture will be discussed as a separate level of chronological evidence.

800 - 400BC

A series of dates from the Orkneys form an almost indistinguishable group, statistically, for this period. These comprise the primary occupation at Bu, Quanterness, Pierowall and the Phase 5 roundhouse at Howe. C-14 evidence for settlement in the west at this period is more tenuous and restricted to the hillfort at Dun Lagaidh, early occupation at Dun Mor Vaul towards the end of the period, pre-roundhouse occupation at Dun Bharabhat and some of the dates from Hornish Point. These latter dates are more reasonably dealt with below

At Howe and Pierowall massive solid-walled *simple roundhouses* were occupied in this period; both were some 16m in overall diameter, the former with walls 4m thick and the latter 3m, both poorly preserved. Howe is the only C-14 dated roundhouse known to have had a surrounding enclosure and ditch at this time. The early dates would suggest that the roundhouse was constructed between 500 - 400BC. The roundhouse at Bu was 19.5 - 20.5m in external diameter and enclosed an area of some 9 - 10m in diameter. Again the structure was solid-walled, although it may originally have had a guard-cell leading off the entrance passage, and although the excavator has described it as a broch (Hedges 1987, 10) it does not

fulfil the criteria prescribed by MacKie (e.g. MacKie 1984). Quanerness had a slighter roundhouse structure than the others, built into the ruins of a chambered cairn (Renfrew 1979).

Little is known of the primary internal organisation of these structures other than at Bu where there was a complex radial division of space (Hedges 1987, 12), suggestive of parallels with wheelhouses. The interior at Quanerness would appear to have been open in its primary occupation.

There is no solid evidence from these Orcadian structures of the appearance at this earliest stage of any of the specific structural characteristics used to define *complex roundhouses*; there is certainly no C-14 evidence for the development of the highly specialised hollow-wall building technique which enabled the construction of *broch towers*; neither is there evidence of scarcement ledges or intra-mural cells, galleries or stairs. This could simply be the result of an inadequate database but, as will be discussed below, it may well reflect the original situation and be compatible with models for structural and cultural development in the period.

Interestingly there is one date from Crosskirk, SRR-266, which calibrates to a reasonably tightly defined period between 487 - 406BC at the 68% confidence level. This date from the primary floor at Crosskirk was rejected by Fairhurst despite its internal consistency with dates from the secondary internal occupation levels. In view of other dates from solid-walled roundhouse sites it may be permissible to accept this as a genuine date for the primary occupation at Crosskirk. If this were so it would imply the construction of a thick-walled roundhouse of relatively modest height (the clay-cored wall would have restricted potential height) containing a guard-cell, intra-mural cell and intra-mural stair, in Caithness in the 5th BC. This would be consistent with a development of complexity from the simpler Orcadian type which seems to be focussed earlier in the period. The radially partitioned

interior invites comparisons with Bu which strengthen the possibility of chronological proximity.

The C-14 dates suggest an internally consistent development in this period from simple thick-walled roundhouses as at Bu and Howe to more complex but essentially similar structures exemplified by Crosskirk. A C5th BC date is also strongly suggested for the hut circle group at Kilphedir which consisted, at this stage, of slighter walled roundhouses.

400 - 200BC

Dates which fall into this period at the 68% confidence level derive from Howe, Crosskirk and Skaill in the north (together with enigmatic reconstruction and reoccupation at Quanterness) and from Hornish Point, Baleshare, Dun an Ruigh Ruaidh and Dun Mor Vault in the west. The later dates for the secondary occupation at Dun Bharabhat, Lewis indicate probable primary occupation of the roundhouse in this period. The apparently continuous nature of the structural sequence at Howe together with date GU-1758, indicate that these two centuries saw the construction of the Phase 6 structure, similar to the *complex roundhouse* at Crosskirk.

The Howe structure had walls 3.5m in width and preserved up to 2m in height, containing two intra-mural stairs and two 'guard-cells': its interior was divided by radial partitions similar to those at Crosskirk and Bu. This structure was closely related in form and function to those latter structures and, like Crosskirk, provides a structural link between the *simple roundhouses* and *broch towers*. The occupation at Skaill and Quanterness suggests that settlement in the Orkneys was by no means restricted to massive *complex roundhouses*.

At Dun Mor Vault occupation continued but without convincing structural associations and the western C-14 evidence is restricted effectively to that from the Central Excavation Unit's excavations at Baleshare. The evidence from the former site does not relate to any

convincing settlement structure so in this discussion only Hornish Point is relevant. As discussed in Part 2, there is strong dating evidence here for the construction and occupation of one or more wheelhouses between 430 - 300BC (Barber pers comm. and forthcoming). Unfortunately the excavation was restricted in scale but it is clear that Structure 5 represents a small drystone sand-revetted structure containing a number of radial piers converging on a central open interior (Barber forthcoming).

This apparently disturbing early dating, relative to conventional wheelhouse dating, will be seen in clearer perspective when other levels of dating are examined but the very great degree of similarity in the organisation of interior space between areas and through time in the Atlantic Scottish Iron Age should not go unnoted at this stage.

The later dates for the secondary occupation at Dun Bharabhat, Lewis, indicate primary occupation prior to c200BC. The immediately pre-roundhouse occupation material, relating to incompletely excavated phases dates to the C7th BC, and thus the foundation of the roundhouse could be substantially prior to 200BC. The structure is a *complex roundhouse* with intra-mural stairs and galleries and entrance features typical of *broch architecture*. Its small size and the width of one gallery entrance (so wide as to pose problems of weight stress on the lintel if much walling had been in place above it) make interpretation of the structure as a *broch tower* difficult.

By around 300BC there appear to have been structures in Atlantic Scotland which contained many of the features associated with *broch architecture* conventionally ascribed to a much later period.

200BC - 100AD

This period encompasses the *broch tower* phase at Howe, much of the secondary occupation at Crosskirk, the more reliable dates for Dun an Ruigh Ruaidh and Dun Mor Vul together with the single

dates from Duns Ardtreck and Flodigarry and secondary occupation in Dun Bharabhat.

The interior partitioning and general plan of the Howe *broch tower* unambiguously link it with the *complex roundhouse* which previously occupied the site and with the Crosskirk *complex roundhouse* and thus with the earlier simple roundhouses. It is rooted in the same dynamic structural tradition. The dates from Flodigarry and Ardtreck indicate the building of ground-galleried roundhouses, possibly of tower-like proportions in this period. The dates from Dun Mor Vault and Dun an Ruaigh Ruaidh are consistent with this broad period.

The occupation at Dun an Ruaigh Ruaidh, as discussed above, seems to have centred on the C1st AD. This site too was a ground-galleried roundhouse, with upper gallery levels preserved. The contention of the excavator that the structure was a 'semi-broch' seems untenable. The structure, from its position on the eroding cliff-edge, has lost much of its walling through collapse. The attempt to find rubble below, where the cliff has fallen away, did not in any way disprove this; the collapsed masonry and natural rock must have formed an ideal quarry for the many stone buildings in the valley below (this also explains why the remaining structure above has been allowed to survive to upper gallery level). Equivalent circumstances account for the 'semi-broch' myth in the case of all of MacKie's D-shaped examples. *Broch architecture* is meaningful only in a complete circular or subcircular structure where weight distribution can be channelled evenly.

At this period we see the construction of roundhouses with continuous intra-mural galleries and other features of *broch architecture*. There may be an increase in architectural complexity and an increase in the number of *complex roundhouses* overall; alternatively this could be an artefact of the C-14 dating. No *simple atlantic roundhouse* is clearly attributable to this period. Further sections will attempt to fill out and amplify the very broad outline chronology which is perceptible in the C-14 evidence.

Level Two - The Quern Transition

The importance of the adoption of the rotary quern, in place of the archaic saddle quern, to the chronology of the Atlantic Scottish Iron Age was first made explicit by Seamus Caulfield (1977). The central hypothesis was that the superiority of the rotary quern, in both the quality and the speed of its grain processing, would ensure that once adopted in one part of the area it would supersede the saddle quern within a period which would seem to the archaeologist to be extremely short. Thus we could envisage a 'quern replacement horizon' lasting an unknown but almost certainly very short period in which the two types would be in use but otherwise the presence of a saddle or rotary quern on a site would indicate a pre- or post-replacement date.

Caulfield's main intention was to show that the prevalence of saddle querns on northern roundhouse sites compared with their absence from the west suggested that the earliest *broch towers* were constructed in the north, in contrast to the ideas of Euan MacKie. Evidence discussed below suggests that saddle querns were in fact in use on western roundhouse sites and indeed the whole question of 'broch origins' in any particular part of the province need not be a central or meaningful issue. The importance of quern transition theory lies in the recent evidence for the dating of that transition and for the implications of this date for the wider questions of Atlantic Scottish chronology. It is the contention here that if we accept the hypothesis of an archaeologically sudden quern transition then we must be prepared to address the problems of chronology which that hypothesis raises; problems which render invalid many long-cherished theories of structural development and succession.

It is important to assess the validity of the quern transition as a short-lived process within the region. The superiority of the rotary quern is not in question: if efficiency and quality of product were the only criteria there would be no room for doubt that the rotary quern would have rendered the saddle quern obsolete in the Atlantic

Province in a few years at most. The problem lies in our lack of understanding of the way in which remote and potentially conservative farming communities react to technological innovation. There are two main arguments which suggest that the communities of the Atlantic Scottish Iron Age may have been quick to accept this change in technology.

The development and spread of structural innovations across areas which, in terms of primitive transport capabilities, were very extensive is not indicative of the behaviour of isolated and inward-looking communities. The remarkable spread of highly complex and specific building techniques involved in *broch architecture* must show that, whatever the process behind their spread may have been, communities were not afraid of change. With the very obvious advantages of the rotary quern to influence acceptance it is likely that contacts across the Atlantic Province would have led to the displacement of the saddle quern within a relatively short period of years.

The second argument lies in the economic urgency which may have further opened communities to technological development; the deterioration of the northern climate, underway for probably the whole of the first millennium BC and indicated for example in the peat growth over a mid-C1st BC agricultural settlement at Kilphedir, would have led to substantial social and economic changes. An openness to agricultural developments must be intrinsically more likely than it would have been in more static and successful socio-economic systems.

The rotary quern is stressed because of its ubiquity on sites of the period, and because of its archaeological visibility, but it was not an isolated agricultural development; the disappearance of stone ards from the artefactual record, suggestive of their replacement by iron versions (Hedges 1987, 93), is another example. The appearance of horse bones, indicative of small domestic herds (Macartney 1984, 137), is another innovation linked either to agricultural practice or alternatively to the display of prestige through horse ownership and

riding. The context of the period under consideration gives every support to the idea of the rapid adoption and spread of the rotary quern, over a period which in archaeological terms is likely to have been so short as to appear effectively instantaneous. The dating of this transition is central to the chronology of the many sites from which saddle and rotary querns have been obtained.

The dating of the quern transition, in our hierarchy of chronological levels, must rest on the C-14 evidence. Part 2 gives details of the dates from Crosskirk and Baleshare which are relevant to this matter. In the case of both of these sites the relevance lies in the dating of contexts which contain or seal rotary querns, or fragments, which had gone out of use, i.e. not the period of quern transition itself but a period when the rotary quern was already established.

The rotary quernstone at Baleshare was built into the entrance passage of a structure in a Hebridean machair site (Barber forthcoming, see Part 2 for further details). The site is, in Atlantic Scottish terms, exceptionally securely dated by a series of C-14 dates. The dates presented for Baleshare in Ill. A1.4 are contemporary with or later than the structure containing the quern. This tight cluster of dates strongly suggests the abandonment of this structure prior to the mid or late C2nd BC. This represents the abandonment of a structure which was itself built after a rotary quern had been made, used and discarded. Even assuming a short life for this sand-revetted structure, and a short life for the quern in its primary function, it is difficult to sustain the view that the rotary quern was introduced in the Outer Hebrides substantially later than 200BC.

The Hebridean evidence is paralleled by that from the site of Crosskirk in Caithness (Fairhurst 1984). The relevant dates from this site are those which relate to the occupation of the *complex roundhouse* at a period after its initial occupation (Ill. A1.2). The dates are taken from layers within the build-up of occupation material within the roundhouse and from associated parts of the external occupation. These dates as a group again suggest that querns had been made, used and broken on this site prior to the

period of 150 - 100BC and give a *terminus ante quem* for the quern transition in Caithness which is consistent with that for the Outer Hebrides.

Future C-14 dating will further define the period of the quern transition by dating deposits containing rotary querns. A date of around 200BC would seem a reasonable estimate at the present state of knowledge.

The evidence of quern types from Atlantic Scottish Iron Age sites can help us with dating towards the middle of the period; the closing centuries BC. There is, as yet, no convincing internal typology for either rotary or saddle querns in the area: MacKie's work on Scottish Iron Age rotary quern types does not enable us to make chronological distinctions between types in the Atlantic Scottish contexts, the vertical-handled disc quern being ubiquitous in the province (MacKie 1971). Only a broad distinction between the pre- and post-replacement periods is currently possible. Nonetheless with a reasonably secure dating of this replacement to the period around 200BC this crude bipartite dating provides a wealth of information relevant to existing models of structural and material development in the Atlantic Scottish Iron Age.

One problem of potential significance for the use of the quern transition as a chronological indicator is the possibility of the survival of saddle querns for uses other than grain processing. The range of possible functions for saddle querns is greater than that for the more specialised rotary querns. It is not clear if grinding equipment for non-grain processing functions is of a form likely to be confused with saddle querns. Most of the Hebridean sites where rotary querns are found contain no saddle querns and the transition appears to have been complete. At the Howe saddle querns do survive into the later period (Smith pers.comm.) but their contexts are overwhelmingly from collapsed building rubble. A major study of the forms and contexts of saddle querns over the period will be needed to assess the degree of survival and the possibility of changes in form and size for saddle querns used for purposes other than grain

processing. At present only the appearance of rotary querns is of definite chronological significance while the occurrence of saddle querns *in situ*, especially where they occur in numbers and without associated rotary querns, must be treated cautiously as an indicator of pre-quern transition date.

Northern Quern Evidence

As Caulfield pointed out there are many instances of saddle querns being found on northern roundhouse sites although most are very poorly recorded or entirely without contexts. The sequences on sites such as Howe give warning that without properly recorded contexts we cannot be sure that a saddle quern from a given site is associated with the occupation of the roundhouse rather than with an underlying and unrecognised structure possibly of simpler type. In using the quern transition to examine structural sequences it is only valid to use those examples which can be assigned to a reasonably specific context.

The two principal northern sites to be affected by the re-dating of the quern transition are Jarlshof in Shetland and Gurness in Orkney. At Jarlshof there are no querns recorded from within the roundhouse itself but the Aisled Roundhouse, which was the earliest identified post-roundhouse structure on the site, yielded both saddle and rotary querns (Hamilton 1956). This Aisled Roundhouse has been considered in detail elsewhere (Armit forthcoming) and been shown to have been a wheelhouse even in its earliest form, with no evidence of the timber post phase which Hamilton considered to have predated the insertion of radial stone piers. This earliest wheelhouse at Jarlshof would seem to straddle the local quern transition and date to the decades around 200BC. The successive structures on the site have exclusively rotary querns.

The importance of this re-dating of the first Jarlshof wheelhouse or Aisled Roundhouse is that it places the entire construction and primary occupation of the *complex roundhouse* into the period prior to 200BC, far earlier than the accepted dating for that site. This

need not necessarily surprise us since, although Jarlshof has long been accepted as one of the classic 'broch' structures, in the traditional sense, it does not have evidence of greater structural complexity than the structures at Crosskirk and from Howe in Phase 6 which have been referred to above as complex roundhouses. The Jarlshof structure is a massive-walled, possibly circular roundhouse with a solid base and evidence of a guard-cell, a fragment of a basal cell and a scarcement, taken to indicate an upper floor level. This does not amount to a greater structural complexity than is demonstrated at Crosskirk or Dun Bharabhat, and the pre-200BC date is not inconsistent with the emerging C-14 chronology. The scarcement is the only structural feature not present at the latter sites and at Jarlshof it lies at a height of 2.5m, the maximum height to which Crosskirk was preserved and above the preserved height of Bharabhat.

The structure at Jarlshof was a *complex roundhouse* similar to others which had developed from the earlier simpler roundhouses and which was constructed at broadly the same time as Crosskirk; unlike the latter structure it was abandoned, at least in its primary form, much earlier and succeeded by the earliest wheelhouse on the site at around 200BC. Whether the roundhouse at Jarlshof ever possessed the same radial interior organisation as Crosskirk, Bu and the others, is not clear as the primary floor has never been exposed; the one original feature known, the rock-cut well, does however form a striking parallel with the former site and with Gurness, discussed below. By the period of the quern transition Crosskirk was still inhabited, albeit in a progressively modified form, while the Jarlshof roundhouse had been supplanted by the early aisled wheelhouse.

Gurness in Orkney is perhaps the most important site to be affected by a re-dated quern transition. Gurness displays unambiguous *broch architecture*; it was a *broch tower*, with clear evidence of upper galleries and floor levels in combination with other definitive features of *broch architecture*. Like the demonstrably early sites at Bu, Howe Phase 6 and Crosskirk, Gurness displayed traits of spatial organisation based on radial division accomplished by the use

of projecting stone piers. In terms of spatial organisation as well as construction it lies in the developing tradition which springs from these architecturally simpler structures. The earliest occupation levels at Gurness yielded saddle querns and the upper levels rotary querns. This was noted specifically by the original excavator (Craw quoted in Hedges 1987). This seems to indicate primary occupation of the structure prior to 200BC but continuing occupation extending well beyond this date.

The re-interpretation of the site by Hedges does not take the evidence of these querns into account and prefers a C1st AD date for construction on the basis of Roman material which will be examined below (Hedges 1987). This reverses the hierarchy of dating proposed in this paper and is valid if one denies the importance of the quern transition. Since the early dating of the site would not be inconsistent with the C-14 dating of *complex roundhouses*, and since the quern evidence from other sites provides an internally consistent sequence one must argue for reversing the hierarchy of the dating methods, and to explain why the quern transition should be inapplicable to Gurness, if one is to accept the later dating. With the reservations expressed above regarding the use of saddle querns as a pre-transition indicator, the numbers and exclusivity of the Jarlshof and Gurness contexts argue for the chronological review proposed here.

The numbers of saddle querns from early roundhouse excavations in the north give circumstantial support to the hypothesis that the majority of these structures were constructed prior to 200BC or represent the archaeologically most visible phases of sites where the structural development began at an early period (data collated in Caulfield 1977, 131-3). The numbers and contexts of rotary querns similarly indicate that the quern transition in no way marked the end of *complex roundhouse* occupation, although the evidence from C-14 and quern dating for the construction of northern roundhouses after the local quern transition is restricted to the somewhat ambiguous dating of the later *broch tower* at Howe.

One other Orcadian site worthy of consideration in the light of quern dating is the Calf of Eday (Calder 1937). The construction of the thick-walled roundhouse on this site, which had substantial radial stone piers and which is normally regarded as a wheelhouse, should pre-date the quern transition. The closest Orcadian parallel for this structure is not a wheelhouse but instead is the massive-walled roundhouse at Bu. The Calf of Eday structure would seem to parallel the simple massive-walled roundhouses towards the earlier part of the Orcadian Iron Age.

Returning to the description of structural development discussed in the previous section, in the light of the quern transition evidence, the picture can be somewhat amplified. The development of simple roundhouses prior to 400BC, as at Bu, Howe and possibly the Calf of Eday, would seem to be followed by the relatively rapid development of related structures, of similar scale but of increasing and variable complexity as at Crosskirk, Jarlshof and Howe with the earliest clear evidence for the building of a *broch tower*, with all the specialised architectural techniques which that entails, coming from Gurness prior to the quern transition in the decades around 200BC.

Gurness is representative of a number of northern *complex roundhouse* sites which have extensive associated occupation in slighter structures surrounding and focussed on the central roundhouse itself. Occupation of roundhouse sites continues well after this date into the C2nd and C1st BC although some such as Jarlshof are clearly superseded by the wheelhouse form. Roundhouse sites form the focus for later settlement into much later periods (even into the post-medieval period in the Outer Hebrides) but it is important to differentiate phases of construction and primary occupation from reconstruction and secondary occupation.

Western Quern Evidence

The situation in the western Atlantic Province is somewhat different regarding the relation of quern types to structural form. For the reasons presented above this discussion assumes an archaeologically

indistinguishable date for the quern transition across the Atlantic Province of c200BC. As Caulfield observed the evidence for querns in the western roundhouse sites shows significant differences from those of the north (Caulfield 1977).

Ground-galleried *complex roundhouses* such as Dun Mor Vaul and Dun an Ruaigh Ruaidh have rotary quern fragments stratified in pre-roundhouse contexts at the former site and primary structural contexts at the latter (MacKie 1974 and 1980). Such developed *broch-towers* were being constructed after the local quern transition and thus later than any securely dated northern example.

Some western sites, which Caulfield did not consider, do show evidence of earlier construction of *complex roundhouses*. Dun Cuier, in Barra, is a ground-galleried *complex roundhouse* which yielded a saddle quern from an unclear context. Dun Thomaidh in North Uist provides a further example of a saddle quern occurring on a re-occupied *complex roundhouse* site (Armit forthcoming). This Hebridean evidence would suggest that, as in the north, complex roundhouses were constructed and occupied prior to 200BC although in the west there is unambiguous evidence of construction extending into the last two centuries BC.

C-14 dating has not yet been deployed in the west on sites likely to shed light on the earlier parts of the Iron Age sequence; the western equivalents of Bu, Crosskirk and the rest, if they exist, have not yet been explored. The two regional sequences may be focussing on different parts of the same sequence and may be complementary in developing a unified model for development in the Atlantic Province, or they may indicate genuine differences with an early development in the north followed by abandonment soon after the quern transition while *broch architecture* arrives fully developed in the west and persists longer. One initial observation of possible significance is that the best understood *complex roundhouse* excavations in the west, at Vaul, Ruaigh Ruaidh and Flodigarry, all represent structural developments on sites without apparent previous massive-walled stone buildings.

The western situation is complicated by the parallel occurrence of a seemingly distinct but clearly contemporary structural tradition in the form of the wheelhouse. The distinctiveness of the wheelhouse, as a structural type, is not as great as was once thought; the spatial organisation of the northern roundhouses shows a similar tradition of the organisation and division of domestic space. Several Hebridean wheelhouses, those which are free-standing and massive-walled, seem as close to the northern roundhouse architectural tradition as to their neighbouring sand-revetted wheelhouses (Armit forthcoming). The definitive characteristic of the wheelhouses which sets them apart architecturally from the traditions of *broch architecture* is the structural use of drystone corbelled bays, founded on drystone piers, for roofing the periphery of the structure. Rather than simple spatial divisions, which may be irregularly spaced and may be formed of single set slabs, the piers of the wheelhouses form a regular radial foundation for peripheral roofing.

The site of Foshigarry, North Uist, shows a sequence of development from aisled to bonded-pier wheelhouse which strikingly parallels that at Jarlshof and bears an identical relationship to the local quern transition. The first wheelhouse at Foshigarry had both saddle and rotary querns while the later two have only rotary querns (Armit forthcoming). The great majority of the Hebridean wheelhouses yield only rotary querns and some e.g. Kilpheder (Lethbridge 1952) and A Cheardach Mhor (Young 1959) incorporate rotary querns in their walling and were built after the quern transition. The evidence for dating wheelhouses to the period from the C3rd - C5th AD has been considered elsewhere and shown to be untenable (Armit forthcoming). The combined C-14 and quern evidence for the Hebridean wheelhouses indicates development prior to 300BC, indicated by the dates from Hornish Point, and continuing construction and occupation well after the local quern replacement horizon.

Level Three - Roman Material

The greatest impact of C-14 dating in the Atlantic Scottish Iron Age has been in our understanding of the early part of the period while the dating of the quern transition has increased our awareness of developments in the period around 200BC. The study of Roman and Roman-associated material is restricted, by definition, to elucidating developments towards the end of the conventional Atlantic Iron Age. Roman material, as has been mentioned, was originally the only means of dating the Atlantic Scottish Iron Age so it is not surprising that the notion of a Roman period *floruit* has been so resistant to change.

The types of Roman material found in the Atlantic Scottish Iron Age comprise essentially coinage, glass and pottery, both Coarse Wares and Samian. In absolute terms the quantity is very small. An obstacle to interpretation is our lack of knowledge as to the processes by which these objects come to be on native sites outwith the areas of Roman penetration and the context of their use in native societies. No attempt has been made to analyse the types of Roman material and their contexts with a view to explaining the processes which lead to their introduction into Atlantic Scotland. Without such a model it is difficult to assess the value of Roman material as a chronological tool except insofar as such material, where its date of manufacture is known, provides a *terminus post quem* for its associated material.

The date of Roman influence on Scottish material culture is generally held to be the late C1st and C2nd AD when Roman military strength in the north was at its height. Generally Roman material is seen as representative of heirlooms or trophies of raids or even scavenging on Roman sites. Other interpretations could be envisaged which involve gift exchange or direct trade. Roman finds have tended to be regarded as exotic curios in otherwise mundane cultural assemblages.

Several of the sites dated by C-14 and quern evidence have yielded Roman material. Crosskirk is a valuable example in highlighting how the presence of Roman material could, in the absence of the C-14 sequence and the evidence of the quern transition, entirely mislead us into believing that the site had been constructed in the C1st or C2nd AD.

