

Coastal Assessment Survey Barra and Watersay



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Volume 1



Prepared for Historic Scotland by Keith Branigan & John Grattan



SEARCH



The University
of Sheffield

Cover.

Dun Clieff (site 3.5.3.12.) on a tidal islet off the west coast of Barra.

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The photographs in the report are the work of Keith Branigan, Patrick Foster, David Gilberston and John Grattan. The maps were produced by Keith Branigan and John Grattan and manipulated by James Wood. Plans and field sketches were produced by various survey team members.

1: INTRODUCTION.

1.1. BACKGROUND.

This report presents the results of a rapid coastal erosion assessment around the entire coasts of the Isle of Barra and the Isle of Vatersay, including tidal islets. In addition, a catalogue of sites and monuments within the coastal zone on the offshore islands of Fuiay and Bìruaslum is included as an appendix in volume 2. These islands were surveyed archaeologically on an 'opportunistic' basis, but geomorphologists were not available at the time to make a detailed report on coastal erosion on these two islands. The aims of the project were three-fold: to assess the extent and affects of coastal erosion and related processes on the coastal zone, to record all sites and monuments with that zone, and to assess the erosional threat to those sites and monuments.

The survey was incorporated into the organisation of the SEARCH* project of the Department of Archaeology & Prehistory, University of Sheffield, and fieldwork (which included the four remaining uninhabited islands south of Vatersay) was conducted over a period of four three-week seasons between 1991 and 1994. A short-stretch of coastline at the south-west corner of Barra had been surveyed in March 1989 in advance of the building of the Vatersay causeway approach road, and the results of this survey were incorporated into the coastal erosion survey of 1991-94.

The fieldwork was undertaken by a team comprising both archaeologists and geomorphologists, the former led by Keith Branigan and the latter by David Gilbertson, and funded by a series of grants from Historic Scotland.

* Sheffield Environmental and Archaeological Research Campaign in the Hebrides.

1.2. PROJECT AIMS.

The erosion of the Scottish coastline, and in particular its impact on the archaeology of the coastal zone, has been discussed by Ashmore (1994), who highlighted sea level change, coastal dune system instability, and human impact, as major areas of concern. The survey therefore had three aims:

To describe and define the geomorphology of the coastline of Barra and Vatersay, and to assess its present and predict its future erosional condition.

To identify and record all sites and monuments within the coastal zone.

To assess the impact of coastal erosion, and any other destructive processes, on these sites and monuments, and to recommend possible action where necessary.

1.3. REPORT FORMAT.

The format of this report is based on that used for the Ullapool to Lochinver Coastal Assessment Survey Report (Long 1996), which was recommended as a model by Patrick Ashmore. It is therefore divided into two volumes.

Volume 1 contains introductory information (Section 1), a description of the methodology employed by both the archaeologists and the geomorphologists (Section 2), three annotated colour maps with accompanying summary descriptions for each section of the study area (Maps 1-7) showing geomorphology, erosional status, and archaeology (Section 3), and an analysis and discussion of the data presented (Section 4). The volume concludes with a summary of conclusions and recommendations.

Volume 2 provides more detailed information on the sites and monuments of each area in the form of a site gazetteer, together with surveyed plans of a small selection of significant sites, and either field sketches or photographs of a further selection of sites.

1.4. THE STUDY AREA.

1.4.1. Introduction.

The study area includes the entire coastline of the Outer Hebridean islands of Barra and Vatersay, and includes the islands of Orosay adjacent to the Eoligarry headland and Bìruaslum, which lies off the far western edge of Heishival Mor on Vatersay. Other minor islets were visited if they were accessible on foot at low tide. The relevant Ordnance Survey maps are sheets NF 60/70 and NL 69/79.

1.4.2. Extent and Dimensions.

The coastal strip is defined as the inter-tidal zone, the area exposed between the mean high (HWM) and low (LWM) water marks and a 50 metre wide corridor above the HWM. In some areas dangerous and precipitous cliffs lead to the survey corridor being extended to 100 metre inland from the HWM, or cliff edge. The position of flotsam and jetsam and wave rounded boulders was also noted as a guide to the real extent of the influence of storm, driven waves. The assessment of geomorphology, geology and erosion class necessarily drew upon a survey of a much wider area, the coastal zone cannot be considered in isolation from such features as the gradient and condition of adjacent hillslopes, lithologies, sand dunes and machair pastures. This reconnaissance of the potential coastal-erosion archaeological-hazard status of sectors of coast is subjective. It is based upon field observations of coastlines and sites, and examines their locations in relationship to observable geomorphological processes or features. This assessment depends upon the identification of geomorphic processes such as wave erosion, deflation, landslip, collapse, topple etc. , which are seen to be taking place at the moment, or to have happened in the 'recent past'. Obviously coastal erosion in one form or another, with varying degrees of intensity, is taking place all the time. The time span offered by the concept of the 'recent past' provides a better time framework for estimating the broad range of climatic, oceanographic and geomorphic conditions that can be anticipated to recur in a 1-50 year planning time-frame, than might be obtained from observations of only present-day events.

The survey did not extend to the marine zone, defined as the area of sea floor continuously covered by water under normal circumstances.

As noted elsewhere the measurement of any stretch of coastline is extremely difficult and the figures quoted here are necessarily approximate (Ashmore 1994, 25 - 27), nor do the map miles reflect the extremely difficult nature of much of the country traversed.

1.4.3. Description.

The study maps have been divided into 7 sections for the purpose of producing a series of 1:25000 maps. Each section produces maps of coastal geomorphology, erosion status and the location of archaeology in the coastal zone. These sections are divided between Barra, sections 1 - 5 and Watersay, sections 6 - 7. These are described as follows:

Section 1. *The Eoligarry headland.* 12.1 km.

This section covers the Eoligarry headland, comprising a series of extensive shell-sand beaches, the offshore island of Orosay and the rocky headland of Scurrial. As such it encompasses most of the coastal types and conditions found on Barra and Watersay.

Section 2. *Crannag - Meall nam Bùth.* 18.5 km.

This section of coastline runs south along the eastern coast of Barra from the southern edge of Tràigh Mhór, to the rocky inlet of Meall nam Bùth. A very complex and indented coastline, there are many sheltered sea lochs which together add up to a considerable length of coastline. Mainly low lying surrounded by wave cut platforms and rocky beaches. Soils are poor and waterlogged.

Section 3. *Meall Nam Bùth - Castle Bay.* 10.1 km.

Running south from Meall nam Bùth, this section of coastline is marked by either low lying coastal platforms or by steep and precipitous headlands, both of which support peat soils over erosion resistant gneiss bedrocks. The coast edge is mainly marked by boulder beach, wave cut platform and very rarely shell sand beaches. The island of Orosay is also included in this section.

Section 4. *Castle Bay - Aird na Gregaig.* 10.0 km.

This section runs west around the coast from Castle Bay, around the steep headland formed by Ben Tangaval to Aird na Gregaig, which lies by Halaman bay on the west coast of Barra. This is an exposed and windswept landscape, in consequence of which the geomorphological processes that operate are considerable and tend to have removed any soft sediments within reach of the waves. The cliffs here, particularly around Cuilachmore are over 30 metres high.

Section 5. *Halaman Bay - Scalavaslain.* 11.0 km.

This section runs north to Greian head and then east to Scalavaslain, which lies Tràigh Eais. In essence the section splits into two parts. The first which runs north to Greian Head is dominated by shell sand beaches, machair and sand dunes. The second which runs from Greian Head to Scalavaslain is essentially dominated by gneiss headlands and hillsides which fall precipitously to the sea.

Section 6. North Watersay

14. 1 km.

North Watersay is dominated by the great hill of Heishival Mor and by a series of headlands.

Section 7. South Watersay.

12. 2 km.

A much gentler landscape than north Watersay, this section comprises the sand dunes and machair of Watersay Bay and the precipitous headlands of Ben Rulibrek and Am Meall.

1.5. PREVIOUS ARCHAEOLOGICAL RESEARCH.

Prior to the survey reported here there had been no systematic archaeological research or survey conducted on either island. The RCAHM in 1924 recorded just six of the sites listed in our gazetteer, and to these can be added one further site marked on the 1:25,000 OS map.

Concurrent with the coastal erosion survey reported here, SEARCH has conducted intensive field survey covering the whole of Watersay and 80% of Barra. A gazetteer of the sites and monuments discovered during these surveys will appear in "*From Barra to Berneray (SEARCH Vol.5)*" (Branigan and Foster forthcoming). Sites recorded during the Watersay approach road survey, and subsequently during the survey of the whole of the Tangaval peninsula, have already been published in Barra: "*Archaeological Research on Ben Tangaval*" (Branigan and Foster 1995). This volume also includes the excavation report on a number of sites within the coastal erosion zone which were excavated in advance of the construction of the Watersay approach road, including the important Neolithic site at Alt Chrisal.

Because the coastal erosion surveys were concurrent with surveys of the remainder of the islands' surface, sites identified in the coastal erosion were given numbers as part of the total island sequence. These numbers, which take the form of a zone code letter and a number (e. g. A16 or VN7) are given in this report in brackets, immediately following the description of site type. E.g. site 1, on map 1.3. is also E26 in the catalogue of sites for the entire island; it therefore appears on the summary sheet 3.1.3. as 1. Tràigh Eais. Shipwreck (E26).

2: METHODOLOGY.

2.1. INTRODUCTION.

This section briefly describes the methodologies used by both the geomorphologists for the study of the extent and nature of coastal erosion (section 2. 2) and by the archaeologists for the survey of sites and monuments (section 2. 3). In general the two teams worked independently in the field, the nature of their respective tasks requiring different rhythms of work which were not compatible. However, both Prof. Gilbertson and Dr. Grattan joined the archaeological team in some sections of the survey, and the erosional threat to each site within the coastal zone was discussed between Prof. Gilbertson and Prof. Branigan.

2.2. GEOMORPHOLOGY AND COASTAL EROSION SURVEY.

A team of two, Dr. J. P. Grattan and Prof. D. D. Gilbertson carried out the geomorphological and coastal erosion survey. Normally these operated as a team, but where the sections of coastline were judged safe they were surveyed by either member working individually. Contentious or difficult areas, which arose from such surveys, were revisited. The survey method employed was a modification of that described by Grainger and Kalaugher (1990) which dealt with the recognition and evaluation of coastal landslip hazards and is described in detail in Gilbertson *et al.*, (1996). Grainger and Kalaugher provided a rapid, qualitative approach to the problem of surveying erosion at the coast in a planning context. Their method emphasised the importance of the nature and relationships of the deposits present for understanding possible future coastal erosion. Two particular benefits in the Hebridean context were that the approach had been originally devised for coastlines where relatively weak superficial deposits rest on resistant lithologies, and the survey method could be used in reasonable safety in difficult terrain and hostile weather. This approach was, therefore, particularly relevant to the practicalities of exploring Outer Hebridean coastlines; the need to map rapidly in adverse environments and weather conditions; and, where necessary, to the detect and evaluate the status of sites located upon tills, or within other peats or blown sands, deposits typically resting upon relatively resistant gneissose bedrocks. The geomorphologists attempted to place the coastal erosion survey within the wider context of environmental change in the Outer Hebrides, and consulted widely the relevant literature and specialists. This process resulted in the production of a major academic work, "The Outer Hebrides: the last 14 000 years" edited by Gilbertson, Grattan and Kent (a plant specialist), which was published in 1996.

The survey procedure emphasised the following main points:

1. To judge whether or not a section of the shorelines was experiencing negligible erosion in terms of the goals and time frame of this survey - i. e. there appears to be a stable shoreline or otherwise.
2. To identify the character of the sum of the lithologies of the present bedrocks, or the superficial deposits and their geomorphic relationships in order to assess their likely propensity to be lost by one or other mechanism. Artificial, constructed, or otherwise deliberately protected shorelines have also been recognised.
3. The nature of the wide range of erosional agencies which are active in this geoarchaeological context has been emphasised - for example, direct wave impact, landslips and

other types of mass-movement, wind erosion, and the complex effects of animals and people - and are designated by letter suffixes.

To identify whether coastal processes ('broadly-defined') are factors leading to coastal accretion, rather than erosion in particular circumstances - a result which would lead to higher degrees of protection for the archaeological remains than existed previously.

The survey of each section of coastline was reported to and discussed with the members of the archaeological survey teams.

2.3. ARCHAEOLOGICAL FIELD SURVEY METHODS.

The survey area consisted of the intertidal zone and a 50m wide inland zone bordering the HWM. Where precipitous cliff slopes were met with (e. g. on the west coast of Vatersay) the zone was extended to 100m from the HWM, to include shallower slopes and level areas immediately behind the cliff top which were under threat of erosion.

The field survey was conducted by a team of six student field-walkers, supervised by an experienced field archaeologist, under the direction of Prof. Branigan. The team therefore normally consisted of eight persons, and was divided into two groups each of three walkers and a senior archaeologist. Each group carried its own tapes, maps and record cards, and each senior archaeologist carried a camera. The division into two groups was essentially for the purposes of recording. Whenever a site or monument was identified the group within whose corridor it fell would record it, one person being responsible for the making out the record card and the remaining two for taking the principal dimensions. The senior archaeologist in the group was responsible for assessing the form, nature, and likely age of the site or monument, for taking photographs and ensuring that key features and dimensions were recorded. As director of the survey, Prof. Branigan saw every site which was identified and took additional notes where necessary which were later added to the record cards.

The actual survey walking was conducted by the team of six students walking in line at intervals of approximately 8m, with the two senior archaeologists 20m behind, checking that no site had been overlooked.

The information recorded for each site or monument is as seen on the card (fig. 2. 1), the reverse of the card being used for a measured field sketch where appropriate.

Because the coastal erosion survey was incorporated into a total survey of the two islands which has taken place over a period of ten years, it has been possible to revisit some sites in the coastal zone and record them in greater detail and precision, including full EDM survey. Full descriptions and plans of such sites will appear in SEARCH volumes 5 and 6, but some additional information and more detailed plans are provided in this report (volume 2).

2.4. RECORDING CRITERIA.

We set out to record all the visible material remains of human activity in the coastal zone subject to certain typological and chronological exclusions. We excluded any site the establishment of which we had good reason to place subsequent to AD 1900. There were of course many sites still in use or occupation after 1900, which were included. We also

excluded boundary walls and banks the course of which ran predominantly outside the coastal zone but which either terminated at, or close to, the HWM.

Given the nature of the terrain and the vegetation cover, most 'sites' were inevitably identified by some structural remains, but in the limited areas of machair on Barra and Vatersay, and in areas of rabbit infestation, a small number of sites were identified by surface spreads of artefactual material.

Where a discrete site extended outside the coastal zone, the entire site was recorded and is reported here. However, there were some extensive sites, notably 18-19th century settlements, which extended some distance outside the coastal zone and in these cases the gazetteer of sites in volume 2 refers the reader to the publication of such sites in *From Barra to Berneray* (Branigan and Foster forthcoming).

2.5. SURVEY CONDITIONS.

Since this survey was conducted over a period of four years, the conditions obviously varied considerably. In each year survey took place in the last two weeks of May and the first week of June, a time of relatively low rainfall and high temperatures, long daylight hours and maximum sunshine, and before vegetation growth (particularly ferns) reaches its zenith. Surface and general visibility was therefore generally good.

2.6. SURVEY COVERAGE AND EFFECTIVENESS.

There were no gaps in our coverage of the coastal zone, except of course for steep and precipitous cliffs which, by definition, and are unlikely to contain sites and monuments.

As noted under 2. 4 above, visibility was generally good, and the identification rate of sites with surface traces of structures should be very high. Reduced turf structures may have been missed, though some were certainly recorded. The scarcity of timber for building in the Western Isles means that there were likely to be few pre-20th century timber buildings to concern us. Again, however, some late 19th century timber building sites were located by their platforms, and early 20th century photographs confirm their existence.

In the areas of machair, exposed sections revealed some sites and others were noted in areas of deflated dunes. But there are undoubtedly sites buried beneath some of the big dune systems, like those at Tràigh Eais, Barra, and Bagh Siar, Vatersay, which are of relatively recent origin (Gilbertson, Grattan and Pyatt 1996, 111). Survey outside the coastal zone at Tràigh Eais has revealed several midden sites, mainly as a result of rabbit disturbance, and similar sites probably exist within the 50m survey zone, buried beneath the huge, shifting dunes which fringe the western shore. Similarly, where blanket peat extends into the survey zone we must assume that some sites may be totally covered and invisible on the surface. Fortunately such areas are few, and where they occur the peat is often shallow and buried stone structural remains may still be visible.

Overall, we believe that the rate of site identification was high and that only in a very few machair locations, mostly associated with recent dune systems, are sites likely to lie unrecorded.

3: SURVEY RESULTS.

This section of the report presents the results of the geomorphological and erosional studies, and a summary of the archaeology. Each length of coast is recorded in four sub-sections:

- 1) A brief summary and analysis of geomorphology, erosion, and archaeology.
- 2) A map and facing commentary on hinterland geology and coastal geomorphology.
- 3) A map and facing commentary on erosion status.
- 4) A map and facing summary gazetteer of the built heritage and archaeology.

Sub Section 1: Summary and Analysis.

This provides an overview of the geology, geomorphology, erosion status and archaeology of each length of coast. It should be noted that the coastline has been divided into lengths for convenience of presentation, so that each length does not necessarily represent a natural landscape unit. These summaries provide the more detailed background on which the overall analysis and discussion in section 4 of the report is based.

Sub Section 2. Commentary and Map: Hinterland Geology and Coastal Geomorphology.

The following characteristics have been noted for each section:

Name, grid reference, approximate length, bed rock where visible, soil lithology where visible, soil type, coast edge and general description.

Some changes have been made to the characteristics set out by Historic Scotland (1996):

- "Peat / Soil over bedrock" replaces the category "Drift, boulder clay over visible rock"
- "Mainly rock platform / boulders" replaces the category "Mainly rock platform."

In many cases this survey was the first detailed examination of the geomorphology of the coastline, and is certainly the first to cover the entire coastline; as a result many insights were gained into the geomorphology of the coastal zone and these are discussed at length.

Sub Section 3: Erosion Class.

The following characteristics have been noted for each section:

Name, grid reference, approximate length, bed rock type, soil type, the nature of the threat and the vulnerability of the coastline and / or monuments to erosion.

This attempts to define the precise nature of the erosion threat in different landscape sections. This discussion is supplemented by reference to type sites.

Sub-Section 4: Built Heritage and Archaeology.

The following information is listed for each site:

Name, site type, grid reference, suggested age, condition and action required.

Name: In all cases the name given is the nearest recorded place-name on the 1:25000

map. Although there are more specific place-names for some locations, as provided orally by crofters, our experience is that these names can vary from one oral source to another, and in many cases are nowhere documented in written records. To avoid future confusion we have therefore avoided using such place-names.

Site type: Some descriptions are specific (e. g. blackhouse, kerbed cairn), whereas others are more generalised (e. g. rectangular building, cairn). This obviously reflects our varying confidence in ascribing a precise description to a site according to its visibility and preservation. More detailed information and discussion of site type is obviously to be found in the site gazetteer in volume 2. One of the most prolific types of site found are small circular and sub-circular stone settings and structures, sometimes free-standing and sometimes set against rock-faces or large boulders. We call these 'shelters' and to reduce repetition to a minimum we have constructed a simple typology (types A to E) as seen in fig. 3. 1.

Grid reference: All sites are given an 8 figure NGR.

Suggested age: We ascribe periods of usage on the basis of form, degree of embedding and artefactual material where available. Even though the periods we use are broad, some sites and monuments cannot easily be assigned to a period, in which case we note 'date uncertain'. The periods we use are:

- **Earlier prehistoric:** (Neolithic - Bronze Age)
- **Later prehistoric:** (Iron Age - Norse)
- **Medieval:** (11th - 16th century)
- **Modern:** (17th - 19th century)

Condition: This represents an assessment of the archaeological condition of the site, including not only structural condition but also the degree of disturbance of archaeological deposits.

For summary purposes we use a simple three-part classification:

- **Good:** no visible disturbance to deposits, and structure substantially undamaged at ground level.
- **Fair:** no extensive disturbance to deposits, and most of structure in situ at ground level.
- **Poor:** extensive disturbance of deposits, and significant damage to structure at ground level.

Again, there is often more specific comment in the site gazetteer in volume 2. Because the survey reported here was conducted between ten and four years ago, some sites identified in this report have subsequently been excavated (in some cases due to imminent threats identified in survey work). Where this is the case, the Condition entry notes the excavations in brackets, e. g. (Excavated 1989). Further information, including references to publication, are offered in the full gazetteer in volume 2.

Recommendation: This provides a summary of our assessment of any further work that needs to be undertaken at a site, dependent on the nature and imminence of any threat to the site, and the sites likely significance. We offer three levels of recommendation:

- **Excavation:** A significant site under imminent threat.
- **Watching-brief:** A potentially significant site under an existing threat or a significant site under an anticipated threat.

•**Nil:** No threat anticipated from erosion, or an insignificant site not justifying further work.

Finally, we remind the reader or user of this report that our coastal erosion sites have two survey numbers - those recorded here in numerical sequence, but also their number in the total survey of Barra and Vatersay. These numbers are given following the site type description, e. g. Blackhouse (S9). All these sites are fully listed in From Barra to Berneray (Branigan and Foster forthcoming), with the exception of sites around the Tangaval peninsula already published in Branigan and Foster 1995.

3.1: NORTH BARRA AND THE EOLIGARRY PENINSULA.

1. Hinterland Geology and Coastal Geomorphology.

Between the summit of Ben Errival (NF691045) and Scurrival Point (NF 696096) lies north Barra and the Eoligarry peninsula. This is a complex shoreline formed variously of exposed Gneissose bedrocks such as are exposed in Bàgh nan Clach (NF695085), sand dunes of various age of which those that line Tràigh Eais (NF694065), and large shell sand beaches such as Tràigh Scurrival and Tràigh MhÙr (NF705085 & NF705055 respectively).

As elsewhere on Barra the Gneiss bedrock and pockets of glacial till largely support poor acid soils which support impoverished vegetation. Typical examples may be seen on the slopes of Ben Errival, Ben Eoligarry and Ben Scurrival. However, the influence of the shell sand beaches upon the hinterland soils is, in places profound. The moderating influence on these soils of calcareous shell-sand blown inland can be seen in several places; in particular on the flanks of Ben Eoligarry, and to a lesser extent those of Ben Vaslain (NF694048). The soils immediately inland of Tràigh Scurrival and Tràigh Mhór are considerably enriched by the shell sand and form some of the best agricultural land in the island. This is particularly true of the land in the vicinity of the settlement of Eoligarry.

The shell-sand beaches of Tràigh Eais and Tràigh Mhór and the sand dunes and machair that lie between them together form the Eoligarry Isthmus. The age and geomorphology of these features is complex and is described in detail by Gilbertson *et al.*, 1996b.

Shell sand from Tràigh Eais in particular has been blown far up the slopes of Ben Errival and Ben Eoligarry, enriching the soil and accumulating in places to considerable depth. The southern and south-western slopes of Ben Eoligarry contain substantial hollows which were former sand quarries, as well as numerous rabbit burrows and animal scrapes - palaeosols and middens are exposed in these hollows. Further north, on the hill topped by Dùn Scurrival the influence of the shell sand diminishes and acid peaty soils are re-established. The grassy hillslopes here fall steeply into the sea, and from Eilean Dallaig (NF694081) to Port an Lodain a wave-cut shoreline platform lines the coast. Acid soils, ravines and gullies and exposed gneiss bedrock, dominate the coastline in this section.

South from Port an Lodain the coastline is relatively sheltered which has facilitated the development of the extensive shell sand beach of Tràigh Scurrival. Little bedrock is exposed here and the moderating influence of the shell sand upon the local soils may be observed extending inland to the northern and eastern flanks of Ben Scurrival and Ben Eoligarry. At high tide and during storms the soft sediments, which line most of this section of coastline, will be easily eroded. Palaeosols and middens are exposed along this coastline. Isolated bedrock platforms can be found occurring southwards towards Tràigh MhÙr but in essence large shell-sand beaches, coastal dunes and machair dominate the geomorphology of this relatively sheltered western coastline.

2. Erosion Class.

Erosion, deflation and re-deposition interact upon the northern Barra and the Eoligarry Isthmus. Along the flanks of Ben Errival stream and wave erosion interact with mass-movement in numerous gullies. These processes threaten few archaeological remains. The situation as described for Ben Errival also applies to the western shoreline of Eoligarry Peninsula north from Tràigh Eais to Scurrival Point. This often rocky and dangerous, cliff-edged coastline is over-topped by storm waves along its whole northern margin, causing the erosion of some archaeological features in an otherwise broadly stable situation. Mass movement of the hillslopes does occur, in particular on the steep hillside between Dun Scurrival (NF695081) and the sea.

The erosional hazard situation of the island of Orosay and the coastline south east of the Airfield, formed by the flanks of Ben Vaslain and Ben Errival is much the same. There is some wave attack, some loss of material in gullies by mass-movement and streams, which remove the colluvium or peaty soils resting on bed-rock. The edge of one site of uncertain significance, located on a low shelf behind the small bay on the northern shoreline of Orosay, is now being eroded by waves.

Substantial erosion of the coastal dune cordon is found at the western part of the narrow southern portion of the isthmus fronting Tràigh Eais. Erosion via aeolian forces is near constant here, supplemented by wave action during storm events. Erosion by deflation and waves might occur from both west and east. Examination of the documentary record by Gilbertson et al. 1995 suggests that the sea breached the isthmus in 1749, and that this nearly took place again in 1816. These are relatively young dunes, and their erosion is exposing features of interest - in this case the substantial remains of a wood-built ship, presumed to be late 19th or early 20th century in age, some 20-30 m long, with a cargo of roofing slates. The dunes to the north are the wreck are the site of relatively successful long term attempts to control dune erosion. These conservation activities have led to the stabilisation and subsequent accretion of dunes to the north-east. To the north-west of the Airport building, a prominent coastal dune fringe is experiencing substantial deflation and re-deposition down wind. These dunes are further destabilised in many places by quarrying for building sand. Both processes reveal complex exposures of fossil soils, and middens, with artefacts and vertebrate remains - discussion of which is found in Gilbertson, Kent and Grattan (1996). In the northern part of the isthmus, tracks, sand quarrying and rabbit-burrowing have led to numerous hollows and pits in which further palaeosols, middens, and in one case, the remains of the former Kilmoire Chapel are exposed.

The sandy shores of the north-eastern shoreline of the Eoligarry Peninsula are less affected by such processes. On many it is evident that waves are attacking the sand face, again exposing middens - some quite recent - especially on the shoreline facing the island of Orosay. Coastal sand dunes have developed further in recent times on the Saltinish headland (NF712083) north-east of Eoligarry.

3. Built Heritage and Archaeology.

The machair and shifting dunes, which cover sites across the low-lying parts of Eoligarry undoubtedly, obscure some sites within the coastal zone too, which are occasionally revealed by deflation or by wave erosion. The lack of any sites within the coastal zone (and indeed inland of it) around the east coast of the peninsula north of Chiall is, however, difficult to explain in these terms.

Not surprisingly there was apparently considerable prehistoric interest in this area, and presumably its famed cockle beach, represented by middens 2, 3 and 11, by activity sites at 4 and 11 and of course by Dun Scurrial. The coastal zone reveals no trace of medieval sites contemporary with the important church of Cille-Bharra. The few modern sites in the coastal zone are mainly shelters along the higher pastures of the west coast.

The one significant site under present and on-going erosion threat is site 15 with a midden and substantial stone structures. This has now been observed over a period of eight years and is actively eroding.

3.1.1: Hinterland Geology and Coastal Geomorphology.

1. TRAIGH EAIS

NF688058 - NF697079

2100m.

Shell sand and machair.

Extensive sand sheets, sand dune and machair.

3. PORT AN LODAIN - TRAIGH SCURRIVAL

- SOUND OF OROSAY

NF702096 - NF710065

3600m.

Shell sand and machair.

Essentially dominated by shell sand production and deposition. Calcareous soils, extensive shell-sand beaches, sand dunes and machair. Little or no till and bedrock is visible.

2. TRAIGH EAIS - PORT AN LODAIN

NF697079 - NF702096

3000m.

Gneiss headlands, steep cliffs and wave cut platforms. Acid peat soil.

Exposed bedrock, steep hillsides and occasional sea cliffs and wave cut platforms. Soils are a mixture of acid peats and gleys and calcareous sediment.

4. SOUND OF OROSAY - TRAIGH MHÓR - CRANNAG

NF710065 - NF704048

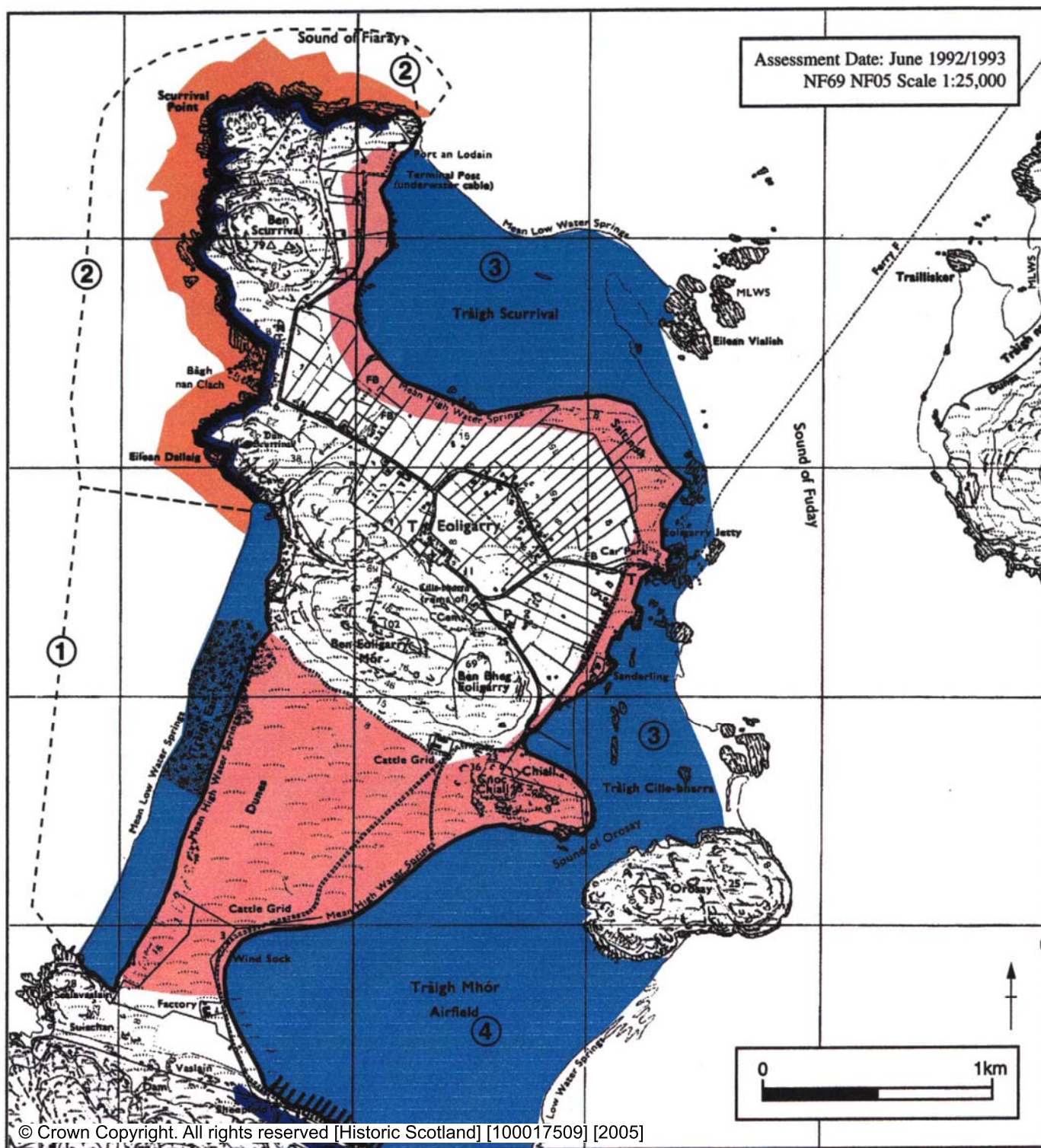
3400m

Shell sand and machair.

Extensive sand sheets, sand dune and machair.

MAP 1.1 EOLIGARRY PENINSULA.

Hinterland Geology and Coastal Geomorphology



Hinterland Geology

- Peat Soil and Exposed Bedrock
- Blown Sand

Coast Edge

- Low Edge < 5m
- Cliff > 5m
- Man Made Barrier

Coast Geomorphology

- Mainly Rock Platform - Boulders
- Shingle/Courbles/Boulders
- Mainly Sand
- Blown Sand

3.1.2: Erosion Class.

1. TRAIGH EAIS

NF688058 - NF697079

2100m.

Shell sand beach, both erosive and depositional processes active.

Erosion and deposition is occurring in this location. Sand is transported from the beach to form sand dunes and machair. In turn some of the sand dunes are being eroded, whilst others are stable or stabilising. Lessening the erosive pressure from people and grazing is probably the key to maintaining a balance between erosion and deposition.

3. PORT AN LODAIN - TRAIGH SCURRIVAL - SOUND OF OROSAY

NF702096 - NF710065

3600m

Mainly shell sand beach - erosive and depositional processes operating.

Erosive and depositional forces operate in this area. Shell-sand production is extensive and must have buried and protected archaeology. However, middens and palaeosols of uncertain age are exposed in the coastal zone and these are trimmed by wave action during high tide and storm events.

2. TRAIGH EAIS - PORT AN LODAIN

NF697079 - NF702096

3000m

Gneiss cliffs, storm washed and subject to catastrophic failure of cliff edge and wave erosion of soft sediments.

Erosion is active along all this section of very exposed coastline. Mass movement occurs on the hillsides and soft sediments are trimmed by wave action. Scurrival point is frequently washed by waves. Archaeology along this coastline is at considerable risk.

4. SOUND OF OROSAY - TRAIGH MHÓR - CRANNAG

NF710065 - NF704048

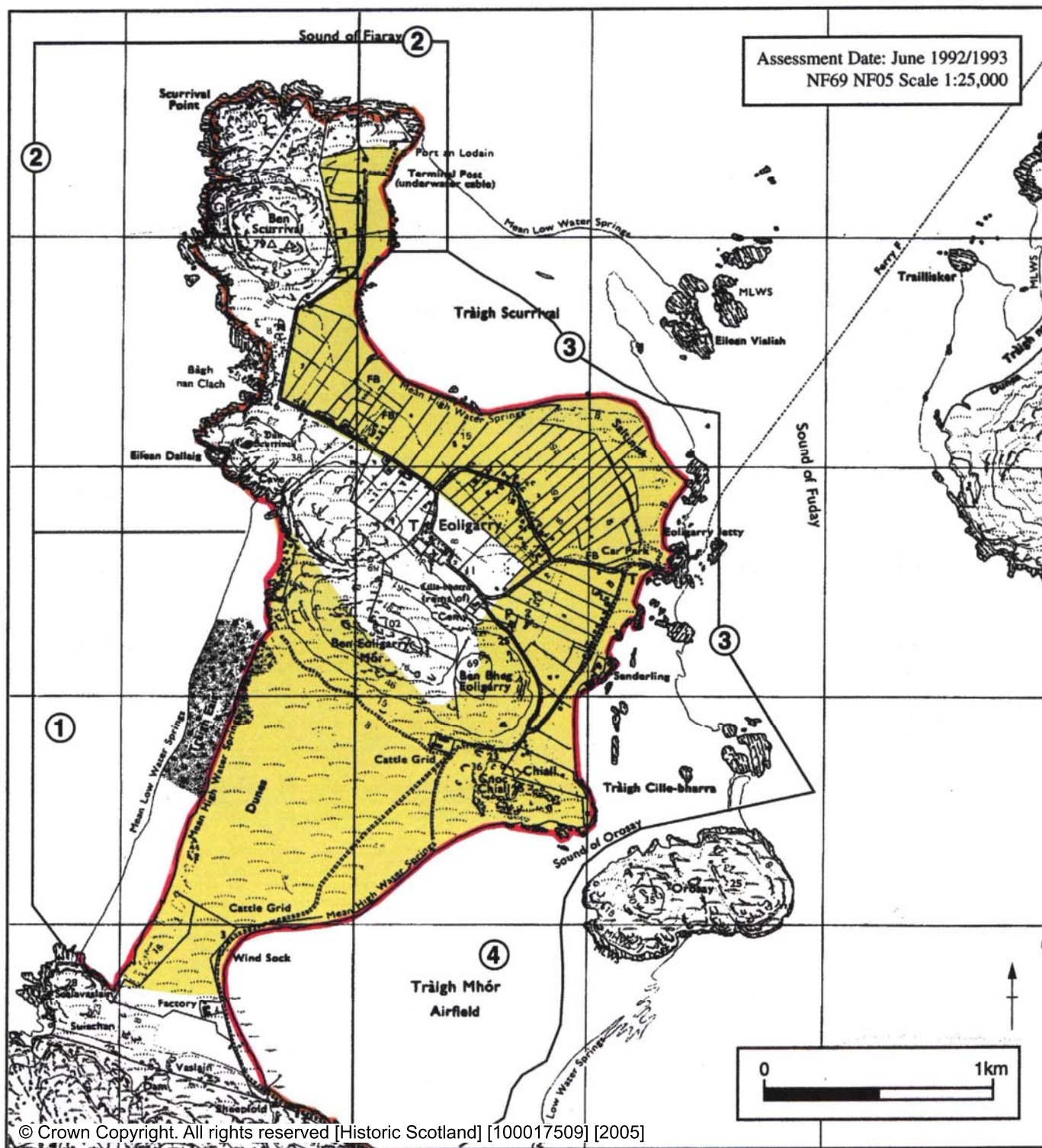
3400m








Mainly shell sand beach which is both eroding and stable.

Erosive and depositional processes are occurring along this section of coastline. Sand dune production is evident and sand is clearly being blown inland to form machair and to mantle the hill-slopes. The Isthmus has been breached by waves in the past and this must be considered a possibility in the future.

MAP 1.2 EOLIGARRY PENINSULA.

Erosion Class



- | | |
|---|----------------------------|
|  | Eroding |
|  | Eroding or Stable |
|  | Both Accreting and Eroding |
|  | Land Below 10m |
|  | Stable |
|  | Vulnerable to Erosion |
|  | Active Erosion |

3.1.3: Built Heritage and Archaeology.

1. TRÀIGH EÀIS.

Shipwreck (E26). NF 69170608 Probable 19th century. Poor. Nil.

2. TRÀIGH EÀIS.

Shell Midden (E18). NF 69500673. Later prehistoric? Poor. Nil.

3. TRÀIGH EÀIS.

Shell Midden (E17). NF 69490677. Later prehistoric? Fair. Nil.

4. SCURRIVAL.

Cave & platform (E16). NF 69590792. Prehistoric occupation. Good. Excavated 1998.

5. DUN SCURRIVAL.

Dun (E15). NF 69530812. Later prehistoric. Fair. Nil.

6. BAGH NAN CLACH.

Two shelters type B (E14). NF 69490885 Modern. Fair. Nil.

7. BAGH NAN CLACH.

Shelter type E (E13). NF 69490885. Modern. Fair. Nil.

8. BEN SCURRIVAL.

Shelter type E (E12). NF 69300895. Modern. Fair. Nil.

9. SCURRIVAL POINT.

Stone Ring (E11). NF 69490962. Prehistoric. Good. Excavated 1997.

10. SCURRIVAL POINT.

Stone Shelter (E10). NF 69750965. Indeterminate age. Poor. Nil.

11. CHIALL. E

extensive shell midden (E9). NF 70950685. Modern, Prehistoric. Fair. Nil.

12. CHIALL.

Shelter type E (E8). NF 709306665. Modern. Fair. Nil.

13. CHIALL.

Three upright stones (E7). NF 70990652. Modern. Fair. Nil.

14. CHIALL.

Shell midden, Palaeosol (E5). NF 70700644. Modern. Fair. Nil.

15. OROSAY.

Midden and stone structures (E4). NF 71200632. Prehistoric? Good. Urgent assessment excavation.

16. OROSAY.

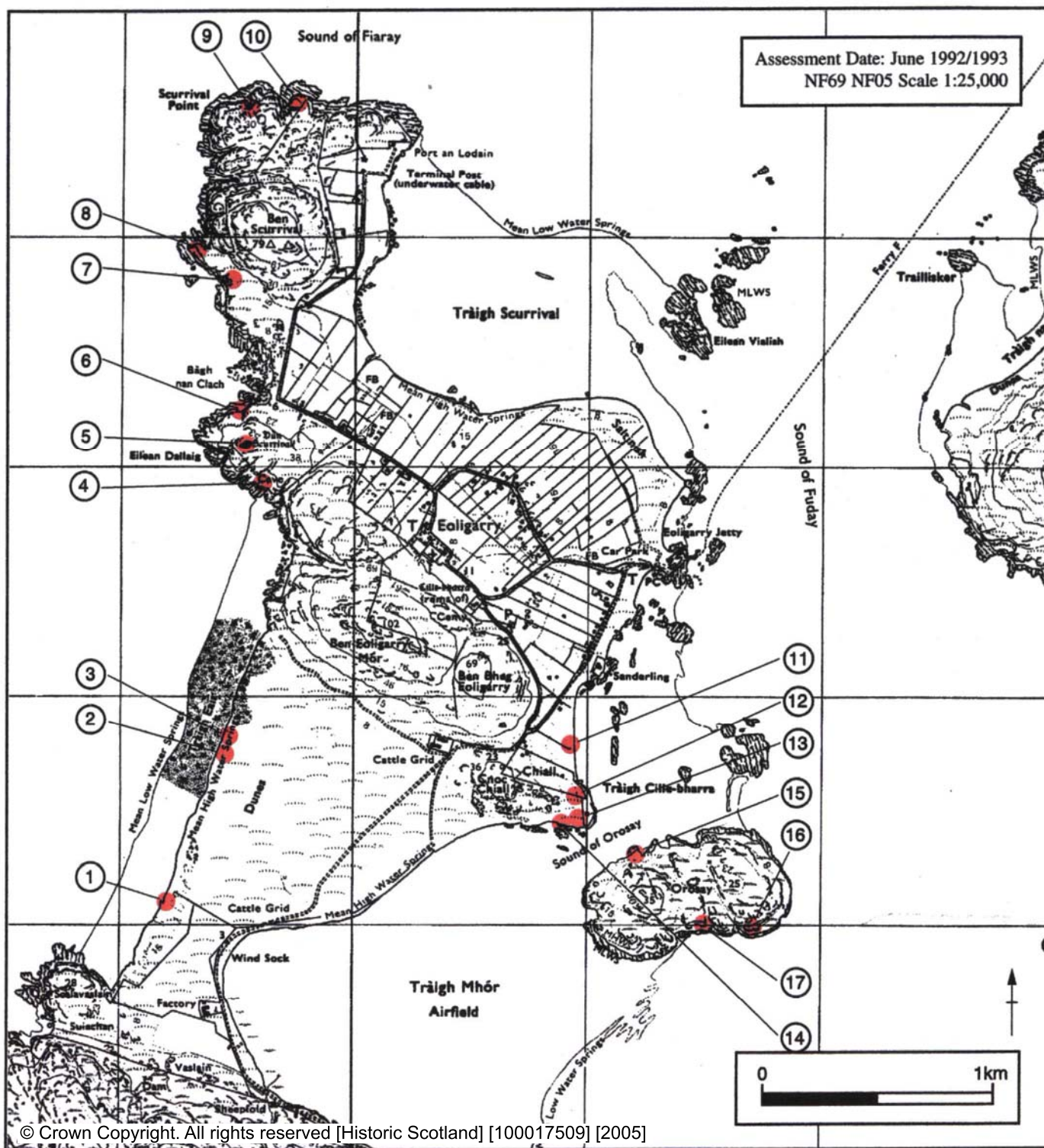
Cairn (E3). NF 71730606. Prehistoric. Fair. Nil.

17. OROSAY.

Shelter type E (E2). NF 71510600. Modern. Fair. Nil.

18. TRÀIGH MHÓR.

Blackhouse (G18). NF 69490538. Modern. Poor. Nil.



3.2: NORTH EAST BARRA.

This is a complex crenellated coastline, which is characterised by notable changes in the degree of exposure experienced by different sectors of the coastline.

1. Hinterland Geology and Coastal Geomorphology.

This is the section of coastline immediately to the south of Tràigh Mhór. It is a complex and difficult stretch of coastline, composed of long promontories, skerries and a series of offshore islands such as Hellisay and Gighay, and the Black Islands. Extensive shoreline platforms composed of bedrock are exposed at low tide. The coastline is quite low lying, rarely exceeding 10m in altitude, with the notable exception of Bruernish which is 94m (NF728010). Exposed gullies facing to the open sea are typically the sites of stream erosion and mass-movement. In some small bays, the interaction between the characteristic direction of wave approach and shoreline orientation has led to the deposition of flotsam and jetsam up to 30m inland of the shoreline.

The local bedrock as elsewhere is a combination of Lewisian Gneiss and associated basalt dykes. The basalt dykes erode quicker than the gneiss and the bays and gullies are frequently the result of the easier erosion of this material. Much of the coastline is marked by a low rocky cliff edge often less than 2 metres in height or less steeply angled bedrock and boulders falling into the sea. Sandy beaches are a rarity, most of the coast is lined with blocks fallen from the cliff edge or rounded clasts of a variety of sizes from boulder to cobble. There is little or no evidence for the moderating influence of shell-sand from the beaches to the north upon the local soils. The peats appear to be quite deep in low-lying depressions, but generally they are shallow and often waterlogged as the bedrock inhibits the drainage of rainwater. Evidence for former spade cultivation is extensive. The slopes of Bruernish are steep and in place the thin peat soil cover, which has formed struggles to maintain contact with the bedrock. As a result large patches of rock are exposed.

The long inlets, as well as significant areas of the small bays are very sheltered, to the extent that in several of them saltmarsh is developing. Particular examples of saltmarsh development may be seen at NF733013 by Rubha na h-Acarseid and NF717021 at the head of Loch Obe. The development of saltmarsh may serve to stabilise low energy erosive processes. In Loch Obe small areas of saltmarsh or mudflats are developing in front of the remains of structures and features originally constructed at the shoreline. South of Loch Obe much of the coastline is distinctly different to that immediately to the north. Two types of landform are common: low lying coastal moorland as at Leanish and immediately to the south of Bun an t-Sruith and steep hillside falling directly to the sea. At low tide most of the coast is ringed by a wave cut platform of bare rock.

2. Erosion Class.

Erosion can be seen to be occurring along both exposed eastern coastlines and, surprisingly, within the large bays, which characterise this stretch of coastline. Between Bruernish and Rubha Mhìcheil the hillsides fall steeply into the sea resulting in place in cliff edges up to 7 metres high, particularly at Rubha na h-Acarseid and between Heilem

island and Barra at NF734006. At the mouths of inlets and where streams egress into the sea, extensive boulder beaches have developed. The occasional large angular boulder suggests that the cliff faces fail rarely but catastrophically.

The erosion hazards in this area can be illustrated by the description of one particular location where a man made structure is now being demolished by natural erosive processes. This site is typical of many in this area. Site 84 (NL71620058) at Rubha Liath, east of the Decca Navigator mast is typical. Site 84 is a very well built former croft of probable eighteenth or nineteenth century origin, which is actively being eroded by the sea. The distribution around the structure of flotsam and jetsam and storm-beach boulders demonstrates that the site is frequently totally over-topped by waves. The walls have been breached by wave-impact, and wave-induced slumping at two locations. The exposures produced reveal the croft to have been built upon a terrestrial mineral soil derived from basalt. A complex mosaic of accretionary salt marshes and wave-induced erosion features now surrounds this site. It is clear that notable shoreline recession has occurred, principally of the surficial deposits over-lying the basalt. One possible former shoreline edge is the steep 1 m high rock-edge some 10 metres east of the structure.

3. Built Heritage and Archaeology.

Although there are some well protected anchorages for small boats in this section of coastline, numerous shoreline platforms, skerries and submerged rocks make this a less than ideal coast for fishermen, whilst much of the land adjacent to the coastline is rock-strewn or peat covered. It is therefore surprising that we have 90 sites in this zone. However, 90% of these sites are modern, including forty-two blackhouses and twenty-six outbuildings, mostly representing 19th century occupation. This may reflect the severe land-pressure in Barra in the earlier 19th century when population was at its peak. However, site 82 is a clearance settlement of 1850/51 and it is possible that some other east coast blackhouses represent families cleared from Eoligarry and Borve. In contrast to the many blackhouses is the scarcity of clearance cairns (2 sites) and even of the normally ubiquitous shepherd's shelters (9 sites), suggesting these east coast families were mainly concerned with fishing. The scarcity of prehistoric and mediaeval sites is in marked contrast and emphasises that much of this coastline was probably considered undesirable except in times of population stress. Few as they are, the prehistoric sites include a broch (site 42), a kerbed cairn (site 8) and a substantial occupation mound (site 7), whilst site 68 may be a scarce mediaeval occupation site. Fortunately none of these sites is under threat from coastal erosion.

3.1.3: Hinterland Geology and Coastal Geomorphology.

1. CRANNAG - BRUERNISH VILLAGE

NF704048 - NF724025

In excess of 8000 metres.

Gneiss platforms, with exposed bedrock, some pockets of till and acid peat soils. Wave cut platforms and boulder beaches.

A relatively low-lying coastal platform with exposed bedrock along much of the coast, which is overlain by softer sediments, usually glacial till. Soils are predominantly acidic and in many places waterlogged. Land use mainly grazing, but extensive evidence for spade cultivation in the past.

2. BRUERNISH VILLAGE - MEALL NAM BÙTH

NF724025 - NF710001

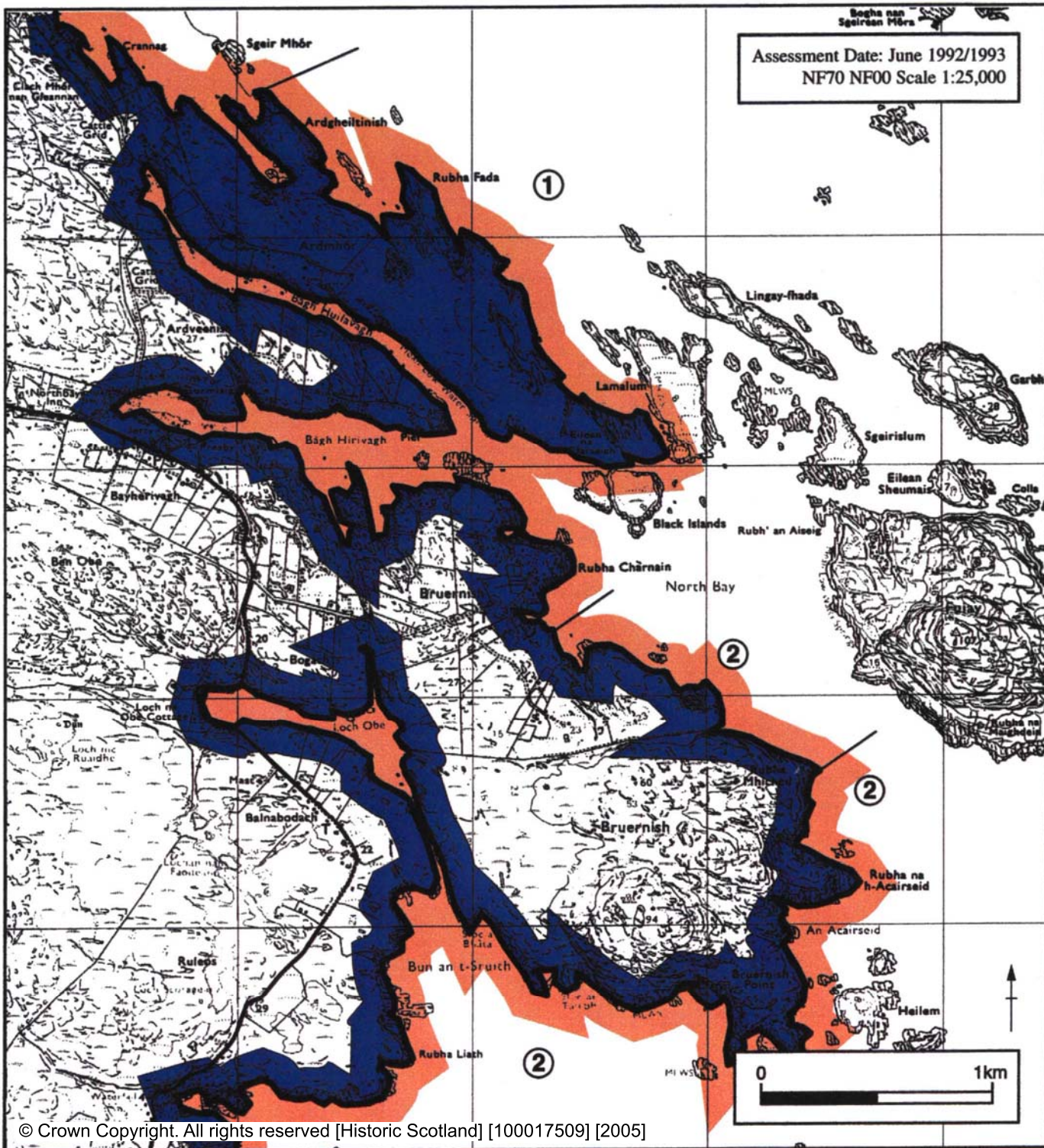
5000 metres.

