



# Coastal Assessment Survey Ullapool to Lochinver

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Volume 1



*Prepared for Historic Scotland*

*by*



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Cover: View of Camas Beag, looking south east towards Dun Canna (NC 10 SW 1). This sheltered inlet is enclosed by a fish trap (NC 2111 9009), just visible at centre left (compare with Figure 12).

## Abstract

In August 1996 a coastal assessment survey was conducted along a 115 km stretch of the north western coastline of mainland Scotland between the towns of Ullapool and Lochinver. The principal aims of the survey were to document the archaeology of the coastal zone and assess the impact of coastal related processes on the cultural environment. The survey involved an inspection of both the intertidal zone and a 50m wide coastal strip above the high water mark.

In summary 192 sites were inspected, of which 136 were new recordings. The sites primarily consisted of structures and field systems associated with 18th-19th century crofting townships, however several structures and deposits dating back to the prehistoric and medieval periods were also recorded. A total of 5 sites were considered to be actively eroding, including the most significant site recorded, the multi-period structural complex and midden deposits at Achnahair Sands (NC 01 SW 2).

Overall the coastline was considered to be eroding, though generally at a rate negligible for the purposes of cultural resource management. It was noted that a significant proportion of the recorded sites exist in exposed and low lying positions and are thus highly vulnerable to marine transgression or erosion under extreme conditions.

This is Volume 1 of the report, which contains the methodology, results and conclusions derived from the field survey. Volume 2 principally comprises a site gazetteer.

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Finally, the successful execution of the fieldwork has only been possible through the untiring efforts of the project team who daily faced the trials of toiling through wet, tick-infested 'vertical heather' along some sections of very rugged and inaccessible coastline. I would like to thank Jenny Lee, Fred Stevenson, Vanessa Edmonds and Harvey Johnston for their eager participation and high standard of recording.

The project owes its existence to the hard work, enthusiasm and faith of Maree Lee Smith, who helped enormously in the early stages of project design. I would like to extend a particular thank you to her.

The photographs, maps and plans used in the report were produced by Jenny Lee, Fred Stevenson and Andrew Long. Any errors, opinions and misinterpretations contained within this report are the sole responsibility of the author.

## Abbreviations

ALS:	Afforestable Land Survey	NMAS:	National Museum of Antiquities of Scotland
ASL:	Above Sea Level	NMRS:	National Monuments Record of Scotland
GUAD:	Glasgow University Archaeology Department	RCAHMS:	Royal Commission on the Ancient & Historical Monuments of Scotland
GUDGTS:	Glasgow University Department of Geography & Topographic Science	SIMS:	Scottish Institute of Maritime Studies
HS:	Historic Scotland	SNH:	Scottish Natural Heritage
HWM:	High Water Mark (mean)	SSS:	School of Scottish Studies, Edinburgh University
LWM:	Low Water Mark (mean)		
MOLARS:	Medieval or Later Rural Settlement		

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## 1. Introduction

### 1.1 Background

This report presents the results of a rapid coastal erosion assessment between the towns of Ullapool and Lochinver on the north west coastline of mainland Scotland. The principal aim of the project was to assess the affects of coastal erosion, coastal related processes (e.g. sand dune deflation), human interference and developmental impacts upon the archaeology and built heritage of the coastal zone in a cost effective manner. The investigations were part of a wider project initiated by Historic Scotland to characterise the threat of coastal erosion for each region and its implications for the management of the cultural heritage of Scotland in general. To achieve these objectives the project complements previous studies undertaken as part of this scheme (Robertson 1996; James 1996; Gilbertson *et al* 1996), and conforms to Historic Scotland coastal assessment procedures (Historic Scotland 1996). The survey has been conducted as part of a post-graduate research programme at Glasgow University.

The fieldwork was undertaken by Mr Andrew Long (Consultant Archaeologist) in association with Glasgow University Archaeology Department (GUAD) in August 1996. The project was funded by Historic Scotland by means of a grant to GUAD. The project was managed by Mr Patrick Ashmore (HS) and Dr Alex Morrison (GUAD).

### 1.2 Project Aims

Ashmore (1994) has summarised the background to the general problem of erosion on the wider Scottish coastline, and as a response the present project has been designed to address the specific issues raised in that introductory paper. The central concerns cited were the affects of sea level change, the ability of the sea to erode the coast edge, the instability of fragile coastal dune systems, the human impact on the coastline (*Ibid.*, 5-9), and the perceived worsening of these threats as demonstrated by prior fieldwork.

The primary aim of this study was therefore to define the geomorphological characteristics and the erosional condition of the coastline between Ullapool and Lochinver, and the influence of these factors on the long term stability of the cultural heritage of the coastal zone. In essence the study was required to produce a resource document for use as the basis for coastal archaeological site management in the study area over an extended period, such as the next 100 years or so. With this in mind the emphasis of the study has been to attempt a prediction of the potential affects and implications of coastal erosion into the future and beyond, rather than merely documenting the present erosional state of the cultural environment.

A secondary aim of the study was to provide a regional archaeological background to the study area, which has until recently been neglected from the perspective of systematic archaeological investigations (see Section 1.5). The fieldwork was designed to complement the RCAHMS Afforestation Land Survey (ALS) of the Achiltibuie area (see Section 2). As such this report is more detailed than its predecessors (Robertson 1996; James 1996) and a greater emphasis was placed on

recording site contents, dimensions and documentary associations, particularly in the case of fragile sites experiencing active degradation.

### **1.3 Report Format**

The study as presented in this document is based on stage 1 of a proposal submitted to Historic Scotland in March 1996 (Long 1996). The report has been presented in 2 volumes;

Volume 1 contains introductory information (Section 1), study methodology (Section 2), and a series of annotated colour maps reflecting geomorphology, erosional condition and archaeology for each section of the study area (Maps 1-11). Each map is preceded by a summary containing general environmental and archaeological information for each stretch of coastline (Section 3). A comparison and analysis of this data is presented (Section 4), and summarised with appropriate recommendations (Section 5). References for both volumes are located at the rear of Volume 1. A list of abbreviations used in this report and acknowledgements are cited at the start of this volume.

Volume 2 consists of appendices containing supplementary information. A gazetteer provides more detailed site information (Appendix 1). Specialised terms used in the report are defined (Appendix 2), a list of sources, organisations and individuals consulted during the course of this study (Appendix 3) and a catalogue of new sites recorded in the field for the first time (Appendix 4) are also presented.

The basic field data (site recording sheets, maps, plans and photographs) contains more expansive information, and is located within a project archive held by the RCAHMS.

### **1.4 The Study Area**

#### **1.4.1 Introduction**

The project study area consists of the mainland coastal strip between the tidal limit of the Ullapool River, Loch Broom Parish, Ross & Cromarty District (NH 2124 8944) and the tidal limit of the Culag River, Assynt Parish, Sutherland District (NC 2094 9222) (Figure 1). The survey area did not include offshore islands, unless they were accessible on foot at low tide.

#### **1.4.2 Extent and Dimensions**

For the purposes of this study the coastal strip is defined as the intertidal zone (the area exposed between the mean high (HWM) and low water marks (LWM)), and a 50m wide corridor above the high water mark. The width of this corridor varied according to the density and distribution of archaeological features and the extent of the influence of coastal processes, such as the formation and erosion of aeolian dune systems. The point at which the high water mark impacts upon the hinterland is termed the 'coast edge', and this varies in position and width depending on local topography, fluctuations in tidal range and other geomorphological, marine and climatic factors. It is generally considered that the greatest potential threat to

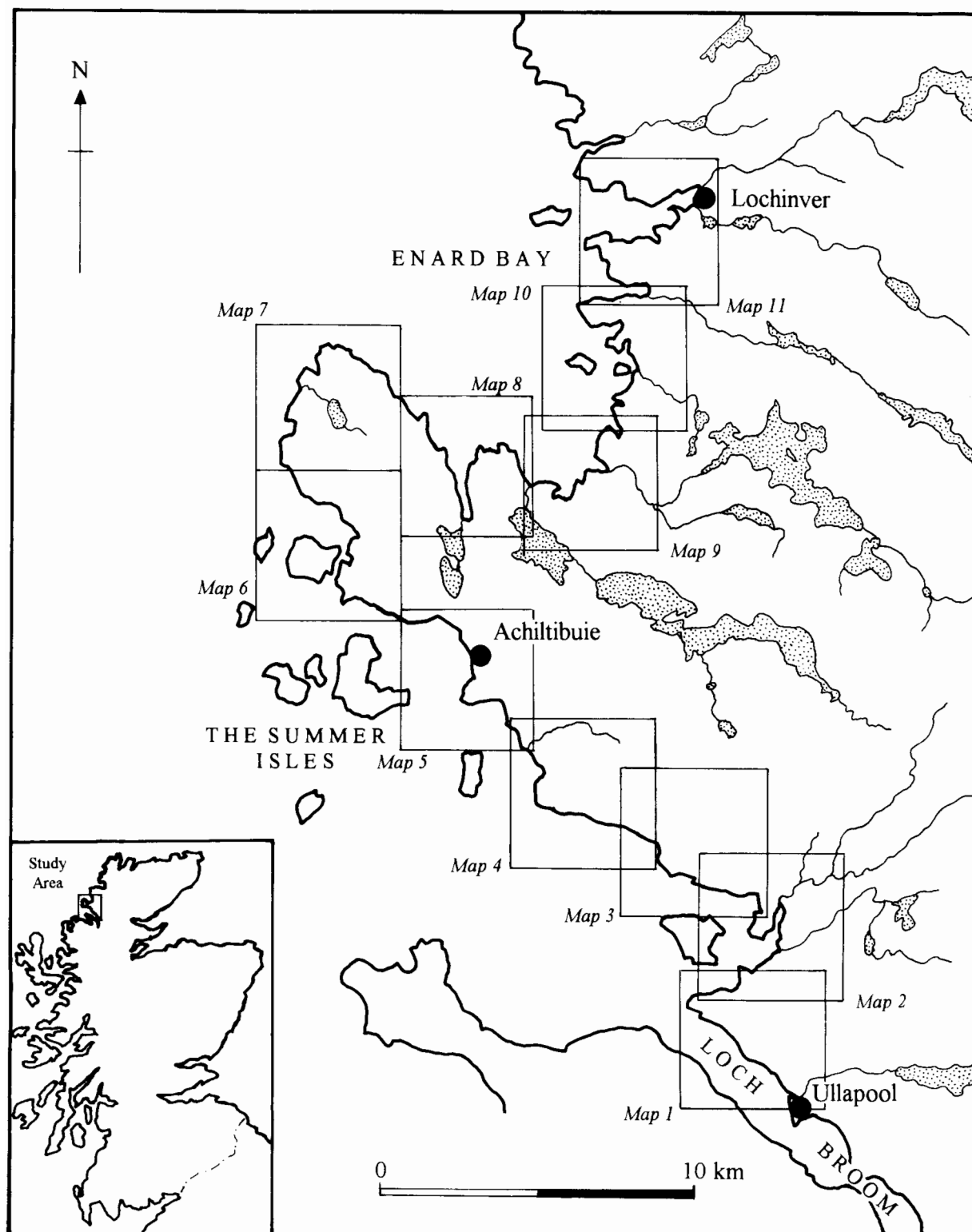


Figure 1: Study Area Location, showing Key to Maps 1-11.

archaeological remains exists at this point, and it was therefore here that the main focus of the survey was directed.

The survey did not extend to the marine zone (defined as the area of sea floor continuously covered by water under normal circumstances), though some previously documented shipwrecks have been included in the site catalogue. Furthermore, some features observed within the marine zone from the coast edge (e.g. boat remains or slipways) were accordingly noted.

The difficulties involved in measuring the length of a given stretch of coastline have been highlighted elsewhere (Ashmore 1994, 25-27). This study area is no exception, particularly in the north (Maps 9-11) where the underlying glaciated Lewisian gneiss topography has produced a highly fractal coastline. At a scale of 1:25,000 the length of the coast edge has been measured as approximately 116 km, however it is likely to be greater than this figure for the practical purposes of fieldwork on the ground. The intertidal zone was generally restricted in width owing to the steep topography and is estimated at a mean of extent 20-30m perpendicular to the shoreline.

### 1.4.3 Description

The study area has been divided into 11 sections for the purposes of producing a series of 1:25,000 maps (Figure 1), each reflecting the coastal geomorphology, erosional state and archaeology of the coastal zone. These are described from south to north as follows;

- Map 1: *Ullapool to Ardmair* (7.0 km)

The study area starts at the tidal limit of the Ullapool River and follows the north west side of the river to its mouth, then follows pebble beaches along the north east side of the fjord of Loch Broom to its mouth at the headland of Rubha Cadail. The coast then curves east around the base of the steep rocky hill of Meall Mór to the pebble beaches of Ardmair Bay.

- Map 2: *Ardmair to Camas Beag* (10.4 km)

This section starts at the south end of the pebble beaches of Ardmair Bay, which it follows to the north east, around the spit of Aird na h-Eighe into Loch Kanaird, to the mouth of the Kanaird Estuary. The east side of the River Kanaird is followed northwards to the tidal limit, then southwards along the west side to the rocky promontory of Rubha Meallain Bhuidhe. A series of short rocky headlands interspersed with open pebble beaches lead west and north to the enclosed inlet of Camas Beag.

- Map 3: *Camas Beag to Geodha Mór* (5.3 km)

This section starts at the east end of a series of very steep cliffs and rocky slopes at the base of Creag Dearg which are followed west and north west past occasional small, exposed bays around the flanks of Ben Mór Coigach to a point 700m west of Geodha Mór where a narrow coastal terrace begins.

- Map 4: *Geodha Mór to Badenscallie* (7.1 km)

This section starts at a point where the steep slopes of Ben Mór Coigach flatten off into an undulating coastal terrace flanked by rock platforms and low cliffs, interspersed with pebble beaches in small, open bays. The terrace continues westwards to the rocky headland of Rubha Dubh Ard, and continues beyond this point in a general north westerly direction to the start of

Badenscallie Bay, passing a small sandy beach in the mouth of the Allt Ach a' Bhraighe at Acheninver.

- Map 5: *Badenscallie to Polbain* (7.9 km)

This section starts at the south end of a pebble beach in Badenscallie Bay, follows a coastal terrace around a low rocky headland into a wide, sheltered pebble beach at Polglass to the north. The coastline curves to the west past the blocked mouth of a marshy loch, around the rocky promontory of Rubha Dùnan, returning to the east before continuing along the coastal terrace in a north westerly orientation, primarily following pebble beaches and rock platforms. At Badentarbat Bay the terrace swings west along rock platforms and low cliffs to Polbain.

- Map 6: *Polbain to Reiff Bay* (10.8 km)

This section starts at Polbain and follows an undulating coastal terrace westwards along small rocky headlands interspersed with pebble beaches to the mouth of Caolas Eilean Ristol, a sheltered channel between the mainland and Isle Ristol. The East side of this channel is followed northwards around the base of the steep hill of Meall Dearg, around the wide, enclosed harbour of Old Dorney Bay to Alltan Dubh. At this point the coast resumes a north westerly orientation along a peat covered terrace flanked by low cliffs and rock platforms to the steep sided inlet of Geodha na Glaic Bàine at the southern end of Reiff Bay.

- Map 7: *Reiff to Rubha Dubh* (15.8 km)

This section starts at the south end of Reiff township, and follows sand and pebble beaches west around Reiff Bay, circumnavigating the edge of the almost entirely enclosed Loch of Reiff, before following steep cliffs north around the exposed headland of Roinn a' Mhill to the enclosed bay of Camas Eilean Ghlais. A very exposed stretch of steep cliffs is followed north and north east along wide rock platforms and boulder beaches to Rubha Còigeach. The coast then follows steep, high slopes and cliffs along rock platforms and boulder beaches to the small sea stack of Rubha Dubh.

- Map 8: *Rubha Dubh to Garvie Bay* (15.1 km)

This section starts at the small sea stack of Rubha Dubh and follows steep, high slopes and cliffs south east along rock platforms and boulder beaches to the long, sheltered estuary of Achnahaird Bay. The west side of Achnahaird Bay is followed encompassing the intertidal sands, salt marsh and adjacent dune system to the Allt Loch Raa which is followed around the east side of the bay along pebble beaches, then sloping rock slabs to Rubha Beag. An indented section of low cliffs is followed to the east along rock platforms, then past the tombolo of Rubh' a' Choin, to follow a series of rock platforms interspersed with storm beaches south to the outlet of the River Garvie.

- Map 9: *Garvie Bay to Lochan Sàl* (8.4 km)

This section starts at the River Garvie and follows a section of steep, low cliffs and rock platforms to sheltered pebble beaches in Lag na Saille. The coast then follows very steep, rocky slopes, occasional cliffs and rock platforms around the headland of Rubha na Mòine to the pebble beaches of Polly Bay. Steep rocky slopes and rock platforms continue to the north around the headland of Rubha Phollaidh and into the deep, sheltered fjord at Lochan Sàl.

- Map 10: *Lochan Sàl to Loch Kirkaig* (16.5 km)

This section starts at north side of the mouth of Lochan Sàl and follows an extremely complex, indented coastline to the north and north west, past the sheltered bay of Loch an Eisg-Brachaidh, to the headland of Rubha na Brèige, before following the south shore of Loch Kirkaig east to the mouth of the River Kirkaig. The coast edge comprises steep, rocky and wooded slopes flanked by rock platforms and occasional cliffs along the extent of this section, with the occurrence pebble beaches restricted to Loch an Eisg-Brachaidh.



- Map 11: *Loch Kirkaig to Lochinver* (13.2 km)

This section starts at the mouth of the River Kirkaig at Inverkirkaig and follows the head of Loch Kirkaig along a wide pebble and sand intertidal flat before following the north side of the loch west and north west along steep, rocky slopes, occasional cliffs and rock platforms past occasional narrow inlets to the headland of Kirkaig Point. The South shore of Loch Inver is followed under similar topography to the east, past pebble beaches in the enclosed bays at Badnaban, Strathan, and Lady Constance Bay to Aird Ghlas at the entrance to Lochinver harbour. The recently constructed harbour walls and piers of Lochinver are followed to the tidal limit of the Culag River where the study area ends.

### 1.5 Previous Archaeological Research

Prior to 1994 no previous systematic archaeological research had been conducted in the study area, though limited field survey had been undertaken within the wider study region (Long 1995, 7-8). The small number of recorded sites were the result of casual recording and reports from the general public. The eroding dune system of Achnahaird (NC 01 SW 2) has been the subject of attention from various enthusiastic amateur archaeologists, and has been monitored on an informal basis since 1989 (*Ibid.*, 4-6).

In 1994-95 however two systematic archaeological investigations directly relevant to the study were conducted. Firstly the RCAHMS conducted an afforestation land survey (ALS) of the Achiltibuie area, specifically the Coigach peninsula west of easting NC 205 (Rubha Lag na Saille to Achduart) (Piers Dixon, pers. comm. 1996). The details of the field survey have not been published to date, however the basic data was accessible to the project team prior to the start of the fieldwork. The survey recorded a total of 585 individual structures (e.g. buildings, enclosures, burnt mounds and burial cairns) and mapped a large number of landscape elements (e.g. field boundaries, lazy bed cultivation plots and clearance cairns) on a series of 1:10,000 mapsheets. Detailed mapping of selected landscapes and structures was conducted at scales up to 1:100, including Building 2 at Achnahaird Sands (NC 01 SW 2), Achnahaird dun (NC 01 SW 3) and the broch and post-broch complex at Achlochan (NC 00 NW 3).

The ALS methodology was based on an examination of aerial photographs and first edition (1875) Ordnance Survey coverage of the area, combined with systematic field walking in extensive areas of the peninsula. The emphasis of the survey was focused on the recording of ruinous structures and field systems, and was not totally compatible with the recording required for a coastal assessment survey, in that site condition reports and coastal geomorphology were not documented in detail (see Section 2.3.1).

A separate, but related project was conducted by the Department of Environmental Science, Stirling University in association with AOC (Scotland) Ltd on the field systems of the Badentarbat Estate (McCullagh 1995), and has produced valuable data from an individual site complex in the study area. The fieldwork involved the mapping of an extensive dyke network, soils, drainage and vegetation in the area of the pre-clearance township of Badentarbat, complemented by the collection of environmental material from a series of trial trenches (*Ibid.*, 1-2). A preliminary analysis of results has suggested a sequence of landuse dating to *ca.* 3000 BC, indicating that the pattern of field systems evident in the landscape today is the result

of evolution over a very long period of time, rather than purely an expression of the last phase of pre-clearance agricultural activity (Rod McCullagh, pers. comm. 1996).

In addition, the RCAHMS has also documented a number of farmsteads and townships in the wider region identified purely through an examination of the early Ordnance Survey coverage and the RCAHMS architectural photograph collection (Lesley Ferguson, David Easton pers. comm. 1996). This project was entirely desk-based and involved no field checking.

To date the only comparable survey in terms of similarities in study area and archaeological record conducted in northern mainland Scotland was a coastal erosion assessment of the eastern coast of Caithness (Batey 1982), situated 100km to the north east. A recent 'coastal-erosion archaeological-hazard' reconnaissance study has been conducted on the southern islands of the Outer Hebrides (Gilbertson *et al* 1996), and this has proved useful for comparative purposes.

## **2. Methodology**

### **2.1 Introduction**

In this section the research methodology and field recording techniques are briefly described. A supplementary aim of the project was to complement existing survey coverage in the area, in particular the RCAHMS afforestable land survey (ALS) (see Section 1.5), and produce a site management assessment for each site recorded in the coastal zone. The methodology employed was designed to fulfil this additional aim, and as a result involved more detailed site recording than previous coastal assessment studies.

### **2.2 Background Research**

A background study complying to the methodology specified in the Historic Scotland coastal zone survey procedures (Historic Scotland 1996, 9-11) was conducted prior to the start of fieldwork, as stipulated in the project research design (Long 1996, 3). The principal purpose of this study was to identify areas of archaeological sensitivity, and review the geological, geomorphological and historical context to facilitate the interpretation of the fieldwork results.

The ALS fieldwork results were examined closely in order to identify sites and landscape elements in the study area for which unpublished documentation existed. A full list of information sources, organisations and individuals consulted during the course of this study is located in Appendix 3. To aid collation of the results, ALS field numbers have been noted on the field record sheets where appropriate.

Prior to fieldwork the locations of all previously recorded sites were marked on a series of 1:10,000 survey maps for checking in the field. These maps were used as the basis for all fieldwork documentation<sup>1</sup>.

### **2.3 Fieldwork**

#### **2.3.1 Field Techniques**

The fieldwork was conducted by two independent teams, each consisting of 2-3 field workers to satisfy health and safety requirements associated with work in the intertidal zone (Historic Scotland 1996, 8). It is not considered necessary to document the survey logistics in detail, however some comment is provided to facilitate further studies in this area.

As stated above (Section 1.4.2) the study area consisted of the intertidal zone and a 50m wide inland zone bordering the HWM. This area was surveyed from two parallel transects, one following the HWM, the other following the first break of slope above the HWM. In this way an adequate appraisal was made of both the intertidal zone and the immediate hinterland. Major difficulties encountered included impassable sections

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<sup>1</sup> Archival note: The numbers on these maps correspond to the field record sheets, and not the published site designations in this report.

of intertidal zone (e.g. the base of steep cliffs at low tide), modern fencelines and dense vegetation, which could only be overcome by deviations in land.

Individual sites were recorded following a rapid procedure which involved defining the site boundaries and individual features, and measuring the maximum site dimensions and significant elements. A brief description of the remains, their condition and any perceived threats were noted and a site sketch plan was made in the field. In the case of site elements previously recorded by the RCAHMS as part of the ALS, the survey team plotted the extent of remains contained within the coastal zone, and recorded the site condition and threats only. This variation was made on the basis that detailed structural dimensions, description and mapping had already been conducted. In some cases additional recording was necessary as the ALS did not necessarily record all elements present at a site (e.g. occupied buildings and slipways).

Generally all significant sites were documented by a series of black and white prints, though in some cases colour prints were also taken. All sites, as well as the required geomorphological and erosion information, were plotted on the 1:10,000 survey maps.

In general each survey team completed 3-7 km of coastline in this fashion each day, depending on the nature of the terrain, accessibility of the coastline and density of archaeological features.