Several fragments of Samian pottery from Crosskirk, dating from the C2nd AD, occur in contexts secondary to the construction and original occupation of the structure. All appear to belong to Period IV possibly, but not conclusively, after a break in the occupation of the site (Fairhurst 1984, 115). A small fragment of Roman glass belongs to this same occupation material. A sherd of Castor Ware found under the turf outside the roundhouse at Crosskirk demonstrates that occupation on the site continued into the C4th AD (Breeze 1984, 115) although the presence of the complex roundhouse form on the site by this time may have been incidental.

There is no convincing evidence for a break in the occupation at Crosskirk, this belief apparently stemming from incredulity at the relatively shallow depth of stratification which had built up inside the roundhouse after several centuries of occupation. It need not cause major surprise that a society who possessed the technological ability to construct a *complex roundhouse* also possessed the practical sense to keep the build up of debris on the floor to a minimum.

Most of the Roman finds from Atlantic Scotland are small fragments of larger pottery or glass vessels; whilst glass may have been brought into the structures broken for re-use, unless small broken potsherds were treasured in their own right it is likely that these original Roman artefacts were used and eventually broken in the structures themselves. That only small and occasional fragments are found suggests that debris was regularly and relatively thoroughly removed from domestic floors.

The relatively well understood sequence at Crosskirk which, despite its wealth of Roman finds, was a construction of much earlier centuries is of great relevance to a reinterpretation of the sequence at Gurness. The previous section proposed a foundation date for the *broch tower* at Gurness prior to around 200BC, a view clearly at variance with that expressed in the recent publication of the site (Hedges 1987) which favours a C1st AD date on the basis of Roman period finds. This is the result of allotting primacy to the Roman material over the quern evidence, although the two need not be contradictory.

To take the Roman material as evidence of a C1st AD date for the foundation of the *broch tower* entails a number of difficult implications. It implies that the builders of this structure, surely one of the most architecturally advanced buildings of the period, continued to use large numbers of saddle querns which had been rendered obsolete, for the processing of grain, in neighbouring Caithness some 2 - 3 centuries previously. This is especially difficult to sustain since they were manifestly in contact, however indirectly, with the Roman world.

The original excavator stated expressly that the saddle querns came from the lowest levels and were superseded on the site by the rotary form. Hedges notes, in his reinterpretation, that the stratigraphic basis for this interpretation is insufficient from the extant records and that all that is known is that specimens of both saddle and rotary querns were located beneath the final floor (Hedges 1987, 78). This tells us nothing of the relative stratigraphy of the two types. Nonetheless Craw's belief in the spatial separation remains, and reflects the situation we would expect, so it is clearly necessary to examine the reinterpretation made some 40 years after the excavation which refutes the observation of the excavator. This entails examining the Roman material and its contexts.

The Roman material from the site comprises a glass globule and toggle, possibly made from re-used Roman glass, and fragments of a Roman amphora dated to the C2nd AD. Some of this material

derives from contexts below the final identified floor but none is clearly associated with primary occupation. The two glass fragments were found when material which had subsided into the underlying well was sieved. All that is known is that they came from below the final floor; not as Hedges states, that they came from the 'earliest' floor. It would seem likely that material subsiding into a well would be disturbed stratigraphically and likely to have been deposited originally after the well had gone out of use; i.e. some considerable time after the construction of the well and thus presumably long after the primary occupation of the *broch tower*.

The complex constructions within the well may also date to a period after the initial occupation. The only convincing stratigraphic determinant for the Gurness interior deposits is whether a given find derives from the final floor or before it. If the level of information from Crosskirk had been similar then that site too would have been interpreted as a Roman period construction. The *broch tower* at Gurness was occupied well into the Roman period but this is not inconsistent with a foundation in the C3rd or C2nd BC as was the case at the even earlier site of Crosskirk, this view being consistent with the presence of seven saddle querns in the site assemblage.

No other northern roundhouse site has well-stratified evidence linking Roman material to primary occupation or construction. Clickhimin in Shetland yielded a fragment of a Roman colourless glass bowl from its secondary interior modification stage (Hamilton 1968, 138). This would date this re-occupation and rebuilding to the late C1st or C2nd AD. In the Orkneys Roman finds show continuing occupation of *complex roundhouses* in the C2nd AD at sites like Oxtro, Taft and Borthwick (Hedges 1987, 30) demonstrated by the presence of Samian Ware. A series of *denarii* from Lingro included at least two of Crispina dating their production to between 180 - 3 AD (Hedges 1987, 30).

In the western Atlantic Province the only secure contexts for Roman material from a roundhouse site come from Dun Mor Vaul in Tiree. Sherds of Antonine Samian Ware and a number of Roman glass

fragments combine to extend the date of the secondary occupation of the structure into the C2nd AD. Hebridean wheelhouses have produced few examples of Roman or Roman associated material; a Samian sherd from Bac Mhic Connain in North Uist (Beveridge 1930) has no recorded context to link it with the occupation of the wheelhouse on that site. The fibula found in an aumbrey at the Kilpheder wheelhouse in South Uist may again date from the late C2nd AD but its context could indicate deposition at any time prior to the total infilling of the wheelhouse (Lethbridge 1952, 182).

There is extensive evidence of Roman Period occupation of *complex roundhouses* but no evidence as yet for their construction in Atlantic Scotland at this time. It is possible that the large external settlements which were associated with many northern roundhouses became the more important element on the sites at this time and that they, rather than the roundhouses, were the focus for expansion. The Orcadian sites with Roman occupation tend also to be those with evidence of substantial associated external settlements, e.g. Gurness, Midhowe etc. This pattern is not exclusive and in the west the typical single-structure settlements seem to have persisted, e.g. Dun Mor Vul.

Indications that the period of currency of *broch architecture* may have continued into the C1st AD comes from the lowland *complex roundhouses* outwith Atlantic Scotland and outwith the scope of this paper (MacInnes 1984). In the Atlantic Province the evidence of this third chronological level clarifies the pattern suggested by the C-14 dates for the latter part of the Iron Age. In discussing the C-14 and quern evidence it was suggested that the *broch tower* developed from *complex roundhouses* present between 400 - 200BC. Sites such as Gurness would have represented early examples of the fully developed form, Gurness being constructed not later than 200 - 150BC. The evidence of Roman material is compatible with this picture and extends the occupation of these structures into the C2nd AD although the paucity of well-defined stratigraphic contexts means that it is not possible to be sure that *broch architecture* was still current after the C1st AD in Atlantic Scotland.

The evidence of continuity into the Pictish period is amply demonstrated in the Orkneys (Hedges 1987) and in the Outer Hebrides (Harding and Topping 1986, Armit 1988) and would seem to reflect a generally continuous development of settlement into the period beyond that considered in this paper. The next stage in the chronological investigation of the Atlantic Iron Age will be to examine the less independently datable levels of native material culture and structural typology in the light of the broad chronology constructed so far.

Level Four - Native Material Culture

Chronological patterns in the native material culture of the period are very poorly known and a major re-evaluation of the subject is overdue. Within the scope of this paper all that can usefully be done is to assess the chronological value of current typological schemes in relation to the preceding discussion of the emerging chronology.

Native Pottery

The chronological value of native pottery in the region is greatest for the early period in the north where the scheme defined by Hamilton (1956 and 1968) and developed by Renfrew (1979), on the basis of the cross-dating of stratigraphic sequences on several sites, is supported by recent excavation. In the later period in the north and for the whole of the western sequence the greater variety and profusion of decoration and form seems paradoxically far less sensitive to chronological change, although well-stratified sequences from a series of excavations on Lewis may eventually clarify the picture.

The pottery for the early period in the Northern Isles, from the end of the Late Bronze Age into the Iron Age possibly up to c400BC, forms a coherent sequence which fits the C-14 evidence from recently excavated sites. The pottery from Bu, Quanterness and Pierowall, all occupied in the period 800 - 400BC, shares common

features with Village II at Jarlshof and with the first roundhouse at Clickhimin. The undecorated, high-shouldered jar form occurs at both of these Shetland sites with the first appearance of roundhouses. These pottery forms replace the plain bucket and barrel forms of the preceding period but without the appearance of dramatic change. The structural and pottery evidence links these two stratigraphic phases to the C-14 dated Orkney sequence.

There are variations within and between assemblages, and it would be misleading to place too much emphasis on shared traits singled out subjectively from a range of possibilities, but nonetheless the parallels in this instance are relatively clear. The Pierowall assemblage parallels the Jarlshof rim forms closely with hints of internal flanging on some rims again parallel to the Jarlshof assemblage (e.g. Sharples 1984, No.21). The other Jarlshof pot form which appears dominant in the catalogued assemblage, with bulging bodies and curving out-turned or everted rims is also paralleled at Quanterness and Clickhimin. There is no indication at the C-14 dated sites of the plain Late Bronze Age wares.

It seems reasonable to group all of these phases on the sites of the Northern Isles together on the basis of native pottery tied to C-14 dating and supported by the dominance of the roundhouse form. C-14 dating indicates a probable range from 800 - 400BC, although the weighted centroids of the dates concentrate on the second two centuries of that span.

There are no obvious parallels in the northern assemblage for the pre-roundhouse wares from Crosskirk and the early-roundhouse wares from that site show closer resemblance to the succeeding types at Clickhimin and the roundhouse period types at Jarlshof, although with significant differences in decoration. This may indicate that Crosskirk, the earliest dated complex roundhouse is of a period somewhat later than the Orcadian and Shetland group as the C-14 evidence suggests. There is a scarcity of reliable ceramic sequences from the north after this early period, which should be remedied by the Howe assemblage when that site is published. The pottery of the

later centuries BC in the north contains a greater variety of forms and decoration, although the latter is very restricted in comparison to the western pottery of the period. At present, without dated stratigraphic assemblages, it is impossible to assess the chronological significance of this pottery and the traits it contains.

In the western Atlantic Province the situation is considerably more confused. The pottery sequence at Dun Mor Vaul (MacKie 1974, 161) provides a graphic demonstration of the persistence of a wide range of forms and decorative motives throughout the entire sequence of occupation from c600BC to c300AD. The Vaul assemblage is one of the largest in the region and contains the vast majority of the forms and motifs current in the western Atlantic Iron Age. The presence or absence of these traits on any western site cannot be taken, in the present state of our knowledge, as chronologically sensitive within the period concerned. This pessimistic picture seems shortly to be confirmed by the publication of the material from Baleshare and Hornish Point where traits once thought to be of chronological significance seem to be current for far longer periods (Barber pers. comm.). Patrick Topping's recent work on Hebridean pottery has pointed to similar conclusions regarding the lack of evidence for chronological distinctions in the native pottery of that area (Topping 1985). Correlation between west and north is virtually impossible given the poor state of our understanding of development in either area for most of the period.

One of the few motifs not present at Vaul, applied roundels or bosses, was present at Flodigarry in a primary, thus probably C1st BC context. This form is however paralleled in the pre-roundhouse ware at Crosskirk and so again illustrates vividly the recurrence of traits over long periods. The most convincing conclusion from this gloomy picture is that the variation of the pottery of the period is not chronologically significant but may instead reflect functional and symbolic differences. The continuity of specific traits over such a time span reinforces the C-14 picture of a continuous progression and development of a cultural group sharing a similar ideological background.

Metalwork

The problems of lengthy chronological survival which prevent the chronological utility of native pottery also apply to the remainder of the native material. A prime example is the projecting ring-headed pin, originally dated to the early centuries AD on the basis of Roman associations at Traprain Law but now known to have been current as early as the C4th or C5th BC at Dun Mor Vaul, as demonstrated by stamped pottery sherds (MacKie 1974, 128). With the prospect of many, conventionally late, assemblages representing long sequences it is difficult to place chronological significance on native metalwork without a wide-ranging review of the evidence and its contexts.

Glass

The chronological value of Roman glass has already been discussed. The problems with the native material are of a different nature and are best examined by a case study of one common type; the small annular yellow glass beads of Guido's Class 8 (Guido 1978, 181). The conventional dating of the type is based on two concepts; diffusion and time-lag. The beads have close parallels in south-west England, particularly at Meare which is taken to be the centre of their manufacture, and the type is dated in the south from the C3rd - C1st BC. Although the Scottish series are thought to have been manufactured in Scotland at Culbin Sands and possibly at a number of other locations (Guido 1978, 74), the date for the series is based on the hypothesis that the idea for the type must have originated in the south and arrived in Scotland by an unexplained process much later. The reverse direction of diffusion is not considered.

The dating of the Scottish examples is placed in the C1st BC - C1st AD as if any individual bead moved up the Atlantic coast at a constant and measurable rate. There is no evidence for either diffusion or time-lag in this instance. If we did have evidence of an English origin we would still have to hypothesise what sort of process can transfer the prevalence of a particular bead type from one end of

the country to the other and why it should take upwards of 200 years to do so. Without such a hypothesis it is preferable to assume that the Scottish series is, if not independent, at least as early as the English, dating from the C3rd - C1st BC.

This revised dating of the Scottish series is far easier to reconcile with the Scottish occurrences of the type which have a wide chronological and contextual currency. Examples occur in the pre-roundhouse fort at Clickhimin which would pre-date the quern transition in that area. Other examples occur at Dun Mor Vaul and Dun Troddan as well as at the Hebridean wheelhouses of A' Cheardach Mhor and Tigh Talamhanta. All of these sites would sit happily within the period as newly defined. For more specific chronological separation the type, and indeed the bead evidence in general, is not helpful.

Level Five - Structural Typology

This form of study has been the central feature of the great tradition of broch studies in the mid-C20th. The schemes of MacKie, Hamilton and their predecessors rested on the extraction of as much data as possible from the cataloguing and comparison of the architectural *minutiae* of their rigorously defined structural forms (e.g. MacKie 1965, Hamilton 1968). The problems with this approach centred on the inferences drawn from structural typology, which tended to rest on pre-conceived hyper-diffusionist theories stretching the method far beyond the bounds of legitimate inference. These studies were characterised by a highly particularist approach to structural typology without adequate consideration of what structural variation or similarities actually mean within societies, in an effort to strengthen pre-existing cultural-historical narratives derived from the work of Childe and others. The problems of over-definition and the reductionist approach in general have been discussed in case-study form elsewhere (Armit 1988) and this discussion will centre on the limited inferences which can be drawn by a cautious structural typological approach constructed with respect to the evidence of more reliable chronological indicators.

While brochs were viewed as the specific development of a relatively brief period from the second half of the C1st BC it was considered justifiable to use structural typology to link large numbers of these structures to one overall historical process and to infer close chronological proximity between structures sharing the traditionally defined traits of *broch architecture*. With the extended chronology established by more reliable dating methods it has become apparent that the chronological tightness of *broch architecture* has disappeared and we are faced with a period of several centuries when the characteristic traits of *broch architecture* are found in varying combinations across the Atlantic Scottish Province. Although the *broch towers* may be a relatively late development within the Iron Age sequence it is still probable that they were built over a period of three centuries or more.

In terms of field survey, where a structural typology might have its most practical uses, it is generally impossible to distinguish between simple and complex roundhouses and broch towers. The collapse of stone, stone-robbing, local environmental change etc can all contribute to the problems of assigning a site to a specific place within a structural typological scheme. In the past the tendency has been to assign poorly preserved structures to the lowliest of the available classes. Thus we have in the Western Isles very large numbers of sites classified as duns which have all the superficial features we could expect of a similarly preserved *broch tower* (Armit 1988).

The cellular structures of the Late Bronze Age at Jarlshof and Clickhimin and of the type which cluster around northern *broch towers*, would not be assignable in the field to any specific class or period on the basis of structural typology alone. Although this is an obvious and accepted point it appears to be far more difficult to appreciate when dealing with the roundhouses of the Iron Age; these have often been casually assigned to specific categories in a typological sequence and thence to the chronological positions

dictated by that typology. The duns of the Western Isles have been a prime example of this process (Armit 1985, 1988).

In the absence of other forms of dating in an area where structural developments occur very gradually and where traits recur widely in chronologically remote periods, it is dangerous to use structural typology as a means of dating sites. It may eventually be possible to use specific combinations of architectural features, the recurrent patterning of structural traits, such as the hollow-walled building of the *broch towers*, to give a *terminus post quem* for a structure if that patterning can be shown to be specific to a relatively restricted period, but only when securely fixed by more reliable dating methods. To establish a structural typological sequence based on a development from simple to complex roundhouses and thence to broch towers for example would be to fossilise an opinion in the literature and effectively hinder objective future work.

We cannot form a chronology based on structural typology, nor indeed on typologies of native material culture, without assuming the types of relationships within and between groups which we should be attempting to investigate. The problem applies to a lesser extent with the quern evidence and Roman evidence but these levels are preferable because the clarity and simplicity of the underlying assumptions prevent the transcendence of hypothesis into 'established fact' with theory and data becoming painfully entangled, as they can with structural evidence.

Summary Sequence

In the early part of the period, broadly dated by C-14 evidence to 800 - 400 BC, the Orcadian record is dominated by *simple atlantic roundhouses* such as Pierowall, Bu, Toftsness and Quanterness, all isolated single farmhouses. Additional stratigraphic evidence from the Shetlands suggests that this type of settlement was directly successive to the cellular houses which characterise the Late Bronze Age in the area and which share structural traits with the Orcadian and Shetland neolithic houses. The native material culture, in

particular pottery, helps to give greater definition to the C-14 sequence suggesting that the development of the roundhouses may have occurred in the period 600 - 400BC where the weighted centroids of the calibrated date distributions cluster.

From c400BC the C-14 data indicates that each of these excavated simple roundhouses had been abandoned and the structures which are represented are *complex roundhouses* incorporating features of *broch architecture*. Howe is the sole dated Orcadian example but Crosskirk in Caithness is a parallel. Both appear to have been enclosed and may have had auxilliary outer structures.

From 200BC the C-14 evidence is less helpful in the north and the second level of dating, the quern evidence, becomes more useful. This indicates that a number of *broch towers* occupy sites with occupation earlier than the quern transition. Gurness in Orkney is the prime example of a *broch tower* which has artefactual evidence for construction prior to the local quern transition. At this period the northern *broch towers* appear often to be enclosed and surrounded by clustered settlements. Roman material indicates the continued occupation and importance of these settlements into the early centuries AD although it is not currently possible to identify any northern roundhouse likely to have been built at this time. The site of Skail with its cellular architecture is a useful reminder that the archaeological concentration on the most obvious sites may have greatly distorted our overall impression of the developing settlement pattern.

One of the most striking features of settlement patterns to appear from the revised chronology brought about by the C-14 evidence is the development of nucleated settlement in the Northern Isles and possibly in Caithness. The development from single roundhouses in the earliest Iron Age is followed by the appearance of enclosed roundhouse settlement at Crosskirk and Howe. With the development of the *broch tower* large nucleated settlements appear clustered around *complex roundhouse* sites which may, as at Howe, have developed from earlier simpler roundhouses. Against

this pattern Hedges has observed a contemporary settlement form represented at Skaill where slighter structures are present (Hedges 1987). Unfortunately the dating of this site is imprecise and it cannot be convincingly related to any specific chronological position. Exploring the complementary development of these two superficially contradictory elements of the settlement pattern must form a prime research objective in the north.

The settlement patterns of the west throughout the period are currently much less well defined although current work will help establish a database comparable to that of the Orkneys. At present the west provides a series of comparisons and contradictions to the Orcadian record which are discussed below.

Discussion

A chronological framework must be constructed, setting out the time dimension of the relationship between aspects of cultural production, such as structures and artefacts, as independently as possible of our interpretations of those relationships. Advances in methods of interpreting contexts and associations of cultural products will be of little value if founded on schemes constructed on the basis of the previous generation's assumptions. It is therefore preferable, prior to the application of new interpretative models, to understand the dependence of the archaeological sequence on preceding and potentially outmoded hypotheses. The differential weighting of various forms of evidence can contribute to eliminating this dependency.

The central aim of this paper has been to clarify the chronological basis for the study of the Atlantic Scottish Iron Age and to assess the implications of a systematic evaluation of the relative worth of our dating methods. The hierarchy of dating methods is not definitive but it is explicit; future work will be more constructive if it can be equally explicit regarding its underlying assumptions. It is hoped that this will help to provide criteria for a more realistic evaluation of competing hypotheses.

The picture resulting from this re-evaluation indicates a series of developments which are of far greater complexity than they may have appeared prior to the excavations of the 1970s and '80s. There is little support for a unilinear sequence or uniform process to encompass the entire area of Atlantic Scotland. This brief discussion will not attempt to offer an all-embracing model but simply consider some of the problems which have become apparent in the preceding chronological review.

It may be useful to isolate a number of the differences which appear broadly to distinguish the north and the west of the region. Differences are apparent in;

- a) The absence in the west of large nucleated settlements clustered around *complex roundhouses*.
- b) The interior organisation of the excavated western roundhouses which lack the consistent radial or bi-partite division of the northern examples.
- c) The presence and importance in parts of the west of a contemporary domestic form, the wheelhouse, which has an unclear relationship with *broch architecture*; the relative rarity of this form in the north is important.
- d) The far greater abundance of decorated pottery in the west particularly in the early part of the period.

These are a few of the more immediately striking examples of the disparity between the two areas, although the west/north dichotomy may well be over-stressed; the Shetlands, for example share traits a-c with the west rather than with the Orkneys. The central point is that the presence of *broch architecture* over the whole area need not indicate shared processes of development throughout the period. The historical narrative approach, which attempts an all-embracing

explanatory descriptive model, can only be a goal for the remote future.

The attitude of prehistorians over the years to the brochs has encouraged ideas of uniformity of origin and development in all of the areas where *broch architecture* occurs. It has been considered that the uniformity of the structures coupled with their degree of specialisation must indicate a powerful cultural relationship amongst their builders. This view can be challenged. It has been usual to see structural evidence as separate from artefactual evidence. This is a convenience of classification which enables us to devote our analytical energies to relatively restricted aspects of society at any one time, and as such it is a valuable conceptual division. Its utility does not however make it a real division in terms of prehistoric society. When we interpret the specific structural form of the *broch tower* as an artefact we can begin to appreciate that its use and meaning could vary between cultural contexts.

To use an analogy with the spread of the rotary quern, we can appreciate that the adoption of this artefact by a wide range of societies does not in any way necessitate cultural uniformity. What was adopted was a specialised artefact which utilised a specific technique, of rotary motion, to a given end and which was accommodated within a pre-existing cultural context. The *complex roundhouse*, as an artefact, utilises the central technique of hollow-walled construction to produce the desired end-product; a high walled structure. The adoption of this technique and this structural form need not be seen *a priori* as an indicator of cultural uniformity among participant groups. The more restricted distribution of *broch architecture* compared to the rotary quern arises from a number of restrictions based on the limited geographical background of drystone building skill and the perceived social use of a product which lacks the universal applicability of the rotary quern. In such a context the variation in architecture between areas need not be surprising. The dichotomy between the open-interior roundhouses of the west and the radially partitioned roundhouses of the north may

show the superficial unity of *broch architecture* cloaking two very different domestic forms.

Complex roundhouses can be seen as one 'artefact' amongst a whole range in Atlantic Scotland and not necessarily as the one that holds the key to the formulation of models to explain the entire process of development in the area. Structural types form an important element in the cultural fabric of material forms and associations; the view of brochs as artefacts within a wider cultural context should not be taken to deny their importance. The sheer scale of *broch towers* would inevitably have made them extremely powerful symbols and this could well have led to their adoption within different cultural contexts and with varying contextual meanings. Nonetheless the study of the Atlantic Scottish Iron Age must lose its dependency on structural typology. The disentangling of the valuable aspects of our antiquarian and architectural/historical inheritance from the clutter of prejudice and unfounded assumption is an essential step towards a proper re-evaluation of the Atlantic Iron Age.

Part Two - C-14 Dates

The following section lists the sites from which the dates in Ills. A1.2 A1.3 and A1.4 are derived and lists both the dates used and those left out. The reasons for this selection are discussed and it must be made explicit that an element of subjective interpretation cannot be excised from the use of C-14 dates; indeed it is inherent from the initial stage of sample gathering and selection on-site. Some sites have been excluded where dates do not relate to Iron Age activity (as at Dun Carloway) or where full data is unavailable (as for the Udal wheelhouse). The sites are discussed from north to south within three subdivisions of the Atlantic Province; the Northern Isles and North Mainland, the Outer Hebrides, and the West Coast and Inner Isles.

The following tables list the dates from each site first in their uncalibrated form with laboratory reference number and a note on site context. The dates used in this paper however are calibrated using the micro-computer package CALND which uses the high precision dendrochronological data of Stuiver and Pearson (1986) and the calibration procedure of Robinson (1984). Each calibrated date is presented here as a Weighted Average, or centroid, of the calibrated distribution (the range of possible dates) with a note of the upper and lower 68% confidence limits.

Lab Ref. - Laboratory Reference Number

Context - Sample context within site

Uncal. - Uncalibrated date with standard deviation

WA - Weighted average (centroid) after calibration

68% H - 68% confidence upper (oldest) limit

68% L - 68% confidence lower (youngest) limit

The Northern Isles and North Mainland (Ill.A1.2)Pierowall Quarry, Orkney (Sharples 1984)

<u>Lab Ref</u>	<u>Context</u>	<u>UnCal.</u>	<u>WA</u>	<u>68% H</u>	<u>68% L</u>
GU-1580	Occupation immediately preceding roundhouse	560+/-80 bc	657BC	804BC	470BC
GU-1581	Contemporary occupation to roundhouse	475+/-60 bc	511BC	681BC	416BC

These two dates, derived from animal bone, have both been included in Ill.A1.2. GU 1580 is a terminus post quem for the roundhouse construction while GU 1581 is derived from contemporary occupation debris (Sharples 1984, 89).