Gneiss hillsides, exposed bedrock, occasional sandy beaches but commonly wave cut platforms and/or boulders.



Steep hillsides which support poor acidic soils and typical acid vegetation. Land use is grazing. The coast is lined in places with a wave cut platform, which is exposed at low tide. In others a moderately sized cliff (3-5 metres) may be found. Some inlets are choked with storm beach deposits. In many places the gradient is too steep to have supported cultivation, but occasional flatter platforms are found to contain Lazy Beds.

MAP 2.1 CRANNAG TO EARSARY


Hinterland Geology and Coastal Geomorphology







Hinterland Geology

-  Peat Soil and Exposed Bedrock
 Blown Sand

Coast Edge

-  Low Edge < 5m
 Cliff > 5m
 Man Made Barrier

Coast Geomorphology

-  Mainly Rock Platform - Boulders
 Shingle/Courbles/Boulders
 Mainly Sand
 Blown Sand

3.2.2: Erosion Class.

1. CRANNAG - BRUERNISH

NF704048 - NF724025

In excess of 8000 metres.

Essentially stable bedrock overlain by soft sediments which are liable to erosion from wave action.

A complex, stable shoreline with exposed bedrock in many places. However, surficial deposits of softer sediment, which may contain archaeology, may be found at the shoreline, are common and these are subject to erosion in many places.

2. BRUERNISH - RUBHA MHÌCHEIL

NF724025 - NF734016

1500 metres.

Three erosion classes are present in this section.

A) Exposed bedrock

B) Soft sediments exposed at the coastline, which are eroded by wave action.

C) Exposed bedrock overtopped by a surface lithology of soft sediment, which is vulnerable to erosion by wave action.

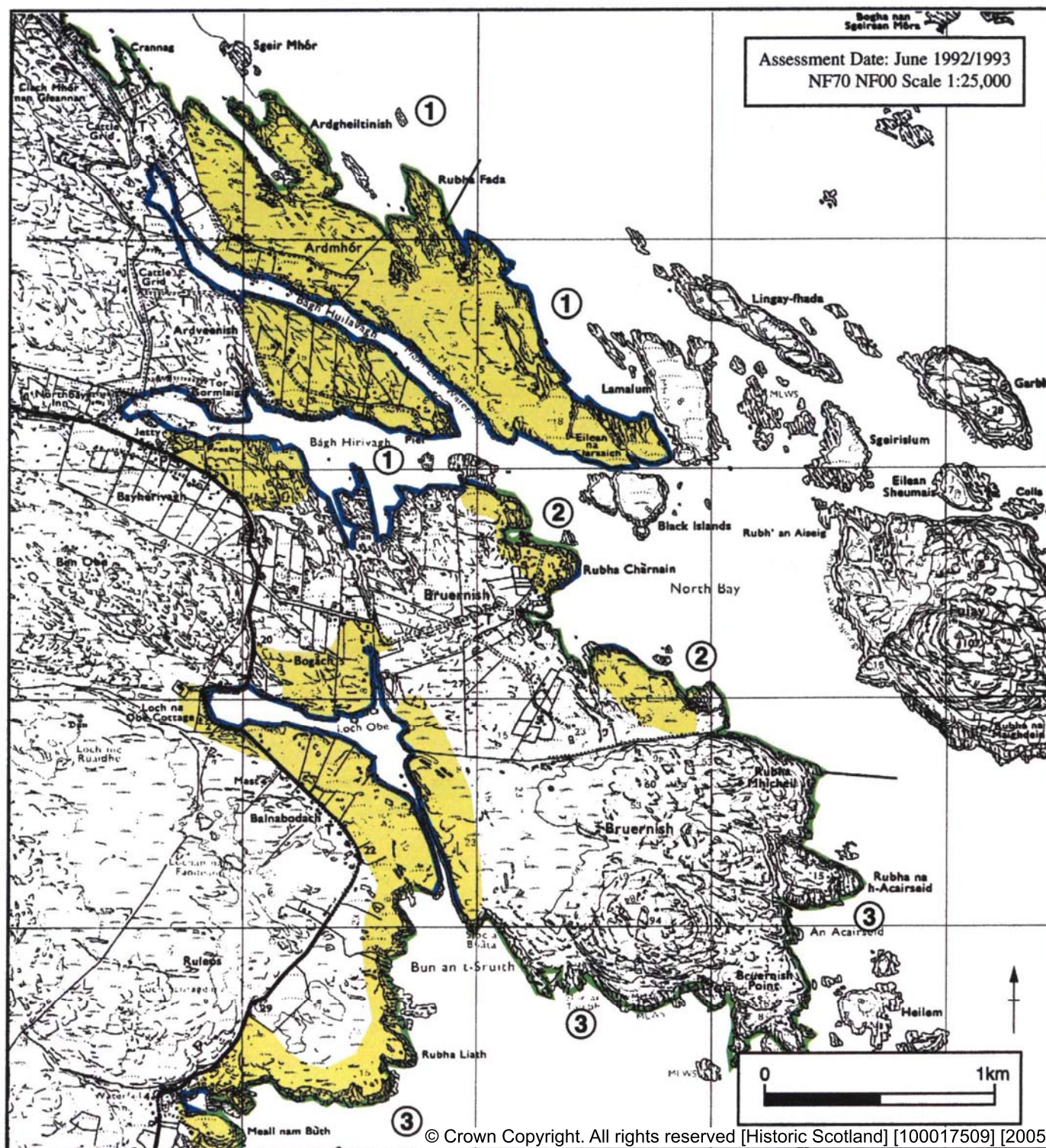
3. RUBHA MHÌCHEIL - MEALL NAM BÙTH








NF734016 - NL693986

Ca. 9000 metres.

Essentially stable bedrock overlain by soft sediments which are liable to erosion from wave action.

A complex coastline. At the coast soft sediments, which are subject to attack by wave action overlie erosion resistant lithologies.



- | | |
|---|----------------------------|
|  | Eroding |
|  | Eroding or Stable |
|  | Both Accreting and Eroding |
|  | Land Below 10m |
|  | Stable |
|  | Vulnerable to Erosion |
|  | Active Erosion |

3.2.3: Built heritage and Archaeology 1.

- | | | |
|--|---|--|
| 1. CRANNAG.
Substantial Hut (A84).
NF70820455.
Modern. Good. Nil. | 13. ARDMHÓR.
Blackhouse (A72).
NF72100372.
Modern. Good. Nil. | 25. TOR GORMLAIG.
Shelter type E (A58).
NF70800332.
Modern. Poor. Nil. |
| 2. CRANNAG.
Blackhouse (A83).
NF70810455.
Uncertain age. Fair. Nil | 14. ARDMHÓR.
Blackhouse (A71).
NF72130353.
Modern. Good. Nil. | 26. BAGH HIRIVAGH.
Blackhouse (A57).
NF70550339.
Modern. Fair. Nil. |
| 3. ARDMHÓR
Blackhouse (A82).
NF71030423.
Modern. Good. Nil. | 15. ARDMHÓR.
Small hut (A70).
NF72300329.
Mediaeval. Fair. Nil. | 27. BAGH HIRIVAGH.
Shelter type A (A56).
NF70430330.
Modern. Poor. Nil. |
| 4. ARDMHÓR
Kelp oven (A81).
NF71100424.
Uncertain age. Poor. Nil. | 16. BAGH HUILAVAGH
Probable kelp oven (A68).
NF70760408.
Modern. Poor. Nil. | 28. BAGH HIRIVAGH.
Robbed Blackhouse (A55).
NF70430328.
Modern. Poor. Nil. |
| 5. ARDMHÓR
Blackhouse (A80).
NF71050421.
Modern. Poor. Nil. | 17. BAGH HUILAVAGH.
Stone shed (A67).
NF70800416.
Uncertain age. Fair. Nil. | 29. BAGH HIRIVAGH.
Outbuilding (A54).
NF70550309.
Modern. Fair. Nil. |
| 6. ARDMHÓR
Shelter type B (A79).
NF71240416.
Modern. Good. Nil. | 18. BAGH HUILAVAGH.
Blackhouse (A66).
NF70690404.
Modern. Good. Nil. | 30. BAGH HIRIVAGH.
Rect. Building (A53).
NF70930313.
Modern. Fair. Nil. |
| 7. ARDMHÓR.
Grassed over mound (A78).
NF7120426.
Later Prehistoric. Good. Nil. | 19. BAGH HUILAVAGH.
2 blackhouses & pen (A65).
NF70720395.
Modern. Poor. Nil. | 31. BAGH HIRIVAGH.
Causeway (A51).
NF71060308.
Uncertain age. Fair. Nil. |
| 8. ARDMHÓR.
Low greenmound (A77).
NF7120426.
Earlier Prehistoric. Good. Nil. | 20. BAGH HIRIVAGH.
Small hut (A63).
NF71230326.
Modern. Poor. Nil. | 32. BAGH HIRIVAGH.
Shelter type A (A50).
NF71270289.
Modern. Fair. Nil. |
| 9. ARDMHÓR
Circular hut (A76).
NF71400419.
Modern. Good. Nil. | 21. BAGH HIRIVAGH.
Boat noost (A62).
NF71080335.
Modern. Fair. Nil. | 33. BAGH HIRIVAGH.
Kelp oven? (A49).
NF71270294.
Modern. Poor. Nil. |
| 10. ARDMHÓR.
Substantial building, overlies
earlier structure (A75).
NF71760384
Modern. Fair. Nil. | 22. ARDVEENISH.
Shelter type F (A61).
NF70930356.
Modern. Fair. Nil. | 34. BAGH HIRIVAGH.
Causeway (A48).
NF71240298.
Uncertain age. Fair. Nil. |
| 11. ARDMHÓR.
Clearance cairn (A74).
NF71780392.
Modern. Fair. Nil. | 23. ARDVEENISH.
Orthostat Wall & shelter type
A (A60).
NF70900353.
Modern. Fair. Nil. | 35. BAGH HIRIVAGH.
2 clearance cairns (A47).
NF71060292.
Modern. Fair. Nil. |
| 12. ARDMHÓR.
Probable kelp oven (A73).
NF71860392.
Modern. Poor. Nil. | 24. TOR GORMLAIG.
Small Sq. building (A59).
NF70840334.
Modern. Fair. Nil. | 36. BAGH HIRIVAGH.
Blackhouse (A46).
NF71020290.
Modern. Fair. Nil. |
| | | 37. BAGH HIRIVAGH.
Outbuilding (A45).
NF71200270.
Modern. Fair. Nil. |

3.2.3: Built heritage and Archaeology 2.

38. BAGH HIRIVAGH. Blackhouse (A42). NF71300266. Modern. Fair. Nil.	51. RUBHA CHARNAIN. Outbuilding (A28). NF72190261. Modern. Fair. Nil.	64. BRUERNISH. Turf & Stone wall (A15). NF72500210. Uncertain age. Fair. Nil.
39. BAGH HIRIVAGH. Stone hut (A41). NF71350254. Modern. Fair. Nil.	52. RUBHA CHARNAIN. Outbuilding (A27). NF72200268. Modern. Poor. Nil.	65. BRUERNISH. Shelter type E (A14). NF72980194. Modern. Fair. Nil.
40. BAGH HIRIVAGH. Stone hut (A40). NF71430249. Modern. Fair. Nil.	53. RUBHA CHARNAIN. Whitehouse (A26). NF72360260. Modern. Poor. Nil.	66. BRUERNISH. Shelter type C (A13). NF73000195. Modern. Poor. Nil.
41. BAGH HIRIVAGH. Blackhouse (A39). NF 712490248. Modern. Poor. Nil.	54. RUBHA CHARNAIN. Boathouse (A25). NF 72340254. Modern. Poor. Nil.	67. BRUERNISH. Building (A12). NF7330141. Modern. Fair. Nil.
42. BAGH HIRIVAGH. Dun (A38). NF71500265. Later prehistoric. Poor. Nil.	55. RUBHA CHARNAIN. Blackhouse (A24). NF 72290250. Modern. Good. Nil.	68. BRUERNISH. 2 turf walled bdg. (A11). NF73450118. Uncertain age. Fair. Monitor.
43. BAGH HIRIVAGH. Causeway to Dun (A37). NF71490264. Later Prehistoric. Fair. Nil.	56. BRUERNISH. Blackhouse (A23). NF72260245. Modern. Fair. Nil.	69. BRUERNISH. Blackhouse & byre (A10). NF73250141. Modern. Fair. Nil.
44. BAGH HIRIVAGH. 6 rick stands (A36). NF71640252. Modern. Fair. Nil.	57. BRUERNISH. Blackhouse (A22). NF72260240. Modern. Fair. Nil.	70. BRUERNISH. Blackhouse (A9). NF73140125. Modern. Fair. Nil. z
45. BAGH HIRIVAGH. Blackhouse (A35). NF71730249. Modern. Good. Nil.	58. BRUERNISH. Blackhouse (A21). NF72170239. Modern. Poor. Nil.	71. BRUERNISH. Outbuilding (A8). NF73330093. Uncertain age. Poor. Nil.
46. BAGH HIRIVAGH. Boulder wall. (A34). NF71700272. Modern. Fair. Nil.	59. BRUERNISH. Blackhouse (A20). NF72150230. Modern. Fair. Nil.	72. LOCH OBE. Blackhouse (A7). NF73290059. Modern. Poor. Nil.
47. BRUERNISH. Hamlet, 3 blackhouses & out- buildings (A33). NF71820286. Modern. Fair. Nil.	60. BRUERNISH. Whitehouse (A19). NF72220225. Modern. Good. Nil.	73. LOCH OBE. Blackhouse (A6). NF73300057. Modern. Poor. Nil.
48. BRUERNISH. 2 roomed building (A32). NF72100285. Modern. Fair. Nil.	61. BRUERNISH. Outbuilding (A18). NF72290220. Uncertain age. Fair. Nil.	74. LOCH OBE. 2 shelters type A (A5). NF72760076. Uncertain age. Poor. Nil.
49. BRUERNISH. L shaped house (A31). NF72020274. Modern. Good. Nil.	62. BRUERNISH. 2 Blackhouses (A17). NF72410207. Modern. Fair. Nil.	75. LOCH OBE. Shelter (A4). NF71670191. Uncertain age. Fair. Nil.
50. RUBHA CHARNAIN. Small house (A30). NF72130266. Modern. Fair. Nil.	63. BRUERNISH. Stone setting (A16). NF72580193. Uncertain age. Fair. Nil.	76. LOCH OBE. Blackhouse (A3). NF71600229. Modern. Poor. Nil.

3.2.3: Built heritage and Archaeology 3.

76. LOCH OBE.
Blackhouse (A3).
NF71600229.
Modern. Poor. Nil.

77. LOCH OBE.
Blackhouse (A2).
NF71400195.
Modern. Good. Nil.

78. LOCH OBE.
Hut (A1).
NF71400195.
Modern. Fair. Nil.

79. LOCH OBE.
Blackhouse (L12).
NF71180183.
Modern. Poor. Nil.

80. LOCH OBE.
Blackhouse (L11).
NF71180183.
Modern. Poor. Nil.

81. LOCH OBE.
Stone hut (L10).
NF71200185.
Modern. Fair. Nil.

82. LOCH OBE.
Hamlet: 6 blackhouses (L9).
NF71540168.
Modern. Good. Nil.

83. LOCH OBE.
Hamlet: 7 blackhouses (L8).
NF71590167.
Modern. Fair. Nil.

84. RUBHA LIATH.
Blackhouse (L7).
NF71620058.
Modern. Good. Nil.

85. RUBHA LIATH.
Blackhouse (L6).
NF71590038.
Modern. Fair. Nil.

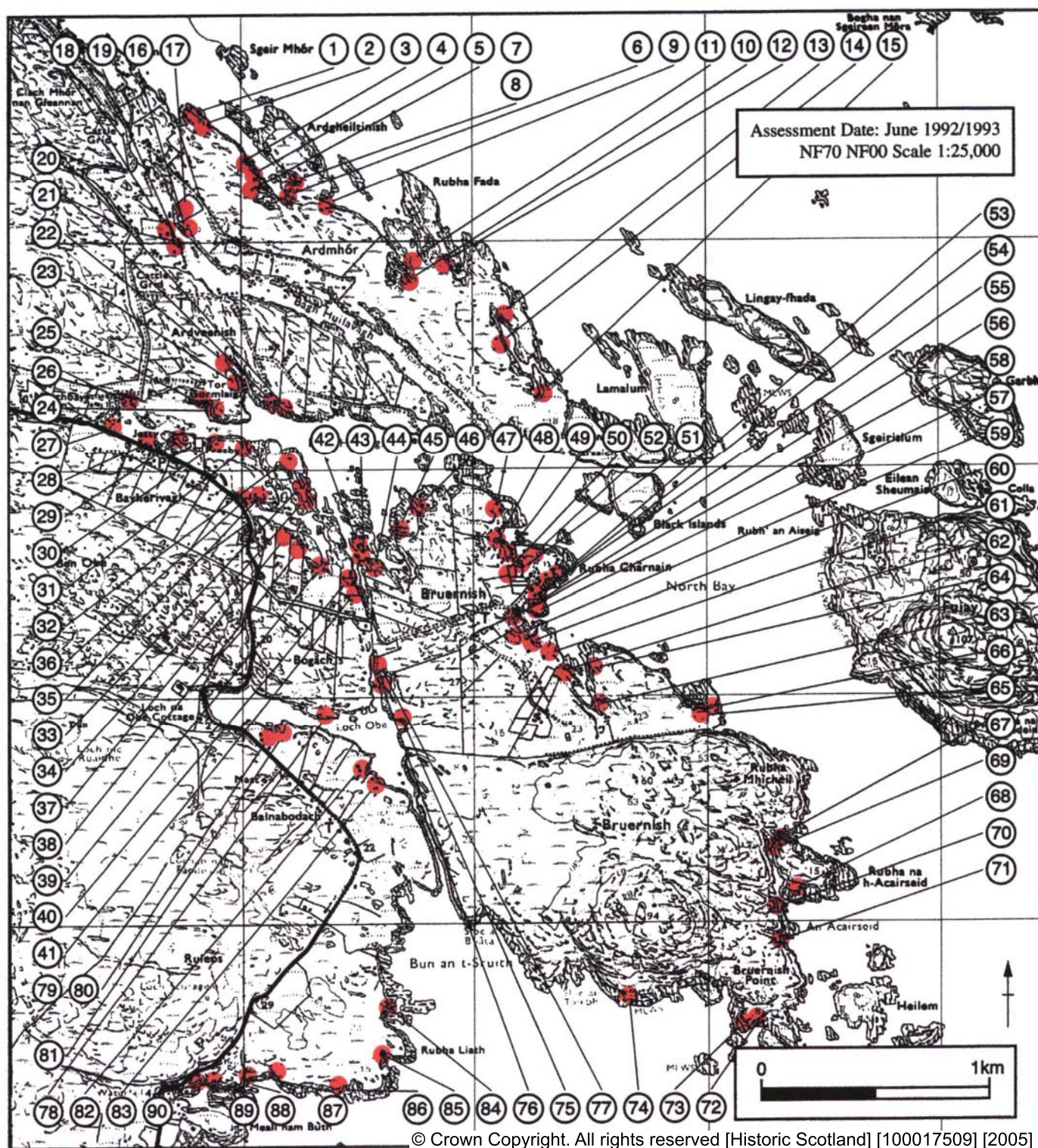
86. RUBHA LIATH.
Turf walls (L5).
NF71400035.
Modern. Fair. Nil.

87. RUBHA LIATH.
Blackhouse. (L4).
NF71130038.
Modern. Fair. Nil.

88. RUBHA LIATH.
Outbuilding (L3).
NF71000038.
Modern. Fair. Nil.

89. RUBHA LIATH.
Blackhouse (L2).
NF70850030.
Modern. Poor. Nil.

90. RUBHA LIATH.
Stone hut.
NF70870030.
Modern. Poor. Nil.



3.3: BARRA SOUTH EAST.

This is a complex crenellated coastline, which is characterised by notable changes in the degree of exposure experienced by different sectors of the coastline.

1. Hinterland Geology and Coastal Geomorphology.

Meall nam Bùth - Brevig Bay (including Orosay).

At low tide most of the coast is ringed by a wave cut platform of bare rock. Shell sand beaches are a rarity, but two can be found, at Earsary (NL707999), between Orosay Island and Barra (NL 706994) and at the mouth of a small bay NF708003. In the main, the soils of this section of coastline are acid peats and gleys.

The north, east and south sides of the offshore island of Orosay are apparently stable, with the exception of a major boulder fall on the south side. No archaeological sites appear to be associated with this threat.

Brevig Bay - Castle Bay.

The shoreline between Ledaig and Brevig is similar to that of the coastline to the north, with the exception that long sheltered inlets are absent, and that passage towards Castle Bay offers increasing protection from southerly and easterly storms. However, in the past - there would also have been increased exposure to Atlantic waves moving through the Sound of Vatersay. This coastline is the steepest in this section, with hillslopes falling to the sea from Aird Rubha Mor 100 metres (NL693977), Beinn nan Carnan 150 metres (NL683983) and from the high ridge which runs between Ben Orosay (NL672977) and an unnamed point (NL 678977) at approximately 100m altitude. Soil cover is predominantly peaty and bogs are common. The drainage network along this section of coastline is short, but very steep. As a result streams are fast and erosive. Exposed sections in ravines and gullies suggest that pockets of glacial till and colluvium survive here.

2. Erosion Class.

Meall nam Bùth - Brevig Bay (including Orosay).

The small township of Earsary has a complex shoreline with numerous small coastal protection walls, small beaches and near-shore skerries. This stretch of coastline is now relatively stable as it is largely protected by the protection measures installed to protect the coast road. The south-western shoreline of Brevig bay contains soft lithologies which are being eroded by the sea, and evidence of mass-movement on the hillslopes and at the coast. Minor collapse of rock exposed at the coast does occur, and can be seen on the southern side of Orosay Island, but this does not threaten either of the archaeological monuments on the island.

Brevig Bay - Castle Bay.

In the major inlet between Aird Rubha Mor and Rubha-fear-Vatersay (NL686977) and the adjacent 'O'Neill's Croft' ships' spars and other wave-debris extends up to 30 metres inland along stream channels and to heights that exceed those of adjacent archaeological

sites. Waves are funnelled up stream beds and gullies eroded into intrusive basalt dykes. These are causing site 59 to be threatened with over-topping (storm-beach boulders >30 cm in diameter reach well above the site), and are also exposing the end of a wall in the adjacent gully. Similar processes and outcomes are evident along this entire section of coastline.

The distribution of flotsam and jetsam demonstrates that archaeological sites within the coastal survey zone are at risk of erosion by the action of the sea. There is no suggestion that these sites are frequently over-topped by waves at the present day, but a slight change in dominant storm direction would alter this. The extent of damage induced by mass-movement is difficult to determine. The locations of developing slip planes are not easy to detect in a wet peaty landscape. The trampling and 'puddling' effects of cattle in wet locations has further eroded several archaeological features along this coastline, in particular of boundary walls near O'Neill's Croft'.

The effects and incidence of marine induced erosion along the southern area of this stretch of coastline may have been lessened by the recent construction of the Vatersay Causeway which has inhibited the passage, across the mouth of Castlebay, of large Atlantic waves. However, the long-term effect of the construction of this structure on coastal currents and resultant erosion and deposition cannot currently be assessed.

The eastern shoreline of Castlebay between Orosay Island (NL67973) and Ledaig appears to be exposed to erosion from the action of waves crossing Castlebay. Here the coastline is marked by a stony beach and by the extensive remains of wharves associated with the herring fishing industry. These have been severely eroded by wave action, despite their relatively sheltered position. The erosion of these features demonstrates that any structure in the coastal zone is at risk from wave action. They also demonstrate that constant low energy wave action may be an effective agent of the erosion of coastal archaeology, if less dramatically so than on coastlines exposed to high energy waves.

Examination of the Castle Bay area shows that wave erosion is undermining cemented, boulder-built, unloading platforms immediately south of the village of Ledaig. The available fetch across Castle Bay is not large; the erosional effects found illustrate the effect of the waves generated by storms and shipping. No significant archaeological structures or deposits appear to have been lost. The majority of the coastline appears to be essentially stable. In the future, erosional processes are likely to become even less important as a result of the construction of the Vatersay Causeway preventing large Atlantic storm waves passing along the Sound of Vatersay.

3. Built Heritage and Archaeology.

The coastline from Leanish to Ledaig is remarkably empty of occupation sites, and most of the walls that run to the HWM are either land boundaries or walls to enclose headlands as temporary pens, suggesting the area was never used for more than rough grazing. The only site of possible significance is 14, which appears to consist of 3 raised platforms, the largest a trapezoid 17 x 8 metres. They are heavily overgrown, covered with ferns and difficult to plot or understand. But unless they are the upstanding remnants of peat cutting (which is a possibility) this site is like no other identified on Barra. In Castlebay, modern occupation has surely destroyed or obscured some earlier sites. The extensive remains of the quaysides associated with the herring fisheries have crumbled and either already disappeared or will do so very shortly.

3.3.1: Hinterland Geology and Coastal Geomorphology.

1. MEALL NAM BÙTH - BREVIG BAY

NF7076000- NL693986

Ca. 2600 metres.

Essentially low lying coastal strip. Coastal strip formed from gneiss bedrock, wave cut platforms, boulder beaches and topped by acid peat soils.

Exposed bedrock lines much of this coastline. The soils of the coastal zone are everywhere acidic, with the exception of a few areas adjacent to very small shell-sand beaches.

3. BREVIG BAY - OROSAY ISLAND

NL698982 - NL667973

4900 metres.

Lewisian gneiss headlands separated by a series of bays. Headlands lined by cliffs and bays lined by low rocky edges and boulder beaches.

An exposed section of coastline. Gradients in many places are steep. Soils are acidic, thin and predominantly peaty. The presence of pockets of till produces marginally superior soil in places. Cliffs or steeply angled bedrock prohibit easy access to the sea, which is limited to a few bays and inlets.

2. SW SHORE OF BREVIG BAY

NL693986 - NL698982

700 metres.

Exposed hillside supporting acid soils. Essentially boulder beaches and wave cut platform.

A steep hillside which falls straight to the beach. Soils are very poor and unstable.

4. OROSAY ISLAND - CASTLE BAY

NL667973 - NL669980

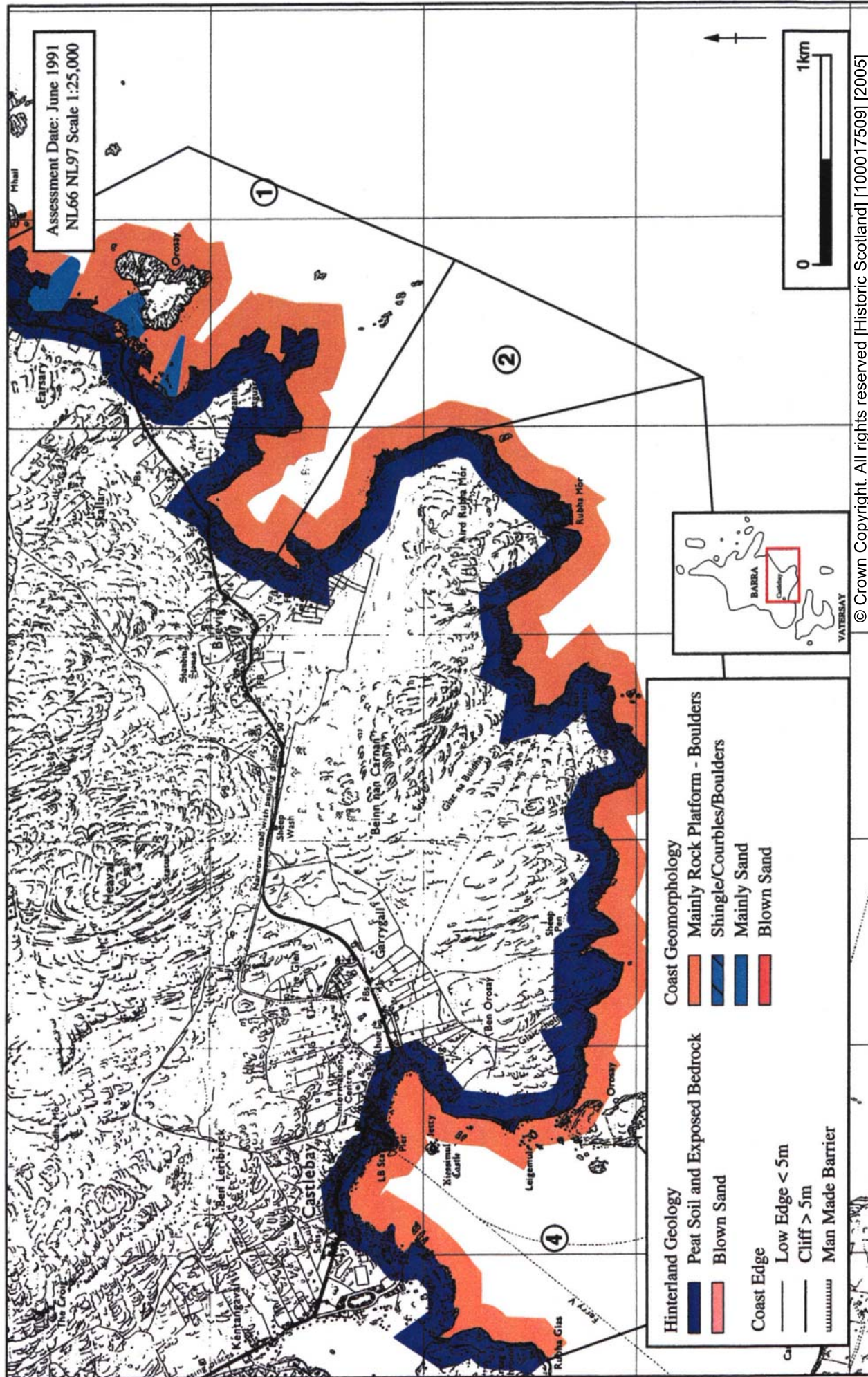
1800 metres.

Low edge, acid soils and boulder beaches. Some wave cut platforms.

A reasonably sheltered stretch of coastline. Exposed bedrock is found along much of the coast, which is lined with a cobble beach.

MAP 3.1 EARSARY TO HORVE

Hinterland Geology and Coastal Geomorphology



3.3.2: Erosion Class.

1. MEALL NAM BÙTH - BREVIG BAY

NF7076000- NL693986

2600 metres.

Hard rock lithologies are essentially stable, but overlying soft sediment are vulnerable to wave erosion.

A complex coastline. At the coast soft sediments, which are subject to attack by wave action overlie erosion resistant lithologies.

3. BREVIG BAY - RUBHA MOR

NL698982 - NL694973

1300 metres.

Hard rock lithologies are essentially stable, but overlying soft sediment are vulnerable to erosion induced by wave action and gravity.

Gradient induced mass movement, occasional collapse of bedrock lithologies exposed in cliffs. Erosion of overlying soft sediments by wave action.

2. SOUTHWEST SHORE OF BREVIG BAY.

NL693986 - NL698982

700 metres.

Hard rock lithologies are essentially stable, but overlying soft sediment are vulnerable to erosion induced by wave action and gravity.

Gradient induced mass movement and erosion of soft sediments by wave action.

4. RUBHA MOR - RU-FEAR-VATERSAY

NL694973 - NL698973

1300 metres.

Evident erosion of coastal zone.

Within this bay considerable erosion of bedrock and softer surface lithologies is induced by gradient, wave action, stream erosion and the activity of animals. The head of the bay contains archaeology, sites 11, 12, 13 and 14. The morphology of the bay serves to funnel and concentrate high energy waves onto the shore where they may impact upon the archaeology.

5. RU-FEAR-VATERSAY - OROSAY ISLAND

NL698973 - NL667973

2400 metres.

Hard rock lithologies are essentially stable, but overlying soft sediment are vulnerable to erosion induced by wave action and gravity.

Cliff collapse is evident in many sections, as is the mass movement of softer lithologies. In many places the mass movement is induced by gradient, but undercutting of exposed coastal sections is also a common feature.

6. CASTLE BAY. OROSAY ISLAND - LEDAIG

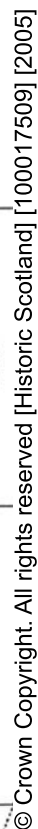
NL667973 - NL669980

1800 metres.

Essentially stable, but wave action is eroding soft sediments exposed at the coast.

A sheltered stretch of coastline which is basically resistant to erosion, nevertheless, built structures along this coastline have been severely eroded by low-energy, but near continuous wave action. The bay contains infrastructure from the now defunct Herring industry which is being eroded by the sea, Kiessimul Castle of probable 14th century construction with several rebuilds and the supposed site of a Dun of which no physical trace can be identified. Erosion in this bay is difficult to predict. The construction of the Vatersay causeway must have prevented the passage of Atlantic waves in to the bay.

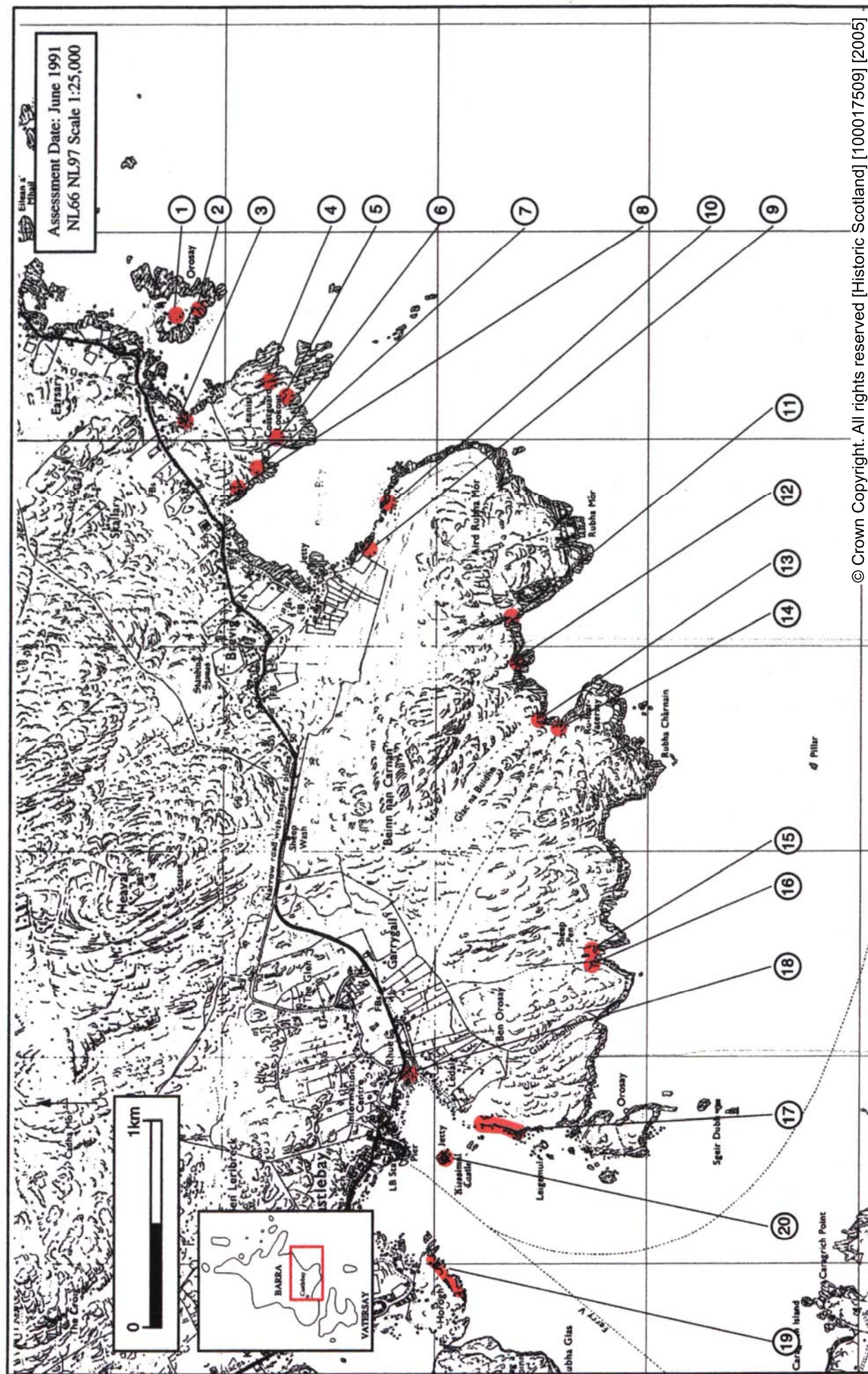
Erosion Class



3.3.3: Built Heritage and Archaeology.

- | | |
|--|---|
| <p>1. OROSAY.
4 clearance cairns (S17).
NL70649924.
Modern. Fair. Nil</p> | <p>12. AIRD RUBHA MOR.
Headland wall (S4).
NL68919763.
Modern. Poor. Nil.</p> |
| <p>2. OROSAY.
Wall of large stone blocks (S16).
NL70689911.
Uncertain. Fair. Nil</p> | <p>13. GLAC NA BUIDHE.
Stone wall (S5).
NL68659754.
Uncertain age. Fair. Nil.</p> |
| <p>3. LEANISH.
House and Byre (S15).
NL70149915.
Modern. Fair. Nil.</p> | <p>14. RU-FEAR VATERSAY.
Raised platforms (S6).
NL68639746.
Later prehistoric. Poor. Nil.</p> |
| <p>4. LEANISH.
Blackhouse (S14).
NL70319880.
Modern. Fair. Nil.</p> | <p>15. BEN OROSAY.
Headland wall (S8).
NL67529724.
Modern. Poor. Nil.</p> |
| <p>5. LEANISH.
Complex of 3 banks (S13).
NL70209875.
Modern. Fair. Nil.</p> | <p>16. BEN OROSAY.
Blackhouse & outbuildings (S9).
NL67509730.
Modern. Good. Nil.</p> |
| <p>6. LEANISH.
Earth bank (S12).
NL70009876.
Uncertain. Fair. Nil</p> | <p>17. CASTLE BAY.
Fishery infrastructure (K1).
NL6650-65/9720-75.
Modern. Poor. Nil.</p> |
| <p>7. LEANISH.
Wall and shelter (S11).
NL69889882.
Modern. Fair. Nil.</p> | <p>18. CASTLE BAY.
Alleged dun (K2).
NL66889808.
Later Prehistoric. Poor. Nil.</p> |
| <p>8. LEANISH.
2 sections of stone & turf wall (S10).
NL69809891.
Modern. Fair. Nil.</p> | <p>19. CASTLE BAY.
Fishery infrastructure (K3).
NL6560-85/9785-90.
Modern. Poor. Nil</p> |
| <p>9. BREVIG BAY.
Boulder wall (S1).
NL69569824.
Modern. Fair. Nil.</p> | <p>20. CASTLE BAY.
Kiessimul Castle (K. 4).
NL66569796.
Medieval. Good. Nil.</p> |
| <p>10. BREVIG BAY.
Headland wall (S2).
NL69759821.
Modern. Fair. Nil.</p> | |
| <p>11. AIRD RUBHA MOR.
Turf & stone wall (S3).
NL69149769.
Modern. Fair. Nil.</p> | |

Built Heritage and Archaeology



3.4: THE TANGAVAL HEADLAND.

1. Hinterland Geology and Coastal Geomorphology.

Tangaval is essentially a large elongate dome of banded Lewisian Grey Gneiss aligned NNW - SSE. Its series of relatively flat upper summit areas, give way to steep slopes leading down to the sea on three sides - to the north-west, west and south from the high points of 332 m at Ben Tangaval, Ben na Scute (183 m) and Cuialachmore. The slopes and cliffs along its north and west sides are precipitous. The eastern and north eastern margins are formed by a low valley which contains Quaternary drift deposits - often undifferentiated till - and machair sands and lacustrine deposits adjacent to Hallaman Bay. The south-eastern margin of the headland is characterised by gentler slopes which lead down to the Sound of Vatersay and Castlebay. Much of the topography is influenced by fault and late Palaeozoic basalt-dyke systems which are aligned NW-SE and SSW-NNE. The former give rise to the large and very exposed Glen Bretadale at the western end of the massif, numerous smaller valleys and gullies, such as that occupied by Alt Crysal, and numerous steep scarps. Basalt-filled dykes are also associated with major cross-valleys, of which the largest is that broad and relatively sheltered valley occupied by Allt a Gortain, and then continues through Bealach a Mhaim and on to Crebisdale. Almost invariably the basaltic infill of the dykes has proved less resistant to erosion than the gneiss with the result that the landscape is lined with shallow troughs one to five metres below the surrounding slopes developed on banded grey gneissose bedrocks.

Evidence of Quaternary glaciation is common across Tangaval. Pockets of cobble and boulder rich tills survive in hollows and pockets, and especially on the lower slopes of the hill mass, but good exposures are rare. Where visible, the till can be seen to be resting on an ice-smoothed surface.

Tilldeposits have given rise to a series of very poor soils (Hudson 1991). Lithosols, rankers, podzols, sometimes sub-alpine podzols are present. Large areas of Tangaval are also covered in various forms of peat soils, blanket bogs on the flatter surfaces, topogeneous mires in gullies and basins, such as that between Cuialachmore and Ben na Scute. These peats have been, and are still burnt, grazed, and in deeper areas, harvested for fuel. The western headlands are at present characterised by large areas of the remnants of eroding blanket bog. Substantial areas of these poor peat soils have been cultivated using various forms of Feannagan. This farming practice often involved the input of minerals via the addition of shell sand and seaweed to the created long ridges or mounds of peat. The adjacent troughs have also served to accelerate downslope drainage of the land, and on places on southern Vatersay, these troughs in the peat or poor mineral soils have now been eroded down to the bed-rock.

Soils which have improved by the addition of shell sand, seaweed or other products occur around many archaeological sites, and in the area of Gortain they give rise to vegetation which is visibly a brighter green than the dull-browns of the typical cover of Calluna-dominated moorland.

The survey also revealed the survival of shrubs of aspen (*Populus tremula*) in situations severely affected by salt spray and wind, and which are beyond the reach of sheep and fire.

2. Erosion Status.

This is a very exposed section of coastline. The western margins of Ben Tangaval are marked by high sea cliffs, while the southern margin which fronts the Sound of Vatersay has been scoured by the passage of tidal currents and waves not to mention high energy Atlantic storm waves. Needless to say any soft sediment is highly vulnerable and in the main must have been eroded away a considerable period of time ago. Wave erosion has negligible effect upon the gneiss in the time period considered. In 1992, the presence of seaweed and drifted wood 10 - 15 m inland indicated the capacity of waves to reach inland of the shoreline. There was some minor erosion of the colluvium at the waters edge. However, neither the vegetation, nor the archaeological sites appeared to be notably affected the occasional ingress and erosion by waves. Mass movement was not significant. The most notable sites subject to potential erosion are the "hut structures" south of the western "Leading Light" at NL647975 which are demonstrably covered by breaking waves at high tide, and might eventually be lost if wave attack - and wave-induced mass-movement- continued at its present intensity. Further east, few if any archaeological sites noted are suspected to suffer loss or erosion in the 50 m survey zone extending to Bagh Beag. There may be numerous interesting features under and shorewards of the village of Nasg, but it was too difficult to detect them in the complex of buildings - old and new - visible in June 1991.

Further west rotational slides and slumping of till, colluvium and other surficial deposits is active at the steepened walls of dykes and fault planes. Wave induced erosional processes are also active, with waves removing the slumped material and eroding the base of the slips and slumps. These slides/slumps are lubricated by water flowing underground at the interface between the surficial deposits and bedrocks, - the surface of the gneiss dipping towards the Sound of Vatersay.

One remaining area of uncertainty concerns the widespread peat erosion and soil loss observed on the windswept western moorlands of Cuialachbeg and Cuialachmore.

3. Built Heritage and Archaeology.

This apparently inhospitable length of coastline, exposed to the worst of the Atlantic storms, fringed for much of its length by bare rock or steep cliffs, and with no worthwhile protected harbours has some important archaeology. This is noticeably concentrated in the more sheltered eastern area or at two "preferred" locations at Allt Chrìsal and Gortain.

As elsewhere modern remains dominate, but there are few blackhouses within the coastal corridor; possibly because of the exposed nature of the coast they are mostly set further back. The proliferation of clearance cairns, however, indicates cultivation of many small shelves and platforms close to the sea. The considerable number of shelters in the zone might suggest use by fishermen, but given the scarcity of landing places they probably relate to the use of the peninsula for grazing.

Prehistoric remains are few but varied, broch, oval mound and round houses, rock shelter, cist and boat shaped setting. It should be remembered, however, that the major Neolithic/EBA site at Allt Chrìsal was invisible to surface survey and we must assume other sites may be similarly buried. No significant sites are under threat in this section of coastline, although the curious cellular structures of 17/18 should be watched.

3.4.1: Hinterland Geology and Coastal Morphology.

1. BAGH BEAG

NL655980

1500 metres.

A low coastal edge, mainly cobble beach.

A very sheltered sea loch. Small patches of salt marsh can be observed around its eastern and northern margins. Soils are peaty.

4. TRÀIGH A' GHOIRTEIN - CUIALACH-MORE POINT.

NL63159810 - NL62009870

1400 metres.

Exposed gneiss rock platforms, little soft lithology.

The low shoreline along the north shore of the Sound of Vatersay is made up of a ice-smoothed surface of grey gneiss, on which is covered by a thin layer of colluvium, solifluction deposits, or till, which support acid mineral soils, with feannegans, and nowadays grazed by sheep.

2. BAGH BEAG - NASG.

NL65609780- NL646977

1500 metres.

Mainly a low coastal edge with wave washed exposed rock platforms and boulder beaches.

Creag a Chroinn falls steeply to the sea at Rubha Glas. Soils here are peaty with abundant exposed bedrock. Between Rubha Glas and Nasg the coastline opens up and the coastal strip is low lying and exposed.

5. CUIALACHMORE POINT. - AIRD NA GRE-GAIG.

NL62009870 - NF 63700071

3900 metres.

Steep, high cliffs dominate much of this section. An often steep and precipitous coastline. The cliffs of Doirlinn head are over 100ft high. Soil in the area is thin and poor. Large areas of peat are peeling from the underlying gneiss. A small patch of saltmarsh has been identified at the mouth of Glen Bretadale. Land use very poor grazing.

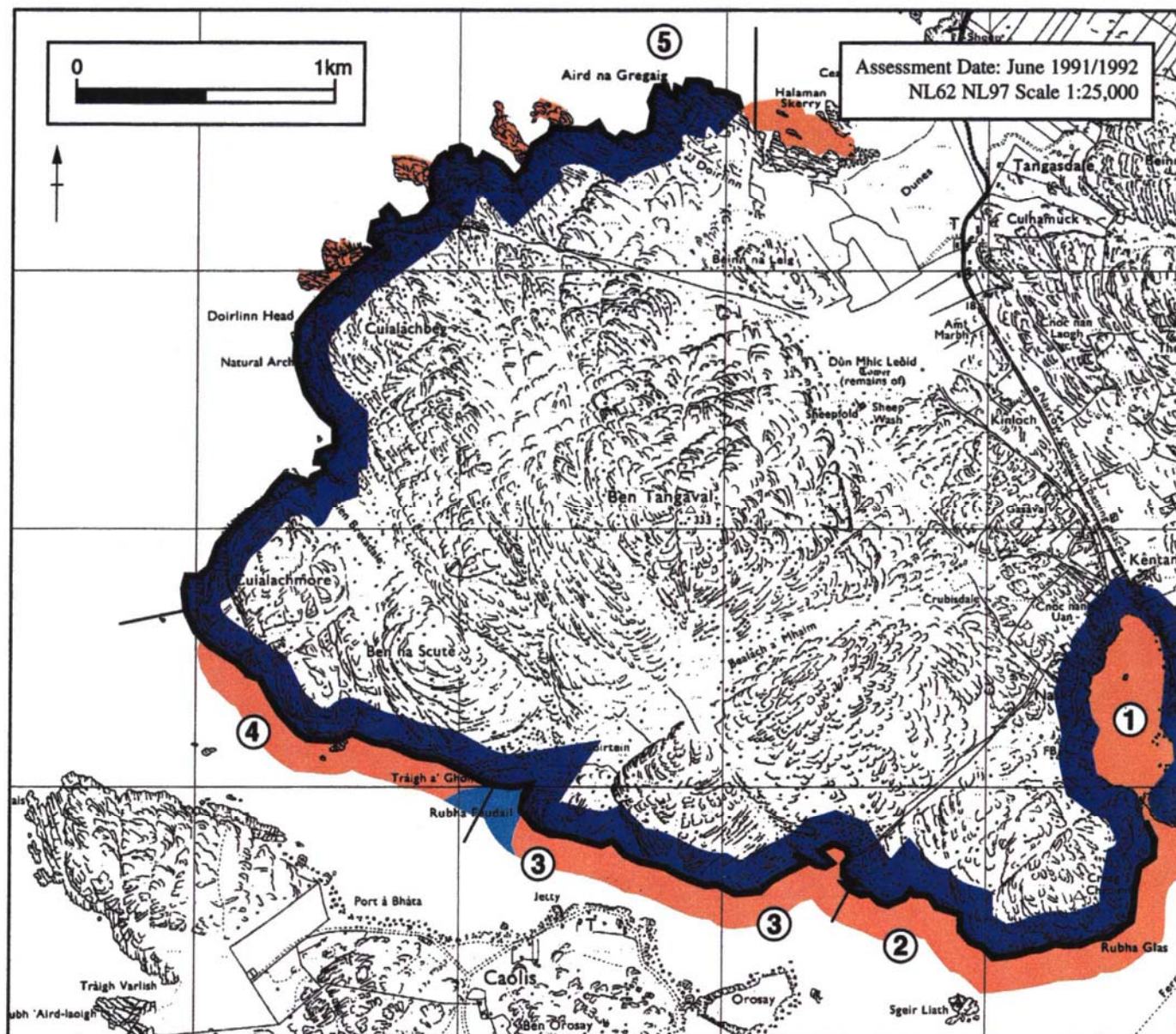
3. NASG - TRÀIGH A' GHOIRTEIN

NL646977 - NL63159810

1700 metres.

Mainly a low coastal edge with wave washed exposed rock platforms and boulder beaches.

This section of coastline includes the settlement sites of Allt Chrisal and Gortein. Both sites are separated by a steep section of coastline, which is very difficult to traverse. Soils are poor acid peats. The most recent evidence for cultivation comes from the common clearance cairns and the Feannagan which are associated with the abandoned settlement of Gortein.



Hinterland Geology

- Peat Soil and Exposed Bedrock
- Blown Sand

Coast Edge

- Low Edge < 5m
- Cliff > 5m
- Man Made Barrier

Coast Geomorphology

- Mainly Rock Platform - Boulders
- Shingle/Courbles/Boulders
- Mainly Sand
- Blown Sand

3.4.2: Erosion Status.

1. BAGH BEAG

NL655980

1500 metres.

Stable, no erosion risk.