Two site complexes (Achnahaird Sands, (NC 01 SW 2) and Old Dorney Bay (NB 1985 9113)) were investigated in greater detail as part of a wider research program at Glasgow University. Achnahaird Sands in particular was at high risk from imminent erosion, and it was considered highly important to salvage scientific information immediately before loss through degradation of the dune system. A quantified, selective surface collection was conducted, and the sites were mapped at the scales of 1:500 and 1:100 respectively. The results of this work are summarily documented in Volume 2, and will be detailed elsewhere (Long in prep.).

The primary survey records are archived at the RCAHMS, John Sinclair House, 16 Bernard Terrace, Edinburgh EH8 9NX (0131-662-1456).

### **2.3.2 Recording Criteria**

In the report a distinction is made between discrete sites or structural complexes contained within the coastal zone (e.g. buildings, boat nausts and other landuse foci) and wider cultural landscapes (e.g. townships, field systems and cultivation), which invariably extended across considerable areas outside the coastal zone. Recording sheets were compiled for all sites in the former category, while relevant elements of the latter category were marked on a series of 1:10,000 survey maps. Site record sheets were compiled for cultural landscapes during the analysis stage, drawing additionally on early map sources and aerial photographs to define the probable extent of the remains.

The relationship between individual structural foci and the wider cultural landscape is reflected on the survey maps contained within this report (see Maps 1-11). For example, the building and boat naust at NH 2133 8955 (Map 1, Site 7.1) is considered

both a discrete site for the purposes of assessing coastal threat, but also an element of the crofting township of Morefield (Map 1, Site 7), which is less specifically affected by proximity to the coast. If there was any doubt concerning the connection between a site element and the wider cultural landscape, the element was recorded separately.

For the purposes of the survey a site was defined as any visible focus of human activity within the study area, regardless of condition, state of occupancy, scale or age. Exceptions to this definition were late 20th century structures (e.g. bungalows, chalets and harbour walls) which have been constructed as part of a documented planning process. Modern sites reflecting a traditional lifestyle or technology (e.g. boat nausts or peat cuttings) were invariably recorded. It is possible that the evidence of modern activity at these sites merely represents the latest phase of usage. Hulks were recorded irrespective of age, though only if they had been demonstrably abandoned.

### **2.3.3 Survey Conditions**

The survey was conducted in late summer during a reputedly dry year (Mike Kelly pers. comm. 1996), and very little field time was lost through bad weather conditions. The principal seasonal factor affecting the survey was the widespread occurrence of tall bracken throughout the coastal zone, which made the relocation of ALS recorded structures and unobtrusive site types difficult (e.g. Map 6, NB 1983 9101 & NB 1984 9102).

### **2.3.4 Survey Coverage and Effectiveness**

There were no significant gaps in survey coverage in the study area, and an estimated 9.3 km<sup>2</sup> of coast edge was examined along the 116 km stretch, including both the intertidal and 50m wide coastal strip. The coastal strip was significantly expanded at particular locations to encompass the full extent of some site complexes and land affected by coastal processes (e.g. Achnahaird Sands).

Given the high degree of vegetation cover, lack of ground surface exposures in the coastal strip and in some cases subsequent sediment accumulation, the percentage of ground surface meaningfully examined within the study area was very small and difficult to calculate. For this reason the results of the survey are heavily biased towards later, obtrusive structures, such as stone buildings and field boundaries, which are sufficiently upstanding above the ground surface to detect under normal conditions. The identification of prehistoric and medieval sites, particularly unobtrusive scatters of cultural material, turf or heavily reduced stone buildings was highly problematical and these sites are not adequately represented in the survey results. The principal exception to this is the site of Achnahaird Sands (NC 01 SW 2), which is well exposed in a degraded sand dune system. Other putative early structures have only been exposed as a result of potentially damaging recent land use practices, such as peat cutting (poss. hut circle, NB 1975 9131), controlled burn-offs (Old Dorney Bay, NB 1982 9113, (Frances Ross, pers. comm. 1996)) and sand excavations (Acheninver, NC 00 NW 22).

In contrast to this observation, however, the intertidal zone was largely free of ground cover, with the obvious exception of coastal sediments and seaweed. It is considered

that the archaeological record of this zone is perhaps more reflective of a longer period use than the 18th-20th centuries. Some of the more robust intertidal and coast edge features such as boat nausts, slipways and fish traps recorded may well be earlier in origin than the latest phases of activity suggest. The coast edge is indisputably a comparatively limited zone and irrespective of time this strip would constitute an obvious focus for these activities. Particularly in the case of a coastline such as this, which is considered relatively stable and has not apparently changed markedly since the 1750s (see Section 4.2.2). Shipwrecks and hulks are, by nature of their fragile fabric, less robust and susceptible to rapid disintegration by wave action and the continuous process of submersion and exposure. It is probably for this reason that the majority of recorded hulks were 20th century in date, though a possible 19th century vessel was noted at the mouth of the Ullapool River (NH 2123 8947).

### 3. Study Results

In this section the results of the field survey are presented in conjunction with the geomorphological and erosional condition studies. Each coastal section (Maps 1-11) is preceded by a brief summary and analysis, which are in turn synthesised later in this volume (Section 4). The categories used in describing the coastline are in accordance with the established procedure for coastal assessment survey in Scotland (Historic Scotland 1996, 12-18).

The maps for each section reflect three classes of information, each of which is preceded by an annotated list describing individual features and local variations or sub-sections within each coast section (1, 2, 3 etc.). The individual sub-sections are generally defined through morphological similarity, though in the case where highly complex local variation exists, a more arbitrary approach was taken for simplicity and ease of description (e.g. Achnahaird Bay, Map 8).

Each coast section is defined according to the following categories, which are defined in detail in Volume 2 (Appendix 2):

#### 1. Hinterland Geology and Coastal Geomorphology:

The following characteristics have been listed for each sub-section:

*Name, grid reference, approximate length, coastal geomorphological characteristics, coast edge type, hinterland geology and general description.*

This reflects the underlying characteristics of the coastal landscape as determined through previous geological mapping, local studies (Crofts & Mather 1972; Steers 1973; Price 1983, 1991; Johnstone & Mykura 1989) and field observations. This assists in the formulation of site predictive and long term erosional models. The following changes have been made to the established categories used in the defining these characteristics (Historic Scotland 1996) to allow for regional variations not previously observed in coastal assessment studies. These are:

- 'Peat / soil over bedrock' replaces the category 'Drift, boulder clay over visible rock'. Comparatively few substantial deposits of glacial drift were observed, though extensive peat deposits and glaciated rock exposures were common throughout the study area. This category therefore defines any soft, surficial material overlying a harder bedrock.
- 'Mainly rock platform / boulders' replaces the category 'Mainly rock platform'. Extensive water washed boulder deposits often occurred in association with rock platforms.
- 'Mainly shingle / cobbles / boulders' has been introduced to represent the predominance of coarse beach material in foreshore composition throughout the region.

Note, no section of coastline was dominated by intertidal deposits of mud, and this category was omitted from the survey maps. However, occasional intertidal mud banks do occur in areas of complex coastal geomorphology. These areas are marked on the maps in brown.

One problem associated with the geological and geomorphological aspects of the study was the lack of recent, detailed drift mapping and other studies. The latest available geological drift map series (British Geological Survey, Edinburgh, 6½":1 mile 2nd edition Ordnance Survey series 1912) was outdated both in terms of geomorphological theory and the accuracy of the mapping. Another problem was the overall lack of ground surface exposures to enable the survey team to determine the precise nature and origin of drift deposits (e.g. raised beach material as opposed to glacial till) or soils, which

will ultimately effect any interpretation of the landscape history. Given the lack of detailed, reliable information, the geomorphological aspects of this study have been based primarily on the 1912 mapping supplemented by basic coastal descriptions (Steers 1973, 67-70) and field observations where available. This situation must be considered when assessing the overall accuracy of the study.

## **2. Erosion Class:**

The following characteristics have been listed for each sub-section:

*Name, grid reference, approximate length, erosion class and general description.*

This defines the current and predicted erosional condition of the coastline, based on field observations, previous coastal assessment studies in the region (Bryan 1994; Gilbertson *et al* 1996) and geomorphological theory (Hamblin 1985; Hansom 1988). In addition all land below 10m ASL is noted to indicate areas most at risk in the event of sea level rise.

## **3. Built Heritage and Archaeology:**

The following characteristics have been listed for each site:

*Name, site type, grid reference, site condition, action required.*

This is a listing of archaeological sites and buildings inspected during the survey. Sites located in the intertidal zone and at the coast edge are numbered on the seaward side. Conversely sites located in the hinterland strip are numbered on the landward side. Sites have been divided into two principal categories;

- Extensive site complexes containing several elements both inside and outside the study area (e.g. crofting townships and field systems). These are marked as orange outlines, with dashed lines indicating undetermined boundaries.
- Individual sites and elements of site complexes (e.g. boat naust and buildings clusters) situated within the study area are marked as discrete symbols. Where these sites are more extensive than the symbol, the entire surface area is shaded (e.g. NC 01 SW 2 & NC 2010 9097).

Site dates have been indicated in rough terms of approximate centuries or periods of occupation based on current archaeological thinking, comparative research and local documentary sources. There is likely to be considerable variation to these approximate dates when more detailed studies are undertaken (e.g. Badentarbat field systems; McCullagh 1995).

Site descriptions, dimensions and more detailed recommendations are contained in Volume 2 of this report (Appendix 1).





## 4. Analysis

### 4.1 Introduction

In this section the results of the fieldwork are synthesised and preliminary findings concerning the erosional history of the coastline and regional settlement are discussed. It is important to state at this point that the survey has been a rapid assessment based on accessible sources of data which **vary in quality**, and as such any conclusions must be considered tentative suggestions **rather than firm judgements**. Future studies with a more detailed or specialised approach **may well** arrive at different conclusions.

### 4.2 Erosional Condition

In this section the contribution of the **local geology** and geomorphological processes on the erosional condition and its **potential effect** on the future management of the built heritage are synthesised and discussed.

#### 4.2.1 Survey Results

The results of the survey clearly indicate that erosion is the dominant process active in the study area (Table 1). A discussion of these results is located later in the report (Section 4.2.3).

<i>Coastal measurements in km</i>								
<i>Survey Map</i>	<i>Definitely Accreting</i>	<i>Accreting or stable</i>	<i>Stable</i>	<i>Eroding or stable</i>	<i>Definitely eroding</i>	<i>Both accreting and eroding</i>	<i>Total</i>	<i>Land below 10m ASL<sup>3</sup></i>
1	0.00	0.68	1.32	3.98	1.02	0.00	7.00	0.2 km <sup>2</sup>
2	0.00	0.46	2.70	2.1	0.00	5.10	10.36	1.0 km <sup>2</sup>
3	0.00	0.00	0.00	5.34	0.00	0.00	5.34	< 0.1 km <sup>2</sup>
4	0.00	0.00	0.80	6.28	0.00	0.00	7.08	0.2 km <sup>2</sup>
5	0.00	0.00	2.46	4.78	0.70	0.00	7.94	0.8 km <sup>2</sup>
6	0.00	0.42	3.12	7.28	0.00	0.00	10.82	0.1 km <sup>2</sup>
7	0.00	0.00	2.62	7.02	4.22	1.92	15.78	0.2 km <sup>2</sup>
8	0.00	0.00	1.22	7.54	2.74	3.64	15.14	1.2 km <sup>2</sup>
9	0.00	0.00	1.38	6.30	0.00	0.72	8.40	0.5 km <sup>2</sup>
10	0.00	0.00	3.03	12.20	1.30	0.00	16.53	0.2 km <sup>2</sup>
11	0.00	0.00	1.88	9.56	0.00	1.72	13.16	0.3 km <sup>2</sup>
Total	0.00	1.56	20.53	70.49	9.98	13.10	115.66	4.8 km <sup>2</sup>
%	0.00	1.3	17.9	60.9	8.6	11.3	100	

Table 1: *Analysis of Erosional Character by Survey Map.*

<sup>3</sup> Note this figure includes all non-tidal land below 10m ASL, regardless of proximity to the coast edge.

In general the coastline was considered to be either stable or eroding (87.4%) with a negligible rate of regression. This state was accentuated by variations in the degree of exposure and bedrock resistance. There was very little evidence of active accretion (1.3%), and this was entirely represented by the development of small spits at river mouths. In complex estuarine environments (11.3%) both accretion and erosion was occurring, which is effectively amounting to a superficially stable situation, though minor coast edge erosion was frequently occurring to surrounding drift deposits. Approximately 4.8km<sup>2</sup> of the hinterland is situated below 10m ASL, and much of this is located in a few extensive river valleys (e.g. Strath Kanaire). The majority of the hinterland is composed of steep rocky hills, which compared to lowland areas is not seriously threatened by the prospect of marine transgression.

#### 4.2.2 Potential Impact on the Built Environment

In the following section the potential affects of the specific categories defined by Historic Scotland as threats to the archaeology and built heritage of the coastal zone (Ashmore 1994, 6-9) are addressed in relation to the study area.

##### 4.2.2.1 Sea Level Change

The study area contains ample evidence of a post-glacial rise in relative sea level, notably the unmistakable underlying form of a drowned, glaciated landscape. This inundation has been followed by a series of partial drops in relative sea level caused by isostatic uplift, as represented by the frequent occurrence of raised beaches of varying height.

A comparison between the current coastline and 18th century maps of the area indicates that very little change has occurred to the coastline during the intervening period (cf. Murdoch Mackenzie's coastal survey; 1755, and Peter May's map of the Barony of Coigach; 1756). This has generally been corroborated by field observations, though in two estuarine locations evidence of recent tidal incursion was observed. At Achnahair Bay two sections of stone and turf dyke (NC 2018 2127, Plates 11 & 13) are now located below the HWM, and at the head of the River Kanaire Estuary (Map 2) a causeway had been recently constructed to prevent inundation of adjacent low lying land. At Loch Kirkaig (Map 10), another inlet with estuarine characteristics, erosion to coast edge deposits was observed on the north shore, further illustrating this effect.

It is not clear whether these examples represent regional trends or merely the effects of local factors within estuarine environments, however they do illustrate the vulnerability of much of the cultural landscape in this region. Approximately 75% of recorded sites and most archaeologically sensitive areas were either wholly or partially located below 10m ASL. The area has not received any detailed geomorphological studies (Price 1983, 164), and for this reason it is difficult to conclusively determine the current trend in sea level fluctuation. It is possible the rate of eustatic sea level rise is currently either matched or outstripped by isostatic uplift as raised beach deposits were generally observed to be intact, with few indications of active erosion or inundation. Therefore it is probably safe to conclude that relative sea level is fairly constant, and that with the exception of certain estuarine situations

which characteristically have high tidal ranges (Hansom 1988, 17-20), the trend of slow land surface re-emergence is probably continuing.

#### 4.2.2.2 Erosional Potential of the Sea

In general the coastline is sheltered from the full effects of longshore wave activity by a group of offshore islands (The **Summer Isles**), however some exposed headlands do display clear evidence of mechanical erosion. In general the underlying bedrock is highly resistant to erosion, though substantial raised beach deposits are located throughout the study area which would be highly vulnerable to concerted wave activity under adverse climatic conditions. These deposits are often located in relatively exposed situations, such as the densely settled Achiltibuie / Badenscallie area (Map 5). In this area several archaeological sites are located along the coast edge. In particular, a structure at Port Allt a' Ruistéal (NC 2019 9090) (Plate 9), is currently collapsing as a result of wave erosion. Unfortunately there have been no detailed geomorphological studies into wave or tidal behaviour in this area (Bryan 1994, 3.1-3.5), and so the full extent of this potential problem is difficult to assess. In particular, the normal limit of the wave effected zone under storm conditions and the documented effects of extreme events on the coast edge are not known.

#### 4.2.2.3 Stability of Fragile Coastal Dune Systems

Achnahaird Sands (Map 8) comprises the only coastal dune system located in the study area. A small quantity of blown sand also occurs above HWM at Acheninver (Map 4), but there is no evidence of dune or machair development. Both these areas contain disturbed archaeological deposits, though the disturbance at Acheninver is purely a result of artificial sand extraction, rather than natural processes. Elsewhere occasional exposures of sand exist in the intertidal zone, but no significant deposits have formed inland.

Achnahaird Sands (Crofts & Mather 1972) has experienced ongoing dune disturbance in the form of point erosion, rabbit burrowing, livestock trampling, and human interference. In particular, excessive erosion is occurring at the southern end of the dune system. Here the back dunes have been destabilised and dispersed by wind action, revealing an underlying palaeosol and structural complex dating to the 16th / 17th centuries and earlier. Behind this zone a machair surface is also actively receding across a scarp 1-2m in height. In the absence of a detailed geomorphological study the cause of this erosion is as uncertain, but the situation has definitely been worsened by destabilisation caused by rabbit burrows and the use of a gully in the dunes as a stock track since the 1960s.

#### 4.2.2.4 Human Impacts

Human impacts on the coastal zone in the study area take four principal forms; residential development, coastal defences or harbour facilities, tourist visitation and rural industrial activity. The affects of these impacts on the archaeological record of the coastal zone in the Minch area have been briefly assessed by Bryan (1994, 23.2-23.4). These will be dealt with separately in relation to the study area as follows:

1. *Residential development:-* there are a number of locations where recently constructed tourist facilities (e.g. caravan and chalet parks) were observed during the study, in particular in the vicinity

of established settlements (e.g. Ardair, Inverkirkaig and Strathan). In addition, the recent excavation of building foundations was noted on land north west of the Ullapool River, effectively extending the modern settlement of Morefield.

2. *Coastal defences and harbour facilities*:- Lochinver harbour has been substantially enlarged in recent years with the construction of new piers, roadway and harbour defences. An associated complex of new quarries has also been developed at Aird Ghlas at the mouth of the harbour. No other harbour related construction was noted, though occasional small, revetment walls, causeways and gabions adjacent to private houses and farmland indicate the prevalence of unofficial, small scale coastal defences throughout the area. Occasionally makeshift solutions had been employed to control small, isolated sections of eroding shoreline (e.g. concrete blocks at Lùib na Mór-choille, Map 1 or Port na Bà, Map 11; Plate 10).
3. *Tourist visitation*: this impact was primarily present at Achnahaird Sands (NC 01 SW 2), where an adjacent caravan park has encouraged a large seasonal population into a fragile dune system containing significant archaeological deposits.
4. *Rural industrial activity*: these consist of salmon farm facilities, coastal agricultural activities (e.g. grazing and cultivation) and localised quarrying activities. Overall the affects of these activities were minor, though consistently present throughout all the inhabited parts of the study area. No particular incidence stands out as being a serious threat to the archaeological record, though the clearly the cumulative effect of these processes will cause site degradation in the long term..

Except where discussed in individual site entries (Sections 5.1 & 5.2), it is clear that the archaeological record of this region is not badly affected by major developments or human interference, though the isolation of the area has tended to create a situation where it is difficult to monitor activities likely to cause disturbance. It is considered that the number of detailed surveys conducted in recent years will serve to highlight the archaeology of the region, and facilitate the site management and planning process.

#### 4.2.3 Discussion

The overall geological and geomorphological characteristics of the study area indicate a slowly developing erosional landscape in a relatively early stage of evolution. The process of glaciation has defined the topography and morphology of the region and the subsequent drowning of the landscape in the postglacial period has in essence emphasised this underlying form, rather than creating a coast edge with an entirely different character. This is a result of the relatively recent occurrence of this marine transgression (ca. 6000 bp; Price 1983, 164) and the high degree of resistance in the dominant local bedrocks, which primarily comprised Torridonian Group sedimentary rocks in the central and southern sections (Johnstone & Mykura 1989, 3-41) and Lewisian gneiss in the north of the study area (*Ibid.* 17-18).

These two rock types have created coastlines with a distinctly different character, however both do display similarities; for instance, the overall rarity of major coastal cliffs and wide wave cut platforms, weak wave notch development and the prevalence of sub-aerial weathering processes actively affecting the underlying glacial landforms. The resulting coastal landforms are characterised by glacially smoothed surfaces or scree slopes with low, sloping rock platforms or shelves at sea level. Strong coastal cliff development displaying evidence of bedrock failure is restricted to exposed

headlands (e.g. Rubha Còigeach) and offshore islands (Hamblin 1985, 298), particularly in Torridonian sandstone areas.

The frequent bays and inlets situated around the coast are considered a reflection of the underlying topography, as opposed to the cumulative effects of mechanical wave action on weaknesses in the bedrock. This is supported by the strong correlation between the distribution of these bays and raised beach deposits. On a smaller scale, however, wave action has resulted in the formation of narrow, steep sided inlets (geos) and caves in exposed areas.

The faster pace of coastal erosion on the western side of Rubha Còigeach is demonstrated by the occurrence of wide wave cut platforms, sea stacks, caves, geos and steep cliffs, and the occurrence of small, eroding residual raised beach deposits on the edge of cliff tops. The occurrence of raised beach and other drift deposits (e.g. peat and glacial till) over more resistant bedrock has frequently resulted in active cliff top erosion in the form of slumping and deflation. This probably comprises a greater threat to the built heritage in the short term than the slower effects of wave action (e.g. Geodha na Glaic Bàine (NC 1970 9138), where structures and cultivation are located on the cliff edge).

Offshore islands immediately adjacent to the mainland are frequently by cobble bars or tombolos (e.g. Loch of Reiff) formed by longshore drift or under storm conditions. The presence of substantial storm bars composed of massive boulders stands as testimony to the activity of high energy waves in the past. There was little evidence of recent storm bar construction, though indications of potentially earlier storm bar development do exist. For example, at Achlochan, a broch (NC 00 NW 3) may have been constructed onto a pre-existing storm bar, which would indicate that the bar was formed before ca. 2000 BP.

It can often be problematical to determine whether a tidal cliff is a result of wave action or merely an earlier glacial outcrop which has been superficially modified the sea (e.g. the Creag Dearg / Ben Mòr Coigach coastline on Map 3). In particular, the coasts of the northern Lewisian gneiss sections (Maps 9-11) appear to be almost totally unaffected by wave action, with the exception of the formation of a small, sloping rock platform. This type of coast has been termed by Price (1991, 96) as a 'skerry' coast, and is typified by a highly fractal outline with frequent offshore islands and reefs.

The influence of isostatic uplift in the area between ca. 5,000 and 2,000 BP has resulted in the formation of raised beach deposits along coastal shelves throughout the study area (Price 1983, 182-183). It is also apparent that the process of storm bar formation was either associated with, or immediately post-dated this period. Storm bars are certainly a feature associated with the modern coast edge, and have not been observed above raised beach deposits. Active accretion is currently a very rare occurrence in the study area, and has only been observed in estuaries or at the mouths of river valleys; often these deposits have been reworked by longshore currents, sometimes forming into small spits.

The human impact on the basic form of the coastline is negligible, though clearly the coast has created a focus for activity throughout the past and into the modern period. There are very few coastal defences located in the study area and with the exception of modern harbour constructions (e.g. Lochinver), these are often small and makeshift attempts to prevent minor point erosion and / or inundation.

To summarise, the overall resistance of the underlying bedrocks in the study area has effectively set a very slow rate of regression, and consequently mechanical wave action has a negligible affect on archaeological sites at the coast edge; however, sites situated on less resistant drift deposits overlying the bedrock are susceptible to erosion in the form of sub-aerial weathering.

The widespread occurrence of stable deposits of raised beach material above the current foreshore is indicative of an overall pace of isostatic uplift that is currently matching or outpacing any eustatic rise in sea level; however, there is evidence in estuarine situations that the tidal range has increased over the past 120 years, and may be indicative of a relatively recent rise in relative sea level documented elsewhere around the British coastline (Lamb 1995, 278-279). The possibility of sustained sea level rise perhaps represents the single most serious long term erosional threat to the archaeology of the study area, much of the majority of sites in the coastal zone are situated in highly vulnerable and / or low lying locations.

### 4.3 Archaeology

In this section the results of the archaeological field survey are described, and the preliminary findings concerning site location, distribution and significance are discussed. The criteria which defined a site for the purposes of this study are stated earlier in this report (Section 2.3.2). All sites are briefly listed in their geomorphological and erosional context (Section 3), and described in greater detail in Appendix 1.