The 68% confidence levels cover almost 400 calendar years from 416 to 804 BC. The spread of potential dates matches almost exactly those from the occupation material at Bu and Quanterness.

Quanterness, Orkney (Renfrew 1979)

<u>Lab Ref</u>	<u>Context</u>	<u>UnCal.</u>	<u>WA</u>	<u>68% H</u>	<u>68% L</u>
Q-1465	Primary occupation	620+/-85 bc	738BC	828BC	639BC
Q-1464	Primary occupation	490+/-85 bc	545BC	759BC	414BC
Q-1463	Secondary occupation	180+/-60 bc	186BC	323BC	98BC

These dates taken from soil rich in organic material (Renfrew 1974, 72) combine to suggest primary roundhouse occupation between 800-400BC. This is not as desperate a situation as it may at first appear as the 95% confidence levels of these two dates do not extend the range significantly beyond 900-400BC. Secondary occupation appears to have been substantially later possibly as late as the C2nd or C3rd BC.

Howe, Stromness, Orkney (Carter et al 1984)

<u>Lab Ref</u>	<u>Context</u>	<u>UnCal.</u>	<u>WA</u>	<u>68% H</u>	<u>68% L</u>
GU-1760	Phase 3 silt in well	455+/-75 bc	489BC	670BC	407BC
GU-1804	Phase 3 midden	470+/-55 bc	500BC	666BC	415BC
GU-1805	Phase 4 settlement floor	355+/-60 bc	380BC	421BC	371BC
GU-1799	Phase 5 skeleton in roundhouse drain	430+/-50 bc	439BC	487BC	406BC
GU-1789	Phase 5 rampart const.	455+/-70 bc	486BC	656BC	409BC
GU-1759	Phase 5/6 ditch fill	ad 10+/-60	AD48	25BC	AD113
GU-1758	Phase 5/6 east rampart	305+/-95 bc	329BC	415BC	220BC
GU-1750	Phase 7 end of main broch village	120+/-50 bc	103BC	177BC	64BC
GU-1788	Phase 7 early burning in broch tower	ad 15+/-55	AD54	5BC	AD113
GU-1786	Phase 7 late burning	25+/-55 bc	AD9	86BC	AD59

Excluded Dates

GU-1787	Phase 7 workshop floor	ad 280+/-65	AD371	AD265	AD421
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+3 Pictish settlement dates

The dates from Howe provide a reasonable degree of internal consistency at the 68% confidence level. All of the published dates have been included in Ill.A1.2 except for those relating to Phase 8, the post-broch tower 'Pictish' occupation and from late Phase 7, these being outwith the period under discussion in this paper.

Identifiable structures appeared in Phase 5 with the construction of the early roundhouse but hearth and paving etc in Phase 4 indicate earlier structures of indeterminate form (Carter et al 1984, 64). The later dates from the site are ambiguous, in the absence of full publication of their contexts; the Phase 7 occupation which appears to cover a long chronological span including broch tower and ancillary structure occupation.

Bu, Orkney (Hedges 1987)

<u>Lab Ref</u>	<u>Context</u>	<u>UnCal.</u>	<u>WA</u>	<u>68% H</u>	<u>68% L</u>
GU-1228	Primary occupation	520+/-95 bc	593BC	797BC	419BC
GU-1154	Primary occupation	510+/-80 bc	576BC	783BC	420BC
GU-1152	Base of infill	490+/-65 bc	539BC	705BC	418BC
GU-1153	Earth-house occupation	595+/-65 bc	717BC	809BC	622BC

All four of the dates from Bu have been included in Ill.A1.2. The first three listed provide strong evidence for occupation of the roundhouse at some time in the period from 800-400BC.

The date from the earth-house occupation, clearly later than the others on stratigraphic grounds, is superficially out of sequence with the others. It is worth noting that the 95% confidence levels for GU-1513 extend from 839-439BC indicating that its implausibly early dating at the 68% level may artificially stress its irregularity when compared with stratigraphically later dates. Nevertheless this does indicate a need for caution in the use of the percentage confidence levels.

Skail, Orkney (Gelling 1985)

<u>Lab Ref</u>	<u>Context</u>	<u>UnCal.</u>	<u>WA</u>	<u>68% H</u>	<u>68% L</u>
Birm-413	Iron Age occupation	260+/-120 bc	276BC	409BC	129BC
Birm-397	Iron Age occupation	150+/-110 bc	146BC	333BC	4BC
Birm-764	Primary Iron/Dark Age	70+/-100 bc	47BC	175BC	AD58

The Iron Age site at Skail is not yet fully published and this data is taken from an interim report (Gelling in Renfrew ed. 1985, 176-182). The very wide standard deviations of these dates in their uncalibrated state mean that occupation may have taken place in the last four-five centuries BC.

Crosskirk, Caithness (Fairhurst 1984)

<u>Lab Ref</u>	<u>Context</u>	<u>UnCal.</u>	<u>WA</u>	<u>68% H</u>	<u>68% L</u>
SRR-266	Primary floor const	430+/-50 bc	439BC	487BC	406BC
SRR-272	Broch occupation	100+/-50 bc	78BC	150BC	18BC
SRR-271	Enc.1 floor (broch phase)	120+/-80 bc	107BC	213BC	4BC
SRR-270	Enc.1 (broch phase)	150+/-100 bc	146BC	317BC	20BC
SRR-268	Enc.3a hearth	170+/-50 bc	172BC	262BC	97BC
SRR-267	Late hearth	ad 70+/-70	AD117	AD32	AD205
SRR-269	Enc.7	820+/-100 bc	944BC	1064BC	834BC

The dates from Crosskirk give another coherent sequence, all from charcoal samples except for dates SRR-266 (organic detritus) and SRR-270 (bone protein) (Fairhurst 1984, 164-5). All are included in Ill.A1.2. The dismissal of date SRR-266 by the excavator as being representative of a construction date was simply due to its being regarded as too early (Fairhurst 1984, 165); there is no other justification given and, since the date is not inconsistent with the other dates from this or other sites, it is accepted here as a reliable indicator of the construction phase.

Dates SRR-270, 271, 272, and 268 derive from contexts deposited during the occupation of the structure but post-dating the primary occupation while SRR-267 is from the latest reorganisation of the roundhouse interior. All of these dates give a plausible dating of the occupation sequence. The very early date, SRR-269, comes from a structure of unclear type and which is stratigraphically ambiguous.

Upper Suisgill, Sutherland (Barclay 1985)

<u>Lab Ref</u>	<u>Context</u>	<u>UnCal.</u>	<u>WA</u>	<u>68% H</u>	<u>68% L</u>
GU 1491	Period VI	255+/-65bc	280BC	396BC	196BC

Excluded Dates

GU 1492	Structure 1a	825+/-105bc	951BC	1073BC	834BC
GU 1490	Structure 1b	885+/-90bc	1021BC	1161BC	911BC
GU 1493	Period III bank debris	990+/-60bc	1167BC	1287BC	1069BC

GU 1326 Period V 630+/-60bc 763BC 823BC 681BC

The majority of the dates have been excluded from Ill.A1.2 due to their lack of association with well-defined structural units. The one date which is included relates to the latest phase on the site when the souterrains were in use.

Kilphedir, Sutherland (Fairhurst and Taylor 1971)

<u>Lab Ref</u>	<u>Context</u>	<u>UnCal.</u>	<u>WA</u>	<u>68% H</u>	<u>68% L</u>
GU 299	Hut Circle Occupation	420+/-40bc	422BC	438BC	406BC
GU 10	Abandonment	ad42+/-60	AD84	AD18	AD128
GU 11	,,	114+/-55bc	96BC	176BC	32BC
GU 67	,,	ad28+/-60	AD68	AD9	AD122
L 1061	,,	150+/-80bc	146BC	276BC	69BC
SRR 3	,,	150+/-50bc	143BC	214BC	83BC

All of these dates are included in Ill.A1.2. All but the first derive from a single sample taken from charcoal deposited after the abandonment of the final roundhouse on the site.

Tor a Chorcain, Langwell (Nisbet 1974)

<u>Lab Ref</u>	<u>Context</u>	<u>UnCal.</u>	<u>WA</u>	<u>68% H</u>	<u>68% L</u>
GaK 4860	Primary posthole	230+/-90bc	245BC	395BC	128BC
GaK 4862	Foundation of inner wall	350+/-90bc	375BC	426BC	278BC
GaK 4861	Fallen roof timber?	310+/-100bc	334BC	418BC	220BC

This site has never been fully published and the contexts of the dates are not entirely clear. They seem all to be associated with the construction of a vitrified dun built over a hillfort as at Dun Lagaidh. The roundhouse incorporated a number of the features of broch architecture including a guard cell and was of characteristic broch size and shape but from the vitrification would appear to have incorporated timbers in its construction.

The West Coast and Inner Isles (Ill.A1.3)Dun Lagaidh (MacKie 1975)

<u>Lab Ref</u>	<u>Context</u>	<u>UnCal.</u>	<u>WA</u>	<u>68% H</u>	<u>68% L</u>
GaK 1121	Construction of Hillfort	490+/-80bc	544BC	750BC	415BC
GaK 2492	Destruction of Hillfort	460+/-100bc	507BC	704BC	402BC

Excluded dates

GaK 1948	Old ground surface	880+/-90bc	1014BC	1151BC	906BC
GaK 1947	Medieval Reoccupation	ad840+/-90	AD921	AD782	AD990

The two dates incorporated in Ill.A1.3 relate to the hillfort which was built over by a roundhouse (the excavator refers to the site as a dun because it lacks unambiguous evidence of super-imposed mural galleries; this type of structural typology has been argued against in this paper and elsewhere e.g. Armit 1988). The roundhouse itself is not dated by C-14 as GaK 1947 relates to medieval reoccupation. Dun Lagaidh in its initial hillfort period is more closely related to structural developments outside the main area of Atlantic Scotland as considered in this survey.

Dun an Ruaigh Ruaidh (Rhiroy) (MacKie 1980)

<u>Lab Ref</u>	<u>Context</u>	<u>UnCal.</u>	<u>WA</u>	<u>68% H</u>	<u>68% L</u>
GU-1365	Pre-broch turf-Ph1	135+/-80 bc	126BC	234BC	26BC
GU-1366	Posthole- Ph1	275+/-80 bc	299BC	404BC	206BC
GU-1368	Posthole- Ph1	1+/-65 bc	AD36	73BC	AD101
GaK-2493	Posthole- Ph1	580+/-80 bc	687BC	809BC	527BC
GU-1367	Late Ph2 on hearth	30+/-60 bc	AD3	91BC	AD59
GaK-2496	Late Ph2 floor	10+/-100 bc	AD25	99BC	AD122

Excluded Dates

GaK-2495	Late Ph4	1020+/-90 bc	1211BC	1367BC	1070BC
GaK-2494	Ph6 Gallery	ad 790+/-80	865BC	759BC	973BC
GaK-2497	Pre-broch	970+/-110 bc	1195BC	1376BC	1029BC

The dates from this site present a sadly erratic series which require detailed consideration and cautious use. The original excavation report does not adequately analyse these dates and instead uses them to argue for a variety of possible hypotheses which seem to be largely unwarranted.

The problematic dates are those which derive from construction and primary occupation contexts; the first four listed. The only dates which are in fact out of sequence are those deriving from charcoal from Phase 1 postholes. The use of old timbers in construction could easily account for apparent anomalies and in this instance only the youngest date is of real value; each of these dates represents a terminus post quem for occupation so clearly the youngest is the most archaeologically useful and indeed the only useful one in the context of dating the phase of activity.

GU-1368 is the important date here, representing the infill of the postholes during the primary occupation period. This date ranges from 73BC-AD101 at the 68% confidence level with a weighted centroid of AD36. Its extreme 95% oldest limit is 108BC so it is unlikely that the charcoal was deposited before that date and thus that the postholes went out of use by this date. MacKie's claim that radiocarbon dates show that the structure was built in the 3rd or 2nd centuries bc appears to be contradicted by this evidence. The statistically most likely date for the filling of the postholes (prior to the completion of the primary pebble floor of the roundhouse) is the weighted centroid of the calibration for GU-1368 i.e. AD36.

This dating is consistent with the date GU-1365 for the pre-structural turf-line for which the weighted centroid is 126BC. This date is another terminus post quem for the structural activity on the site. The two dates for Phase 2 suggest continuing occupation on the site in the 1st AD.

Dun Flodigarry, Skye (Martlew 1985)

<u>Lab Ref</u>	<u>Context</u>	<u>UnCal.</u>	<u>WA</u>	<u>68% H</u>	<u>68% L</u>
GU-1662	Immediately post-const.	45+/-65 bc	14BC	100BC	AD53

The single date from Flodigarry relates to a structure which has been convincingly interpreted as an unfinished broch of ground-galleried type and relatively massive

proportions (Martlew 1985). It is derived from corylus charcoal deposited soon after the construction of the broch wall. The usefulness of a single date is severely limited.

Dun Ardtreck, Skye (MacKie 1974)

<u>Lab Ref</u>	<u>Context</u>	<u>UnCal.</u>	<u>WA</u>	<u>68% H</u>	<u>68% L</u>
Gx-1120	Construction	55+/-105 bc	29BC	160BC	AD 68

The single C-14 date from this structure is rendered almost useless by the wide dating range which extends rapidly after the 68% confidence level. At 90% confidence it spans seven centuries between 500BC-200AD.

Dun Mor Vault, Tiree (MacKie 1974)

<u>Lab Ref</u>	<u>Context</u>	<u>UnCal.</u>	<u>WA</u>	<u>68% H</u>	<u>68% L</u>
GaK-1092	Phase 1A under midden	400+/-110 bc	424BC	592BC	359BC
GaK-1098	End of Phase 1A- grain	445+/-90 bc	483BC	674BC	400BC
GaK-1225	Phase 1B- animal bone	280+/-100 bc	301BC	409BC	182BC
GaK-1097	Phase 2B gallery chamber	ad 60+/-90	AD106	AD11	AD214
GaK-1521	Phase 4-topsoil	290+/-80 bc	316BC	407BC	220BC
GaK-1099	Phase 5 gallery rubble	ad 160+/-90	AD226	AD111	AD336

Excluded Dates

GaK-1096	Phase 2B gallery floor	1195+/-90 bc	1429BC	1519BC	1343BC
GaK-1520	Norse	ad 490+/-200	AD576	AD390	AD748
Gx-3426	Burial	ad 805+/-155	AD881	AD675	AD1012

All but two of the C-14 dates from the site are included in Ill.A1.3. Gak-1520 and Gx-3426 are both from much later re-use. The relationship between the remaining dates and the structure is unclear and MacKie's interpretation is based on the assumption that the floor level which he identified was the original one.

MacKie believed that the first three dates related to pre-roundhouse occupation although the sections and plans do not give any support to this and the absence of convincing structures associated with phases 1A and 1B means that we cannot rule out the possibility

that those levels were the primary roundhouse occupation levels (MacKie 1974, 92). MacKie's failure to consider this possibility appears to derive from his belief that the roundhouse would have had a level floor while the early deposits lie deep in a cleft; evidence from many other roundhouse sites does not warrant this assumption. An alternative and opposite view suggests that MacKie's floor levels were construction levels and that his secondary occupation was in fact primary occupation (Nieke 1984, 172). The excavation report does not permit one to choose between these hypotheses with any confidence.

The Outer Hebrides (Ill.A1.4)

Dun Bharabhat, Lewis (Harding and Dixon pers.comm.)

<u>Lab Ref</u>	<u>Context</u>	<u>UnCal.</u>	<u>WA</u>	<u>68% H</u>	<u>68% L</u>
GU 2434	Secondary Occupation	60+/-50 bc	31BC	101BC	AD33
GU 2435	Secondary Occupation	150+/-50 bc	143BC	214BC	83BC
GU 2436	Material under foundation	600+/-50 bc	733BC	807BC	671BC

These dates derive from the interior occupation of the complex roundhouse on Dun Bharabhat, with GU 2436 providing a terminus post quem for construction and the remaining two dates providing a terminus ante quem for the primary occupation and partial collapse of the structure.

Eilean Olabhat, North Uist (Armit 1986 and 1988 b.)

<u>Lab Ref</u>	<u>Context</u>	<u>UnCal.</u>	<u>WA</u>	<u>68% H</u>	<u>68% L</u>
GU 2326	Primary occupation	60+/-50 bc	31BC	101BC	AD33
GU 2327	Metalworking debris	ad 150+/-50	AD214	AD124	AD273

This Hebridean island occupation site is still under excavation and the structural sequence is not fully defined. GU 2326 derives from primary occupation of a slightly built, possibly cellular, structure while GU 2327 is from charcoal associated with a deposit of metalworking debris which includes a handpin mould.

Baleshare, North Uist (Barber forthcoming)

<u>Lab Ref</u>	<u>Context</u>	<u>UnCal.</u>	<u>WA</u>	<u>68% H</u>	<u>68% L</u>
GU-1960	Midden under quern/walls	290+/-55 bc	321BC	403BC	238BC
GU-1974	Cultivated Deposit	260+/-50 bc	288BC	393BC	219BC
GU-1970	Midden	315+/-50 bc	348BC	407BC	274BC
GU-1961	Cultivated deposit	440+/-55 bc	455BC	526BC	409BC
GU-1963	Midden	425+/-55 bc	438BC	486BC	403BC
GU-1962	Burial- prob contaminated	205+/-50 bc	222BC	342BC	142BC
GU-1964	Sand after structures	160+/-80 bc	159BC	303BC	75BC
GU-1972	Dumped material	135+/-50 bc	122BC	189BC	75BC
GU-1968	Sand sealing quern	95+/-50 bc	72BC	140BC	11BC
GU-1975	Dumped deposits	107+/-50 bc	86BC	181BC	28BC

+ 6 LBA Dates

The extensive Hebridean machair site at Baleshare was partially excavated in 1984 by the Scottish Central Excavation Unit as part of a wider programme of rescue excavation which also included work at Hornish Point (Barber forthcoming). The excavation revealed a number of fragmentary structures none of which can be conclusively linked with specific structural forms. The great importance of the dating of this site in the present context is the presence of a rotary quern stone re-used in the walling of a partially excavated drystone structure.

The five earliest dates all derive from contexts pre-dating the quern. Dates GU 1962, 1964 and 1968, however, all seal the quern fragment and dates GU 1972 and 1975 are contemporary or later. These dates combine to suggest the abandonment of the structure prior to the mid-late C2nd BC with the weighted centroids of the calibrated dates concentrating around this period. This represents the abandonment of a structure which was itself built after the breakage and re-use of a rotary quern.

Rotary querns in the Outer Hebrides must have been in use before the contexts dated here were formed. Even if we take the very latest parts of the 68% confidence levels for these 5 dates it is still very probable that this structure was abandoned in the late C2nd BC. A date for the local 'quern transition' at around 200BC or earlier would seem to be the implication of these dates.

Hornish Point, South Uist (Barber forthcoming)

<u>Lab Ref</u>	<u>Context</u>	<u>UnCal.</u>	<u>WA</u>	<u>68% H</u>	<u>68% L</u>
GU-2015	Midden above structures	230+/-50 bc	253BC	358BC	181BC
GU-2024	Dumped deposits over Wh.	220+/-50 bc	241BC	352BC	170BC
GU-2025	,, ,, ,,	335+/-50 bc	367BC	410BC	295BC
GU-2028	Structure 7- contemp. Wh.?	320+/-50 bc	353BC	407BC	274BC
GU-2026	,, ,,	235+/-50 bc	259BC	362BC	187BC
GU-2017	Sand- Structures contemp?	385+/-50 bc	402BC	426BC	395BC
GU-2022	Rev wall- ,, ,,	360+/-50 bc	386BC	420BC	391BC
GU-2021	Cultivation- ,, ,,	375+/-50 bc	395BC	424BC	393BC
GU-2027	Cultivation under Wh.	420+/-50 bc	429BC	474BC	402BC
GU-2020	Cultivation under site	550+/-50 bc	650BC	792BC	521BC

Hornish Point is another Hebridean machair site excavated in the Central Excavation Unit's rescue programme in 1984 (Barber forthcoming). The dates form a coherent series and are all from reliable contexts linked to a series of structures which include at least one certain and two probable wheelhouses. The last two dates, GU 2027 and 2020, indicate that the structural sequence commenced after use of the area for cultivation in the late C5th BC.

The preliminary stratigraphic matrix for the site shows that the very tight cluster of dates GU 2017, 2021 and 2022, are likely to be contemporary with the occupation of Structures 1 and 2, both of which have the characteristic radial piers associated with wheelhouses (Barber pers. comm.). This would date the structures with a high degree of probability to between 430 and 390BC. The best preserved wheelhouse, Structure 5, is not dated directly but is post-dated by GU 2014, 2024 and 2025 which together suggest abandonment by around 300BC. The dates for the fragmentary Structure 7, which is stratigraphically parallel to Structure 5, are not inconsistent with this dating. The whole structural sequence of wheelhouses and associated structures would appear to occur from approximately 430BC until 300BC at latest.

Appendix TwoAdditional C-14 Dates for the Western Isles

A number of dates excluded from Appendix One, as unreliable, irrelevant or too late chronologically, are relevant to the present study. This appendix lists the remaining dates relevant to the later prehistoric sites with structural evidence for settlement.

Dun Carloway (NB 1901 4122)

Lab-Ref	Context	UnCal	WA	68%H	68%L
GX-3428	Final Phase	1300+/-150	1321AD	1230AD	1412AD

The Udal, North Uist (NF 824 783)

Lab-Ref	Context	UnCal	WA	68%H	68%L
Q-1139	Layer XI ('Scotto-Pictish')	675+/-115	745AD	638AD	872AD
Q-1132	Layer XII ('Scotto-Pictish')	595+/-115	673AD	581AD	762AD
Q-1137	Layer XIII ('Scotto-Pictish')	450+/-80	555AD	439AD	631AD
Q-1131	Layer XIV (post-wheelhouse)	340+/-120	435AD	276AD	557AD

(Data taken from Ralston 1986)

Appendix Three

Later Prehistoric Pottery in the Western Isles

Native pottery typology has been described in Appendix One as part of the fourth level of chronological evidence for Atlantic Scotland in the period prior to 200AD. In the later period, prior to the Norse incursions, pottery typology becomes a somewhat more reliable chronological indicator although the ceramic typology is only now becoming apparent in outline. In the Western Isles, with so few C-14 dates available, few stratified querns and almost no Roman material, the problems of pottery typology are particularly significant. The wealth of pottery decoration and the variety of forms for parts of the later prehistoric period have complicated the issue and made the establishment of pottery typologies an early objective for the region.

The early pottery typologies constructed firstly by Lindsay Scott (1948) and later modified by Alison Young (1966) have recently been reassessed in Patrick Topping's doctoral thesis (1985). Scott's pottery typology was based on the excavated sequence at Cleittraval. This started with the premise that the whole ceramic tradition of the Atlantic Scottish Iron Age derived from Wessex after the C1st BC 'Belgic invasions', and defined broad phases on the basis of a numerical analysis. Scott concluded that incised decoration was the predominant early form which then disappeared as relief decoration became more common. Curvilinear grooved decoration was believed to be restricted to the early period as were stamped decoration and applied bosses. Topping demonstrated that the assertions underlying Scott's typology were based on too few sherds and unclear stratigraphy (Topping 1985, 218-221).

Young's pottery typology was based on the Cleittraval sequence and attempted to trace the ancestry of the early incised forms from local neolithic ceramics. Young saw the incised lattice, herringbone and chevron motifs as of neolithic descent, along with the applied rondels, while pin-stamping and finger-channelling were thought to be purely Iron Age inventions. Everted rims and applied cordons,

skeuomorphs perhaps of leather thongs, were also seen as Iron Age introductions (Young 1966, 48). Again the basic problems of the Clettraval database hampered proper study and Mackie's excavations at Dun Mor Vaul (MacKie 1974) showed that the decorated forms co-existed in the record as far back as the mid-1st millennium BC. None of the attempts to apply typologies to the characteristic decorated assemblages of the Hebridean Iron Age have had any demonstrable utility or chronological significance.

A number of typological stages can be identified in the pottery of the 1st millennium AD in the Western Isles and the emergence of these forms from the preceding highly decorated assemblages can be traced. The recognition of the mid-late 1st millennium AD forms came initially from Young's work at Dun Cuier (C.28) and A' Cheardach Mhor (1955, 1959 and 1966; W.15) and was developed by Alan Lane on the basis of his work on the Udal pottery from North Uist (Lane 1983). This late stage has now been traced back to its development from the decorated forms at Cnip (W.1) with an intermediate assemblage at Eilean Olabhat (Armit 1988a and 1988b; C.19). The decorated early assemblages have not been subdivided in this thesis. Four stages of development can be traced; these are in no way definitive and are simple reflections of the excavation of particular sites with assemblages relating to particular parts of the sequence. Nonetheless it is useful to define and describe the types and summarise the dating evidence for each.

1. Mid-late 1st millennium BC decorated assemblages

The characteristic Atlantic Iron Age pottery forms have been recorded at a range of sites encompassing principally the monumental types of structure, the atlantic roundhouses and wheelhouses.