Bàgh Beag, immediately west of Castle Bay is fully protected, but does experience a substantial tidal flow through its narrow entrance at the southern end

4. TRAÌGH A' GHOIRTEIN - CUIALACH-MORE POINT.

NL63159810 - NL62009870

1400 metres.

Wave lashed section of headland, little soft sediment remains to be eroded. The gneiss cliffs will fail rarely but catastrophically.

Small isolated sites occur on the narrow low-angle talus cones above the shoreline. Most of these sites are close to the shore-cliff edge and are likely in the next 20 - 100 years to be affected by wave erosion or wave-accelerated mass-movement. Despite this problem the greater part of this shoreline is essentially stable and likely to remain so.

2. BAGH BEAG - NASG.

NL65609780- NL646977

1500 metres.

Gneiss is essential resistant to erosion, softer lithologies are subject to moderate erosion risk.

This section of coastline is characterised by two types of coastal edge. Steep hill slopes and short cliffs around Rubha Glas and a low-lying coastal edge around the leading light at Nasg. This latter section of coastline was vulnerable to high-energy waves passing down the sound of Vatersay. The consequences of the construction of the causeway, as elsewhere in this survey, has yet to be fully assessed.

5. CUIALACHMORE POINT. - AIRD NA GRE-GAIG.

NL62009870 - NF 63700071

3900 metres. Wave lashed section of headland, little soft sediment remains to be eroded. The gneiss cliffs will fail rarely but catastrophically.

This wild, rocky and precipitous shoreline displayed many spectacular geological and geomorphological features, but despite the evident power of geomorphological processes at work on this exposed promontory, in no case was it possible to detect a clear threat to the sparse archaeological remains of the area. The northern shoreline is less forbidding than the western cliff-lines.

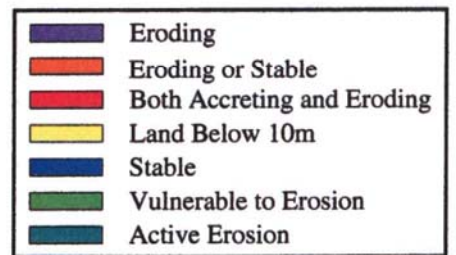
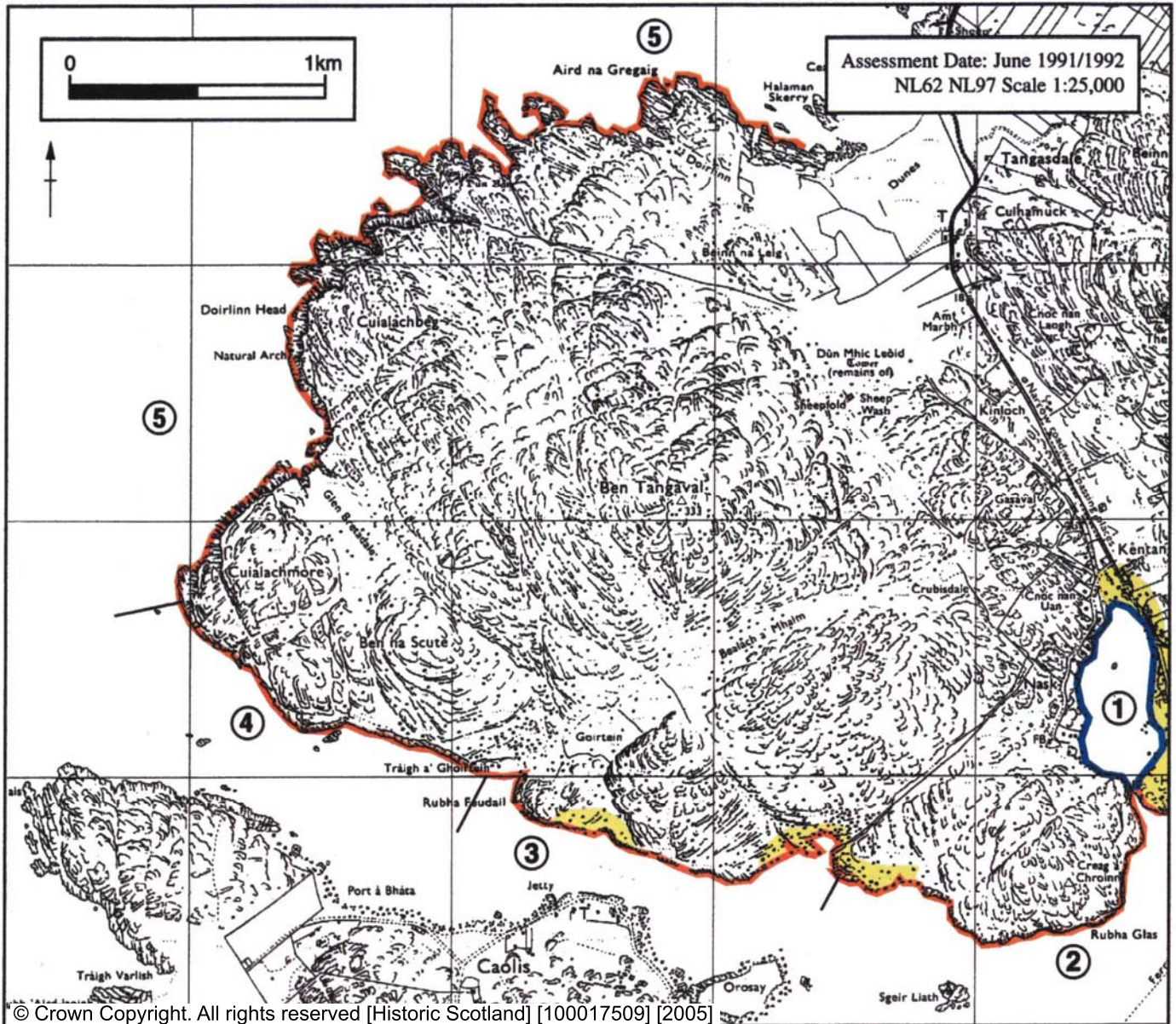
3. NASG - TRAÌGH A' GHOIRTEIN

NL646977 - NL63159810

1700 metres.

Gneiss is essential resistant to erosion, softer lithologies are subject to moderate erosion risk

The 50 m survey strip below the "clearance" village of Gortein (at NL632980) is characterised by material being lost by mass-movement and coastal erosion. In the east, at the rock shelter excavated in 1989, and the surrounding area, numerous blocks of gneiss are sliding into the sea, the passage of the over-hanging blocks making up the rock shelter is impeded by the presence of four smaller blocks which act as "chocks".

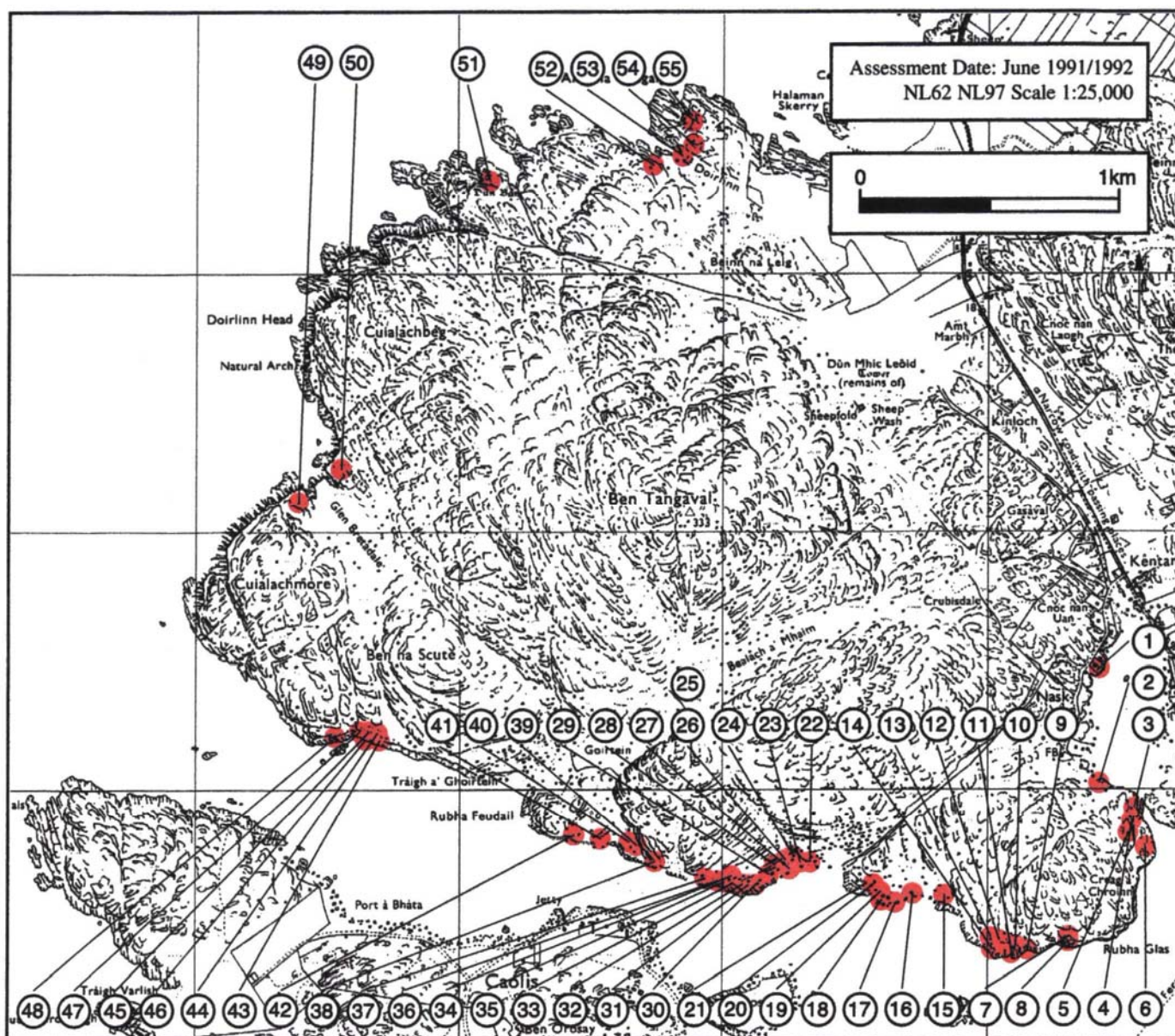


3.4.3: Built heritage and Archaeology 1.

- | | | |
|--|---|--|
| 1. BAGH BEAG.
Rectangular outbuilding
(T228).
NL65439845.
Modern. Fair. Nil. | 11. RUBHA GLAS.
Shelter type C (T71).
NL65119740
Modern. Fair. Nil. | 21. RUBHA GLAS.
Clearance cairn (T45).
NL64589762.
Modern. Fair. Nil. |
| 2. BAGH BEAG.
Rectangular outbuilding
(T227).
NL65449802
Modern. Fair. Nil. | 12. RUBHA GLAS.
Shelter type A (T88).
NL65059743.
Modern. Fair. Nil. | 22. ALT CHRISAL.
Blackhouse (T30).
NL64339771.
Modern. Good. Excavated
1989. |
| 3. BAGH BEAG.
Shelter type A (T79).
NL65459795.
Modern. Fair. Nil. | 13. RUBHA GLAS.
Shelter type A (T86).
NL65059745.
Modern. Fair. Nil. | 23. ALT CHRISAL.
Two kelp ovens (T28).
NL64299711.
Modern. Poor. Excavated
1990. |
| 4. BAGH BEAG.
Oval hut (T78).
NL65529791.
Modern. Fair. Nil. | 14. RUBHA GLAS.
Rectangular cist (T85).
NL65019740.
Prehistoric. Fair. Nil. | 24. ALT CHRISAL.
Clearance cairns (T24).
NL64279772.
Modern. Fair. Nil. |
| 5. BAGH BEAG.
Shelter type A (T77).
NL65529790.
Modern. Good. Nil. | 15. RUBHA GLAS.
Shelter type C (T64).
NL64829759.
Modern. Fair. Nil. | 25. ALT CHRISAL.
Byre (T27).
NL64279773.
Modern. Good. Excavated
1989. |
| 6. CREAG A' CHROINN.
Clearance cairns & Lazy beds
(T76). NL65629782.
Modern. Fair. Nil. | 16. RUBHA GLAS.
Clearance cairns & Lazy beds
(T54). NL64709760.
Modern. Fair. Nil. | 26. ALT CHRISAL.
Blackhouse/activity site
(T26).
NL64259773.
Modern/earlier prehistoric.
Good. Excavated 1989-94. |
| 7. RUBHA GLAS.
Shelter type C (T74).
NL65309741.
Modern. Fair. Nil. | 17. RUBHA GLAS.
Cellular stone structure (T50).
NL64629757.
Modern / Earlier? Fair.
Watching Brief. | 27. ALT CHRISAL.
Drying shed (T25).
NL64269770.
Modern. Good. Excavated
1989. |
| 8. RUBHA GLAS.
Raised platform (T75).
NL65309740.
Modern. Fair. Nil. | 18. RUBHA GLAS.
Cellular stone structure (T49).
NL64619758
Modern / Earlier? Fair.
Watching Brief | 28. ALT CHRISAL.
Clearance cairn (T13).
NL64239770.
Modern. Fair. Nil. |
| 9. RUBHA GLAS.
Shelter type C (T73).
NL65149740.
Modern. Fair. Nil. | 19. RUBHA GLAS.
Shelter type A (T48).
NL64609759.
Modern. Fair. Nil. | 29. ALT CHRISAL.
Clearance cairn (T14).
NL64219768.
Modern. Fair. Excavated
1989. |
| 10. RUBHA GLAS.
Shelter type C (T72).
NL65119742
Modern. Fair. Nil. | 20. RUBHA GLAS.
Blackhouse (T46).
NL64609760.
Modern. Good. Nil. | |

3.4.3: Built heritage and Archaeology 2.

- | | | |
|---|---|---|
| 30. ALT CHRISAL.
Hut platform (T11).
NL64149765.
Prehistoric. Poor. Excavated
1989. | 40. GORTEIN.
Rectangular building (T93).
NL63659778.
Modern. Poor. Nil. | NL62529933.
Modern. Fair. Nil. |
| 31. ALT CHRISAL.
Clearance cairn (T10).
NL64139765.
Modern. Fair. Nil. | 41. GORTEIN.
Blackhouse (T94).
NL63539782.
Modern. Good. Nil. | 50. BRETADALE.
Boat-shaped stone setting
(T188).
NL62529933.
Later prehistoric? Fair. Nil. |
| 32. ALT CHRISAL.
Clearance cairn (T9).
NL64119764.
Modern. Fair. Excavated
1989. | 42. GORTEIN.
Clearance cairn (T115).
NL63429780.
Modern. Fair. Nil. | 51. DUN BAN.
Atlantic roundhouse (T226).
NL63120037.
Later prehistoric. Fair. Nil. |
| 33. ALT CHRISAL.
Clearance cairn (T8).
NL64019764.
Modern. Fair. Nil. | 43. BEN NA SCUTE.
Circular stone building
(T164).
NL62859816.
Later prehistoric? Poor. Nil. | 52. AIRD NA GREGAIG.
Shelter type C (T194).
NL63800040.
Modern. Fair. Nil. |
| 34. ALT CHRISAL.
Clearance cairn (T7).
NL64069766.
Modern. Fair. Nil. | 44. BEN NA SCUTE.
Rock shelter (T168).
NL62869818.
Uncertain. Fair. Nil. | 53. AIRD NA GREGAIG.
Oval enclosure / Shelter type
A (T192).
NL63800044.
Modern. Fair. Nil. |
| 35. ALT CHRISAL.
Clearance cairn (T6).
NL64039765.
Modern. Fair. Nil. | 45. BEN NA SCUTE.
Circ. stone building (T166).
NL62829819.
Later prehistoric. Poor.
Excavated 1990. | 54. AIRD NA GREGAIG.
Shelter type A (T193).
NL63910048.
Modern. Fair. Nil. |
| 36. ALT CHRISAL.
Clearance cairn (T5).
NL64039765.
Modern. Fair. Nil. | 51. DUN BAN.
Atlantic roundhouse (T226).
NL63120037.
Later prehistoric. Fair. Nil. | 55. AIRD NA GREGAIG.
Shelter type C (T194).
NL63970045.
Modern. Fair. Nil. |
| 37. ALT CHRISAL.
Wall/activity site? (T1).
NL63299763.
Modern/prehistoric?. Poor.
Excavated 1989. | 46. BEN NA SCUTE.
Shelter type B (T165).
NL62829817.
Modern. Poor. Nil. | |
| 38. GORTEIN.
Rock shelter (T70).
NL63739772.
Earlier prehistoric. Good.
Excavated 1990. | 47. BEN NA SCUTE.
Shelter type E (T167).
NL62829818.
Modern. Fair. Nil. | |
| 39. GORTEIN.
Clearance cairn (T92).
NL63769767.
Modern. Fair. Nil. | 48. BEN NA SCUTE.
Enclosure, activity site.
NL62529821.
Earlier prehistoric. Fair.
Excavated 1992. | |
| | 49. BRETADALE.
Shelter type A (T173). | |



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3.5: WEST BARRA.

1. Hinterland Geology and Coastal Geomorphology.

As elsewhere the geology and geomorphology is dominated by Lewisian Gneiss and basalt dykes which are less resistant to erosion and soil types dominated either by shell sand or by peat. This is an archaeologically and geomorphologically complex sector of coastline. To a greater or lesser extent it is covered in sand blown inland from the shoreline. On the most exposed area of Greian Head and Borge Point this sand is thin and patchy on shorelines which are essentially geomorphologically stable. Sand dune and machair dominate the soils of the survey area. Sand is blown far inland and modifies the peat soils of the hinterland. There is anecdotal evidence that ships were once able to sail directly into Loch St. Clair. Extensive machair now prevents this and bears evidence to the tremendous power of blown sand to modify the landscape.

2. Coastal Erosion Status.

This coastline encompasses two basic landforms. 1). Sand dune and machair, 2). Rocky headlands. While essentially stable, storm waves do sweep across the western margins of Borge Point and are re-working ancient field systems and features. The deposits adjacent to the 'broch' at Port na Cille (Site 1) are affected by slumping and minor wave erosion.

Both dune erosion and formation are taking place elsewhere at the shoreline. In Halaman Bay, a variety of barriers have been placed within and at the front of eroding dunes in an attempt to control deflation or to bring about dune growth - these have met with varying levels of success. Erosion is principally focussed upon present or past routeways to the shoreline. Very few archaeological features in sand dunes are evident through natural exposures in these dune and machair areas indeed site 3 has only been identified from an Ordnance Survey record and has not been found by our surveying team.

The rocky coastline between Cleat and Tràigh Eais is characterised by till, solifluction, colluvium and peat resting upon either gneiss bedrocks, or basaltic bed-rocks in the many gullies that extend inland. Stream and wave erosion interact with mass-movement in these gullies. Typically, these processes threaten few archaeological remains. The exception is the small dun of Dùn Chlièf (Site12) which is located on a small knoll in the inter-tidal zone and is regularly washed and eroded by storm waves.

3. Built Heritage and Archaeology.

This strip of coast is dominated by the cliffs of Greian headland and Ben Erival, and by areas of Sand dune and machair at Halaman Bay, Allasdale and Cleat, so few sites are identified here and those which occur in clusters for the most part. The overall impression is that most of this coastline was little utilised at any time in the past. The only modern occupation sites are at the west end of the small valley at Vaslain, on the southern edge of the Eoligarra machair. Prehistoric occupation is focussed on the brochs at Borge Headland and Dun Chlieff, although there are scattered lesser sites in between.

Erosion threatens both of the brochs. The threat at Borge is not directly to the broch wall

itself, but to the midden immediately north of it, actively eroding downslope into Port na Cille, and to the embanked enclosure running around it to the south. At some stage the cemetery wall may need to be strengthened, at which point the midden and perhaps the broch should be investigated. Dun Chlieff is threatened by winter storm waves, which break over it, there is no way to protect it from this hazard.

3.5.1: Hinterland Geology and Coastal Geomorphology.

1. HALAMAN BAY - GREIAN HEAD.

NF64000070 - NF64600490.

6500 metres.

In essence a low coastal edge, though a few moderately high cliffs can be found. Shell sand and its distribution across the landscape governs the environment in this section.

This section of coast is formed by two low headlands formed of gneiss bedrock, Borge Point and Sgeir Liath, which separate several shell sand beaches. The influence of the shell sand beaches extends inland in the form of sand dune and machair, and also moderate the acidity of the peat soils of the inland hills. The coastline is in the main quite low, but moderately sized cliffs do exist, particularly at the chasm known as "MacNeil's Leap".

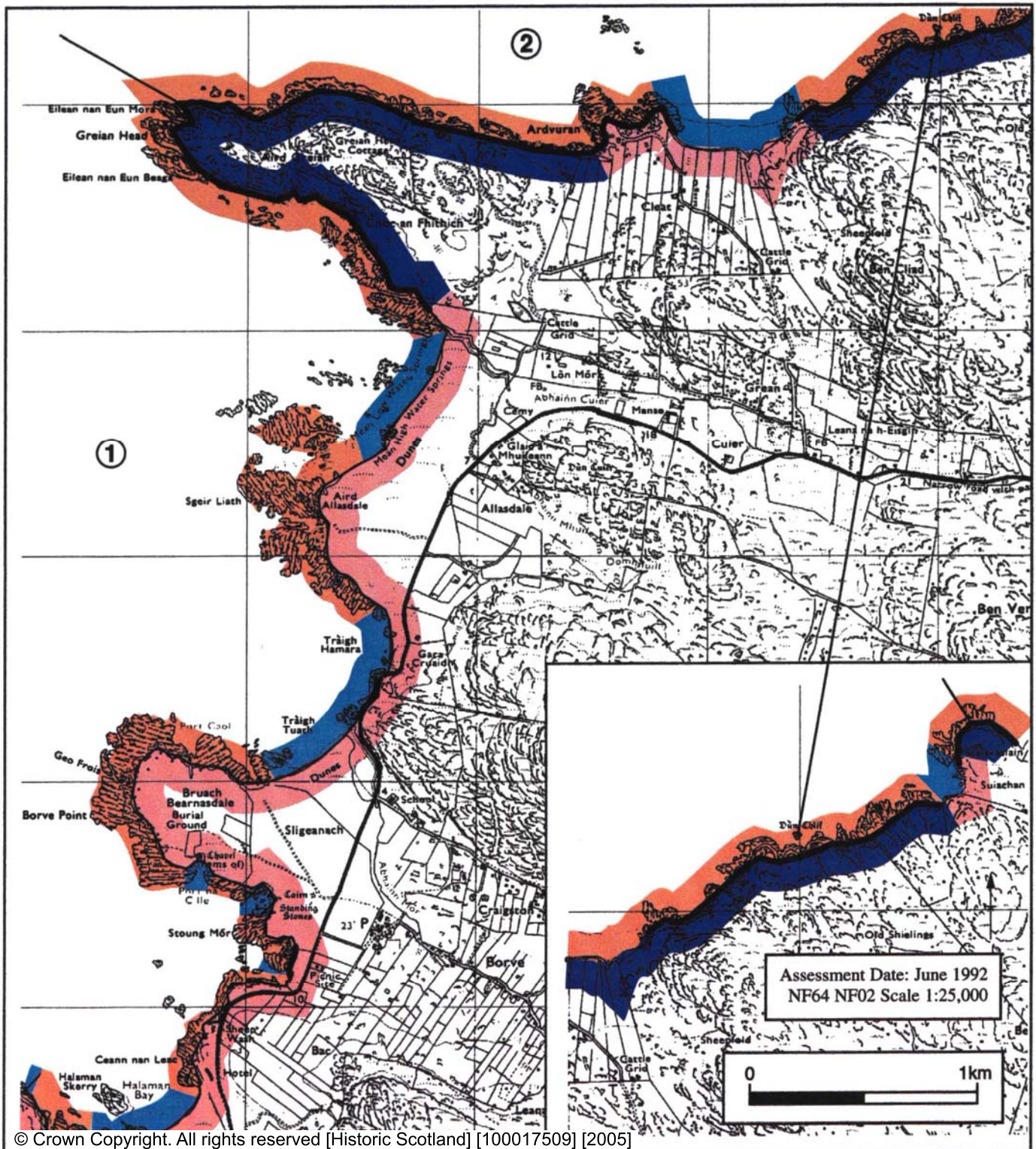
2. GREIAN HEAD - SCALAVASLAIN

NF64600490 - NF68800580.

4500 metres.

Gneiss headlands, steep cliffs, precipitous hill slopes, much exposed bare rock and acid soils.

A distinctly different section of coastline dominated by the rocky headlands of Greian head and the hillslopes of Ben Erival. Here are found steep precipitous grass slopes and high cliffs. A shell sand beach does exist at Cleat, where raised beach and till deposits may be found.



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Hinterland Geology

- Peat Soil and Exposed Bedrock
- Blown Sand

Coast Edge

- Low Edge < 5m
- Cliff > 5m
- Man Made Barrier

Coast Geomorphology

- Mainly Rock Platform - Boulders
- Shingle/Courbles/Boulders
- Mainly Sand
- Blown Sand

3.5.2: Erosion Class.

1. Halaman Bay - Greian head.

NF64000070 - NF64600490.

6500 metres.

Though the machair/sand dune environments are essentially dynamic and are a system which is both erosive and depositional. However, basalt dykes are eroding and are associated with some archaeological monuments. Essentially stable, the shell sand beaches of this section are a dynamic stable system where moderate changes do occur, but in a cycle which sees the sand moved from beach to sand dune to machair, with little real change to the overall shape of the coastline. Soft deposits upon the coastal strips of the low lying headlands are vulnerable to wave action during storms.

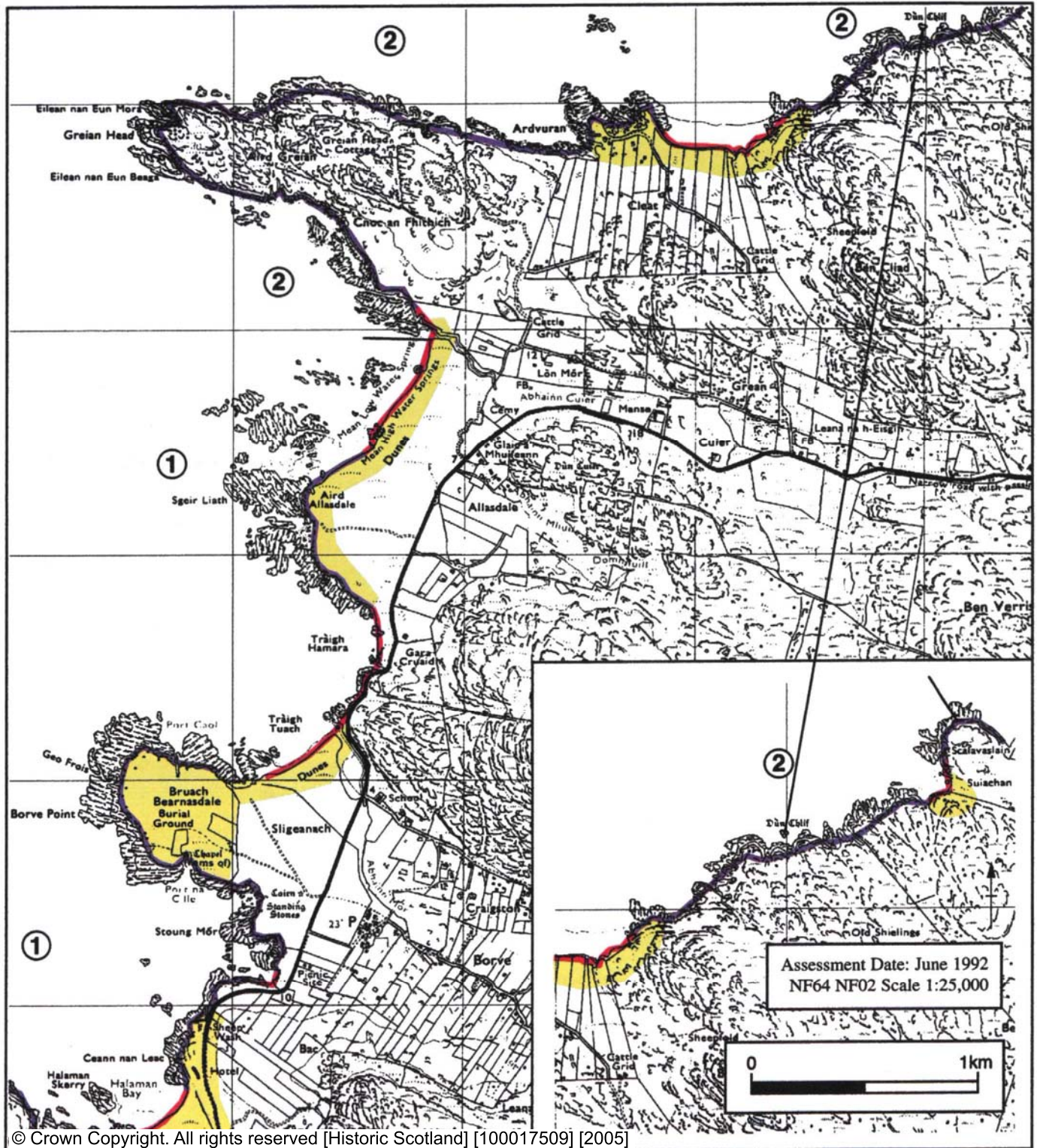
2. Greian head - Scalavaslain.

NF64600490 - NF68800580.

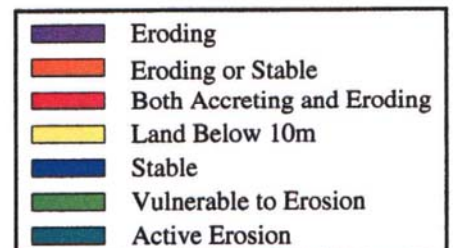
4500 metres.

Essentially erosive coastline.

A distinctly different section of coastline dominated by the rocky headlands of Greian head and the hillslopes of Ben Erival. Here are found steep precipitous grass slopes and high cliffs. A shell sand beach does exist at Cleat, where Raised Beach and glacial till deposits may be found. Mass movement of the soil cover on the hillslopes does occur, as does catastrophic failure of weakened and undermined cliff sections. Basalt dykes in the gneiss preferentially erode into the headlands.



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3.5.3: Built Heritage and Archaeology

1. PORT NA CILLE.
Broch, Midden & Enclosure
(B5). NF64700170.
Later prehistoric. Fair.
Watching brief.

2. BORVE POINT.
Embanked enclosure (B85).
NF64670172.
Later prehistoric. Fair.
Watching brief.

3. MOLLADH BEAG.
Pottery scatter (C52).
NF65500290.
Later prehistoric. Unknown.
Nil.

4. GREIAN HEAD.
Circ. stone structure (G1).
NF65240460
Prehistoric? Fair. Nil.

5. GREIAN HEAD.
Shelter type E (G2).
NF65190470.
Modern. Fair. Nil.

6. GREIAN HEAD.
Kelp oven? (G3).
NF65120462.
Modern. Poor. Nil.

7. GREIAN HEAD.
Stone hut (G4).
NF64960466.
Modern. Fair. Nil.

8. GREIAN HEAD.
Megalithic structure (G5).
NF64840474.
Prehistoric? Poor. Nil.

9. GREIAN HEAD.
Shelter type F (G6).
NF65070490.
Modern. Fair. Nil.

10. GREIAN HEAD.
Shelter type A (G7).
NF65120489.
Modern. Fair. Nil.

11. GREIAN HEAD.
Shelter type E (G8).
NF65500501.
Modern. Fair. Nil.

12. BEN ERIVAL.
Dùn Clieff (G9).
NF68190530.
Later prehistoric. Fair.
Watching brief.

13. BEN ERIVAL.
Stone structure (G10).
NF68270526.
Modern. Fair. Nil.

14. BEN ERIVAL.
Circ. Stone hut (G12).
NF68490549.
Later prehistoric. Poor. Nil.

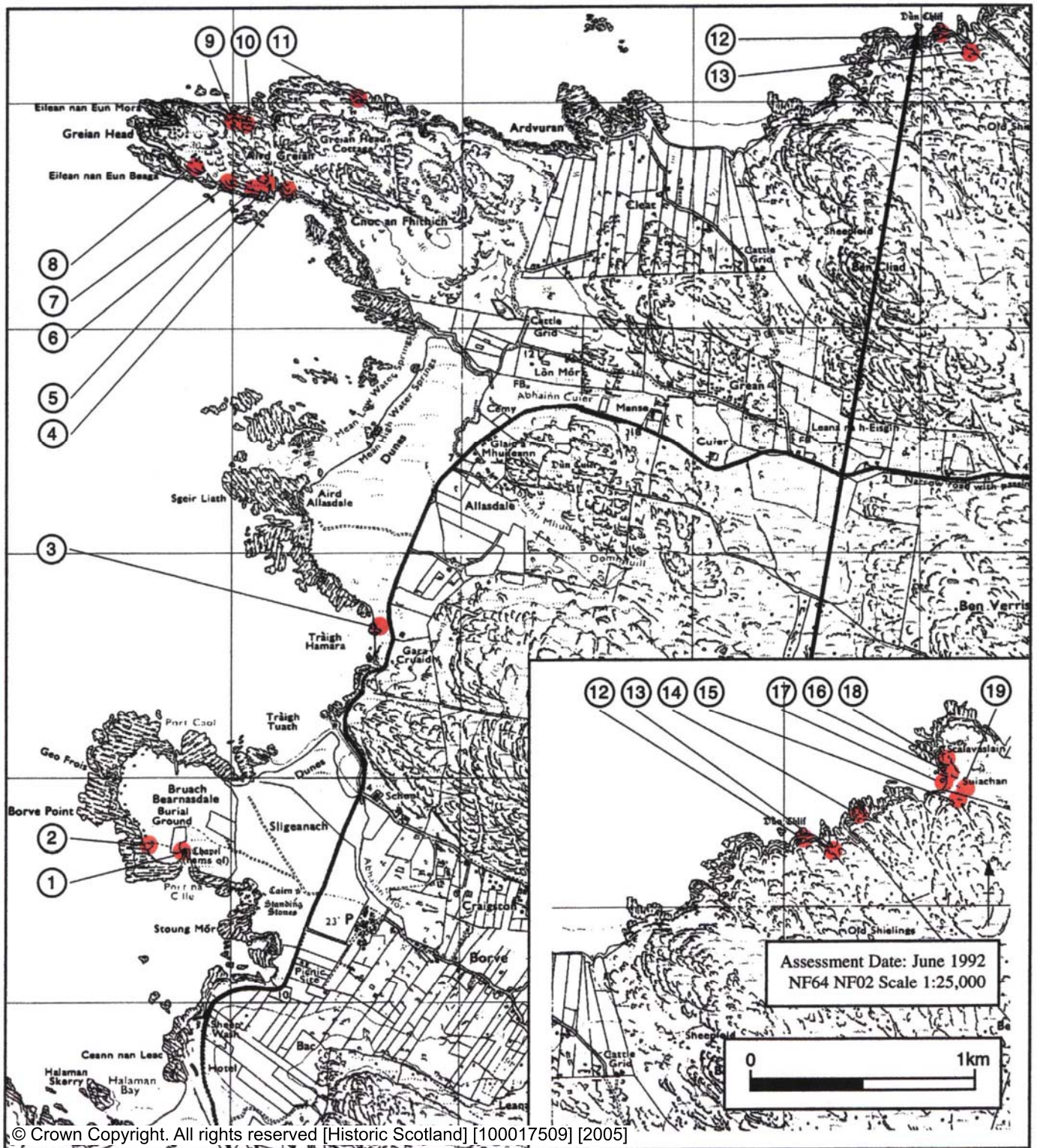
15. SUIACHAN.
Blackhouse & pen (G13).
NF68780550.
Uncertain. Poor. Nil.

16. SUIACHAN.
Oval cairn (G14).
NF68750554.
Earlier prehistoric. Good. Nil.

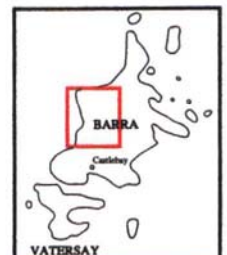
17. SCALAVASLAIN.
Oblong building (G15).
NF68710555.
Modern. Poor. Nil.

18. SCALAVASLAIN.
Kelp oven (G16).
NF68690562.
Modern. Fair. Nil.

19. SCALAVASLAIN.
Blackhouse (G17).
NF68840553.
Modern. Fair. Nil.



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3.5.3: NORTH VATERSAY.

1. Hinterland Geology and Coastal Geomorphology.

Vatersay Causeway - Caolis - Tràigh Varlish

This section comprises the north-western section of the island of Vatersay, fronting onto the Sound of Vatersay, to Aird a' Chaolis, and the southern coastline of the Chaolis headland to Tràigh Varlish. The underlying bedrock geology, as elsewhere, is dominated by Lewisian Gneiss. On the steeper, north facing slopes of Aird a' Chaolis occasional hollows have accumulated peat in excess of 1 metre in depth. However, much of the soil is very shallow and large expanses of bare rock from which the peat soil has been stripped by the actions of wind and grazing are evident. Wave and wind erosion affects the rocky shoreline of much of western Vatersay. In places, the loss of surface peat soils appears extreme - wind, storm and concentrated runoff between lazy beds being the major causes. Attempts to farm this headland in the past are evident in the complex of walls, often crossing areas now denuded of soil, or occasionally buried in peaty hollows. Land use is largely restricted to rough grazing and the headland is largely dominated in the early summer by nesting Arctic Terns. The south facing slopes of Aird a' Chaolis above Tràigh Varlish are a complete contrast to the slopes on the northern flanks of the headland. Here shell sands have been blown up hill from the beach to foster the development of calcareous soils and machair vegetation.

Much of Aird a' Chaolis slopes steeply to the sea and is surrounded by wave cut platforms. In places glacial till has been deposited on them. The coastal geomorphology reflects complex erosional and depositional processes. From the causeway west for 500 metres a storm beach of large cobbles has formed. Where the coast turns slightly northwards at NL625976 glacial till is exposed. From the north-western edge of the till exposed on the beach for a distance of 200, metres a glacial till rests on a wave cut platform. From the edge of the wave cut platform, round the Aird a' Chaolis headland, no sediment of note is evident until the sands of Tràigh Varlish are reached.

Vatersay Bay - Uidh Peninsula - Vatersay Causeway.

As elsewhere on the island the underlying geology is formed of Lewisian Gneiss, which in places is exposed as a bare rock surface and in others is covered with a variety of surficial sediments. These comprise variously of shell sands, glacial till and colluvium. These support poor, mainly peaty soils. Slightly better soils are found where shell sands are blown inland and where the slope angle is moderate to gentle.

The slopes of Heishival Beag slope steeply to the sea above both Vatersay Bay and Cornaig Bay. The flanks of this hill are riven with deep gullies and ravines, which contain fast flowing streams. Thin peaty soils cling precariously to the bedrock and recent mass movement of these peats is evident. Where the slopes of Heishival Beag fall into the relatively sheltered Cornaig Bay, a small cliff has been formed which in many places is 2-3 metres high. At the foot of this cliff a mixture of glacial till and reworked beach cobbles is found. Where Heishival Beag falls into the sound of Vatersay a small cliff has formed in many places. Some beach cobbles are evident along this section of shoreline, but no sediments typical of a glacial till were identified. Within ravines and on rare flat platforms on the hillside small patches of poor acid soil are found which have attracted farming and

settlement in the past, but these appear to be well beyond the reach of current coastal erosion processes.

The Uidh peninsula is formed from a block of Lewisian Gneiss, which is split by major north-south trending faults. The sea has exploited these lines of obvious weakness, and the sea at high tide now splits the peninsula in two places. The bedrock is overlain by glacially derived till which in places supports thin peaty soils. Elsewhere along the peninsula, particularly in the vicinity of the faults that have been breached by the sea, shell sand beaches provide calcareous material that is blown inland to support small patches of typical machair grassland, which in turn support a large rabbit population. Shell sand is also supplied from the beach by Uidh Township. A low cliff, generally less than two metres in height, largely protects the south coast of the Uidh peninsula. Land use of this section if the coastline is currently restricted to rough grazing but there is evidence of spade cultivation in historical times. In contrast, the north-facing coast is quite low lying. In most places, the exception being the south and eastern shoreline of Creag Mhór, there is no cliff line; instead wave washed boulders and bedrock form most of the coastline. The gentler landscape has seen the exploitation of this coastline for spade cultivation.

Ben Orosay forms the final section of coastline in this survey of the shore of Vatersay. The coastline here is rich in archaeological heritage. In essence the small hill of Ben Orosay is built from a block of Lewisian Gneiss. Evidence of past land use abounds in the form of lazybeds, and the area is still used for grazing purposes. The soils are poor, thin peaty gleys formed largely on glacial till and occasionally on bedrock. Associated with Ben Orosay, yet isolated by a short neck of the sea is the island of Orosay, this too is composed of Lewisian Gneiss. The shorelines of both Ben Orosay and the small islet of Orosay are lined with an extensive beach deposit comprising clasts, which range in size from cobbles to boulders, in addition a wave washed platform of bedrock is exposed on the western coastline of Orosay island. The entire coastline in this section is affected by wave erosion. It remains to be seen what the impacts of the construction of the Vatersay causeway will have on this small section of coastline.

2. Erosion Class.

Vatersay Causeway - Caolis - Tràigh Varlish

The character of this section is essentially erosional; where exposed to the actions of the sea, cliff collapse is evident. The storm beach at Caolis is clearly an active geomorphological feature where both erosion and deposition may be anticipated. The construction of the Vatersay causeway may have, as yet unanticipated, consequences for this stretch of the shore. In those areas where the coastline is unprotected by heaped storm beach cobbles, active erosion is occurring. On the Caolis Headland, west of Caolis Township, these processes have exposed to their bases, ancient walls and various stone structures. The shoreline platform which borders this headland along the southern shore of the Sound of Vatersay is covered by ancient walls, which sometimes form enclosures, as well as the remains of houses west of Caolis which are all overtopped by winter storms. Around the Caolis headland the erosional process are typical of those which occur on other similar coastlines, where exposed to Atlantic storms, faults and dykes in the Gneiss are preferentially eroded, a process which leads inevitably to the collapse of sections of cliff line. Sometimes these collapses are massive in size. In Tràigh Varlish, the shell sands are driven inland by wind and wave action and flotsam and jetsam may be found consider-

able distances inland. The prominent small headland in the centre of Tràigh Varlish contains a complex archaeological site. The headland is formed from a wave cut platform overtopped by till and shell sand. The edges of this feature are clearly being "trimmed" by wave action.

Tràigh Varlish - Bagh Siar.

The erosional status of such shorelines is determined principally by the degree of exposure to Atlantic storms. The bedrocks are resistant to erosion. Erosion of such coastal features is a rare, catastrophic event, which is demonstrated by the massive block collapses on the very western edge of this headland. However, in contrast, the surficial deposits, which overlie the bedrock, are subject to near constant erosion pressure from the action of wind, waves, rain and gravity. Along the exposed west facing section Atlantic storms have and are removing considerable quantities of soil. Archaeological features here are at risk.

Vatersay Bay - Uidh Peninsula - Vatersay Causeway.

This coastline is essentially erosional in character. Slope angle and mass-movement prevent the surface sediments achieving much stability along the southern flank of Heishival Beag. Wave action constantly trims cleans loose sediments from this section of coastline in addition to the occasional collapse of blocks of bedrock into the sea. The Uidh peninsula is very exposed to the action of the sea, which must overtop many sections of the headland during stormy weather. In particular, over-topping by waves, slumping and rabbit erosion are all affecting the remains of the chapel at the far north east of the Uidh Peninsula of Vatersay on the northern shoreline of the small island of Uinessan (NL665957). The large rounded clasts which line all the shorelines of Cornaig bay are clear evidence that wave erosion dominates this coastline, as is the trimmed appearance of the low bedrock and till cliffline which lines the Cornaig shore of Heishival Beag. Both the beach clasts, the low lying nature of much of the coastline and the abundant deposition of flotsam and jetsam well inland demonstrate the considerable erosion risk faced by the shoreline of Ben Orosay and the small rocky islet of Orosay.

3. Built Heritage and Archaeology.

The long coastline of North Vatersay is mostly steep and rugged, the exceptions being the gentler slopes of the Uidh peninsula and Ben Orosay, and the small area of machair behind Tràigh Varlish. Sites and monuments are mostly found on the more inhospitable sections of coastline, although the scarcity of sites around the coast of Ben Orosay may be partly due to considerable recent occupation which may have destroyed or obscured earlier remains.

Modern occupation and exploitation of the coastal zone is represented mainly by blackhouses and outbuildings, mostly in clusters at Port a Bhata, Trevisick, Vatersay school and Uidh. The group of six blackhouses at Port a Bhata, already partly destroyed by the sea, may perhaps represent the earlier focus of Caolis township, now located on the north coast of Ben Orosay. Fishing is still an important activity at Caolis but it has left little visible archaeology. Small huts on the headland west of Trevisick (sites 12 - 13) are almost certainly fishermen's shelters.

Prehistoric occupation sites in the coastal zone are only three in number and widely separated, but the survey of the rest of north Vatersay reveals many such sites a little further inland. The same is true of the two kerbed cairns found west of Trevisick (sites 15 - 16), which we now know to be coastal outliers of at least a complex of at least twenty such cairns in the valley behind the coast at this point.

The small island of Biruaslum has a remarkable concentration of sites. The hut cluster on the southern side may be a rare medieval settlement and the massive wall of the "fort" indicates an important, presumably Iron Age, focus. At the edge of this site a thick Neolithic midden is eroding and should be kept under watching brief, if not explored.

3.6.1: Hinterland Geology and Coastal Geomorphology.

1. CAOLIS BEACH.
NL635976- NL625977
700 metres.

A low coastal edge formed of storm deposited material. Acid soils and vegetation.
Mainly storm beach composed of medium - massive cobbles. This is an active geomorphological feature.

2. CAOLIS BEACH WESTERN SECTION.
NL625975 - NL625976
6150 metres.

A low coastal edge formed of glacial till. Acid soils and vegetation.

This section of the beach trends approximately north - south and is "trimmed" by waves. It is not protected by a storm beach and must be "trimmed" by winter storms. The exposed sediment is a glacial till.

3. AIRD A' CHAOLIS: NORTH-WESTERN SECTION.
NL624966 - NL622979
400 metres.

A low coastal edge formed of a wave cut platform. Thin soils.

Here a wave cut platform in the Gneiss has accumulated a glacial till and supports a thin peaty soil.

4. AIRD A' CHAOLIS: WESTERN SECTION
NL622979 - NL619973
1600 metres.

Exposed rocky headland with low and high coastal edges. Abundant bare rock and thin soils.
The circuit of Aird a' Chaolis is dangerous in places and is not a place for the unfit or the unwary. Essentially the headland is a dome of Lewisian Gneiss, in places, the land slopes moderately gently to the sea, but in others, the slope is precipitous. A wave cut platform surrounds much of this headland.

5. TRÀIGH VARLISH
NL619973 - NL618970
400 metres.

Low coastal edge, wave cut platforms and shell sand beach. Calcareous machair soils.
Tràigh Varlish comprises a shell sand beach, machair and a headland, which has accumulated glacial till and archaeological sediments

6. TRÀIGH VARLISH - BIRUASLAM - BAGH SIAR
NL618970 - NL 622957
2700 metres.

A high coastal edge, steep hillsides and poor acid vegetation.

A high headland comprising steep cliffs, in places up to forty metres high, steep grassy slopes and poor peaty soils formed on till/colluvium. A wave cut platform may be observed around much of this coastline, but there is no trace of any soft sediment remaining on any of these platforms. The Gneiss is faulted by basaltic dykes which are a weaker lithology and hence erode at a greater rate than dominant bedrock

7. BEN HEISHIVAL FLANKING VATERSAY BAY.

NL634954 - NL640957
1000 metres.

A high coastal edge, steep hillsides and poor acid vegetation.

Steeply angled bedrock into the sea. Small cliffs with cobbles - boulders at their feet. Thin acid soils with some glacial till and colluvium.

8. SOUTH SIDE OF THE UIDH PENINSULA TO UINESSAN.

NL644961 - NL668956
1900 metres.

Low coastal edge, small cliffs and occasional sandy inlets. Acid and calcareous soils and dependent vegetation.

From Uidh township as far as the eastern edge of Creag Mhór: small Bedrock cliffs into the sea. Poor acid soils formed on glacial till. Uinessan is a bedrock islet separated at high tide from the mainland. Shell sand has been blown from the beach here to form a small outcrop of machair grassland.

9. NORTH SIDE OF THE UIDH PENINSULA.
NL648963 - NL668956
1900 metres.

Low coastal edge, small cliffs and occasional sandy inlets. Acid and calcareous soils and dependent vegetation.

Less steep than the south side, and receiving calcareous inputs from shell sand, this flank of the peninsula supports a much better soil and has been extensively used for farming into the recent past.

10. BEN HEISHIVAL & CORNAIG BAY.
NL648963 - NL631968
1700 metres.

Low coastal edge, small cliffs formed from till and exposed bedrock, mainly boulder beach.

Ben Heishival is a dome of Lewisian Gneiss that steeply angles down hill into the sea. Soils are poor an acid. The seaward edge is marked by low cliffs of bedrock and trimmed till. A cobble - boulder beach lies along much of the coast, which is derived from the till, and the action of storm waves.

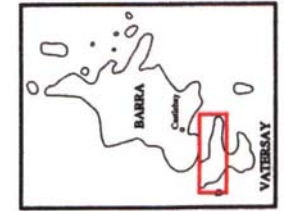
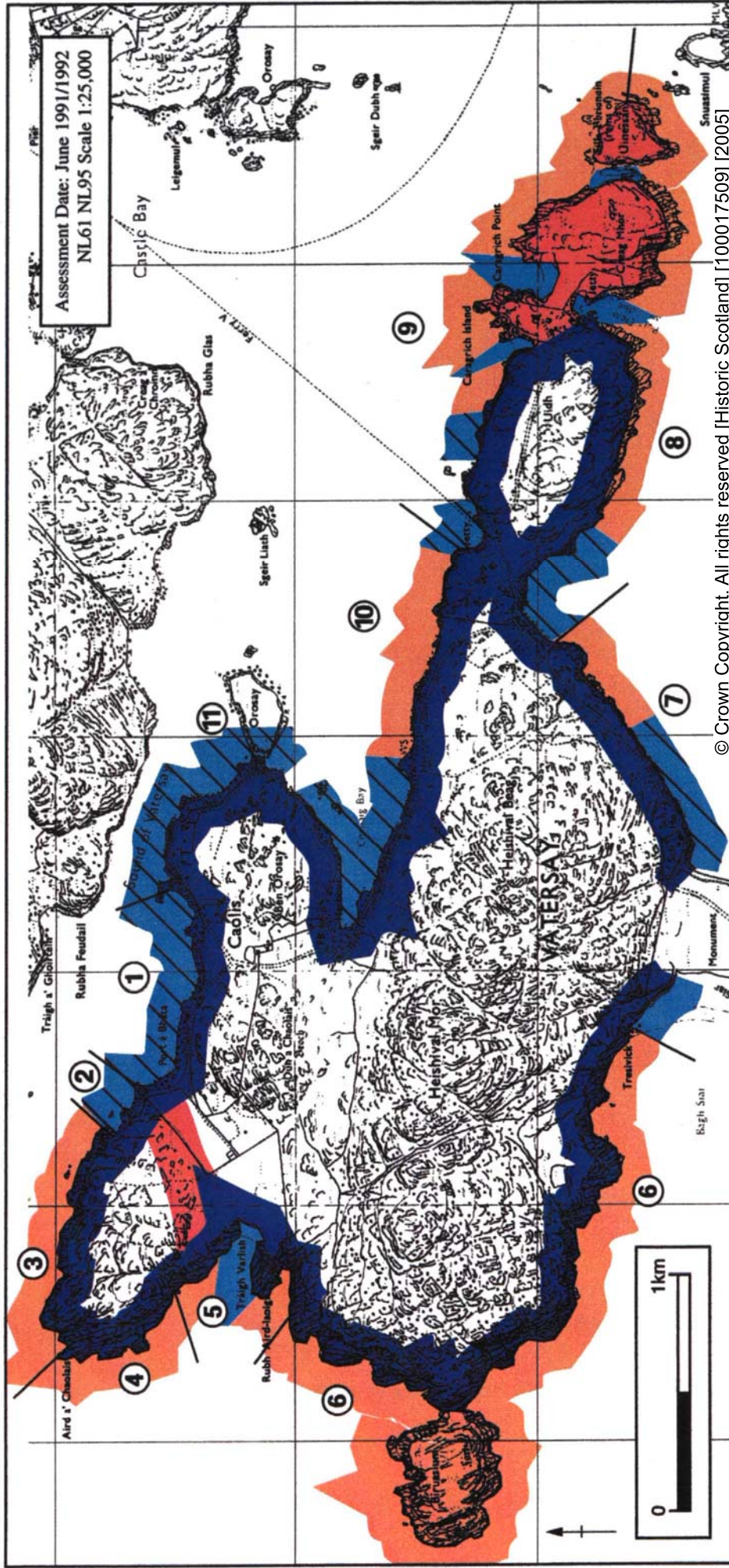
11. BEN OROSAY & OROSAY ISLAND.
NL631968 - NL635976 & NL641972
1800 metres.