#### 4.3.1 Introduction

On conclusion of the field survey, there were 195 documented archaeological sites in the study area<sup>4</sup>. The site catalogue can be represented in the following manner;

• New sites and landscape elements recorded during the course of the survey	136
• Previously documented sites inspected (in some cases additional elements were recorded)	56
<hr/>	
<i>Sub-total</i>	192
• Less - Previously documented sites considered to be natural features (Rubha a' Chàirn, NC 01 NW 1).	1
• Plus - Previously documented sites not relocated; (probably obscured by dense ground cover)	4
<hr/>	
<i>Total</i>	195

<sup>4</sup> Shipwreck sites located in the marine zone have been excluded from the site population as it has not been possible to fully assess them at this stage.

In summary, 192 sites were inspected, one of which was rejected from the site population on the basis that as it **was clearly a natural** feature, leaving a total of 191 cultural sites. A further 4 sites **recorded by the ALS** were not relocated by the survey team; however, there are no good **grounds to reject** these structures from the site population, given the rigorous **field identification** and documentation procedure employed by the RCAHMS. As the **approximate locations** of these sites were clearly not affected by coastal processes, **this omission** will not influence the site management component of the assessment. **The total number of sites located within the coastal zone is therefore calculated at 195 individual sites or cultural landscape features.**

For reasons stated above (Section 2.3.4) the recorded site catalogue is considered a sample, rather than a reflection **of the total site population**. This is particularly in the case for evidence of prehistoric occupation **in the study area**. Furthermore, it was often highly problematic to determine **precisely what** constituted a site, and some inconsistencies may exist between individual recordings.

A single listed building (NC 00 NW 27) **and a** protected ancient monument (NC 10 SW 1) are the only scheduled sites in the **entire** study area. It would appear from the results of this survey and the published scheduling criteria (Historic Scotland 1995) that several additional sites warrant scheduling (Section 5).

A total of 5 sites situated at the coast edge are considered to be either at risk or actively eroding as a result of **coastal processes**. Furthermore, all shipwrecks / hulk sites are considered at risk due **to the vulnerability** of their material fabric to weathering and erosion, and **demonstrated exposure** to coastal processes (see Section 5 for discussion).

For analytical purposes the recorded sites are described in terms of four broad categories. Owing to the **occurrence of elements** relating to more than one different period at each site, these categories **are not considered** to be discrete. The categories are:

1. *Prehistoric sites-* defined **as sites containing demonstrable** prehistoric structural or artefactual elements, such as hut circles, **duns and burial cairns** (**ca. 5000 BC - 500 AD**).
2. *Pre-improvement sites-* defined as sites containing **elements that** are not demonstrably prehistoric in origin, but probably pre-date the period of Highland **improvements**. An approximate date range for these sites can be set at *ca.* 500 - 1760 AD, and can generally be described as MOLARS. Sites in this category were generally established prior to the mid-18th century, when the first detailed estate documentation occurred (e.g. Forfeited Estate Papers). Morphologically, these sites often do not have obvious diagnostic features that can be ascribed to a particular period. Lazy bed cultivation is considered pre-improvement in origin, though the practice undoubtedly continued into at least the 19th century.
3. *Post-improvement sites-* defined as sites containing elements which were constructed after the start of the improvement period (*ca.* 1760 AD - present date), such as stone walled fields, crofting townships, kelp kilns and sheepfolds. There is likely to be considerable overlap between pre- and post-improvement site elements, as the process of improvement was gradual and occurred at different times throughout the region.



4. *Intertidal and marine zone sites*- defined as sites containing elements within the intertidal and marine zones irrespective of time. This category contains all hulks, regardless of position in relation to the coast edge.

### 4.3.2 Prehistoric Sites

A total of 15 sites (7.7% of the site population) consisted of elements considered prehistoric in origin (Figure 2, Table 2). These are classified as follows:

<i>Site Type</i>	<i>No.</i>	<i>Period</i>	<i>Ref.</i>
Hut circles	6	Bronze / Iron Age	NC 00 SW 2, NC 00 SW 3, NB 1975 9131, NC 2023 9127, NC 2023 9128, NC 2039 9137
Duns	2	Iron Age	NC 10 SW 1, NC 01 SW 3
Vitrified Fort	1	Iron Age	NC 01 NE 1
Broch	1	Iron Age	NC 00 NW 3
Burial Cairns	2	Bronze Age ?	NC 1984 9102, NB 1970 9138
Rock Shelter	1	Mesolithic ?	NH 19 NW 1
Standing Stone	1	Bronze Age ?	NC 2065 9206
Artefact Scatter	1	Late Iron Age (1st - 5th C AD ?)	NC 01 SW 2

Table 2: *Prehistoric Sites recorded in the Study Area.*

The majority of these sites were recorded prior to the field survey, and generally consist of large, obtrusive monuments that are clearly visible in the landscape. In the absence of a well researched regional context and artefactual or scientific dating evidence, it is currently difficult to ascribe a precise interpretation or date to most of these sites. The periods defined above are based on previous research in other regions, and should be considered conjectural.

The fort, duns and brochs occupy defensive positions on rocky promontories, or in the case of Achlochan Broch (NC 00 NW 3), on a narrow storm bar between a shallow loch and the open sea. The hut circles are located on relatively flat terraces at a distance of approximately 50m from the coast edge. The only discernible concentration of prehistoric sites in the coastal zone occurs around the sheltered beach of Achnahaird Sands, where 4 sites are located. Detailed fieldwork in the hinterland of the Coigach Peninsula has demonstrated the presence of extensive upland settlement in the form of hut circles, enclosures and burnt mounds, potentially dating to the bronze or early iron age (1st - 2nd millennia BC). In the absence of detailed investigations it is impossible to date these with certainty, however the occupation of similar sites in other parts of the Highlands has been demonstrated to occur within this period.

It is uncertain at this stage what effects postglacial marine transgression have had in determining the location and subsequent survival of early prehistoric sites in this area, since no detailed investigations have been conducted. The only recorded site with

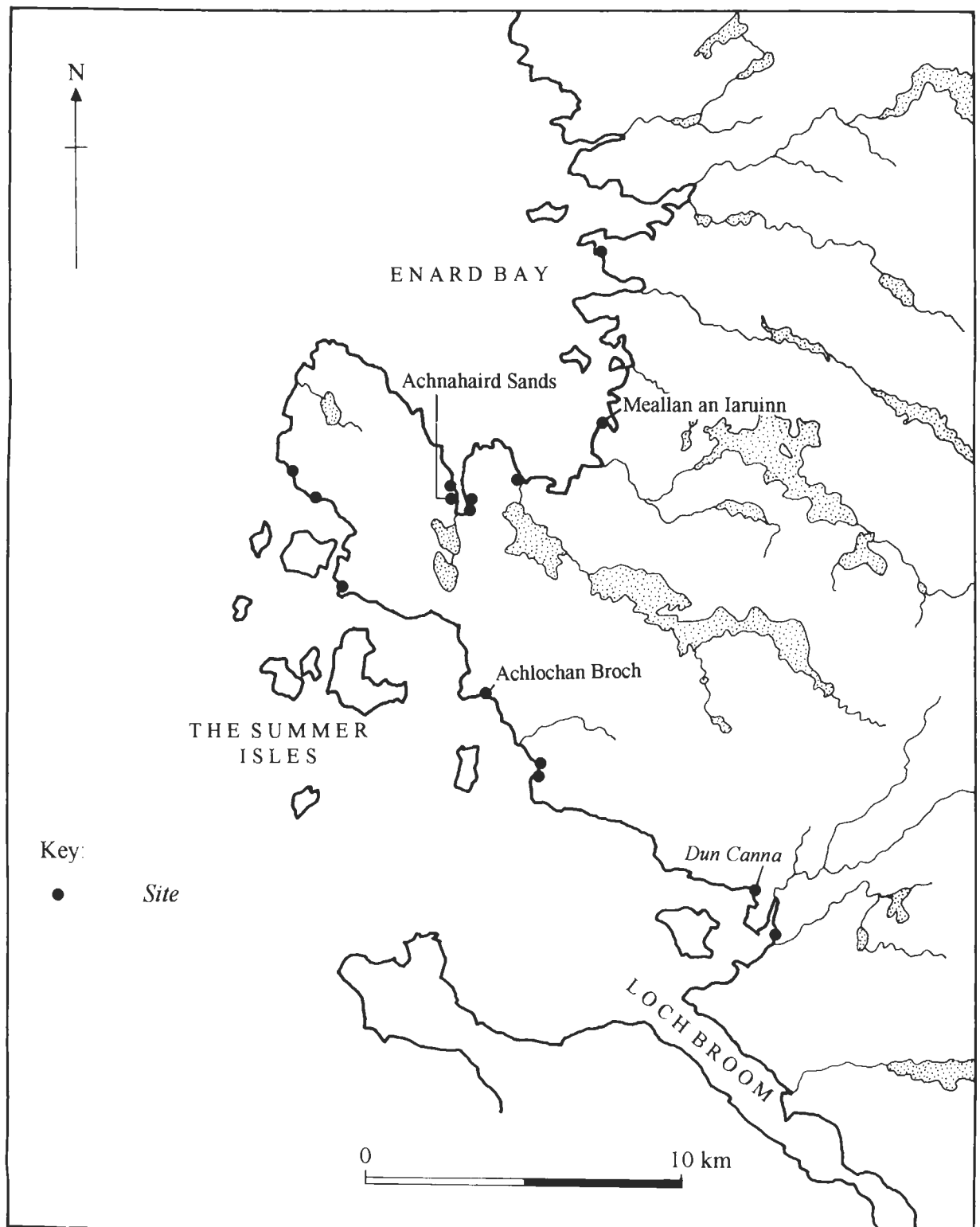


Figure 2: Distribution of Prehistoric Sites in the Study Area.

potential Mesolithic associations was a rock shelter at Buaile Ghlas (NH 19 NW 1). Comparative studies from other parts of the highlands suggests that Mesolithic settlement is clustered along the **coastline** (Price 1983, 177-178), suggesting that Holocene raised beach deposits are **archaeologically sensitive** locations for sites of this period.

It is probable that a large number of inobtrusive prehistoric sites have been obscured by later drift deposits (e.g. peat and blown sand) or vegetation. Some recorded structures during this survey were only identified as a result of recent disturbance (e.g. peat cuttings at Alltan Dubh NB 1975 9131 (Plate 4)).

### 4.3.3 Pre-Improvement Sites

A total of 55 sites (28.2% of the site population) consisted of elements considered pre-improvement in origin (Figure 3, Table 3). These can be classified as follows:

<i>Site Type</i>	<i>No.</i>	<i>Description</i>
Structures	12	These vary from subrectangular longhouses, small circular 'sheiling'-type features and other asymmetrical or crudely built structures.
Enclosures	3	Generally crude, asymmetrical and atypical stone constructions (e.g. NB 1964 9147, NC 2038 9141 & NC 2065 9205)
Fish traps / weirs	3	Documented pre-1756 salmon creaves (NC 2039 9137 & NC 01 SE 1) and a large, boulder construction similar to the 'Yairs' of Loch Broom ( NC 2111 9009) (Bathgate 1949). A further salmon fishing site was noted by Peter May in 1756 on his map of the Barony of Coigach (SRO/RHP 85395) at the mouth of the Ullapool River (NH 2122 8948), but the remains of this complex have not been positively identified in the field.
Lazy Bed cultivation/ Turf or stone dykes	37	Characteristic hand cultivated rigs and associated dyke systems.

*Table 3: Pre-improvement Sites recorded in the Study Area.*

These sites have been defined according to an assessment of various factors, including site function, form, construction method, and documentary or artefactual associations. It is probable that the use or occupation of these sites continued into the 19th century. Furthermore, it is possible that pre-improvement features survive within area occupied by later crofting townships (e.g. **Reiff**). It is clear that the survival of lazy bed cultivation is influenced by the extent of later landuse patterns, indicating that other earlier features may be obscured or **disturbed** in a similar manner.

It is possible that some sites or **site elements** in this category could date to the medieval period, however given the **overall** absence of diagnostic artefactual evidence this is difficult to demonstrate. The **principal** exception is an extensive collection of late medieval and early post-medieval (16th-17th centuries) artefactual material from Achnahaird Sands (NC 01 SW 2), which clearly indicates a medieval date for the occupation of the site.

The distribution of pre-improvement sites is very extensive, and, allowing for the influence of later disturbance, actually covers a greater frontage of coastline than the

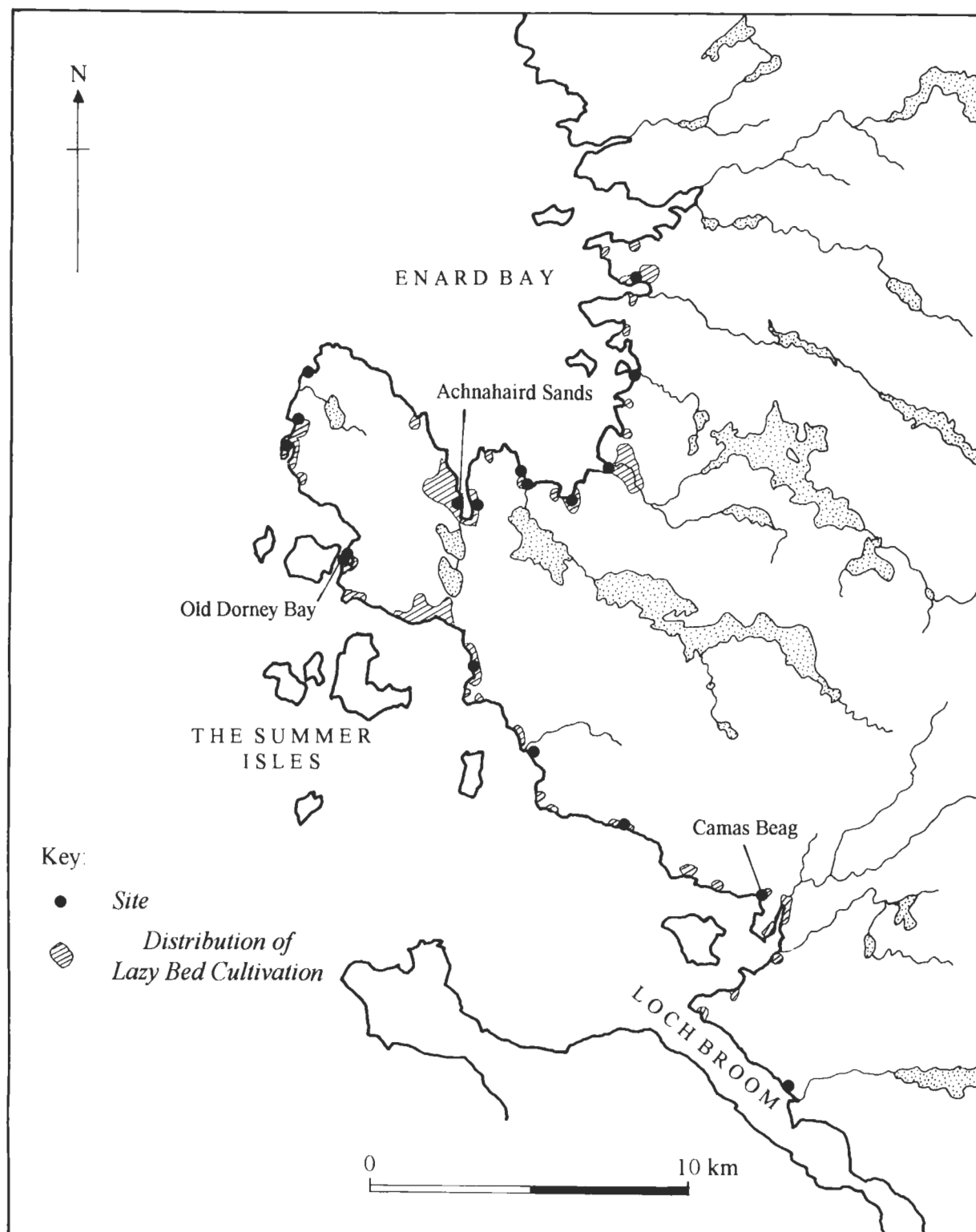


Figure 3: Distribution of Pre-improvement Sites in the Study Area.

post-improvement sites. Structural complexes are closely associated with raised beach deposits, though the distribution of **lazy bed cultivation** is very wide and plots are frequently located in highly **marginal and inaccessible** land (e.g. Creag an Airgid, NC 2096 9001 & NC 2095 9002). **These plots may** be the result of a later expansion of the communities in the late 18th / mid 19th centuries at the time of maximum population growth (Baldwin 1994, 292).

#### 4.3.4 Post-Improvement Sites

A total of 168 sites (86.1% of site population) contained elements considered post-improvement in origin (Figure 4, Table 4). The majority of these sites consist of a variety of elements (e.g. buildings, **field systems**, peat cuttings and trackways). For analytical purposes the site data has **been presented** below according to the occurrence of individual elements:

<i>Site Elements</i>	<i>No. of Sites containing each Element</i>	<i>Description</i>
Structures	88	Rectangular buildings, boat nausts, church / chapels, mills and other documented constructions
Enclosures	7	Pens or sheepfolds
Foot bridges	3	Small stone or concrete constructions
Trackways	6	Sections of embanked, enclosed or revetted trackway leading to or along the shoreline
Fords	3	River crossings consisting of piled stone embankments or cuttings
Kelp kilns / storage pits	12	Circular or rectangular pit features
Rock shelter	1	'Cave' containing 19th century artefacts
Burials	2	Burial grounds and documented burial sites
Historic middens	2	Artefact and kitchen waste dumps
Cairn	1	1st ed. Ordnance Survey trigonometric cairn
Peat cuttings	27	Areas containing any evidence of past peat cutting
Weirs	6	Concrete or stone barriers, presumably for use as fish traps
Oyster farm	1	Evidence of recent oyster farming
Quarries	2	Stone extraction sites, sometimes associated with particular buildings
Field systems	30	Stone field boundaries or revetment walls, and field clearance activity, sometimes defining the boundaries of crofting townships.

Table 4: *Post-improvement Site Elements recorded in the Study Area.*

These site elements are the most frequently occurring cultural feature present in the coastal zone. This is considered a reflection of their comparatively recent construction (many buildings and structures are still in use) and the degree to which this latest phase of land use has obscured evidence of earlier settlement.

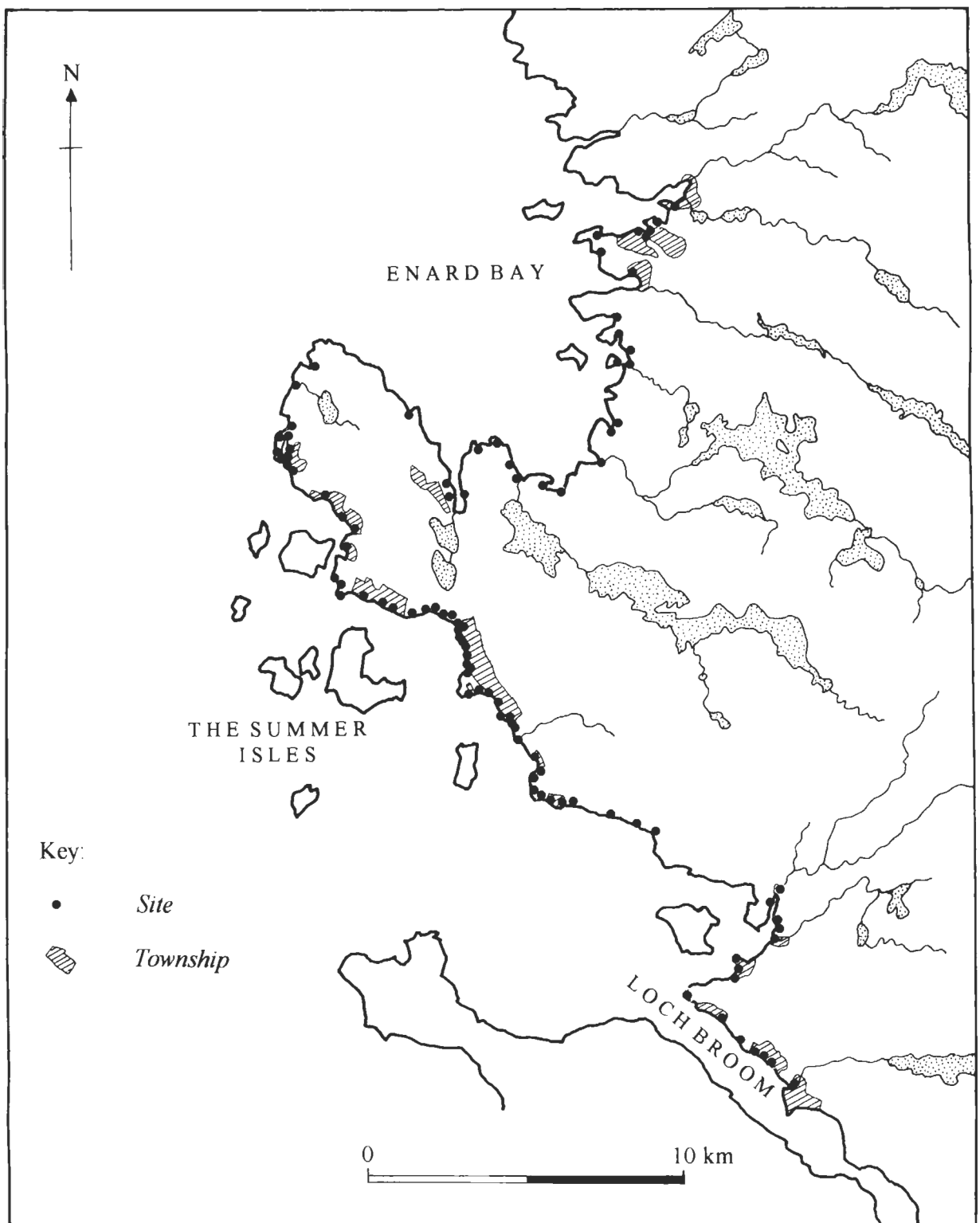


Figure 4: Distribution of Post-improvement Sites in the Study Area.

The distribution of post-improvement sites is very wide, and especially dense in the Achiltibuie / Badenscallie area. The **distribution of features** is perhaps less extensive than the pre-improvement landscape **and may indicate** the contraction of settlement in the area brought about by **improvements to the Cromatie estate** in the 19th century. Township sites have a close association with raised beach deposits and alluvial valleys, which represent the best **cultivable land** in the region. The form and distribution of this settlement pattern is corroborated by an examination of contemporary map and documentary **sources** (e.g. 1st & 2nd edition OS maps and the Statistical Accounts). It is also reasonable to assume that to a certain degree the post-improvement settlement pattern reflects elements of the pre-existing medieval and post-medieval patterns. A comparison between the settlement pattern depicted on Peter May's map of the Barony of Coigach (1756) and the crofting townships shown on the 1st edition OS map coverage of the region (1875) demonstrates that post-improvement settlement continued in the same approximate locations, though with a different mode of organisation.

#### 4.3.5 Intertidal and Marine Zone Sites

This category consists of abandoned hulks, shipwrecks and slipways (Figure 5, Table 5). These occur in the following number of locations;

<i>Site Type</i>	<i>No. sites</i>	<i>Description</i>
Hulks (or fragments)	11 (5.6%)	Generally small 20th C rowing and fishing boats abandoned at or just above the HWM. Often associated with boat nausts or slipways
Shipwrecks	2	Documented but unassessed wreck sites located in the marine zone adjacent to the study area.
Slipways	25 (12.8%)	Generally consist of cleared passageways across cobble / boulder beaches or rock platforms delineated by rows of boulders in the inter-tidal zone and at the marine zone interface. Occasionally concrete slipways were noted. Generally associated with boat naust complexes.

Table 5: *Intertidal and Marine Zone Sites recorded in the Study Area.*

In general the hulks examined were mid-late 20th century in date and of low significance, however a single vessel at the mouth of the Ullapool River (NH 2123 8947) is considered to be 19th century in origin (Plate 8). In the vicinity of this vessel a number of timber posts in the intertidal zone (NH 2122 8948), may indicate the existence of a fish trap or fence of unknown age (probably 18th - 20th century). Peter May (1756) indicates the location of a salmon fishing site in this location (SRO/RHP 85395).