A wide range of form and a high percentage of decorated vessels with a wide variety of motifs are present. Decoration can be incised, applied, channelled or stamped. Rims are characteristically short and everted or inturned; flaring rims appear to be absent. No

convincing typology has been formulated to subdivide these assemblages and many forms and motifs appear to be current from the mid-1st millennium BC through to the C1st BC or later.

The earliest dating of the type is the mid-1st millennium BC at Dun Mor Vul (MacKie 1974) and it persists on a number of wheelhouse sites, e.g. Kilpheder (W.22) and A' Cheardach Mhor (W.15), after the local quern replacement horizon. At Dun Bharabhat (A.L18) this type of assemblage is associated with the final occupation in the last two centuries BC. At Cnip (W.1) it is succeeded directly, without an apparent break in occupation, by the next assemblage type.

2. Cnip Phase 3 assemblage

This is a unique assemblage at present and dated only by its typological precedence over the C-14 dated assemblage at Eilean Olabhat (C.19). The large jars and decoration restricted to applied wavy cordons are similar to the Eilean Olabhat assemblage but the rims are short and everted as with the typologically preceding assemblage.

The full analysis of the Cnip ceramic assemblage should clarify the period when the pottery forms were changing. It is important to note that this type of form and motif were also present in the earlier assemblages and the development involves the reduction of variety rather than actual transformation.

3. Eilean Olabhat assemblage

The assemblage from Eilean Olabhat, North Uist, contemporary with the metalworking phase on that site, occupies a typologically intermediate position between the Iron Age and immediately pre-Norse forms. This type of assemblage has not been found in quantity but is present at A' Cheardach Mhor, in the post-wheelhouse levels, at Berie Structure 2 (C.5) and at Dun Cuier. All of these occurrences would support the C-14 dating at Eilean Olabhat (Appendix One),

which places the material in the C2nd or C3rd AD. This also fits with the C-14 and artefactual dating for the succeeding forms.

The vessels of this phase have decoration restricted to applied wavy cordons, characteristically two (one below the rim and one at the widest part of the body). Vessels are relatively large jars and flaring rims are characteristic.

4. Pre-Norse assemblages

The ceramic assemblages of the immediately pre-Norse period in the Western Isles, dating from approximately 400 - 800AD, are relatively well established. This type of assemblage is known from the Udal (C.10) and Berie, Structures 1 and 2. Its chronology is therefore fixed by C-14 and by a range of diagnostic metalwork. Pottery of this form is also present, mixed with elements of the earlier assemblages, at Dun Cuier (A.B4) and Dun Carloway (A.L12).

These assemblages have a number of characteristics;

- a. Total absence of decoration.
- b. Rims are upright or flaring; no short everted rims.
- c. Vessels tend to be large jars, with barrel and bucket shapes predominant.
- d. Vessels are coarser than in preceding stages and coils are often clearly visible in section ('tongue-in-groove' style at the Udal). They are competently made but not as well-fired or as well-finished as earlier forms.

This pre-Norse assemblage type is easily distinguished from the succeeding Norse pottery by the total absence of characteristically Norse grass-marking and the absence of platter forms; forms and fabrics of the Norse period tend to be distinct from all preceding native developments (Lane 1983, 243).

Summary

A development can be traced in the ceramic assemblages of the Western Isles through the 1st millennium AD from the preceding 1st millennium BC assemblages: the early styles with their variety of form and decoration, through a gradual restriction in the range of decoration, give way to the development of plain flaring rims assemblages. The main trends can be summarised as follows;

- a. Decoration; the reduction in the variety and quantity of decoration, and finally its abandonment.
- b. Quality of Manufacture; the reduction in the numbers of small and fine vessels, until assemblages become entirely constituted of large coarse pots.
- c. Rim Form; the lengthening of everted rims into the later flaring rim form.

This may be interpreted as signifying a change in the role played by ceramics in the domestic context. The assemblages become less elaborate, less differentiated and more purely utilitarian. The reduction in the elaboration of ceramics coincides with the abandonment of monumental architecture, and with the emergence of fine metalwork as an arena for elaboration. As yet there is insufficient information to establish whether the decline of decorated assemblages was sudden or gradual; it is clear however that the later assemblages have their roots in the early styles.

Appendix Four

Catalogue of Later Prehistoric Settlement Sites in the Western Isles

Introduction

The following catalogue lists the sites all of the known settlement types in the Western Isles for which a later prehistoric date is known or suspected. The catalogue is divided by the classification system set out in Chapter Four. In the case of the atlantic roundhouses, for manageability's sake, the list has been subdivided according to island.

Within each division of the catalogue, sites are listed from north to south, firstly by island and then by grid reference. The heading 'Ref' denotes the specific reference for each site which encodes the class of the site (e.g. 'A' for atlantic roundhouse, 'W' for wheelhouse etc.) and its sequential catalogue number. Sites on which evidence for more than one settlement form is present are listed independently under each separate class: Ill. 4.2 provides a cross-referenced tabulation for excavated sites in this category. An entry 'Y' for 'Galleries' indicates that intra-mural galleries or cells have been detected.

The 'comments' section provides a brief summary of points relevant to the present work but does not seek to set out a comprehensive synthesis of all previous sources of information. The 'references' section provides the key references to fuller descriptions for individual monuments. Sites discussed at length in the text of the present work are not further described in the catalogue but instead are cross-referenced to the relevant chapter. All measurements, under 'altitude' and 'dimensions' are

given in metres. Dimensions for atlantic roundhouses, promontory forts, walled islets and miscellaneous structures refer to external dimensions, except where stated, but refer to internal dimensions for wheelhouses, cellular and linear structures.

Atlantic Roundhouses - Lewis

Ref: A.L1 Name: DUN SMIRVIG
 Island: Lewis
 NGR: NB 52 64
 Location: Islet Altitude:
 Dimensions: Shape: Circular Galleries?:
 Additional Features:

Comments: This site is now preserved as a mound in a loch but local tradition, recorded in 1867, suggests the former presence of a circular tower.

References: RCAHMS no.31.

Ref: A.L2 Name: DUN MARA
 Island: Lewis
 NGR: NB 4947 6313
 Location: Promontory Altitude: 5
 Dimensions: 28 x 22 Shape: Oval Galleries?:
 Additional Features: Later Rectilinear Structures, Outer Walls

Comments: This roundhouse is situated on a strongly defended promontory with two external walls (Ill. 5.20).

References: RCAHMS no.13.

Ref: A.L3 Name: DUN SLEIBHE
Island: Lewis
NGR: NB 5050 6267
Location: Islet Altitude: 40
Dimensions: Shape: Circular Galleries?:
Additional Features:

Comments: This site is now preserved as a mound in a drained loch but local tradition suggests the former presence of a circular tower.

References: RCAHMS no.30.

Ref: A.L4 Name: DUN AIRNESTEAN
Island: Lewis
NGR: NB 4886 6266
Location: Islet Altitude: 5
Dimensions: Shape: Circular Galleries?:
Additional Features:

Comments: This site is an inaccessible tidal islet but clear vegetation marks indicate a circular building. Finds of iron age pottery have been recorded from the site.

References: RCAHMS no.33.

Ref: A.L5 Name: DUN BHARABHAT, GALSON

Island: Lewis

NGR: NB 4617 5965

Location: Islet Altitude: 50

Dimensions: 19 x 16 Shape: Oval Galleries?:

Additional Features: Causeway 14m, Cross-Causeway Wall,
Three Additional 'Causeways'

Comments: This structure has walls preserved c. 2.5m wide and lies on a low islet. It has three stone 'causeways' radiating out into the loch, for which no explanation is readily forthcoming (Ill. 5.23).

References: RCAHMS no.36.

Ref: A.L6 Name: DUN SOBHUILL

Island: Lewis

NGR: NB 4430 5950

Location: Promontory Altitude: 5

Dimensions: Shape: Circular Galleries?: Y

Additional Features:

Comments: An 8m arc of a wall 4.5m wide, with a mural cell, is preserved on an eroding promontory.

References: RCAHMS no.29.

Ref: A.L7 Name: DUN SHIAVAT

Island: Lewis

NGR: NB 4759 5925

Location: Islet Altitude: 65

Dimensions: Shape: Circular Galleries?:

Additional Features:

Comments: This site has substantial preserved walling but is wholly inaccessible due to its location and lack of a causeway.

References: RCAHMS no.14.

Ref: A.L8 Name: DUN BORVE

Island: Lewis

NGR: NB 4185 5803

Location: Moorland Altitude: 40

Dimensions: 16 Shape: Circular Galleries?: Y

Additional Features: Scarcement, Staircase

Comments: This site has walls c. 3.5m wide and lies buried in peat up to its second storey level (Ill. 5.15).

References: RCAHMS no.11.

Ref: A.L9 Name: DUN LOCH AN DUIN, SHADER

Island: Lewis

NGR: NB 3928 5435

Location: Islet Altitude: 35

Dimensions: 17.5 x 16 Shape: Oval Galleries?: Y

Additional Features: Later Rectilinear Occupation,
Causeway 40m, Outer Wall, Harbour

Comments: This is a well-preserved galleried structure with walls some 3m wide. The galleries were observed on a subsequent visit to that on which the plan was made (Ill. 5.21).

References: RCAHMS no.28

Ref: A.L10 Name: DUN ARNOL

Island: Lewis

NGR: NB 3013 4901

Location: Islet Altitude: 5

Dimensions: 15 Shape: Circular Galleries?:

Additional Features: Causeway 20m, Later Circular
Structure

Comments: This structure was unrecorded prior to 1984 but retains walls up to 4 courses high.

References: Armit 1985.

Ref: A.L11

Name: DUN LOCH AN DUNA, BRAGAR

Island: Lewis

NGR: NB 2854 4740

Location: Islet Altitude: 25

Dimensions: 16.5 Shape: Circular Galleries?: Y

Additional Features: Causeway, Outer Wall, Cross-Causeway
Walls, External Rectilinear Structures, Scarcement, Annexe

Comments: This massive structure survives with walls c.
3.5m wide up to first floor level (Ill. 5.16).

References: RCAHMS no.10.

Ref: A.L12

Name: DUN CARLOWAY

Island: Lewis

NGR: NB 1901 4122

Location: Knoll Altitude: 90

Dimensions: 15 Shape: Circular Galleries?: Y

Additional Features: Stairs, Scarcement

Comments: This site was excavated by Tabraham and is
discussed in Chapter Five (Ill. 5.2).

References: Tabraham 1976.

Ref: A.L13 Name: DUN BOROSDALE

Island: Lewis

NGR: NB 2125 4101

Location: Islet Altitude: 17

Dimensions: Shape: Circular Galleries?:

Additional Features: Causeway

Comments: This site was located from the air in 1984 by DW Harding. It is not accessible to surface survey.

References: Armit 1985.

Ref: A.L14 Name: DUN STUAIGH

Island: Lewis

NGR: NB 1540 4025

Location: Islet Altitude: 5

Dimensions: 14 x 13 Shape: Circular Galleries?: Y

Additional Features:

Comments: This structure has walls 3m wide and lies on a tidal islet.

References: RCAHMS no.70.

Ref: A.L15 Name: DUN LOCH AN DUIN, CARLOWAY
 Island: Lewis
 NGR: NB 1975 3990
 Location: Islet Altitude: 0
 Dimensions: 9 x 7.5 Shape: Circular Galleries?:
 Additional Features: Later Occupation, Abrupt-Ending
 Causeway, Cross-Causeway Wall, Annexe

Comments: This dilapidated and overgrown site has had the landward end of its causeway destroyed by a modern road (Ill. 5.17).

References: RCAHMS no.76.

Ref: A.L16 Name: DUN CAMUS NA CLIBHE
 Island: Lewis
 NGR: NB 085 364
 Location: Moorland Altitude:
 Dimensions: Shape: Galleries?:
 Additional Features:

Comments: This site is known only through a strong place-name tradition.

References: RCAHMS no.101.

Ref: A.L17 **Name: DUN BHARABHAT, G.BERNERA**
Island: Lewis
NGR: NB 1558 3555
Location: Islet Altitude: 5
Dimensions: 15.5 x 14 Shape: Circular? Galleries?: Y
Additional Features: Later Circular Structure, Causeway
33m, Stairs, Scarcement

Comments: This structure survives to first floor level and has complex architectural features preserved (Ill. 5.13).

References: RCAHMS no.71.

Ref: A.L18 **Name: DUN BHARABHAT, CNIP**
Island: Lewis
NGR: NB 0988 3531
Location: Islet Altitude: 40
Dimensions: 11 Shape: Circular Galleries?: Y
Additional Features: Causeway, Annexe

Comments: This site was excavated by Harding and is discussed in Chapter Five (Ill. 5.3).

References: RCAHMS no.72.

Ref: A.L19 **Name: LOCH NA BERIE**
Island: Lewis
NGR: NB 1035 3525
Location: Islet Altitude: 5
Dimensions: 20 Shape: Circular Galleries?: Y
Additional Features: Stairs, Scarcement, Causeway

Comments: This site was excavated by Harding and Armit and is discussed in Chapter Five (Ills. 5.4 and 5.5)

References: RCAHMS no.69.

Ref: A.L20 **Name: DUN BHARABHAT CROULISTA 2**
Island: Lewis
NGR: NB 0386 3487
Location: Islet Altitude: 20
Dimensions: 10 x 8 Shape: Subcircular Galleries?:
Additional Features: Later Structures, Harbour

Comments: This is a partly artificial islet with walls c. 2m wide and no trace of a causeway (Ill. 5.22).

References: RCAHMS no.75.

Ref: A.L21 Name: DUN BARRAGLOM

Island: Lewis

NGR: NB 1677 3435

Location: Coastal Altitude: 5

Dimensions: 15 Shape: Circular Galleries?:

Additional Features: Later Baile, Possible Outer Wall

Comments: This site is set on an eroding cliff edge and is built over by a later baile (Ill. 5.26).

References: RCAHMS no.77.

Ref: A.L22 Name: DUN BHARABHAT, BREASCLETE

Island: Lewis

NGR: NB 223 343

Location: Islet Altitude: 5

Dimensions: Shape: Galleries?:

Additional Features: Causeway

Comments: This site is preserved as a very substantial stone mound, submerged in a dammed loch.

References: No references, located 1985.

Ref: A.L23 Name: DUN TIDDABORRAGH
Island: Lewis
NGR: NB 1829 3399
Location: Knoll Altitude: 5
Dimensions: 18.3 Shape: Circular Galleries?:
Additional Features: Possible Outer Wall

Comments: Very little now remains of this eroding massive stone roundhouse.

References: RCAHMS no.73.

Ref: A.L24 Name: DUN BORRANISH
Island: Lewis
NGR: NB 0502 3322
Location: Islet Altitude: 5
Dimensions: 15 x 14 Shape: Subcircular Galleries?: Y
Additional Features: Causeway 16m, Outer Wall, Earlier Causeway

Comments: This site is a massive subcircular roundhouse with walls c. 3.5 - 4m wide. The causeway appears to be of two-phase construction (Ill. 5.25).

References: RCAHMS no.74.

Ref: A.L25 Name: DUN LOCH AN DUIN, BAYBLE
 Island: Lewis
 NGR: NB 516 305
 Location: Islet Altitude: 50
 Dimensions: 16.5 x 15 Shape: Oval Galleries?: Y
 Additional Features: Later Rectilinear Structure, Causeway

Comments: This site survives as a stone mound robbed to provide stone for a later rectilinear house (Ill. 5.24).

References: RCAHMS no.49.

Ref: A.L26 Name: DUN CROMORE
 Island: Lewis
 NGR: NB 4011 2068
 Location: Islet Altitude: 5
 Dimensions: 13 Shape: Circular Galleries?: Y
 Additional Features: Later Rectilinear Structures, Submerged Causeway, Annexe, Stairs

Comments: This is a well-preserved roundhouse with walls varying from 1 - 2m wide and with a possible earlier roundhouse preserved as a courtyard (Ill. 5.14).

References: RCAHMS no.38, Armit 1985.

Atlantic Roundhouses - Harris

Ref: A.H1 Name: DUN LOCH AN DUIN TARANSAY
 Island: Harris
 NGR: NB 0216 0127
 Location: Islet Altitude: 70
 Dimensions: 12 x 11 Shape: Oval Galleries?:
 Additional Features: Causeway 35m

Comments: The site is now truncated by erosion or robbing but appears to have been oval or circular. The walls are c. 3m wide.

References: RCAHMS no.117.

Ref: A.H2 Name: DUN CHLACH, TARANSAY
 Island: Harris
 NGR: NB 0411 0044
 Location: Moorland Altitude: 5
 Dimensions: Shape: Galleries?:
 Additional Features:

Comments: No trace remains of this structure which has been robbed out and covered by blown sand.

References: RCAHMS no.142.

Ref: A.H3 Name: DUN RHATHA, TARANSAY

Island: Harris

NGR: NF 0358 9961

Location: Knoll Altitude: 15

Dimensions: 18.5 x 18 Shape: Oval Galleries?:

Additional Features: Later Internal Modifications

Comments: The walls of this site are c. 3.5m wide and appear to have originally formed an oval structure.

References: RCAHMS no.118.

Ref: A.H4 Name: DUN BHUIRGH, BORVE

Island: Harris

NGR: NF 0325 9400

Location: Knoll Altitude: 70

Dimensions: 13.5 Shape: Circular Galleries?:

Additional Features: Later Circular Structure, Outer Wall, Annexe

Comments: The walls of this site are c. 2.5m wide and have a retaining wall 1.7m high for one third of the circuit (Ill. 5.19). The site occupies a commanding location and its entrance is on the north-east, away from the shallowest approach to the summit.

References: RCAHMS no.123.

Ref: A.H5 **Name: DUN LOCH LANGAVAT**

Island: Harris

NGR: NG 0432 9161

Location: Islet Altitude: 35

Dimensions: 12.5 Shape: Circular Galleries?:

Additional Features: Causeway 20m

Comments: This roundhouse, with walls c. 1.5m wide is connected to the shore by a partly submerged causeway. The structure is now very dilapidated.

References: RCAHMS no.124.

Ref: A.H6 **Name: TOE HEAD**

Island: Harris

NGR: NF 9700 9134

Location: Coastal Altitude: 10

Dimensions: 16.6 Shape: Circular Galleries?:

Additional Features: Later Chapel

Comments: The site was partly excavated by Simpson in 1965, revealing the dimensions of the structure under a relatively recent chapel.

References: DES 1965.

Ref: A.H7 Name: DUN SEANA CHAISTEAL

Island: Harris

NGR: NF 9017 8717

Location: Knoll Altitude: 40

Dimensions: 17.6 Shape: Circular Galleries?:

Additional Features: External Enclosure

Comments: This structure is preserved with walls up to 2m in height and 3.3m wide.

References: RCAHMS no.119.

Ref: A.H8 Name: PABBAY

Island: Harris

NGR: NF 8852 8659

Location: Knoll Altitude: 25

Dimensions: 26 x 24 Shape: Galleries?:

Additional Features: External Rectilinear Structure

Comments: The site is preserved as a substantial stone mound.

References: RCAHMS no.44.

Ref: A.H9 **Name: DUN INNSEGALL**

Island: Harris

NGR: NF 0194 8521

Location: Islet Altitude: 3

Dimensions: 16.3 x 16 Shape: Oval Galleries?:

Additional Features: Causeway 26m

Comments: This structure is connected via a causeway to another islet but not to the shore. Its walls are c. 3m wide.

References: RCAHMS no.144.

Ref: A.H10 **Name: ST. CLEMENTS DUN, RODEL**

Island: Harris

NGR: NF 0502 8321

Location: Knoll Altitude: 50

Dimensions: 13.5 Shape: Circular Galleries?: Y

Additional Features: External Structures, Internal Modification, Outer Wall, Annexe, External Structures

Comments: The main roundhouse has walls c. 3m wide and has a series of possibly contemporary structures, of uncertain form, clustered between it and its outer wall. It is approached by an artificial path (Ill. 5.18).

References: RCAHMS no.121.

Ref: A.H11

Name: DUNAN RUADH

Island: Harris

NGR: NF 9747 8312

Location: Islet

Altitude: 5

Dimensions: 14

Shape: Circular

Galleries?:

Additional Features:

Comments: The structure has walls c. 3.3m wide and lies on an overgrown islet.

References: RCAHMS no.123.

Atlantic Roundhouses - North Uist

Ref: A.NU1

Name: DUN AN STICER

Island: North Uist

NGR: NF 8972 7768

Location: Islet Altitude: 5

Dimensions: 18.5 Shape: Circular Galleries?: Y

Additional Features: Later Rectilinear Structure Inside,
External Rectilinear Structure, Complex of Causeways,
Outer Wall

Comments: This massive well-preserved structure is occupied by substantial medieval occupation, attributed to a son of Archibald the Clerk c. 1600 AD. The roundhouse has well preserved galleries and west entrance and survives to c. 3.6m high. It is approached via two substantial causeways which converge on a small rocky islet with one further causeway leading from here to the main islet. These causeways seem designed for wheeled traffic and are likely to be medieval in their present form.

References: RCAHMS no.171, Beveridge 1911, 138/144.

Ref: A.NU2

Name: DUN IOSAL AN DUIN

Island: North Uist

NGR: NF 9171 7699

Location: Islet Altitude: 5

Dimensions: Shape: Oval Galleries?:

Additional Features: Causeway 35m, Outer Wall

Comments: The site is inaccessible and overgrown and has not been inspected other than from the shore of the loch. No dimensions have been recorded.

References: RCAHMS no.196, Beveridge 1911, 144.

Ref: A.NU3 **Name: RUDH AN DUIN**

Island: North Uist

NGR: NF 7857 7617

Location: Islet Altitude: 5

Dimensions: 24 Shape: Circular Galleries?: Y

Additional Features: Causeway

Comments: Excavated by Beveridge (Ill. 5.6). Discussion in Chapter Five.

References: RCAHMS no.184, Beveridge 1911, 214/8.

Ref: A.NU4 **Name: DUN A GHALLAIN**

Island: North Uist

NGR: NF 7479 7598

Location: Islet Altitude: 5

Dimensions: Shape: Galleries?:

Additional Features: Causeway, Later Occupation

Comments: Excavated by Beveridge prior to 1911. Discussed in Chapter Five. Located in an inaccessible marshy loch.

References: RCAHMS no.191, Beveridge 1911, 196/7.

Ref: A.NU5 Name: DUN ROSAIL

Island: North Uist

NGR: NF 8781 7597

Location: Knoll Altitude: 5

Dimensions: Shape: Galleries?:

Additional Features:

Comments: The site survives as a substantial mound with no measurable original dimensions. The mound is c. 2.5m high.

References: RCAHMS no.325, Beveridge 1911, 226.

Ref: A.NU6 Name: EILEAN A GHALLAIN

Island: North Uist

NGR: NF 7483 7589

Location: Islet Altitude: 5

Dimensions: 12.75 Shape: Circular Galleries?:

Additional Features: Causeway, Secondary Internal Occupation

Comments: Excavated by Beveridge prior to 1911. Discussed in Chapter Five. Walls 2.1 - 3m wide. Located in an inaccessible marshy loch.

References: RCAHMS no.192, Beveridge 1911, 197.

Ref: A.NU7 **Name: DUN THOMAI DH**

Island: North Uist

NGR: NF 7564 7562

Location: Islet Altitude: 5

Dimensions: 14.6 Shape: Circular Galleries?: Y

Additional Features: Later Occupation, Causeway 80m,
Causeway Gap, External Occupation and Enclosure, Harbour

Comments: Excavated by Beveridge (Ill. 5.7); discussed in
Chapters Five and Seven.

References: RCAHMS no.212, Beveridge 1930.

Ref: A.NU8 **Name: OBAN SKIBINISH 1**

Island: North Uist

NGR: NF 8348 7518

Location: Islet Altitude: 5

Dimensions: Shape: Oval Galleries?:

Additional Features: Causeway 40m, External Structure,
Outer Wall

Comments: This site lies on a tidal islet and is
represented by a mound some 1.5m high and a small ruined
external structure to its east.

References: RCAHMS no.182, Beveridge 1911, 220/1.

Ref: A.NU9 **Name: DUN SKELLOR**
 Island: North Uist
 NGR: NF 8075 7509
 Location: Moorland Altitude: 20
 Dimensions: 17-20? Shape: Circular Galleries?:
 Additional Features:

Comments: The structure is now a substantial grassy mound.
 The dimensions have been based on visible facing stones
 around the base of the mound.

References: RCAHMS no.293, Beveridge 1911, 219.

Ref: A.NU10 **Name: DUN SCOLPAIG**
 Island: North Uist
 NGR: NF 7310 7503
 Location: Islet Altitude: 20
 Dimensions: Shape: Galleries?:
 Additional Features: Causeway, C19th Tower

Comments: Built over by a tower in 1830. A local tradition
 relates to C15th AD occupation by Donald Herroch.

References: RCAHMS no.322, Beveridge 1911, 193/4.

Ref: A.NU11 Name: DUN TOLOMAN

Island: North Uist

NGR: NF 8207 7492

Location: Islet Altitude: 10

Dimensions: Shape: Oval Galleries?:

Additional Features: Causeway (Probable), East and West
Annexes, Outer Wall

Comments: The site is a substantial marsh islet with no
wall dimensions measurable. The mound is c. 25 x 20m.

References: RCAHMS no.294, Beveridge 1911, 219/20.