Low lying coastal edge, mainly boulder beach.

Essentially low lying coasts which support poor soils. A cobble and boulder beach lies along much of the coast.

MAP 6.1 NORTH VATERSAY.

Hinterland Geology and Coastal Geomorphology



- | | |
|-------------------------------|---------------------------------|
| Hinterland Geology | Coast Geomorphology |
| Peat Soil and Exposed Bedrock | Mainly Rock Platform - Boulders |
| Blown Sand | Shingle/Courbles/Boulders |
| | Mainly Sand |
| | Blown Sand |
| Coast Edge | |
| Low Edge < 5m | |
| Cliff > 5m | |
| Man Made Barrier | |



3.6.2: Erosion Class 1.

1. CAOLIS BEACH.

NL635976 - NL625977

6750 metres.

Both erosive and depositional in nature.

This is an active geomorphological feature. A storm beach has accumulated in much of this section. It is probable that erosion and deposition of the storm beach is considerable each winter. Our survey suggested that the storm beach is frequently overtopped, particularly along its eastern margins and appears to be being driven inland, onto farmland. This development may be the consequence of the construction of the Vatersay causeway and subsequent changes in local currents and fetches. The western edge of the beach, which trends north - south, is unprotected by storm beach deposits and here the exposed glacial till is being actively eroded. The remains of several rectangular structures, probably 18th century houses, are being eroded into the sea in this section.

2. AIRD A' CHAOLIS.

NL624966 - NL619973

2000 metres.

Wave cut platform supporting thin soil and archaeology, vulnerable to erosion.

A wave cut platform surrounds much of this headland. The distribution of beach cobbles make it clear that this section of coastline is frequently overtopped by waves. Any unresistant lithologies in this section are subject to severe erosional pressures. Here a wave cut platform in the Gneiss has accumulated a glacial till and supports a thin peaty soil. Clearly ancient structures are found on this wave cut platform at its western edge where it adjoins Caolis beach, these are at risk.

3. TRÀIGH VARLISH

NL619973 - NL618970

400 metres.

Both erosive and depositional in nature.

Tràigh Varlish is a complex geomorphological feature. Shell sands from the beaches are blown inland to foster rich machair grasslands, which have most probably been exploited since prehistoric times. Tidal action extends 300m inland from the beach here, and wave action is eroding exposed soft lithologies. Flotsam and Jetsam are also being driven far inland, a clear indication that the influence of the sea on this exposed western bay is profound. Glacial tills, midden deposits and structures exposed in section on the headland which dominates the centre of Tràigh Varlish are all being eroded by the sea. The passage of people and animals has produced an incised track and hollow through blown sand from south-east portion of the Caolis headland down to the bay containing Tràigh Varlish.

4. TRÀIGH VARLISH - TREVISICK

NL618970 - NL 622957

2700 metres.

Stable in the long term but liable to occasional catastrophic failure. Soils on the hillsides cling precariously to the underlying bedrock. Soil erosion and the erosion of archaeology is a problem. The Gneiss cliffs here will fail rarely but catastrophically. Surficial sediments along this coastline are exposed to severe wind and wave action and are actively eroding. Erosive processes observed to be active in the soft surface sediments were gullying, slumping and rotational slumping. All of these are largely the result of water in abundance loosening the bond between soil and bedrock. In addition where the angle of slope lessened it was observed that wind action in many areas had removed organic sediments and left behind the minerogenic subsoil.

5. BEN HEISHIVAL FLANKING VATERSAY BAY

NL634954 - NL640957

1000 metres..

Essentially erosion resistant coastline.

There is little soft sediment to erode along this coastline; it has largely been eroded away by the action of waves and gravity.

6. SOUTH SIDE OF THE UIDH PENINSULA TO UINESSAN

NL644961 - NL668956

1900 metres.

Essentially erosive in nature, both bedrock and softer lithologies are eroding.

Erosion is progressively more extreme as one moves from Uidh towards Uinessan chapel. The sea has breached the peninsula in several places. Cliff erosion by falling blocks is evident in places, particularly in the small bay which separates Uidh from Creag Mhór. In addition to physical erosion caused by wind, waves and mass movement, erosion by animals is a real problem. Uinessan chapel is being severely damaged by rabbit burrowing in addition it is clearly overtopped by waves during storm conditions and the edges of the archaeological feature is clearly trimmed by wave action.

3.6.2: Erosion Class 2.

7. NORTH SIDE OF THE UIDH PENINSULA.

NL648963 - NL668956

1900 metres.

Essentially erosive in nature, both bedrock and softer lithologies are eroding.

Wave action, mass movement and erosion by streams are all active along this section of coastline. Wave action is undercutting the soft cliff edge in several places, triggering cliff collapse and mass movement. In contrast, shell sand, driven by wind, is accumulating in Caragrich Bay.

8. BEN HEISHIVAL & CORNAIG BAY.

NL648963 - NL631968

1700 metres.

Actively eroding coastline.

Erosion dominates this section of coastline. Till exposures are eroded and undermined by wave action, gneiss cliffs are subject to sudden failure and the cliff foot is lined with a cobble beach that bears witness to the effectiveness of the erosive processes.

9. BEN OROSAY & OROSAY ISLAND.

NL631968 - NL635976 & NL641972.

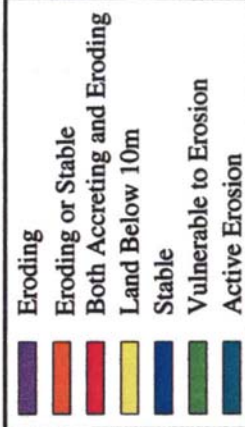
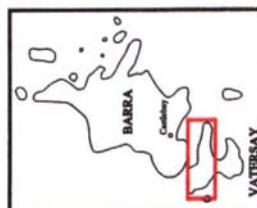
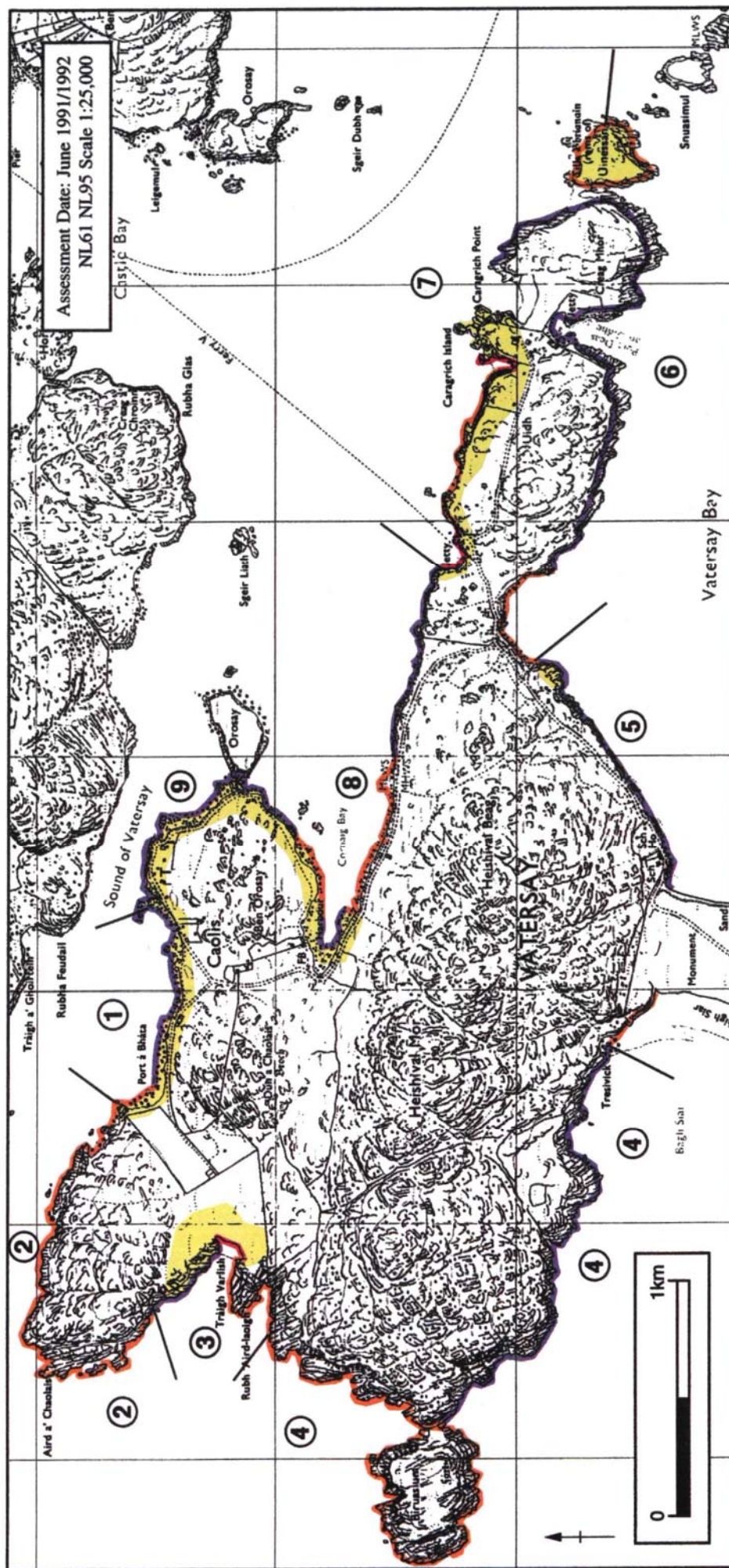
1800 metres.

While the coastline is essentially stable, the soft lithologies of the coastal zone are at high risk from storm driven wave action.

The coastline of this section is relatively low lying. There is no cliff to protect archaeological features. The main erosive process here is the movement inland of waves driven by storm winds.

MAP 6.2 NORTH VATERSAY.

Erosion Class



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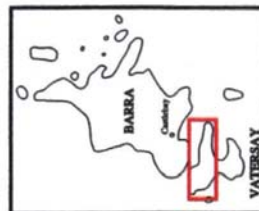
3.6.3: Built Heritage and Archaeology 1.

- | | | |
|--|--|--|
| 1. CAOLIS
6 blackhouses (VN156).
NL62559757.
Modern. Poor. Nil. | 11. BÌRUASLUM.
Settlement site (BM6).
NL61039626.
Mediaeval? Good. Nil. | 21. TRESIVICK.
Earth & stone mound (VN94).
NL62269581.
Prehistoric? Fair. Nil. |
| 2. PORT A BHATA.
Square stone building (VN1).
NL62429762.
Uncertain age. Fair. Nil. | 12. BÌRUASLUM.
Fort / Enclosure (BM7).
NL61079630.
Later prehistoric. Good. Nil. | 22. TRESIVICK.
Kerbed cairn (VN81).
NL62349584.
Early prehistoric. Fair.
Watching Brief. |
| 3. AIRD A' CHAOLISE.
Enclosure (VN155).
NL62119791.
Uncertain. Good. Watching
brief. | 13. BÌRUASLUM.
Midden (BM8).
NL61139631.
Earlier prehistoric. Fair.
Watching brief. | 23. TRESIVICK.
Kerbed cairn & hut (VN82).
NL62439586.
Early prehistoric. Fair. Nil. |
| 4. TRÀIGH VARLISH.
Shell midden (VN43).
NL61829719.
Earlier prehistoric. Good.
Watching brief. | 14. TRESIVICK.
Clearance cairn (VN117).
NL61609590.
Modern. Fair. Nil. | 24. TRESIVICK.
Cairn (VN80).
NL62449581.
Early Prehistoric. Fair. Nil. |
| 5. TRÀIGH VARLISH.
Kelp Oven (VN45).
NL61809712.
Modern. Good. Nil | 15. TRESIVICK.
Shelter type A (VN116).
NL61619583.
Modern. Fair. Nil. | 25. TRESIVICK.
Blackhouse & 2 Out bdg.
(VN77).
NL62819568.
Uncertain age. Good. Nil. |
| 6. BÌRUASLUM.
Oval stone setting (BM1).
NL60959624.
Prehistoric? Good. Nil. | 16. TRESIVICK.
Oval boulder setting
(VN107).
NL61899592.
Earlier prehistoric. Poor.
Watching brief. | 26. HEISHIVAL BEAG.
Blackhouses and outbuilding.
(VN149).
NL63699545.
Modern. Good. Nil. |
| 7. BÌRUASLUM.
2 shelters type A, small pen
(BM2).
NL609962.
Modern. Good. Nil. | 17. TRESIVICK.
Shelter type A (VN106).
NL61909589.
Uncertain age. Fair. Nil. | 27 HEISHIVAL BEAG.
Catalina flying boat (VN147).
NL64149576.
1948. Poor. Nil. |
| 8. BÌRUASLUM.
Shelter type E (BM3).
NL60789640.
Modern. Good. Nil. | 18. TRESIVICK.
Oval setting(VN105).
NL6199582.
Earlier prehistoric. Fair. Nil. | 28. HEISHIVAL BEAG.
3 shelters type C (VN146).
NL64179575.
Uncertain age. Fair. Nil. |
| 9. BÌRUASLUM.
Shelter type E (BM4).
NL60709630.
Modern. Good. Nil. | 19. TRESIVICK.
4 circular huts (VN96).
NL62139581.
Probably modern. Good. Nil. | 29. HEISHIVAL BEAG.
Rectangular stone hut
(VN145).
NL64189580.
Modern. Poor. Nil. |
| 10. BÌRUASLUM.
Shelter type A (BM5).
NL60709633.
Modern. Good. Nil. | 20. TRESIVICK.
5 small stone mounds
(VN95).
NL62259580.
Probably modern. Good. Nil. | 30. HEISHIVAL BEAG.
Blackhouse (VN144).
NL64309581.
Modern. Fair. Nil. |

3.6.3: Built Heritage and Archaeology 2.

- | | | |
|--|--|--|
| 31. HEISHIVAL BEAG.
Stone building (VN143).
NL64359583.
Modern. Fair. Nil. | 41. UIDH.
2 stone buildings (VN132).
NL65729618.
Modern. Fair. Nil. | 52. CORNAIG BAY.
Stone-built fish trap (VN154).
NL63129685.
Modern. Poor. Nil. |
| 32. HEISHIVAL BEAG.
Blackhouse (VN142).
NL64369584.
Modern. Fair. Nil. | 42. UIDH.
Small building (VN131).
NL65719615.
Modern. Fair. Nil. | 53. CORNAIG BAY.
Revetted platform (VN153).
NL635968.
Uncertain Age. Poor. Nil. |
| 33. HEISHIVAL BEAG.
Stone mound (VN141).
NL64389585.
Later prehistoric. Good. Nil. | 43. UIDH.
Boat shaped noost (VN130).
NL65189623.
Modern. Good. Nil. | 54. CORNAIG BAY.
Revetted platform (VN152).
NL635969.
Uncertain Age. Poor. Nil. |
| 34. HEISHIVAL BEAG.
Fallen standing stone
(VN140).
NL64379586.
Prehistoric. Good. Nil. | 44. UIDH.
D-shaped enclosure (VN129).
NL64859519.
Probably modern. Fair. Nil. | 55. CORNAIG BAY.
Shelter type B (VN151).
NL636969.
Modern. Poor. Nil. |
| 35. UIDH.
Shelter type E (VN139).
NL65269568.
Modern. Poor. Nil. | 45. UIDH.
2 blackhouses (VN128).
NL64839618.
Modern. Good. Nil. | |
| 36. UIDH.
Shelter type E (VN138).
NL65349565.
Modern. Poor. Nil. | 46. CORNAIG BAY.
Oval hut (VN44).
NL63689656.
Modern? Poor. Nil. | |
| 37. UIDH.
Shelter type E (VN137).
NL65359565.
Modern. Poor. Nil. | 47. CORNAIG BAY.
Shelter type C (VN39).
NL63659659.
Modern. Poor. Nil. | |
| 38. UIDH.
Shelter type E and pen
(VN136).
NL65409563.
Modern. Fair. Nil. | 48. CORNAIG BAY.
Oval hut (VN41).
NL63529665.
Modern. Poor. Nil. | |
| 39. UINESSAN.
Hut foundation (VN135).
NL66479577.
Later prehistoric? Poor. Nil. | 49. CORNAIG BAY.
Boulder built building
(VN40).
NL63429665.
Modern. Fair. Nil. | |
| 40. CILLE BHRIANNAIN.
Mediaeval chapel (VN133).
NL66479569.
Mediaeval. Fair. Watching
brief. | 50. CORNAIG BAY.
Shelter type A (VN42).
NL63409666.
Modern. Poor. Nil. | |
| | 51. CORNAIG BAY.
Circular stone hut (VN38).
NL63289669.
Earlier prehistoric. Fair. Nil. | |

Built Heritage and Archaeology



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3.6.3: SOUTH VATERSAY.

1. Hinterland Geology and Coastal Geomorphology.

Bagh Siar -Huilish Point - Bagh a' Deas.

This section comprises two distinct environments:(a) the shell sand, sand dunes and machair of Bagh Siar and Bagh a' Deas; and (b) the steep exposed Gneiss headland formed by the flanks of Ben Rulibrek which supports thin acid soils formed on till and colluvium.Bagh Siar comprises a shell sand beach, sand dunes and machair.The soils of the machair are currently grazed, but in the past have been cultivated by spade cultivation.

Bagh a' Deas - Am Meall - Vatersay Bay.

Much of this section is formed by the headland, which is marked at its eastern edge by the peak of Am Meall.As elsewhere this headland is formed of Lewisian Gneiss.From Bagh a' Deas to Borisdale a wave cut platform has been formed, but from Borisdale east and then north, the headland is marked by a cliff which at the eastern tip is over 5 metres high.Till, colluvium and peat have accumulated in pockets and hollows in the bedrock.The dangerous nature of the coastline prevented close examination, but several gullies, exposed to the sea, were seen to contain considerable quantities of glacially derived debris.Along the northern shore of the headland, which forms the south shore of Vatersay Bay, a low cliff line formed from glacial till is obvious.The beach formed at the extreme western edge of Vatersay Bay is formed of shell sand, sand dune and machair.The soils found in this section of coastline are formed from a combination of machair, peat and agricultural processes.

2. Erosion Class.

Bagh Siar -Huilish Point - Bagh a' Deas.

While it is clear that Bagh Siar is an active geomorphological feature, with both erosion and deposition occurring, examination of the south shoreline of B`agh Siar reveals a scalloped cliffline, the result of erosion induced by wave action interacting with lazy beds orientated down the hillslope.Thin midden deposits and palaeosols are exposed.Bagh a' Deas is less exposed to Atlantic waves, but the erosion threat here is of a different nature.Tracks used by people and animals moving south from Vatersay township to the large B`agh a' Deas facing the Sound of Sandray, are associated with blowouts and hollows, exposing middens of uncertain age.Archaeological deposits in both areas of machair are at risk.

Large areas of the headland have been stripped of soil by wind and wave action.Peaty soils can be observed moving downslope under the influence of gravity and evidence for past mass movements of hillslope sediments may be observed, particularly in the exposed western section.In addition the solid lithology is also unstable and major cliff failures may be observed, some of which, by the fresh nature of the rocks, appears to be quite recent.Waves funnelled by the topography of the coastline, and to a lesser extent wind, are removing the machair and till overlying the Gneiss and basalt bedrocks of the area. The rate of cliff retreat is unknown.Archaeological features in the coastal zone here must be considered to be at risk.

Bagh a' Deas - Am Meall - Vatersay Bay.

The southern shore and eastern shoreline of Am Meall appears to be relatively stable. Erosion is occurring in places but appears to be proceeding at a slow rate. Along much of the shoreline, glacial till is being actively trimmed by wave action. Along the southern margins of Vatersay the rectilinear patterns of light and shade reveal the former presence of the once larger settlement of Vatersay township, which dates from the heyday of herring fishing. A large dune blow-out occurs immediately east of the township, but no ancient features were discovered within it. As ever, thin middens and palaeosols occur in stream and wave-eroded exposures in the sand dunes in the north-western portion of Vatersay Bay.

3. Built Heritage and Archaeology.

South Vatersay is dominated by rugged eastern and western hills (Am Meall and Ben Rulibrek respectively) and by rolling pasture and machair in between. Archaeological sites are extremely scarce in the coastal corridor. The only site of interest is perhaps that of the former herring fisheries township in the south-west corner of Vatersay Bay. The platforms occupied by the timber-framed buildings are clearly visible here, upslope from the crumbling remains of the Quayside. Postcards from around 1900 show what the settlement looked like in its heyday. Erosion is slowly eating into some sections of the coast at this point.

3.7.1: Hinterland Geology and Coastal Geomorphology 1.

1. BAGH SIAR - HUILISH POINT.

NL 622957 - NL 617950

2900 metres.

Bagh Siar is a classic shell-sand beach, which is very exposed to the west. Backed by sand dunes and machair. To the south and west it gives way to Huilish point, which has low cliffs and boulder beaches.

Bagh Siar is extremely exposed to the west. A shell sand beach, sand dunes and machair dominate the bay. To the south the shell sand beach ceases at NL625648; westwards from here to Huilish Point, the littoral is largely dominated by a bedrock cliff between 1- 3 metres high. The soils of Huilish point are poor acid peats. In occasional isolated hollows these appear to be quite deep but elsewhere they form a thin veneer on the steeply sloping bedrock. Some evidence of former spade cultivation can be seen but the area currently appears to be used solely for grazing of sheep and cattle

2. BEN RULIBREK

NL 617950 - NL 634938

3500 metres.

A precipitous gneiss headland, which falls steeply to the sea. Boulder beaches or wave cut platforms.

As elsewhere the parent rock here is Lewisian Gneiss. The coastline formed by Ben Rulibrek is almost everywhere precipitous. In the northern and southern sections cliffs are below 5 metres in height, but in the exposed western section they are much higher, in excess of 10 metres in many areas. Thin acid soils are formed on colluvium and till. Basalt dykes dissect the bedrock and these are exploited by the sea to form a coastline that is steep and heavily dissected by ravines and gullies. On the western flanks erosive processes have formed steep cliffs, whilst on the southern flanks, facing the Sound of Sandray, steep "Boiler plate" slabs form much of the coastline.

3. BAGH A' DEAS

NL 634938 - NL636938

500 metres.

A classic shell sand beach backed by sand dunes and machair.

This area is exposed to the south, facing the island of Sandray. The beach is formed of shell sand.

4. SOUTHERN AND EASTERN SHORELINE OF AM MEALL

NL636938 - NL 653946

2700 metres.

A gneiss headland, with steep hillslopes and / or precipitous cliffs.

This shoreline is formed primarily of Lewisian Gneiss, but in several gullies glacially derived debris has accumulated and these are clearly being trimmed by wave action. Mass movement is evident in some of these gullies. A wave cut platform is evident around the end of the peninsula.

5. SOUTHERN SHORE OF VATERSAY BAY.

NL 653946 - NL 635646

1800 metres.

Hillslope covered by blown sand and glacially derived debris. A low coast edge and boulder beach.

This section of shoreline trends almost exactly east - west and falls into two convenient sections: (11a). Here surficial deposits, primarily glacial till overlies erosion resistant lithologies of Lewisian Gneiss. The till forms a small cliff, rarely more than 2 metres high and is clearly trimmed by wave action. A narrow beach formed of eroded till has formed, comprised mainly of cobble sized clasts. 11b. Here the glacial till described above is overlain by windblown sands.

6. EASTERN SHORE OF VATERSAY BAY

NL 635646 - NL 635954

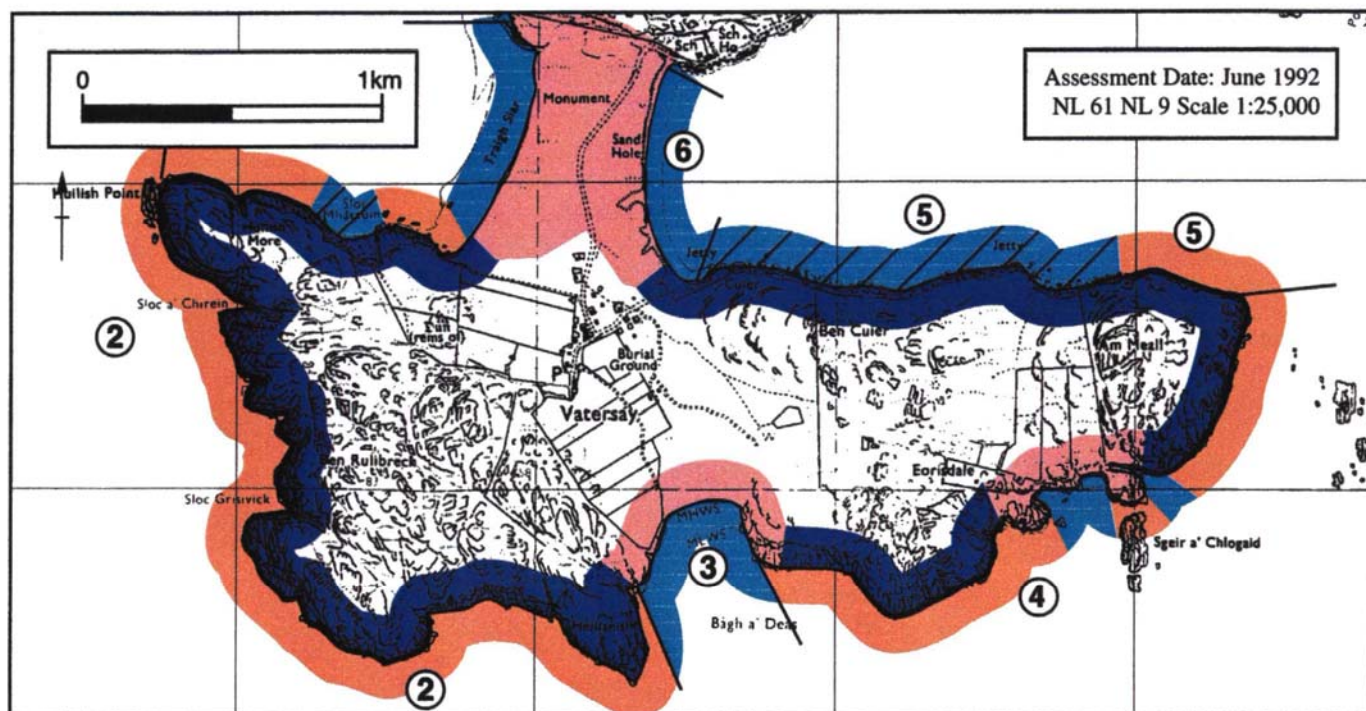
800 metres.

A classic shell sand beach, backed by machair and sand dunes.

This section of shore is a classic Hebridean sand dune coast comprising shell sand beach, sand dunes up to 4 metres in height and machair vegetation.

MAP 7.1 SOUTH VATERSAY.

Hinterland Geology and Coastal Geomorphology.



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Hinterland Geology

- Peat Soil and Exposed Bedrock
- Blown Sand

Coast Geomorphology

- Mainly Rock Platform - Boulders
- Shingle/Courbles/Boulders
- Mainly Sand
- Blown Sand

Coast Edge

- Low Edge < 5m
- Cliff > 5m
- Man Made Barrier

3.7.2: Erosion Class.

1. BAGH SIAR - HUILISH POINT

NL 622957 - NL 617950

2900 metres.

Both erosion and deposition is occurring along Bagh Siar. The coastline to Huilish point is essentially stable, but occasional collapse of cliffs was noted.

This bay is exposed to the west and subject to considerable geomorphological activity. Archaeological features in this bay are at risk from wave and wind erosion.

2. BEN RULIBREK

NL 617950 - NL 634938

3500 metres.

High cliffs which prone to occasional catastrophic failure. Soil mass movement also occurring.

This bleak and exposed coastline is one of the most active in the entire archipelago. Cliff failure and the mass movement of surface sediments are common and appear to be frequent.

3. BAGH A' DEAS

NL 634938 - NL 636938

500 metres.

Classic shell sand environment, both erosion and deposition is occurring.

This is an active coastline, but in this south facing location, far more sheltered than Bagh Siar. Wind and wave erosion is evident, and human activity has obviously weakened the machair leading to dune blowouts.

4. SOUTHERN AND EASTERN SHORELINE OF AM MEALL

NL 636938 - NL 653946

2700 metres.

Geomorphologically active gneiss headland, several erosion processes are occurring.

Essentially an erosion-resistant shoreline. Erosion is controlled by the degree of exposure to wave action upon glacial till perched at different heights above mid tide level, in a variety of depositional settings. These tills are either (a) accumulated in ravines and gullies, or (b) perched on wave cut and ice smoothed platforms from previous sea-level or glacial maxima. The various erosional conditions along this coastline are identified by suffixes A-C.

4A. Stable shoreline with glacial till exposed above mid-tide level

4B. Glacial tills, which are being trimmed by wave action, overlie Lewisian Gneiss.

4C. Stable coastal cliffs.

5. SOUTHERN SHORE OF VATERSAY BAY.

NL 653946 - NL 635646

1800 metres.

Soft surface lithologies which are vulnerable to wave erosion.

5a. Wave action is trimming the glacial till which crops out along this section of coastline. Material eroded from the till has formed a narrow beach, but this affords no protection to the coast.

5b. Here windblown sands overlie the glacial till. In this section it is difficult to establish the balance between erosion and deposition with any confidence.

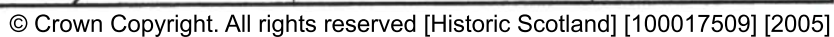
6. EASTERN SHORE OF VATERSAY BAY








NL 635646 - NL 635954

800 metres.

Classic shell sand environment, both erosive and depositional processes are taking place.

Erosion and deposition by waves and winds are evident along both margins of the sandy isthmus that joins the northern and southern parts of Vatersay. The present survey has not determined the nature of the balance between these two processes. Deflation and the erosion of dune fronts are evident along many sections of both the east- and west-facing shorelines. However, their impacts on archaeological and historical features are not clear.



- | | |
|---|----------------------------|
|  | Eroding |
|  | Eroding or Stable |
|  | Both Accreting and Eroding |
|  | Land Below 10m |
|  | Stable |
|  | Vulnerable to Erosion |
|  | Active Erosion |

3.7.3. Built Heritage and Archaeology.

1. BEN RULIBREK.

Oval enclosure (VS17).

NL62309383.

Modern. Fair. Nil.

2. EORISDALE.

House (VS22).

NL64589398.

Uncertain. Poor. Nil.

3. SGEIR A' CHLOGAID.

Promontory Walls (VS).

NL64909412.

Uncertain. Fair. Nil.

4. VATERSAY BAY.

House (VS26).

NL64679462.

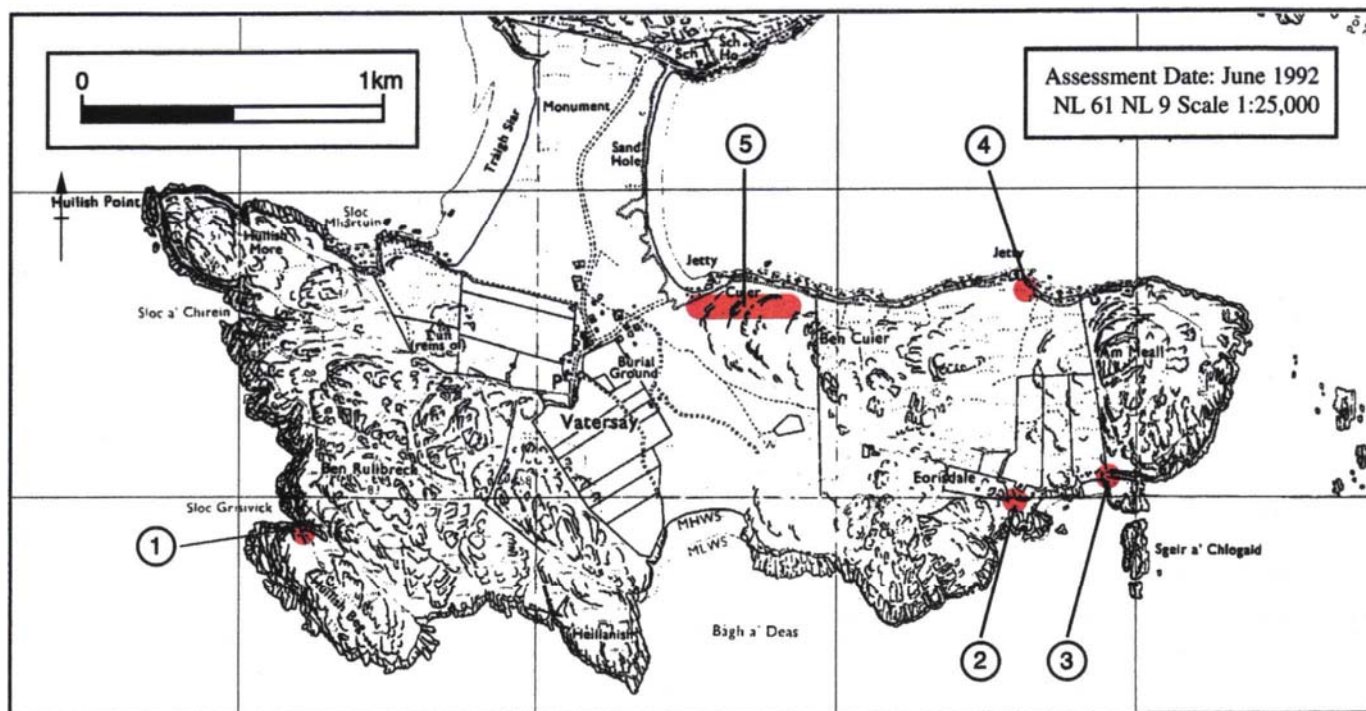
Modern. Poor. Nil.

5. VATERSAY BAY.

Herring Fishery complex
(VS27)

NL63609465 - 64009465.

Modern. Good. Nil.



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4: ANALYSIS

4.1. Introduction

In this section the result of the analysis are synthesised and we discuss our findings re the erosional state of the coastline and its relationship to settlement and the archaeological and built heritage. While our judgement of these issues is necessarily subjective, they have been formed from wide geomorphological and archaeological experience and observations made in the islands over several years and in all seasons.

4.2. Erosional Condition

In this section the contribution of the local geology and geomorphological processes to the erosion status of the coast are discussed and any broad management issues are raised.

4.2.1. Survey results.

It is clear from the survey that few of the exposed sea coasts of Barra and Vatersay may be considered to be stable, and in the main all appear to endure some form of erosion Table 1. A discussion of these results is located below.

<i>Coastal Measurements in km</i>								
<i>Survey map</i>	<i>Definitely Accreting</i>	<i>Accreting or stable</i>	<i>Stable</i>	<i>Eroding stable</i>	<i>or Definitely eroding</i>	<i>Accreting & eroding</i>	<i>Total KM</i>	<i>Land < 10 m ASL</i>
1	0.00	0.00	0.00	3.7	0.00	8.4	12.1	3.60 km ²
2	0.00	0.00	10.1	8.4	0.00	0.00	18.5	0.40 km ²
3	0.00	0.00	0.90	0.00	8.40	0.80	10.1	0.60 km ²
4	0.00	0.00	1.5	8.5	0.00	0.00	10	0.09 km ²
5	0.00	0.00	0.00	0.00	8.90	2.1	11.0	0.25 km ²
6	0.00	0.00	0.00	6.5	6.70	0.9	14.1	0.15 km ²
7	0.00	0.00	0.00	0.00	10.0	2.2	12.2	
Total	0.00	0.00	12.5	27.1	34.00	14.4	88.00	5.09 km ²
%	0.00	0.00	14.2	30.8	38.63	16.36	100	

Table 1: Analysis of erosional character by survey map.

Table 1 confirms the essentially erosive character of the Hebridean coastal environment. Only 14.2% of the coast may be considered at all stable, and these sections lie mainly in sheltered sea lochs. 16.3% of the coastline is occupied by shell sand beaches, and associated sand dune and machair systems. These areas have been classified as both accreting and eroding, though in essence the systems exhibit Dynamic Metastable Equilibrium, that is the system vary dynamically around a mean condition. Thus considerable erosion and deposition is occurring in these areas without any significant impact on long term coastal morphology.

In dramatic contrast are those sections of coastline, which may be, considered vulnerable to - or actively eroding, 69.4%. Along these coasts erosion of, the surface lithology, the bedrock or both is occurring. These erode at vastly differing rates. Soft surface lithologies, composed of peat or glacially derived clays, may be "trimmed" at a more or less continuous rate, by each winter's storms. The impact of this may be seen along much of the coastline where large areas of rock platform have been exposed by the action of the sea, which has stripped away the surface sediments.

In contrast, the Lewisian gneiss, which dominates the bedrock lithology, is extremely resistant to the immediate erosive action of the sea, but is liable to fail rarely but catastrophically. This process is dramatically illustrated along the many of the western and north facing coasts and headlands, Ben Rulibrek and Heishival Mor on Vatersay, Cuilachmore, Greian Head and the Scurrival headland on Barra are all line with large blocks which have detached themselves and fallen into the sea. The sea also exploits lines of weakness in the gneiss, where faults are commonly filled with less resistant basalt. The erosion of the basalt has created features, which were exploited by early settlers on the islands, the various small promontory headlands, the major isolated island of Bìruaslum on Vatersay, and the Port na Cille on the Borge headland.

4.2.2. Potential Impact on the Built Environment.

In this section the potential impact of the specific categories defined by historic Scotland as threats to the archaeology and built heritage are explored.

4.2.2.1. Sea Level Change.

The islands of the Outer Hebrides have, as elsewhere in the Western Highlands bear witness to past glaciations and sea level change. The glacial history of the region is poorly understood (Hall, 1996), but the islands exhibit clear signs of isostatic rebound such as the raised beach at Cleit (Gilbertson, Grattan, Pyatt & Schwenniger, 1996). This must be set against more recent sea level rise evidence in the "drowned forests" of the western coast, evidence on Barra in the deposit found at Port Caol.

A direct comparison of the modern day coastline with eighteenth century maps has not proved possible. However, locational evidence surmised from the present day relationship to the sea of eighteenth (possibly nineteenth) century blackhouses may be useful. In several cases it can be seen that the sea is actively eroding, or is very close to the walls of such dwellings. Given the active and dynamic nature of winter (and summer!) storm waves it is reasonable to surmise that they would at least have been constructed beyond the normal reach of such events. However, map section 2 reveals several such blackhouses to be actively eroded by the sea. Here, there may have been a slight rise in sea level relative to the land, which is indeed tilting towards the south-west. Given current predictions structures along this coast may be increasingly exposed to this hazard, which is also effective in map sections 1 - 4, and 6 - 7.

4.2.2.2. Erosional Potential of the Sea.

Slightly different forces are evident on north Vatersay where the blackhouses of site 1 have been badly eroded by the sea. Here, the culprit appears to be the erosion of the

glacial till on which the houses are constructed by waves passing down the sound of Vatersay. The erosion of this settlement, little more than half of each house now remains, in at the most 200 years, bears evidence to the ability of the sea to erode soft coastal lithologies. Elsewhere on Vatersay winter storms threaten exposed structures such as the medieval chapel on Uinessan. On Barra and Vatersay any archaeology within reach of storm waves or close to eroding basalt dykes must be considered to be at risk. Particular attention must be drawn to the archaeology around Port na Cille on Borge Headland, and Dun Chlief below Ben Erival. In summary any built heritage or archaeology within reach of the sea must be considered to be at risk.

4.2.2.3. Stability of Fragile Coastal Dune Systems.

These have been the subjects of considerable research by the survey team, which is reported in Gilbertson, Grattan and Schwenniger (1996). As stated in outline above, these are dynamic systems, which exhibit considerable variability around loosely defined mean conditions. Shell sand beaches produce sands, which produce sand dunes, which are associated with machair grasslands. These may be destabilised by human intervention, commonly grazing or other forms of agriculture. That the sand dunes have been dramatically destabilised in the past is clear from the historical record, the sea having breached the sand dunes of the Eoligarry isthmus on at least one occasion in the historical past. On Barra efforts are being made to ensure the stability of the sand dunes of the Eoligarry isthmus. Personal observation suggests that their efforts are meeting with success. Sand dunes also serve to protect archaeological heritage, at least one site is known to be completely buried in the sands near Allasdale, while the chapel of Cille Bhriannan at Eoligarry has been completely buried in the past.

More than the sea, perhaps the greatest danger posed to archaeological monuments in the sand dune environments of Barra and Vatersay is posed by the heavy rabbit infestation which is seen to exist. In particular the chapel on Uinessan is at real risk directly from their burrowing, but perhaps more seriously from the combined actions of grazing and burrowing destabilising the sand dune/machair system, sudden and dramatic erosion is the likely result.

4.2.2.4. Human Impacts.

The publication of the Barra and Vatersay Local Plan, adopted by the Western Isles Council in May 1996, makes it possible to predict with some precision the likely human impact on sites and monuments within the coastal corridor. Developments already under way or likely to proceed in the next decade include:

- 1) Heritage trails which include sections of the coastal zone on Eoligarry, Borge Headland (Barra), Ben Orosay, and Ben Cuier (Vatersay).
- 2) Footpaths, of which only that between Cleat and Scalavaslain which impinge on the coastal zone.
- 3) Fish-farming off the east coast of Ardveenish and Bruernish, and in Cornaig Bay.
- 4) Development of a hostel/hotel and camping ground at the former Vatersay School.

5) A golf course at Cnoc an Fhithich at Greian.

In addition to these developments, there remains the possibility of developments on Tràigh Mhór, although this is a SSSI and no developments are mentioned in the Plan. Nevertheless a case has been made for the building of a concrete runway to replace the tidal beach landing strip, and local cockle diggers are concerned by the threat of mechanical extraction of cockle by nationals from other EC countries.

We estimate the likely impact of the developments in the Plan to be as follows:

- 1) Heritage Trails: There is unlikely to be any substantial increase in tourist numbers generally, and some of the key sites on each of the proposed trails already attract those visitors interested in archaeology and history. The trails will lead to more visits to some less spectacular monuments but overall numbers will be small. We foresee no threat to the archaeology from the development of these trails.
- 2) The footpath from Cleat to Scalavaslain is mostly along high cliffs with little archaeology. The only foreseen threat is the possibility of more visitors to Dun Clieff, where some masonry is sufficiently exposed to be in danger of gradual collapse if it is frequently clambered over.
- 3) Fish-farming around Ardveenish and Bruernish will not have any direct impact on the archaeology, but the construction of additional on-shore facilities could possibly lead to damage to sites within the coastal corridor.
- 4) Development of the former Vatersay school into a hostel and adjacent camping ground should present no danger to the archaeology unless the work extends upslope to the north of the school where there is an important complex of 18th-019th century structures and one, perhaps two, prehistoric house sites.
- 5) The Greian golf course barely touches the coastal corridor and offers no threat to the archaeology.

Any developments at Tràigh Mhór could lead to the destruction of the large site on the west side of Orosay. Their effect on this site would obviously depend on the nature and extent of the developments, but this site should be kept under close scrutiny.

In general we envisage little human impact on the sites within the coastal corridor in the foreseeable future.

4.2.3. Discussion.

Coastal erosion has been a feature of the Hebridean environment throughout the Holocene and will continue to be so. Isostatic uplift and downthrow have and global sea level rise will, have an impact upon the coastal zone and archaeological monuments contained therein. The presence of peat deposits and *Corylus* macro fossils within the present day inter-tidal zone at Port Caol, points to a considerable erosion of the coastline along the western fringe of Barra since the late glacial period (Brayshay and Edwards, 1996). This study has attempted to reach a reasoned value judgement upon the erosion status of each

section of coastline surveyed. The evaluation of the coastal-erosion archaeological-hazard along a section of coast involves more than observing the impact, washing and re-working effects of waves - the most obvious of coastal geomorphic processes. Terrestrial processes are also of critical importance. The presence of extensive surficial deposits of till, soliflucted materials, sand dunes and peats in wet- or waterlogged situations promotes extensive mass movement. The landscape, geomorphology, and geology of the area explored in this survey can be broadly described. The geology consist of a series of Lewisian Gneiss blocks, extremely erosion resistant which form the interior hills, rocky headlands and cliffs of varying height. The Lewisian Gneiss is dissected by a series of major and minor faults, which broadly trend east - west (Godard, 1965; Johnston & Mykwa, 1989; Hall, 1996). As a result the major valleys also trend east west, as does the Sound of Vatersay and the disjuncture between north and south Vatersay. The bed-rock itself is fractured and contains intersecting networks of joints, fractures, faults and basalt-filled dykes of various sizes, and of varying resistance to erosional processes. These basalt fills erode quicker than the gneiss and contribute towards the formation of small bays and headlands. One general consequence of this natural and inevitable process is that walls and other features, which people have built in order to exploit the defensive value of chasm-bound headlands (e.g. Sgeir a' Chlogiad NL650940 on Vatersay), are naturally subject to erosion by wave attack and slope failure at their margins. This process may undermine the stability of the broadly erosion resistant gneiss. The result of this is that the dominant erosion process of the gneiss is for unpredictable rare but catastrophic events rather than slow predictable erosion.

In addition to interior hills and the high headland formed by Ben Tangaval the gneiss also forms relatively low coastal platforms. These can be found on both the eastern and western coasts of Barra, and are typified by the coastal landscape around Bruernish in the east and the Borge headland in the west. On Vatersay this is also typical of the landscape around Ben Orosay and the Tràigh Varlish headland.

Onto the bedrock are draped a series of softer deposits, which are essentially of Quaternary, and frequently of Holocene, age. These are raised beach deposits, alpine and sub-alpine lithosols and peats, and fertile calcareous soils. Raised beach deposits are found at Cleit (Peacock, 1984, 1991) these are in fact a rare outcrop of this type of deposit. Glacial till (Peacock, 1991, Smith and Fettes, 1979) is found in many areas and may be presumed to be trapped in many coastal ravines. In this survey it was extensively mapped on both north and south Vatersay in particular, but pockets may be found in hollows and as valley fills around both Vatersay and Barra.

Alpine and Sub-Alpine lithosols (Blackburn, 1946; Boyd & Boyd, 1990), which are found on exposed high ground, while blanket peat, and a range of peaty podsols, gleys and rankers which form on acid parent material, are found on mountain slopes and moorland. Modern agricultural use of these soil types is typically limited to rough grazing which poses little threat to the archaeology.

The ice-smoothed bedrock surfaces eroded on the gneissose or basaltic bedrocks of the area typically slope towards the shoreline. This property has the effect of promoting a ground-water-lubricated surface beneath the tills or solifluction deposits, over which the surficial deposits slide under the pull of gravity. Even on the gentler slopes of these bleak and rocky promontories, the loss of peat is sometimes associated with accelerated and

concentrated surface drainage caused by the construction in the past of downslope-orientated 'lazy beds'. Archaeology within peat moving downslope will lose its integrity and structure. Terracettes, are also common. In addition rotational slips and slumps are frequent at cliff-edges and may extend back 10-20 m into the cliff face. In addition deflation is affecting the thin peat soils on exposed headlands. It can be commonly seen on west-facing headlands such as that of Tangaval on Barra, and the west-facing headlands of Vatersay; structures stripped of soil on such exposed headlands may be difficult to identify at all.

Along the Eoligarry isthmus, western coastlines of Barra and Western, central and southern coastlines of Vatersay an extensive range of fertile brown calcareous soils of the Frazerburgh Series are found, these are formed on machair and shell sands. They are capable of sustaining arable and pasture, but are exposed to the difficult influences of the sea and wind (Boyd & Boyd, 1990; Hudson, 1991; Hudson *et al.*, 1982; Pankhurst & Mullins, 1991). Aeolian geomorphic processes are usually considered of great importance for understanding many aspects of environment, soil and modern life in the Hebrides (Angus, 1987, 1991; Manley, 1979; Murray, 1973). Deflation and accretion by aeolian processes occur on many areas of coastline of machair- or dune-dominated coastlines - such as the southern part of west facing Tràigh Eais on the Eoligarry Peninsula, immediately west of the Barra Airport building. On machair sands and on sand dunes, wave-action interacts with the effects of wind, animals (sheep, cattle, rabbits) and human activity (sand quarries, foot or vehicle paths and tracks) to produce significant blow-outs or more generally-eroded hollows and in places have exposed prehistoric palaeosols and middens. Erosion induced by animals in this landscape feature can also interact with natural processes as discussed above on the small island of Uinissan.

In addition to the bedrock and its cover, other landscape features also contribute towards erosion in the coastal zone. Streams drain through both the surficial and bed-rock lithologies in the coastal study zone. It is not clear how far stream erosion is itself eroding interesting sites, but it is evident that in the 50 m wide survey zone, the stream-channel provides an access route for waves to relatively inland areas, hence accelerating erosion by widening and deepening the stream channels. At other locations, increased protection is afforded to features or sites by other combinations of biological and geomorphic processes. In a few very sheltered inlets, small areas of saltmarsh or mudflats are developing in front of the remains of structures and features originally constructed at the shoreline - e.g. in Loch Obe in eastern Barra.

This survey has identified a wide variety of archaeological monuments within the coastal corridor defined by Ashmore (1994), and it is clear that these monuments range in age from the ancient prehistoric to the recent historic period. In general it is difficult to produce a quantified erosion risk to any particular monument. However, it is apparent that coastal erosion processes are occurring around much of the coastlines of Barra and Vatersay, and that in several cases coastal erosion is directly threatening or eroding structures constructed during the recent historical past. The clearest examples of this may be found west of Caolis on Vatersay, and around the complex headlands described in map section 2. These structures must originally have been built beyond the direct threat of the sea and their erosion is the clearest demonstration of coastal erosion. The causes for this erosion may be diverse. On Vatersay it appears to be the result of wave action and the erosion of the sediments on which the houses are constructed. In map section 2 the erosion

appears to be the result of the closer proximity of the sea to the structures themselves. This may be the result of isostatic processes, sea level rise, or both, and further research will be necessary to clarify the answer. However, other structures may have been constructed to exploit the defensive properties afforded by eroding coastline and headlands, thus Dùn Ban and Dùn Chliel were in all probability deliberately constructed near the sea. This being the case, after two millennia of pounding by the sea, the monuments are battered but still standing.

Western coastlines everywhere on the islands are exposed to the action of wind and waves and only in exceptional cases may any monument within the coastal corridor be considered not to be at risk. Whether the surface sediments are calcareous sands or peaty soil the action of wind and waves will serve to destabilise both the coastal edge and the surface sediments. Where the coastal edge is formed of gneiss or till cliff failure will be irreversible. However, where a dune cordon forms the littoral, sand may accumulate as well as erode, and careful management and conservation will preserve monuments here in the short term. However, the balance between sand supply and sand erosion is a delicate one. The construction of a permanent aircraft runway on Tràigh Mhór may destabilise this system with unforeseen consequences.

4.3: Archaeology

In this section we summarise the results of the archaeological field survey, providing first an overview of the entire corpus of sites, and then a period-based discussion of the sites and monuments and their significance. Detailed descriptions of each site, together with a selection of field sketches, measured plans and photographs, are found in volume 2.

4.3.1. Introduction

The field survey recorded a total of 262 sites and monuments in the coastal corridor of the two islands. Of this total, 202 sites were recorded on Barra and 60 on Vatersay (including Biruaslum). Of these 262 sites only twelve (4.6%) were previously documented by the RCAHMS, the NMS, or the OS, ten on Barra and two on Vatersay.