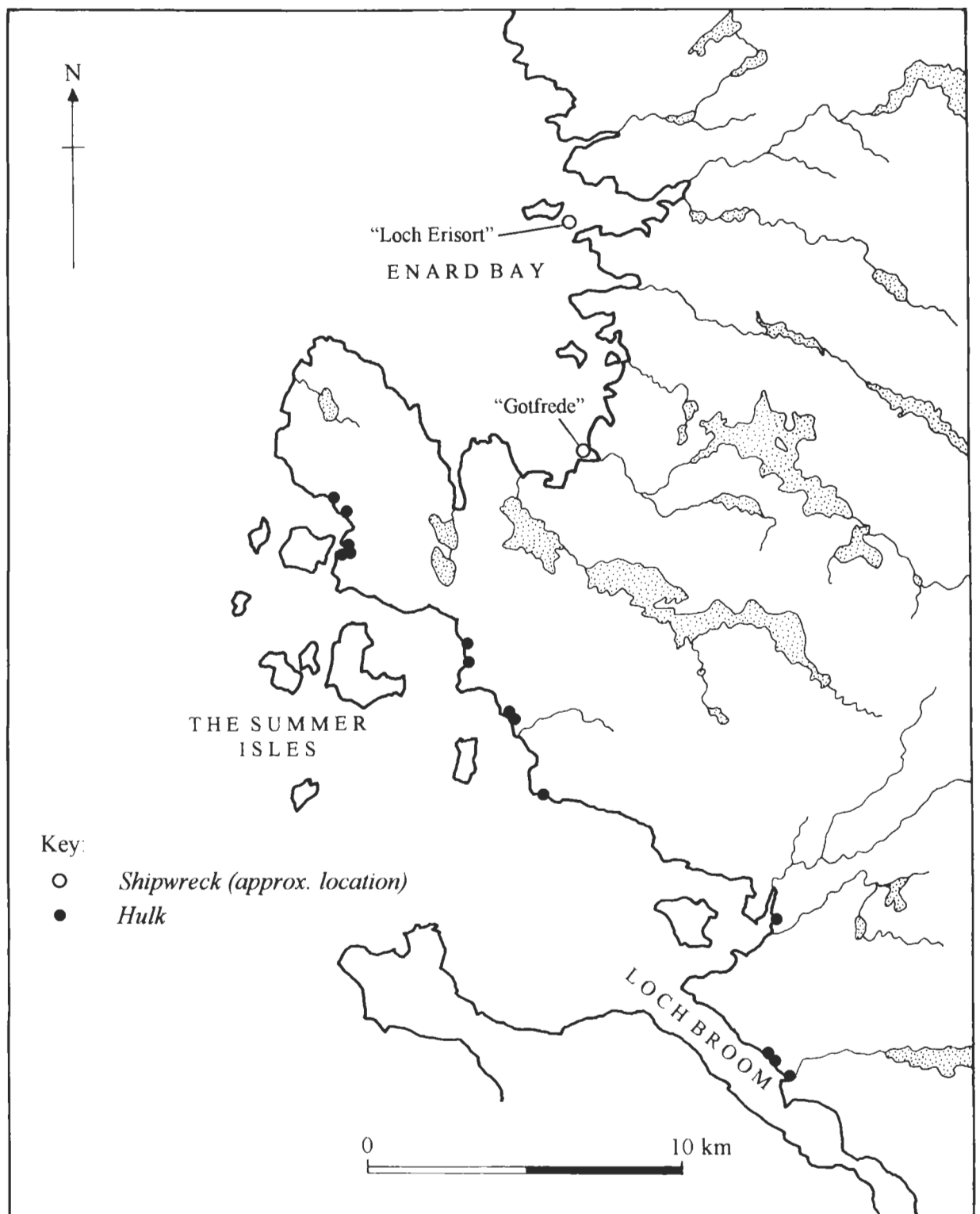


Figure 5: Distribution of Shipwrecks and Hulks in the Study Area.



## 5. Summary and Recommendations

It has been demonstrated throughout this study that in general the coastline between Ullapool and Lochinver is a slowly eroding environment, but there are few significant sites under immediate threat from coastal erosion or related processes. This is considered a reflection of the sheltered aspect of much of the coastline, the resistance of the underlying bedrock, the limited effects of sea level change, the restricted number of fragile coastal dune systems and low level of coastal development in the region. There is a very high proportion of sites situated in the study area with a specific coastal-related function (e.g. boat nausts and kelp kilns). Furthermore, it is clear that at any given point in time proximity to the sea was a highly important site location factor, allowing ease of access to a wider range of resources, the use of boat for transportation and the availability of good soils for cultivation on raised beach deposits.

It is consequently unsurprising that some sites are located in highly exposed situations on the coast edge (e.g. Achlochan Broch, NC 00 NW 3) and may be vulnerable to coastal erosion if there is a general worsening in climatic conditions, a rise in sea level or during extreme storm events. Approximately 75% of all recorded sites are located in a zone below 10m ASL, including extensive settlements and field systems occupying low lying river valleys which extend a considerable distance from the coastline (e.g. Strath Kanaird). These sites in these locations may be at risk from marine transgression.

### 5.1 Site Erosion

There was observable evidence of active erosion at various points along the coast, and 5 sites (2% of site population) are considered to be under threat from coastal erosion or related processes (Figure 6, Table 6). These are:

<i>Site location</i>	<i>Site number</i>	<i>Report ref.</i>	<i>Type</i>	<i>Threat</i>
Acheninver	NC 00 NW 2	Map 4/18	Structures	Sand and gravel excavation along the shoreline
Port Allt a' Ruistéal	NC 2019 9090	Map 5/11.9	Structure	Wave erosion
Achnahaird	NC 01 SW 3	Map 8/4	Dun	Visitation and rabbit activity
Achnahaird Sands	NC 01 SW 2, NC 2015 9131	Map 8/5	Structures, field systems & midden	Visitation, wind erosion, marine transgression, rabbit and stock activity
Port na Bà	NC 2074 9198	Map 11/1.3	Historic midden	Wave erosion

Table 6: *Eroding Sites recorded in the Study Area*

In general it is considered that the threats to these sites are minimal, and the generally low significance of the archaeology does not warrant immediate intervention. However, the site of Achnahaird Sands (NC 01 SW 2) is considered of exceptionally high significance and the threat to the exposed structures and deposits is immediate.

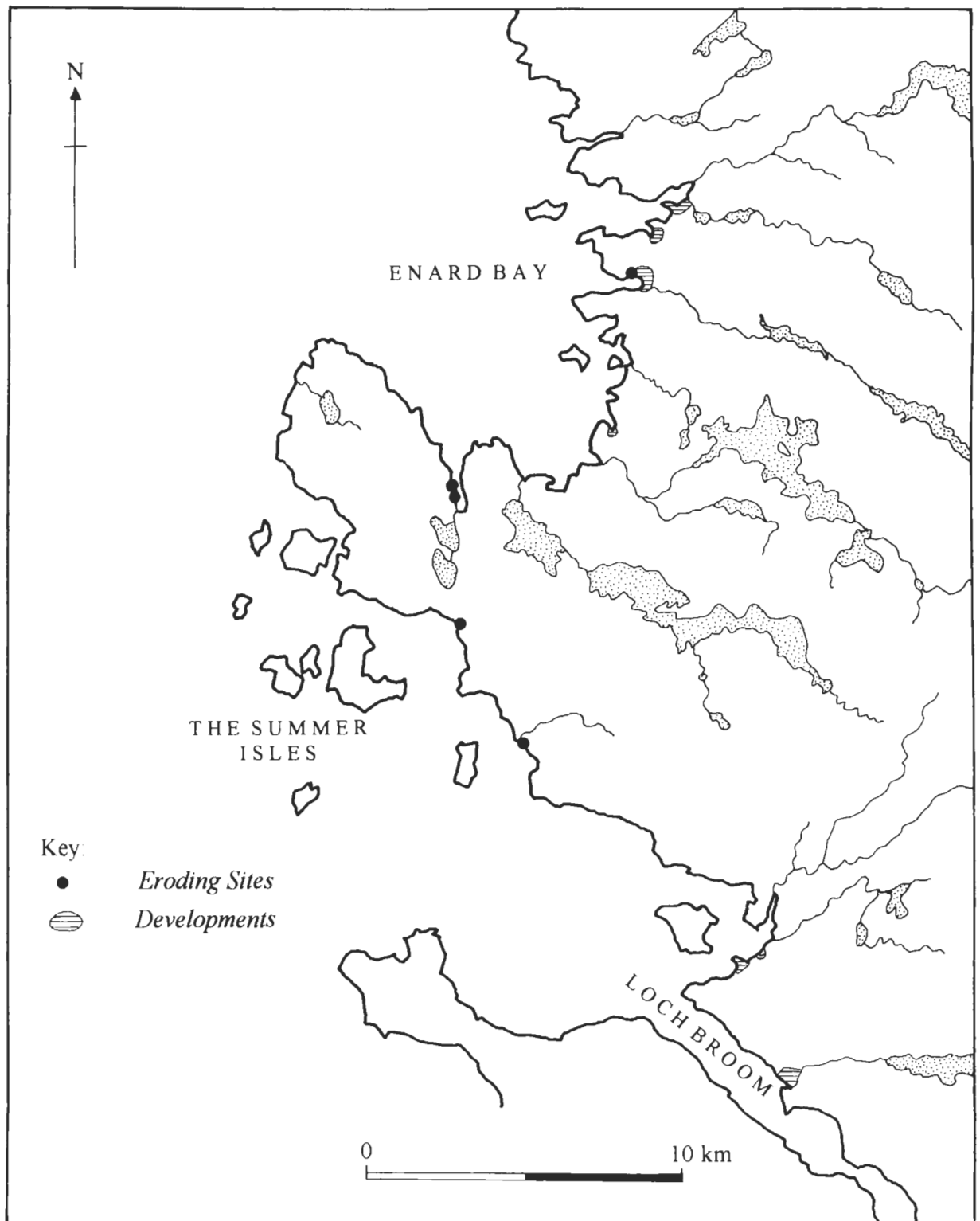


Figure 6: Distribution of eroding Sites and the Impact of Recent Developments in the Study Area.

The geomorphology and topographic setting of this site is unique throughout the study area, and the exceptional site exposure is providing a remarkable opportunity to study the late prehistoric - post-medieval occupation of the Highlands at a single site. It is recommended that an intensive site survey, environmental sampling programme and salvage excavation be conducted to retrieve scientific information prior to the imminent destruction of the site (see Appendix 1).

In addition the structure at Acheninver (NC 00 NW 2) has not yet received a full assessment, and requires sub-surface testing and / or trial trenching to determine its full significance. It is located in a fragile environment and it is possible that sand quarrying will re-commence and further disturb the structural remains.

## 5.2 Developmental Impacts

In addition, a total of 7 areas have been defined as having either experienced recent developments, have developments in progress or have further developmental potential. The list below has been provided to indicate the nature of coastal developments in the study area and thus provide a basis on which such activities can be monitored.

1. *Morefield*- Building sites are under construction on the north side of the Ullapool River. This area contains documented 18th century settlement.
2. *Ardmair Point*- Recent caravan and chalet park constructed on the site of an 18th / 19th century township and fishing depot.
3. *Poll a' Chreadha*- Recent salmon farm depot constructed on the site of lazy bed cultivation plots and a possible structure.
4. *Lochan Sàl*- Recent salmon farm complex occupying site of an 18th / 19th century building.
5. *Inverkirkaig*- Recent chalet construction in the area of an 18th / 19th century township.
6. *Strathan*- Recent chalet construction in the area of an 18th / 19th century township.
7. *Lochinver*- Recent construction of new harbour facilities.

In general very few site elements have been directly affected by land development, however much of this activity has occurred on raised beach deposits in the proximity of documented townships and associated field systems. It is suggested that these areas have acted as a focus for settlement since formation in the period 5,000 -2,000 BP, and therefore have high archaeological sensitivity.

## 5.3 General Recommendations

1. It is recommended that further work should involve an examination of the marine zone, concentrating on selected slipway and boat naust complexes in the area (e.g. Old Dorney Bay; NB 1985 9113). There was a high correlation between the occurrence of recent boat remains and these sites, and it may be possible to demonstrate an early phase of use for these features through an examination of the marine zone in conjunction with local oral research and the excavation of selected nausts. This is considered of particular value given that sites on the coast edge are especially vulnerable to mechanical wave erosion.

2. The offshore islands (e.g. The Summer Isles) require a separate investigation to establish the nature of the archaeology and built environment in these locations, and the affect of coastal processes on the natural and human environment. It is postulated that a greater degree of erosion will be observed due to their increased exposure, particularly on the western coasts. The sheltered nature of much of the mainland coast is due in part to the interruption to longshore wave activity caused by offshore islands. To date there has been no systematic survey of these islands though several important chance discoveries have been made, including early Christian sculpture (NH 09 NE 1) and a large steatite bowl (NB 90 NE 4).
3. Any future developments involving extensive ground disturbance to raised beach deposits should be monitored closely given the clear association between these locations and past human activity. This is particularly important given the current poor understanding of human occupation in the Highlands, besides the immediately evident 18th / 19th century settlement pattern.
4. In future studies of this nature in the Highlands it is recommended that the survey area be expanded to include all land below 10m ASL. This study has demonstrated the correlation between settlement and the flat, low lying land suitable for cultivation on raised beaches and in river valleys, and the degree to which this land extends inland from the immediate coastal strip. The potential risk to these sites would be high in the event of marine transgression.

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Plate 1: A typical stretch of 'skerry' coastline, looking north west to Rubha na Brèige from Rubh' a Brochaire (Map 10).



Plate 3: The sheltered harbour of Old Dornie Bay (NB 1985 9113), with several slipways and a boat naust visible in the foreground. Looking towards Isle Ristol.



Plate 2: Storm bar composed of massive boulders, defining the head of Loch of Reiff (Map 7).



Plate 4: Subcircular structure near Alltan Dubh, (NB 1975 9131) revealed through peat cutting.





Plate 5: Remains of circular kelp kiln at Rubh' a' Choin (NC 2033 9148); note heat shattered rocks inside boulder arrangement on storm beach



Plate 6: Enclosure composed of piled boulders on a storm beach, Garvie Bay (NC 2038 9141).



Plate 7: Abandoned croft at Badenscallie (NC 00 NW 56). Reputedly built below HWM to avoid eviction, this building was flooded several times while in occupation.

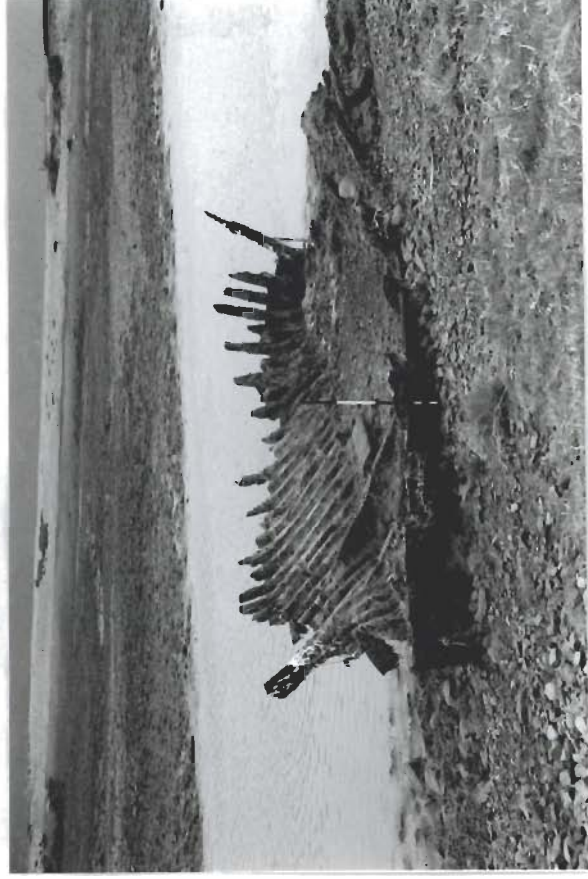


Plate 8: Hulk stranded in a tidal stretch of the Ullapool River (NH 2123 8947).





Plate 9:  
Evidence of wave erosion to a structure at Achiltibuie (NC 2019 9090). Achiltibuie Mill (NC 00 NW 27) is in the background



Plate 10:  
Evidence of wave erosion at the edge of a historic midden at Port na Bà, Inverkirkaig (NC 2074 9198)



Plate 11:  
Stone and turf dyke on the west side of Achmahaid Bay (NC 2018 9127), note erosion caused by tidal inundation

### 3.1 Ullapool to Ardmair

1. **Hinterland Geology and Coastal Geomorphology:** Loch Broom is a deep sea loch, or *fjord*, located at the mouth of a drowned, glaciated valley, characterised by a 'U'-shaped profile, steep valley sides and truncated spurs descending to sea level. The predominant bedrock along this section of coast is Torridonian sandstone. Due to the sheltered aspect of the loch side there has been only limited development of erosional landforms, though steep cliffs (<30m in height) have developed around the exposed headland of Meall Garbh at the mouth of the loch. The presence of raised beach deposits indicate a drop in relative sea level post-dating the initial flooding, resulting from the partial re-emergence of the land surface caused by isostatic uplift.

The foreshore consists predominantly of a semi-continuous shingle and cobble beach along the edge of Loch Broom, with occasional rock platforms occurring at the base of exposed headlands and truncated spurs. The shingle beach profile along the shore of the loch is very shallow and there is little evidence of storm beach development, indicating a lack of exposure to long shore wave activity. Substantial alluvial deposits are located in the mouth of the Ullapool River valley..

2. **Erosion Class:** The north east shore of Loch Broom is an essentially sheltered, stable coastal environment with minor erosion only occurring at the base of truncated spurs (e.g. Sròn a' Bhuic), on the outside of a meander bend in a tidal stretch of the Ullapool River and at the edge of raised beach deposits at Lùib na Mór-choille, which is possibly a result of human interference. There are few indications of active accretion, though coarse beach material supplied by fluvial sources is being transported east along the foreshore by long shore drift, causing small spits to develop at stream outlets. An extensive part of the hinterland is low lying and would be susceptible to increased erosion and marine inundation in the event of a change in climatic conditions or rise in sea level. Much of the coast edge is composed of soft alluvial or raised beach deposits which would be eroded very fast in this event.

The headland of Meall Garbh at the mouth of the loch, in contrast, is an active erosional environment as indicated by the development of extensive coastal cliffs, rock platforms and boulder-filled coves. The underlying bedrock is highly resistant and the rate of regression is likely to be negligible for the purposes of cultural resource management.

3. **Built Heritage and Archaeology:** The settlement pattern along this part of Loch Broom is dominated by the 18th / 19th century crofting townships of Morefield (NH 19 NW 5) and Rhue (NH 19 NW 8). Comparatively few elements of these settlements occur within the coastal zone, and most buildings and structures are located 300-400m from the coast edge. There was no definite evidence of prehistoric or medieval occupation in the coastal zone, though some field system elements in the township of Morefield are possibly earlier than the majority of the extant remains (see Peter May's map of The Barony of Coigach; SRO/ RHP85395). It was difficult to conclusively identify prehistoric and medieval site elements on the basis of a rapid assessment alone.

The later 19th and 20th century use of the coastal zone is represented by a lighthouse at Rubha Cadail (NH 2092 8974), peat cuttings on Meall Garbh (NH 2097 8978 & NH 2103 8979), quarry (NH 2108 8960) and several abandoned hulks in or immediately adjacent to the intertidal zone. One degraded wooden hulk stranded at the mouth of the Ullapool River (NH 2123 8947) is probably 19th century in date and potentially of local significance (Plate 8).

There was no indication of coastal erosion affecting the recorded sites, with the exception of natural deterioration caused by exposure to the elements and human interference (e.g stone robbing. Some field system elements (e.g. stone field boundaries and clearance cairns) may be threatened by minor coast edge erosion at Lùib na Mór-choille. The threat is very slight and the affected cultural elements are considered of low significance. There is also some risk of site disturbance related to the development of land adjoining the southern edge of Morefield (Figure 6).

### 3.1.1 Hinterland Geology and Coastal Geomorphology

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#### 1. ULLAPOOL RIVER

NH 212 894

0.6 km

*Mainly shingle beach*

*Low edge < 5m*

*Alluvial deposits / raised beach*

Fluvial deposits situated at the mouth of a tidal river valley. A spit has formed on the updrift side of the river, fed by a combination of long shore processes and alluvial deposition.

#### 2. LÙIB NA MÓR-CHOILLE

NH 211 895

1.4 km

*Mainly shingle beach*

*Low edge < 5m*

*Raised beach*

An exposed section of shingle foreshore in front of a raised beach terrace.

#### 3. SRÒN A' BHUIC

NH 210 895

0.9 km

*Mainly shingle beach with an isolated section of exposed rock platforms*

*Low edge < 5m with sections of cliff (10m)*

*Peat / soil over visible rock*

A slight headland formed by the submergence of the base of a truncated spur, flanked by shingle beaches. Low cliffs have developed at the base of the hill. The exposed rock has interrupted beach material movement along the shore of the loch

#### 4. LÙIB MORA

NH 210 896

1.2 km

*Mainly shingle beach*

*Low edge < 5m*

*Raised beach*

An exposed section of shingle foreshore in front of a raised beach terrace.

#### 5. MEALL GARBH

NH 209 897

2.5 km

Mainly rock platform / boulder with occasional cobble and boulder beaches.

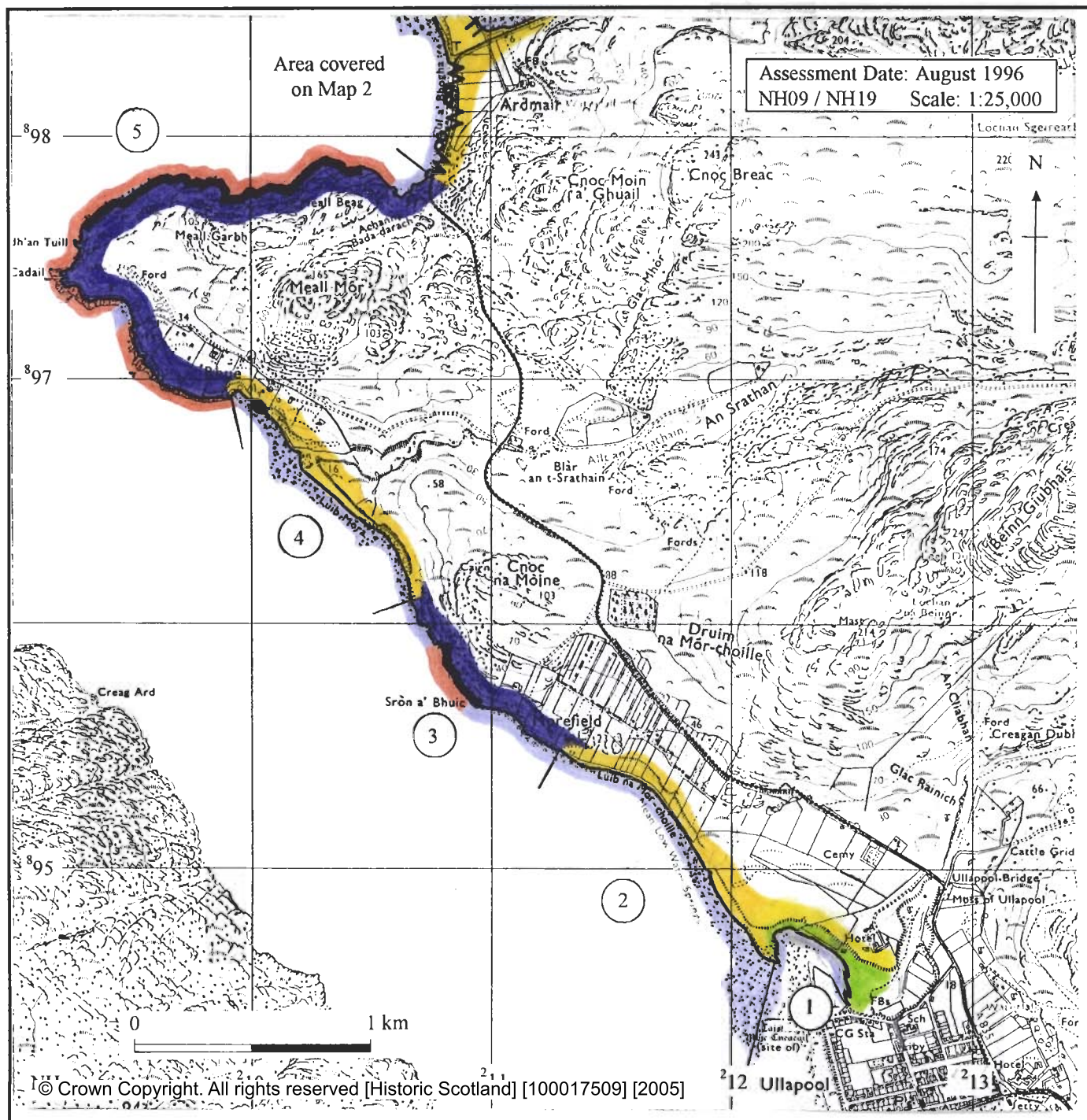
*High cliffs (>30m) to the north west, and low edge < 5m on the south.*

*Peat / soil over visible rock.*

An exposed Torridonian sandstone headland with cobble and boulder beaches in infrequent sheltered bays. Peat filled shelves occur above the shoreline on steep glaciated slopes. Steep cliffs and wave cut platforms have formed around the base of these slopes.