Ref: A.NU12 Name: OBAN TRUMISGARRY

Island: North Uist

NGR: NF 8726 7470

Location: Islet Altitude: 5

Dimensions: Shape: Circular Galleries?:

Additional Features: Causeway 30m

Comments: This site survives only as a overgrown stony
mound on an islet in a tidal loch.

References: RCAHMS no.324, Beveridge 1911, 225.

Ref: A.NU13 Name: GARRY IOCHDRACH

Island: North Uist

NGR: NF 7724 7427

Location: Machair Altitude: 5

Dimensions: 14.6 Shape: Circular Galleries?: Y

Additional Features: Secondary Wheelhouse

Comments: Excavated by Beveridge (Ill. 5.8). Discussed in Chapter Five. Wheelhouse discussed in Chapter Six. The diameter is taken on the north-west\south-east axis where both opposing external wall-faces appear to be intact.

References: Beveridge 1931.

Ref: A.NU14 Name: CNOC A COMHDHALACH

Island: North Uist

NGR: NF 7708 7413

Location: Machair Altitude: 5

Dimensions: 11.6 Shape: Circular Galleries?: Y

Additional Features: Secondary Internal Structures

Comments: Excavated by Beveridge prior to 1911 (Ill. 5.9). Discussed in Chapter Five. Internal wheelhouse discussed in Chapter Six.

References: RCAHMS no.269, Beveridge 1911, 200/6.

Ref: A.NU15 **Name: DUN NA MAIRBHE**

Island: North Uist

NGR: NF 86 74

Location: Islet Altitude: 5

Dimensions: 18.6 Shape: Circular Galleries?:

Additional Features: Annexe

Comments: This tidal islet site has preserved walls 5.8m wide and 0.3m high.

References: RCAHMS no.183, Beveridge 1911, 224/5.

Ref: A.NU16 **Name: DUN BRU**

Island: North Uist

NGR: NF 8956 7390

Location: Islet Altitude: 5

Dimensions: 10 Shape: Oval Galleries?:

Additional Features: Causeway 18m, Possible Outer Wall

Comments: A stony mound, 3m high, occupies this rocky islet. Dimensions were recorded by the RCAHMS.

References: RCAHMS no.296, Beveridge 1911, 152.

Ref: A.NU17 Name: EILEAN MALEIT

Island: North Uist

NGR: NF 7748 7388

Location: Islet Altitude: 5

Dimensions: 16 Shape: Circular Galleries?: Y

Additional Features: Causeway, Secondary Internal Structures

Comments: Excavated by Beveridge prior to 1911 (Ill. 5.10). Discussed in Chapter Five. Internal wheelhouse discussed in Chapter Six.

References: RCAHMS no.270, Beveridge 1911, 207/9.

Ref: A.NU18 Name: DUN AONGHUIS

Island: North Uist

NGR: NF 8560 7381

Location: Islet Altitude: 5

Dimensions: Shape: Galleries?:

Additional Features: Later Occupation, Causeway, Outer Wall, Harbour

Comments: A small medieval fort, or 'late dun' surmounts this islet and is described by Beveridge and the RCAHMS (traditional occupation by Angus Fhionn c. 1500 AD). There are traces of an earlier roundhouse in the form of massive foundations for a circular structure under the internal rectilinear medieval buildings. A submerged and partially dismantled causeway may relate to this phase. The outer wall and boat noost or harbour may relate to any phase of the site's use.

References: RCAHMS no.213, Beveridge 1911, 223/4.

Ref: A.NU19 Name: DUN TORCUILL

Island: North Uist

NGR: NF 8887 7373

Location: Islet Altitude: 5

Dimensions: 18.6 x 16 Shape: Oval Galleries?: Y

Additional Features: Later Internal Occupation, Causeway
35m

Comments: This is an exceptionally well-preserved site with walls 2.3 - 3.8m wide and up to 3m high. Later structures occupy the interior and the area to the front of the roundhouse opposite the causeway.

References: RCAHMS no.172, Beveridge 1911, 149, Thomas
1890, 365

Ref: A.NU20 Name: BUAILE RISARY

Island: North Uist

NGR: NF 7665 7278

Location: Moorland Altitude: 50

Dimensions: Shape: Galleries?:

Additional Features: Later Baile Settlement

Comments: Excavated by Beveridge prior to 1911. Discussed in Chapter Five.

References: Beveridge, 210, RCAHMS no.193.

Ref: A.NU21 **Name: DUN NIGHEAN RIGH LOCHLAIN**
 Island: North Uist
 NGR: NF 9528 7239
 Location: Islet Altitude: 5
 Dimensions: 10 Shape: Circular Galleries?:
 Additional Features: Causeway, Internal Secondary
 Occupation

Comments: This structure rises directly from the loch and has a submerged causeway.

References: RCAHMS no.199, Beveridge 1911, 146.

Ref: A.NU22 **Name: DUN LOCH NA CAIGINN**
 Island: North Uist
 NGR: NF 9510 7199
 Location: Islet Altitude: 5
 Dimensions: 12 Shape: Circular Galleries?: Y
 Additional Features: Later Rectilinear Structures,
 Causeway 30m, Cross-Causeway Wall, Harbour, Outer Wall

Comments: The structure survives to a height of 1.2m on an overgrown defended islet.

References: RCAHMS no.189, Beveridge 1911, 148.

Ref: A.NU23 Name: DUN LOCH CNOC NAN UAN

Island: North Uist

NGR: NF 7184 7146

Location: Islet Altitude: 20

Dimensions: Shape: Galleries?:

Additional Features: Causeway 36m

Comments: This site is represented by a 20m diameter mound in a drained loch.

References: RCAHMS no.320, Beveridge 1911, 192.

Ref: A.NU24 Name: DUN GROGARRY

Island: North Uist

NGR: NF 7125 7146

Location: Islet Altitude: 5

Dimensions: 18 Shape: Circular Galleries?:

Additional Features: Causeway 20m, Outer Wall

Comments: The site occupies an islet in a partially drained loch. It retains evidence of walls 5m thick and up to c. 1.5m high.

References: RCAHMS no.179, Beveridge 1911, 191.

Ref: A.NU25 **Name: SOUTH CLETTRAVAL**
 Island: North Uist
 NGR: NF 749 714
 Location: Moorland Altitude: 110
 Dimensions: 13 Shape: Circular Galleries?:
 Additional Features:

Comments: The massive stone roundhouse is constructed over the remains of a chambered tomb.

References: RCAHMS no.178, Beveridge 1911, 189.

Ref: A.NU26 **Name: DUN MHIC RHAOUILL**
 Island: North Uist
 NGR: NF 7263 7128
 Location: Islet Altitude: 20
 Dimensions: 12.75 Shape: Circular Galleries?:
 Additional Features: Later Occupation, Causeway 45m,
 External Occupation, Harbour

Comments: The sole description of this site comes from Beveridge's work. His description of the diameter is ambiguous, not specifying internal or external diameter; it has been assumed that he referred to external diameter, the opposite view implying an internal diameter of less than 2m which seems unlikely to have gone without specific comment.

References: RCAHMS no.205, Beveridge 1911, 192.

Ref: A.NU27 Name: AN CHAISTEIL

Island: North Uist

NGR: NF 6970 7119

Location: Coastal Altitude: 5

Dimensions: Shape: Galleries?:

Additional Features: Later Occupation

Comments: Only isolated facing slabs survive.

References: RCAHMS no.319, Beveridge 1911, 191.

Ref: A.NU28 Name: DUN SCARIE

Island: North Uist

NGR: NF 7178 7055

Location: Islet Altitude: 5

Dimensions: Shape: Galleries?:

Additional Features: Later Rectilinear Structures, Causeway
34m

Comments: Only a turf covered stony mound, 1.2m high,
remains on this site.

References: RCAHMS no.318, Beveridge 1911, 190.

Ref: A.NU29 Name: SITHEAN TUATH

Island: North Uist

NGR: NF 7193 7017

Location: Islet Altitude: 10

Dimensions: 18 Shape: Circular Galleries?:

Additional Features:

Comments: This site is a 3m high stony mound on an islet in a drained loch. There are insufficient lengths of walling to give dimensions.

References: Beveridge 1911, 190.

Ref: A.NU30 Name: SRATH BEAG AN DUIN

Island: North Uist

NGR: NF 82 70

Location: Moorland Altitude: c. 50

Dimensions: 12 Shape: Galleries?:

Additional Features:

Comments: Confirmation of the place-name is given by the remains of a stony mound with facing stones.

References: RCAHMS no.295.

Ref: A.NU31 Name: EILEAN DUBH

Island: North Uist

NGR: NF 7173 6958

Location: Islet Altitude: 5

Dimensions: 13 Shape: Circular Galleries?:

Additional Features:

Comments: All that remains of this site is a mound in a drained loch. The external diameter measurement must be regarded as approximate.

References: Beveridge 1911, 188.

Ref: A.NU32 Name: DUN LOCH SHANNAIDH

Island: North Uist

NGR: NF 7325 6858

Location: Islet Altitude: 10

Dimensions: Shape: Galleries?:

Additional Features:

Comments: This islet retains some evidence of having been the site of a massive stone structure.

References: Beveridge 1911, 189, Thomas 1890, 403.

Ref: A.NU33 Name: DUN STEINGARRY

Island: North Uist

NGR: NF 7198 6838

Location: Islet Altitude: 5

Dimensions: Shape: Circular Galleries?:

Additional Features:

Comments: This site is a mound in a loch drained prior to 1793.

References: RCAHMS no.316, Beveridge 1911, 188.

Ref: A.NU34 Name: DUN LEIRARAY

Island: North Uist

NGR: NF 9126 6778

Location: Islet Altitude: 5

Dimensions: Shape: Circular Galleries?:

Additional Features:

Comments: No trace of structure now survives on this rocky outcrop islet.

References: RCAHMS no.302, Beveridge 1911, 158.

Ref: A.NU35 Name: DUN LOCH HUNDER

Island: North Uist

NGR: NF 9048 6526

Location: Islet Altitude: 5

Dimensions: 12.5 x 10.5 Shape: Circular Galleries?: Y

Additional Features: Causeways 40 and 50m, Additional islet, Cross-Causeway Wall

Comments: The roundhouse is reached over two causeways with an intervening islet. The walls survive to 2m high and contain two super-imposed intra-mural galleries.

References: RCAHMS no.173, Beveridge 1911, 161.

Ref: A.NU36 Name: DUN LOCH NAN STRUBHAN

Island: North Uist

NGR: NF 80 64

Location: Islet Altitude: 5

Dimensions: Shape: Oval Galleries?:

Additional Features: Causeway 32m

Comments: The structure survives as a stony mound c. 2m high.

References: RCAHMS no.177, Beveridge 1911, 185.

Ref: A.NU37 **Name: DUN NIGHEAN RIGH LOCHLAIN**
 Island: North Uist
 NGR: NF 8636 6398
 Location: Islet Altitude: 5
 Dimensions: 10 Shape: Oval Galleries?:
 Additional Features: Causeway 25m, Possible Internal
 Structure

Comments: The structure rises straight from the loch and has a south-east entrance. The interior is too overgrown to enable the character of secondary occupation to be assessed.

The site is also known as Dun Breinish or Dun Eidann.

References: RCAHMS no.214, Beveridge 1911, 165.

Ref: A.NU38 **Name: DUNAN MOR**
 Island: North Uist
 NGR: NF 7815 6339
 Location: Machair Altitude: 5
 Dimensions: Shape: Galleries?:
 Additional Features:

Comments: The place name suggests the former presence of a roundhouse, now represented by a substantial mound.

References: RCAHMS no.314, Beveridge 1911, 185.

Ref: A.NU39 Name: DUN BAILLERAY

Island: North Uist

NGR: NF 7817 6282

Location: Moorland Altitude: 5

Dimensions: Shape: Circular Galleries?:

Additional Features: Later Cottages

Comments: This structure comprises a stony mound surmounted by relatively recent structures.

References: RCAHMS no.315, Beveridge 1911, 184.

Ref: A.NU40 Name: DUN MOR

Island: North Uist

NGR: NF 7808 6218

Location: Islet Altitude: 5

Dimensions: Shape: Circular Galleries?:

Additional Features: Causeway

Comments: This site is represented by a stony mound in a drained loch.

References: RCAHMS no.313, Beveridge 1911, 184.

Ref: A.NU41 Name: DUN NA DISE

Island: North Uist

NGR: NF 8072 6172

Location: Islet Altitude: 5

Dimensions: 20 x 14 Shape: Oval Galleries?: Y

Additional Features:

Comments: The structure lies on a tidal islet and is now suffering greatly from erosion. The galleries are visible in section. To some extent the dimensions may be distorted by collapse and displacement.

References: RCAHMS no.175, Beveridge 1911, 181.

Ref: A.NU42 Name: DUN NA H-OLA

Island: North Uist

NGR: NF 7854 6161

Location: Islet Altitude: 5

Dimensions: Shape: Galleries?:

Additional Features:

Comments: The site is preserved as a mound, 0.3m high and c. 20m in diameter, in an machair loch drained in 1911.

References: RCAHMS no.312, Beveridge 1911, 183.

Ref: A.NU43 Name: BEINN NA COILLE

Island: North Uist

NGR: NF 8363 6151

Location: Moorland Altitude: 20

Dimensions: 21 x 18.5 Shape: Oval Galleries?:

Additional Features: Later Shielings

Comments: This structure is surmounted by extensive later buildings, rectilinear structures and 'boat-shaped' shielings, which prevent detailed measurements.

References: RCAHMS no.311.

Ref: A.NU44 Name: EILEAN SCALASTER

Island: North Uist

NGR: NF 8094 6113

Location: Islet Altitude: 5

Dimensions: 10 x 8 Shape: D-shaped Galleries?:

Additional Features:

Comments: The structure has walls 2.3m wide and 1.3m high. An entrance is traceable on the east side.

References: RCAHMS no.203, Beveridge 1911, 181.

Ref: A.NU45 Name: DUN BAN HACKLETT

Island: North Uist

NGR: NF 8605 6012

Location: Islet Altitude: 5

Dimensions: 9 Shape: Circular Galleries?:

Additional Features: Causeway 25m, External 'Hut Circle',
Outer Wall

Comments: The site is surrounded by an outer wall of approximately 20m diameter. The structure inside is c. 2m high with a probable 9m diameter.

References: RCAHMS no.186.

Ref: A.NU46 . Name: LOCH OBISARY C

Island: North Uist

NGR: NF 88 60

Location: Islet Altitude: 5

Dimensions: 20 Shape: Circular Galleries?:

Additional Features:

Comments: The wall of this structure projects above the surface of the loch but the interior is entirely flooded.

References: RCAHMS no.298, Beveridge 1911, 167/9.

Ref: A.NU47 Name: DUN AN T-SIAMAIN

Island: North Uist

NGR: NF 8857 5947

Location: Islet Altitude: 5

Dimensions: 14 x 12.75 Shape: Oval Galleries?:

Additional Features: Later Shielings, Zigzag Causeway 25m,
Cross-Causeway Wall, Harbour

Comments: The structure is full of collapsed rubble which prevents accurate measurement of the internal diameter.

References: RCAHMS no.211, Beveridge 1911, 169/70.

Ref: A.NU48 Name: DUN LOCH NAN GEALAG

Island: North Uist

NGR: NF 8650 5939

Location: Islet Altitude: 5

Dimensions: Shape: Oval Galleries?:

Additional Features: Causeway 30m, Causeway Gap

Comments: The site survives as a mass of tumbled stone with fragments of a stone wall on its south side.

References: RCAHMS no.174, Beveridge 1911, 176.

Ref: A.NU49 Name: DUN CHEIREIN

Island: North Uist

NGR: NF 8578 5855

Location: Knoll Altitude: 10

Dimensions: Shape: Galleries?:

Additional Features:

Comments: This site is now occupied by a crofter's cottage.

References: RCAHMS no.310, Beveridge 1911, 176.

Ref: A.NU50 Name: RUADH AN DUIN, EAVAL

Island: North Uist

NGR: NF 8973 5850

Location: Islet Altitude: 5

Dimensions: Shape: Galleries?:

Additional Features: Later Shielings

Comments: A curved fragment of massive stone walling, 14m long, 1.2m wide and 0.6m high. The RCAHMS report appears to be describing later rough walling on the islet.

References: RCAHMS no.188.

Ref: A.NU51 Name: DUN BAN, GRIMSAY 1
Island: North Uist
NGR: NF 8699 5695
Location: Islet Altitude: 10
Dimensions: 15 Shape: Circular Galleries?: Y
Additional Features: Later Cellular Occupation, Causeway
30m

Comments: Excavated by Thomas (Ill. 5.11). The roundhouse is discussed in Chapter Five and the cellular structures in Chapter Seven.

References: RCAHMS no.299, Beveridge 1911, 172, Thomas 1890, 399.

Atlantic Roundhouses - Benbecula

Ref: A.BE1 Name: DUN UACHDAR

Island: Benbecula

NGR: NF 8003 5538

Location: Islet Altitude: 5

Dimensions: 16 x 15 Shape: Oval Galleries?:

Additional Features: Later Walling, Causeway 42m

Comments: The site has a submerged causeway and has been modified with the addition of a recent irregular wall.

References: RCAHMS no.359.

Ref: A.BE2 Name: DUN BHUIDHE MHURCHDAIDH

Island: Benbecula

NGR: NF 7942 5452

Location: Islet Altitude: 5

Dimensions: 18 Shape: Circular Galleries?: Y

Additional Features: Later Baile, Causeway 70m, 2nd Causeway 150m) Cross-Causeway Wall, Internal Square Structure, Outer Wall

Comments: The site lies in a drained loch and has a substantial baile settlement over the original features. It is approached by two causeways with a large intervening islet.

References: RCAHMS no.349.

Ref: A.BE3 Name: DUN LOCH NA BEIRE

Island: Benbecula

NGR: NF 8323 5421

Location: Islet Altitude: 10

Dimensions: Shape: Galleries?:

Additional Features: Harbour

Comments: The site is an overgrown islet with place-name evidence and local tradition to suggest the former presence of a substantial roundhouse.

References: RCAHMS no.365.

Ref: A.BE4 Name: DUN EILEAN IAIN

Island: Benbecula

NGR: NF 7889 5351

Location: Islet Altitude: 5

Dimensions: 35 Shape: Circular Galleries?:

Additional Features: Later Structures, Causeway 80m,ü
Harbour

Comments: The site contains three substantial boat-shaped buildings secondary to the main structure. The nature of the original structure is unclear but a roundhouse is suggested by the quantity of stone.

References: RCAHMS no.348.

Ref: A.BE5 Name: DUN TORCUSAY

Island: Benbecula

NGR: NF 7618 5313

Location: Islet Altitude: 5

Dimensions: 13 x 11 Shape: Oval Galleries?: Y

Additional Features: Causeway

Comments: This is an islet entirely obscured by reeds which cover internal stonework. The causeway is of unusual construction being represented by two parallel lines of stone which presumably supported a timber superstructure.

References: RCAHMS no.347.

Ref: A.BE6 Name: DUN LOCH AN DUNAIN

Island: Benbecula

NGR: NF 7786 5129

Location: Islet Altitude: 5

Dimensions: 25 x 17 Shape: Oval Galleries?:

Additional Features: Later Occupation, Causeway 45m

Comments: This site is a robbed out stone structure on an islet in a drained loch.

References: RCAHMS no.362.

Ref: A.BE7 **Name: DUN AONGHAIS**

Island: Benbecula

NGR: NF 7968 5125

Location: Islet Altitude: 5

Dimensions: 10 Shape: Circular Galleries?:

Additional Features: Later Occupation, Causeway 75m

Comments: The site is an overgrown rubble covered islet.

References: RCAHMS no.345.

Ref: A.BE8 **Name: DUN RUADH**

Island: Benbecula

NGR: NF 7986 5105

Location: Islet Altitude: 5

Dimensions: Shape: Oval Galleries?:

Additional Features: Later Circular Structure, Causeway
75m

Comments: The site is an overgrown islet with natural
outcrop forming part of the circuit of the walls.

References: RCAHMS no.344.

Ref: A.BE9 **Name: DUN SHUNISH**

Island: Benbecula

NGR: NF 7807 5086

Location: Islet Altitude: 5

Dimensions: 11 Shape: Circular Galleries?:

Additional Features:

Comments: The site is a former islet in a drained loch.

References: RCAHMS no.361.

Ref: A.BE10 **Name: DUN MHIC UISDEIN**

Island: Benbecula

NGR: NF 8001 5065

Location: Islet Altitude: 5

Dimensions: 17 x 15 Shape: D-shaped Galleries?:

Additional Features:

Comments: The wall of this structure is formed of very large stones and is almost straight on its west side.

References: RCAHMS no.343.

Ref: A.BE11 Name: DUN GUNISARY BAY

Island: Benbecula

NGR: NF 7985 4916

Location: Islet Altitude: 5

Dimensions: 17 x 13 Shape: Oval Galleries?:

Additional Features: Causeway 15m

Comments: The site projects c. 1m above the water level in a small loch. The structure has been substantially robbed.

References: RCAHMS no.346.

Ref: A.BE12 Name: DUN FHEARCHAIR

Island: Benbecula

NGR: NF 8010 4890

Location: Islet Altitude: 10

Dimensions: 15 Shape: Galleries?:

Additional Features:

Comments: This site is a shapeless stony mound now occupying a promontory into a loch.

References: RCAHMS no.360.

Ref: A.BE13 Name: DUN OB SAILE

Island: Benbecula

NGR: NF 8115 4874

Location: Islet Altitude: 5

Dimensions: Shape: Circular Galleries?:

Additional Features:

Comments: The site is in poor condition and occupies a small tidal islet.

References: Located 1985, no references.

Atlantic Roundhouses - South Uist

Ref: A.S1 Name: DUN BUIDHE, ARDNAMONIE
 Island: South Uist
 NGR: NF 7735 4629
 Location: Islet Altitude: 5
 Dimensions: 18 Shape: Circular Galleries?: Y
 Additional Features: Causeway, External Structures

Comments: The walls of this structure are c. 3.5m wide and the mound stands some 3m high. There are traces of a gallery within the walls, c. 0.8m wide.

References: RCAHMS no.373.

Ref: A.S2 Name: ARDNAMONIE
 Island: South Uist
 NGR: NF 7723 4624
 Location: Islet Altitude: 5
 Dimensions: Shape: Galleries?:
 Additional Features: Later Baile

Comments: The site survives as a very substantial stone mound under a later baile.

References: RCAHMS no.433.

Ref: A.S3 **Name: DUN NA BUAIL-UACHDRAICH**

Island: South Uist

NGR: NF 7777 4606

Location: Islet Altitude: 5

Dimensions: 17 Shape: Circular Galleries?:

Additional Features: Outer Wall

Comments: The walls of this structure are c. 4.5m wide and c. 1.2m high. An outer wall flanks the south part of the islet

References: RCAHMS no.374.

Ref: A.S4 **Name: DUN LOCH AN DAILL**

Island: South Uist

NGR: NF 7969 4592

Location: Islet Altitude: 5

Dimensions: Shape: Galleries?:

Additional Features: Causeway 30m

Comments: No details are available on this site which appears never to have been visited. Access is prevented by the deeply submerged causeway and nesting birds. Quantities of stone indicate the presence of a roundhouse.

References: RCAHMS no.417.

Ref: A.S5 **Name: DUN UISELAN**

Island: South Uist

NGR: NF 7776 4536

Location: Islet Altitude: 5

Dimensions: 23 x 17 Shape: Oval Galleries?: Y

Additional Features: Two Later Rectilinear Structures,
Causeway 60m

Comments: This site is an overgrown islet with a substantial causeway which bends midway along its course. The roundhouse entrance lies around the islet from the causeway.

References: RCAHMS no.376.

Ref: A.S6 **Name: DUN MOR**

Island: South Uist

NGR: NF 7744 4152

Location: Islet Altitude: 5

Dimensions: 11 x 9 Shape: Oval Galleries?:

Additional Features: Later Structures, Causeway, Outer
Wall

Comments: The structure was robbed out in the early part of this century and is very dilapidated. Late rectilinear and oval structures occupy part of the structure.

References: RCAHMS no.383.

Ref: A.S7 **Name: DUN CILLE BHANAIN**

Island: South Uist

NGR: NF 7685 4138

Location: Promontory Altitude: 5

Dimensions: 18 x 15 Shape: Oval Galleries?:

Additional Features:

Comments: The mound of this structure survives to c. 0.8m in height and is overlain by a chapel.

References: RCAHMS no.416.

Ref: A.S8 **Name: DUN ALIGARRY**

Island: South Uist

NGR: NF 7655 3917

Location: Islet Altitude: 2

Dimensions: 18 Shape: Circular Galleries?:

Additional Features: Possible Causeway

Comments: The structure survives with walls c. 4m wide on an islet in a drained loch. A modern shooting butt obscures the interior.

References: RCAHMS no.427.

Ref: A.S9 **Name: DUN BUIDHE, DRUIDIBEG**

Island: South Uist

NGR: NF 7744 3883

Location: Islet Altitude: 5

Dimensions: Shape: Circular Galleries?:

Additional Features: Causeway 62m, Outer Wall

Comments: The structure survives as a stone mound c. 2.5m high and is surrounded by an outer wall of c. 31m diameter.

References: RCAHMS no.430, Blundell 1913, 295.