We would remind the reader that we excluded from our record any site which we believe was established after AD 1900, and we also excluded any banks and walls of which the course ran predominantly outside the coastal zone. (One site created after AD 1900 was, however, included and that was site 6.27, the wreck of a Catalina flying-boat which crashed in 1944. Its inclusion represents nothing more than an interest in aviation on the part of the project director!) We also excluded areas of lazy-bedding (which, had they been included, might well have doubled the number of sites recorded), although they are mentioned where they relate to a farming complex including clearance cairns, outbuildings and blackhouses, in the site gazetteer in volume 2.

Site coverage was discussed in 2.5 and we concluded that with the exception of some of the limited areas of machair and dune systems, the identification rate of sites was probably high.

As explained in 3.4, we have ascribed broad periods of usage to sites, utilising the evidence of their morphology and structure, their degree of embedding, and artefactual mate-

rial where it is available. We have also been able to compare survey sites with over thirty sites of all types and periods which have been excavated on Barra and Vatersay, by the S.E.A.R.C.H. project, over the last ten years. Where the period of a significant site is uncertain, this is discussed in some detail in the gazetteer entries in volume 2. We recognise that some period ascriptions may be wrong, but ten years of excavations as well as surveys on Barra and Vatersay give us more confidence in proposing dates for sites than we would otherwise have. Our four periods of usage are:

- **Earlier prehistoric** (Neolithic and Bronze Age)
- **Later prehistoric** (Iron Age and Norse)
- **Medieval** (11th-16th centuries AD)
- **Modern** (17th-19th century AD)

There were 32 sites identified which we have been unable to ascribe to any period and/or function with confidence, and these are excluded from the period tabulations given below. These sites were:

1.13;2.31;2.34;2.46;2.63;2.64;2.71;2.86;3.2;3.5;3.6;3.8;3.9;3.10;3.11;3.12;
3.13;3.15;3.18;4.8;4.17;4.18;4.30;4.44;5.7;5.13;6.3;6.20;6.27;6.53;6.54;7.3.

In the four following sections (4.3.2 - 4.3.5) we summarise and discuss the identified sites of each of these four periods. It may be noticed that although the total number of sites recorded in the summary sections above is 262, the sites tabulated in the sections below total 264, even after 32 unclassified sites have been excluded. This discrepancy is accounted for by some sites on which there are several monuments, each of which has been totalled in the tabulations below. The most common category where this occurs is the blackhouse. A cluster of blackhouses, or a blackhouse and immediately adjacent out-buildings, have been usually recorded as one site, but each individual building will have been totalled in the tabulations below.

4. 3. 2. Earlier Prehistoric Sites

A total of 22 sites and monuments are ascribed to the earlier prehistoric period, representing 8.3% of the total site population. The sites can be classified as follows

Site Type	No.	Site refs.
Huts/occ sites	2	1.15;6.51
Activity sites	7	1.9;4.26;4.37;4.48;5.4;6.16;6.18
Rock shelters	1	4.38
Middens	2	6.4;6.13
Cists	1	4.14
Cairns	6	1.16;2.8;5.16;6.22;6.23;6.24
Standing stones	1	6.34
Megalith structures	2	5.8;6.6

There is a significant concentration of identified sites on the west and south coastline rather than the east coast; in fact only four of the twenty-two sites are on the east. There are two small clusters, one on the Sound of Vatersay, and one on the southern coast of Heishival More, both closely associated with further sites beyond the 50m coastal corri-

dor, but otherwise there is no clear pattern in the distribution.

The most numerous type of site is identified as the 'activity site'. This identification is based on excavations at site 4.26 and site 4.48 (Branigan and Foster 1995 72-92, 170-4). Whereas the former site could only be identified by excavation, 4.48 provided surface indications in the form of an oval 'enclosure' marked out by a ring of large stones. Similar stone settings in similar locations, very close to the HWM, have been noted at sites 1.9, 5.4, 6.16 and perhaps 6.18, and 1.9 has produced a small assemblage of worked quartz on sampling excavation (Branigan and Foster forthcoming). This may be a site type overlooked in other coastal surveys.

Almost as numerous are the cairns, which are grouped with three near the north end of Barra and three on the south coast of north Vatersay. The latter (sites 6.22, 6.23, and 6.24) are coastal outliers of a group of no less than twenty kerbed cairns. The three in northern Barra (1.16, 2.8, and 5.16) are more isolated, but seem to belong to a dispersed group in this area with other examples on Fuiay and on Fuday. Elsewhere on Barra kerbed cairns are very few indeed.

There is no trace of mesolithic occupation from the coastal zone, despite attempts to identify it, including sampling excavation of the platform outside the cave, site 1.4 (Branigan and Foster forthcoming). Marine transgression of low-lying coastal zones on the west coast of the Western Isles is well documented, and was indeed demonstrated during this survey by D.D. Gilbertson (Gilbertson et al 1996, 88-9). It is widely assumed that this transgression has covered mesolithic sites exploiting the marine resources of the west coast.

4.3.3. Later Prehistoric Sites

A total of 23 sites classified as Later Prehistoric were recorded, representing 8.7% of the total site population. The sites can be classified as follows

Site Type	No.	Site Refs.
Promontory forts	1	6.12
Brochs/ARHs	5	1.5; 2.42; 4.51; 5.1; 5.12
Round/oval houses	7	2.7; 4.43; 4.45; 5.14; 6.21; 6.33; 6.39
Enclosures	1	5.2
Middens	5	1.2; 1.3; 1.11; 5.1; 5.3
Caves	1	1.4
Oblong houses	2	2.68; 3.14
Boat settings	1	4.50

Later prehistoric sites are more widely dispersed than those of the preceding period, with a third of them on the east coast, and at least four on machair, and no significant clustering of sites. Not surprisingly the middens are found on machair, where wind, sea, rabbit and cattle all act as eroding and exposing agents.

Domestic occupation sites are more numerous than in the preceding period, mostly represented by stone-founded oval or circular buildings with external diameters in the range

from around 6m to 10m. Their identification and dating is suggested by excavations of similar structures both within the coastal zone (site 4.45) and further inland on the Tangaval peninsula and in the Borge valley. Many of these structures were almost certainly completed in turf.

Brochs and/or Atlantic Round Houses are well represented in the coastal zone because their builders show a preference for either peninsulas (e.g. sites 4.51 and 5.1) or islets (e.g. 5.13 and 2.42). It should be noted that RCHAMS would identify a sixth example in the coastal zone on Barra but we have found no evidence whatever for the existence of a 'dun' at site 3.18. On the other hand, there is some reason to think that a prehistoric site, most probably an ARH, stood on the site later occupied by Kiessimul Castle (site 3.20 - see volume 2).

Several midden sites at Traigh Eias suggest considerable later prehistoric interest in coastal locations on the machair, presumably related at Traigh Eias to the exploitation of its famous cockle beds. It should be noted that the pottery from these sites is all very similar in fabric, but it is found as generally small and featureless sherds the attribution of which to the Iron Age is not certain. Similar material from the broch sites, however, suggests an Iron Age date is likely.

Sites 2.68, 3.14 and 4.50 are tentatively placed at the end of the later prehistoric period, partly due to their form and partly due to the high degree of embedding. The details of these sites are to be found in the gazetteer in volume 2, but site 2.68 consists of one square and one longer, narrower building apparently built of turf, with a door in the narrow end, and site 3.14 appears to consist of a trapezoidal long building, and two smaller rectangular structures. Site 4.50 is a boat-shaped setting of stones in Brettadale, a very remote area overlooking the sea.

4.3.4. Medieval Sites.

Only three sites were identified as medieval in the entire survey, and of these only two can certainly be ascribed to that period. These sites represent just 1.1% of the site population. The sites can be classified as follows:

Site Type	No.	Site Refs.
Castle	1	3.20
Chapel	1	6.40
Circular huts	1	6.11

Kiessimul Castle is very well documented (though still much argued about in terms of its foundation date), and the chapel of Cille Bhriannain is also well known, although it is now no more than a slight hump in the grass. The most intriguing site is the cluster of about a dozen small circular huts in two groups either side of a large boulder on a rock shelf above steep cliffs on the south side of Biruaslum. There is no direct evidence for its date, but the case for placing it in the medieval period is made in the gazetteer in volume 2. Fortunately it appears to be under no threat.

4.3.5. Modern Sites

A total of 216 sites identified as modern were recorded, representing 81.8% of the total site population. These sites can be classified as follows:

Site Type	No.	Site Refs.
Blackhouses	76	1.18;2.2;2.3;2.5;2.13;2.14;2.18; 2.19(2);2.26;2.28;2.36;2.38;2.41; 2.45;2.47(3);2.50;2.55;2.56;2.57; 2.58;2.59;2.62(2);2.69;2.70;2.72; 2.73;2.76;2.77;2.79;2.80;2.82(6); 2.83(7);2.84;2.85;2.87;2.89;3.3; 3.4;3.16;4.20;4.22;4.26;4.41;5.15; 5.19;6.1(6);6.25;6.26(4);6.30;6.32; 6.45(2);7.4.
Whitehouses	2	2.53;2.60
Outbuildings	41	2.1;2.10;2.15;2.17;2.24;2.29;2.30; 2.37;2.39;2.40;2.47(3);2.48;2.49; 2.51;2.52;2.54;2.61;2.67;2.69;2.78; 2.81;2.88;2.90;3.3;4.1;4.2;4.25; 4.27;4.40;5.17;6.2;6.25(2);6.26; 6.29;6.31;6.41(2);6.42;6.49;7.2
Shieling huts	5	2.9;2.20;4.4;6.46;6.48
Middens	2	1.11,1.14
Enclosures	4	2.47;4.53;6.44;7.1
Clearance Cairns	18	2.11;2.35;3.1;4.6;4.16;4.21;4.24; 4.28;4.29;4.31;4.32;4.33;4.34;4.35; 4.36;4.39;4.42;6.14
Rick stands	1	2.44
Kelp ovens	8	2.4;2.12;2.16;2.33;4.23;5.6;5.18; 6.5
Boat noosts	2	2.21;6.43
Fishing installations	4	3.17;3.19;6.52;7.5
Shipwrecks	1	1.1
Shelters	52	1.6;1.7;1.10;1.12;1.17;2.6;2.22; 2.23;2.25;2.27;2.32;2.65;2.66;2.74; 2.75;3.7;4.3;4.5;4.7;4.9;4.10;4.11; 4.12;4.13;4.15;4.19;4.46;4.47;4.49; 4.52;4.53;4.54;4.55;5.9;5.10;5.11; 6.7;6.8;6.9;6.10;6.15;6.17;6.19; 6.28;6.35;6.36;6.37;6.38;6.47;6.50; 6.55

The corpus of modern sites is dominated, as one would expect, by structures associated with the crofting system, most notably the blackhouse, the outbuilding (byres, barns, and drying sheds), and the shelter. The blackhouses show a remarkable concentration in the coastal zone around Ardveenish and Bruernish, and although this is a particular long stretch of coastline, the length does not explain the appearance of 66% (50) of all the coastal zone blackhouses in this one area. It is tempting to put this concentration down to the clearance of crofters from good grazing areas such as Eoligaray and Borge to this bleak coastline, but the truth is probably more complex. Many of these houses were probably built during the period of Barra's population boom in the late 18th-early 19th century. Some may have resulted from Macneil's limited clearances from two townships, and some might belong to the notorious clearance of Gordon of Cluny - though we must remember that he was determined to ship most of his cleared tenants to Canada. Not surprisingly the outbuildings are also concentrated particularly around the coast of Ardveenish and Bruernish and four of eight kelp oven sites are found here too.

In contrast, less than 10% of clearance cairns are found in this same zone, and only 20% of the shelters. The concentration of clearance cairns on the coast of the Tangaval peninsula emphasise not so much the importance of cultivation there but rather that the coast provided the only suitable areas for such activity. The large number of shelters in the same zone complement this interpretation, emphasising the importance of rough grazing for sheep on this bleak peninsula, and we see a similar concentration on north Vatersay. The relative scarcity of late 19th century installations associated with the herring industry, and the poor and deteriorating condition of the few that survive (3.17, 3.19) is a useful reminder of how little may survive of a major industrial activity, less than a century after it began its rapid decline. One has only to compare the empty northern slope of Ben Cuier (Vatersay) in 1998 with postcards showing the same slope, packed with buildings, c.1900 to realise how inadequate the archaeological record is.

5: SUMMARY AND RECOMMENDATIONS

5.1. Introduction

The coastline surveyed in this project is generally suffering from the effects of erosion, but the degree of erosion and its archaeological significance vary greatly from one area of coastline to the other. In general, the east coast is eroding more slowly than the west coast, partly because it does not have to contend with winter storms coming in from the Atlantic and partly because it is better protected in any case, by off-shore islands and by its more indented nature. The dune systems at Eoliggary, Allasdale, and Halaman Bay on Barra are vulnerable both to wind and sea, and they are constantly moving, both revealing and covering archaeological sites and deposits.

Many of the sites recorded in this survey, particularly those on the west and south-west coasts, are actively eroding and will be lost within the foreseeable future. Many of these sites, however, are of common types and recent origin and do not justify measures to protect them or to explore them before they are destroyed.

Thirteen sites, however, are sufficiently significant and sufficiently threatened to warrant further action, and there are three further threats which need to be noted for future consideration and, possibly, action. The report now lists the threatened sites and briefly discusses their significance and what action should be taken, and finally briefly discusses the three long-term threats.

5.2. Sites requiring action

Site 1.15 (NF71200632)

Extensive midden and stone structures. This site is c.40 x 35m, with a thick shell midden. There are stone structures, in one place three courses high, eroding from the section. Six sherds of fine but fragile reddish-orange handmade pottery were recovered from the shell midden. The site was first noted in 1991 and has been watched since; it is actively eroding. Originally identified as a probable wheelhouse site, we now believe it may be of earlier prehistoric date and a significant settlement site. Apart from the continuous tidal erosion, this site could be threatened at any time either by airport-related works, or mechanised digging of the cockle beds.

Recommendation

An assessment excavation to identify the nature and date of the site. Further action dependent on results.

Site 2.68
(NF73450118)

Two structures, one apparently a turf-walled house c.9 c 4.5m with an entrance in its narrow end, the other turf and stone, 6.5 x 5.5m, with a thick wall. These two structures have no other parallels amongst the 1000+ sites surveyed on Barra and Vatersay. They are under no threat from coastal erosion, but peat-cutting has taken place recently within 50m of the longer building.

Recommendation

Watching brief

Site 4.17
(NL64629757)

A curious cellular structure, 12 x 8m, built mostly of beach boulders. It is sufficiently upstanding to be considered of recent date, but its form is like no other recent structure we have seen. It lies only just above HWM, but is under no immediate threat.

Recommendation

Watching brief/further assessment

Site 4.18
(NL64619758)

Adjacent to 4.17 and almost identical to all appearances.

Recommendation

Watching brief/further assessment

Site 5.1
(NF64700170)

The broch preserved under the south-east corner of the cemetery on Borge headland is under no immediate threat itself, but two associated features are actively eroding. The low bank of an enclosure immediately south of the broch, and probably associated with it at some time in the broch's occupation, is eroding into the small bay immediately to the east of the broch. North of the broch the steep slope below the cemetery wall is eroding into the head of the same bay, and the midden deposit with bone, shell and Iron Age pottery is eroding with it. In the longer term this erosion will threaten the cemetery wall itself.

Recommendation

Watching brief, with the intention of anticipating any threat to the cemetery wall (which would lead to either wall collapse, exposing probable broch appendages, and/or extensive consolidation works).

Site 5.2

(NF64670172)

A triangular embanked enclosure with upright monoliths erected in the bank at intervals. The western side has already eroded completely, leaving only some large monoliths in the HWM zone, and the whole structure is wide open to storms from the Atlantic. The northern arm of the enclosure continues as a bank across the headland and can be seen to be crossed by the cemetery enclosure wall. Inside the cemetery it cannot be traced, but at the point where it enters the cemetery area it is heading directly for the broch (site 5.1). We believe the bank and enclosure are to be associated with the broch. There is no doubt the enclosure will eventually be totally destroyed.

Recommendation

Watching brief. Consideration should be given to undertaking a sampling excavation across the enclosure to clarify its purpose and date, and to establish whether further action is required before more of the enclosure is lost to the sea.

Site 5.12

(NF68190530)

Dun Chlieff, perched on a small tidal islet, is exposed to Atlantic storms and has been much damaged on its western and northern sides. The circuit of wall visible around the top of the islet is late rebuild/modification, but the outer face of large masonry blocks is visible on both the south and east. A midden deposit is eroding on the eastern slope.

Recommendation

Watching brief. Any particularly severe Atlantic storms could sweep away what remains of the west and north walls, and expose the interior to 'scouring', at which point rescue excavation might become necessary.

Site 6.3

(NL62119791)

This complex of enclosures, cairn, walls and other embedded features is curiously placed on an exposed platform near the west end of the Sound of Vatersay. The date of the various structures is not at all clear, but they form an interesting group.

Recommendation

Watching brief.

Site 6.4

(NL61829719)

A shell-midden, producing a little flint material, and from a lower soil horizon the time of a red deer antler. There are suggestions of stone structures at some points in the midden, and the crofter reports seeing buried stone walls in a once-deflating dune immediately to the south.

Recommendation

Watching brief. The deposits may provide a useful sequence back into the early post-glacial period and structural remains may be exposed by Atlantic storms to which the site is wide-open.

Site 6.13

(NL61139631)

A midden? deposit, up to 1.3m deep, yielding pottery and flint, including the rim of an Unstan bowl. This deposit could be occupation material in situ rather than a midden; there is little shell or bone visible in the section. The midden is actively eroding and slumping; it is unclear how far back the midden/deposit extends from the cliff edge.

Recommendation

Despite the logistic difficulties, being on an island separated from the mainland of Vatersay by a vertical dyke, this site should be further examined as soon as possible.

Site 6.16

(NL61899592)

This oval setting of stone blocks, 6.5 x 4m, perched on the very edge of the HWM, is very similar to site 4.48, which on excavation proved to be a LBA activity enclosure (Branigan and Foster 1995, 170-6). This type of site may be more common than previously identified (see above 4.3.2).

Recommendation

Watching brief. The site is likely to begin to disappear in the near future.

Site 6.22

(NL62349584)

This kerbed cairn, standing to about 1.5m in height, with well preserved kerb, is one of the outliers of a cluster of about twenty cairns on this southern slope of Heishival Mor. It is only 5m from the HWM, and although erosion here is slow it will be threatened in due course.

Recommendation

Watching brief.

Site 6.40

(NL66479569)

The chapel of Marion of the Severed Heads, Cille Bhriannain, is scarcely visible now and is not in any case a very substantial structure. It sits on a mound which rabbit activity reveals to cover an Iron Age site of some kind. Recommendation Watching brief. There is no danger from coastal erosion, but rabbit activity could threaten the destruction of the chapels foundations.

5.3 Long-term threats

There are three potential long-term threats which we believe need to be kept in mind in planning any strategy for the protection of sites in the coastal zone on Barra and Vatersay.

Dune Systems.

The problems of shifting and eroding/deflating dunes are well known. Fortunately dune systems are found in only a few areas in Barra and Vatersay. Of these, those at Halaman Bay have yet to reveal any archaeological material. Those to the west of Allasdale have fitfully produced thin scatters of pottery,

bone and shell, whilst those at Eoligarry clearly cover quite extensive and numerous sites of archaeological interest. All of these sites need to be monitored, preferably on a relatively frequent basis, to identify and record exposed archaeology before it is buried by

further shifting within the dune systems.

Human Impact.

In section 4.2.2.4 above we discussed the foreseeable human impact on archaeological sites within the coastal zone, with specific reference to developments mentioned in the Barra and Vatersay Local Plan. We concluded that most of these posed little threat to archaeology. We would again reiterate, however, our concern about possible threats to the archaeology on the fringes of Traigh Mhor, including Orosay. These threats are likely to come either from airport development or mechanised cockle digging.

Long Term Environmental Change.

The on-going subsidence of the west coast of Scotland including the Western Isles is well documented, but its impact on sites presently in the coastal zone can be measured in millennia rather than centuries, let alone decades. Global warming, however, may lead to a rise in sea levels in a much shorter time-frame and this, together with a possible change in weather patterns, including storm strength and frequency, could threaten many of the sites identified in this survey.

Conclusion

This survey has shown that the coastal zone of Barra and Vatersay includes areas of rapid erosion and areas of archaeological richness. Fortunately areas of erosion and archaeology do not everywhere coincide. The principal threats to significant monuments are generally to be found on the west coast, and we have identified thirteen sites which deserve further attention. The particular value of this survey is that it has run concurrently with a total survey of the two islands concerned and it may therefore be possible in due course to come to a better understanding of the relationship between the archaeology of the coastal corridor and its hinterland.

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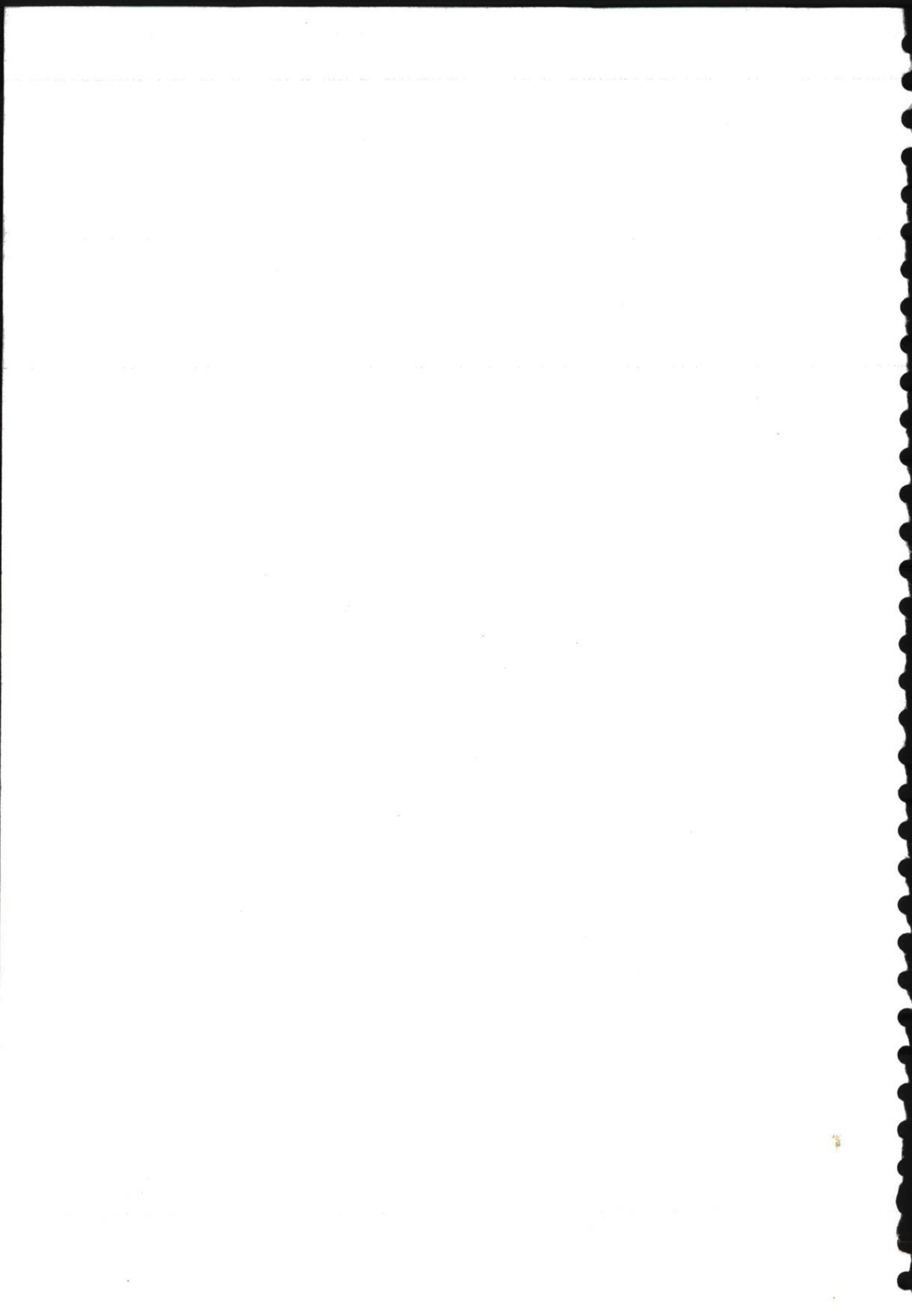
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Coastal Assessment Survey Barra and Vatersay



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Volume 2



Prepared for Historic Scotland by Keith Branigan & John Grattan



The University
of Sheffield

Cover.

Dun Ban (Site 4.51)

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1: INTRODUCTION.

1.1. BACKGROUND.

This report presents the results of a rapid coastal erosion assessment around the entire coasts of the Isle of Barra and the Isle of Vatersay, including tidal islets. In addition, a catalogue of sites and monuments within the coastal zone on the offshore islands of Fuiay and Bìruaslum is included as an appendix in volume 2. These islands were surveyed archaeologically on an 'opportunistic' basis, but geomorphologists were not available at the time to make a detailed report on coastal erosion on these two islands. The aims of the project were three-fold: to assess the extent and affects of coastal erosion and related processes on the coastal zone, to record all sites and monuments with that zone, and to assess the erosional threat to those sites and monuments.

The survey was incorporated into the organisation of the SEARCH* project of the Department of Archaeology & Prehistory, University of Sheffield, and fieldwork (which included the four remaining uninhabited islands south of Vatersay) was conducted over a period of four three-week seasons between 1991 and 1994. A short-stretch of coastline at the south-west corner of Barra had been surveyed in March 1989 in advance of the building of the Vatersay causeway approach road, and the results of this survey were incorporated into the coastal erosion survey of 1991-94.

The fieldwork was undertaken by a team comprising both archaeologists and geomorphologists, the former led by Keith Branigan and the latter by David Gilbertson, and funded by a series of grants from Historic Scotland.

* Sheffield Environmental and Archaeological Research Campaign in the Hebrides.

1.2. PROJECT AIMS.

The erosion of the Scottish coastline, and in particular its impact on the archaeology of the coastal zone, has been discussed by Ashmore (1994), who highlighted sea level change, coastal dune system instability, and human impact, as major areas of concern. The survey therefore had three aims:

To describe and define the geomorphology of the coastline of Barra and Vatersay, and to assess its present and predict its future erosional condition.

To identify and record all sites and monuments within the coastal zone.

To assess the impact of coastal erosion, and any other destructive processes, on these sites and monuments, and to recommend possible action where necessary.

1.3. REPORT FORMAT.

The format of this report is based on that used for the Ullapool to Lochinver Coastal Assessment Survey Report (Long 1996), which was recommended as a model by Patrick Ashmore. It is therefore divided into two volumes.

Volume 1 contains introductory information (Section 1), a description of the methodology employed by both the archaeologists and the geomorphologists (Section 2), three annotated colour maps with accompanying summary descriptions for each section of the study area (Maps 1-7) showing geomorphology, erosional status, and archaeology (Section 3), and an analysis and discussion of the data presented (Section 4). The volume concludes with a summary of conclusions and recommendations.

Volume 2 provides more detailed information on the sites and monuments of each area in the form of a site gazetteer, together with surveyed plans of a small selection of significant sites, and either field sketches or photographs of a further selection of sites.

1.4. THE STUDY AREA.

1.4.1. Introduction.

The study area includes the entire coastline of the Outer Hebridean islands of Barra and Vatersay, and includes the islands of Orosay adjacent to the Eoligarry headland and Bìruaslum, which lies off the far western edge of Heishival Mor on Vatersay. Other minor islets were visited if they were accessible on foot at low tide. The relevant Ordnance Survey maps are sheets NF 60/70 and NL 69/79.

1.4.2. Extent and Dimensions.

The coastal strip is defined as the inter-tidal zone, the area exposed between the mean high (HWM) and low (LWM) water marks and a 50 metre wide corridor above the HWM. In some areas dangerous and precipitous cliffs lead to the survey corridor being extended to 100 metre inland from the HWM, or cliff edge. The position of flotsam and jetsam and wave rounded boulders was also noted as a guide to the real extent of the influence of storm, driven waves. The assessment of geomorphology, geology and erosion class necessarily drew upon a survey of a much wider area, the coastal zone cannot be considered in isolation from such features as the gradient and condition of adjacent hillslopes, lithologies, sand dunes and machair pastures. This reconnaissance of the potential coastal-erosion archaeological-hazard status of sectors of coast is subjective. It is based upon field observations of coastlines and sites, and examines their locations in relationship to observable geomorphological processes or features. This assessment depends upon the identification of geomorphic processes such as wave erosion, deflation, landslip, collapse, topple etc. , which are seen to be taking place at the moment, or to have happened in the 'recent past'. Obviously coastal erosion in one form or another, with varying degrees of intensity, is taking place all the time. The time span offered by the concept of the 'recent past' provides a better time framework for estimating the broad range of climatic, oceanographic and geomorphic conditions that can be anticipated to recur in a 1-50 year planning time-frame, than might be obtained from observations of only present-day events.

The survey did not extend to the marine zone, defined as the area of sea floor continuously covered by water under normal circumstances.

As noted elsewhere the measurement of any stretch of coastline is extremely difficult and the figures quoted here are necessarily approximate (Ashmore 1994, 25 - 27), nor do the map miles reflect the extremely difficult nature of much of the country traversed.

1.4.3. Description.

The study maps have been divided into 7 sections for the purpose of producing a series of 1:25000 maps. Each section produces maps of coastal geomorphology, erosion status and the location of archaeology in the coastal zone. These sections are divided between Barra, sections 1 - 5 and Vatersay, sections 6 - 7. These are described as follows:

Section 1. *The Eoligarra headland.* 12. 1 km.

This section covers the Eoligarra headland, comprising a series of extensive shell-sand beaches, the offshore island of Orosay and the rocky headland of Scurrial. As such it encompasses most of the coastal types and conditions found on Barra and Vatersay.

Section 2. *Crannag - Meall nam Bùth.* 18. 5 km.

This section of coastline runs south along the eastern coast of Barra from the southern edge of Tràigh Mhór, to the rocky inlet of Meall nam Bùth. A very complex and indented coastline, there are many sheltered sea lochs which together add up to a considerable length of coastline. Mainly low lying surrounded by wave cut platforms and rocky beaches. Soils are poor and waterlogged.

Section 3. *Meall Nam Bùth - Castle Bay.* 10. 1 km.

Running south from Meall nam Bùth, this section of coastline is marked by either low lying coastal platforms or by steep and precipitous headlands, both of which support peat soils over erosion resistant gneiss bedrocks. The coast edge is mainly marked by boulder beach, wave cut platform and very rarely shell sand beaches. The island of Orosay is also included in this section.

Section 4. *Castle Bay - Aird na Gregaig.* 10. 0 km.

This section runs west around the coast from Castle Bay, around the steep headland formed by Ben Tangaval to Aird na Gregaig, which lies by Halaman bay on the west coast of Barra. This is an exposed and windswept landscape, in consequence of which the geomorphological processes that operate are considerable and tend to have removed any soft sediments within reach of the waves. The cliffs here, particularly around Cuialachmore are over 30 metres high.

Section 5. *Halaman Bay - Scalavaslain.* 11. 0 km.

This section runs north to Greian head and then east to Scalavaslain, which lies Tràigh Eais. In essence the section splits into two parts. The first which runs north to Greian Head is dominated by shell sand beaches, machair and sand dunes. The second which runs from Greian Head to Scalavaslain is essentially dominated by gneiss headlands and hillsides which fall precipitously to the sea.

Section 6. *North Vatersay* 14. 1 km.
North Vatersay is dominated by the great hill of Heishival Mor and by a series of headlands.

Section 7. *South Vatersay.* 12. 2 km.
A much gentler landscape than north Vatersay, this section comprises the sand dunes and machair of Vatersay Bay and the precipitous headlands of Ben Rulibrek and Am Meall.

1.5. PREVIOUS ARCHAEOLOGICAL RESEARCH.

Prior to the survey reported here there had been no systematic archaeological research or survey conducted on either island. The RCAHM in 1924 recorded just six of the sites listed in our gazetteer, and to these can be added one further site marked on the 1:25,000 OS map.

Concurrent with the coastal erosion survey reported here, SEARCH has conducted intensive field survey covering the whole of Vatersay and 80% of Barra. A gazetteer of the sites and monuments discovered during these surveys will appear in "*From Barra to Berneray (SEARCH Vol.5)*" (Branigan and Foster forthcoming). Sites recorded during the Vatersay approach road survey, and subsequently during the survey of the whole of the Tangaval peninsula, have already been published in Barra: "*Archaeological Research on Ben Tangaval*" (Branigan and Foster 1995). This volume also includes the excavation report on a number of sites within the coastal erosion zone which were excavated in advance of the construction of the Vatersay approach road, including the important Neolithic site at Alt Chrisal.

Because the coastal erosion surveys were concurrent with surveys of the remainder of the islands' surface, sites identified in the coastal erosion were given numbers as part of the total island sequence. These numbers, which take the form of a zone code letter and a number (e. g. A16 or VN7) are given in this report in brackets, immediately following the description of site type. E.g. site 1, on map 1.3. is also E26 in the catalogue of sites for the entire island; it therefore appears on the summary sheet 3.1.3. as 1. Tràigh Eais. Shipwreck (E26).

GAZETEER OF SITES

The site gazetteer is divided into seven sections, each related to one of the seven lengths of coastline presented on maps 1 to 7 in volume 1 of this report. In addition we include an appendix which records sites in the coastal corridor on the offshore island of Fuiay. This island was not part of the coastal erosion survey and has not been surveyed by the geomorphologists for coastal erosion, but it was felt appropriate to record here the archaeological sites found inside the coastal corridor.

References to illustrations of surveyed sites are given at the end of the text for each illustrated site. These references refer to:

FS. Field sketches - drawings made in the field, during the coastal erosion survey, with principal dimensions inserted on the drawing, but the drawings are not to scale.

MP. Measured plan - sites surveyed and planned with an EDM, and therefore to scale.

SURVEY MAP 1. EOLIGARRY PENINSULA

1. Traigh Eias (E26) NGR NF69170608
 Site Type: shipwreck Date: modern
 Remains of a wooden sailing ship with roofing slates and coal. The boat appears to be c.30m long, with remains of a mast. Seen in 1991/1992 following movement and erosion at the edge of the dune system.
2. Traigh Eias (E18) NGR NF69500673
 Site Type: midden Date: later prehistoric
 A thin midden spread, over an area about 10m x 8m, with shell and a few scraps of coarse handmade pottery.
3. Traigh Eias (E17) NGR NF69490677
 Site Type: midden Date: later prehistoric
 Midden debris in a deflating dune. The debris is spread, patchily, across much of the base of the deflation, an area about 10m x 18m. The midden spread is thin, consisting of shells, a few bones (including some recent), and a scatter of small coarse handmade sherds similar to those at E18. A fragment of decorated bronze may be from a C5th-6th AD brooch. Excavated in 1990. Publication: Branigan and Foster forthcoming
4. Scurrival (E16) NGR NF69590792
 Site Type: cave Date: Middle IA and later
 Narrow cave, entrance c.3m wide, depth c.16m. We have seen a human skull said to have been recovered inside the cave some 20-30 years ago. Before the cave is a flat platform surrounded by large blocks of stone. Sampling excavation at one side of the platform in 1998 revealed a deposit with Middle IA pottery, a small hearth and a saddle quern. There were a few sherds of Medieval pottery in the top soil. Publication: Branigan and Foster forthcoming.
5. Dun Scurrival (E15) NGR NF69530812
 Site Type: 'dun' Date: Iron Age and later
 Oval stone-walled structure, 24 x 16m overall, with internal area measuring 13 x 8m. Masses of fallen masonry on slopes around the structure and inside the wall. The wall structure is partly visible at the NW and W, and appears to comprise a thick outer wall, an irregular but narrow gallery, and a narrow inner wall. The outer wall is 2.5 - 3.5m wide, the gallery 0.5 - 1m, and the inner wall about 1m wide. There are suggestions of an entrance at the east end of the structure. A trench has been dug at some time in the past towards the east end of the internal area and revealed remains of a wall three courses high, which must belong to a structural feature within the central 'courtyard'. The NMS has a collection of c.70 sherds, flints, a bone pin and bone bobbin from the site.
6. Bagh Nan Clach (E14) NGR NF69540815
 Site Type: temporary pens or shelters ? Date: uncertain
 Two small banked enclosures built against a rock face below Dun Scurrival. One is 8 x 6m, the other 6.4 x 4m.
7. Bagh Nan Clach (E13) NGR NF69530885
 Site Type: shelter type E Date: modern
 Shelter about 2.5m square, formed by an arc of boulders and an upright slab set against a rock face.
8. Ben Scurrival (E12) NGR NF69300895
 Site Type: shelter type E Date: modern
 A small shelter formed of a large rock and boulder, with a built stone and earth wall, enclosing an area 1.9 x 1.8m.

9. Scurrial Point (E11)

NGR NF69490962

Site Type: stone ring/activity enclosure

Date: prehistoric

An oval about 14.5 x 12m enclosed by a ring of well embedded stone blocks. On the west side two stones, about 0.7m high, are set upright with a narrow gap between them. A quadrant was excavated in 1994 and revealed a low 'bench' around the inside of the stone ring, with a possible shelter built into it. The only artifact material was a handful of simple quartz artefacts of uncertain date. Publication: Branigan and Foster forthcoming. (FS.1;PL.1A)

10. Scurrial Point (E10)

NGR NF69750965

Site Type: temporary shelter type A

Date: uncertain

A shallow depression, 4 x 2m, surrounded by heavily embedded stone slabs.

11. Chiall (E9)

NGR NF70950685

Site Type: shell midden

Date: prehistoric and later

An extensive but patchy shell midden extends over about 200m along the eroding coast edge, with several layers of debris separated by sand blows. A few small coarse handmade sherds came from the lower levels, but glazed C19th pottery was found in the top level of midden.

12. Chiall (E8)

NGR NF70930665

Site Type: shelter type E

Date: modern

Shelter 3 x 2m, formed by a rock face, two large boulders and three smaller blocks.

13. Chiall (E7)

NGR NF70990652

Site Type: ? animal burial

Date: modern

Three upright stones, 0.5-0.7m high, set around a cist-like stone setting. A local resident informed us it was the grave of a dog.

14. Chiall (E5)

NGR NF70700644

Site Type: shell midden

Date: modern ?

A shallow shell midden above a fossil soil and alongside an old trackway. No pottery seen, but stratigraphic position suggests it is relatively recent.

15. Orosay (E4)

NGR NF71200632

Site Type: midden and stone structures

Date: prehistoric

A huge midden and associated stone built structures, on a small promontory on the Sound of Orosay. The midden is represented by a grassed-over mound about 1m high, but at the sea-cut section the midden and interleaving sand deposits has a depth of 1.8m, so that the total depth is probably between 2 and 3m. The mound is 30-40m across. In the exposed section a peat deposit at the base is overlain by traces of stone structures, with five stones laid horizontally at one point; two further stones are set upright, and further along the section there are suggestions of a double-faced wall. A flint pebble was recovered from this level. Of at least three midden levels, the middle one includes a lense of burnt material and many shells. A little below this deposit we recovered five very friable pieces of thin reddish-orange pottery, tempered with coarse sand. The fabric bears no resemblance to any Iron Age or medieval pottery yet seen on Barra. Its nearest parallels are amongst the Beaker sherds from Alt Chrisal. A sampling of the shell content of the midden showed that, as expected in this location, cockles were predominant, followed in descending order by limpets, dog whelks, periwinkles, mussels, pecteus and razor shells. There were traces of further midden deposits in the sea-cut section to the north-east of this site. This is clearly a substantial site, probably of the earlier prehistoric period.

16. Orosay (E3)

NF 71730606

Site Type: cairn

Date: prehistoric

A low cairn, mostly comprised of peat and soil, c.5m diameter with a rough kerb of boulders. Probably a prehistoric burial cairn, although the use of peat and soil for the cairn material is unusual on Barra and Vatersay.

17. Orosay (E2)

NF 71510600

Site Type: shelter type E

Date: modern

Rectangular stone setting, 3.5 x 1.5m, against a low rock face.

18. Traigh Mhor (G18)

NF 69490538

Site Type: blackhouse

Date: modern

Foundations of oblong stone building 19.3 x 6.1m, door in centre of south wall, and another at west end of south wall. Interior divided in three by two partition walls. East room 4.3 x 3.5m with 1.8m 'doorway' from main room. Main central room 4.3 x 6.5m, with possible low platform, dresser setting or bed box in rear left corner. West room 4.3 x 4.8m, with doorway 1.5m from central room, as well as external door. The external wall is c.1.2m wide. Blackhouse.

SURVEY MAP 2. CRANNAG TO EARSARY

1. Crannag (A84) NGR NF70820455
 Site Type: fisherman's store Date: modern
 Rectangular building, 6 x 5.1m, with three walls faced with
 stone blocks and earth filled, the rear wall a natural rock face. Door at NE corner.
2. Crannag (A83) NGR NF70810455
 Site Type: blackhouse ? Date: modern
 Rectangular building, 9.7 x 7.3, with three walls faced with stone blocks and earth fill,
 and rear wall a natural rock face. There is a 1.2m door in the centre of the north wall, and
 the wall to the left of the door thickens to provide some shelter from westerly winds. This
 has all the features of a blackhouse, but for the natural rock rear wall.
3. Ardmhor (A82) NGR NF71030423
 Site Type: blackhouse Date: modern
 Rectangular thick-walled building, 9.1 x 6m, with door to the north. The wall is 1m wide
 with an earth core. No partitions or secondary features at all.
4. Ardmhor (A81) NGR NF71100424
 Site Type: kelp oven Date: modern
 Rectangular setting of stones, 3.4 x 1.4m, with slightly hollow centre and some collapsed
 stone infill.
5. Ardmhor (A80) NGR NF71050421
 Site Type: modified blackhouse ? Date: modern
 Rectangular thick-walled building, 8.5 x 4.8m, its walls varying between 1m and 1.3m in
 width. It has a door in its east wall, and may have had a second in the west wall.
 There is a secondary wall projecting into the main room from immediately alongside the
 door, and a rubble lambing pen built into the south-west corner.
6. Ardmhor (A79) NGR NF71240416
 Site Type: shelter type B Date: modern
 Circular setting, 5 x 3.7m, of large boulders and some smaller infilling blocks.
7. Ardmhor (A78) NGR NF71290426
 Site Type: oval house ? Date: Iron Age?
 A prominent grassed over mound, 9 x 7.5m, and about 2m high.
 There are traces of stone blocks on the periphery but no clear indication of a stone cairn.
 The shape and size of the mound
 and its apparent lack of a stone cairn suggest this is a later prehistoric house, possibly
 with turf or peat superstructure on a stone foundation, as excavated in the Borge valley
 (B54).
 The adjacent site 8, however, looks like a kerbed cairn and these often occur in pairs or
 larger groups.
8. Ardmhor (A77) NGR NF71300425
 Site Type: kerbed cairn ? Date: prehistoric
 Adjacent to site 7, a low grassed-over mound with clear traces of a kerb of stone blocks
 on the south quadrant and more sporadically elsewhere. The mound is 5m in diameter,
 about 1m high, and looks like a kerbed cairn.
9. Ardmhor (A76) NGR NF71400419
 Site Type: circular hut Date: medieval, modern ?
 A circular hut, 4.6m diam, with stoen and turf walls standing up to 0.45m high, with a
 slightly inturned entrance on the west.

10. Ardmhor (A75)

NGR NF71760384

Site Type: outbuilding

Date: modern

Rectangular building, 5.75 x 4.5m, with stone facing and earth core walls. No visible doorway. It stands on a larger stone edged platform 7.9 x 6.6m which could be the remains of an earlier structure.

11. Ardmhor (A74)

NGR NF71780392

Site Type: clearance cairn

Date: modern

Low clearance cairn 2.4 x 1.5m, with both large blocks and small field stones.

12. Ardmhor (A73)

NGR NF71860392

Site Type: kelp oven ?

Date: modern

Rectangular spread of stone blocks, 3.7 x 1.4m, some of which show signs of burning. The stones do not look like cleared field stones, and the long narrow shape and location suggest a kelp oven rather than a clearance cairn.

13. Ardmhor (A72)

NGR NF72100372

Site Type: blackhouse

Date: modern

A rectangular thick-walled building, 12 x 7.5m, with walls 1.6m at their widest. There is the stump of a possible original partition wall to the left of the door in the east wall. Later rubble-built walls forming lambing pens are in the north-east and south-west corners. A byre, 6.5 x 4.5m overall, has been added to the south end of the building, with a door at its north-east corner. (FS.2)

14. Ardmhor (A71)

NGR NF72130353

Site Type: blackhouse

Date: modern

A rectangular building 12 x 5.5m, with stone-faced walls 1.2m wide. A partition wall at the south-east end may be original, and creates a room 3.2 x 2.1m with no external doorway. The main doorway appears to be in the north-east wall. There are secondary rubble-built walls in the north-west end of the building, possibly lambing pens. To the front of the building a circular stone setting 1.7m diam is to one side of the door, and a wall 5m long projects northwards on the other side to create a small yard area.

15. Ardmhor (A70)

NGR NF72300329

Site Type: rectangular hut

Date: modern ?

Well-embedded foundations of a small stone and turf walled hut, 4.5 x 3.9m, most probably a fisherman's store.

16. Bagh Huilavagh (A68)

NGR NF70760408

Site Type: kelp oven

Date: modern

Rectangular stone setting, 3 x 1.7m, with further stone collapse inside.

17. Bagh Huilavagh (A67)

NGR NF70800416

Site Type: outbuilding

Date: modern

Rectangular building, 6.4 x 4.6m, with loosely built stone walls 0.95m wide and a 1m door in the south wall.

18. Bagh Huilavagh (A66)

NGR NF70690404

Site Type: blackhouse

Date: modern

Oblong building, 9 x 7m, with door in centre of the east wall and remains of windows to either side.

19. Bagh Huilavagh (A65) NGR NF70720395
 Site Type: 2 blackhouses and pen Date: modern
 Complex of three small rectangular buildings adjacent to a sea loch and protected from the west by a rock outcrop. The central thick-walled building, 8.8 x 4.7m, is divided into two rooms, each with its own external door but no connecting internal door. The larger room measures 5 x 2.8m, and the smaller 1.6 x 2.8m. In front of this building a second sub-rectangular structure 9.2 x 8.1m is thinner-walled and mostly destroyed. Some 35m to the rear of the central building a thick-walled building 7.2 x 4.1m has a door at its eastern corner, and an annexe 4.2 x 4.1 with a door on the opposite (west) side. The central building appears to be a small blackhouse with a separate byre, and the other thick-walled building may also have originally been a blackhouse.(FS.3)
20. Bagh Hirivagh (A63) NGR NF71230326
 Site Type: shelter type C Date: modern
 Rectangular stone and turf structure 3 x 3m, with entrance in NW corner.
21. Bagh Hirivagh (A62) NGR NF71080335
 Site Type: boat noost Date: modern
 Elongated oval pit, 4 x 2m, with drainage cut to sea on east.
22. Ardveenish (A61) NGR NF70930356
 Site Type: shelter type F Date: modern
 Rectangular stone structure, 2 x 1m, roughly built against a large rock.
23. Ardveenish (A60) NGR NF70900353
 Site Type: shelter type A Date: modern
 Circular stone setting 1m diam, set in land boundary formed of spaced upright stones.
24. Tor Gormlaig (A59) NGR NF70840334
 Site Type: outbuilding/byre Date: modern
 Stone building, 4m square, with 0.8m door in NE corner.
25. Tor Gormlaig (A58) NGR NF70800332
 Site Type: shelter type E Date: modern
 Three stones set on edge against a large boulder, forming a shelter 1.3m square.
26. Bagh Hirivagh (A57) NGR NF70550339
 Site Type: blackhouse Date: modern
 Oblong building, 8 x 4m, with door in centre of north wall. No trace of internal partition. Walls stand to almost 1m in height.
27. Bagh Hirivagh (A56) NGR NF70430330
 Site Type: shelter type A Date: modern
 Circular setting, 3.5m diam, of large stones with slightly depressed interior area.
28. Bagh Hirivagh (A55) NGR NF70430328
 Site Type: robbed blackhouse Date: modern
 Much robbed and embedded foundations of an oblong building, 7.8 x 3.9m, possible traces of door in centre of east wall.
29. Bagh Hirivagh (A54) NGR NF70550309
 Site Type: outbuilding/byre ? Date: modern
 Sub-rectangular thick-walled building, 4 x 3m, with door in centre of east wall.

30. Bagh Hirivagh (A53) NGR NF70930313
 Site Type: rectangular building Date: modern
 Rectangular building 13 x 6.6m, door in centre of south wall.
 The south and east walls still stand, whilst the west and north walls have collapsed.
31. Bagh Hirivagh (A51) NGR NF71060308
 Site Type: causeway Date: uncertain
 A 1m wide causeway of large boulders linking two small islets separated by 5m of tidal water. No trace of structures on either island.
32. Bagh Hirivagh (A50) NGR NF71270289
 Site Type: shelter type A Date: modern
 Circular stone setting, 1m diam.
33. Bagh Hirivagh (A49) NGR NF71270294
 Site Type: kelp oven ? Date: modern
 Sub-rectangular stone setting, 1.25 x 4m.
34. Bagh Hirivagh (A48) NGR NF12420298
 Site Type: causeway Date: uncertain
 Causeway 3.5m wide, of large stones, connecting two small tidal islets.
35. Bagh Hirivagh (A47) NGR NF71060292
 Site Type: clearance cairns Date: modern
 Two clearance cairns, heavily embedded, 1.5 and 0.8m diam.
36. Bagh Hirivagh (A46) NGR NF71020290
 Site Type: blackhouse Date: modern
 Oblong building, 11.5 x 6m, heavily embedded foundations, with door in centre of east wall. No traces of internal partitions.
37. Bagh Hirivagh (A45) NGR NF71200270
 Site Type: outbuilding/byre ? Date: modern
 Stone building, 5.5 x 4.5m, with 1m door in centre of east wall.
38. Bagh Hirivagh (A42) NGR NF71300266
 Site Type: outbuilding/drying shed ? Date: modern
 Stone building, 6.75 x 4m, north and east walls much robbed, with traces of platform against rear wall. Three clearance cairns, each c.2m diam, stand at the rear of the building.
39. Bagh Hirivagh (A41) NGR NF71350254
 Site Type: outbuilding Date: modern
 Thick-walled rectangular building, 6 x 4m, door in centre of east wall. Slight foundations inside enclose two 'pens' or bins in the NW and SE corners.
40. Bagh Hirivagh (A40) NGR NF71430249
 Site Type: outbuilding/byre ? Date: modern
 Thick-walled rectangular building, 8 x 5m, with door in north-east corner.
41. Bagh Hirivagh (A39) NGR NF71240248
 Site Type: blackhouse Date: modern
 Thick-walled oblong building, 9 x 5m, with door in centre of north wall. No trace of internal partitions.