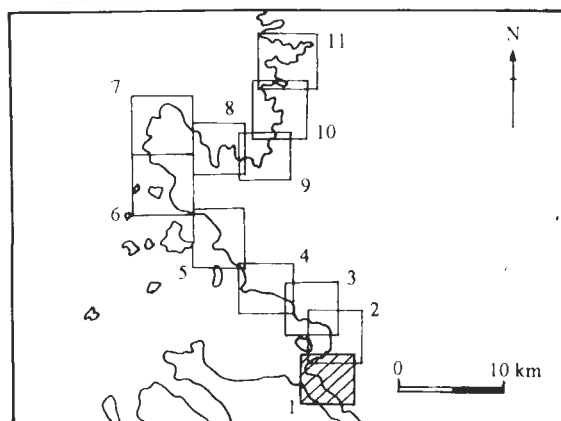
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Key:

Hinterland Geology	
Peat / soil over visible bedrock	
Raised beach and marine deposits	
Blown sand	
Alluvial deposits	
Coast Edge	
Low edge (<5m)	
Cliff (>5m)	
Man made barrier	
Storm beach	
Human disturbance	
Coastal Geomorphology	
Mainly rock platform/boulders	
Mainly shingle/cobbles/boulders	
Mainly sand	
Marsh	



### 3.1.2 Erosion Class

---

#### 1. ULLAPOOL RIVER

NH 212 894

0.6 km

##### *Definitely eroding*

The Ullapool River is gradually cutting back through prior alluvial and raised beach deposits on the outside of a tidal meander bend. Recent erosion scars are visible along the edge of a terrace above the river. Gabions have been placed at the upper reaches of the tidal stretch, presumably to prevent erosion at high tide levels or under storm conditions.

#### 2. GOB AN T-SEID

NH 212 894

0.8 km

##### *Accreting or stable*

The movement of shingle along the north east shore of Loch Broom and the deposition of fluvial deposits at the mouth of the Ullapool River have caused a small spit to develop.

#### 3. ALLT NA BEISTE

NH 211 895

0.25 km

##### *Stable*

A present shingle foreshore abuts earlier raised beach deposits to the west of the outlet of a small stream. There are no indications of either active erosion or accretion.

#### 4. LÙIB NA MÓR-CHOILLE

(EAST)

NH 211 895

0.3 km

##### *Definitely eroding*

There is evidence of minor tidal / wave erosion to raised beach deposits, in the form of vertical soil banks on the edge of the shingle foreshore at this point. It is possible that the concentration of erosion at this point is a result of a

combination of boat wash (Bryan 1994, 23.3) and the influence of the stranding of a large fishing vessel on the updrift side, consequently interfering with long shore drift (Hanson 1988, 82-83). The affects of this process on the hinterland township and field systems of Morefield (NH 19 NW 5) are considered negligible, though some attempts have been made to prevent further erosion by the placement of concrete blocks at the coast edge. This process could correct itself over time, however the erosion is concentrated at an obvious curve on the north shore of the loch and may be a reflection of a long term process.

#### 5. LÙIB NA MÓR-CHOILLE

(WEST)

NH 211 895

0.3 km

##### *Stable*

A present shingle foreshore abuts earlier raised beach deposits. There are no indications of either active erosion or accretion.

#### 6. SRÒN A' BHUIC

NH 210 895

1.2 km

##### *Eroding or stable*

Rock platforms, cliffs and pebble beaches occur across the coastal frontage of the truncated spur of a steep, rocky hill. The environment is slightly erosional, though the rate of regression is probably negligible.

#### 7. LÙIB MORA

NH 210 896

0.35 km

##### *Stable*

A present shingle foreshore abuts earlier raised beach deposits. There

are no indications of either active erosion or accretion.

#### 8. ALLT AN T-SRATHAN

NH 210 896

0.25 km

##### *Accreting or stable*

Fluvial deposition has caused a small tidal fan to occur at the mouth of a small stream.

#### 9. RHUE (EAST)

NH 209 896

0.25 km

##### *Stable*

A present shingle foreshore abuts earlier raised beach deposits. There are no indications of either active erosion or accretion.

#### 10. RHUE (CENTRAL)

NH 209 897

0.7 km

##### *Eroding or stable*

Rock platforms on the edge of a coastal terrace. The environment is slightly erosional, though the rate of regression is probably negligible.

#### 11. RHUE (WEST)

NH 209 897

0.1 km

##### *Stable*

A small enclosed bay containing a pebble beach. There are no active indications of erosion, though the beach is located in a very exposed situation.

#### 12. MEALL GARBH

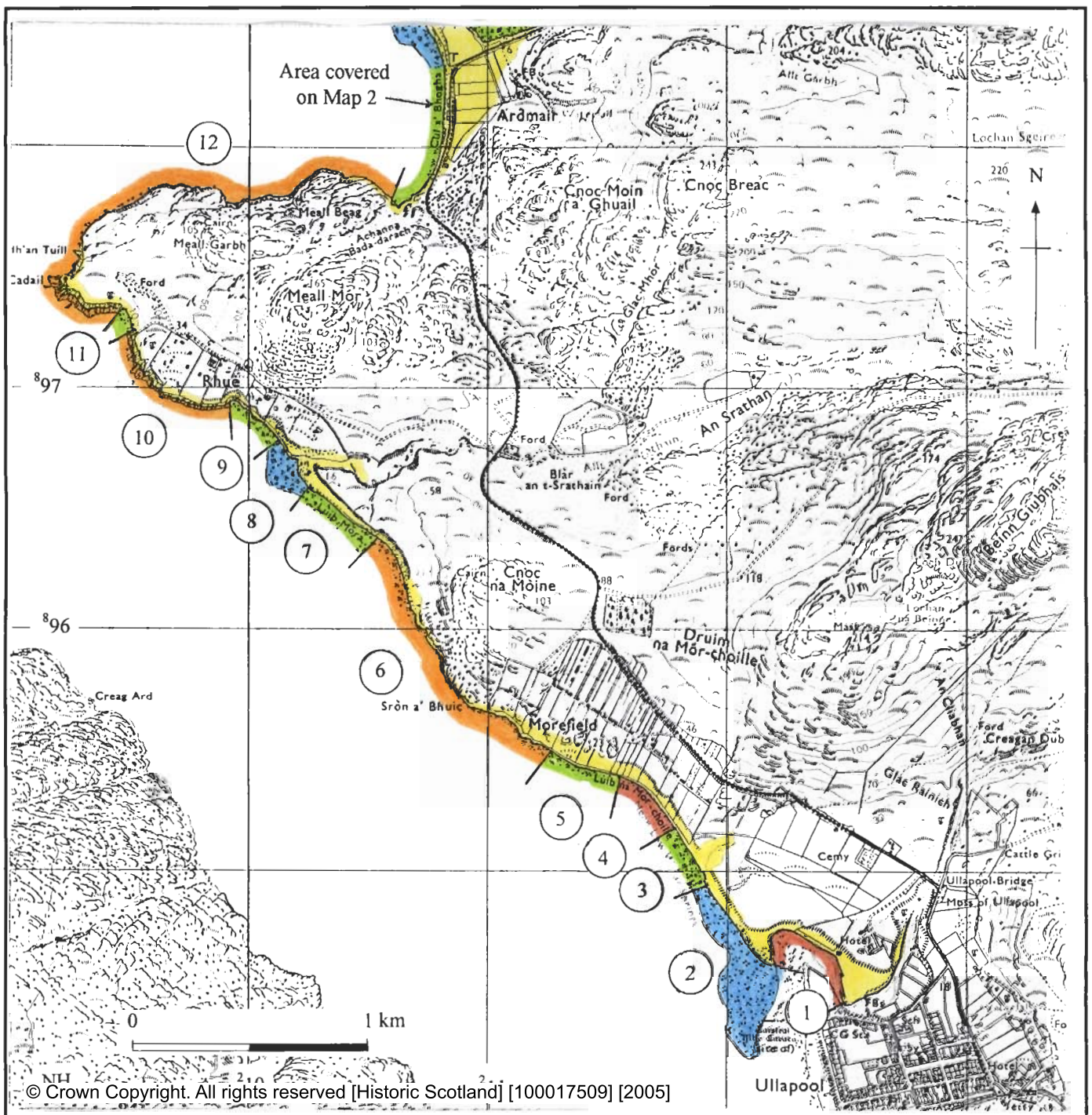
NH 210 897

1.8 km

##### *Eroding or stable*

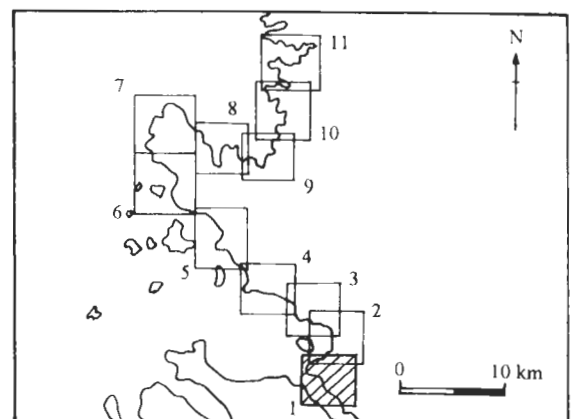
High cliffs and boulder beaches around the base of an exposed headland. The rate of erosion is considered to be very slow owing to the resistance of the bedrock.





Key:

Erosion Class	
Definitely accreting	Blue
Accreting or stable	Light Blue
Stable	Green
Eroding or stable	Orange
Definitely eroding	Red
Both accreting and eroding	Purple
Land below 10m	Yellow



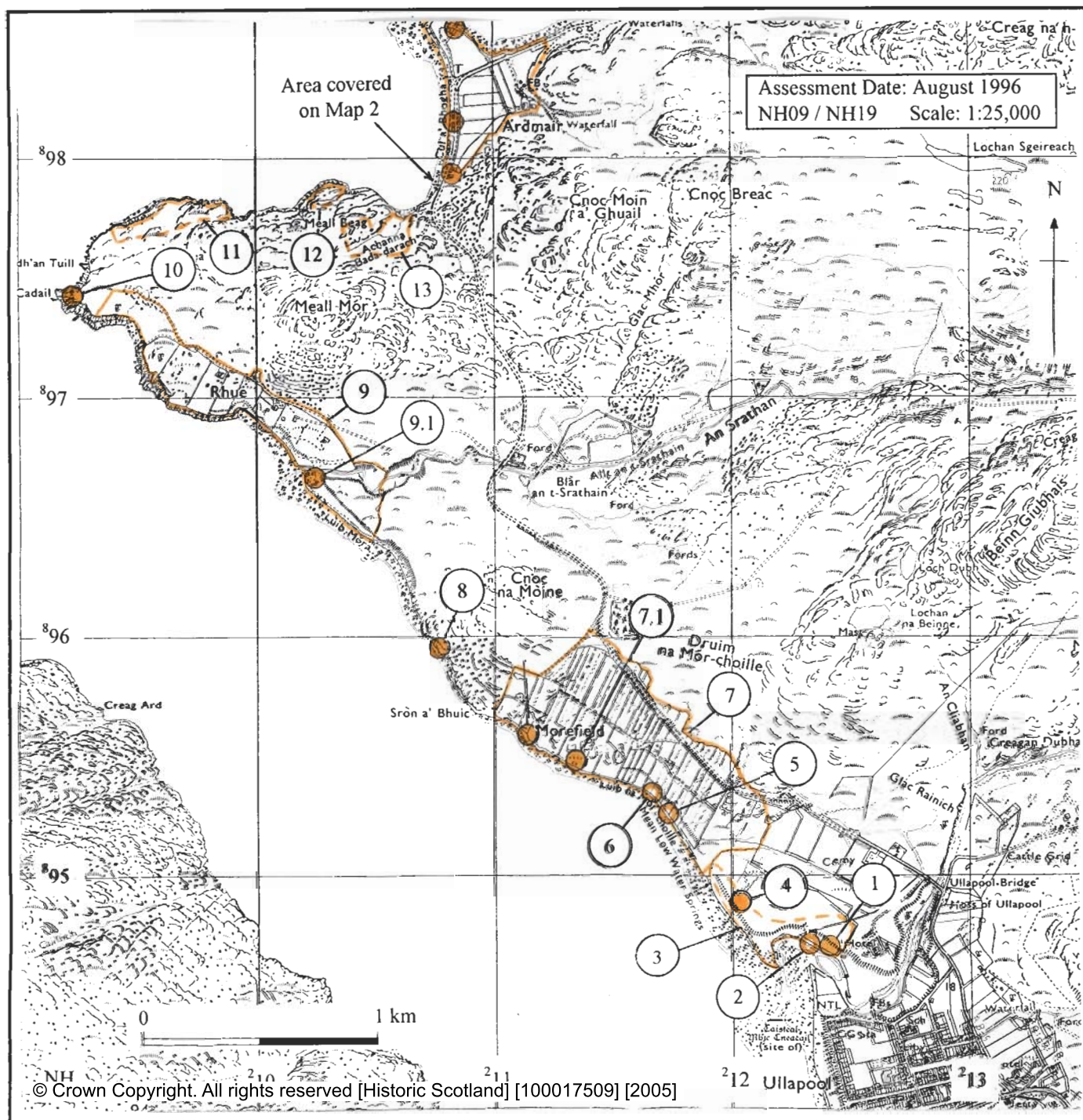
### 3.1.3 Built Heritage and Archaeology

---

1. MOREFIELD COTTAGE Building NH 2124 8947 18th-19th Century Fair Nil	Nil	16th-19th Century Fair Nil
2. ULLAPOOL RIVER Hulk NH 2123 8947 19th-20th Century Poor Survey	6. MOREFIELD Hulks NH 2116 8953 20th Century Good Nil	10. RUBHA CADAIL Lighthouse NH 2092 8974 20th Century Good Nil
3. GOB AN T-SEID Field systems, posts NH 2122 8948 18th-20th Century Fair Survey	7. MOREFIELD Township, field systems NH 19 NW 5 7.1 Building, boat naust NH 2103 8955 7.2 Boat naust NH 2111 8956 16th -20th Century Fair Nil	11. MEALL GARBH Peat cuttings NH 2097 8978 19th-20th Century Fair Nil
4. GOB AN T-SEID Circular stone features (?) NH 2120 8949 Pre-modern Fair Survey	8. CNOC NA MOINE Quarry NH 2108 8960 19th-20th Century Good Nil	12. MEALL BEAG Peat cuttings NH 2103 8979 19th-20th Century Fair Nil
5. MOREFIELD Hulks NH 2117 8952 20th Century Good	9. RHUE Township, field systems, cultivation NH 19 NW 8 9.1 Building complex NH 2102 8966	13. ACHANA BADA DARACH Cultivation NH 2106 8977 16th-19th Century Fair Nil

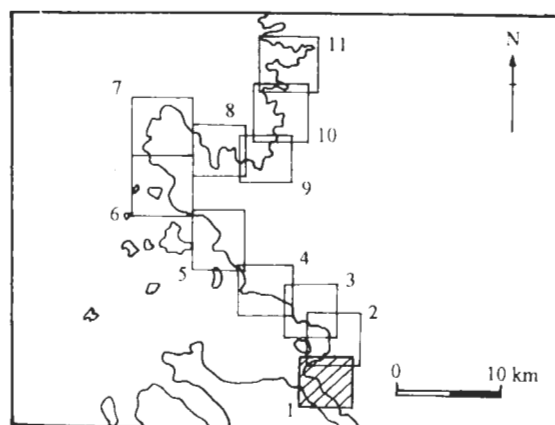
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Key:

Protected Ancient Monument	
Listed Historic Building	
Other known Ancient Monument	
Undesignated wreck	
Site complex	
Undetermined boundary	







## 3.2 Ardmail to Camas Beag

1. **Hinterland Geology and Coastal Geomorphology:** This section encompasses the estuarine mouth of a major glaciated river valley (Strath Kanaird), situated between ranges of steep, rugged hills. The predominant bedrock throughout this section is Torridonian sandstone, though most of the coast edge within the valley consists of drift deposits. The topography of the valley mouth is complex and contains a number of isolated rocky knolls and extensive raised beach deposits (Steers 1973, 70), which vary considerably in height. This clearly indicates a sequence of post-glacial sea level fluctuations covering a range of at least 10-20m, consisting of an initial rise caused by glacial melt, followed by a series of drops in relative sea level caused by subsequent isostatic uplift. Deep peat has since developed over the highest raised beach deposits and this is now being excavated on a commercial basis (e.g. Blar Mór).

Steep cliffs and rock platforms have developed around the base of glacial knolls, which now comprise a series of small headlands. In relatively sheltered bays the foreshore is primarily composed of shingle supplied by fluvial deposition and the erosion of raised beach deposits, notably forming a pronounced spit at Ardmail. In exposed locations storm beaches have developed including a tombolo at Meallan Bhuidhe.

2. **Erosion Class:** This stretch of coastline has been substantially sheltered from long shore wave activity by Isle Martin. The condition of the coast edge is generally stable in nature, though some erosion is occurring, notably at points within the Kanaird estuary and on exposed headlands. The character of the coast is heavily influenced by the outflow of the River Kanaird, which deposits a large quantity of medium grade fluvial material within the mouth of the estuary. There is little indication of active accretion except at Ardmail Point, where the confluence between the riverine and marine currents has created a spit. The extent of deposition within the estuary is limited to the formation of intertidal shingle and mud banks which show little indication of developing into permanent islands. The coast edge around the estuary is subject to minor wave erosion in places. The rate of regression is likely to be slow, however the high incidence of soft drift deposits will make this section highly vulnerable in the event of a worsening in climatic conditions.

To the north of the estuary there are a series of low rocky headlands which show signs of slow erosion in the form of cliff, rock platform and occasional boulder beach development. Between these points there are shallow bays containing shingle foreshores which show no obvious indications of erosion or accretion. However, the incidence of storm beach development along this section does indicate the potentially exposed aspect of the coastline. The steep sided, cusped formation of some of these bays suggest that the edge of the raised beach deposits behind are slowly receding through sub-aerial weathering. Much of the land in Strath Kanaird and at Ardmail Point is low lying and may be subject to marine inundation in the event of a rise in sea level. A causeway has recently been constructed to prevent inundation of a very low lying area at the head of the tidal reach of the river (NC 2120 9007). Evidence of human disturbance to the coast edge includes the construction of harbour facilities, revetment walls and a shoreline road embankments.

3. **Built Heritage and Archaeology:** The archaeology of this section is varied, and contains sites reflecting the longest period of occupation in the study area. Prehistoric sites are represented by a putative Mesolithic rock shelter (NH 19 NW 1) and a substantial dun (NC 10 SW 1) (Cover, Volume 1). An impressive fish trap (NC 2111 9009) (Plate 12) adjacent to the dun is certainly pre-modern in origin, while extensive evidence of 18th - 20th century settlement around the Kanaird estuary (e.g. Ardmail (NH 2110 8983) and South Keanachulish (NH 2120 8995)) including various buildings (many still occupied), lazy bed cultivation plots, peat cuttings, boat nausts, a ford and a hulk indicate the importance of the Kanaird valley throughout the later post-medieval period. There is little evidence of coastal erosion at specific sites, though some pre- and post improvement site elements have been disturbed by late 20th century developments, such as the construction of a salmon farm (NH 2115 8987), caravan / chalet park (NH 2109 8985) and extensive peat cutting near Camas Mòr (NC 2114 9005).

### 3.2.1 Hinterland Geology and Coastal Geomorphology

#### 1. AIRD NA H-EIGHE

NH 210 898

1.4 km

*Mainly shingle beach*

*Disturbed storm beach and man-made barriers*

*Raised beach*

A spit composed of raised beach material and recently deposited shingle defines the south eastern side of Loch Kanaird. A storm beach situated along the west side of the promontory has been modified through the construction of a superimposed road embankment. A series of retaining and harbour walls have been constructed around the north side of the promontory.

#### 2. POLL A' CHREADHA

NH 211 898

0.7 km

*Mainly shingle beach, with boulders in the north*

*Low edge < 5m and occasional cliffs (20m)*

*Mainly peat / soil over visible rock*

A shingle foreshore abuts raised beach deposits and a steep hillside to the north east of Aird na h-Eighe.

#### 3. RIVER KANAIRD ESTUARY

NH 211 899

4.1 km

*Mainly shingle beach, with some mud deposition*

*Low edge < 5m with a section of man-made barrier*

*Peat / soil over visible rock interspersed with raised beaches*

A complex area encompassing the tidal reach of the River Kanaird. At low tide extensive shingle banks with occasional mud banks are exposed. Occasional rock platforms occur around the base of small headlands at the mouth of the estuary. The majority of the coast edge comprises low grassy banks, though a man-made causeway has been constructed along the west side of the upper reach. A small tidal tributary behind the causeway has been blocked, and modified into a drain. The hinterland comprises low rocky knolls interspersed with raised beach and alluvial terraces.

#### 4. RUBHA

MEALLAIN

BHUIDHE

NH 211 899

0.7 km

*Mainly rock platform / boulder Cliffs (20m)*

*Peat / soil over visible rock*

An exposed rocky headland formed by a glaciated knoll situated on the west side of the Kanaird estuary. A shingle tombolo is situated at the west end of the section, linking a small rocky island to the mainland.

#### 5. CAMAS AN LOCHAIN

NH 211 899

0.4 km

*Mainly shingle beache*

*Storm beach*

*Raised beach*

An enclosed bay with a shingle foreshore backing onto a storm

beach in front of raised beach deposits and steep rocky slopes. The storm beach has impounded a small freshwater lochan.

#### 6. MEALLAN BUIDHE

NC 211 900

0.5 km

*Mainly rock platform / boulder Cliffs (20m)*

*Peat / soil over visible rock*

A small rocky headland formed by a glaciated knoll situated between raised beaches.

#### 7. CAMAS MÓR

NC 211 900

0.55 km

*Mainly shingle beach*

*High edge (10m)*

*Raised beach*

A wide bay backed by high grassy slopes defining the edge of raised beach deposits covered by deep peat deposits. The shingle beach is situated between small rocky headlands.