Ref: A.S10 **Name: DUN ALTABRUG**

Island: South Uist

NGR: NF 7490 3439

Location: Islet Altitude: 5

Dimensions: 10 x 9 Shape: Oval Galleries?:

Additional Features: Causeway 33m, Outer Wall

Comments: The structure survives to c. 1.3m high with walls 3 - 4m wide and a north-east entrance.

References: RCAHMS no.378, Blundell 1913, 295.

Ref: A.S11 **Name: DUN GRO GHOT**

Island: South Uist

NGR: NF 8579 3436

Location: Moorland Altitude: 45

Dimensions: Shape: Galleries?:

Additional Features:

Comments: A substantial stone mound and the place-name suggest the existence of an atlantic roundhouse on this site.

References: RCAHMS no.418.

Ref: A.S12 **Name: STONEYBRIDGE**

Island: South Uist

NGR: NF 7386 3357

Location: Islet Altitude: 5

Dimensions: Shape: Galleries?:

Additional Features:

Comments: The substantial walling of a roundhouse was located while trenching around a modern house in 1963. The site occupies a former islet in a drained loch.

References: RCAHMS no.426.

Ref: A.S13 **Name: DUN VULAN**
Island: South Uist
NGR: NF 7140 2980
Location: Islet Altitude: 3
Dimensions: 18 Shape: Circular Galleries?: Y
Additional Features: Later Circular Structure

Comments: This site is an eroding roundhouse by a modern road which has obscured the original locational setting and drainage of the area. The walls are 4 - 5m wide and contain a gallery on the north-east. An internal secondary structure occupies the roundhouse.

References: RCAHMS no.375.

Ref: A.S14 **Name: LOCH ERISORT**
Island: South Uist
NGR: NF 7776 2967
Location: Moorland Altitude: 15
Dimensions: 14 Shape: Circular Galleries?:
Additional Features: Later Shieling

Comments: This appears to be a stone roundhouse with concentric walls and a north-west entrance.

References: NMR.

Ref: A.S15 **Name: DUN LOCH AN DUIN, BORNISH**
 Island: South Uist
 NGR: NF 7414 2907
 Location: Islet Altitude: 5
 Dimensions: 15 Shape: Circular Galleries?:
 Additional Features: Causeway 30m, Outer Wall

Comments: This structure had walls of c. 5m wide. It was largely obliterated to build two sheepfolds prior to 1914. the outer wall is unlikely to be contemporary with the the original structure of which only a short arc remains visible.

References: RCAHMS no.377.

Ref: A.S16 **Name: DUN LOCH GREANABRECK**
 Island: South Uist
 NGR: NF 7445 2724
 Location: Islet Altitude: 5
 Dimensions: 15 x 10 Shape: Oval Galleries?:
 Additional Features: Causeway 43m

Comments: The structure surmounts an oval artificial islet. The walls are up to 5m wide.

References: RCAHMS no.425, Blundell 1913, 294.

Ref: A.S17 **Name: DUN LOCH CNOC A BUIDHE**

Island: South Uist

NGR: NF 7483 2587

Location: Islet Altitude: 5

Dimensions: 14.5 Shape: Circular Galleries?:

Additional Features: Later Rectilinear Structure, Causeway
80m

Comments: The structure has a south entrance and walls up to c. 2m wide and 1m high, with an intrusive rectilinear structure. A well-built S-shaped causeway connects it to the shore of the loch.

References: RCAHMS no.382.

Ref: A.S18 **Name: DUN EILEAN AN STAOIR**

Island: South Uist

NGR: NF 7328 2579

Location: Islet Altitude: 5

Dimensions: 17 x 14 Shape: Oval Galleries?:

Additional Features: Harbour, External Circular Structure

Comments: The walls are set back from the present edge of the islet and the structure has a well-built and paved boat harbour. The site was classed as a late dun by the RCAHMS but the reasons for this are not clear.

References: RCAHMS no.379.

Ref: A.S19 **Name: DUN LOCH AN DUIN**

Island: South Uist

NGR: NF 7449 2265

Location: Islet Altitude: 5

Dimensions: Shape: Galleries?:

Additional Features:

Comments: The site is now represented by a substantial, though much robbed, stone mound.

References: RCAHMS no.423.

Ref: A.S20 **Name: OROSAY**

Island: South Uist

NGR: NF 7302 1734

Location: Islet Altitude: 30

Dimensions: 11 Shape: Circular Galleries?:

Additional Features: 2 External Circular Structures, Causeway 120m,

Comments: The site occupies the summit of a very large tidal islet connected to the mainland by a very long causeway, some 3 - 4m wide. The remainder of the island is occupied by traces of cultivation but no evidence of recent structures. The islet described as Orasay by the RCAHMS is in fact an intervening islet crossed by the causeway.

References: RCAHMS no.435.

Ref: A.S21 Name: DUN SMERCLETT

Island: South Uist

NGR: NF 7464 1522

Location: Islet Altitude: 5

Dimensions: Shape: Galleries?:

Additional Features:

Comments: The site is a small tidal islet from which traces of the stone structure have been largely removed.

References: RCAHMS no.420.

Atlantic Roundhouses - Barra

Ref: A.B1 Name: DUNAN RUADH
 Island: Barra
 NGR: NF 726 082
 Location: Promontory Altitude: 10
 Dimensions: Shape: Circular Galleries?: Y
 Additional Features:

Comments: This site lies on the island of Fuday off Barra. It was inaccessible at the time of survey and all data derives from the RCAHMS inventory. A 5m arc of walling was visible suggesting a circular structure.

References: RCAHMS no.443.

Ref: A.B2 Name: DUN SCURRIVAL
 Island: Barra
 NGR: NF 6954 0810
 Location: Hilltop Altitude: 60
 Dimensions: 17 x 13 Shape: Oval Galleries?: Y
 Additional Features: Secondary Internal Occupation, External Structures, Scarcement (noted in early sources)

Comments: This massive galleried structure has internal and external secondary occupation in the form of rectilinear stone structures. There is also evidence of possible secondary modification to the course of wall with its northern part being a secondary extension. An external wall may be contemporary and may have served to control access to the main structure; this uses outcrop and survives up to 0.8m high by 26m long.

References: RCAHMS no.449, Scott 1947, 3, Young 1955, 291, Armit 1988a.

Ref: A.B3 Name: DUN CHLIF
 Island: Barra
 NGR: NF 6819 0528
 Location: Promontory Altitude: 5
 Dimensions: 16 x 12 Shape: Oval Galleries?: Y
 Additional Features:

Comments: The structure is situated on a tidally isolated promontory. Midden deposits are visible around the site which is suffering greatly through tidal erosion. The structure survives to 1.2m in external height and c. 0.6m internally. The interior is approximately circular with a diameter of 7.5m. The site is also known locally as Dunan Ruadh na Chlif and Sorn Coir Fhinn (the fire-place of the kettle of Fhinn)

References: RCAHMS no.448, Scott 1947, 4, Armit 1988a, Young 1955, 291.

Ref: A.B4 Name: DUN CUIER
 Island: Barra
 NGR: NF 6708 0345
 Location: Hilltop Altitude: 40
 Dimensions: 21 x 22.5 Shape: Circular Galleries?: Y
 Additional Features: Later Internal Cellular Structure, Scarcement

Comments: Excavated by Young (Ill. 5.12). There is a detailed discussion of the atlantic roundhouse in Chapter Five; the internal cellular structure discussed in Chapter Seven.

References: RCAHMS no.441, Young 1955, Armit 1988a.

Ref: A.B5 **Name: DUN LOCH AN DUIN**
 Island: Barra
 NGR: NF 694 032
 Location: Islet Altitude: 40
 Dimensions: 14.9 Shape: Circular Galleries?: Y
 Additional Features: Causeway

Comments: Since the RCAHMS visit, the site has been submerged by the construction of a dam. All measurements used in structural analysis derive from the RCAHMS.

References: RCAHMS no.445, Scott 1947, 4, Young 1955, 193, Armit 1988a.

Ref: A.B6 **Name: BAIGH HIRIVAGH 1**
 Island: Barra
 NGR: NF 7113 0297
 Location: Islet Altitude: 5
 Dimensions: Shape: Galleries?:
 Additional Features: Causeway 35m

Comments: The detailed description in RCAHMS suggests that this site existed but no trace was visible by 1965. The measurements given by the RCAHMS appear to refer to the mound rather than the external wall as they also report that the outer face had been removed. Consequently the dimensions have not been used in structural analysis.

References: RCAHMS no.455.

Ref: A.B7 **Name: BAIGH HIRIVAGH 2**

Island: Barra

NGR: NF 7153 0263

Location: Islet Altitude: 5

Dimensions: 12 Shape: Circular Galleries?: Y

Additional Features: Causeway 40m

Comments: This dilapidated site lies on an exposed tidal Islet. Its walls have now substantially fallen away but galleries are visible in the eroding edges.

References: RCAHMS no.456, Young 1955, 293, Armit 1988a.

Ref: A.B8 **Name: DUN LOCH NIC RUAIDHE**

Island: Barra

NGR: NF 7025 0188

Location: Islet Altitude: 60

Dimensions: Shape: Galleries?:

Additional Features: Causeway 30m, Annexe

Comments: The site occupies an inaccessible inland loch location; possible occupation was noted on other islets in loch in 1985 but the islets were inaccessible for close inspection.

References: RCAHMS no.454, Young 1955, 292, Armit 1988a.

Ref: A.B9 Name: DUN NA KILLE
 Island: Barra
 NGR: NF 6477 0167
 Location: Coast Altitude: 5
 Dimensions: 16 Shape: Circular Galleries?:
 Additional Features:

Comments: The structure is incorporated within a recent graveyard wall corner on the coastal plain. The visible arc enables an estimate of external diameter at c. 16m. The entrance is visible on the east, 0.9m high by 0.55m wide. Five courses of walling survive to a height of c. 1.7m.

References: RCAHMS no.469, Young 1955, 293, Armit 1988a.

Ref: A.B10 Name: DUN AN T'SLEIBH
 Island: Barra
 NGR: NF 66 01
 Location: Knoll Altitude: 15
 Dimensions: Shape: Galleries?:
 Additional Features:

Comments: Traces of this site were noted by Scott, with walls > 3m wide enclosing an internal diameter of c. 6.5m. Absolutely no trace of this site has been noted by previous or subsequent sources and the identification of the structure as a roundhouse must remain doubtful.

References: RCAHMS no.471, Scott 1947, 4, Armit 1988a.

Ref: A.B11 Name: BAL NA CRAIG

Island: Barra

NGR: NF 6765 0121

Location: Moorland Altitude: 100

Dimensions: 16 Shape: Circular Galleries?: Y

Additional Features: Later Baile Settlement

Comments: This site was recorded by the RCAHMS as a chambered cairn. Survey in 1985 located a complex roundhouse over the chambered cairn amid the ruins of numerous later structures including a post-medieval baile. This identification was later found to correlate to the 1st edition Ordnance Survey maps where the site is referred to as a dun.

References: RCAHMS no.458, Armit 1988a.

Ref: A.B12 Name: DUN BAN

Island: Barra

NGR: NF 6311 0037

Location: Promontory Altitude: 10

Dimensions: 18 Shape: Subcircular Galleries?: Y

Additional Features: External Structures

Comments: This is a galleried structure with walls 4m wide, 1.2m high. Outcrop appears in the centre at a level c. 2.5m above the outer foundations. An entrance to the east was noted in the NMR from 1965 field visit. The structure survives up to 1.2m in height to the east.

References: RCAHMS no.446, Young 1955, 293, Armit 1988a.

Ref:13 **Name: DUN MHIC LEOID**
 Island: Barra
 NGR: NF 6311 0037
 Location: Islet Altitude: 10
 Dimensions: Shape: Subcircular Galleries?:
 Additional Features: Later Tower

Comments: The subcircular remains of a substantial stone roundhouse underlie and form the foundation and quarry for a later medieval tower in Loch St. Clair. The site is too overgrown to enable dimensions to be measured.

References: Armit 1988a.

Ref: A.B14 **Name: BEINN TANGAVAT**
 Island: Barra
 NGR: NF 640 968
 Location: Moorland Altitude: 50
 Dimensions: 16.5 Shape: Circular Galleries?: Y
 Additional Features: Later Rectilinear structures inside and around.

Comments: This site was located during field survey in 1985. It comprises a complex roundhouse in overgrown condition, occupied by the remains of later settlement.

References: Armit 1988a

Ref: A.B15

Name: DUN A CHAOLAIS

Island: Barra

NGR: NF 6280 9704

Location: Hilltop Altitude: 40

Dimensions: 16 Shape: Circular Galleries?: Y

Additional Features: Later Baile Settlement, External Structures, Scarcement, Intra-Mural Stairs

Comments: This is a well-preserved structure with walls c. 2.5m high by 4m wide overall. A later baile settlement occupies the site and the area around the structure. A circular mound, with facing stones suggesting a 16m diameter, is situated on a terrace below Dun a Chaolais.

References: RCAHMS no.442, Armit 1988a.

Ref: A.B16

Name: DUN VATERSAY TOWNSHIP

Island: Barra

NGR: NF 6266 9454

Location: Hilltop Altitude: 50

Dimensions: 15 Shape: Circular Galleries?:

Additional Features: External Structures, Enclosure

Comments: This structure is best preserved to the south and east where the outer face suggests a diameter of c. 15m. An outer courtyard or enclosure is visible in sporadic facing stones to the east of the main structure.

References: RCAHMS no.472, Armit 1988a.

Ref: A.B17 **Name: DUN SANDRAY**

Island: Barra

NGR: NF 6374 9137

Location: Hilltop Altitude: 170

Dimensions: 15.5 x 12.75 Shape: Oval Galleries?: Y

Additional Features: Enclosure

Comments: Dun Sandray lies on the island of Sandray off Barra. It was inaccessible at the time of survey and all data derives from the RCAHMS inventory. The walls of the structure survive to 2m high and a lintelled ground gallery survives substantially intact. The structure has an entrance to the west-north-west. Traces of an outer wall indicate a former enclosure.

References: RCAHMS no.444, Armit 1988a.

Ref: A.B18 **Name: DUNAN RUADH PABBAY**

Island: Barra

NGR: NF 6129 8764

Location: Promontory Altitude: 5

Dimensions: Shape: Galleries?: Y

Additional Features:

Comments: This site lies on the island of Pabbay off Barra. It was inaccessible at the time of survey and all data derives from the RCAHMS inventory. Parts of the walls were visible on the south-west arc showing a width of c. 4m containing a gallery.

References: RCAHMS no.447, Armit 1988a.

Wheelhouses

Ref: W.1 Name: CNIP
Island: Lewis
NGR: NB 0980 3665
Location: Machair Altitude: 0
Dimensions: 7 Shape: Circular
Additional Features: Later Occupation

Comments: Excavated by Armit. Discussed in Chapter Six (Ill. 6.2). Later cellular and linear house structures discussed in Chapters Seven and Eight respectively.

References: Armit 1988.

Ref: W.2 Name: CALUM MACLEODS WHEELHOUSE
Island: Lewis
NGR: NB 1021 3564
Location: Machair Altitude: 10
Dimensions: Shape: Circular
Additional Features:

Comments: Excavated by Calum Macleod of Reef in the 1950s, when walling and indications of piers were noted. The site is now an eroding machair knoll.

References: NMR.

Ref: W.3 **Name: THE UDAL**

Island: North Uist

NGR: NF 824 783

Location: Machair Altitude: 5

Dimensions: 9.8 Shape: Circular

Additional Features: Later Cellular Structures

Comments: Excavated by Iain Crawford. Discussed in Chapter Six. Later cellular structures discussed in Chapter Seven.

References: Crawford 1967/78, 1975, 1977, 1985.

Ref: W.4 **Name: FOSHIGARRY**

Island: North Uist

NGR: NF 7430 7636

Location: Machair Altitude: 0

Dimensions: 10.5, 10.5, ? Shape: Circular

Additional Features: Later Cellular Structures

Comments: Excavated by Beveridge. Discussed in Chapter Six (Ill. 6.3). Cellular structures discussed in Chapter Seven.

References: Beveridge 1930.

Ref: W.5

Name: BAC MHIC CONNAIN

Island: North Uist

NGR: NF 7695 7620

Location: Machair

Altitude: 5

Dimensions: 9

Shape: Circular

Additional Features:

Comments: Excavated by Beveridge. Discussed in Chapter Six (Ill. 6.4).

References: RCAHMS no.271, Beveridge 1931.

Ref: W.6

Name: SOLLAS (MACHAIR LEATHANN)

Island: North Uist

NGR: NF 8035 7577

Location: Machair

Altitude: 5

Dimensions: 12

Shape: Circular

Additional Features:

Comments: Excavated by Beveridge. Discussed in Chapter Six (Ill. 6.5). The site was re-excavated by Atkinson but this latter project remains unpublished.

References: RCAHMS no.272, Beveridge 1911.

Ref: W.7

Name: GARRY IOCHDRACH

Island: North Uist

NGR: NF 7724 7427

Location: Machair Altitude: 5

Dimensions: 7.9 Shape: Circular

Additional Features: Earlier and Later Occupation

Comments: Excavated by Beveridge. Discussed in Chapter Six (Ill. 5.8). Earlier occupation discussed in Chapter Five.

References: Beveridge 1931.

Ref: W.8

Name: CNOC A COMHDHALACH

Island: North Uist

NGR: NF 7708 7413

Location: Machair Altitude: 5

Dimensions: 7 Shape: Circular

Additional Features: Earlier Occupation

Comments: Excavated by Beveridge. Discussed in Chapter Six (Ill. 5.9). Earlier occupation discussed in Chapter Five.

References: RCAHMS no.269, Beveridge 1911

Ref: W.9 **Name: BALELONE**

Island: North Uist

NGR: NF 719 741

Location: Machair Altitude: 0

Dimensions: Shape:

Additional Features:

Comments: Excavated by Barber. Discussed in Chapter Six.

References: Barber forthcoming.

Ref: W.10 **Name: EILEAN MALEIT**

Island: North Uist

NGR: NF 7748 7388

Location: Machair Altitude: 5

Dimensions: 9 Shape: Circular

Additional Features: Causeway, Earlier Occupation

Comments: Excavated by Beveridge. Discussed in Chapter Six (Ill. 5.10). Earlier occupation discussed in Chapter Five.

References: RCAHMS no.270, Beveridge 1911.

Ref: W.11 **Name: CLETTRAVAL**

Island: North Uist

NGR: NF 7489 7136

Location: Moorland Altitude: 95

Dimensions: 8 Shape: Circular

Additional Features: Later Re-occupation

Comments: Excavated by Scott. Discussed in Chapter Six
(Ill. 6.6 and 6.7).

References: Scott 1948.

Ref: W.12

Name: A CHEARDACH RUADH

Island: North Uist

NGR: NF 7763 6157

Location: Machair Altitude: 5

Dimensions: Shape:

Additional Features:

Comments: Excavated partially by Scott but details remain
unpublished.

References: RCAHMS no.286, Beveridge 1911, 229, Scott
1956.

Ref: W.12

Name: BRUACH BAN

Island: Benbecula

NGR: NF 787 567

Location: Machair

Altitude: 5

Dimensions: 10

Shape: Circular

Additional Features:

Comments: Excavated by Scott. Discussed in Chapter Six.

References: NMR.

Ref: W.13

Name: BRUTHACH A TUATH

Island: Benbecula

NGR: NF 787 566

Location: Machair

Altitude: 5

Dimensions: 8.8

Shape: Circular

Additional Features:

Comments: Excavated by Wallace. Discussed in Chapter Six.

References: RCAHMS no.354.

Ref: W.14

Name: HORNISH POINT

Island: South Uist

NGR: NF 758 470

Location: Machair

Altitude: 5

Dimensions: 7.5

Shape: Circular

Additional Features:

Comments: Excavated by Barber. Discussed in Chapter Six.

References: Barber forthcoming.

Ref: W.15

Name: A CHEARDACH MHOR

Island: South Uist

NGR: NF 7571 4128

Location: Machair

Altitude: 5

Dimensions: 10.8

Shape: Circular

Additional Features: Later Cellular Occupation

Comments: Excavated by Young and Richardson. Discussed in Chapter Six (Ill. 6.8). Cellular structures discussed in Chapter Seven.

References: Young and Richardson 1959.

Ref: W.16 **Name: A CHEARDACH BHEAG**
Island: South Uist
NGR: NF 7577 4037
Location: Machair Altitude: 5
Dimensions: 9 Shape: Circular
Additional Features:

Comments: Excavated by Fairhurst. Discussed in Chapter Six (Ill. 6.9).

References: Fairhurst 1971.

Ref: W.17 **Name: GEIRNISH**
Island: South Uist
NGR: NF 8425 3998
Location: Machair Altitude: 15
Dimensions: Shape: Circular
Additional Features: Later Shielings

Comments: Structural remains described by the RCAHMS suggest the former presence of a wheelhouse on this site.

References: RCAHMS no.393.

Ref: W.18

Name: A CHEARDACH MHOR 2

Island: South Uist

NGR: NF 7557 3924

Location: Machair

Altitude: 5

Dimensions:

Shape:

Additional Features:

Comments: A substantial midden, pottery of broadly later prehistoric type and a mound with stones, all suggest the presence of a wheelhouse on this site.

References: NMR.

Ref: W.19

Name: USINISH

Island: South Uist

NGR: NF 8433 3326

Location: Moorland

Altitude: 80

Dimensions: 9

Shape: Circular

Additional Features:

Comments: Described by Thomas. Discussed in Chapter Six (Ill. 6.10).

References: RCAHMS no.395, Thomas 1870.

Ref: W.20

Name: SITHEAN A PHIOBAIRE

Island: South Uist

NGR: NF 732 204

Location: Machair

Altitude: 5

Dimensions:

Shape:

Additional Features:

Comments: This mound site is recorded as a wheelhouse by Lethbridge but without supporting information.

References: Lethbridge 1952.

Ref: W.21

Name: BRUTHACH A TIGH TALLAN

Island: South Uist

NGR: NF 732 203

Location: Machair

Altitude: 5

Dimensions:

Shape:

Additional Features:

Comments: This mound site is recorded as a wheelhouse by Lethbridge but without supporting information.

References: Lethbridge 1952.

Ref: W.22

Name: KILPHEDER

Island: South Uist

NGR: NF 7327 2026

Location: Machair

Altitude: 5

Dimensions: 8.8

Shape: Circular

Additional Features:

Comments: Excavated by Lethbridge. Discussed in Chapter Six (Ill. 6.11).

References: Lethbridge 1952.

Ref: W.23

Name: SOUTH UIST

Island: South Uist

NGR: not known

Location: Moorland

Altitude:

Dimensions:

Shape:

Additional Features:

Comments: The site is described in some detail by Dryden and appears to have been a wheelhouse. Its location on South Uist is unknown.

References: Dryden 1857.

Ref: W.24

Name: NORTH BORVE

Island: Barra

NGR: NF 6563 0285

Location: Machair

Altitude: 8

Dimensions: 16 x 13

Shape: Oval

Additional Features:

Comments: Traces of an arc of walling with a radial pier were noted by RCAHMS surveyors in 1965.

References: NMR.

Ref: W.25

Name: TIGH TALAMHANTA ALLASDALE

Island: Barra

NGR: NF 6768 0220

Location: Moorland

Altitude: 115

Dimensions: 8

Shape: Circular

Additional Features:

Comments: Excavated by Young. Discussed in Chapter Six. (Ill. 6.12).

References: RCAHMS no.459, Young 1952.

Ref: W.26

Name: BORVE POINT 2

Island: Barra

NGR: NF 6519 0167

Location: Machair

Altitude: 8

Dimensions:

Shape: Circular

Additional Features:

Comments: An arc of walling, 1.5m long by 0.8m wide, was recorded, with a possible pier on its south-east.

References: NMR.

Cellular Structures

Ref: C.1 Name: EUROPIE
Island: Lewis
NGR: NB 5116 6396
Location: Machair Altitude: 35
Dimensions: Shape: Cellular
Additional Features:

Comments: A passage c. 10m long leads to a circular cobrbelled cell at this site, recorded by RCAHMS surveyors in 1965.

References: NMR

Ref: C.2 Name: GALSON
Island: Lewis
NGR: NB 44 59
Location: Machair Altitude: 5
Dimensions: Shape: Cellular
Additional Features:

Comments: Excavated by Edwards. Discussed in Chapter Seven (Ill. 7.2).

References: RCAHMS no.20, Edwards 1923.

Ref: C.3

Name: CNIP

Island: Lewis

NGR: NB 0980 3665

Location: Machair

Altitude: 0

Dimensions:

Shape: Cellular

Additional Features: Earlier and Later Occupation

Comments: Excavated by Armit. Discussed in Chapter Seven (Ill. 7.3 and 7.4). The earlier wheelhouses are discussed in Chapter Six and the linear house structure is discussed in Chapter Eight.

References: Armit 1988a.

Ref: C.4

Name: DUN BHARABHAT

Island: Lewis

NGR: NB 0988 3531

Location: Islet

Altitude: 40

Dimensions: 5

Shape: Cellular

Additional Features: Earlier Occupation

Comments: Excavated by Harding. Discussed in Chapter Seven (Ill. 5.3). Earlier atlantic roundhouse is discussed in Chapter Five.

References: Harding and Topping 1986.