42. Bagh Hirivagh (A38) NGR NF71500265
 Site Type: broch/ARH Date: Iron Age
 A slightly oval walled structure occupying most of a small islet approached at low tide by the causeway site 43 (A37). Traces of an inner and outer wall can be followed around the circumference, although few traces are visible on the east and west sides. The overall dimensions are 19.8 x 17.1m, and the interior space is 11.2 x 9.3m. The inner wall was 1.2m wide, separated from the outer by a space (on the east side) of 0.6m. At the north end of the islet, a flat area about 11 x 8m forms a yard-like feature outside the structure.(FS.4;PL.1B)
43. Bagh Hirivagh (A37) NGR NF71490264
 Site Type: causeway Date: Iron Age
 Causeway of large boulders and stones, 4m wide, connecting islet and site 42 to the mainland. The causeway is 20m long.
44. Bagh Hirivagh (A36) NGR NF71640252
 Site Type: rick stands Date: modern ?
 Six well-embedded circular stone platforms, from 2m to 2.5m diameter, made of small cobbles or blocks of stone.
45. Bagh Hirivagh (A35) NGR NF71730251
 Site Type: blackhouse Date: modern
 Oblong building, 7.6 x 5.3m, with relatively thin (0.8m) walls. A single 0.9m door is located almost midway along the west side. No trace of internal partitions.
46. Bagh Hirivagh (A34) NGR NF71700272
 Site Type: double-boulder enclosure wall Date: modern ?
 An unusual wall with double stone facing but no visible core and many stones set on edge. The wall runs for 15m, its north end marked by a large block of stone.
47. Bruernish (A33) NGR NF71820286
 Site Type: 3 blackhouses,enclosure. Date: modern
 Three blackhouses with circular stone-built pen, c15m diam, and other stone and turf walls. House 3 is 12 x 7m, with a door in the centre of the east wall and two partitions dividing the interior into three rooms. Attached to its back wall at right angles is an outbuilding (1), 11 x 5.5m, with a door in its south-east corner. This is a more crudely constructed building the walls incorporating some large boulders. It may be a byre. House 2 stands west of 3, and is 10 x 6.5m. It has a door in the centre of its west wall; a large gap in the east wall foundation is not original and probably the result of robbing. Flimsy secondary partition features enclose a small 'pen' in one corner and divide off the east end of the building. Building 4 stands north of building 2 and is 12 x 7m, with a central door in its east wall and no trace of internal partition.(FS.5)
48. Bruernish (A32) NGR NF72100285
 Site Type: outbuilding/store ? Date: modern
 A stone outbuilding, 9 x 5m, divided into two rooms, with adjacent separate doorways in the east wall. The building is immediately adjacent to the sea and may have served a fisherman's bothy and store.
49. Bruernish (A31) NGR NF72020274
 Site Type: L-shaped house Date: modern
 An unusual house with two wings at right angles, the E-W wing is 9 x 5m, and the N-S is 8 x 5m. The E-W wing has a single room 6 x 5m with a door in its SW corner, and a window to its right. The N-S wing has two rooms, one 8 x 4m entered from a door in the NW corner of the building, and a second 5 x 3m, entered through an internal door in a partition wall. This room has a window in its south wall.

50. Rubha Charnain (A30) NGR NF72130266
 Site Type: outbuilding/byre ? Date: modern
 A small thick-walled oblong building, 6 x 3m, with a door in its NE corner.
51. Rubha Charnain (A28) NGR NF72190261
 Site Type: outbuilding/byre ? Date: modern
 Thick-walled building, 6 x 5m, with a door in the centre of the south wall, and an external lean-to 2 x 1.5m. A crofter said the building had been a byre, but this could have been secondary use.
52. Rubha Charnain (A27) NGR NF72980194
 Site Type: outbuilding Date: modern
 Thick-walled building, 5 x 4m, foundations only survive with no clear indication of doorway.
53. Rubha Charnain (A26) NGR NF72360260
 Site Type: whitehouse Date: modern
 Two stone-built end walls of rectangular building, 10 x 6m. The front and back walls were of timber, the collapsed debris of which is still visible. The north wall has a fireplace and chimney.
54. Rubha Charnain (A25) NGR NF72340254
 Site Type: boathouse ? Date: modern
 Rectangular building, 6 x 3m, immediately alongside jetty.
55. Rubha Charnain (A24) NGR NF72290250
 Site Type: blackhouse Date: modern
 Oblong thick-walled building, 8.5 x 5m, with door in centre of south wall. No internal partitions but a secondary pen built into the south-west corner.
56. Bruernish (A23) NGR NF72270245
 Site Type: blackhouse Date: modern
 Oblong thick-walled building, 8 x 5m, with door in centre of south wall, and window to the left of it. A gap in the west wall is probably secondary or post-abandonment. No trace of internal partitions.
57. Bruernish (A22) NGR NF72260240
 Site Type: blackhouse Date: modern
 Much robbed and embedded foundations of thick-walled oblong building, 10 x 4.5m. Door position uncertain; no trace of internal partition.
58. Bruernish (A21) NGR NF72170239
 Site Type: blackhouse Date: modern
 Reduced foundations of a thick-walled oblong building, 8 x 5m. Door position uncertain; no trace of internal partition.
59. Bruernish (A20) NGR NF72150230
 Site Type: blackhouse Date: modern
 Small thick-walled oblong building, 6 x 3m, with door almost central in west wall. No trace of internal partition.
60. Bruernish (A19) NGR NF72220225
 Site Type: whitehouse Date: modern
 Rectangular building, 8.5 x 5m, with door in centre of north wall, flanked by windows. A third window is in the centre of the south wall, and there is a fireplace and chimney in each of the end walls.

61. Bruernish (A18) NGR NF72290220
 Site Type: outbuilding/byre ? Date: modern
 Thick-walled building, 4.6 x 4m, with door in the NW corner.
62. Bruernish (A17) NGR NF72410207
 Site Type: 2 blackhouses Date: modern
 House 1 is 10 x 6m, with a door in the centre of its east wall overlooking a small inlet. No trace of internal partitions. House 2 is 6.5 x 5m, with a door near centre in the east wall. No trace of internal partitions.
63. Bruernish (A16) NGR NF72590190
 Site Type: stone setting Date: uncertain
 An irregular setting of about 20 stones, focussed on an upright monolith 1.3m tall. Alignments appear to run south and west from the monolith for about 3m in each direction, but the stones form no clear arrangement.
- 64 Bruernish (A15) NGR NF72500210
 Site Type: turf and stone wall Date: uncertain
 This much reduced wall runs for about 90m along the slope, set back from the HWM by about 20m.
65. Bruernish (A14) NGR NF72980194
 Site Type: shelter type E Date: modern ?
 Four large blocks set on edge, and remains of turf wall/bank, forming a rectangular enclosure 3.8 x 1.8m against a rock face. Probably used as a fisherman's store, only 2m above HWM.
66. Bruernish (A13) NGR NF73000195
 Site Type: store building ? Date: modern
 Small turf and stone walled building, 3 x 1.75m, with door in NW corner. Probably a fisherman's store, 3m above HWM.
67. Bruernish (A12) NGR NF73340141
 Site Type: uncertain ? Date: modern
 A shallow, flat-bottomed, rectangular pit, 9 x 4.3m, has been cut into the top of a low hillock and lined with a roughly built stone wall. It appears to be the foundation of a building, but the wall has no real width and any super-structure may therefore have been of timber or turf.
68. Bruernish (A11) NGR NF73450118
 Site Type: 2 oblong turf and stone buildings Date: medieval?
 Building A has thick stone and turf walls and is almost square, 6.5 x 5.5m. The only possible entrance is at the SE corner. This structure could be an enclosure rather than a building. Building B, to the west, is heavily embedded and overgrown, but is 9 x 5m, with a door in one of the short walls.(FS.6)
69. Bruernish (A10) NGR NF73250141
 Site Type: blackhouse and byre ? Date: modern
 Building A is 13.4 x 6.2m with a door towards the west end of the south wall. There are no traces of internal partition. Building B is more reduced and embedded and may be an earlier house used as a byre or outbuilding when building A was built. It measures 9.4 x 6.7, and has a narrow partition wall just inside the central door, which is in the south wall.
70. Bruernish (A9) NGR NF73140125
 Site Type: blackhouse Date: modern
 Oblong thick-walled building, 10.3 x 6.75m, divided by cross-wall into two rooms, the western larger than the eastern. The main door gives into the western room.

71. Bruernish (A8) NGR NF73330093
 Site Type: building emplacement ? Date: modern
 Sub-rectangular single-stone foundation, 7.8 x 4m, with 'face' on the inside. Presumably the setting for a timber, or possibly a turf, building ?
72. Bruernish (A7) NGR NF73290059
 Site Type: blackhouse Date: modern
 Overgrown foundations of a thick-walled oblong house, 8.2 x 5m, door in centre of NE wall. No trace internal partition.
73. Bruernish (A6) NGR NF73300057
 Site Type: building emplacement ? Date: modern
 Rectangular single-stone foundation, 7 x 3.5m, with 'face' on the inside. Presumably the setting for a timber or turf building ? (PL.2A)
74. Bruernish (A5) NGR NF72760076
 Site Type: 2 shelters type A Date: modern
 Two 'drop' shaped stone settings. A measures 2.7 x 2.3m, and B is 2.6 x 1.9m.
75. Loch Obe (A4) NGR NF71670191
 Site Type: shelter type F Date: modern
 Low curving turf and stone wall built against a north facing rock face, enclosing an area 3.1 x 1.8m.
76. Loch Obe (A3) NGR NF71600229
 Site Type: blackhouse ? Date: modern
 Heavily robbed and grassed over foundations of a thick-walled structure, 9 x 6.6m, with rounded corners.
77. Loch Obe (A2) NGR NF71400195
 Site Type: byre ? Date: modern
 Thick-walled building 7.5 x 5.5m, with 0.6m door at north-west corner. Wall stands to 1m in parts.
78. Loch Obe (A1) NGR NF71400195
 Site Type: fisherman's store/bothey Date: modern
 Foundations, up to 1m wide, of rectangular building, 4.6 x 3m, built against three large rocks.
79. Loch Obe (L12) NGR NF71160183
 Site Type: blackhouse Date: modern
 Large oblong building 16.8 x 6m, with grassed-over foundations. The 1m wide door is in the west wall, and there is a partial, possibly secondary, partition wall 2.8m long, towards the north end of the building
80. Loch Obe (L11) NGR NF71180190
 Site Type: blackhouse Date: modern
 Thick-walled oblong building, 9.6 x 5.5m, with door in middle of east wall. No internal partitions. Wall still stand a metre high.
81. Loch Obe (L10) NGR NF71200185
 Site Type: rectangular stone hut Date: modern
 Building 4.45 x 2.75m, with door 0.75m in centre of north wall, facing the loch. Heavily overgrown by ferns.

82. Loch Obe (L9)

NGR NF71540168

Site Type: blackhouse settlement

Date: modern

A cluster of six buildings to the west of the stream at Balnabodach, four with walls still standing to 1.5 - 2m. There are significant modifications to some houses.

House A is 7.15 x 5.5m, with no internal partitions. It has a fireplace in the north wall, but this looks as if it may have been inserted into the wall rather than integral.

House B is 10.6 x 5.2m, has two front and one rear window, and a fireplace and chimney in each end wall. This house was probably built around 1880-1890, and was abandoned and its door and window blocked following an epidemic c.1900-1910.

House C is 6.8 x 4.9m, and has been incorporated into a large stone pen. It may have been a byre.

House D is 8.2 x 5.8m and after partial collapse or demolition has been modified by the insertion of a cross wall to make an outbuilding 5.8 x 5.8m.

House E is 9.6 x 5.2m with no trace on internal partition.

House F is 8.7 x 4.8m, and has two interior partition walls making three narrow 'stalls'. Whether either or both is primary is not clear. The settlement's midden is in the salt marsh adjacent to the stream and contains C19th-early 20th pottery, animal bone, and clothing including shoes.(MP.1)

83. Loch Obe (L8)

NGR NF71590167

Site Type: blackhouse settlement

Date: modern

Across the stream to the east of site 82. Seven blackhouses, all collapsed and embedded. House A was excavated in 1996.

House A was originally 9.3 x 6.8m, and had a room added to its west end to make it 13.2 x 6.8. Its rear wall was rebuilt and narrowed by 0.8m, before abandonment. Pottery and census details suggest abandonment in 1850/51.

House B is 9.8 x 6.5 with no internal partitions.

House C is 10 x 6.5m, with no internal partitions.

House D is 10.6 x 6.6m with a partition wall to the right of the door.

House E is 10.6 x 6.4m with no internal partitions.

House F is 7.2 x 5.4m with no internal partitions.

House G is 6 x 4.2m with no internal partitions.

There are boat noosts and breakwaters to the east.(MP.1)

84. Rubha Liath (L7)

NGR NF71620058

Site Type: blackhouse

Date: modern

Thick-walled oblong building, 10.3 x 5m, eroding at the seaward side. The door appears to have been towards one end of the south wall but this is uncertain. There are flimsy secondary partitions inside dividing the area into four 'pens'.

Three raised areas of lazy-bedding are situated to the west of the site, flanked by drainage ditches. (PL.2B)

85. Rubha Liath (L6)

NGR NF71590038

Site Type: outbuilding

Date: modern

Thick-walled oblong building, 8.3 x 5.1m, with opposing doors in the east and west walls, and two short projecting walls dividing off a narrow room at the south end. The wall is built mainly of stones rather than having an earth core.

86. Rubha Liath (L5)

NGR NF71400035

Site Type: turf walls

Date: modern ?

A turf wall c.1.2m wide forming a right angle, 20m N-S and 14.5m E-W.

87. Rubha Liath (L4)

NGR NF71130038

Site Type: blackhouse

Date: modern

Thick-walled oblong building, 7.65 x 5.5m, with 1m door in south wall. Two late flimsy 'pens' built into the NE and SW corners.

88. Rubha Liath (L3)

NGR NF71000038

Site Type: blackhouse ?

Date: modern

Turf-walled oblong structure, 8.7 x 5.7m, with door towards east end of south wall. The only structural stonework in the building is framing the doorway. No trace of internal partition.

89. Rubha Liath (L2)

NGR NF70850030

Site Type: outbuilding

Date: modern

Turf and stone thick-walled oblong building, 7 x 3m, with trace of integral partition wall dividing the interior into two rooms, 2.5m and 1.8m wide. The door must have been in the south wall, which has been entirely eroded away.

90. Rubha Liath (L1)

NGR NF70870030

Site Type: lean-to store

Date: modern

Turf and stone structure, 4.6 x 2.1m, comprised of three walls built against a large slab of rock which forms the fourth wall. The narrow doorway is in the north end.

SURVEY MAP 3. EARSARY TO HORVE

1. Orosay (S17) NGR NL70689911
 Site Type: 4 clearance cairns Date: modern
 Four small cairns, mostly primary clearance debris, from 0.7m to 1.5m diam.

2. Orosay (S16) NGR NL70689911
 Site Type: monolithic wall Date: modern
 Wall of large boulders, one stone high and set edge to edge, closing gap between two rock outcrops 12m apart.

3. Leanish (S15) NGR NL70149915
 Site Type: outbuilding and byre ? Date: modern
 Two rectangular stone-walled buildings with a 'party' wall.
 The largest is 10.7 x 4m and has a door in its NW corner, the smaller is 6.5 x 4.1m, with a door on the opposite side of the complex, in its SE corner.

4. Leanish (S14) NGR NL70319880
 Site Type: blackhouse Date: modern
 Thick-walled oblong building, 10.3 x 5.5m, divided into two almost equal parts by an internal partition. The door is slightly off-centre in the east wall and gives access to both rooms.

5. Leanish (S13) NGR NL70209875
 Site Type: complex of 3 walls/banks Date: modern
 The walls/banks enclose a cultivation patch. A) is a 25m earth bank with stone facing on the west side and was apparently added to B) to enclose further land adjacent to the sea. B) is an earth bank 30m long and 1.6m wide which joins C at a right angle. C) is a natural rock ledge with additional built stone forming a wall 31m long with two entrance-ways, 1m and 2.5m wide.

6. Leanish (S12) NGR NL70009876
 Site Type: earth and stone bank Date: modern
 A 2m wide earth and stone bank, running across neck of headland but not entirely enclosing it (as it survives).

7. Leanish (S11) NGR NL69889882
 Site Type: wall and shelter type F Date: modern
 A stone and earth wall 18.8m long terminating in a built rectangular shelter 2.5m square, built between the wall and a large upstanding boulder.

8. Leanish (S10) NGR NL69809891
 Site Type: 2 earth and stone walls Date: modern
 Two earth and stone walls set one above the other on a slope to the sea. They are flanked to east and west by lazy-bedded areas. They are presumably small terraced cultivation plots.

9. Brevig Bay (S1) NGR NL69569824
 Site Type: shelter type E Date: modern
 A semi-circular stone setting, 3m across, against a large rock set between two cleared cultivation patches and downslope from a low earth and stone retaining wall.

10. Brevig Bay (S2) NGR NL69759821
 Site Type: enclosure wall Date: modern
 A stone and earth bank 2m wide enclosing two sides of an area 74 x 36m, the remaining sides being bounded by the sea. This area is lazy-bedded in two directions. The bank is eroding into the sea at its ends, and the section reveals that this is a carefully constructed 'sheep wall' with a vertical stone wall 0.75m high on the outside face and a sloping bank on the inside.
11. Aird Rubha Mor (S3) NGR NL69149769
 Site Type: turf and stone wall Date: modern ?
 A much reduced turf and stone wall 0.8 wide and 16m long. It serves no obvious purpose as it survives.
12. Aird Rubha Mor (S4) NGR NL68919763
 Site Type: promontory enclosure wall Date: modern ?
 An earth or turf wall faced with irregular boulders on the landward side, shutting off a small headland. The wall is 12m long and 1m wide. On the headland there is no sign of occupation unless it is hidden under a fern-covered hump near the end of the headland.
13. Glac na Buidha (S5) NGR NL68659754
 Site Type: stone wall and house platform? Date: modern ?
 A stone-built wall 28m long, protecting a formerly cultivated area between two streams from downslope erosion. Just to the north a rectangular platform 7 x 5m sits on a low rise on the other side of the stream.
14. Ru-fear-Vatersay (S6) NGR NL68639746
 Site Type: building platforms ? Date: prehistoric/medieval?
 Three fern-covered mounds with traces of stone walling or revetment. A) is trapezoidal, broad end to the east (the sea), measuring 17 x 8m, tapering to 3m. A short stretch of walling is visible on the east front. B) is oblong, 9 x 3m, and C) is oblong, 16m x 5m. There are traces of stone edging/walling along the south side of C. There are some old peat-cuts in the area, and it is possible that these platforms are the accidental products of this activity, but on balance we think it more likely the mounds pre-date the peat cutting. The short stretch of wall at the front of mound A is covered by about 20cms of peat.
15. Ben Orosay (S8) NGR NL67529724
 Site Type: enclosure wall Date: modern
 A roughly built stone and turf wall enclosing a tiny headland only 6 x 1.6m, presumably to be used as a pen. The headland is eroding on all sides and may have been considerably bigger even two centuries ago.
16. Ben Orosay (S9) NGR NL67509730
 Site Type: blackhouse ? and pen Date: modern
 An oblong building 8.6 x 5.3m, probably a blackhouse but with thinner walls than usual. South of the house is a roughly built pen 5.9 x 3.5m, and there are surface indications of other structures to the north of the house. Local oral tradition claims that the house was built by an Irishman, Dermot O'Neil and used c.1780-1810.
17. Castle Bay (K1) NGR NL66509720
 Site Type: docksides etc Date: modern
 Extensive traces of docksides and foundations associated with herring fisheries, late 19th-early 20th century.
18. Castle Bay (K2) NGR NL66889808
 Site Type: site of dun ? Date: -
 Alleged site of totally destroyed 'dun'. A small flat-topped rocky hill. No traces of any structure were visible on it. Observation of a pipe trench cut alongside the east side of the hill revealed no archaeology at all.

19. Castle Bay (K3)

Site Type: docksides etc

Further docksides and foundations connected with the late 19th-early 20th century her-
ring fisheries.

NGR NL65609785

Date: modern

20. Castle Bay (K4)

Site Type: castle

Kiessimul Castle. RCAHMS pp.126-28 have a description and plan of the castle, the
foundation of which they place in the later 15th century.

NGR NL66569796

Date: medieval

SURVEY MAP 4. HORVE TO BORVE

- | | |
|---|----------------------------------|
| 1. Bagh Beag (T228)
Site Type: outbuilding
A stone-walled rectangular building, 7 x 3.5m, close to the HWM, probably a fisherman's store. | NGR NL65439845
Date: modern |
| 2. Bagh Beag (T227)
Site Type: outbuilding
A stone-walled 3.5m square building, close to the HWM, probably a fisherman's store. | NGR NL65449802
Date: modern |
| 3. Bagh Beag (T79)
Site Type: shelter type A
Stone setting, 2.2 x 1.2m, on natural hillock. | NGR NL65459795
Date: modern |
| 4. Bagh Beag (T78)
Site Type: oval hut
Earth and stone structure, 5.6 x 4.7m, with collapsed stone inside and a hollowing around the outside. | NGR NL65529791
Date: modern ? |
| 5. Bagh Beag (T77)
Site Type: shelter type A
Circular stone setting, 4m diam, some stones set upright. | NGR NL65529790
Date: modern |
| 6. Creag a' Chroinn (T76)
Site Type: clearance cairns, lazy-beds
Five clearance cairns set outside two rectangular cultivation areas, one lazy-bedded 12 x 10m, the other enclosed by low stone bank and traces of fence emplacement, 10m square. | NGR NL65629782
Date: modern |
| 7. Rubha Glas (T74)
Site Type: shelter type C
Oval stone and earth structure, 3.4 x 2.4m, situated on a knoll. | NGR NL65309741
Date: modern |
| 8. Rubha Glas (T75)
Site Type: triangular platform
A triangular platform, 14 x 13.8 x 12.5m, marked out by a 2m wide shallow ditch on all three sides. Purpose unclear. | NGR NL65309740
Date: modern ? |
| 9. Rubha Glas (T73)
Site Type: shelter type C
Oval stone and earth structure, 2.9 x 1.6m. | NGR NL65149740
Date: modern |
| 10. Rubha Glas (T72)
Site Type: shelter type C
Collapsed stone structure, 4.5m diam, on small knoll. | NGR NL65119742
Date: modern |
| 11. Rubha Glas (T71)
Site Type: shelter type C
Circular stone and earth structure, 3.3m diam. | NGR NL65119740
Date: modern |
| 12. Rubha Glas (T88)
Site Type: shelter type A
Square stone setting, 1.4 x 1.2m. | NGR NL65059743
Date: modern |
| 13. Rubha Glas (T86)
Site Type: shelter type A
Stone setting, 2m square, possible entrance on south. | NGR NL65059745
Date: modern |

14. Rubha Glas (T85) NGR NL65019740
 Site Type: rectangular cist Date: prehistoric?
 Stone setting, 2.3 x 1.7m, formed of slabs, nine of which are upright and three fallen.
 There is a residual pile of smaller stones around the upright.
15. Rubha Glas (T64) NGR NL64829759
 Site Type: shelter type C Date: modern
 Partly demolished and robbed stone structure, 2m diam, set on a rock outcrop.
16. Rubha Glas (T54) NGR NL64709760
 Site Type: clearance cairns, lazy-beds Date: modern
 Group of small (0.5m diam) clearance cairns scattered on lazy-beds on a low terrace.
17. Rubha Glas (T50) NGR NL64629757
 Site Type: cellular structure Date: modern ?
 An irregular structure, 12 x 8m, built of water-rounded boulders with four or five 'cells',
 with a 1.75m square shelter (?) set into the largest cell.
18. Rubha Glas (T49) NGR NL64619758
 Site Type: cellular structure Date: modern ?
 An irregular structure, 12.5 x 8m, built of water-rounded boulders, with three or four visible 'cells'. It is tempting to place both of these structures (17 and 18) in a mid first millennium AD context, but they seem to be too upstanding, well preserved, and unembedded to be of great antiquity.
19. Rubha Glas (T48) NGR NL64609759
 Site Type: shelter type A Date: modern
 Horseshoe setting of stones, 2m diam, incorporating two large boulders.
20. Rubha Glas (T46) NGR NL64609760
 Site Type: blackhouse Date: modern
 Thick-walled oblong house, 7.5 x 6m, door in the centre of the west wall, and no internal walls.
21. Rubha Glas (T45) NGR NL64589762
 Site Type: clearance cairn ? Date: modern
 A cairn, about 4m diam, comprised of well-embedded medium large stones and earth, with later smaller stones dumped on top. It is possible this is an earlier cairn, utilised for land clearance at a later date.
22. Alt Chrisal (T30) NGR NL64339771
 Site Type: blackhouse Date: modern
 Thick-walled oblong house, 9.4 x 6.6m, with a 1m door in the middle of the south wall. The rear wall had only an inside face at foundation level, being cut-back into the hillside. This building was excavated in advance of destruction by road building in 1989 (Branigan and Foster 1995, 163).
23. Alt Chrisal (T28) NGR NL64299711
 Site Type: 2 kelp ovens Date: modern
 Two oblong settings of stones, mostly set on edge. One is 2.1 x 0.7m, the other 1.15 x 0.45m, broadening to 0.68m. Excavated in advance of road building in 1989 (Branigan and Foster 1995, 94-5).
24. Alt Chrisal (T24) NGR NL64279772
 Site Type: clearance cairn Date: modern
 Grassed-over mound, 3.5m diam, with large stones around perimeter and many smaller stones on the south side.

25. Alt Chrisal (T27) NGR NL64279773
 Site Type: byre Date: modern
 Crudely built rectangular building, 7.5 x 5.4m, utilising large boulders for its foundations, with a door in its SE corner, through which a drain issues. Excavated in advance of road-building 1989 (Branigan and Foster 1995, 92-3).
26. Alt Chrisal (T26) NGR NL64259773
 Site Type: blackhouse/activity site Date: modern/prehistoric
 A thick-walled house, 14.8 x 7.5m, with a door in the centre of south wall, and a secondary partition wall to the right of the door. Beneath and behind the house is an extensive Neolithic/Beaker activity site with hearths, stone paved area, small pottery clamps, and simple stone alignments and features. Excavated in advance of road-building (Branigan and Foster 1995, 64-93).
27. Alt Chrisal (T25) NGR NL64269770
 Site Type: drying shed Date: modern
 A thick-walled building, 7.6 x 5.6m, a door in its SE corner, where the whole building is anchored to a huge boulder. A platform 0.6m high is built across the north end of the building. The building was excavated in advance of road-building (Branigan and Foster 1995, 61-63).
28. Alt Chrisal (T13) NGR NL64239770
 Site Type: clearance cairn Date: modern
 A low elongated mound, 7.5 x 2.5m, well-embedded stones but no obvious structure. The largest stones are at the south end, and similar sized stones a little downslope may be disturbed from the cairn.
29. Alt Chrisal (T14) NGR NL64219768
 Site Type: clearance cairn Date: modern
 A cairn, 4m diam, with large stones at the base and considerable quantities of small sub-rounded stones on top, representing primary land clearance, followed by cultivation. Excavated in advance of road-building (Branigan and Foster 1995, 163).
30. Alt Chrisal (T11) NGR NL64149765
 Site Type: field revetment Date: modern
 This site had the appearance of a hut platform, about 10m across. Excavation in advance of road building revealed a roughly built revetment wall, standing to a height of 0.4m, with a buttress at the east end of the excavated length.
 At a lower level, beneath 6cms of blanket peat, a hearth area 0.4m diam, outlined by stones was found. Its date is unknown.
 (Branigan and Foster 1995, 163).
31. Alt Chrisal (T10) NGR NL64139765
 Site Type: clearance cairn Date: modern
 Grassed over knoll, with scattered stone blocks, mainly around the perimeter. Remains of a cairn ?, 2.5m diam.
32. Alt Chrisal (T9) NGR NL64119764
 Site Type: clearance cairn Date: modern
 A cairn about 4m diam, containing angular and sub-rounded stones c20-30cms across, with large blocks roughly set around the edge to form a kerb. Stones from the cairn spilled over the kerb. Excavation in advance of road building revealed that the cairn sat on cultivated soil re-deposited by hill-wash. A fragment of a pipe-clay bowl embellished with the Prince of Wales feathers, confirms a date contemporary with the blackhouse site T26. (Branigan and Foster 1995, 162).

33. Alt Chrisal (T8) NGR NL64019764
 Site Type: clearance cairn Date: modern
 Rock outcrop, partly grassed-over and infilled with small stones on the west, whilst embedded stones form a low cairn 2m diam at the centre of the outcrop.
34. Alt Chrisal (T7) NGR NL64069766
 Site Type: clearance cairn Date: modern
 Cairn of small boulders, 3 x 1.8m.
35. Alt Chrisal (T6) NGR NL64039765
 Site Type: clearance cairn Date: modern
 Pile of partly embedded larger stones, 2 x 2m.
36. Alt Chrisal (T5) NGR NL64039765
 Site Type: clearance cairn Date: modern
 Low cairn of boulders and small stones piled against a large embedded boulder.
37. Alt Chrisal (T1) NGR NL63299763
 Site Type: activity site Date: modern/prehistoric
 A turf wall terminated in an area with surface indications of a possible occupation site.
38. Gortein (T70) NGR NL63739772
 Site Type: rock-shelter Date: prehistoric
 A rock-shelter formed by a huge erratic slab of gneiss slid downslope and lodged on four smaller blocks of gneiss. The shelter thus formed comprises 3 small chambers. Chamber 1 has no soil deposits at all, and chamber 2 has only a small area of very shallow silty soil and height of 0.9m. Chamber 3 was 4.5 x 2.5-3.2m with a ceiling height of 2m; there is a rear subsidiary chamber 3.5 x 2m with a roof only 0.8m high. No cultural material was on the surface. Under threat from quarrying blasting close by, this chamber was excavated in 1989. It proved to have a deeper soil deposit than expected (up to 25cms deep) which enveloped an L-shaped built windbreak. Seven flint chunks and flakes, and one thick sherd of handmade pottery were recovered from the deposit. (Branigan and Foster 1995, 165-67).(PL.3A)
39. Gortein (T92) NGR NL63769767
 Site Type: clearance cairn Date: modern
 Grassed-over mound of mainly larger stones, 3m diam. Primary clearance material.
40. Gortein (T93) NGR NL63659778
 Site Type: rectangular building Date: modern
 Much robbed and embedded stone foundations of a rectangular building, 7.3 x 4.8m. The structure is not substantial enough to have been a blackhouse.
41. Gortein (T94) NGR NL63539782
 Site Type: blackhouse Date: modern
 Heavily robbed foundations of a thick-walled oblong building, 10.5 x 8m, with a door near centre in the east wall, and a suggestion of a partition wall to the right of the door.
42. Gortein (T115) NGR NL63429780
 Site Type: clearance cairn Date: modern
 A grassed over cairn of mostly small stones from cultivation clearance, with a single upright monolith on one side. One of seventeen clearance cairns, the rest of which are slightly upslope beyond the 50m coastal corridor. For the remainder, and a plan of the whole complex of which they are a part,(see Branigan and Foster 1995, 195-98).

43. Ben Na Scute (T164) NGR NL62859816
 Site Type: circular stone building Date: prehistoric?
 A substantial grassed-over mound, with traces of a well-embedded stone-founded structure, apparently circular c.12m diam. The degree of embedding an comparison with other sites on Barra (including site 45 below) suggests this is probably an Iron Age house.
44. Ben Na Scute (T168) NGR NL62869818
 Site Type: shelter type F? Date: modern ?
 A rock cleft fronted by disturbed traces of a rough wall of stone blocks, enclosing an area 2.75 x 1.5m.
45. Ben Na Scute (T166) NGR NL62829819
 Site Type: circular stone building Date: prehistoric?
 A grassed-over mound with quantities of well-embedded stone blocks, and traces of a circuit wall c.12m diam. Sample excavations revealed disturbed remains of a curved wall c.1m wide enclosing an area heavily infested by rabbits containing much disturbed stonework and an occupation level. From this were recovered four flint flakes and two-dozen small sherds of hand-made pottery. These were mostly similar to sherds from several Iron Age sites on Barra, but three finer sherds included an everted rim of apparently Roman type. (Branigan and Foster 1995, 168-70).
46. Ben Na Scute (T165) NGR NL62829817
 Site Type: shelter type B Date: modern
 Two celled stone setting, each cell measuring 2 x 1.5m.
47. Ben Na Scute (T167) NGR NL62829818
 Site Type: shelter type E Date: modern
 Stone setting, 2 x 1.5m, against massive boulders.
48. Ben Na Scute (T169) NGR NL62529821
 Site Type: activity enclosure Date: prehistoric
 Oval setting of large stones and boulders, marking out an area 7.5 x 6m. A quadrant excavated in 1992 revealed simple paving, a fireplace, and two successive windbreak foundations, associated with a lithic assemblage of over 350 pieces. However, not a single sherd of pottery was found. A C14 date suggested occupation in the mid first millennium BC (Branigan and Foster 1995, 170-76).
49. Bretadale (T173) NGR NL62529933
 Site Type: shelter type A Date: modern
 Oval stone setting, 2 x 1.5m, possible entrance to east.
50. Bretadale (T188) NGR NL62529933
 Site Type: boat-shaped setting Date: uncertain
 Heavily embedded and overgrown boat-shaped setting, 5 x 2.75m, with prow to south and flat stern to north. The stern, the visible prow stone, and three of the side stones are set upright. The structure appears ancient rather than modern.
51. Dun Ban (T226) NGR NL63120037
 Site Type: broch/ARH Date: prehistoric
 Totally collapsed, heavily embedded and covered in part by sea-thrift, now a pronounced mound of stone blocks, with tumble spreading downslope. The wall circuit can be seen in part, standing to a visible height of 1.2m and up to 4m wide, and about 18m diam. (Armit 1992, 163, A.B12).(PL.3B)
52. Aird Na Gregaig (T194) NGR NL63800040
 Site Type: shelter type C Date: modern
 Small stone and earth structure, 4 x 3m, on a knoll 8m diam.

53. Aird Na Gregaig (T192)

NGR NL63800044

Site Type: oval enclosure

Date: modern ?

Oval enclosure of stone blocks set in an almost continuous kerb, 11.8 x 10.5m, with a remains of a shelter type C against a boulder in the centre of the north quadrant. Apart from the shelter, one might be tempted to identify this as another 'activity enclosure' like site 48 (T169) above, and site 1.9 (E11). The shelter could be a late addition of course.

54. Aird Na Gregaig (T193)

NGR NL63910048

Site Type: shelter type B

Date: modern

Stone setting, 3.5 x 3m, with second, 4 x 3m, attached.

55. Aird Na Gregaig (T191)

NGR NL63870045

Site Type: shelter type C

Date: modern

Stone and earth structure, c.2m diam, on low mound with possible earlier structure, on storm beach.

SURVEY MAP 5. BORVE TO VASLAIN

1. Port Na Cille (B5)

NGR NF64700170

Site Type: broch, midden, enclosure

Date: Iron Age

A battered well-constructed stone wall swings in an arc of about 18m diam below the wall of the modern cemetery, which actually follows the line of this earlier wall and uses it as a foundation. Inside the cemetery at this point there is a substantial mound. We identify the wall and mound as the buried remains of a broch, situated immediately overlooking the natural dyke which forms a protected harbourage at this point on the headland. Between the broch and the edge of the dyke are the remains of a bank which curve westwards, and make an enclosure around the broch on this side, with a possible entrance to the west. To the north of the broch, exposed in the steep and eroding edge of the machair, is a midden. We recovered fifteen reddish-brown gritty handmade sherds, one with an applied and impressed cordon, probably of the early first millennium AD. We also found limpet shells, fragments of butchered animal bone, teeth of sheep and pig, and five fish-vertebra. (PL.4A,4B)

2. Borge Point (B85)

NGR NF64670172

Site Type: embanked enclosure

Date: Iron Age?

A sub-triangular enclosure, 32 x 29 x 26.5m, attached to an old land boundary at the south-west tip of Borge headland. The enclosure is marked by a low bank on which a number of upright stones stand at irregular intervals; the SE bank has nine stones still standing *in situ*. The land boundary, marked by a low bank, runs from the enclosure and disappears under the west wall of the modern cemetery 100m away. It appears to be heading towards the mound in the far south-east corner of the cemetery, site 1 (B5). One further bank can be seen to run southwards from this boundary towards the waters edge. We believe this enclosure is ancient and may be broadly contemporary with site 1.

3. Molladh Beag (C52)

NGR NF65500290

Site Type: pottery scatter

Date: Iron Age

OS records IA pottery, bone, and bronze objects found in dunes at this approx NGR in 1959. Nothing seen in 1998.

4. Greian Head (G1)

NGR NF65240460

Site Type: ? activity enclosure

Date: prehistoric ?

Heavily embedded traces of a stone setting enclosing an area 7.5 x 6.6m. The location, in an exposed position, and the size suggest this is not any form of 'shelter'; equally there is too little stone debris to suggest a house site. In size and location at least, the site is reminiscent of site 4.48 (T169) which excavation revealed to be a mid first millennium BC activity enclosure.

5. Greian Head (G2)

NGR NF65190470

Site Type: shelter type E

Date: modern

Grassed-over semi-circular stone setting, 2.8m diam, against a south-facing rock outcrop.

6. Greian Head (G3)

NGR NF65120462

Site Type: kelp oven ?

Date: modern

Oblong stone setting, 1m wide, and surviving to 2.2m length.

7. Greian Head (G4)

NGR NF64960466

Site Type: hut foundation? and kelp oven

Date: modern

Embedded stone setting, 4 x 3.5m, possible entrance on the north side, with remains of oblong stone setting 1m wide and surviving 1.5m length, immediately alongside.

8. Greian Head (G5) NGR NF64840474
 Site Type: megalithic structure Date: uncertain
 Two pairs of stones set upright, about 6m apart, with a spread of smaller stone debris in between, mostly clustered around each pair of uprights. No obvious interpretation.
9. Greian Head (G6) NGR NF65070490
 Site Type: shelter type F Date: modern
 Semi-circular stone and earth structure, 4.2 diam, built against a NE facing rock face.
10. Greian Head (G7) NGR NF65120489
 Site Type: shelter type A Date: modern
 Rectangular stone setting, 2.9 x 2.7m, south facing entrance.
11. Greian Head (G8) NGR NF65500501
 Site Type: shelter type E Date: modern
 Semi-circular stone setting, 3m diam, set against the SW side of a large boulder.
12. Ben Erival (G9) NGR NF68190530
 Site Type: broch/ARH ? Date: Iron Age
 Dun Clieff, on a small tidal islet. On the summit is a roughly built wall of small rocks and boulders enclosing an area 12 x 7m, within which there is much tumbled stone. This appears to be a late reduction of an earlier, more impressive monument measuring 20 x 10m, the enclosure wall of which is set further downslope from the summit. Where it survives and is visible, this wall is built of selected roughly rectangular stone blocks set in courses. At the south end (nearest the mainland), the inturned entrance survives four courses high. RCHM (p.132, No.448) records traces of an oval cell within the wall south of the entrance. Here, and elsewhere, there are traces of a midden from which were recovered six sherds of coarse handmade pottery of Iron Age type. Similar sherds from the site are in the NMS collections.(MP.2;PL.5A,5B)
13. Ben Erival (G10) NGR NF68270526
 Site Type: kelp oven and other structure? Date: modern
 Rectangular stone setting, 3m x 1m, stones embedded on edge, with traces of another stone structure immediately to the west.
14. Ben Erival (G12) NGR NF68490549
 Site Type: circular hut Date: prehistoric
 Heavily embedded stone foundations of a circular hut, 6m diam, with a smaller stone setting, 1.5m diam, imposed on one side. The latter is probably a modern shelter, but the underlying structure may well be prehistoric.(FS.7)
15. Suiachan (G13) NGR NF68780550
 Site Type: blackhouse and pen Date: modern
 Robbed and almost totally grassed-over remains of an oblong thick-walled building, 13 x 5m, with a semi-circular wall creating a pen, 9m diam, on the east end.
16. Suiachan (G14) NGR NF68750554
 Site Type: oval cairn Date: prehistoric
 Well-embedded oval cairn, 5 x 3.2m, and about 0.5m high, with rough kerb visible on west side and sporadically elsewhere. On balance we think it more likely to be a prehistoric cairn than a clearance heap.
17. Scalavaslain (G15) NGR NF68710555
 Site Type: outbuilding ? Date: modern
 Robbed and embedded remains of an oblong building, 7 x 4m, only the west wall is clearly traceable.

18. Scalavaslain (G16)

NGR NF68690562

Site Type: kelp oven

Date: modern

Rectangular setting of stones on edge, 2 x 0.8m, oriented E-W.

19. Scalavaslain (G17)

NGR NF68840553

Site Type: blackhouse

Date: modern

Heavily embedded, and probably robbed, foundations of a thick-walled building, 8 x 5m, door probably in the south wall. No suggestion of an internal partition wall.

SURVEY MAP 6. NORTH VATERSAY

1. Caolis (VN156) NGR NL62559757
 Site Type: blackhouses and outbuildings Date: modern
 A complex of six thick-walled buildings, some apparently blackhouses, others smaller and less substantial outbuildings.

2. Port a Bhata (VN1) NGR NL62429762
 Site Type: outbuilding Date: modern
 Almost square stone-walled building, 4.9 x 4.7m. Wall 1m wide, doorway 1.3m wide in north east corner.

3. Aird a'Chaolise (VN155) NGR NL62119791
 Site type: enclosure, cairn and shelters Date: modern ?
 Circular stone enclosure with two shelters attached on east side, with adjacent cairn and relict field walls.

4. Traigh Varlish (VN43) NGR NL61829719
 Site Type: shell midden Date: prehistoric
 Midden and buried land surface. The midden is up to 0.5m deep and has traces of simple stone structures in it. A local crofter recalls seeing stone structures 15m back from the eroding edge after a sand blow. Small scraps of handmade pottery, including one with an impressed groove, and a small thumb-nail scraper were seen in the midden.

5. Traigh Varlish (VN45) NGR NL61809712
 Site Type: kelp oven Date: modern
 Cist-like structure 1mm wide and at least 1.7, but probably 4m long, formed of small stone blocks set on edge. Traigh Varlish is sea-weed rich.

6. Biruaslum (BM1) NGR NL60959624
 Site Type: oval stone setting Date: prehistoric ?
 Oval stone setting 7 x 5.5m perched near the cliff edge. The northern segment is comprised of three large blocks 0.8 - 1m in size, whilst the southern arc is a line of smaller blocks. Between the northern and southern segments, at the east and west ends, there are no stones at all. This does not appear to be a shelter: neither its form or location support that interpretation.(FS.8)

7. Biruaslum (BM2) NGR NL60959625
 Site Type: pen and 2 shelters type A Date: modern
 Circular and one oval stone setting with projecting spurs which link them to a rock face and create a small enclosure. The circular setting is 2.7m diam, and the oval measures 4.5 x 3m; the enclosure is 9 x 3.5m. Two shelters type A and small pen.(FS.9)

8. Biruaslum (BM3) NGR NL60789640
 Site Type: shelter type E Date: modern
 Semi-circular stone setting 3.5m diam against rock face.

9. Biruaslum (BM4) NGR NL60709630
 Site Type: shelter type E Date: modern
 Remains of semi-circular stone setting 5m diam against rock face.

10. Biruaslum (BM5)

NGR NL60709633

Site Type: shelter type A

Date: modern

Rectangular stone setting 5.5 x 2.5m. Three stones on edge form a right angle at one end, with a fourth upright stone making a short return. The rest of the structure is of flat stones, but for a 1m high stone in the south side. The overall impression is of a shelter 3.5 x 2.5m, with a porch or annexe 2 x 2.5m, but the location, on an open shelf totally exposed to westerly gales must raise a query over this interpretation. (FS.10)

11. Biruaslum (BM6)

NGR NL61039626

Site Type: cellular settlement cluster

Date: medieval ?

A remarkable linear arrangement of probably twelve circular structures strung out over c.130m near the cliff edge. They form two groups, separated by a huge boulder. The north-eastern group appears to comprise six circular or oval structures, the largest c.8m diam, and the smallest c.3.5m. The latter is on the end of a spur wall which runs out from the end of the cluster of five structures. In addition, walls link some of the structures, to form two irregular enclosures or yards. The south-western group comprises four linked structures the largest c.8m diam with a fifth standing slightly apart with a short stretch of straight wall attached to it. A sixth oval structure 10 x 5m stands to the north, the only one of the twelve not on the main alignment. This appears to be a cluster of eleven huts with the largest oval structure more probably a pen. They are well-embedded and probably of considerable antiquity. Immediately to the north-east is the large defensive stone wall (BM7) usually, and probably rightly, attributed to the Iron Age. This wall clearly defends the eastern tip of Biruaslam from attack from the west (the east is defended by the sea dyke which separates Vatersay from Biruaslam). If the huts were Iron Age we would expect them to be within the defended area. Equally if they were earlier than the defence wall (and there is neolithic occupation on Biruaslam, see BM8) then one might expect them to have been robbed out for building the wall. On balance therefore we incline to the view that this interesting settlement is post-Iron Age and probably medieval or early modern. (FS.11)

12. Biruaslum (BM7)

NGR NL61079630

Site Type: fortifid enclosure

Date: Iron Age

An impressive wall approximately 100m long running in an arc from the southern cliff edge towards the eastern edge of the island north of the sea dyke. The wall stands to a height of 3m and is 2m wide. At the highest point of its line across the hillside there appears to be an original entrance about 2.5m wide. The wall runs to an area of large rock outcrops which continue its curving line, but it does not appear to continue beyond the rock to meet the cliff on the east side (pace RCHM, 134). Although it is possible that it has been completely robbed out here, there is no structure on the island which would appear to have been built with its rather regular blocks of stone. The huts at BM6 not only appear to be built of different material but are also much closer to the south-west end of the wall which would have provided a nearer source of building stone. We conclude therefore that this wall, surely too massive to have been built for any reason other than defence, was never completed. It's closest parallels seem to be cliff-forts such as Cahercommaun, Co.Clare, and Dun Aongusa, Galway, dated broadly to the first millennium AD. Cultural material recovered from a midden (site 13) within the area enclosed by the wall is neolithic. A final decision on the dating of this monumental structure should perhaps be deferred. (FS.12; PL.6A)

13. Biruaslum (BM8) NGR NL61139631
 Site Type: midden Date: neolithic
 A midden deposit up to 1.5m deep, eroding from the cliff edge at the south east corner of the island. The deposit appears homogenous/continuous throughout. At a depth of 1.38m in the midden face a decorated bowl rim of Neolithic date was found. An undecorated sherd in identical fabric was found at 0.48m, and a third sherd in the same fabric with a small raised but undecorated cordon or lug was found lying in eroded debris at the base of the midden. From the same debris came two further small sherds, two chunks of flint pebbles and three flakes. The midden appears to be of Neolithic date.
14. Tresivick (VN117) NGR NL61609590
 Site Type: clearance cairn Date: modern
 Low oval grassed cairn 4.5 x 3.5m.
15. Tresivick (VN116) NGR NL61619583
 Site Type: shelter type A Date: modern
 Oval stone setting 3 x 1.7m.
16. Tresivick (VN107) NGR NL61899592
 Site Type: activity enclosure ? Date: prehistoric ?
 Oval stone setting, 6 x 4m, on edge of wave-cut platform. The location, size and nature of the site is similar to T169 (site 48, map 4) which excavation proved to be a LBA activity site.
 (FS.13)
17. Tresivick (VN106) NGR NL61909589
 Site Type: shelter type A Date: modern
 Oval stone setting, 3.5 x 2.2m, adjacent to relict boundary.
18. Tresivick (VN105) NGR NL61999582
 Site Type: activity enclosure ? Date: prehistoric
 Oval stone setting, 8.2 x 4.5m, including several stones set upright around N end, and two possible opposed entrances at the south end. An arc of stone and turf across the south end may be a secondary shelter.(FS.14)
19. Tresivick (VN96) NGR NL62139581
 Site Type: fishermen's shelters Date: modern
 Four, perhaps five, small circular huts built of large beach cobbles at the edge of a storm beach. They vary in size from 3m to 4m diam, and two have traces internal partition.
20. Tresivick (VN95) NGR NL62259580
 Site Type: cairns Date: modern
 Five small loosely piled cairns of beach cobbles, 1.5 - 2m diam. Their purpose is unclear.
21. Tresivick (VN94) NGR NL62269581
 Site Type: earth and stone mound Date: prehistoric ?
 An oval mound of earth and stone, 12 x 8m, standing to 1m in height. In this location, it may have been much reduced by wave action in severe storms. Although no trace of wall structure could be seen, a site of this shape and size is more likely to be a house structure than a cairn.
22. Tresivick (VN81) NGR NL62449580
 Site Type: kerbed cairn Date: prehistoric
 A stone and earth mound, 7.3m diam and standing 1.5m high, with a clear kerb around at least half of its circumference.
 (FS.16)

23. Tresivick (VN82)

NGR NL62439586

Site Type: kerbed cairn, oval hut

Date: prehistoric

Two-phase monument with a heavily robbed kerbed cairn overlain by an oval hut. The cairn is about 8m in diameter, the kerb partly surviving on the south, east and north sides. The stone and turf hut is c.6.5 x 5.5m, with a possible entrance on the north.

24. Tresivick (VN80)

NGR NL62449581

Site Type: cairn ?

Date: prehistoric ?

Circular earth and stone mound, 7.2m diam, standing about 1m high. There are odd stone blocks on the circumference which may be the remains of a kerb. The mound appears to have been disturbed on the east side, and it is possible that its kerb has been robbed for wall-building. Given the concentration of kerbed cairns in this area (about 20 examples within 200m) this seems most likely to be a further example.

25. Tresivick (VN77)

NGR NL62819568

Site Type: blackhouse and outbuildings

Date: modern

Complex of three stone buildings. A) is 11.7 x 5.9m with south-facing door to one end of long wall. B) is to the west of A and at right angles to it; it is 11.5 x 7m and partitioned into two almost equal rooms. C) abuts B at right angles and is 11 x 6.5m with a partition dividing the interior into one broad and one narrow room (2m wide). On the slope behind the buildings are lazy-beds. Blackhouse, byre and store ?

26. Heishival Beag (VN149)

NGR NL63699545

Site Type: 4 blackhouses and outbuildings

Date: modern

Four blackhouses set on slope facing into Vatersay bay.

House A is 10.3 x 8.2m, a door in the centre of the south

wall, and no internal partition wall. A wall runs from one corner to the west for 8m and ends in a small square shed.

House B is 7 x 5m, with a door in the centre of the south wall and no internal partition wall.

House C is behind B and is 8 x 5m, with a south facing door and no partition wall. It is abutted on the west side by a building 6 x 5m with a possible platform in its SW corner. This may be a drying shed.

House D is behind C and is 11.4 x 8m, with a door in the south wall and no internal partition wall.(FS.15)

27. Heishival Beag (VN147)

NGR NL64149576

Site Type: aircraft wreck

Date: 1944

Remains of a Catalina flying boat which crashed further upslope in 1944. The larger parts of the plane were brought down and left in a stream bed.

28. Heishival Beag (VN146)

NGR NL64179575

Site Type: 3 shelters type C

Date: modern ?

Three earth- and stone-walled circular huts with diameters of 3m, 3m and 4m. They are heavily embedded and it is possible that they are pre-modern huts rather than recent shelters, but their small size with interiors only 1.8 - 2.6m diam suggests they were not permanent occupation sites.

29. Heishival Beag (VN145)

NGR NL64189580

Site Type: rectangular hut

Date: modern ?

Very embedded foundations of a stone-walled building 6 x 3m with no obvious doorway.

30. Heishival Beag (VN144)

NGR NL64309581

Site Type: blackhouse

Date: modern

Small thick-walled oblong building, 7 x 5m, door in SE wall, no internal wall, with a stone walled pen, 10 x 7m, at the rear.

31. Heishival Beag (VN143) NGR NL64359583
 Site Type: stone outbuilding Date: modern
 Stone-walled building 8 x 4.5m, door in centre of SE wall, with a 2m square annexe on the NW.
32. Heishival Beag (VN142) NGR NL64369584
 Site Type: blackhouse Date: modern
 Thick-walled oblong house, 15 x 6m, with door in centre of SE wall. No internal partition wall.
33. Heishival Beag (VN141) NGR NL64389585
 Site Type: hut site ? Date: prehistoric ?
 Grassed over mound, 4m diam and 1m high, with some exposed stone blocks. Neither the profile nor the visible stones suggest a cairn.
34. Heishival Beag (VN140) NGR NL64379586
 Site Type: fallen standing stone ? Date: prehistoric ?
 A thin, straight-edged monolith, 1.7 x 0.55m, lying flat on slight slope 15m from HWM.
35. Uidh (VN139) NGR NL65269569
 Site Type: shelter type E Date: prehistoric
 Semi-circular stone setting, 1m diam, built against 5m high south-facing rock face.
36. Uidh (VN138) NGR NL65349565
 Site Type: shelter type E Date: modern
 Semi-circular stone setting, 1.2m diam, set against a 7m high south-facing rock face, taking advantage of a low overhang.
37. Uidh (VN137) NGR NL65359565
 Site Type: shelter type E Date: modern
 Semi-circular stone setting, 2.5m diam, set against a 2m long boulder.
38. Uidh (VN136) NGR NL65409563
 Site Type: shelter type F and pen Date: modern
 A right-angled stone-faced earth bank set into a corner of a large rock formation, forming a shelter or hut 2.7m square.
 Outside, a semi-circular setting of stones set on edge enclose an area about 5.2 x 4.5m.
39. Uinessan (VN135) NGR NL66479577
 Site Type: hut circle and platform ? Date: prehistoric ?
 A revetted platform 11 x 5m on which sits a mound 5 x 4m, with heavily embedded stone blocks around much of its perimeter. It is possible that this is a hut circle built over the remains of an earlier structure.
40. Cille Bhriannain (VN133) NGR NL66479569
 Site Type: chapel on earlier site Date:medieval/prehistoric?
 The much reduced and embedded remains of a small chapel 11 x 5m, with tracing of a low banked enclosure. Rabbit activity reveals an underlying site producing shells and handmade pottery of probably Iron Age date.(MP.3)
41. Uidh (VN132) NGR NL65729618
 Site Type: byre ? and outbuilding Date: modern
 Two thin-walled stone buildings, one 5 x 4m with an entrance probably in its short southern wall, the other 4 x 3.5m with a door in one corner.