#### 8. CAMAS BEAG

NC 211 900

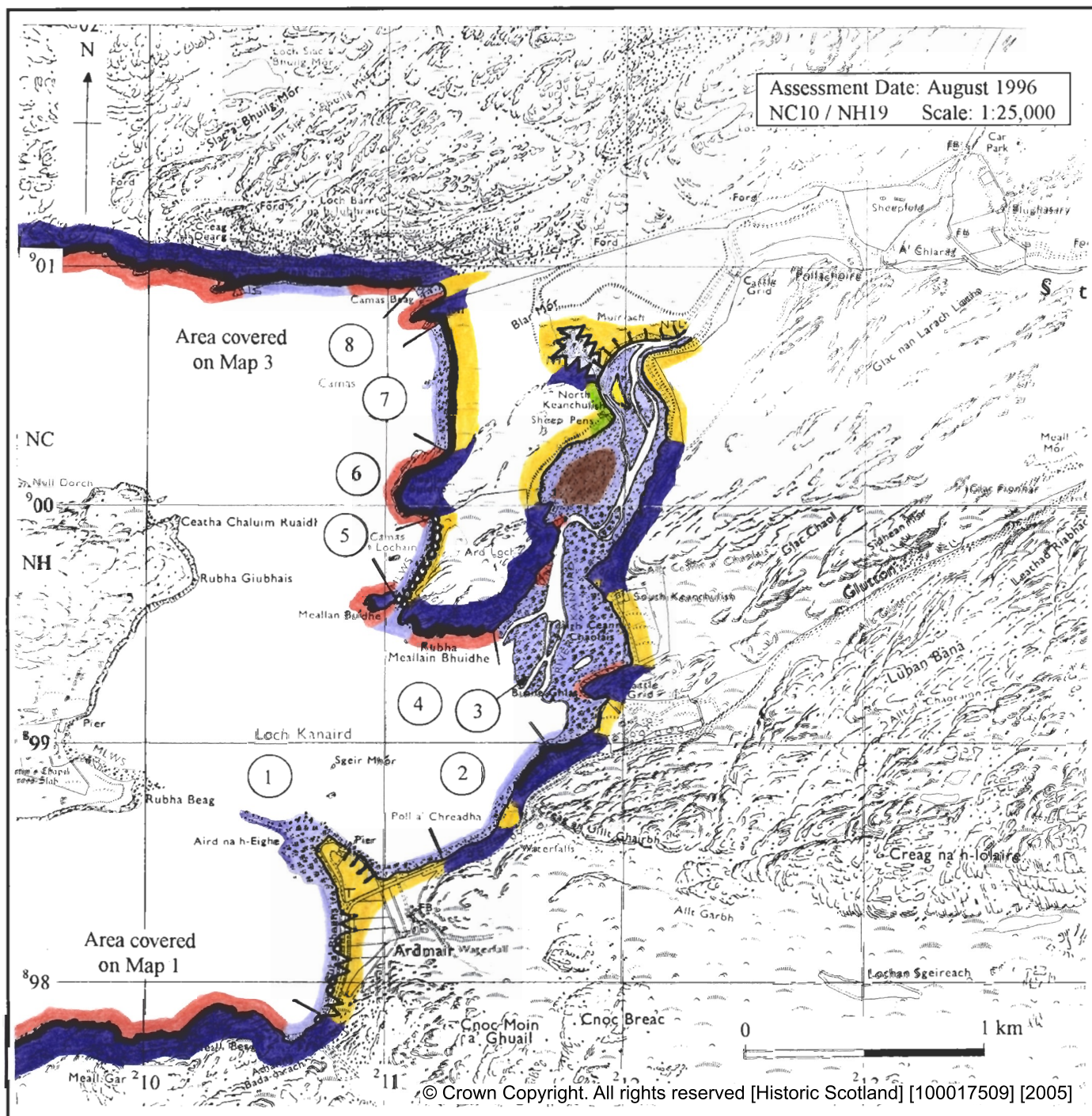
0.4 km

*Mainly rock platform / boulder with an isolated shingle beach*

*Cliffs (10m) with a low edge < 5m at the back of an enclosed bay*

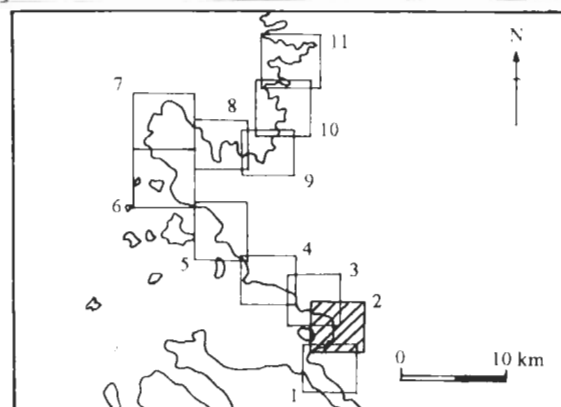
*Raised beach and peat / soil over visible rock*

A narrow rocky headland formed by a glaciated knoll enclosing an indented bay with a shingle and boulder beach.



Key:

Hinterland Geology	
Peat / soil over visible bedrock	
Raised beach and marine deposits	
Blown sand	
Alluvial deposits	
Coast Edge	
Low edge (<5m)	
Cliff (>5m)	
Man made barrier	
Storm beach	
Human disturbance	
Coastal Geomorphology	
Mainly rock platform/boulders	
Mainly shingle/cobbles/boulders	
Mainly sand	
Marsh	



### 3.2.2 Erosion Class

---

#### 1. CUL A' BHOGHA

NH 210 897

0.7 km

*Stable*

A present shingle foreshore and storm beach to the south of promontory spit of Aird na h-Eighe. There are no indications of either active erosion or accretion.

#### 2. AIRD NA H-EIGHE

NH 210 898

0.45 km

*Accreting or stable*

The deposition of shingle derived from fluvial deposits in the River Kanaird estuary and long shore drift from Cul a' Bhogha has caused a small spit to develop at Ardmail Point. The effects of the construction of a stone pier on the north side of the point are uncertain at this stage. The basic form of the spit has apparently not changed since 1756 (May's map SRO/RHP 85395).

#### 3. POLL A' CHREADHA

NH 211 898

0.9 km

*Stable*

A shingle foreshore abuts raised beach deposits on the east side of the promontory spit of Aird na h-Eighe. There are no indications of either active erosion or accretion.

#### 4. CREAG DHUBH

NH 211 898

0.2 km

*Eroding or stable*

Rock fall at the base of a steep hill has created a boulder beach in front of cliffs at the mouth of the River Kanaird estuary.

#### 5. RIVER KANAIRD ESTUARY

NH 211 899

4.1 km

*Both accreting and eroding*

A complex area dominated by active alluvial deposition in the River Kanaird estuary, and subsequent reworking of these deposits by fluvial and tidal processes. A causeway has been constructed in the upper reach of the estuary to protect low lying land from erosion or inundation.

#### 6. RUBHA MEALLAIN

**BHUIDHE**

NH 211 899

0.7 km

*Eroding or stable*

A steep, rocky hillside at the mouth of the River Kanaird. A slow erosional environment indicated by the development of low cliffs.

#### 7. CAMAS AN LOCHAIN

NH 211 899

0.4 km

*Stable*

A shingle foreshore abuts a storm beach in front of raised beach deposits between glacial knolls. There are no indications of active erosion or accretion.

#### 8. MEALLAN BUIDHE

NC 211 900

0.5 km

*Eroding or stable*

Rock platforms around base of steep rocky headland. A slow erosional environment indicated by the development of low cliffs.

#### 9. CAMAS MÓR

NC 211 900

0.55 km

*Stable*

A shingle beach abuts raised beach deposits in a wide bay between headlands. An unusually steep backslope to the bay indicates the possibility of slow erosion to the raised beach.

#### 10. CAMAS BEAG

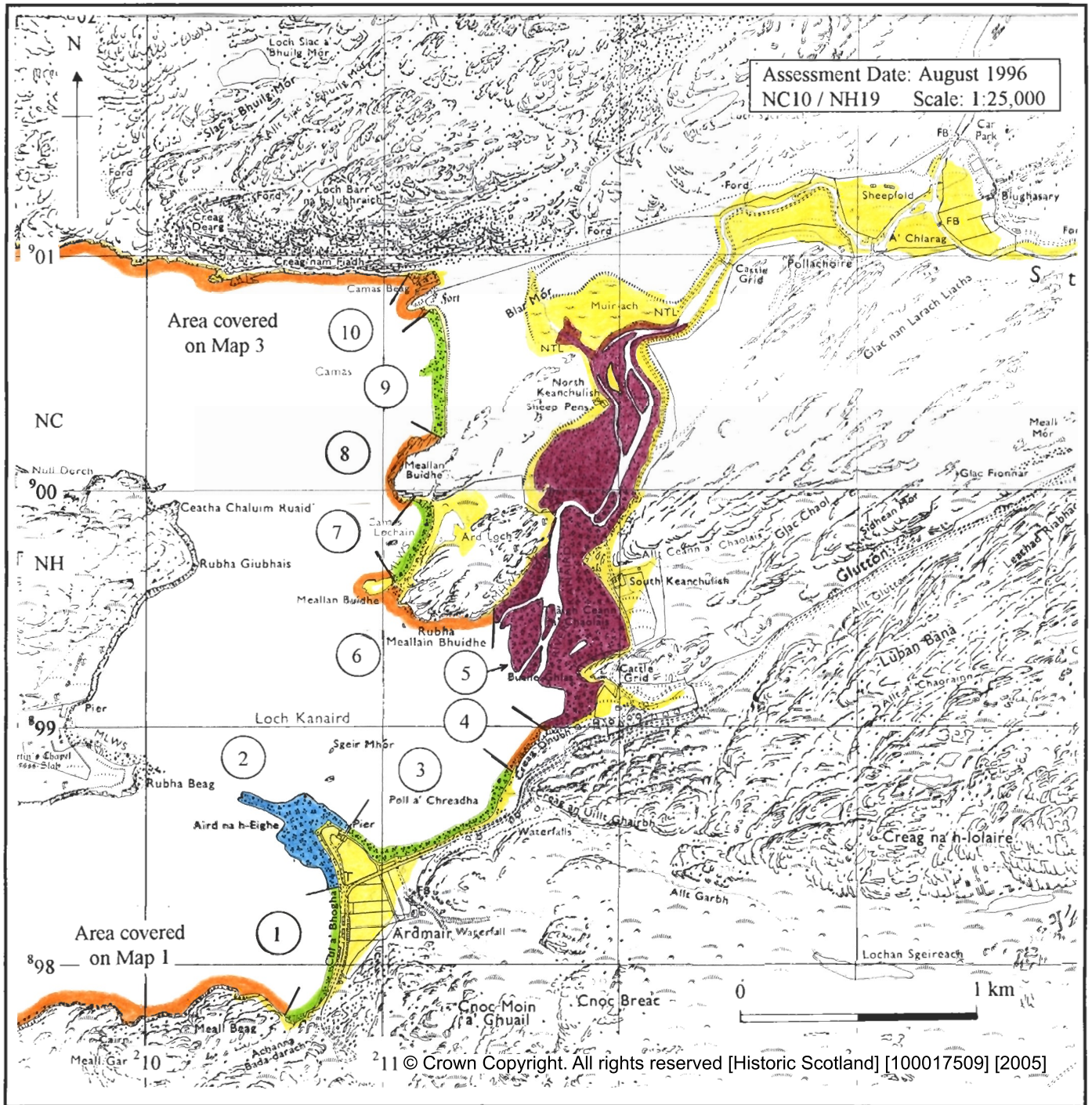
NC 211 900

0.4 km

*Eroding or stable*

A low rocky headland which shelters a small enclosed bay to the north.





Key:

Erosion Class	
Definitely accreting	Blue
Accreting or stable	Light Blue
Stable	Green
Eroding or stable	Yellow
Definitely eroding	Orange
Both accreting and eroding	Red
Land below 10m	Purple

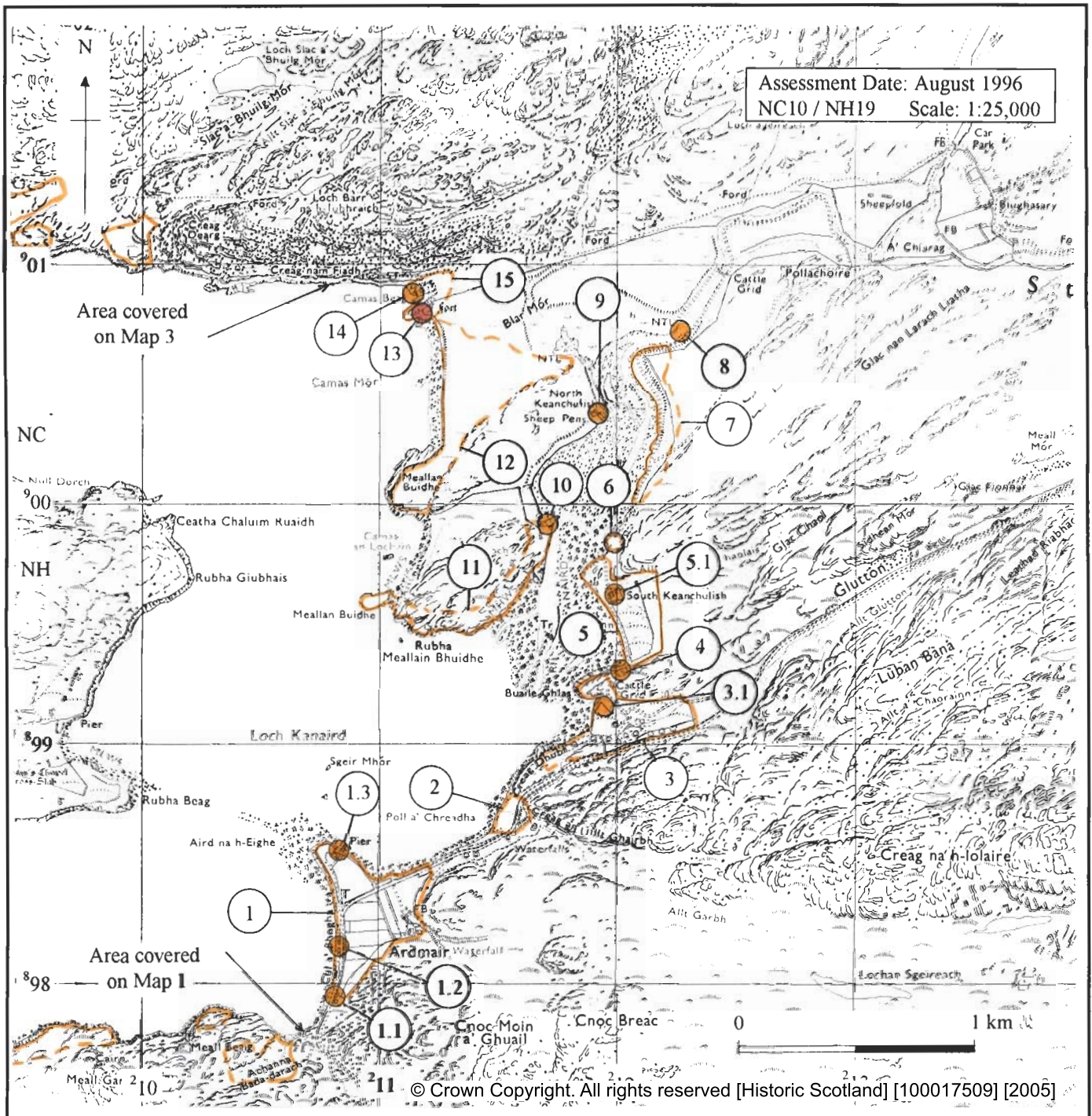
### 3.2.3 Built Heritage and Archaeology

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1. ARDMAIR Township, field systems NH 2110 8983 1.1 Building complex NH 2108 8979 1.2 Building complex (occupied) NH 2108 8982 1.3 Building (occupied); boat naust; harbour NH 2108 8985 18th - 20th Century Fair Nil	5.1 Building complex (occupied) NH 2120 8996 16th-20th Century Fair Nil	Nil
2. POLL A' CHREADHA Cultivation, slipway NH 2115 8987 16th-20th Century Fair Nil	6. RIVER KANAIRD Hulk NH 2120 8998 20th Century Fair Nil	11. RUBHA MEALLAIN BHUIDHE Cultivation, peat cuttings NH 2115 8995 16th-19th Century Fair Nil
3. BUAILE GHLAS Township, field systems NH 19 NW 9 3.1 Building complex NH 2119 8992 16th-19th Century Fair Nil	7. RIVER KANAIRD Cultivation, peat cuttings NC 2112 9003 16th-20th Century Fair Nil	12. CAMAS MÓR Field systems, peat cuttings NC 2113 9005 19th-20th Century Fair Nil
4. BUAILE GHLAS Rock shelter NH 19 NW 1 Pre-modern Fair Monitor	8. RIVER KANAIRD Ford NC 2123 9007 19th Century Fair Nil	13. DUN CANNA Dun, building complex NC 10 SW 1 Protected Ancient Monument Late Prehistoric-Early modern Fair Nil
5. SOUTH KEANCHULISH Settlement, field systems, slipways NH 2120 8995	9. NORTH KEANCHULISH Building complex (occupied), field systems NC 2119 9004 19th-20th Century Good Nil	14. CAMAS BEAG Fish trap NC 2111 9009 Pre-modern Fair Nil
	10. RIVER KANAIRD Boat naust, slipway NH 2117 8999 19th-20th Century Fair	15. CAMAS BEAG Cultivation NC 2113 9009 16th-19th Century Fair Nil

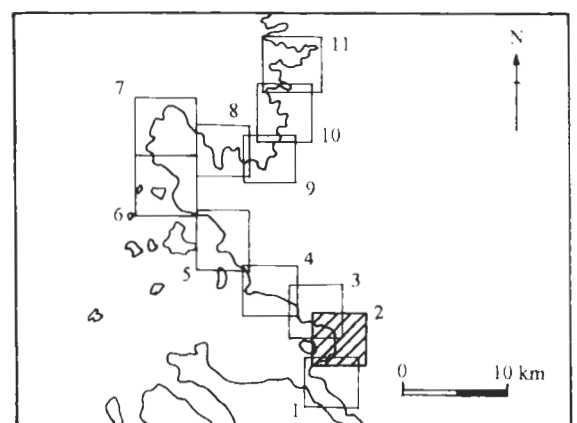
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Key:

Protected Ancient Monument	
Listed Historic Building	
Other known Ancient Monument	
Undesignated wreck	
Site complex	
Undetermined boundary	







### 3.3 Camas Beag to Geodha Mór

1. **Hinterland Geology and Coastal Geomorphology:** This section of coastline is formed by the termination of the southern slopes of two hinterland mountains, Beanan Beaga (390m) and Ben Mór Coigach (743m), which are separated by a narrow gorge-like valley, Coire Mór. The coastline consists of a series of very steep, rocky slopes and cliffs (> 120m in height), presenting an extremely impressive, rugged facade when viewed from Loch Kanaird (Plate 12). The predominant rock-type throughout this section of coastline is Torridonian sandstone, which outcrops extensively at the coast edge to form this precipitous relief. The foreshore is very narrow and is characterised by continuous boulder strewn rock platforms punctuated by scree fans composed of large sub-angular blocks. Steep sided bays situated at the mouths of occasional hanging valleys contain boulder and cobble beaches. A series of badly drained shelves high above the shoreline have allowed peat deposits to develop adjacent to the coast edge.
2. **Erosion Class:** In general this exposed stretch of coastline was considered to be eroding or stable. The presence of rock platforms and coastal cliffs interspersed with infrequent boulder filled coves indicate that mechanical wave erosion is taking place; however, the steep rocky slopes and scree comprising the hinterland topography are clearly a legacy of glacial processes, currently affected primarily by sub-aerial weathering. Extensive water layer weathering as indicated by honey combing in the sandstone immediately above HWM was also observed. The bedrock is highly resistant and the overall rate of coast edge regression is likely to be very slow. There is no significant low lying land in the hinterland at risk from marine inundation in the event of a rise in relative sea level.
3. **Built Heritage and Archaeology:** Given the rugged and isolated nature of this stretch of coastline, it is unsurprising that it contained the least number and most limited range of archaeological sites in any section of this study. The steepness of the hinterland terrain and coast edge has restricted occupation to a series of isolated peat covered shelves 50-200m from the shoreline. Lazy bed plots, peat cuttings and marker cairns (NC 2099 9011, NC 2095 9011 & NC 2093 9012) were, however, recorded on several smaller shelves immediately adjacent to the coast edge. Occasional buildings and structures were located on larger shelves in the hinterland outside the coastal zone.

This settlement is loosely dated to the late 18th / 19th century and is probably associated with a late expansion of the Coigach townships immediately prior to improvement (cf. Culnacraig; Baldwin 1994, 349-352). It is highly possible that earlier site elements obscured by the later occupation may also exist in this area. These sites are linked with the townships of Culnacraig and Blughasary by a precipitous path, which crosses Garbh Allt via a ford (NC 2082 9026) close to the shore. Traditionally, this path was used in the 19th century for the collection and delivery of mail from Achiltibuie. Given the lack of suitable landing places and the wild, exposed aspect of the coastline, it is considered that there was only limited access by sea to this area. In support of this statement no site elements occurred at the coast edge, and structures with a specific maritime function (e.g. boat nausts or kelp kilns) were absent. Consequently coastal erosion is not a serious concern in this area.

### 3.3.1 Hinterland Geology and Coastal Geomorphology

---

#### 1. CREAG DEARG

NC 210 900

1.1 km

*Mainly rock platform / boulder*

*Cliffs (120m)*

*Peat / soil over visible rock*

A series of very high and steep, rocky slopes cliffs directly above narrow rock platforms. Extensive boulder scree slopes and beach fans occur at the base of the cliffs.

#### 2. CREAG AN AIRGID (EAST)

NC 209 901

0.6 km

*Mainly rock platform / boulder*

*Cliffs (50m)*

*Peat / soil over visible rock*

A series of steep cliffs and peat covered shelves directly above narrow rock platforms.

#### 3. CREAG AN AIRGID (WEST)

NC 209 901

0.7 km

*Mainly boulder / cobble beach and rock platform*

*Cliffs (50m)*

*Peat / soil over visible rock*

Two enclosed bays containing boulder/cobble beaches separated by a steep, rocky headland flanked by rock platforms.

#### 4. LEUM AN FHÉIDH

NC 208 901

1.6 km

*Mainly rock platform / boulder*

*Cliffs (50m)*

*Peat / soil over visible rock*

High cliffs at the base of a steep rocky hill. Occasional peat covered shelves occur above narrow rock platforms and occasional boulder fans.

#### 5. GEODHA MÓR

NC 208 902

0.2 km

*Mainly cobble beach and rock platform*

*Low edge < 5m*

*Peat / soil over visible rock*

A small enclosed bay containing a cobble beach in front of a peat covered shelf at the mouth of the Coire Mór valley.