Ref: C.5

Name: LOCH NA BERIE

Island: Lewis

NGR: NB 1035 3525

Location: Islet

Altitude: 5

Dimensions:

Shape: Cellular

Additional Features: Earlier Occupation

Comments: Excavated by Harding and Armit. Discussed in Chapter Seven (Ill. 7.5, 7.6 and 7.7). Earlier atlantic roundhouse discussed in Chapter Five.

References: Harding and Armit 1987, 1988.

Ref: C.6

Name: MEALISTA

Island: Lewis

NGR: NA 991 242

Location: Moorland

Altitude:

Dimensions:

Shape: Cellular

Additional Features:

Comments: This cellular structure appears to have been dismantled for building stone.

References: Thomas 1867.

Ref: C.7 **Name: NISABOST**

Island: Harris

NGR: NF 0419 9679

Location: Moorland Altitude: 20

Dimensions: Shape: Cellular

Additional Features:

Comments: The site comprises three irregular corbelled cells.

References: RCAHMS no.149.

Ref: C.8 **Name: NORTHTON 3**

Island: Harris

NGR: NF 9873 9027

Location: Machair Altitude: 5

Dimensions: Shape: Cellular

Additional Features:

Comments: A passage and corbelled cell were reported of which no trace is now visible.

References: RCAHMS no.154.

Ref: C.9

Name: SCREVAN

Island: North Uist

NGR: NF 9007 7862

Location: Machair

Altitude: 15

Dimensions:

Shape: Cellular

Additional Features:

Comments: A passage leading to a circular cell was recorded.

References: RCAHMS no.266, Beveridge 1911, 114.

Ref: C.10

Name: THE UDAL

Island: North Uist

NGR: NF 824 783

Location: Machair

Altitude: 5

Dimensions:

Shape: Cellular

Additional Features: Earlier and Later Occupation

Comments: Excavated by Crawford and Beveridge. Discussed in Chapter Seven. The earlier wheelhouse occupation is discussed in Chapter Six and the linear structure in Chapter Eight.

References: Beveridge 1911, 129/30, Crawford 1967/78.

Ref: C.11

Name: FOSHIGARRY

Island: North Uist

NGR: NF 7430 7636

Location: Machair

Altitude: 0

Dimensions:

Shape: Cellular

Additional Features: Earlier and Later Occupation

Comments: Excavated by Beveridge. Discussed in Chapter Seven. Earlier wheelhouse occupation discussed in Chapter Six and linear structure discussed in Chapter Eight.

References: Beveridge 1931.

Ref: C.12

Name: SITHEAN AN ALTAIR

Island: North Uist

NGR: NF 77 76

Location: Machair

Altitude: 5

Dimensions:

Shape: Cellular

Additional Features:

Comments: Excavated by Beveridge. Discussed in Chapter Seven (Ill. 7.8).

References: Beveridge 1911, 118/121.

Ref: C.13 **Name: TOTA DUNAIG**

Island: North Uist

NGR: NF 77 76

Location: Machair Altitude:
Dimensions: Shape: Cellular
Additional Features:

Comments: Slight remains of a cellular structural complex were described by Beveridge.

References: Beveridge 1911, 232/3.

Ref: C.14 **Name: DUN A GHALLAIN**

Island: North Uist

NGR: NF 7479 7598

Location: Islet Altitude: 5
Dimensions: Shape: Cellular
Additional Features: Earlier Occupation

Comments: Excavated by Beveridge. Discussed in Chapter Seven. Atlantic roundhouse discussed in Chapter Five.

References: RCAHMS no.191, Beveridge 1911.

Ref: C.15 Name: EILEAN A GHALLAIN
Island: North Uist
NGR: NF 7483 7589
Location: Islet Altitude: 5
Dimensions: Shape: Cellular
Additional Features: Earlier Occupation

Comments: Excavated by Beveridge. Discussed in Chapter
Seven. Atlantic roundhouse discussed in Chapter Five.

References: RCAHMS no.192, Beveridge 1911.

Ref: C.16 Name: DUN THOMAIDH
Island: North Uist
NGR: NF 7564 7562
Location: Islet Altitude: 5
Dimensions: Shape: Cellular
Additional Features: Earlier Occupation

Comments: Excavated by Beveridge. Discussed in Chapter
Seven (Ill. 5.7). Atlantic roundhouse discussed in Chapter
Five.

References: RCAHMS no.212, Beveridge 1930.

Ref: C.17

Name: SCOLPAIG

Island: North Uist

NGR: NF 7282 7535

Location: Machair

Altitude: 5

Dimensions:

Shape: Cellular

Additional Features:

Comments: Beveridge reported an underground structure being found here during ploughing.

References: Beveridge 1911, 117.

Ref: C.18

Name: VALLAQUIE 2

Island: North Uist

NGR: NF 8627 7532

Location: Machair

Altitude: 5

Dimensions:

Shape: Cellular

Additional Features:

Comments: A passage and corbelled cell are recorded in the NMR on this site.

References: NMR

Ref: C.19

Name: EILEAN OLABHAT

Island: North Uist

NGR: NF 7500 7530

Location: Islet

Altitude: 5

Dimensions:

Shape: Cellular

Additional Features: Outer Wall, Later Occupation

Comments: Excavated by Armit. Discussed in Chapter Seven (Ill. 7.9).

References: Armit 1986, 1988b.

Ref: C.20

Name: TIGH TALAMHANTA

Island: North Uist

NGR: NF 9490 7122

Location: Moorland

Altitude: 20

Dimensions:

Shape: Cellular

Additional Features:

Comments: A complex of cells and passages were reported on this site.

References: RCAHMS no.267, Beveridge 1911, 115.

Ref: C.21

Name: DRUIM NA H-UAMHA

Island: North Uist

NGR: NF 729 697

Location: Moorland

Altitude: 10

Dimensions:

Shape: Cellular

Additional Features:

Comments: A cellular structure reported in 1896 on this site, subsequently filled up and is no longer visible.

References: RCAHMS no.268, Beveridge 1911, 116.

Ref: C.22

Name: UNIVAL

Island: North Uist

NGR: NF 800 668

Location: Moorland

Altitude: 80

Dimensions:

Shape: Cellular

Additional Features: Earlier Chambered Tomb

Comments: Excavated by Scott. Discussed in Chapter Seven (Ill. 7.11).

References: Scott 1947a.

Ref: C.23

Name: DUN BAN

Island: North Uist

NGR: NF 8699 5695

Location: Islet

Altitude: 5

Dimensions:

Shape:

Additional Features: Earlier Occupation

Comments: Excavated by Thomas. Discussed in Chapter Seven (Ill. 5.11). Earlier atlantic roundhouse discussed in Chapter Five.

References: Thomas 1890.

Ref: C.24

Name: A CHEARDACH MHOR

Island: South Uist

NGR: NF 7571 4128

Location: Machair

Altitude: 5

Dimensions:

Shape: Cellular

Additional Features: Earlier Occupation

Comments: Excavated by Young and Richardson. Discussed in Chapter Seven (Ill. 7.12). Earlier wheelhouse discussed in Chapter Six.

References: Young and Richardson 1959.

Ref: C.25 **Name: USINISH 2**
Island: South Uist
NGR: NF 8431 3330
Location: Moorland Altitude: 80
Dimensions: Shape: Cellular
Additional Features:

Comments: A series of inter-connecting cells were recorded by the RCAHMS.

References: RCAHMS no.395.

Ref: C.26 **Name: USINISH 4**
Island: South Uist
NGR: NF 843 333
Location: Moorland Altitude: 80
Dimensions: Shape: Cellular
Additional Features:

Comments: A series of three cells connected by passages were reported at this site.

References: RCAHMS no.396.

Ref: C.27 **Name: TIGH NAN LEACACH**
 Island: South Uist
 NGR: NF 8129 2277
 Location: Moorland Altitude: 150
 Dimensions: Shape: Cellular
 Additional Features:

Comments: A series of three corbelled cells were reported at this site.

References: RCAHMS no.397.

Ref: C.28 **Name: DUN CUIER**
 Island: Barra
 NGR: NF 6708 0345
 Location: Hilltop Altitude: 40
 Dimensions: Shape: Cellular
 Additional Features: Earlier Occupation

Comments: Excavated by Young. Discussed in Chapter Seven (Ill. 5.12). Earlier atlantic roundhouse discussed in Chapter Five.

References: RCAHMS no.441, Young 1956, Armit 1988.

Linear House Structures

Ref: L.1 **Name: CNIP**
 Island: Lewis
 NGR: NB 0980 3665
 Location: Machair Altitude: 0
 Dimensions: 7 x 2.2 Shape: Linear
 Additional Features: Earlier Wheelhouse and Cellular Occupation

Comments: Excavated by Armit. Discussed in Chapter Eight (Ill. 8.2). Earlier occupation discussed in Chapters Six and Seven.

References: Armit, 1988a.

Ref: L.2 **Name: VALLAQUIE**
 Island: North Uist
 NGR: NF 8646 7547
 Location: Machair Altitude: 5
 Dimensions: 7 x 2 Shape: Linear
 Additional Features:

Comments: The site was investigated in 1871 when it was revealed as a curved gallery some 6m long by c. 2m wide. It appears to have had a south entrance.

References: RCAHMS no.274, Beveridge 1911, 114/5.

Linear Structures

Ref: L.3 Name: GRESS LODGE
Island: Lewis
NGR: NB 4938 4185
Location: Machair Altitude: 5
Dimensions: Shape: Linear
Additional Features:

Comments: Discussed in Chapter Eight (Ill. 8.4).

References: Liddle, 1872, MacRitchie, 1916, RCAHMS no.58.

Ref: L.4 Name: VALTOS 1
Island: Lewis
NGR: NB 088 367
Location: Moorland Altitude: 70
Dimensions: Shape: Linear
Additional Features:

Comments: This site was temporarily exposed by wind erosion prior to 1914. It appears to have been a subterranean passage with a slab roof.

References: RCAHMS no.96.

Ref: L.5 **Name: PAIBLE, TARANSAY**

Island: Harris

NGR: NF 0323 9917

Location: Machair Altitude: 5

Dimensions: 7.3 Long Shape: Linear

Additional Features:

Comments: This 'earth-house' was removed to provide stones for construction and road-building.

References: RCAHMS no.153.

Ref: L.6 **Name: BERNERAY 2**

Island: Harris

NGR: NF 9071 8151

Location: Machair Altitude: 5

Dimensions: 4 x 0.8 Shape: Linear

Additional Features:

Comments: This structure was dismantled to obtain building stone.

References: RCAHMS no.151.

Ref: L.7

Name: UDAL

Island: North Uist

NGR: NB 824 783

Location: Machair Altitude: 5

Dimensions: 20 x 0.6 Shape: Linear

Additional Features: Earlier and Later Occupation

Comments: This site was excavated by Crawford and Beveridge. It is discussed in Chapter Eight. Wheelhouse and cellular structures on the site are discussed in Chapters Six and Seven.

References: RCAHMS no.273, Beveridge 1911, Crawford 1967/78.

Ref: L.8

Name: FOSHIGARRY

Island: North Uist

NGR: NB 7430 7636

Location: Machair Altitude: 0

Dimensions: 15 x 0.6 Shape: Linear

Additional Features: Earlier and Later Occupation.

Comments: This site was excavated by Beveridge and is discussed in Chapter Eight. Wheelhouse and cellular structures on the site are discussed in Chapters Six and Seven.

References: Beveridge 1931.

Ref: L.9**Name: VALLAY EARTH-HOUSE**

Island: North Uist

NGR: NF 77 76

Location: Machair

Altitude:

Dimensions:

Shape: Linear

Additional Features:

Comments: This site was excavated by Beveridge and is discussed in Chapter Eight.

References: Beveridge 1911, 117/8.

Ref: L.10**Name: PORTAIN**

Island: North Uist

NGR: NF 9529 7241

Location: Moorland

Altitude: 15

Dimensions:

Shape: Linear

Additional Features:

Comments: The site was described as a curving passage built into the bank of a loch.

References: Beveridge 1911, 116.

Ref: L.11 **Name:** KIRKIBOST

Island: North Uist

NGR: NF 752 655

Location: Machair Altitude: 5

Dimensions: Shape: Linear

Additional Features:

Comments: Little information is recorded about this site which appears to have been a subterranean passage.

References: Beveridge 1911, 116.

Ref: L.12 **Name:** BRUTHACH A TUATH

Island: Benbecula

NGR: NF 787 566

Location: Machair Altitude: 5

Dimensions: >4 x 0.6 Shape: Linear

Additional Features: Earlier Wheelhouse

Comments: This site was excavated by Wallace and is discussed in Chapter Eight. The wheelhouse on the site is discussed in Chapter Six.

References:

Ref: L.13 **Name: DRIMORE**

Island: South Uist

NGR: NF 75 41

Location: Machair Altitude: 5

Dimensions: 8 x 1 Shape: Linear

Additional Features:

Comments: This site was excavated by Feachem and is discussed in Chapter Eight.

References: Feachem 1956.

Ref: L.14 **Name: SCALAVAT 1**

Island: South Uist

NGR: NF 8482 3398

Location: Moorland Altitude: 100

Dimensions: Shape: Linear

Additional Features: Later Occupation

Comments: This site appears to have been a subterranean passage built over by later structures.

References: RCAHMS no.394.

Ref: L.15

Name: SCALAVAT 2

Island: South Uist

NGR: NF 84 33

Location: Moorland

Altitude: 100

Dimensions:

Shape: Linear

Additional Features:

Comments: This site appears to have been a subterranean passage built over by later structures.

References: RCAHMS no.394.

Promontory Forts

Ref: P.1 Name: DUN EISTEAN
Island: Lewis
NGR: NB 535 651
Location: Promontory Altitude: 20
Dimensions: Shape: Irregular
Additional Features: Internal Rectilinear Structure

Comments: A wall, 2m wide surrounds the promontory with internal rectilinear structures. Local tradition suggests C12th AD occupation by the Morrisons and it is conceivable that the site may have a late origin.

References: RCAHMS no.15.

Ref: P.2 Name: DUN MARA
Island: Lewis
NGR: NB 4947 6313
Location: Promontory Altitude: 5
Dimensions: Shape: Linear
Additional Features:

Comments: Two walls seal off the promontory which contains an atlantic roundhouse with which the walls may be contemporary.

References: RCAHMS no.13.

Ref: P.3 Name: DUN BHILASCLEITER

Island: Lewis

NGR: NB 5602 5762

Location: Promontory Altitude: 5

Dimensions: Shape: Linear

Additional Features:

Comments: A wall, 3.3m wide seals off this promontory and extends to 24m in length. Early reports of a guard cell cannot now be confirmed from surface traces.

References: RCAHMS no.34.

Ref: P.4 Name: DUN OTHAIL

Island: Lewis

NGR: NB 5425 5150

Location: Promontory Altitude: 5

Dimensions: Shape: Linear

Additional Features: Later Chapel

Comments: The reported site of a promontory fort is no longer traceable.

References: RCAHMS no.35.

Ref: P.5 **Name: DUN CASTEIL A MHORAIR**
Island: Lewis
NGR: NB 5366 4970
Location: Coastal Altitude: 5
Dimensions: 20 x 8 Shape: Irregular
Additional Features: Internal Rectilinear Structure

Comments: This site is a walled coastal stack with an internal rectilinear structure. It may have a late foundation date.

References: RCAHMS no.48.

Ref: P.6 **Name: SHAWBOST**
Island: Lewis
NGR: NB 249 483
Location: Promontory Altitude: 5
Dimensions: Shape:
Additional Features:

Comments: This site appears to have been entirely eroded by tidal action.

References: NMR.

Ref: P.7

Name: RUDHA NA BERIE

Island: Lewis

NGR: NB 2367 4733

Location: Promontory

Altitude: 5

Dimensions:

Shape: Linear

Additional Features: Internal Structures

Comments: Three walls seal off the approach to this promontory (Ill. 9.2). Early reports of internal structure could not be verified.

References: RCAHMS no.12.

Ref: P.8

Name: STAC A CHAISTEAL

Island: Lewis

NGR: NB 2024 4540

Location: Promontory

Altitude: 5

Dimensions:

Shape: Linear

Additional Features:

Comments: A wall, 3m long and 4.5m wide survives as a fragment of the original promontory defense. The entrance is central to the surviving fragment.

References: NMR.

Ref: P.9 **Name: DUN LAIMISHADER**
Island: Lewis
NGR: NB 1746 4313
Location: Promontory Altitude: 5
Dimensions: Shape: Linear
Additional Features: Internal Structures

Comments: The wall runs across the neck of the promontory and along the east side. A series of internal circular cells were recorded.

References: NMR.

Ref: P.10 **Name: DUN MOR**
Island: Lewis
NGR: NB 513 339
Location: Promontory Altitude: 5
Dimensions: Shape:
Additional Features:

Comments: The wall runs along the north and east of the promontory.

References: RCAHMS no.47.

Ref: P.11 **Name: DUN DUBH**
 Island: Lewis
 NGR: NB 5570 3260
 Location: Promontory Altitude: 5
 Dimensions: Shape: Linear
 Additional Features:

Comments: The wall seals off the neck of a very steep-sided easily defended promontory. The wall is 5m wide, 1.2 - 1.5m high, 32m long and has an entrance 1.4m wide.

References: NMR.

Ref: P.12 **Name: RUDHA SHILLDINISH**
 Island: Lewis
 NGR: NB 4540 3067
 Location: Promontory Altitude: 10
 Dimensions: 90 x 90 Shape: Irregular
 Additional Features: Internal Rectilinear Structures and Cultivation

Comments: The walls of this site enclose a complex of multi-phase occupation including later turf and stone structures and cultivation rigs (Ill. 9.3).

References: RCAHMS no.46.

Ref: P.13 **Name: DUNAN CROSBOST**
Island: Lewis
NGR: NB 4035 2430
Location: Promontory Altitude: 5
Dimensions: Shape: Linear
Additional Features:

Comments: The wall across the neck of this promontory has been all but removed for modern structures nearby.

References: RCAHMS no.41.

Ref: P.14 **Name: DUN STUAIDH**
Island: Harris
NGR: NF 0422 8316
Location: Promontory Altitude: 5
Dimensions: 30 x 9 Shape:
Additional Features: Internal Structures

Comments: Walls run around the north, west and south of the promontory, 2m wide and up to 1.5m high. Two small oval turf-built enclosures are visible inside.

References: RCAHMS no.122.

Ref: P.15

Name: CAISTEIL ODAIR

Island: North Uist

NGR: NF 7317 7686

Location: Promontory

Altitude: 20

Dimensions: 120

Shape:

Additional Features:

Comments: This is a well-defended promontory with the remains of a very substantial stone wall across its neck, 120m long and up to 5m in spread. Slight structures were recorded internally and externally by Beveridge and the RCAHMS. These are no longer extant.

References: RCAHMS no.190, Beveridge 1911, 195/6.

Ref: P.16

Name: AN DUNAN

Island: North Uist

NGR: NF 8936 5872

Location: Promontory

Altitude: 5

Dimensions: 7m long

Shape: Linear

Additional Features: 2 Later Circular Structures, 1 Later Boat-Shaped Structure

Comments: A wall, 1.1m wide and 0.6m high seals off this promontory and encloses several slight structures.

References: Beveridge 1911, 171.

Ref: P.17

Name: DUN BIRUASLAM

Island: Barra

NGR: NF 607 964

Location: Promontory Altitude: 60

Dimensions: 100 Long Shape: Linear

Additional Features: later Internal Occupation

Comments: A wall surrounding parts of this promontory is c. 3m wide and 1m high, utilising outcrop for parts of its course.

References: RCAHMS no.451, Armit 1988.

Ref: P.18

Name: DUN MINGULAY

Island: Barra

NGR: NF 545 822

Location: Promontory Altitude: 85

Dimensions: Shape: Linear

Additional Features:

Comments: This site has been entirely eroded.

References: RCAHMS no.452, Armit 1988.

Ref: P.19**Name: DUN BRISTE**

Island: Barra

NGR: NF 550 806

Location: Promontory Altitude: 100

Dimensions: 25m Long Shape: Linear

Additional Features:

Comments: This wall is some 2 - 3.5m wide and appears to be abutted by traces of circular structures.

References: RCAHMS no.453.

Ref: P.20**Name: BARRA HEAD**

Island: Barra

NGR: NF 5480 8025

Location: Promontory Altitude: 200

Dimensions: 20m arc Shape: Linear

Additional Features:

Comments: The walls of this structure are up to 5m wide and contain superimposed intra-mural galleries (Ill. 9.4).

References: RCAHMS no.450, Armit 1988.

Walled Islets

Ref: WA.1 Name: DUN LOCH AN DUIN, AIRD
Island: Lewis
NGR: NB 555 358
Location: Islet Altitude: 40
Dimensions: 30 x 20 Shape: Irregular
Additional Features: Causeway 28m, Internal Structures,
Harbour

Comments: This site was recorded as having an elaborate entrance and guard cell but these have now disappeared (Ill. 10.2).

References: RCAHMS no.50, Thomas 1890, Armit 1985.

Ref: WA.2 Name: DUN LOCH AN DUNA LEURBOST
Island: Lewis
NGR: NB 3903 2614
Location: Islet Altitude: 30
Dimensions: 21 x 19 Shape: Circular
Additional Features: Causeway 35m, Internal Occupation,
Harbour

Comments: This site has several internal structures surrounded by walls 1.3 - 1.5m wide (Ill. 10.3).

References: RCAHMS no.39, Armit 1985.

Ref: WA.3 Name: DUN BHARCLIN

Island: Lewis

NGR: NB 3945 2327

Location: Islet Altitude: 5

Dimensions: 73 x 17 Shape: Irregular

Additional Features: Internal Structures

Comments: This irregular islet is now inaccessible but appears to contain internal structures.

References: RCAHMS no.40.

Ref: WA.4 Name: DUN LOCH AN DUIN, SCALPAY

Island: Harris

NGR: NG 2247 9659

Location: Islet Altitude: 10

Dimensions: 70 x 27 Shape: Irregular

Additional Features: Possible Causeway

Comments: The site is now visible as a partly submerged wall.

References: RCAHMS no.145.

Ref: WA.5 Name: DUN LOCH NAN CLACHAN
Island: North Uist
NGR: NF 7678 7382
Location: Islet Altitude: 5
Dimensions: 28 x 23 Shape: Subcircular
Additional Features: Causeway

Comments: This islet has a collapsed enclosing wall but no visible internal structure.

References: RCAHMS no.181, Beveridge 1911, 199, Blundell 1913, 298.

Ref: WA.6 Name: DUN MHIC LAITHINN
Island: North Uist
NGR: NF 9777 7314
Location: Islet Altitude: 5
Dimensions: 50 x 30 Shape: Oval
Additional Features: Later Shielings

Comments: The wall around this tidal islet utilises the outcrop for parts of its circuit.

References: RCAHMS no.210, Beveridge 1911, 144/6.

Ref: WA.7

Name: DUN LOCH FADA

Island: North Uist

NGR: NF 8796 7121

Location: Islet

Altitude: 10

Dimensions: 120 x 50

Shape: Irregular

Additional Features: 2 Causeways, Possible Internal Structure

Comments: The enclosing wall has entrances at the north and south facing two causeways. The wall utilises outcrop for parts of its circuit.

References: RCAHMS no.202, Beveridge 1911, 154.

Ref: WA.8

Name: EILEAN BUIDHE

Island: North Uist

NGR: NF 8963 6861

Location: Islet

Altitude: 5

Dimensions: 45m long

Shape: Irregular

Additional Features: Causeway 120m, 3 Internal Circular Structures, 2 Harbours

Comments: This irregular wall is 1m wide and survives up to 0.8m high.

References: RCAHMS no.206, Beveridge 1911, 56.

Ref: WA.9

Name: DUN LOCH HUNA

Island: North Uist

NGR: NF 813 669

Location: Islet

Altitude: 10

Dimensions: 70 x ?

Shape: Oval

Additional Features: Later Rectilinear Structure, Causeway
30m, Harbour, Annexe

Comments: Much of the structure is obscured by modern shooting butts but some traces of earlier wall footings can be observed.

References: RCAHMS no.204, Beveridge 1911, 185.

Ref: WA.10

Name: DUN NA CEITHIR-EILEANA

Island: North Uist

NGR: NF 8638 6260

Location: Islet

Altitude: 5

Dimensions:

Shape: Irregular

Additional Features: Possible Causeway, 3 Harbours,
Internal Structure

Comments: A small cell abuts the inner side of the wall, c. 2.5m in diameter. The wall survives to 1.8m high and is 1.3m wide.

References: RCAHMS no.304, Beveridge 1911, 166.

Ref: WA.11 **Name: LOCH MOR BALESHARE 1**
Island: North Uist
NGR: NF 7921 6229
Location: Islet Altitude: 5
Dimensions: 9m long Shape: Curved
Additional Features: Causeway 28m

Comments: A massive semi-circular or D-shaped mound occupies part of this islet, surrounded by an outer wall. Three very crudely built cells are built into the outer wall.

References: RCAHMS no.176, Beveridge 1911, 182.

Ref: WA.12 **Name: LOCH MOR BALESHARE 2**
Island: North Uist
NGR: NF 7928 6222
Location: Islet Altitude: 5
Dimensions: 19 x 12 Shape:
Additional Features: Causeway 11m

Comments: The wall around this islet is set 3m back from the water's edge.

References: RCAHMS no.176, Beveridge 1911, 183.