42. Uidh (VN131) NGR NL65719615
 Site Type: blackhouse Date: modern
 A small thick-walled oblong building, 6 x 4m, with a door in the centre of the NE wall and no trace of internal partition. Much reduced and grassed over.
43. Uidh (VN130) NGR NL65189623
 Site Type: boat noost ? Date: modern ?
 A very clear boat-shaped stone setting with pointed prow to the east and flat stern to the west, 9m x 4.5m. A setting of stones across the inside defines a rear 'cabin' 4.5 x 2m. The stones are not heavily embedded and it seems unlikely that the setting can be of any great antiquity. It is provisionally identified as a boat noost, although the 'cross wall' would not facilitate the storage of a boat. Although the feature is only 10m from the coast edge, there is a 2m high 'cliff' and pebble beach between the 'noost' and the water.(FS.17)
44. Uidh (VN129) NGR NL64859519
 Site Type: enclosure Date: modern
 A D-shaped enclosure formed of an earth and stone bank, the straight side formed by the sea edge. Although erosion is not severe, the enclosure may once have extended further north and may even have been more oval than D-shaped.
45. Uidh (VN128) NGR NL64839618
 Site Type: 2 blackhouses Date: modern
 Two thick-walled oblong buildings, each c. 13 x 8m, with doors in their south-east walls. Reduced to their foundations.
46. Cornaig Bay (VN44) NGR NL63689656
 Site Type: oval hut ? Date: modern ?
 Very heavily embedded stone structure, 4.3 x 3.3m, either a small hut or large shelter.
47. Cornaig Bay (VN 39) NGR NL63659659
 Site Type: shelter type C ? Date: modern
 Scattered remains of a circular stone structure 3.5m diam on a low grassed mound.
48. Cornaig Bay (VN41) NGR NL63529665
 Site Type: oval hut Date: modern ?
 Partly scattered and embedded oval stone setting, 4.1 x 3.5m, with possible entrance on west.
49. Cornaig Bay (VN40) NGR NL63429665
 Site Type: byre ? Date: modern
 Stone-walled building, 13.8 x 12m, standing up to 1.75m. There is a door in the short east wall, and a short partition on the west wall dividing the west end into two 'stalls'.
50. Cornaig Bay (VN42) NGR NL63409666
 Site Type: shelter or hut ? Date: modern ?
 Heavily embedded and partly destroyed oval stone setting or structure, 3.5 x 3.1m.
51. Cornaig Bay (VN38) NGR NL63289669
 Site Type: circular and huts. Date: prehistoric ?
 Stone and earth-walled circular hut, 4.9m diam, partly overlain by a second hut, 4.2 x 3.6m, which has a door to the east. There is a recent small shelter (type B) inside the larger hut. There appear to be traces of a fourth structure underlying the larger hut.(FS.18)

52. Corraig Bay (VN154)

NGR NL63129685

Site Type: tidal fish trap

Date: modern

A curving stone wall, 1.5m wide, barely structured, running across the end of Corraig Bay.(PL.6B)

53. Corraig Bay (VN153)

NGR NL63509688

Site Type: rick stand ?

Date: modern

A low platform, 3.5 x 2.4m, revetted by a shallow arc of stone blocks on the down-slope side.

54. Corraig Bay (VN152)

NGR NL63589690

Site Type: rick stand ?

Date: modern

A low platform, 3 x 2.2m, revetted a curving row of stone blocks on the down-slope side.

55. Corraig Bay (VN151)

NGR NL63629693

Site Type: shelter type B

Date: modern

Stone and earth structure, 2.6 x 2.1m, built on the end of a boundary wall.

SURVEY MAP 7. SOUTH VATERSAY

1. Ben Rulikbrek (VS17) NGR NL62309383
 Site Type: semi-circular enclosure Date: modern
 Semi-circular enclosure 60 x 40m constructed of a turf wall to the west, large orthostats to the south and east, and a steep hillside and rock face to the north. A shepherd's shelter, type F is constructed against a large rock on the south side.

2. Eorisdale (VS22) NGR NL64589398
 Site Type: building platform Date: modern
 Rectangular building platform 10 x 4m with traces of stone alignment around edges, and with a 2m wide raised area across the middle. The prepared base of a demolished and removed timber building; probably an outbuilding for the Eorisdale settlement.

3. Sgeir a'Chlogaid (VS66) NGR NL64909412
 Site Type: promontory enclosure wall Date: uncertain
 A earth and stone wall or bank, about 1m wide and surviving to 0.7m height, closing off a small promontory. There are no visible traces of structures or occupation on the promontory and the wall/bank is not substantial enough to have been for defensive purposes. The promontory was probably used as a sheep pen.

4. Vatersay Bay (VS26) NGR NL64679462
 Site Type: rectangular building Date: modern
 Foundations of a rectangular stone founded building 8.5 x 6m with possible entrance in north (long) wall facing sea. Traces of an enclosure (possibly no more than a fence line) around the house. Small jetty to the NW.

5. Vatersay Bay (VS27) NGR NL63409465
 Site Type: building platforms Date: modern
 At least twelve rectangular building platforms cut into the hillside, some with traces of stone slabs forming the base for timber structures. The longest platforms are up to 25m, the smallest 4m. The site of the herring fishing settlement, which can be seen, on post-cards from the first decade of the 20th century, to consist of several dozen buildings

APPENDIX. SITES ON FULAY IN THE 50m COASTAL CORRIDOR

An archaeological survey of the island of Fuiay, 600m east of the coast of Bruernish, was undertaken in June 1997 and in total seventeen sites and monuments were identified. Of these, four were in the 50m coastal corridor.

AF7. Rubh an Aiseig NGR NF73850245

Site Type: circular house Date: prehist/medieval?

Circular stone structure, 6.1m diam, heavily overgrown by ferns. The well-embedded wall is about 1m wide, and there may be an entrance on the south-west, overlooking the small bay below. More likely to be prehistoric than medieval.(FS.19)

AF13. Rubh an Aiseig NGR NF73830250

Site Type: shelter type F Date: modern

Arc of stone and earth walling enclosing area 5 x 4.5m against a west facing rock face.

AF8. Rubh an Aiseig NGR NF73730270

Site Type: outbuilding ? Date: modern

A heavily robbed and almost entirely grassed over building, 6.3 x 5m, with walls about 0.65m wide. Entrance almost certainly on south facing into small bay. It stands apart from the building at site AF9 and is much more reduced and embedded than those.

AF9. Rubh an Aiseig NGR NF73700264

Site Type: 7 blackhouses, pen, outbuilding Date: modern

A linear arrangement of blackhouses on the west side of a small tidal bay. The buildings are as follows: (FS.20)

- A. Blackhouse oriented N-S, 10.25 x 6.15m, door in east wall and no trace of internal partition wall.
- B. Blackhouse adjoining A and on same orientation, 8.7 x 5.9m, door in centre of east wall, no trace of partition wall.
- C. Blackhouse oriented E-W, 11.8 x 7.2m, door in south wall, and partition wall to left of door. A second door was apparently cut through the north wall and a light secondary partition inserted.
- D. Blackhouse oriented E-W, 10.4 x 6.2m, door in north wall facing that of house C. No trace internal partition wall.
- E. Blackhouse oriented N-S, 10 x 6.7m, and built against SE corner of house D. Door in east wall, but at a late stage in use, a door knocked through into building D.
- F. Foundations of blackhouse, 16 x 7.5m, oriented N-S, and underlying house H.
- G. Blackhouse or outbuilding, 7.2 x 4.9, oriented E-W, door towards west end of north wall. No partition wall.
- H. Blackhouse oriented N-S, 11.3 x 6.9m, door in east wall This house sits on top of F, and is more upstanding than any other house. There is a short pier or projecting wall on the inside west wall, and a lean-to-shed outside the door.
- I. A pen, 12.8 x 5m, possibly sitting on remains of earlier structure.

3. SUMMARY OF THE THE SURVEY RESULTS

In this chapter we summarise the results of the archaeological field survey, providing first an overview of the entire corpus of sites, and then a period-based discussion of the sites and monuments and their significance. We conclude with a review of the recommendations.

3.1 Introduction

The field survey recorded a total of 262 sites and monuments in the coastal corridor of the two islands. Of this total, 202 sites were recorded on Barra and 60 on Vatersay (including Biruaslum). In addition, three sites in the coastal erosion zone on the island of Fuiay are described in an appendix, bringing the total of sites included in this report to 265. Of these 265 sites only twelve (4.6%) were previously documented by the RCAHMS, the NMS, or the OS, ten on Barra and two on Vatersay.

We would remind the reader that we **excluded** from our record any site which we believe was established after AD 1900, and we also excluded any banks and walls of which the course ran predominantly outside the coastal zone. (One site created after AD 1900 was, however, included and that was site 6.27, the wreck of a Catalina flying-boat which crashed in 1944. Its inclusion represents nothing more than an interest in aviation on the part of the project director!) We also excluded areas of lazy-bedding (which, had they been included, might well have doubled the number of sites recorded), although they are mentioned where they relate to a farming complex including clearance cairns, outbuildings and blackhouses.

Site coverage was discussed in 2.5 and we concluded that with the exception of some of the limited areas of machair and dune systems, the identification rate of sites was probably high.

As explained in 3.4, we have ascribed broad periods of usage to sites, utilising the evidence of their morphology and structure, their degree of embedding, and artefactual material where it is available. We have also been able to compare survey sites with over thirty sites of all types and periods which have been excavated on Barra and Vatersay, by the SEARCH project, over the last ten years. Where the period of a significant site is uncertain, this is discussed in some detail in the gazetteer entries above. We recognise that some period ascriptions may be wrong, but ten years of excavations as well as surveys on Barra and Vatersay give us more confidence in proposing dates for sites than we would otherwise have. Our four periods of usage are:

Earlier prehistoric	(Neolithic and Bronze Age)
Later prehistoric	(Iron Age and Norse)
Medieval	(11th-16th centuries AD)
Modern	(17th-19th century AD)

There were 32 sites identified which we have been unable to ascribe to any period and/or function with confidence, and these are excluded from the period tabulations given below. These sites were:

1.13;2.31;2.34;2.46;2.63;2.64;2.71;2.86;3.2;3.5;3.6;3.8;3.9;3.10;3.11;3.12;3.13;3.15;3.18;4.8;4.17;4.18;4.30;4.44;5.7;5.13;6.3;6.20;6.27;6.53;6.54;7.3.

In the four following sections (4.3.2 - 4.3.5) we summarise and discuss the identified sites of each of these four periods. It may be noticed that although the total number of sites recorded in the summary sections above is 262, the sites tabulated in the sections below total 264, even after 32 unclassified sites have been excluded. This discrepancy is accounted for by some sites on which there are several monuments, each of which has been totalled in the tabulations below. The most common category where this occurs is

the blackhouse. A cluster of blackhouses, or a blackhouse and immediately adjacent out-buildings, have been usually recorded as one site, but each individual building will have been totalled in the tabulations below.

3.2 Earlier Prehistoric Sites

A total of 22 sites and monuments are ascribed to the earlier prehistoric period, representing 8.3% of the total site population. The sites can be classified as follows

<i>Site Type</i>	<i>No.</i>	<i>Site refs.</i>
Huts/occ sites	2	1.15;6.51
Activity sites	7	1.9;4.26;4.37;4.48;5.4;6.16;6.18
Rock shelters	1	4.38
Middens	2	6.4;6.13
Cists	1	4.14
Cairns	6	1.16;2.8;5.16;6.22;6.23;6.24
Standing stones	1	6.34
Megalith structures	2	5.8;6.6

There is a significant concentration of identified sites on the west and south coastline rather than the east coast; in fact only four of the twenty-two sites are on the east. There are two small clusters, one on the Sound of Vatersay, and one on the southern coast of Heishival More, both closely associated with further sites beyond the 50m coastal corridor, but otherwise there is no clear pattern in the distribution.

The most numerous type of site is identified as the 'activity site'. This identification is based on excavations at site 4.26 and site 4.48 (Branigan and Foster 1995 72-92, 170-4). Whereas the former site could only be identified by excavation, 4.48 provided surface indications in the form of an oval 'enclosure' marked out by a ring of large stones. Similar stone settings in similar locations, very close to the HWM, have been noted at sites 1.9, 5.4, 6.16 and perhaps 6.18, and 1.9 has produced a small assemblage of worked quartz on sampling excavation (Branigan and Foster forthcoming). This may be a site type overlooked in other coastal surveys.

Almost as numerous are the cairns, which are grouped with three near the north end of Barra and three on the south coast of north Vatersay. The latter (sites 6.22, 6.23, and 6.24) are coastal outliers of a group of no less than twenty kerbed cairns. The three in northern Barra (1.16, 2.8, and 5.16) are more isolated, but seem to belong to a dispersed group in this area with other examples on Fuiay and on Fuday. Elsewhere on Barra kerbed cairns are very few indeed.

There is no trace of mesolithic occupation from the coastal zone, despite attempts to identify it, including sampling excavation of the platform outside the cave, site 1.4 (Branigan and Foster forthcoming). Marine transgression of low-lying coastal zones on the west coast of the Western Isles is well documented, and was indeed demonstrated during this survey by D.D. Gilbertson (Gilbertson et al 1996, 88-9). It is widely assumed that this

transgression has covered mesolithic sites exploiting the marine resources of the west coast.

3.3 Later Prehistoric Sites

A total of 23 sites classified as Later Prehistoric were recorded, representing 8.7% of the total site population. The sites can be classified as follows

<i>Site Type</i>	<i>No.</i>	<i>Site Refs.</i>
Promontory forts	1	6.12
Brochs/ARHs	5	1.5;2.42;4.51;5.1;5.12
Round/oval houses	7	2.7;4.43;4.45;5.14;6.21;6.33;6.39
Enclosures	1	5.2
Middens	5	1.2;1.3;1.11;5.1;5.3
Caves	1	1.4
Oblong houses	2	2.68; 3.14
Boat settings	1	4.50

Later prehistoric sites are more widely dispersed than those of the preceding period, with a third of them on the east coast, and at least four on machair, and no significant clustering of sites. Not surprisingly the middens are found on machair, where wind, sea, rabbit and cattle all act as eroding and exposing agents.

Domestic occupation sites are more numerous than in the preceding period, mostly represented by stone-founded oval or circular buildings with external diameters in the range from around 6m to 10m. Their identification and dating is suggested by excavations of similar structures both within the coastal zone (site 4.45) and further inland on the Tangaval peninsula and in the Borge valley. Many of these structures were almost certainly completed in turf.

Brochs and/or Atlantic Round Houses are well represented in the coastal zone because their builders show a preference for either peninsulas (e.g. sites 4.51 and 5.1) or islets (e.g. 5.13 and 2.42). It should be noted that RCHAMS would identify a sixth example in the coastal zone on Barra but we have found no evidence whatever for the existence of a 'dun' at site 3.18. On the other hand, there is some reason to think that a prehistoric site, most probably an ARH, stood on the site later occupied by Kiessimul Castle (site 3.20).

Several midden sites at Traigh Eias suggest considerable later prehistoric interest in coastal locations on the machair, presumably related at Traigh Eias to the exploitation of its famous cockle beds. It should be noted that the pottery from these sites is all very similar in fabric, but it is found as generally small and featureless sherds the attribution of which to the Iron Age is not certain. Similar material from the broch sites, however, suggests an Iron Age date is likely.

Sites 2.68, 3.14 and 4.50 are tentatively placed at the end of the later prehistoric period, partly due to their form and partly due to the high degree of embedding. The details of these sites are to be found in the gazetteer, but site 2.68 consists of one square and one

longer, narrower building apparently built of turf, with a door in the narrow end, and site 3.14 appears to consist of a trapezoidal long building, and two smaller rectangular structures. Site 4.50 is a boat-shaped setting of stones in Brettadale, a very remote area overlooking the sea.

3.4 Medieval Sites

Only three sites were identified as medieval in the entire survey, and of these only two can certainly be ascribed to that period. These sites represent just 1.1% of the site population. The sites can be classified as follows:

<i>Site Type</i>	<i>No.</i>	<i>Site Refs.</i>
Castle	1	3.20
Chapel	1	6.40
Circular huts	1	6.11

Kiessimul Castle is very well documented (though still much argued about in terms of its foundation date), and the chapel of Cille Bhriannain is also well known, although it is now no more than a slight hump in the grass. The most intriguing site is the cluster of about a dozen small circular huts in two groups either side of a large boulder on a rock shelf above steep cliffs on the south side of Biruaslum. There is no direct evidence for its date, but the case for placing it in the medieval period is made in the gazetteer. Fortunately it appears to be under no threat.

3.5 Modern Sites

A total of 216 sites identified as modern were recorded, representing 81.8% of the total site population. These sites can be classified as follows:

<i>Site Type</i>	<i>No.</i>	<i>Site Refs.</i>
Blackhouses	76	1.18;2.2;2.3;2.5;2.13;2.14;2.18; 2.19(2);2.26;2.28;2.36;2.38;2.41; 2.45;2.47(3);2.50;2.55;2.56;2.57; 2.58;2.59;2.62(2);2.69;2.70;2.72; 2.73;2.76;2.77;2.79;2.80;2.82(6); 2.83(7);2.84;2.85;2.87;2.89;3.3; 3.4;3.16;4.20;4.22;4.26;4.41;5.15; 5.19;6.1(6);6.25;6.26(4);6.30;6.32; 6.45(2);7.4.
Whitehouses	2	2.53;2.60
Outbuildings	41	2.1;2.10;2.15;2.17;2.24;2.29;2.30; 2.37;2.39;2.40;2.47(3);2.48;2.49; 2.51;2.52;2.54;2.61;2.67;2.69;2.78; 2.81;2.88;2.90;3.3;4.1;4.2;4.25; 4.27;4.40;5.17;6.2;6.25(2);6.26; 6.29;6.31;6.41(2);6.42;6.49;7.2

Shieling huts	5	2.9;2.20;4.4;6.46;6.48
Middens	2	1.11,1.14
Enclosures	4	2.47;4.53;6.44;7.1
Clearance cairns	18	2.11;2.35;3.1;4.6;4.16;4.21;4.24; 4.28;4.29;4.31;4.32;4.33;4.34;4.35; 4.36;4.39;4.42;6.14
Rick stands	1	2.44
Kelp ovens	8	2.4;2.12;2.16;2.33;4.23;5.6;5.18; 6.5
Boat noosts	2	2.21;6.43
Fishing installations	4	3.17;3.19;6.52;7.5
Shipwrecks	1	1.1
Shelters	52	1.6;1.7;1.10;1.12;1.17;2.6;2.22; 2.23;2.25;2.27;2.32;2.65;2.66;2.74; 2.75;3.7;4.3;4.5;4.7;4.9;4.10;4.11; 4.12;4.13;4.15;4.19;4.46;4.47;4.49; 4.52;4.53;4.54;4.55;5.9;5.10;5.11; 6.7;6.8;6.9;6.10;6.15;6.17;6.19; 6.28;6.35;6.36;6.37;6.38;6.47;6.50;6.55

The corpus of modern sites is dominated, as one would expect, by structures associated with the crofting system, most notably the blackhouse, the outbuilding (byres, barns, and drying sheds), and the shelter. The blackhouses show a remarkable concentration in the coastal zone around Ardveenish and Bruernish, and although this is a particular long stretch of coastline, the length does not explain the appearance of 66% (50) of all the coastal zone blackhouses in this one area. It is tempting to put this concentration down to the clearance of crofters from good grazing areas such as Eoligaray and Borge to this bleak coastline, but the truth is probably more complex. Many of these houses were probably built during the period of Barra's population boom in the late 18th-early 19th century. Some may have resulted from Macneil's limited clearances from two townships, and some might belong to the notorious clearance of Gordon of Cluny - though we must remember that he was determined to ship most of his cleared tenants to Canada. Not surprisingly the outbuildings are also concentrated particularly around the coast of Ardveenish and Bruernish and four of eight kelp oven sites are found here too.

In contrast, less than 10% of clearance cairns are found in this same zone, and only 20% of the shelters. The concentration of clearance cairns on the coast of the Tangaval peninsula emphasise not so much the importance of cultivation there but rather that the coast provided the only suitable areas for such activity. The large number of shelters in the same zone complement this interpretation, emphasising the importance of rough grazing for sheep on this bleak peninsula, and we see a similar concentration on north Vatersay.

The relative scarcity of late 19th century installations associated with the herring industry, and the poor and deteriorating condition of the few that survive (3.17, 3.19) is a useful reminder of how little may survive of a major industrial activity, less than a century after it began its rapid decline. One has only to compare the empty northern slope of Ben

Cuier (Vatersay) in 1998 with postcards showing the same slope, packed with buildings, c.1900 to realise how inadequate the archaeological record is.

3.6 Summary and Recommendations

Introduction

The coastline surveyed in this project is generally suffering from the effects of erosion, but the degree of erosion and its archaeological significance vary greatly from one area of coastline to the other. In general, the east coast is eroding more slowly than the west coast, partly because it does not have to contend with winter storms coming in from the Atlantic and partly because it is better protected in any case, by off-shore islands and by its more indented nature. The dune systems at Eoliggary, Allasdale, and Halaman Bay on Barra are vulnerable both to wind and sea, and they are constantly moving, both revealing and covering archaeological sites and deposits.

Many of the sites recorded in this survey, particularly those on the west and south-west coasts, are actively eroding and will be lost within the foreseeable future. Many of these sites, however, are of common types and recent origin and do not justify measures to protect them or to explore them before they are destroyed.

Thirteen sites, however, are sufficiently significant and sufficiently threatened to warrant further action, and there are three further threats which need to be noted for future consideration and, possibly, action. The report now lists the threatened sites and briefly discusses their significance and what action should be taken, and finally briefly discusses the three long-term threats.

Sites requiring action

Site 1.15 (NF71200632) Extensive midden and stone structures.

This site is c.40 x 35m, with a thick shell midden. There are stone structures, in one place three courses high, eroding from the section. Six sherds of fine but fragile reddish-orange handmade pottery were recovered from the shell midden. The site was first noted in 1991 and has been watched since; it is actively eroding. Originally identified as a probable wheelhouse site, we now believe it may be of earlier prehistoric date and a significant settlement site.

Apart from the continuous tidal erosion, this site could be threatened at any time either by airport-related works, or mechanised digging of the cockle beds.

Recommendation An assessment excavation to identify the nature and date of the site. Further action dependent on results.

Site 2.68 (NF73450118) Two structures, one apparently a turf-walled house c.9 x 4.5m with an entrance in its narrow end, the other turf and stone, 6.5 x 5.5m, with a thick wall. These two structures have no other parallels amongst the 1000+ sites surveyed on Barra and Vatersay. They are under no threat from coastal erosion, but peat-cutting has taken place recently within 50m of the longer building.

Recommendation Watching brief

Site 4.17 (NL64629757) A curious cellular structure, 12 x 8m, built mostly of beach boulders. It is sufficiently upstanding to be considered of recent date, but its form is like no other recent structure we have seen. It lies only just above HWM, but is under no immediate threat.

Recommendation Watching brief/further assessment

Site 4.18 (NL64619758) Adjacent to 4.17 and almost identical to all appearances.

Recommendation Watching brief/further assessment

Site 5.1 (NF64700170) The broch preserved under the south-east corner of the cemetery on Borge headland is under no immediate threat itself, but two associated features are actively eroding. The low bank of an enclosure immediately south of the broch, and probably associated with it at some time in the broch's occupation, is eroding into the small bay immediately to the east of the broch. North of the broch the steep slope below the cemetery wall is eroding into the head of the same bay, and the midden deposit with bone, shell and Iron Age pottery is eroding with it. In the longer term this erosion will threaten the cemetery wall itself.

Recommendation Watching brief, with the intention of anticipating any threat to the cemetery wall (which would lead to either wall collapse, exposing probable broch appendages, and/or extensive consolidation works).

Site 5.2 (NF64670172) A triangular embanked enclosure with upright monoliths erected in the bank at intervals. The western side has already eroded completely, leaving only some large monoliths in the HWM zone, and the whole structure is wide open to storms from the Atlantic. The northern arm of the enclosure continues as a bank across the headland and can be seen to be crossed by the cemetery enclosure wall. Inside the cemetery it cannot be traced, but at the point where it enters the cemetery area it is heading directly for the broch (site 5.1). We believe the bank and enclosure are to be associated with the broch. There is no doubt the enclosure will eventually be totally destroyed.

Recommendation Watching brief. Consideration should be given to undertaking a sampling excavation across the enclosure to clarify its purpose and date, and to establish whether further action is required before more of the enclosure is lost to the sea.

Site 5.12 (NF68190530) Dun Chlieff, perched on a small tidal islet, is exposed to Atlantic storms and has been much damaged on its western and northern sides. The circuit of wall visible around the top of the islet is late rebuild/modification, but the outer face of large masonry blocks is visible on both the south

and east. A midden deposit is eroding on the eastern slope.

Recommendation Watching brief. Any particularly severe Atlantic storms could sweep away what remains of the west and north walls, and expose the interior to 'scouring', at which point rescue excavation might become necessary.

Site 6.3 (NL62119791) This complex of enclosures, cairn, walls and other embedded features is curiously placed on an exposed platform near the west end of the Sound of Vatersay. The date of the various structures is not at all clear, but they form an interesting group.

Recommendation Watching brief.

Site 6.4 (NL61829719) A shell-midden, producing a little flint material, and from a lower soil horizon the time of a red deer antler. There are suggestions of stone structures at some points in the midden, and the crofter reports seeing buried stone walls in a once-deflating dune immediately to the south.

Recommendation Watching brief. The deposits may provide a useful sequence back into the early post-glacial period and structural remains may be exposed by Atlantic storms to which the site is wide-open.

Site 6.13 (NL61139631) A midden ? deposit, up to 1.3m deep, yielding pottery and flint, including the rim of an Unstan bowl. This deposit could be occupation material *in situ* rather than a midden; there is little shell or bone visible in the section. The midden is actively eroding and slumping; it is unclear how far back the midden/deposit extends from the cliff edge.

Recommendation Despite the logistic difficulties, being on an island separated from the mainland of Vatersay by a vertical dyke, this site should be further examined as soon as possible.

Site 6.16 (NL61899592) This oval setting of stone blocks, 6.5 x 4m, perched on the very edge of the HWM, is very similar to site 4.48, which on excavation proved to be a LBA activity enclosure (Branigan and Foster 1995, 170-6). This type of site may be more common than previously identified (see above 4.3.2).

Recommendation Watching brief. The site is likely to begin to disappear in the near future.

Site 6.22 (NL62349584) This kerbed cairn, standing to about 1.5m in height, with well preserved kerb, is one of the outliers of a cluster of about twenty cairns on this southern slope of Heishival Mor. It is only 5m from the HWM, and although erosion here is slow it will be threatened in due course.

Recommendation Watching brief.

Site 6.40 (NL66479569) The chapel of Marion of the Severed Heads, Cille Bhriannain, is scarcely visible now and is not in any case a very substantial structure. It sits on a mound which rabbit activity reveals to cover an Iron Age site of some kind.

Recommendation Watching brief. There is no danger from coastal erosion, but rabbit activity could threaten the destruction of the chapels foundations.

Long-term threats

There are three potential long-term threats which we believe need to be kept in mind in planning any strategy for the protection of sites in the coastal zone on Barra and Vatersay.

Dune Systems.

The problems of shifting and eroding/deflating dunes are well known. Fortunately dune systems are found in only a few areas in Barra and Vatersay. Of these, those at Halaman Bay have yet to reveal any archaeological material. Those to the west of Allasdale have fitfully produced thin scatters of pottery, bone and shell, whilst those at Eoligaray clearly cover quite extensive and numerous sites of archaeological interest. All of these sites need to be monitored, preferably on a relatively frequent basis, to identify and record exposed archaeology before it is buried by further shifting within the dune systems.

Human Impact.

In section 4.2.2.4 above we discussed the foreseeable human impact on archaeological sites within the coastal zone, with specific reference to developments mentioned in the Barra and Vatersay Local Plan. We concluded that most of these posed little threat to archaeology. We would again reiterate, however, our concern about possible threats to the archaeology on the fringes of Traigh Mhor, including Orosay. These threats are likely to come either from airport development or mechanised cockle digging.

Long Term Environmental Change.

The on-going subsidence of the west coast of Scotland including the Western Isles is well documented, but its impact on sites presently in the coastal zone can be measured in millennia rather than centuries, let alone decades. Global warming, however, may lead to a rise in sea levels in a much shorter time-frame and this, together with a possible change in weather patterns, including storm strength and frequency, could threaten many of the sites identified in this survey.

Conclusion

This survey has shown that the coastal zone of Barra and Vatersay includes areas of rapid erosion and areas of archaeological richness. Fortunately areas of erosion and archaeology do not everywhere coincide. The principal threats to significant monuments are generally to be found on the west coast, and we have identified thirteen sites which deserve further attention. The particular value of this survey is that it has run concurrently with a total survey of the two islands concerned and it may therefore be possible in due course to come to a better understanding of the relationship between the archaeology of the coastal corridor and its hinterland.

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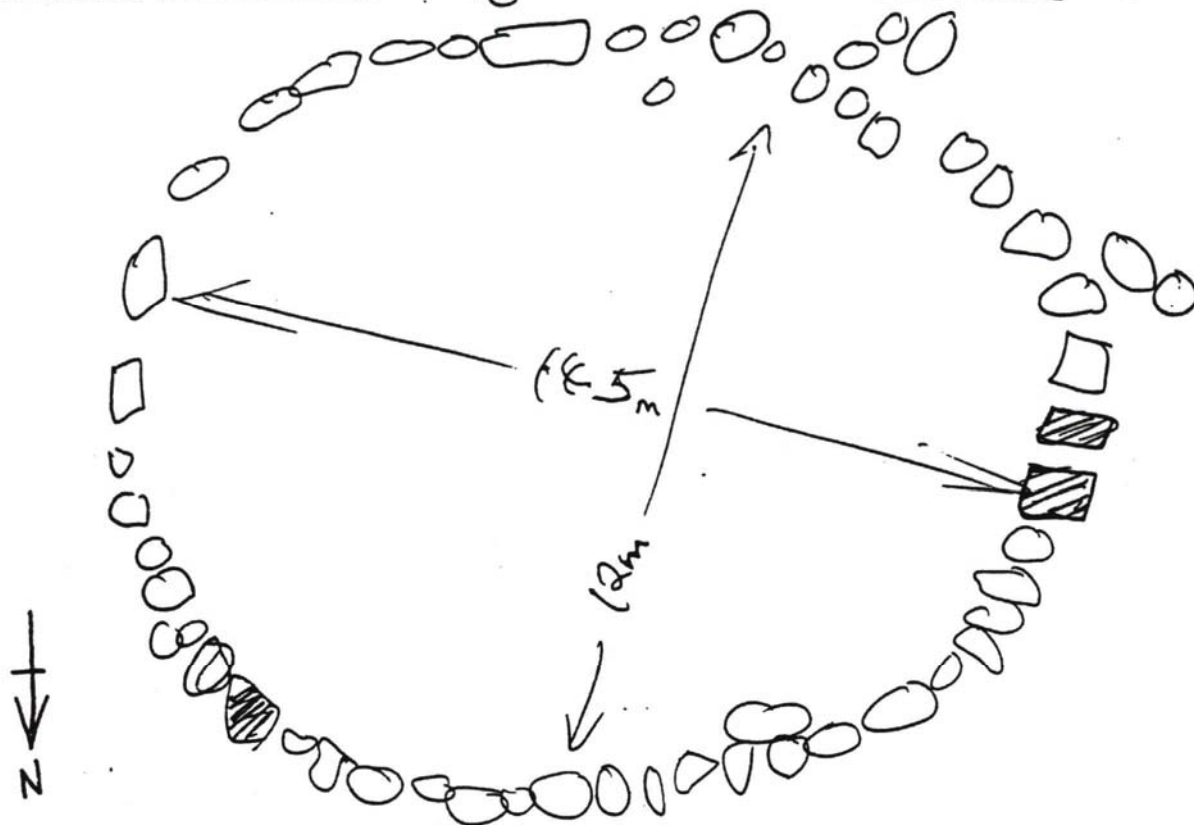
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5. FIELD SKETCHES

SKETCH PLAN (include Dimensions, Directions)

SITE 1.9 (E11)

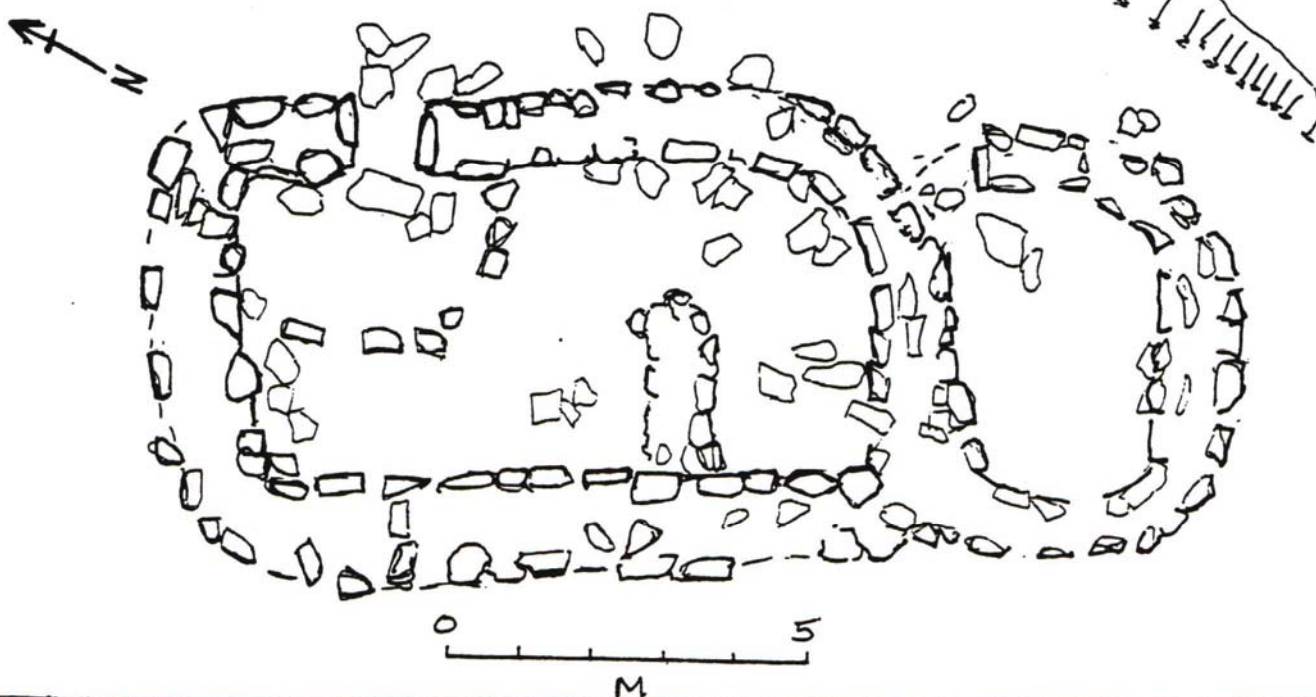


FS.1 Site 1.9 (E11) Prehistoric activity enclosure

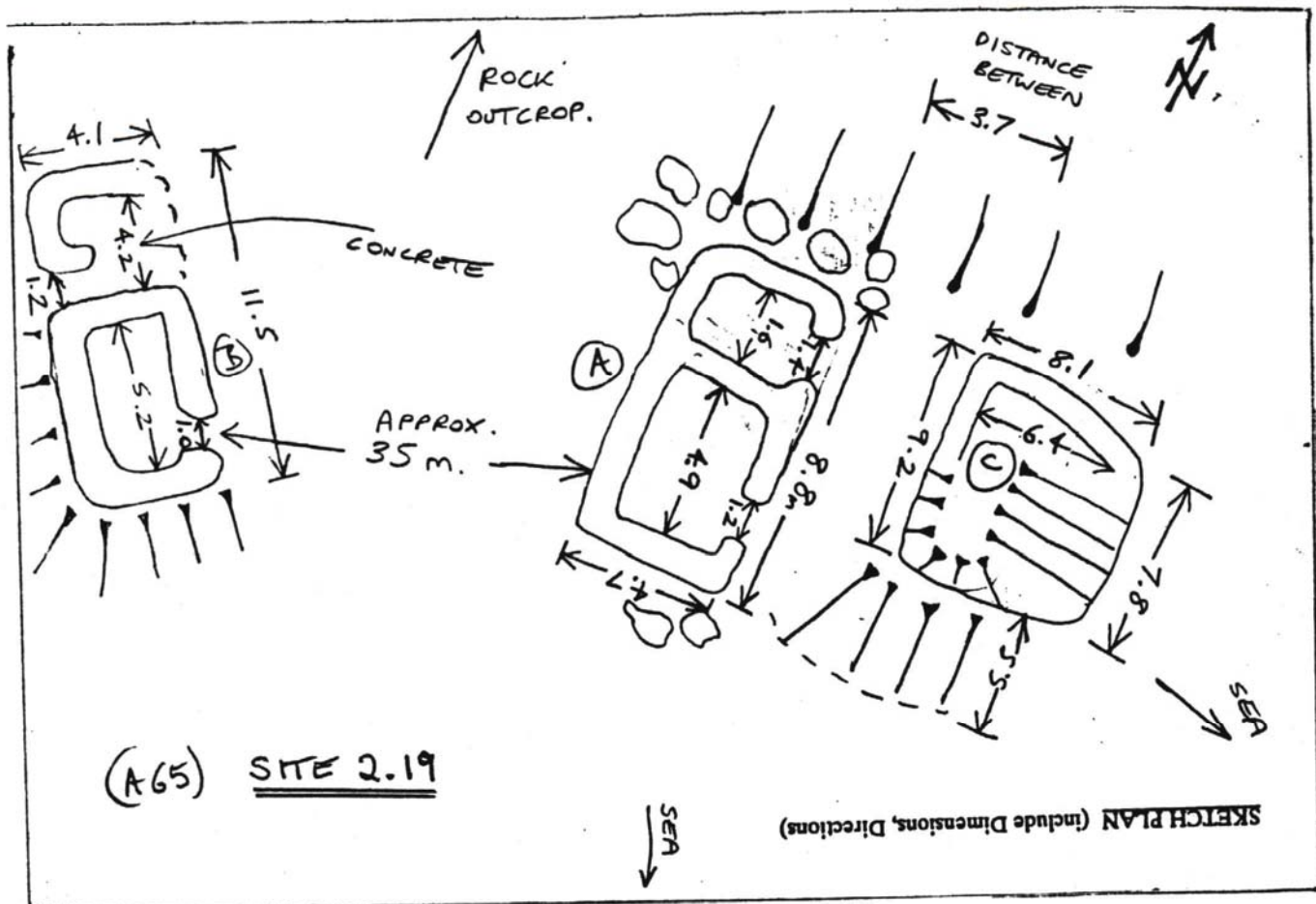
SITE 2.13 (A72)

SKETCH PLAN (include Dimensions, Directions)

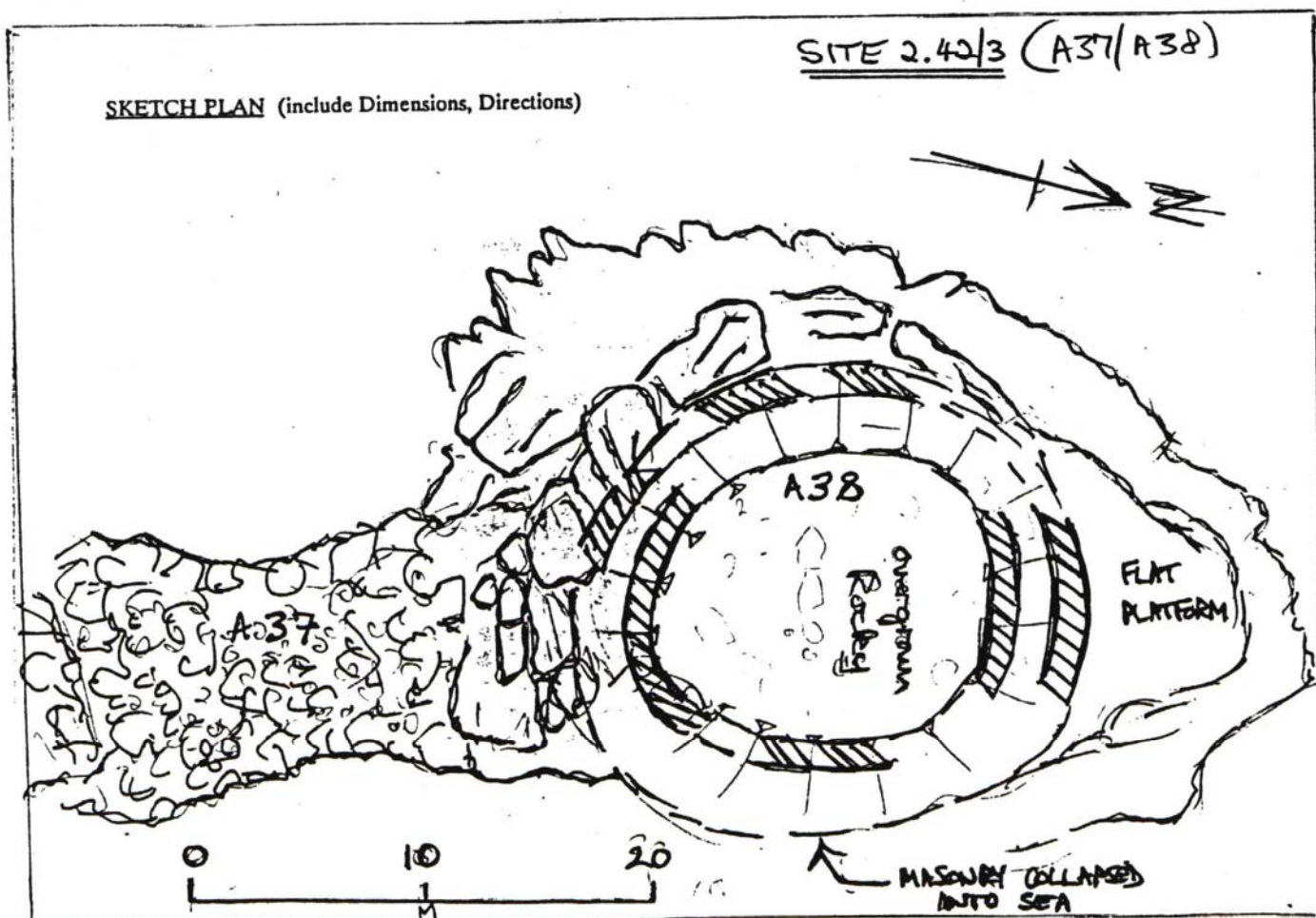
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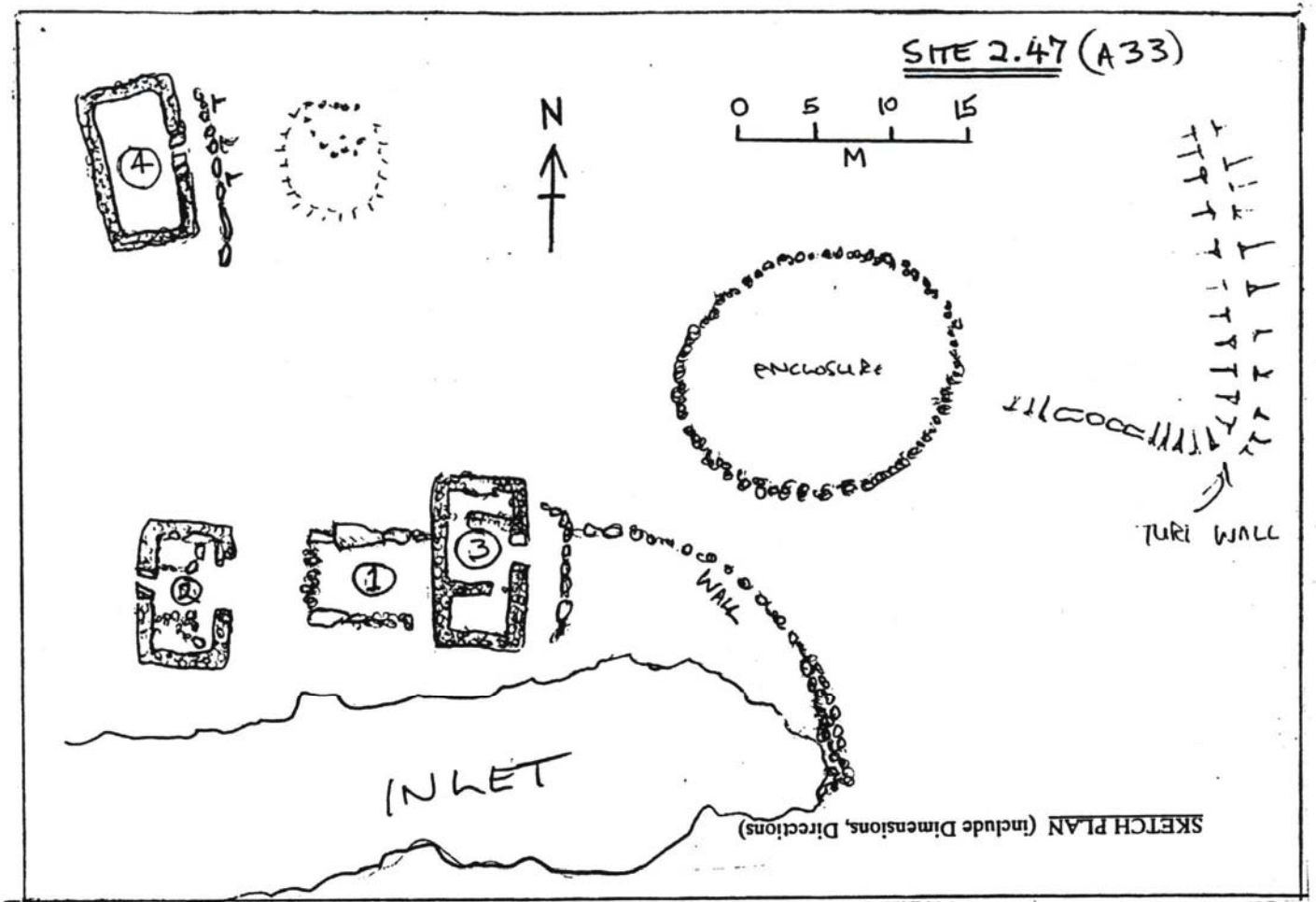
FS.2 Site 2.13 (A72) Blackhouse and byre?



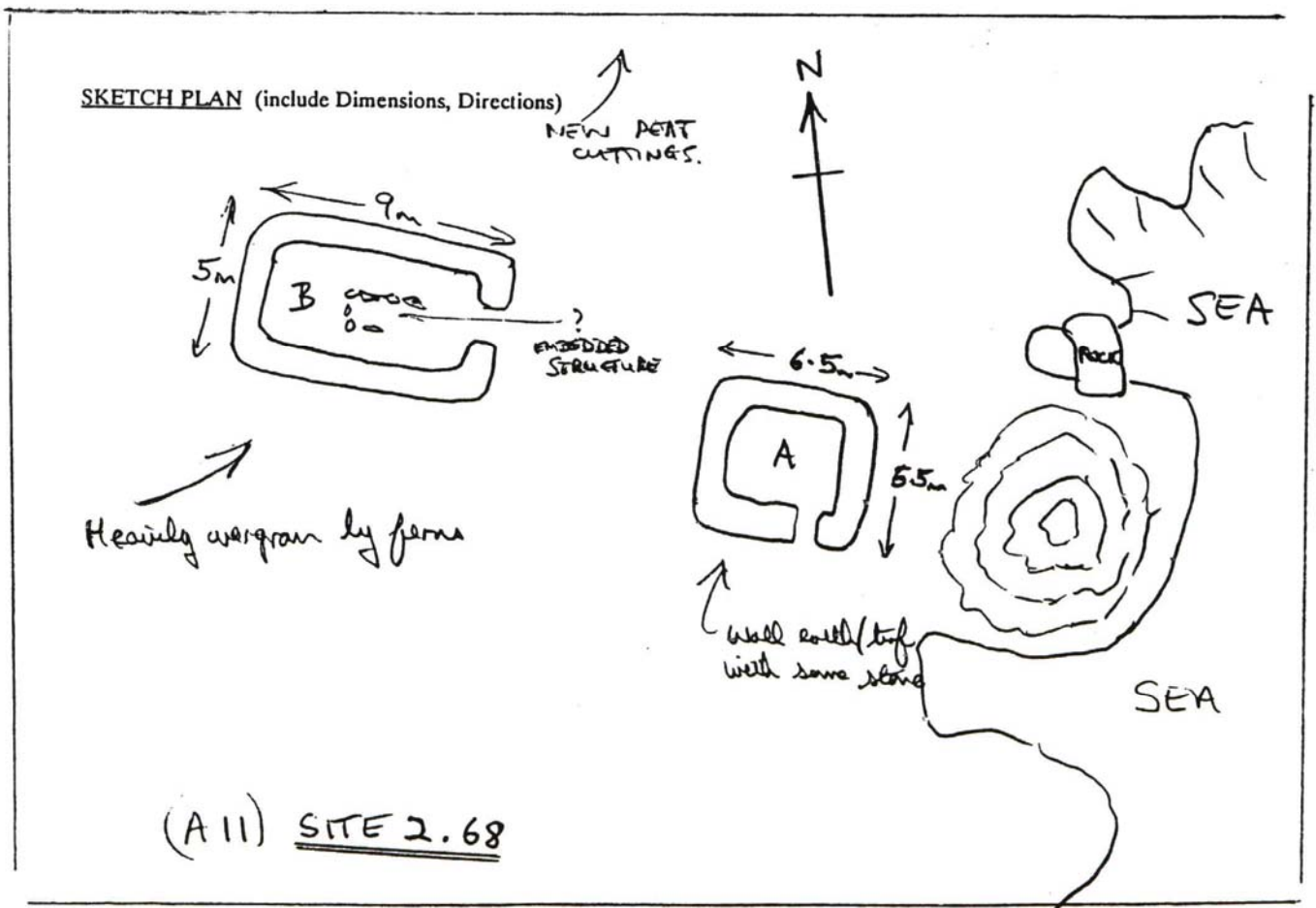
FS.3 Site 2.19 (A65) Blackhouse, outbuildings and garden plot?