#### 6. GARBH CHOIREACHAN

NC 207 902

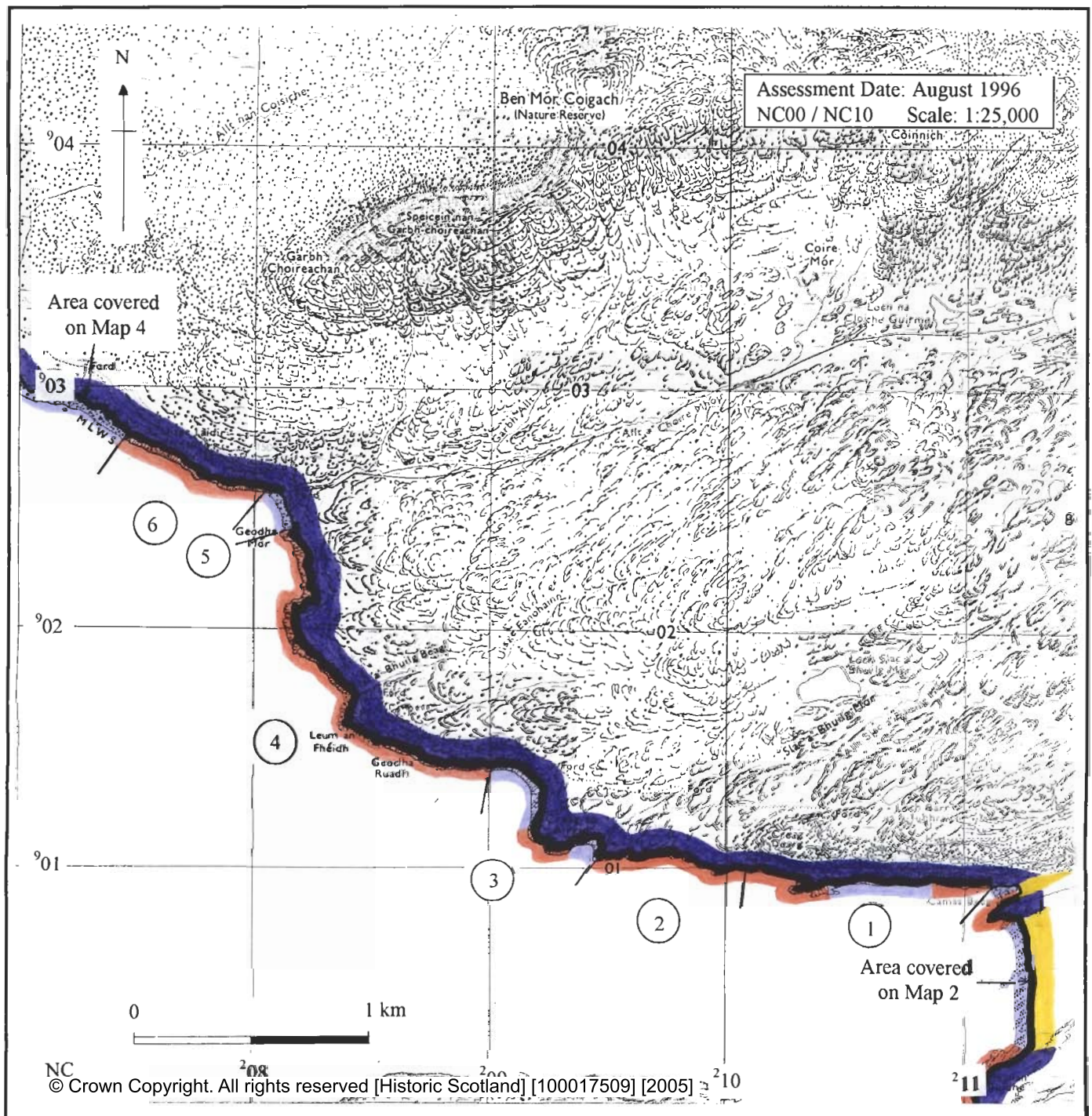
0.7 km

*Mainly rock platform / boulder*

*Cliffs (100m)*

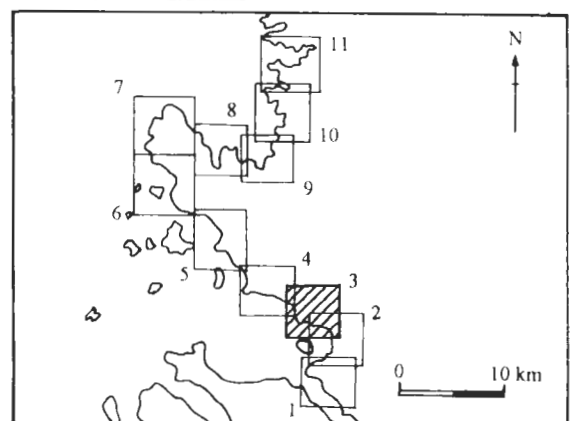
*Peat / soil over visible rock*

Very steep rocky scree slopes at the base of a wooded mountain slope above narrow rock platforms and boulder fans.



Key:

Hinterland Geology	
Peat / soil over visible bedrock	
Raised beach and marine deposits	
Blown sand	
Alluvial deposits	
Coast Edge	
Low edge (<5m)	
Cliff (>5m)	
Man made barrier	
Storm beach	
Human disturbance	
Coastal Geomorphology	
Mainly rock platform/boulders	
Mainly shingle/cobbles/boulders	
Mainly sand	
Marsh	



### 3.3.2 Erosion Class

---

#### 1. CREAG DEARG

NC 210 900

1.1 km

*Eroding or stable*

Rock platforms and boulders derived from rock fall at the base of very high, steep cliffs, indicate that slow, but active erosion is occurring along this exposed section of coast. Weathering is dominated by sub-aerial processes,

with mechanical wave activity and water layer weathering restricted to a narrow zone at the base of the slopes

#### 2. LEUM AN FHÉIDH

NC 208 901

4.0 km

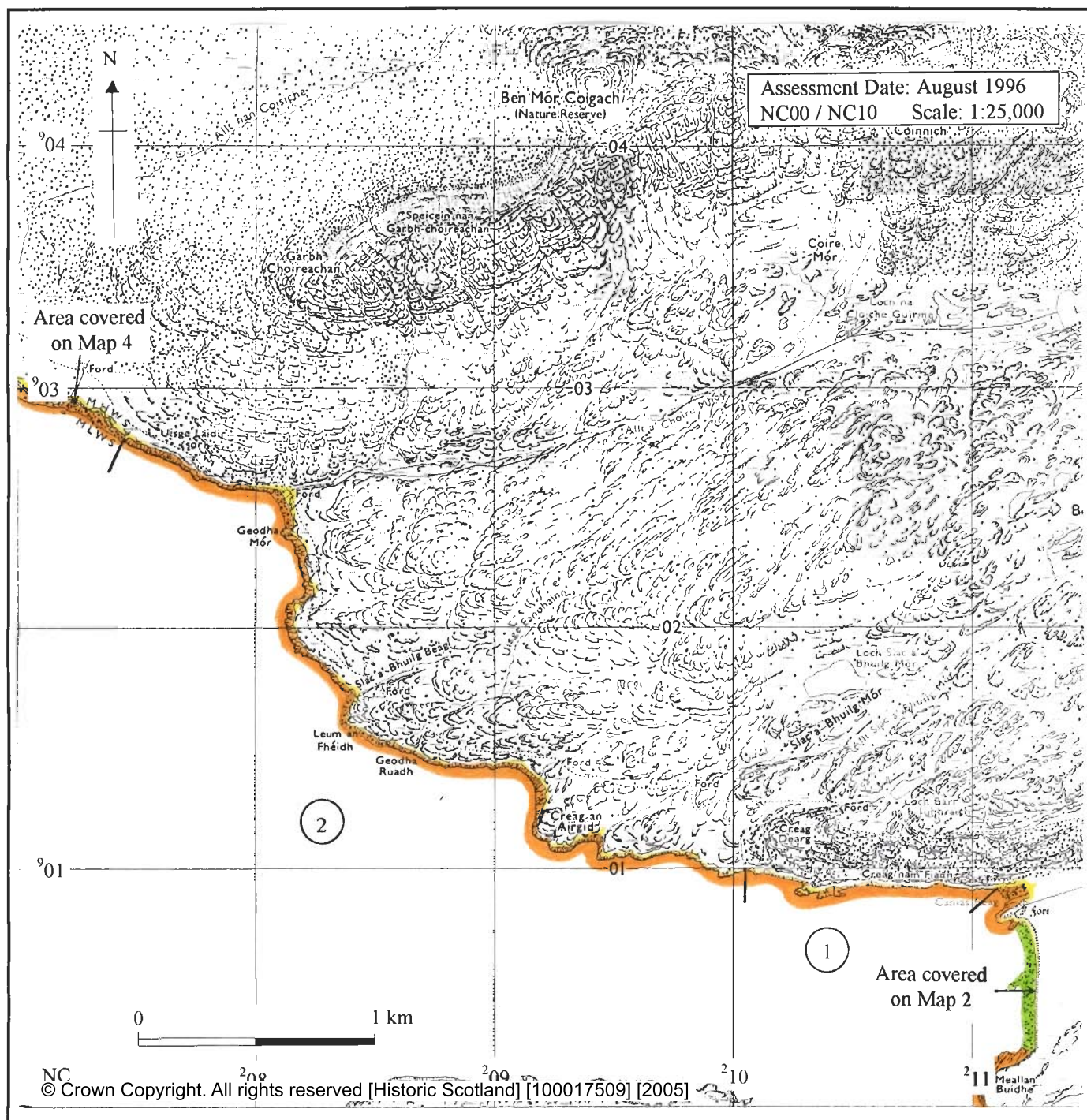
*Eroding or stable*

Rock platforms and boulders derived from rock fall at base of

steep cliffs, interspersed with cobble beaches in enclosed bays. This indicates that slow, but active erosion is occurring along this exposed section of coast. Weathering is dominated by sub-aerial processes, with mechanical wave activity and water layer weathering restricted to a narrow zone at the base of the slopes

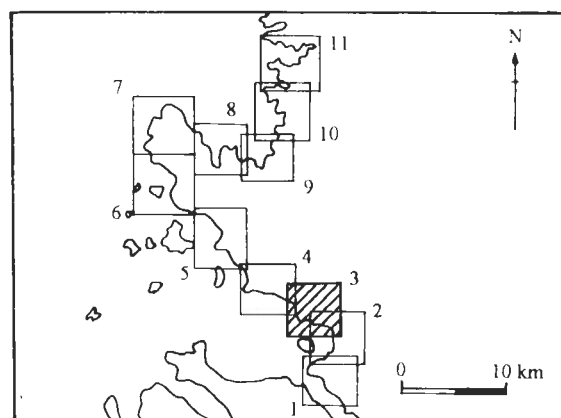
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Key:

Erosion Class	
Definitely accreting	Blue
Accreting or stable	Light Blue
Stable	Green
Eroding or stable	Orange
Definitely eroding	Red
Both accreting and eroding	Purple
Land below 10m	Yellow

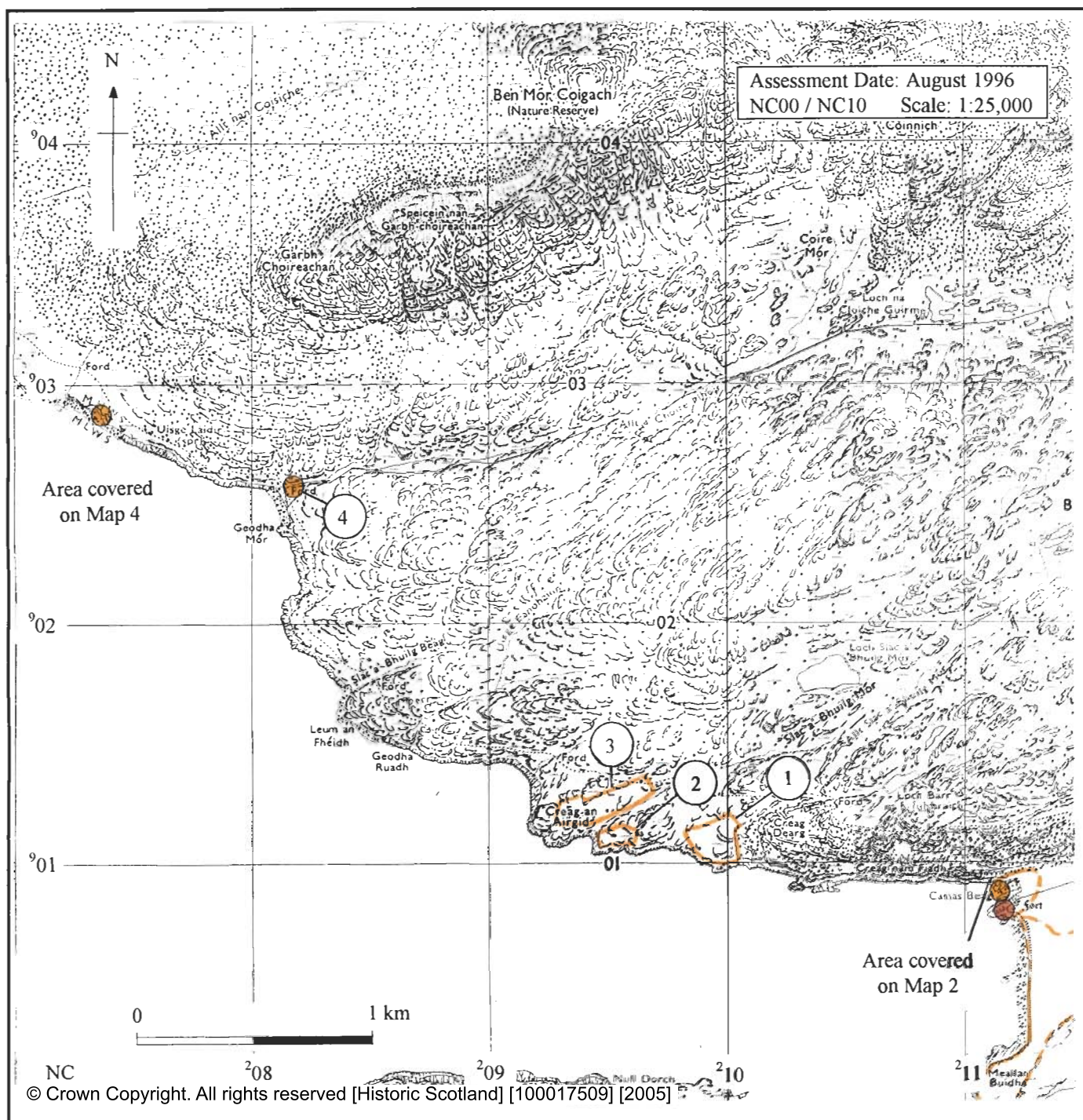


### 3.3.3 Built Heritage and Archaeology

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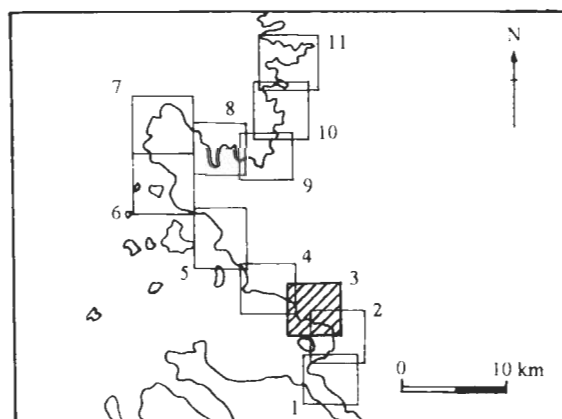
1. CREAG DEARG	NC 2095 9011	Fair
Cultivation	18th-19th Century	Nil
NC 2099 9011	Fair	
18th-19th Century	Nil	4. GEODHA MÓR
Fair		Ford
Nil	3. CREAG AN AIRGID (WEST)	NC 2082 9026
	Buildings, cultivation	18th-20th Century
2. CREAG AN AIRGID (EAST)	NC 2093 9012	Fair
Cultivation	18th-19th Century	Nil

---



Key:

Protected Ancient Monument	
Listed Historic Building	
Other known Ancient Monument	
Undesignated wreck	
Site complex	
Undetermined boundary	







### 3.4 Geodha Mór to Badenscallie

1. **Hinterland Geology and Coastal Geomorphology:** This stretch of coastline is formed by a subsidiary ridge of the Coigach mountain range, Meall Dubh Ard (145m), and effectively defines the point of transition between the steep, precipitous slopes of Ben Mór Coigach (Section 3.3) and the relatively flat coastal shelf at Achiltibuie (Section 3.5). The ridge terminates in a headland (Rubha Dubh Ard) and is flanked by a series of peat covered coastal shelves. The predominant bedrock throughout the area is Torridonian sandstone, which frequently outcrops in the form of coastal cliffs and on steep, rocky hill slopes. Small raised beaches are located on occasional low coastal terraces (e.g. Achduart and Achnacarinan).

The foreshore is dominated by rock platform exposures, while cobble and boulder beaches occur in a number of small bays located along the coastline. At Acheninver there is a small stretch of sandy foreshore backed by a low, stabilised blown sand deposit. Alluvial deposits occur at the mouths of the Allt nan Cosiche and Allt Ach' a' Bhraighe valleys.

2. **Erosion Class:** A relatively exposed stretch of south west facing coastline, which receives limited shelter from a series of offshore islands situated 2km to the west (e.g. Horse Island). In general the coast edge is considered to be eroding or stable, though the rate of regression is considered to be negligible for the purposes of cultural resource management. There are very few high cliffs and wave notch development is generally weak, indicating only a limited influence of mechanical wave erosion on the coast edge. This is typical of a coastline formed by the inundation and / or emergence of a landscape characterised by a resistant bedrock. The occasional small coves located in valley mouths are considered stable, but exposed environments, and have no obvious indications of either active erosion or accretion. Unusually for such an exposed section of coastline, there is no incidence of storm bar development, possibly due to a lack of suitable shingle or and cobble supply. There is little low lying coastal hinterland vulnerable to marine inundation, however many recorded sites would be at risk in the event of a rise in sea level.

3. **Built Heritage and Archaeology:** This section has a relatively high site density, principally as a result of its situation at the southern end of the fertile Achiltibuie coastal shelf. The archaeological record is dominated by small 18th-19th century settlements clustered around raised beaches at Achnacarinan (NC 2046 9047) and Achduart (NC 00 SE 5). These well documented townships (Baldwin 1994) relate to a late phase of population expansion in the region. Several buildings, enclosures, boat nausts and slipways relating to these settlements are located adjacent to the shoreline. A 'cave' at the coast edge near the spring of Uisge Làidir contained evidence of 19th century occupation, and this date is corroborated through local oral history (Baldwin 1994, 305-6). The disturbed fragments of a steel hulk or shipwreck was located at the end of slipway near Achduart (NC 00 SW 5).

Prehistoric occupation of the coastal zone in this section is indicated by the occurrence of hut circles (NC 00 SW 2 & NC 00 SW 3), and a short length of curving drystone wall exposed in sand deposits at Acheninver (NC 00 NW 22) is potentially medieval in origin. It is highly probable that unobtrusive structures or landscape features relating to these periods are present along this stretch of coastline, but as yet remain unidentified or obscured by overlying deposits or vegetation.

No obvious evidence of coastal erosion was observed at any recorded site in this section, though the curved wall structure at Acheninver was only visible as a result of disturbance caused by sand quarrying activities. The significance and preservation of this site should be fully assessed.

### 3.4.1 Hinterland Geology and Coastal Geomorphology

---

#### 1. CULNACRAIG (EAST)

NC 207 902

0.5 km

*Mainly cobble beach*

*Cliffs (> 10m)*

*Peat / soil over visible rock*

A peat covered shelf at the top of low cliffs above a series of cobble and shingle beaches.

#### 2. CULNACRAIG (CENTRAL)

NC 206 903

0.4 km

*Mainly cobble beaches in the east, with rock platforms in the west.*

*Low edge < 5m*

*Raised beach / alluvial deposits*

A narrow corridor of fluvial and marine deposits at the mouth of the Allt na Glaic-rainich.

#### 3. CULNACRAIG (WEST)

NC 206 903

1.7 km

*Mainly rock platform, with some isolated boulder beaches*

*Low edge < 5m with a short stretch of Cliffs (> 20m)*

*Peat / soil over visible rock*

A wide sloping rocky shelf above low cliffs and rock platforms.

#### 4. ACHDUART

NC 205 903

0.15 km

*Mainly cobble beach*

*Low edge < 5m*

*Raised beach*

A small, enclosed bay containing a boulder beach.

#### 5. RUBHA DUBH ARD

NC 204 903

2.0 km

*Mainly rock platform, with some isolated boulder beaches*

*Low edge < 5m with a short stretch of Cliffs (> 20m)*

*Peat / soil over visible rock, with a small isolated raised beach*

A substantial headland composed of a wide peat covered shelf at the top of low cliffs above rock platforms. A raised beach occurs in a small cove at the centre of the headland.

#### 6. ACHNACARINAN (SOUTH)

NC 205 904

0.15 km

*Mainly cobble / boulder beach*

*Low edge < 5m*

*Raised beach.*

A small, enclosed bay containing a cobble/boulder foreshore.

#### 7. ACHNACARINAN (NORTH)

NC 205 904

0.5 km

*Mainly cobble / boulder beach*

*Low edge < 5m*

*Peat / soil over visible rock*

A peat covered shelf above low cliffs and a series of cobble and boulder beaches.

#### 8. ACHENINVER

NC 204 905

0.35 km

*Mainly sand and shingle / cobble beach*

*Low edge < 5m*

*Blown sand and alluvial deposits*

A narrow corridor of fluvial and marine deposits at the mouth of the Allt Ach' a Bhraighe. The terrace to south of the stream is covered with approximately 1.0m of blown sand. This overlies coarse raised beach material, which is exposed in various quarry pits behind the shoreline. A wide expanse of sand is exposed on the foreshore.

#### 9. RUBHAN A' GHILLE DHUIBH

NC 203 905

0.6 km

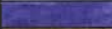
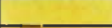
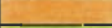









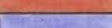
*Mainly rock platform, with some isolated stretches of boulder beach*

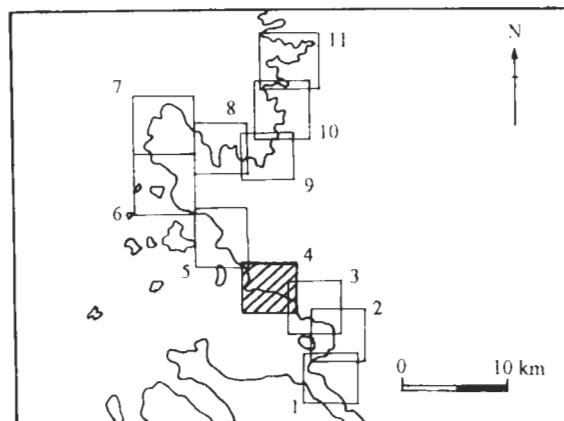
*Low edge < 5m*

*Peat / soil over visible rock*

A small headland composed of a sloping peat covered shelf above low cliffs and a rock platform foreshore.



<b>Hinterland Geology</b>	
Peat / soil over visible bedrock	
Raised beach and marine deposits	
Blown sand	
Alluvial deposits	
<b>Coast Edge</b>	
Low edge (<5m)	
Cliff (>5m)	
Man made barrier	
Storm beach	
Human disturbance	
<b>Coastal Geomorphology</b>	
Mainly rock platform/boulders	
Mainly shingle/cobbles/boulders	
Mainly sand	
Marsh	



### 3.4.2 Erosion Class

---

1. CULNACRAIG

NC 207 902

1.6 km

*Eroding or stable*

This exposed stretch of coast is slowly eroding, as indicated by the presence of rock platforms, low cliffs and occasional boulder beaches.

2. ACHDUART

NC 205 903

0.15 km

*Stable*

A small sheltered bay between minor headlands with an exposed aspect. There are no indications of active erosion or accretion.

3. RUBHA DUBH ARD (SOUTH)

NC 204 903

1.0 km

*Eroding or stable*

The presence of cliffs and rock platforms around the south side of an exposed headland indicate slow but steady erosion.

4. RUBHA DUBH ARD

(CENTRE.)

NC 204 904

0.15 km

*Stable*

A small sheltered bay located at the end of an exposed headland. There are no indications of active erosion or accretion, though this location would be prone to erosion under storm conditions.

5. RUBHA DUBH ARD  
(NORTH)

NC 204 904

0.85 km

*Eroding or stable*

The presence of cliffs and rock platforms around the south side of an exposed headland indicate slow but steady erosion.

6. ACHNACARINAN (SOUTH)

NC 205 904

0.15 km

*Stable*

A small sheltered bay between minor headlands with an exposed aspect. There are no indications of active erosion or accretion.

7. ACHNACARINAN (NORTH)

NC 205 904

0.5 km

*Eroding or stable*

This exposed stretch of coast is slowly eroding, as indicated by the presence of rock platforms, low cliffs and occasional boulder

beaches. This section is substantially sheltered by Horse Island.

8. ACHENINVER

NC 204 905

0.35 km

*Stable*

A wide stretch of beach in a shallow bay with an exposed aspect, situated adjacent to the Allt Ach' a' Bhraighe. Sand has been exposed on the foreshore and this has been blown inland to form a low, consolidated ridge. There are no indications of active prograding, however. This section is substantially sheltered by Horse Island.

9. RUBHAN A' GHILLE

DHUIBH

NC 203 903

0.6 km

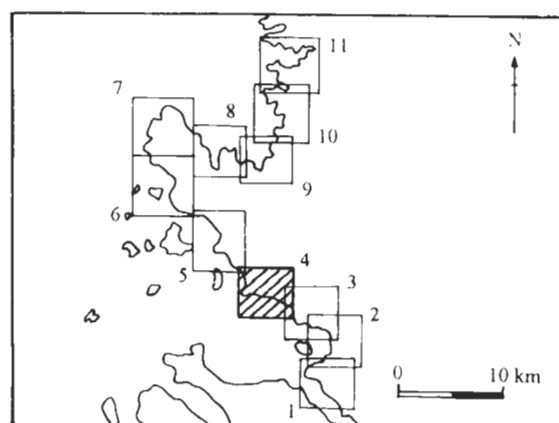
*Eroding or stable*

This exposed stretch of coast is slowly eroding, as indicated by the presence of rock platforms, low cliffs and occasional boulder beaches. This section is substantially sheltered by Horse Island.