Ref: WA.13 **Name: DUN SCOR**

Island: North Uist

NGR: NF 8439 6209

Location: Islet Altitude: 5

Dimensions: 60 x 40 Shape: Oval

Additional Features: Causeway 70m

Comments: Two intervening islets are crossed by the causeway to this walled site. The wall itself is 1m wide.

References: RCAHMS no.208, Beveridge 1911, 180.

Ref: WA.14 **Name: DUN A GHEADAIS**

Island: North Uist

NGR: NF 9136 5938

Location: Islet Altitude: 5

Dimensions: 26 x 19 Shape: Irregular

Additional Features: Causeway 30m,

Comments: The wall on this site utilises natural outcrop.

References: RCAHMS no.185, Beveridge 1911, 170

Ref: WA.15 Name: LOCH OBISARY A
Island: North Uist
NGR: NF
Location: Islet Altitude: 5
Dimensions: Shape:
Additional Features:

Comments: This is an overgrown steep-sided natural islet with a wall c. 1.8m wide around parts of its perimeter.

References: RCAHMS no.198, Beveridge 1911, 167/9.

Ref: WA.16 Name: LOCH OBISARY D
Island: North Uist
NGR: NF
Location: Islet Altitude: 5
Dimensions: Shape:
Additional Features: Later Rectilinear Structure, Causeway 20m, Harbour

Comments: This is a steep-sided peat-covered natural islet with fragmentary walling.

References: RCAHMS no.198, Beveridge 1911, 167/9.

Ref: WA.17 **Name: LOCH SCADAVAY 1**

Island: North Uist

NGR: NF

Location: Islet Altitude: 5

Dimensions: Shape:

Additional Features: 3 Harbours

Comments: A 1.6m wide wall surrounds this islet.

References: RCAHMS no.207, Beveridge 1911, 159.

Ref: WA.18 **Name: DUN HERMIDALE**

Island: Benbecula

NGR: NF 8262 5236

Location: Islet Altitude: 5

Dimensions: 45 Long Shape: Curved

Additional Features: Causeway 6m, Internal Structures

Comments: The wall appears to have been very substantial although only occupying the landward side of the islet. There appears to have been a cell in the wall at the north-east and possibly a series of structures abutting the inner wall-face.

References: RCAHMS no.363.

Ref: WA.19 **Name:** DUN LOCH DRUIM AN IASGAIR
Island: South Uist
NGR: NF 8036 4348
Location: Islet **Altitude:** 5
Dimensions: 18 x 12 **Shape:** Irregular
Additional Features: Internal Circular Structures

Comments: The encircling wall is c. 1.8m wide and has two opposing entrances. A series of complex entrance features are described by the RCAHMS who class the structure as a Late Dun.

References: RCAHMS no.381.

Ref: WA.20 **Name:** DUN MOR 2
Island: South Uist
NGR: NF 7744 4152
Location: Islet **Altitude:** 5
Dimensions: **Shape:** Irregular
Additional Features: Later Baile Settlement, Causeway

Comments: The original features, if any, are obscured by a late baile settlement over the site.

References: RCAHMS no.383.

Ref: **WA.21** Name: **DUN EILEAN CHREAMCH**

Island: South Uist

NGR: NF 7427 1919

Location: Islet Altitude: 5

Dimensions: 27 Shape: Circular

Additional Features: Causeway 40m

Comments: This site was converted into a walled garden in 1865 obscuring the original structure.

References: RCAHMS no.421.

Ref: **WA.22** Name: **DUN NA KILLE**

Island: South Uist

NGR: NF 7461 1905

Location: Islet Altitude: 5

Dimensions: 40 x 30 Shape: Oval

Additional Features: Causeway 200m, 4 Internal rectilinear Structures, 2 Harbours

Comments: The surrounding wall is set slightly back from the water's edge on this overgrown site. No wall-face is preserved but the rubble spread extends to c. 3m.

References: RCAHMS no.384.

Miscellaneous Structures

Ref: M.1 **Name: LOCH AN DUIN, SHADER 2**
Island: Lewis
NGR: NB 392 543
Location: Islet Altitude: 5
Dimensions: Shape: Circular
Additional Features: Causeway, 40m

Comments: This artificial islet with causeway lies adjacent to, and is clearly earlier than, an atlantic roundhouse in the same loch.

References: Armit 1985.

Ref: M.2 **Name: LOCH CARLOWAY**
Island: Lewis
NGR: NB 1927 4217
Location: Islet Altitude: 0
Dimensions: Shape:
Additional Features:

Comments: This site was a tidal islet where local memory suggested the presence of a structure which was destroyed in the construction of a pier.

References: RCAHMS no.182.

Ref: M.3

Name: NORTH TOLSTA

Island: Lewis

NGR: NB 5 4

Location: Islet

Altitude:

Dimensions:

Shape: Circular

Additional Features: Causeway, Internal Occupation

Comments: A stone and timber islet was revealed in C19th drainage operations. Few details of its structure are recorded but it appears to have had internal timber buildings.

References: Blundell 1913.

Ref: M.4

Name: BREACLETE, BERNERA

Island: Lewis

NGR: NB 1632 3643

Location: Islet

Altitude: 5

Dimensions:

Shape: Circular

Additional Features: Possible Causeway

Comments: This site is a slight stone spread on a partly natural islet, with no sign of walling or substantial structure.

References: Armit 1985.

Ref: M.5 **Name: DUN BHARABHAT CROULISTA 1**
 Island: Lewis
 NGR: NB 0401 3487
 Location: Islet Altitude: 20
 Dimensions: Shape: Irregular
 Additional Features: Later Rectilinear Structure,
 Causeway, 30m

Comments: This is an outcrop islet with a causeway but no sign of structure prior to the rectilinear structure, although prehistoric pottery has been found around the site (Topping pers. comm.).

References: RCAHMS no.75.

Ref: M.6 **Name: LOCH AIRIDH NA LIC**
 Island: Lewis
 NGR: NB 3992 3410
 Location: Islet Altitude: 60
 Dimensions: 10.5 x 8.5 Shape: Circular
 Additional Features: Causeway

Comments: This is a clearly artificial stone islet with no visible structure, although there are local reports of timber structures being exposed during loch drainage operations.

References: RCAHMS no.51.

Ref: M.7 **Name: LOCH ORASAY**

Island: Lewis

NGR: NB 39 28

Location: Islet Altitude: 50

Dimensions: Shape:

Additional Features:

Comments: This artificial islet has not been relocated since originally reported.

References: Blundell 1913, 300/1.

Ref: M.8 **Name: LOCHS PARISH**

Island: Lewis

NGR: NB 3311 2119

Location: Islet Altitude: 5

Dimensions: Shape:

Additional Features: Later Rectilinear Structure, Causeway

Comments: This islet has a causeway but no visible original structure.

References: NMR.

Ref: M.9

Name: LOCH ARNISH

Island: Lewis

NGR: NB

Location: Islet

Altitude:

Dimensions:

Shape:

Additional Features:

Comments: This site was recorded as a stony artificial islet with no visible structure.

References: Blundell 1913.

Ref: M.10

Name: DUN BORAIGEO

Island: Harris

NGR: NF 0307 8372

Location: Coastal

Altitude: 5

Dimensions:

Shape: Curved

Additional Features:

Comments: A 6m long arc of walling is preserved on this coastal outcrop but there is insufficient space for this to have formed part of a roundhouse of any size.

References: RCAHMS no.143.

Ref: M.11

Name: EILEAN AN DUNAIN

Island: North Uist

NGR: NF 8956 7997

Location: Islet

Altitude: 0

Dimensions: 11

Shape: Circular

Additional Features:

Comments: This is a stony mound on a rocky tidal islet some 1.5m in height. There is no visible structure preserved although the RCAHMS did report substantial quantities of stone so the site cannot be discounted as a destroyed roundhouse.

References: RCAHMS no.120.

Ref: M.12

Name: DUNAN RUADH

Island: North Uist

NGR: NF 8463 7657

Location: Islet

Altitude: 5

Dimensions:

Shape:

Additional Features:

Comments: The place name suggests former occupation although there is no visible sign preserved.

References: RCAHMS no.323, Beveridge 1911, 224.

Ref: M.13 **Name: EILEAN DOMHNUILL**
 Island: North Uist
 NGR: NF 7468 7532
 Location: Islet Altitude: 5
 Dimensions: Shape:
 Additional Features: Causeway 41m

Comments: This site is an artificial stony islet with a causeway. On excavation it has proved to be wholly of Early Neolithic date.

References: Armit 1986/89.

Ref: M.14 **Name: LOMBAIDH**
 Island: North Uist
 NGR: NF 7 7
 Location: Islet Altitude: 5
 Dimensions: Shape:
 Additional Features: Later Occupation

Comments: This site is a tidal islet with several relatively recent rectilinear structures.

References: Beveridge 1911, 214.

Ref: M.15 **Name: EILEAN AN ACAIRE**

Island: North Uist

NGR: NF 7 7

Location: Islet

Altitude: 5

Dimensions:

Shape:

Additional Features:

Comments: This tidal islet had traces of former walling which seemed too slight to represent a substantial structure.

References: Beveridge 1911, 214.

Ref: M.16 **Name: OBAN SKIBINISH 2**

Island: North Uist

NGR: NF 83 75

Location: Islet

Altitude: 0

Dimensions:

Shape: Irregular

Additional Features:

Comments: This tidal islet had traces of walling on its south-east side which seemed too slight to represent a substantial structure.

References: RCAHMS no.182, Beveridge 1911, 220/1.

Ref: M.17

Name: DUNAN DUBH

Island: North Uist

NGR: NF 8904 7454

Location: Islet

Altitude: 5

Dimensions:

Shape:

Additional Features: Causeway 40m, Outer Wall

Comments: This site is a mound with fragmentary traces of a surrounding wall.

References: RCAHMS no.200, Beveridge 1911, 149.

Ref: M.18

Name: DUN LOCH NA GEARRACHAN A

Island: North Uist

NGR: NF 7659 7440

Location: Islet

Altitude: 5

Dimensions: 10 x 8

Shape: Oval

Additional Features: Causeway 35m

Comments: This site is a stony mound with no visible structure.

References: RCAHMS no.195, Beveridge 1911, 198, Blundell 1913, 298.

Ref: M.19 **Name: DUN LOCH NA GEARRACHAN B**
 Island: North Uist
 NGR: NF 7674 7419
 Location: Islet Altitude: 5
 Dimensions: 10 x 7.6 Shape: Oval
 Additional Features: Causeway 25m

Comments: This site is a stony mound with no visible structure.

References: RCAHMS no.195, Beveridge 1911, 199, Blundell 1913, 298.

Ref: M.20 **Name: DUN LOCH AN DUIN**
 Island: North Uist
 NGR: NF 8927 7416
 Location: Islet Altitude: 5
 Dimensions: 14 x 11 Shape: Oval
 Additional Features: Causeway 60m

Comments: This site is a partly artificial islet utilising outcrop rock. It is connected to the shore by a zigzag causeway

References: RCAHMS no.201, Beveridge 1911, 152.

Ref: M.21 **Name: LOCH NAN GEIRRANN**
Island: North Uist
NGR: NF 8465 7278
Location: Islet Altitude: 5
Dimensions: 5 Shape: Circular
Additional Features: Causeway

Comments: Pottery and hammerstones were found on this site, which lacks visible structure. A probable causeway runs to the shore across a low sandy spit.

References: Beveridge 1911, 222.

Ref: M.22 **Name: BAC A STOC**
Island: North Uist
NGR: NF 9006 7244
Location: Islet Altitude: 0
Dimensions: 26 x 12 Shape: Oval
Additional Features:

Comments: This is a rocky tidal islet with no trace of structure, although slight walling was reported by Beveridge.

References: RCAHMS no.303, Beveridge 1911, 153.

Ref: M.23

Name: DUN EASHADER

Island: North Uist

NGR: NF 80 72

Location: Islet Altitude: 30

Dimensions: 16 x 12 Shape: Oval

Additional Features: Causeway?

Comments: This is an artificial islet for which the causeway is no longer visible.

References: RCAHMS no.194, Beveridge 1911, 218/9.

Ref: M.24

Name: DUN LOCH NA CANLICH

Island: North Uist

NGR: NF 9640 7192.

Location: Islet Altitude: 5

Dimensions: Shape:

Additional Features:

Comments: Despite a local tradition of a site here there is no visible trace.

References: Beveridge 1911, 149.

Ref: M.25 **Name: EILEAN MOSSAM**

Island: North Uist

NGR: NF 8723 7154

Location: Islet Altitude: 10

Dimensions: 23 x 16 Shape: Oval

Additional Features:

Comments: This is a somewhat dubious reference to a possible occupied islet of which no trace has since been relocated.

References: Beveridge 1911, 154.

Ref: M.26 **Name: DUN LOCH VAUSARY**

Island: North Uist

NGR: NF 7489 7019

Location: Islet Altitude: 10

Dimensions: Shape:

Additional Features: Causeway 60m

Comments: This is an overgrown islet some 18m in diameter with no visible trace of structure.

References: RCAHMS no.317, Beveridge 1911, 189.

Ref: M.27 **Name: LOCH NA BUAILE**
Island: North Uist
NGR: NF 9073 7004
Location: Islet Altitude: 5
Dimensions: 29 x 10 Shape: Irregular
Additional Features: Causeway 35m

Comments: This is a high, wooded islet with no trace of structure.

References: RCAHMS no.301, Beveridge 1911, 155.

Ref: M.28 **Name: OB NAN STEARNAIN**
Island: North Uist
NGR: NF 9117 6873
Location: Islet Altitude: 10
Dimensions: Shape:
Additional Features:

Comments: Walling was recorded on this rocky outcrop islet but had disappeared by 1965.

References: Beveridge 1911, 156.

Ref: M.29

Name: LOCHMADDY

Island: North Uist

NGR: NF 9042 6864

Location: Islet

Altitude: 5

Dimensions: 10 x 9

Shape: Circular

Additional Features:

Comments: This islet has a stone spread which may be natural and the causeway reported by Beveridge appears very likely to be natural.

References: Beveridge 1911, 157.

Ref: M.30

Name: LOCHMADDY B

Island: North Uist

NGR: NF 9003 6763

Location: Islet

Altitude: 10

Dimensions: 12.8 x 7.3

Shape:

Additional Features: Causeway

Comments: No visible structure is apparent on this islet site.

References: Beveridge 1911, 160.

Ref: M.31 **Name: DUN DEORAVAT**
Island: North Uist
NGR: NF 8889 6609
Location: Islet Altitude: 5
Dimensions: 12 x 3.5 Shape:
Additional Features: Causeway?

Comments: The very small size of this islet makes it unlikely that it was ever occupied by a substantial structure unless loch levels have changed greatly.

References: Beveridge 1911, 159.

Ref: M.32 **Name: ARD BHEAG**
Island: North Uist
NGR: NF 9067 6425
Location: Islet Altitude: 5
Dimensions: Shape: Circular
Additional Features:

Comments: This site survives a grassed over, low mound on a tidal islet.

References: Beveridge 1911, 162.

Ref: M.33

Name: LOCH MOR BALESWARE 4

Island: North Uist

NGR: NF 7903 6208

Location: Islet

Altitude: 5

Dimensions:

Shape: Irregular

Additional Features: Causeway 42m

Comments: A massive causeway leads out to an artificial stone islet with no trace of structure.

References: RCAHMS no.176, Beveridge 1911, 183.

Ref: M.34

Name: LOCH MOR BALESWARE 3

Island: North Uist

NGR: NF 7908 6202

Location: Islet

Altitude: 5

Dimensions:

Shape: Irregular

Additional Features: Causeway 17m

Comments: A short causeway leads to an apparently natural islet with no trace of structure.

References: RCAHMS no.176, Beveridge 1911, 183.

Ref: M.35 **Name: DUN LOCH AN IASGAICH**
Island: North Uist
NGR: NF 82 62
Location: Islet Altitude: 5
Dimensions: Shape:
Additional Features: Causeway 20m

Comments: Very little information is available on this site which appears to be a causewayed islet with little evidence for a major stone structure.

References: Beveridge 1911, 181.

Ref: M.36 **Name: EILEAN NAN TIGHEAN**
Island: North Uist
NGR: NF 8169 5971
Location: Islet Altitude: 5
Dimensions: Shape:
Additional Features: Later Occupation, Causeway 30m

Comments: This is a causewayed islet with no evidence for primary prehistoric occupation.

References: Beveridge 1911, 288.

Ref: M.37 Name: DUN LOCH AN FHAING

Island: North Uist

NGR: NF 8450 5757

Location: Islet Altitude: 5

Dimensions: Shape:

Additional Features: Causeway?

Comments: This site survives as a low stony mound in the centre of a loch.

References: RCAHMS no.308.

Ref: M.38 Name: DUN LOCH HORNERAY

Island: North Uist

NGR: NF 8653 5720

Location: Islet Altitude: 10

Dimensions: Shape:

Additional Features: Causeway?

Comments: This is an islet with a low stony spread.

References: Beveridge 1911, 175.

Ref: M.39**Name: DUN BAN, GRIMSAY 2**

Island: North Uist

NGR: NF 8597 5665

Location: Islet

Altitude: 10

Dimensions:

Shape:

Additional Features: Causeway?

Comments: This site is an overgrown rocky islet with slight walling filling gaps in the outcrop.

References: RCAHMS no.307, Beveridge 1911, 175.

Ref: M.40**Name: DUN LOCH A MHUILINN**

Island: North Uist

NGR: NF 8737 5553

Location: Islet

Altitude: 15

Dimensions:

Shape: Oval

Additional Features: Causeway

Comments: The causeway to this islet utilises two intervening islets. All of the islets have low stony spreads.

References: RCAHMS no.306, Beveridge 1911, 175.

Ref: M.41 Name: SRUATHAN BEAG, RONAY

Island: North Uist

NGR: NF 8972 5520

Location: Islet Altitude: 10

Dimensions: Shape:

Additional Features: Causeway?

Comments: A possible submerged causeway leads out to an islet with no apparent structure.

References: RCAHMS no.305, Beveridge 1911, 177.

Ref: M.42 Name: LOCH OBISARY B

Island: North Uist

NGR: NF

Location: Islet Altitude: 5

Dimensions: Shape: Circular

Additional Features:

Comments: This is a partly submerged stony mound with traces of slight walling.

References: RCAHMS no.198, Beveridge 1911, 167/9.

Ref: M.43 **Name: GRAMSDALE**

Island: Benbecula

NGR: NF 8121 5486

Location: Islet Altitude: 5

Dimensions: Shape:

Additional Features: Causeway

Comments: The site is reported as lying near the west shore of Loch Olabhat, Benbecula, connected to the shore by a submerged causeway. No further details are available.

References: NMR.

Ref: M.44 **Name: DUN BOROSDALE**

Island: Benbecula

NGR: NF 7814 5285

Location: Islet Altitude: 5

Dimensions: Shape:

Additional Features:

Comments: This site is a submerged islet, now impossible to verify without underwater survey. It was reported as being vegetation covered and locally known as a dun.

References: RCAHMS no.364.

Ref: M.45 **Name: DUN SAIBH**

Island: Benbecula

NGR: NF 8638 4978

Location: Altitude: 5

Dimensions: Shape:

Additional Features:

Comments: No details are known of this site which may not be an antiquity.

References: NMR

Ref: M.46 **Name: DUN LOCH AN DUIN, MHOIR**

Island: South Uist

NGR: NF 7593 4671

Location: Islet Altitude: 5

Dimensions: Shape:

Additional Features:

Comments: The site of this islet is now occupied by a croft in a drained loch.

References: RCAHMS no.428.

Ref: M.47

Name: DUN LOCHAN NAN CARRANAN

Island: South Uist

NGR: NF 7838 4584

Location: Islet

Altitude: 5

Dimensions: 13 x 12

Shape: Oval

Additional Features:

Comments: This site appears to be a substantially artificial islet with no trace of walling.

References: RCAHMS no.429.

Ref: M.48

Name: LOCH CEANN A BHAIGH

Island: South Uist

NGR: NF 76 30

Location: Islet

Altitude: 5

Dimensions:

Shape:

Additional Features:

Comments: This site was reported as a crannog to Blundell but not visited by him and has not since been relocated.

References: Blundell 1913, 295.

Ref: **M.49** Name: **DUN LOCH AN EILEAN**

Island: South Uist

NGR: NF 7450 2376

Location: Islet Altitude: 5

Dimensions: Shape:

Additional Features: Causeway

Comments: This is an overgrown and inaccessible islet with a partly natural submerged causeway.

References: RCAHMS no.419.

Ref: **M.50** Name: **DUN SGEIR GHLAS**

Island: South Uist

NGR: NF 7515 2091

Location: Islet Altitude: 5

Dimensions: 17 Shape: Circular

Additional Features: Causeway

Comments: This site is an artificial islet, some 1.5m high with no sign of actual structure.

References: RCAHMS no.422, Blundell 1913, 294.

Ref: M.51

Name: DUN AN DUICHAL

Island: South Uist

NGR: NF 7431 1885

Location: Islet

Altitude: 5

Dimensions:

Shape:

Additional Features: Later Rectilinear Structures

Comments: This artificial islet has no visible causeway and no structure other than a secondary small rectilinear structure.

References: RCAHMS no.431.

Ref: M.52

Name: LOCH ARD, BORNISH

Island: South Uist

NGR: NF

Location: Islet

Altitude:

Dimensions:

Shape:

Additional Features:

Comments: This artificial islet was recorded by Blundell but has not since been relocated.

References: Blundell 1913, 294.

Appendix FiveStructural Data used in Chapter TwelveAtlantic Roundhouses

Mean = Mean external diameter (m)

Wall% = Wall base percentage

Int = Internal diameter (m)

Area = Internal area (m²)

North Uist

Site Name	Mean	Wall%	Int	Area
Dun an Sticer	18.5	34.1	12.2	116.9
Dun Iosal an Duin				
Rudh an Duin	24	41.7	14	153.94
Dun a Ghallain				
Dun Rosail				
Eilean a Ghallain	12.75	40	7.65	45.96
Dun Thomaidh	14.6			
Oban Skibinish 1				
Dun Skellor	18.5			
Dun Scolpaig				
Dun Toloman				
Oban Trumisgarry				
Garry Iochdrach	14.6	46	7.9	49.02
Cnoc a Comhdhalach	11.6	39.7	7	38.48
Dun na Mairbhe	18.6	62.4	7	38.48
Dun Bru				
Eilean Maleit	16	50	8	50.27
Dun Aonghais				
Dun Torcuill	17.5	34.3	11.5	103.87
Buaile Risary				
Dun Loch na Caiginn	12			
Dun Loch Cnoc nan Uan				

Dun Grogarry	18	55.6	8	50.27
South Clettraval	13			
Dun Mhic Raouill	12.75	42.7	7.3	41.85
An Chaisteil				
Dun Scarie				
Sithean Tuath				
Srath Beag an Duin	12			
Eilean Dubh	13			
Dun Loch Shanndaigh				
Dun Steingarry				
Dun Leiraray				
Dun Loch Hunder	11.5	43.5	6.5	33.18
Dun Loch nan Strubhan				
Dun Nighean R. Lochlainn	10			
Dunan Mor				
Dun Bailleray				
Dun Mor				
Dun na Dise	17	47.1	9	63.62
Dun na h Ola				
Beinn na Coille	19.75			
Eilean Scalaster	9	51.1	4.4	15.21
Dun Ban Hacklett	9			
Loch Obisary C	20			
Dun an t-Siamain	13.4			
Dun Loch nan Gealag				
Dun Cheirein				
Rudh an Duin Eaval				
Dun Ban Grimsay 1	15	53.3	7	38.48

Barra

Site Name	Mean	Wall%	Int	Area
Dunan Ruadh				
Dun Scurrival	15			
Dun Chlif	14	46	7.5	44.18
Dun Cuier	19.5	53.8	9	63.62
Dun Loch an Duin	14.9	49	7.6	45.36
Baigh Hirivagh 1				
Baigh Hirivagh 2	12			
Dun Loch nic Ruaidhe				
Dun na Kille	16			
Dun an t'Sleibh				
Bal na Craig	16	56.3	7	38.48
Dun Ban	18	44.4	10	78.54
Dun Mhic Leoid				
Beinn Tangavat	16.5	36.4	10.5	86.59
Dun a Chaolais	16	45	8.8	60.82
Dun Vatersay	15			
Dun Sandray	14.1	41.1	8.3	54.11
Dunan Ruadh Pabbay				

Wheelhouses

Piers = Number of piers

Diameter = Internal diameter

Cent. = Central area diameter

Area = Internal area

Site Name	Piers	Diameter	Cent.	Area
Cnip 1	8	7	3.2	38.5
Cnip 2		7		38.5
Udal	11	9.8	6	75.4
Foshigarry A		10.5	6	86.6
Foshigarry B		10.5	5.5	86.6
Foshigarry C				
Bac Mhic Connain	8	9	3.5	63.6
Sollas	12	12	7.5	113.1
Garry Iochdrach	7	7.9	4	49
Cnoc a Comhdhalach	7	7	3.5	38.5
Eilean Maleit	9	8	3.6	50.3
Clettraval	8	7.5	4.3	44.2
Bruach Ban	8	10		78.5
Bruthach a Tuath	10	8.8	6	60.8
Hornish Point		7.5		44.2
A Cheardach Mhor	11	10.8	6.8	91.6
A Cheardach Bheag	12	9	5.5	63.6
Usinish	10	9	5	63.6
Kilpheder	11	8.8	5.5	60.8
Allasdale	7	8	4	50.2