FS.4 Site 2.42/43 (A37/38) Broch and causeway



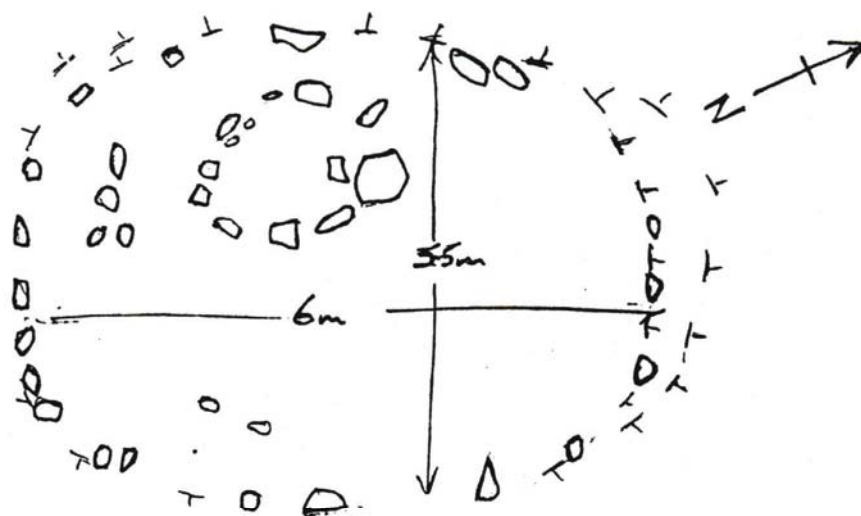
FS.5 Site 2.47 (A33) Blackhouses, outbuilding and enclosure



FS.6 Site 2.68 (A11) Turf and stone-walled buildings

SKETCH PLAN (include Dimensions, Directions)

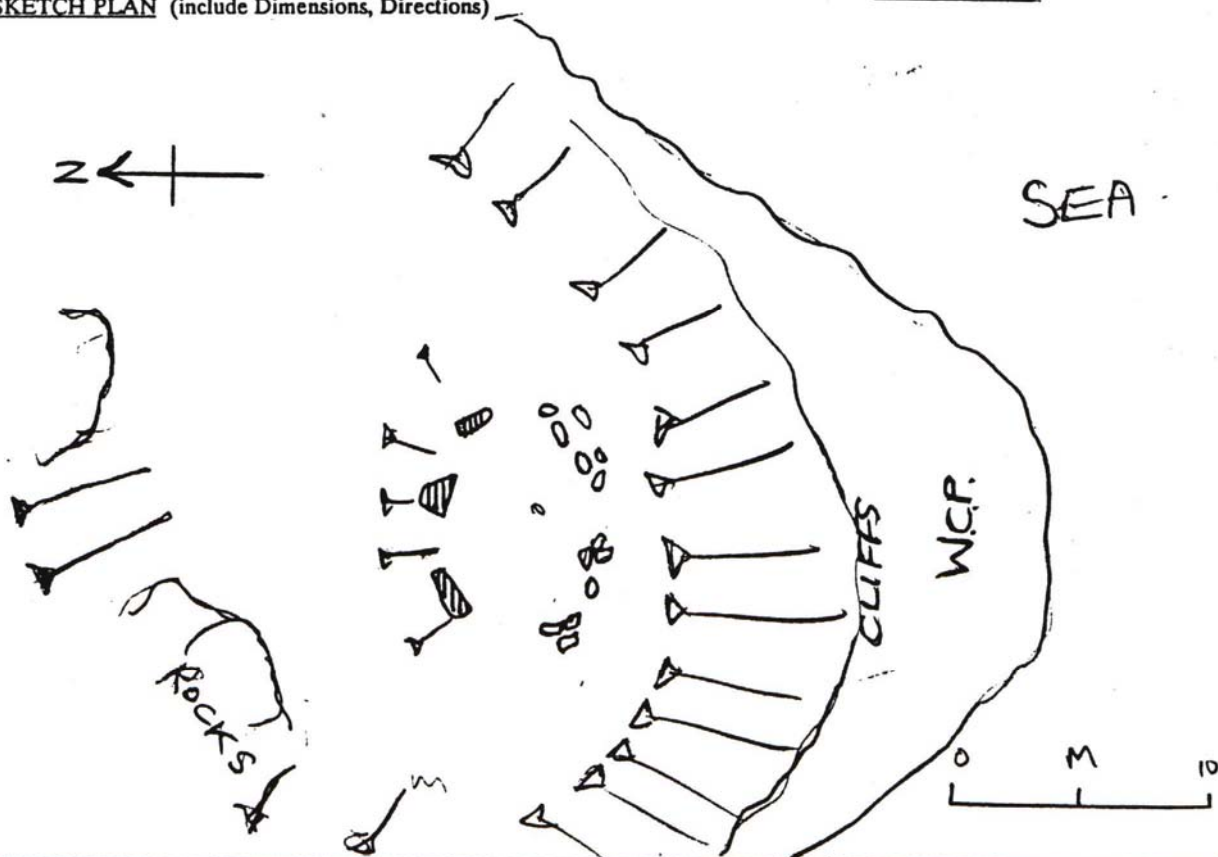
SITE 5.14 (G12)



FS.7 Site 5.14 (G12) Oval hut and later shelter type A

SKETCH PLAN (include Dimensions, Directions)

SITE 6.6 (BM1)



FS.8 Site 6.6 (BM1) Oval stone setting with three uprights

SITE 6.7 (BM 2)

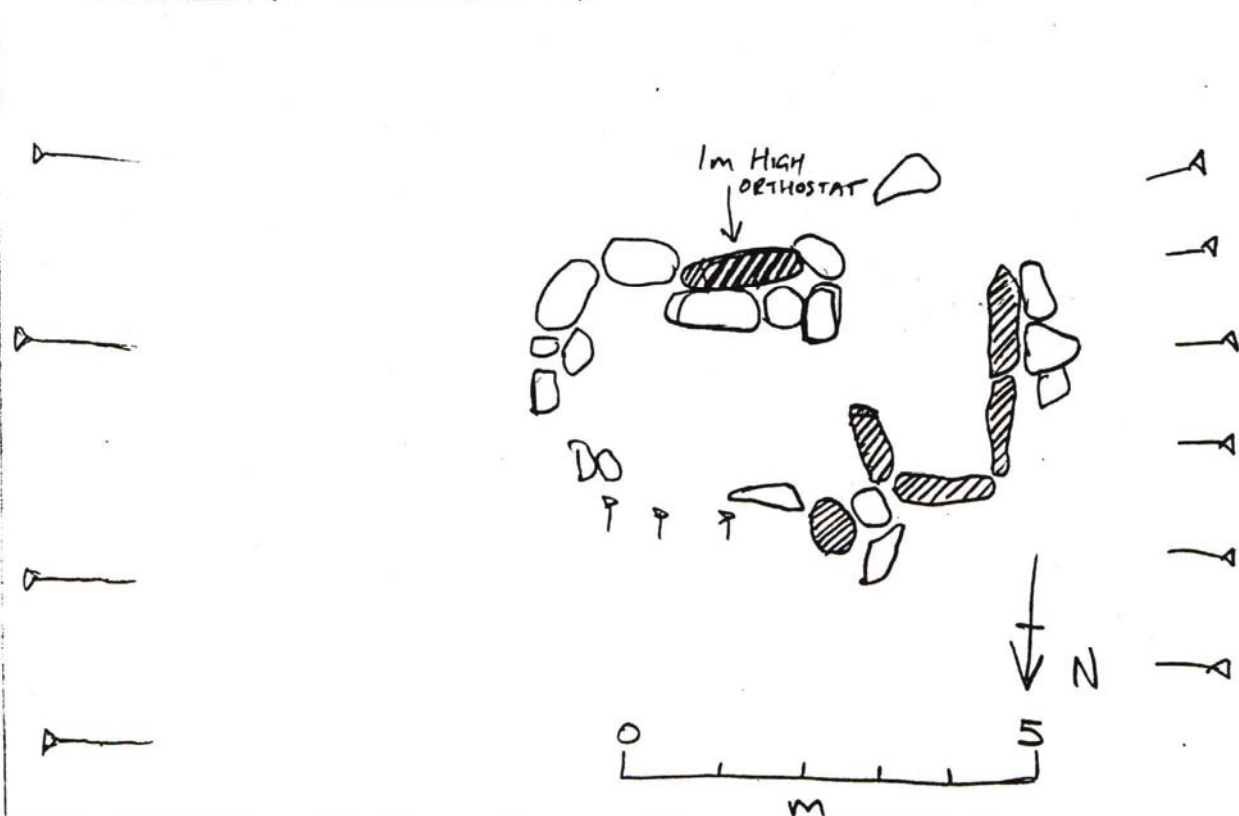
SKETCH PLAN (include Dimensions, Directions)



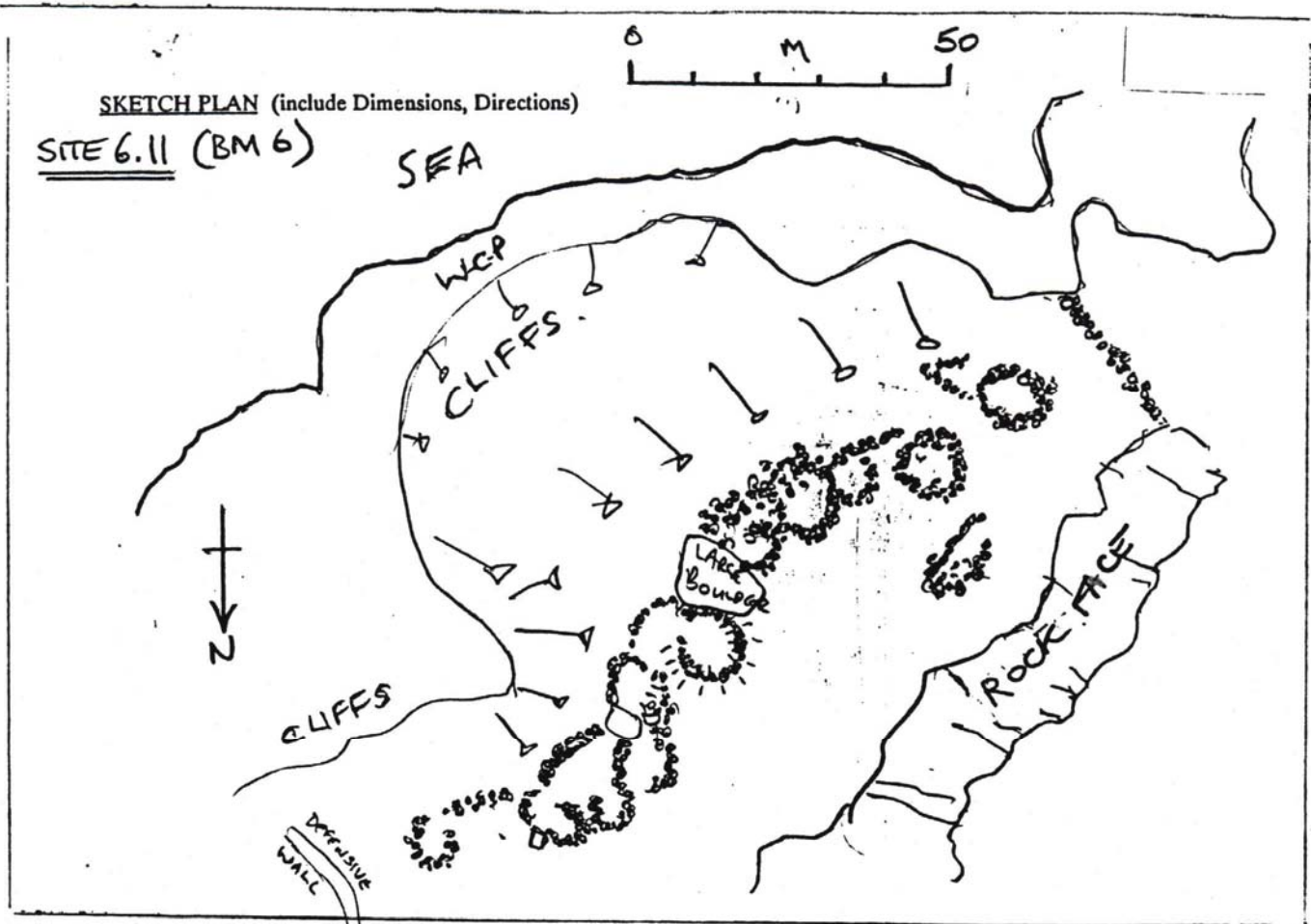
FS.9 Site 6.7 (BM2) Pen and two shelters type A

SITE 6.10 (BM 5)

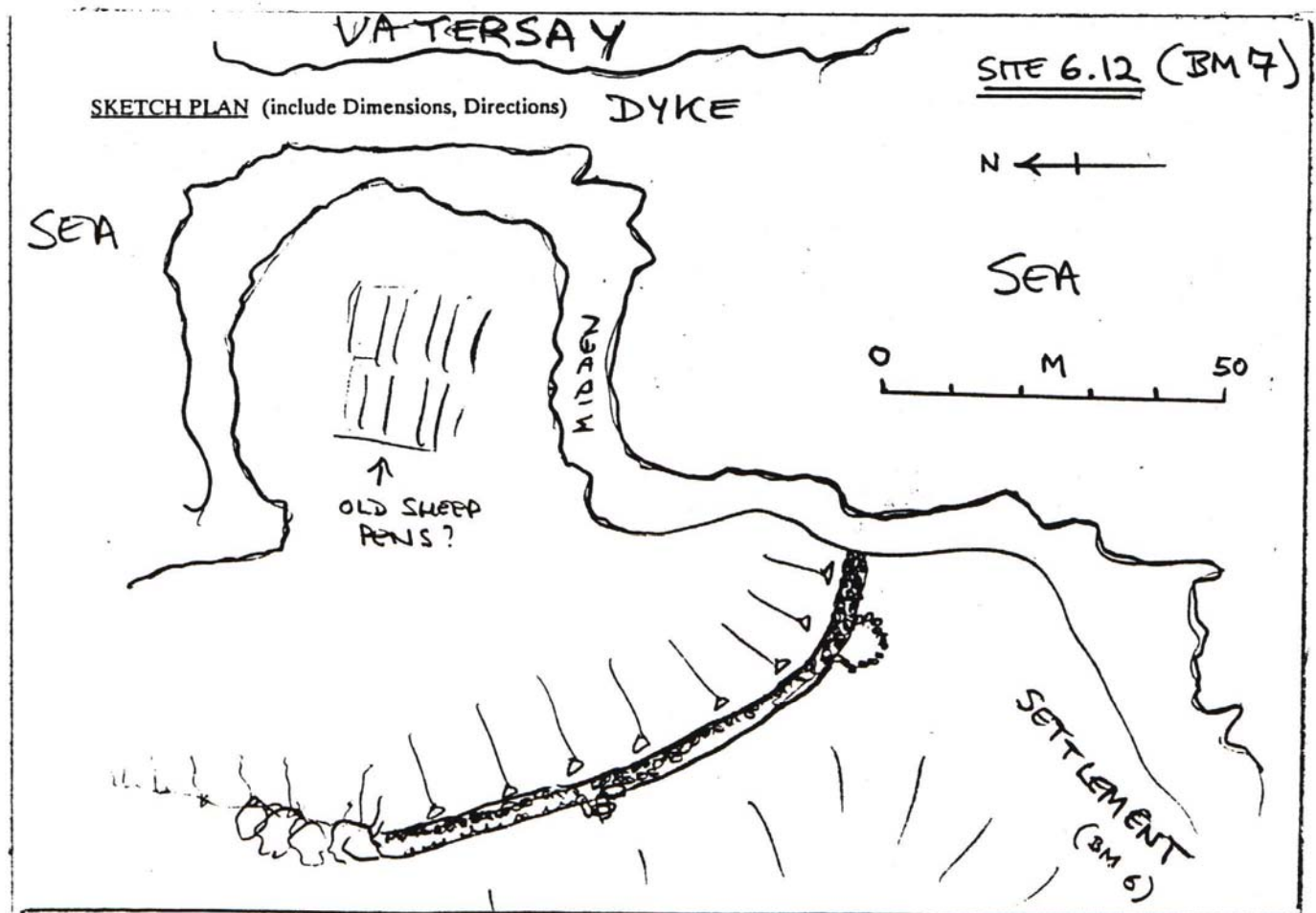
SKETCH PLAN (include Dimensions, Directions)



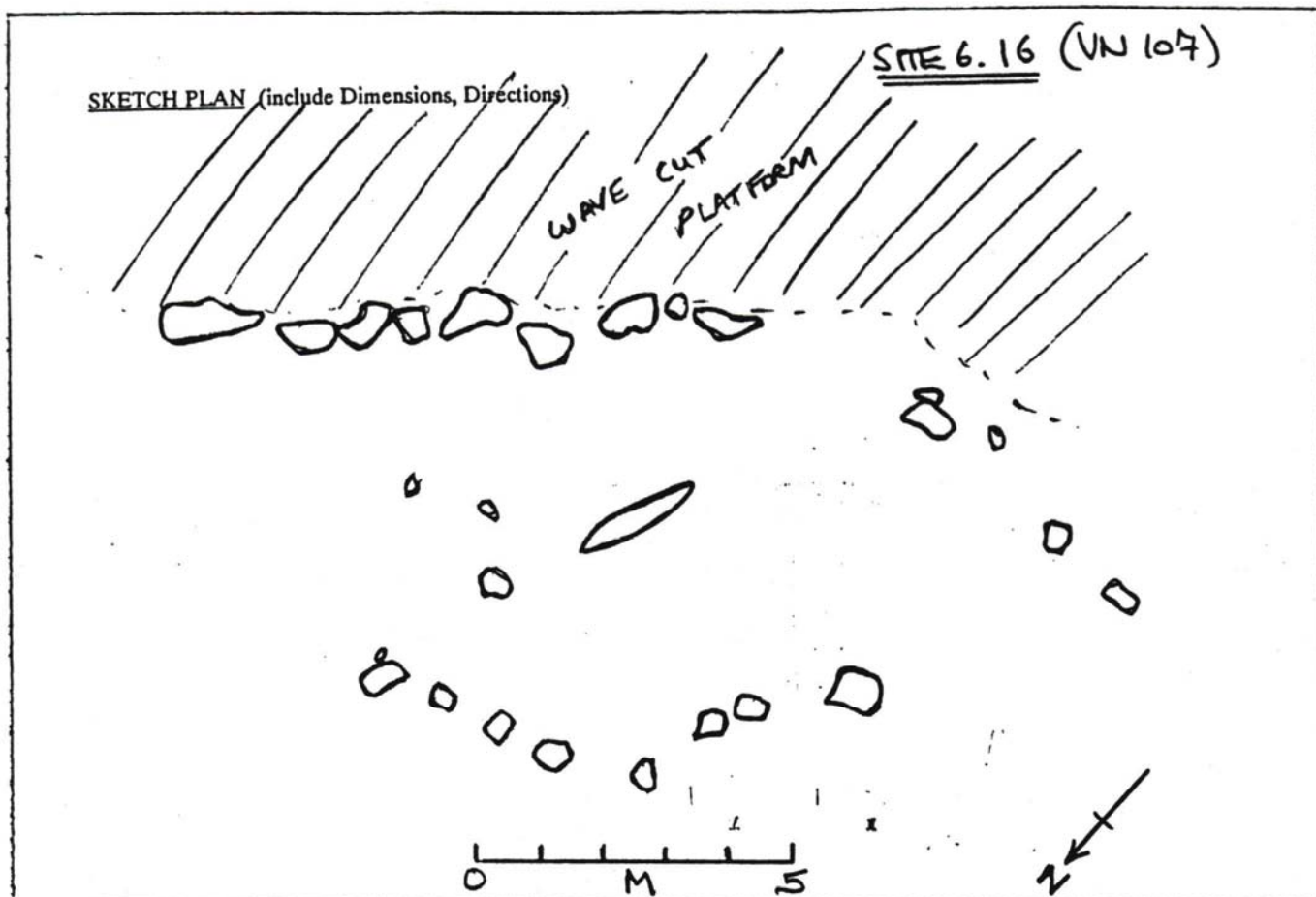
FS.10 Site 6.10 (BM5) Shelter type A



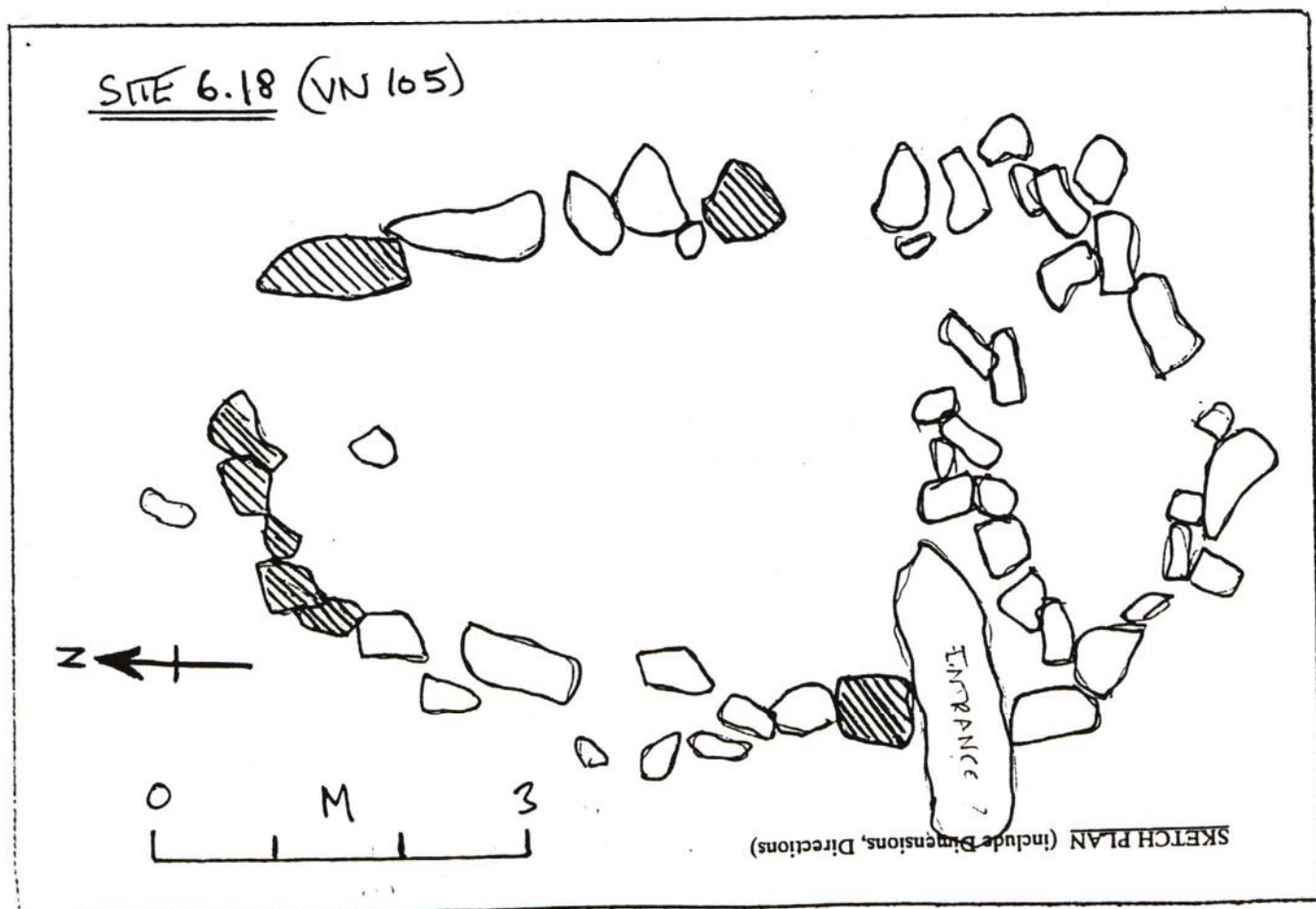
FS.11 Site 6.11 (BM6) Linear group of stone hut circles



FS.12 Site 6.12 (BM7) Monumental wall with attached pen.

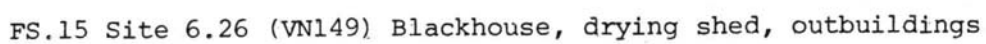


FS.13 Site 6.16 (VN107) Activity enclosure?

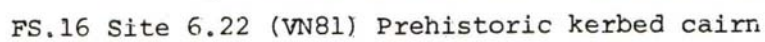


FS.14 Site 6.18 (VN105) Activity enclosure, and secondary pen?

SITE 6.26 (VN 149)

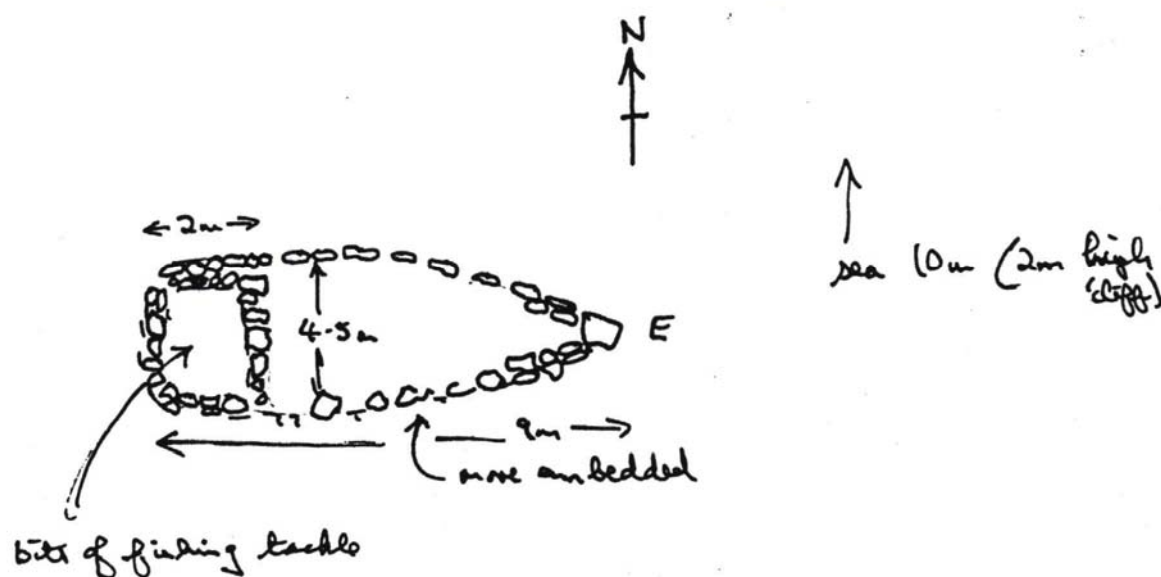


(VN81) STE 6.22



SKETCH PLAN (include Dimensions, Directions)

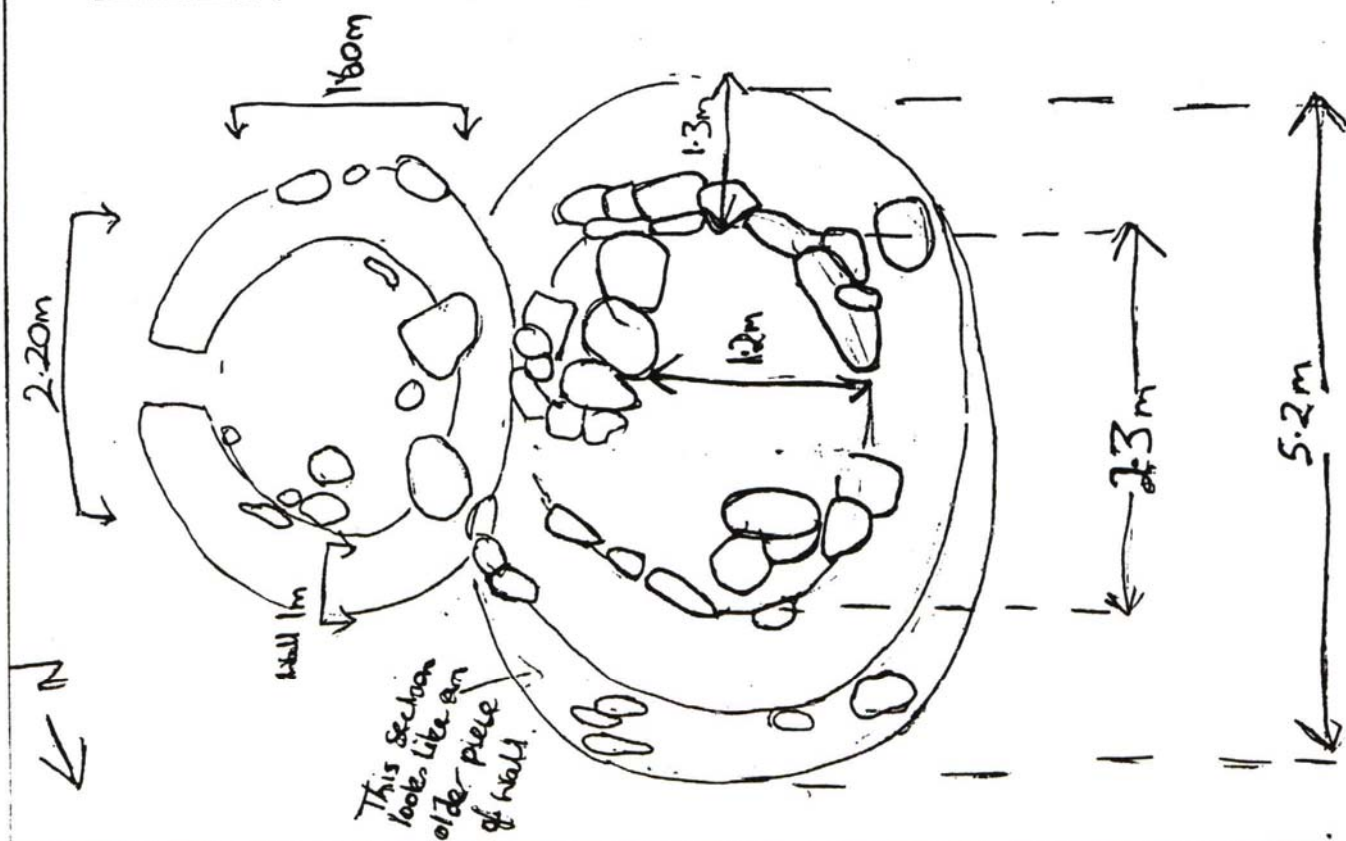
SITE 6.43 (VN 130)



FS.17 Site 6.43 (VN130) Boat-shaped setting; noost?

SKETCH PLAN (include Dimensions, Directions)

SITE 6.51 (VN 38)

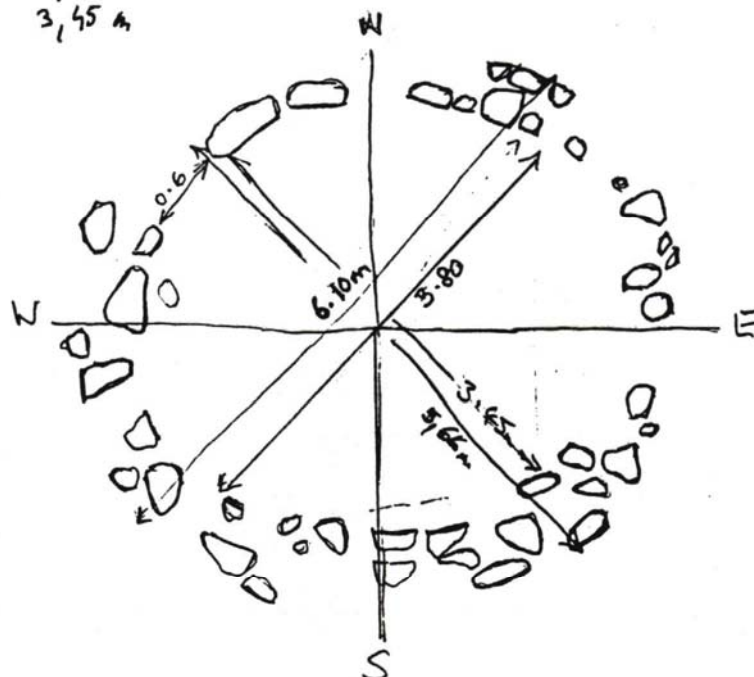


FS.18 Site 6.51 (VN38) Two hut circles, with later shelter

(AF 7)

SKETCH PLAN (include Dimensions, Directions)

outside	6.10 m	5.66 m
inside	3.80 m	3.45 m
door	0.57 m	

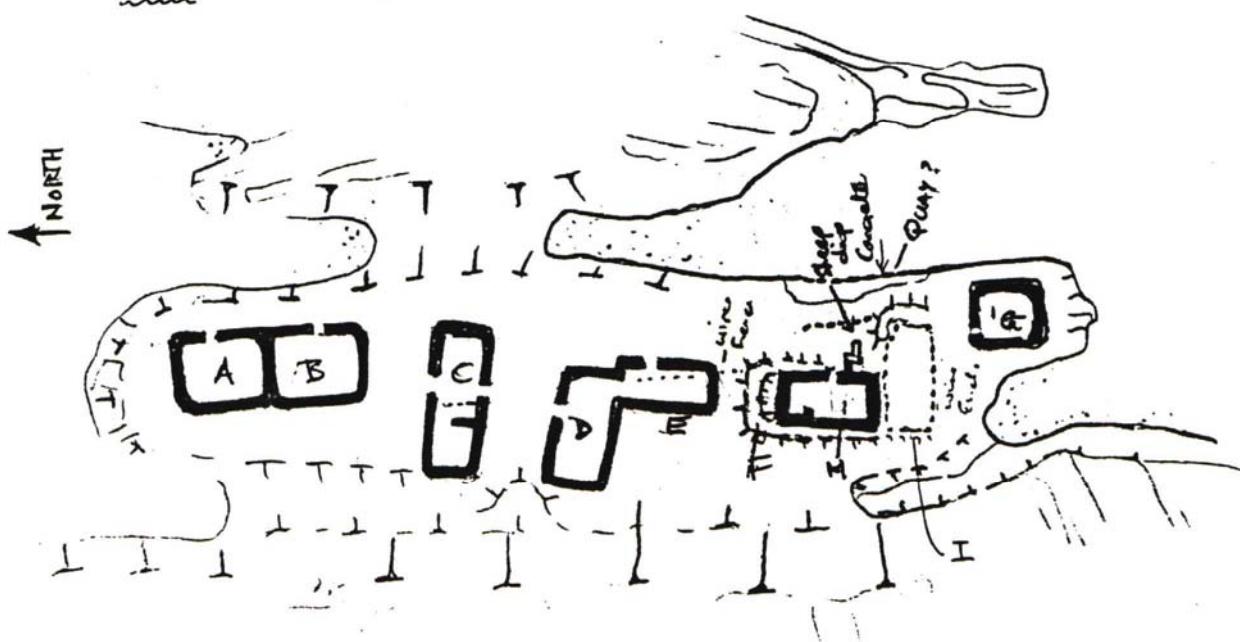


FS.19 Site AF7 (Isle of Fuiay) Stone-walled hut circle

(AF 9)

SKETCH PLAN (include Dimensions, Directions)

0 M 15
APPROX



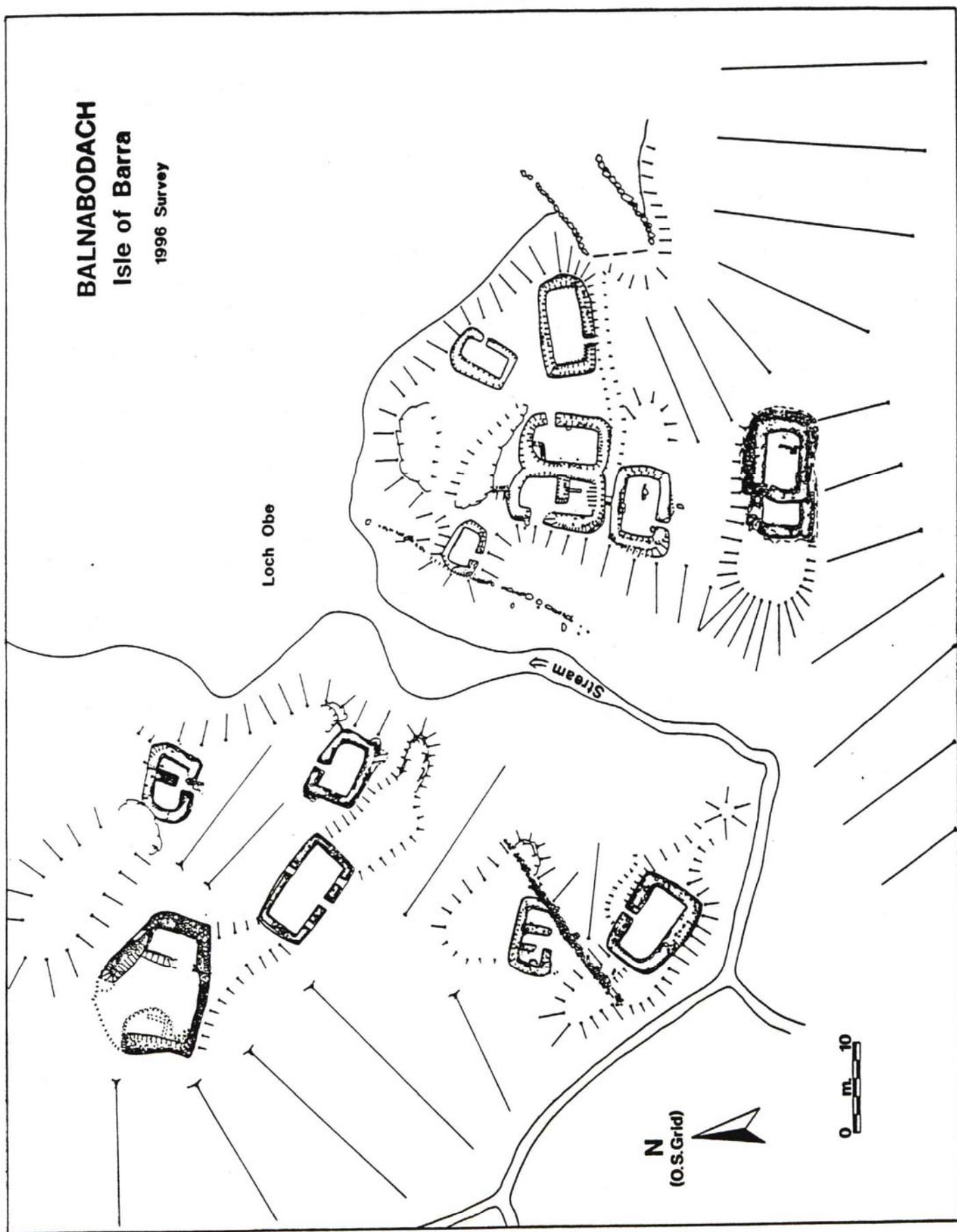
FS.20 Site AF9 (Isle of Fuiay) Blackhouse settlement

6. MEASURED PLANS

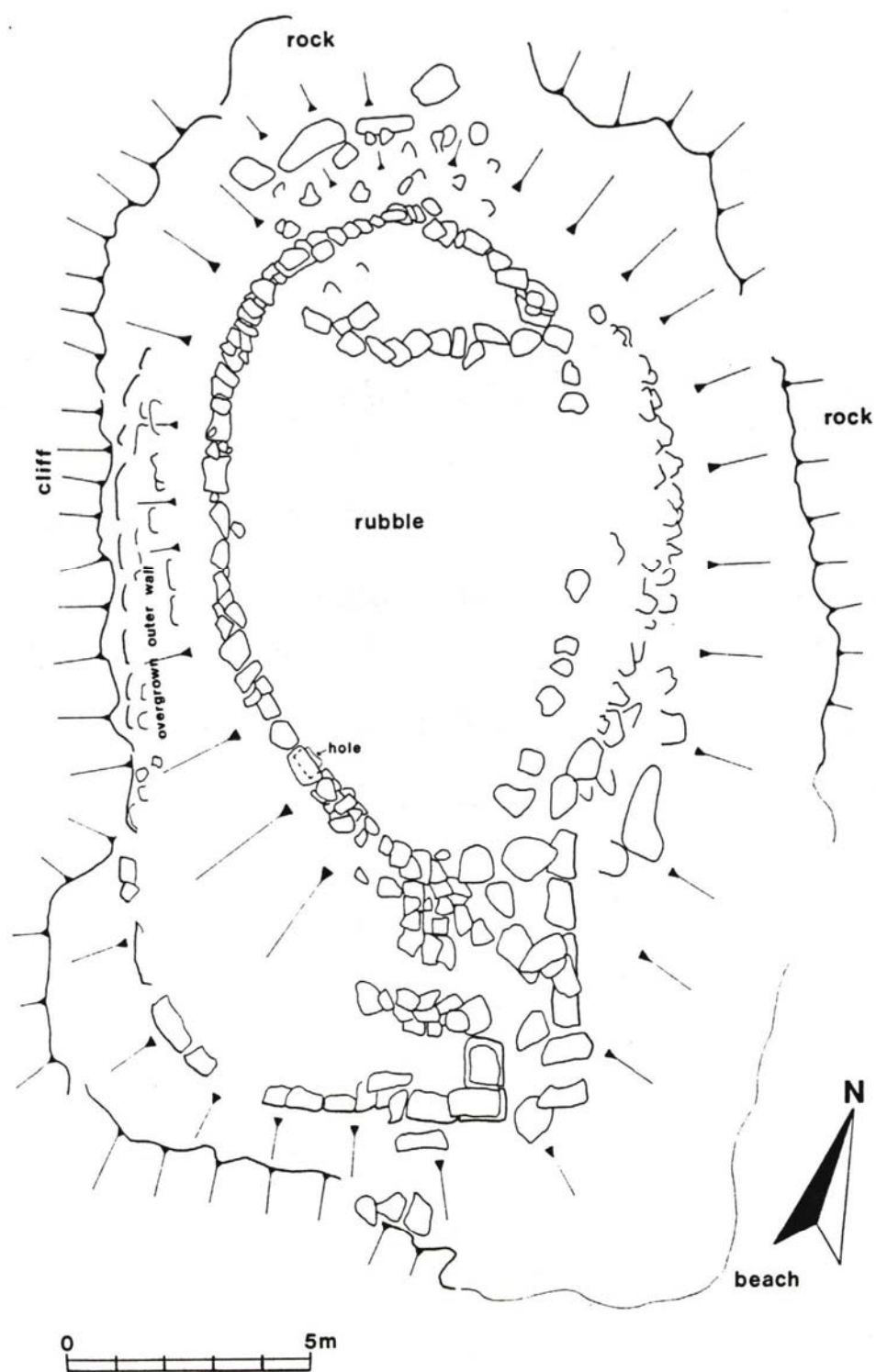
BALNABODACH

Isle of Barra

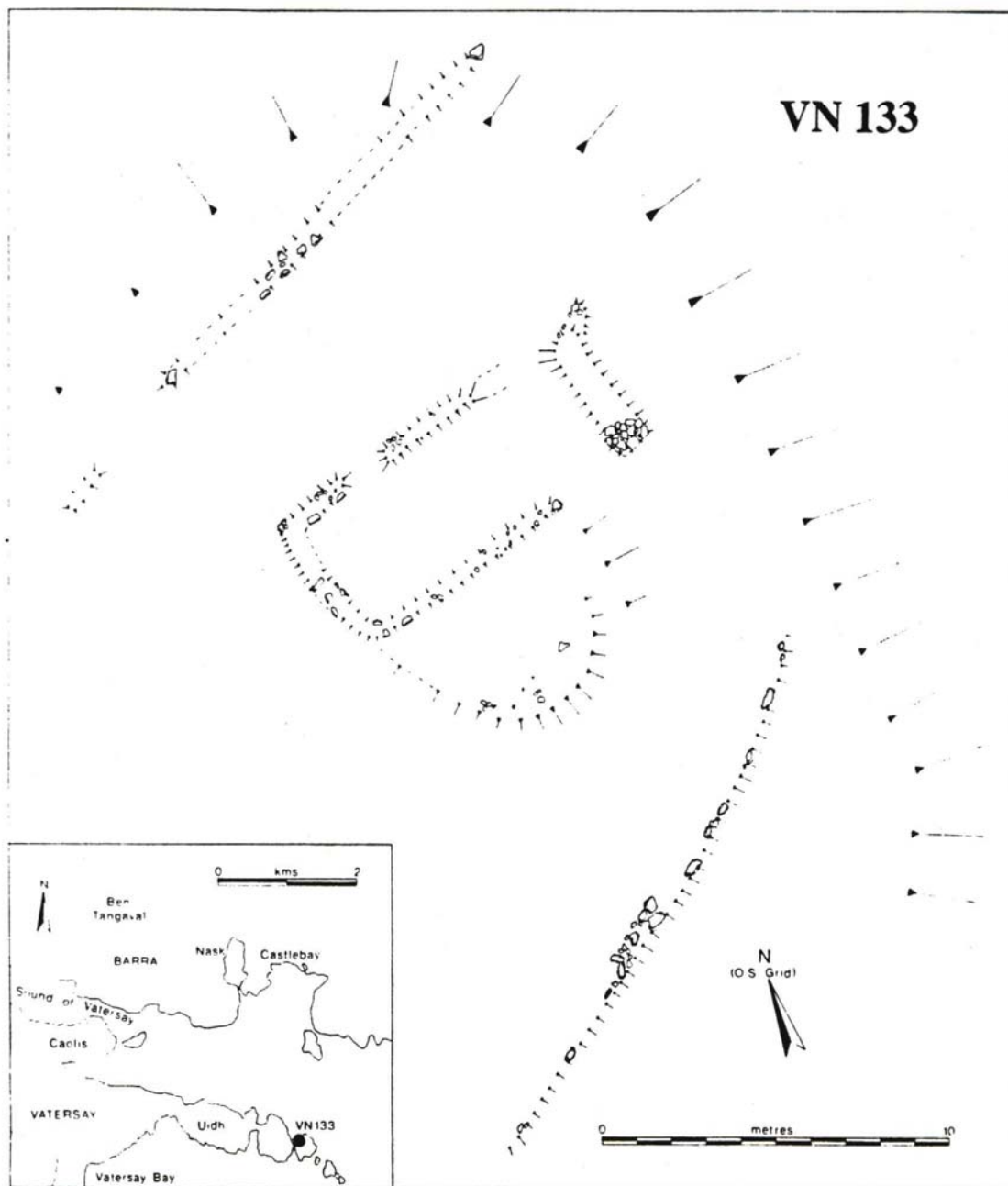
1996 Survey



MP.1 Sites 2.82 (L9) and 2.83 (L8), the abandoned blackhouse settlement at Balnabodach.



MP.2 Site 5.12 (G9) Dun Clieff, a tidal islet with a late oval structure overlying an earlier building with coursed masonry and an inturned entrance.

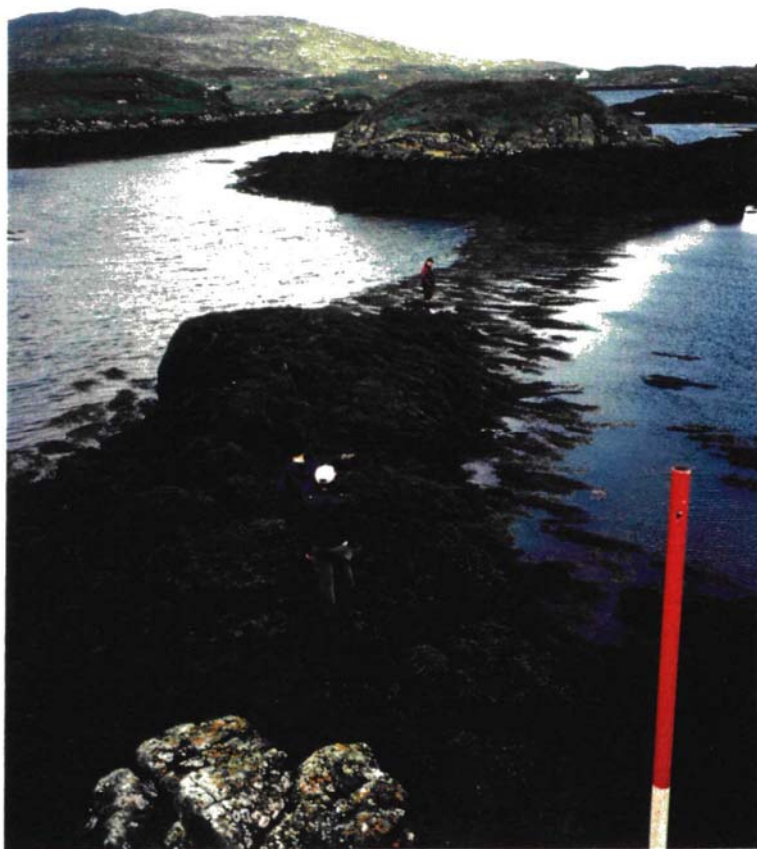


MP.3 Site 6.40 (VN133) the chapel of Cille Bhrianain on the tidal islet of Uinessan, at the extreme eastern tip of north Vatersay. The chapel is inside an enclosure, presumed to be contemporary, and overlies a low mound from which Iron Age pottery is recovered.

7. COLOURED PLATES



PL.1A Site 1.9 (E11) activity enclosure from the west, showing the erosion scar within 30cms of the circle.



PL.1B Site 2.42 (A38) the broch and causeway on a tidal islet in Bay Hirivagh, seen as the tide begins to recede.



PL.2A Site 2.73 (A6) a single-faced stone structure, possibly the foundation/interior facing of a turf-built house.



PL.2B Site 2.84 (L7) blackhouse with erosion scar cutting deep into the south wall of the building.



PL.3A Site 4.38 (T70) rock shelter from below. Excavation revealed an L-shaped windbreak associated with a small lithic assemblage and a Neolithic ? sherd.



PL.3B Site 4.51 (T226) Dun Ban, seen from the south-east. Note the collapsed debris down the landward slope.



PL.4A Site 5.1 (B5) the wall of a broch, curving out below the modern cemetery wall. Above the cemetery wall to the right can be seen the grassed-over mound of the collapsed broch structure.



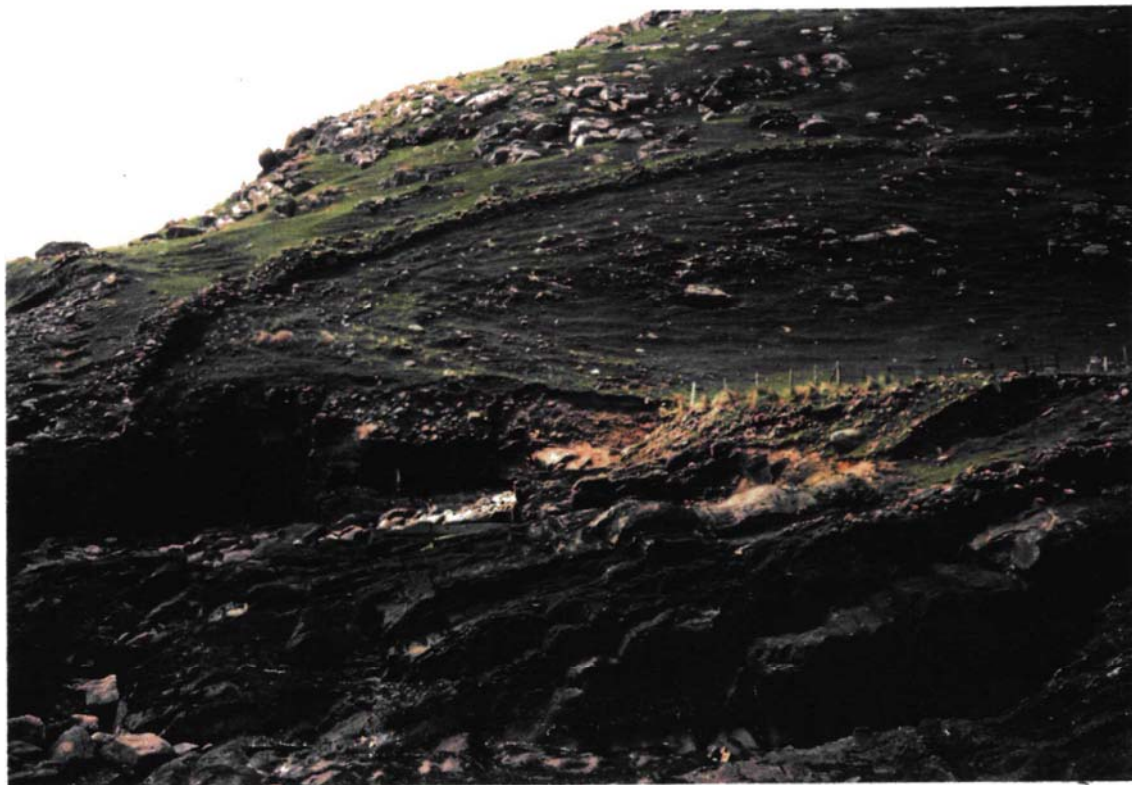
PL.4B Site 5.1 (B5) close-up of the broch wall showing slight batter and narrow doorway.



PL.5A Site 5.12 (G9) Dun Clieff from the south-east.



PL.5B Site 5.12 (G9) close-up of the masonry of the lower, Iron Age ? structure.



PL.6A Site 6.12 (BM7) the great arc of monumental walling is visible above the eroding cliff with a Neolithic midden.



PL.6B Site 7.52 (VN154) stone-built tidal fish-trap, beyond the old cattle ferry, in Corraig Bay.