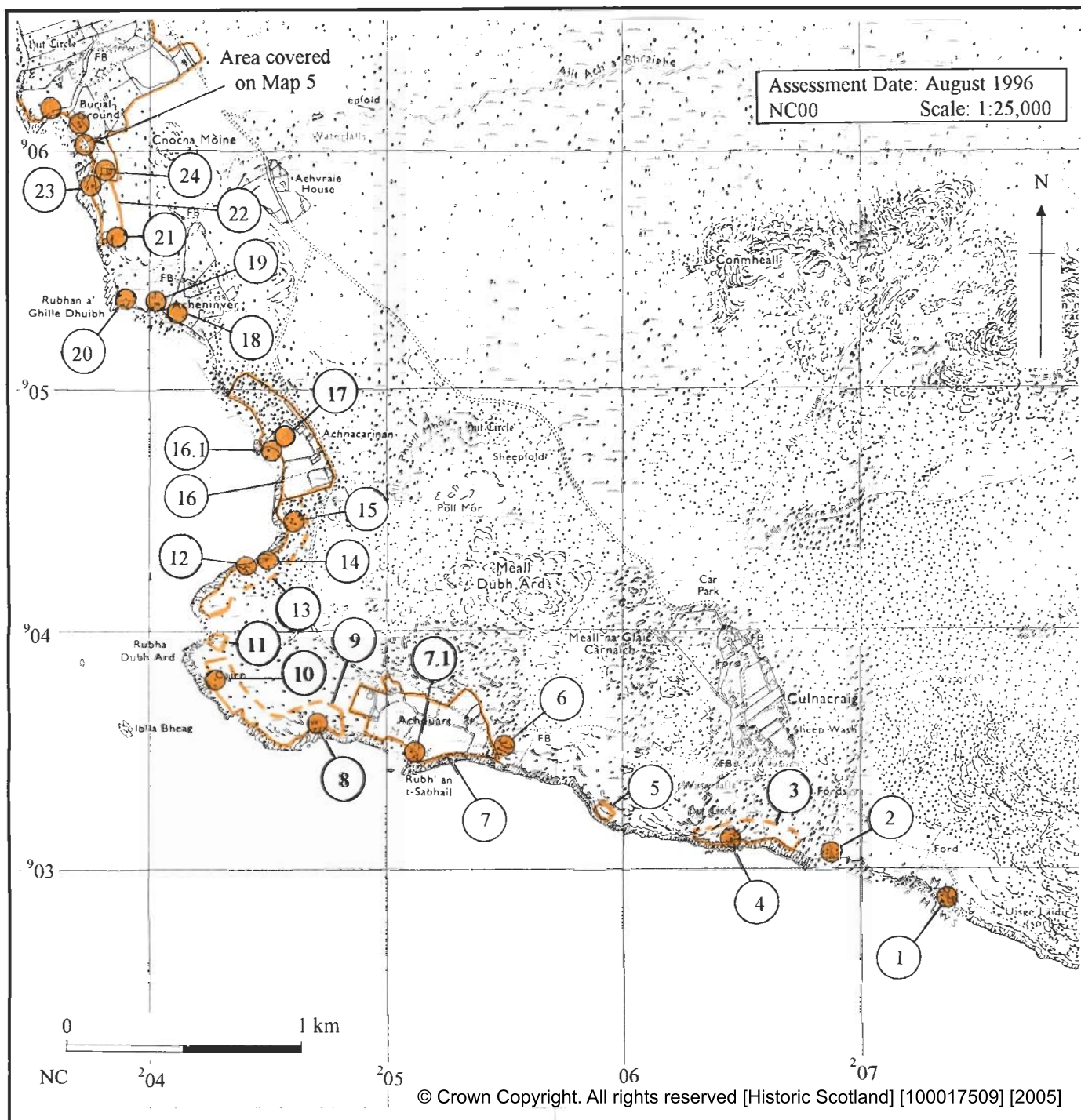
Erosion Class	
<i>Definitely accreting</i>	
<i>Accreting or stable</i>	
<i>Stable</i>	
<i>Eroding or stable</i>	
<i>Definitely eroding</i>	
<i>Both accreting and eroding</i>	
<i>Land below 10m</i>	





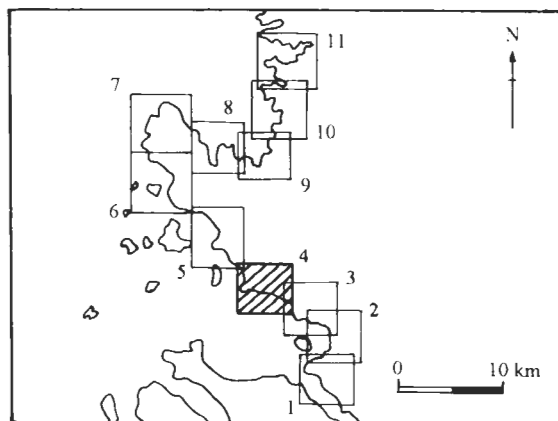
### 3.4.3 Built Heritage and Archaeology

1. UISGE LÀIDIR Cave NC 2074 9029 19th-20th Century Fair Nil	9. RUBHA DUBH ARD Peat cuttings NC 2045 9035 18th-20th Century Fair Nil	Fair Nil
2. ALLT NAN COSICHE Circular structures NC 2069 9031 16th-19th Century Fair Nil	10. RUBHA DUBH ARD Trigonometric cairn NC 2043 9038 19th Century Fair Nil	17. ACHNACARINAN Hut circle NC 00 SW 2 Late Prehistoric Fair Nil
3. CULNACRAIG Cultivation, peat cuttings NC 2066 9032 18th-19th Century Fair Nil	11. RUBHA DUBH ARD Cultivation NC 2043 9039 16th-19th Century Fair Nil	18. ACHENINVER Structures, field systems NC 00 NW 22 Pre-improvement Poor Survey
4. CULNACRAIG Building, slipway NC 2065 9031 18th-19th Century Fair Nil	12. RUBHA DUBH ARD Building, field systems, boat naust, slipway NC 2044 9042 18th-19th Century Fair Nil	19. ACHENINVER Pen complex NC 2040 9054 19th-20th Century Good Nil
5. CULNACRAIG Peat cuttings NC 2059 9032 18th-20th Century Fair Nil	13. RUBHA DUBH ARD Peat cuttings NC 2045 9042 18th-19th Century Fair Nil	20. ACHENINVER Boat naust NC 2039 9054 18th-19th Century Good Nil
6. ACHDUART Building NC 2055 9035 18th-20th Century Not located Nil	14. ACHNACARINAN Hut circle NC 00 SW 3 Late Prehistoric Fair Nil	21. CNOCNA MOINE Hut NC 2039 9056 16th-19th Century Not located Nil
7. ACHDUART Township, field systems, slipway NC 00 SE 5 7.1 Building, NC 2052 9035 18th-20th Century Fair Nil	15. ACHNACARINAN Structure NC 2046 9044 18th-19th Century Fair Nil	22. CNOCNA MOINE Cultivation, field systems NC 2038 9057 16th-19th Century Fair Nil
8. ACHDUART Building complex, hulk NC 00 SW 5 18th-20th Century Fair Nil	16. ACHNACARINAN Township, field systems, cultivation NC 2046 9047 16.1 Structure, slipways, boat naust (?), hulk NC 2045 9047 18th-20th Century	23. CNOCNA MOINE Boat naust, slipway NC 2038 9059 19th-20th Century Fair Monitor
		24. CNOCNA MOINE Building complex NC 00 NW 55 19th Century Fair Nil



Key:

Protected Ancient Monument	●
Listed Historic Building	+
Other known Ancient Monument	●
Undesignated wreck	○
Site complex	□
Undetermined boundary	□





### 3.5 Badenscallie to Polbain

1. **Hinterland Geology and Coastal Geomorphology:** This section comprises a wide undulating coastal shelf divided by the pronounced headland of Rubha Dùnan into two broad bays; Horse Sound to the south and Badentarbat Bay in the north. A narrow isthmus exists between Badentarbat Bay and Achnahaird Bay to the north, which are almost linked by a series of navigable lochs situated along a geological fault-line. The predominant bedrock throughout this section is Torridonian sandstone, though Lewisian gneiss, conglomerate sandstone and quartzite also outcrop in a number of situations. There are comparatively few rock exposures along the coastal shelf, which is generally covered with extensive raised beach material, deep peat or soil deposits. Rock outcrops are largely restricted to intertidal platforms and low cliffs or shelves on headlands. As a result this wide coastal strip comprises one of the better regions for cultivation in the study area. The foreshore is predominantly composed of shingle, cobble and boulder beaches interspersed with rock platforms. Storm bars have formed across the mouths of small valleys at Achlochan and Badentarbat which have impounded marshy freshwater lochs.
2. **Erosion Class:** This coastal section is generally erosional in nature, though much of the coastline is sheltered from long shore wave activity by an offshore island group (The Summer Isles) situated 2.5km to the west. Two sections in particular (Rubha Dùnan and Port Allt a' Ruistéal; Plate 9) display clear indications of active erosion. The remainder of the section is considered to be only marginally eroding or stable, and the overall rate of coastal regression is probably very low. The presence of substantial shingle storm bars in the widest bays clearly indicates that the coastline does on occasion experience high energy wave activity from the south west. These landforms are no longer actively developing, as indicated by the presence of superimposed 18th / 19th century buildings and structures. In particular the buildings comprising the Achlochan broch complex (NC 00 NW 3, NC 2030 9069 & NC 2028 9068) may assist in dating the period of storm bar formation, through determining which elements pre- or post-date the storm bar. Although superficially the broch appears to be located on the storm bar, it may actually be situated on a pre-existing island or promontory which has been linked to the mainland at a later stage. A detailed archaeological investigation could easily determine this relationship. Extensive parts of the hinterland are low lying, and would be vulnerable to erosion and / or marine inundation in the event of a change in climatic conditions or rise in sea level.
3. **Built Heritage and Archaeology:** This coastal shelf is the most settled district in the study area, and contains the highest number of recorded sites in this study. Most sites are associated with the 18th-19th century townships of Achiltibuie, Polglass and Badenscallie. The extant settlement is scattered along a road located 300-400m east of the shoreline, however several buildings and structures are situated on or close to the coast edge. Most of these sites have a specific coastal or maritime function, such as mills, boat nausts and kelp kilns, though some crofts are located very close to the coast edge. One croft at Badenscallie (NC 00 NW 56) was reputedly built below the HWM in an attempt to avoid eviction from the estate (William Maclean pers. comm. 1996), and was flooded on several occasions during its period of occupation.

Extensive lazy bed cultivation plots are distributed along the coastal strip, though much of the visible evidence for this has been obliterated by later cultivation and subdivision. Typically the rigs survive only on steep grassy slopes immediately above the foreshore, which are generally excluded from the modern field systems. It is highly probable that prehistoric and medieval settlement foci exist along the coastline, however it is hard to distinguish securely dated individual elements on the basis of a rapid field inspection only. Earlier occupation of the coastal strip is demonstrated by Achlochan Broch (NC 00 NW 3), which has also acted as a focus for later settlement. Generally the recorded sites are not at immediate threat from coastal erosion, however one site, a building converted to a sheep dipping complex (NC 2019 9090) is affected by wave activity. Many sites (e.g. NC 00 NW 3) are in highly exposed, low lying locations and would be highly vulnerable to erosion or inundation in the event of a change in climatic conditions or a rise in sea level.

### 3.5.1 Hinterland Geology and Coastal Geomorphology

#### 1. BADENSCALLIE BURN

NC 203 906

0.3 km

*Mainly shingle & cobble beach*

*Low edge < 5m*

*Raised beach*

A sheltered bay enclosing a raised beach on the south side of a stream outlet. The foreshore is composed of a shingle and cobble beach isolated between rock platforms. The original drift geological mapping (1912) noted blown sand in this area. With the exception of a minor exposure on the foreshore, no sand landforms were present.

#### 2. BADENSCALLIE (SOUTH)

NC 203 906

0.3 km

*Mainly rock platform / boulder*

*Low edge < 5m*

*Peat / soil over visible rock*

A peat covered shelf above low cliffs and rock platforms.

#### 3. BADENSCALLIE (NORTH)

NC 203 906

0.8 km

*Mainly shingle & cobble beach*

*Low edge < 5m*

*Peat / soil over visible rock*

A sloping soil covered shelf above low grassy banks and a shingle / cobble beach, with occasional rock platforms.

#### 4. LOCH POLL AN DÙNAIN

NC 203 906

0.6 km

*Mainly shingle & cobble beach*

*Storm beach*

*Raised beach*

A substantial storm bar blocks a shallow valley containing a marshy lochan. The foreshore is composed of coarse beach material.

#### 5. RUBHA DÙNAN

NC 201 906

2.0 km

*Mainly rock platform / boulder*

*Low edge < 5m with sections of cliffs (15m)*

*Peat / soil over visible rock*

A steep rocky hill forms a substantial headland along this stretch of coast. The promontory is defined by steep sandstone cliffs on the south side, which are partially protected by a wide cobble / boulder beach towards the east. The north and west sides are characterised by lower angle Lewisian gneiss cliffs, which shelter a raised beach in a small enclosed bay. The hinterland is composed of steep rocky slopes and wide peat shelves.

#### 6. PORT MHAIRE

NC 202 907

0.25 km

*Mainly shingle, cobble & boulder beach*

*Low edge < 5m*

*Raised beach*

A raised beach situated behind a small exposed bay, and sheltered between low headlands.

#### 7. ACHILTIBUIE

NC 202 908

0.5 km

*Mainly rock platform / boulder*

*Low edge < 5m*

*Peat / soil over visible rock*

A rocky shelf covered with thin soil at the top of low cliffs above rock platforms.

#### 8. SGEIR NA H-AIRIGHE

NC 202 908

0.7 km

*Mainly cobble / boulder beach*

*Low edge < 5m*

*Raised beach*

A wide raised beach defined by a short, steep grassy bank. A narrow grassy shelf occurs at the base of this bank, immediately behind a foreshore composed of cobble and boulder beaches and occasional rock platforms.

#### 9. CREAG RUADH

NC 201 909

0.9 km

*Mainly shingle, cobble & boulder beach*

*Low edge < 5m with occasional cliffs (15m)*

*Peat / soil over visible rock with sections of raised beach*

A glacial till and peat covered shelf interspersed with small raised beach deposits defined by low grassy banks and occasional cliffs, above a cobble and boulder foreshore.

#### 10. AN FEALING

NC 201 909

0.4 km

*Mainly shingle & cobble beach*

*Storm beach*

*Raised beach*

A shallow valley containing a freshwater marsh (raised beach, 1912 mapping) blocked by a storm bar (Crofts and Mather 1972). The foreshore is principally composed of cobbles with some sand exposed at low tide.

#### 11. MOL A' BHLAIR

NC 200 909

1.1 km

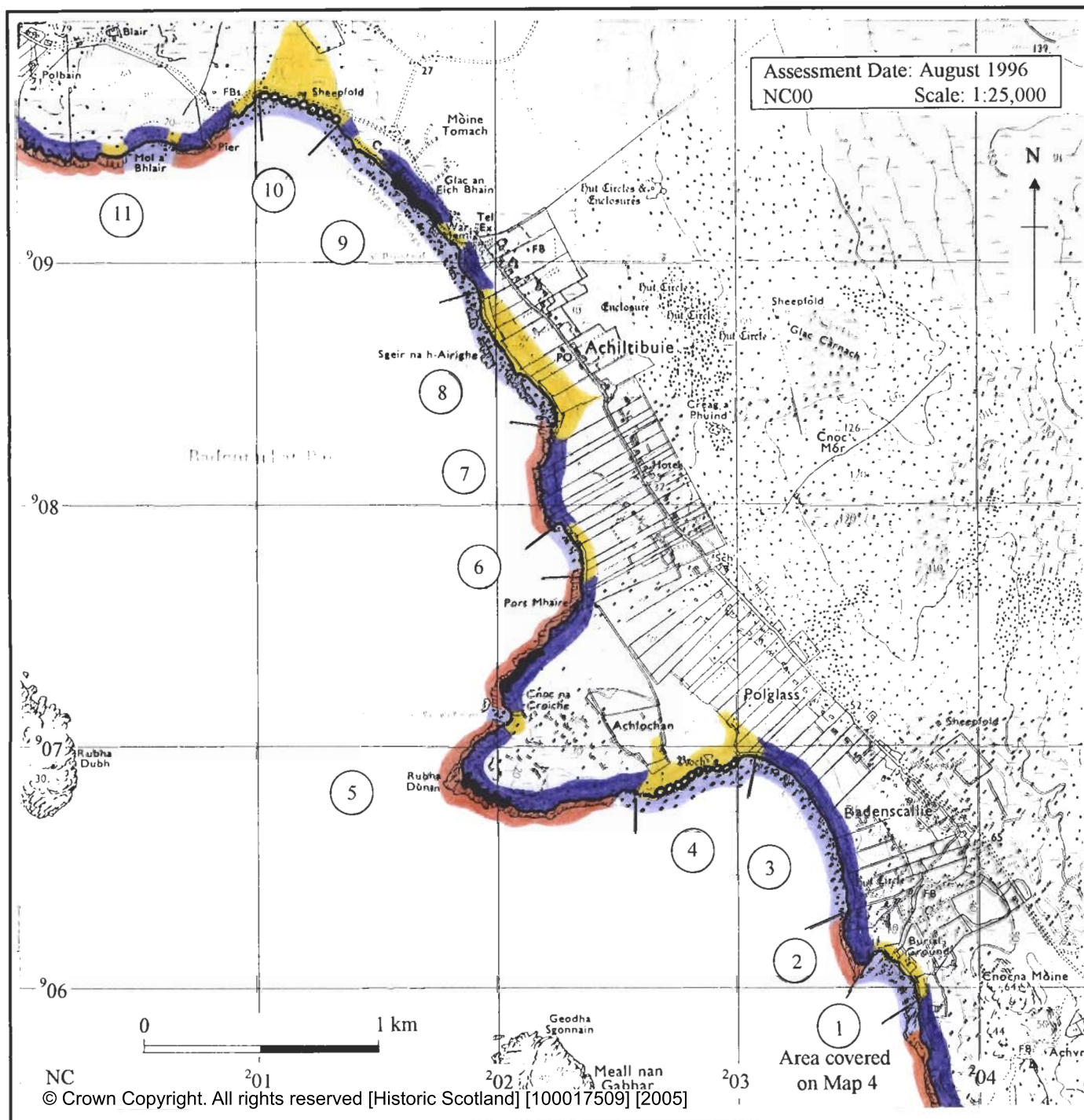
*Mainly rock platform / boulder*

*Low edge < 5m*

*Peat / soil over visible rock with sections of raised beach*

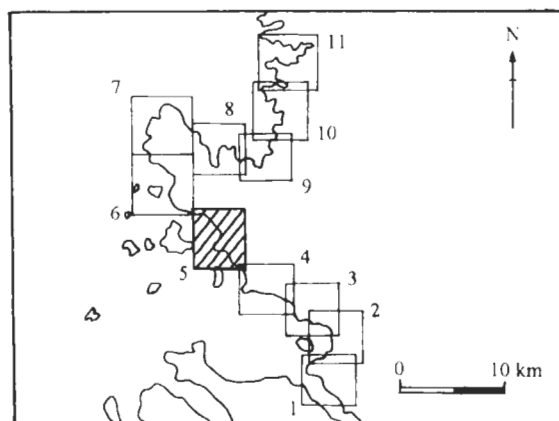
A peat covered shelf at the top of low rocky banks, interspersed with small raised beaches above rock platforms and occasional cobble and boulder beaches.





Key:

Hinterland Geology	
Peat / soil over visible bedrock	
Raised beach and marine deposits	
Blown sand	
Alluvial deposits	
Coast Edge	
Low edge (<5m)	
Cliff (>5m)	
Man made barrier	
Storm beach	
Human disturbance	
Coastal Geomorphology	
Mainly rock platform/boulders	
Mainly shingle/cobbles/boulders	
Mainly sand	
Marsh	





### 3.5.2 Erosion Class

---

#### 1. BADENSCALLIE BURN

NC 203 906

0.3 km

*Stable*

A sheltered bay between rocky headlands, backed by low angle grassy banks. Currently there are no indications of either active erosion or accretion.

#### 2. BADENSCALLIE

NC 203 906

0.3 km

*Eroding or stable*

Low cliffs occur around a small headland, which are eroding slowly.

#### 3. LOCH POLL AN DÙNAIN

NC 203 906

1.0 km

*Stable*

A wide bay defined by short grassy banks and a substantial storm bar. Parts of this section are very low lying and exposed, and would be highly susceptible to flooding / erosion. Currently there are no indications of either active erosion or accretion.

#### 4. ACHLOCHAN (EAST)

NC 202 906

0.35 km

*Eroding or stable*

A cobble beach situated in front of a fossil cliff line, formed of steep grassy banks. These banks may be slowly eroding, mainly as a result of sub-aerial processes, and the subsequent removal of material through longshore drift.

#### 5. ACHLOCHAN (WEST)

NC 202 906

0.6 km

*Definitely eroding*

Steep cliffs composed of friable conglomerate sandstone on the south side of this exposed headland are actively eroding through mechanical wave activity, as indicated by the steep profile, wide rock platforms, fresh rock exposures and rockfall. The rate of regression is, however, likely to be very slow.

#### 6. RUBHA DÙNAN

NC 201 906

1.1 km

*Eroding or stable*

The exposed north side of a headland characterised by low angle cliffs and sloping rock platforms. The coast edge is marginally eroding, though highly resistant due to the rock type (Lewisian gneiss).

#### 7. ACHILTIBUIE

NC 202 907

1.7 km

*Eroding or stable*

A series of short, grassy banks and low angle cliffs around an exposed bay. The hinterland deposits are primarily composed of raised beach material, and are probably eroding slowly.

#### 8. PORT ALLT A' RUISTEAL

NC 201 908

0.1 km

*Definitely eroding*

A steep bank on the south side of a stream outlet. The presence of fresh, vertical soil exposures indicates that this section is actively eroding, probably caused by a combination of wave action and stream erosion. A 19th century structure (NC 2019 9090) is being undercut by wave action.

#### 9. CREAG RUADH

NC 201 909

0.4 km

*Eroding or stable*

A series of short, grassy banks and low angle cliffs around an exposed bay. The hinterland deposits are primarily composed of raised beach material, and are probably eroding slowly. Minor eroding soil exposures were noted at the south end of the section.

#### 10. AN FEALING

NC 201 909

0.8 km

*Stable*

A wide bay surrounded by short grassy banks and a storm beach. Currently there are no indications of either active erosion or accretion.

#### 11. BADENTARBAT PIER

NC 200 909

0.3 km

*Eroding or stable*

A series of short, grassy banks and cliffs above rock platforms are probably eroding slowly.

#### 12. MOL A' BHLAIR

NC 200 909

0.2 km

*Stable*

An exposed bay between rocky headlands, backed by steep grassy banks. Currently there are no indications of either active erosion or accretion.

#### 13. POLBAIN

NC 200 909



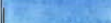




0.5 km

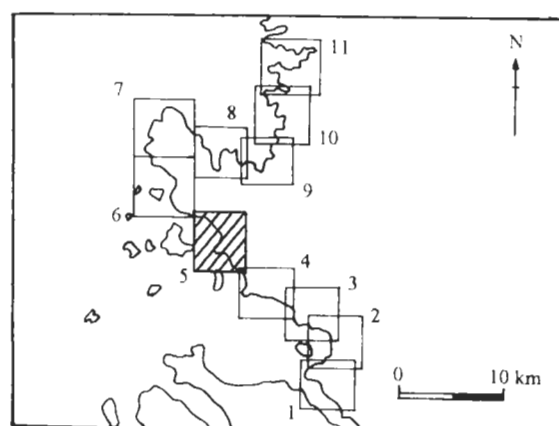
*Eroding or stable*

A series of short, grassy banks and cliffs above rock platforms are probably eroding slowly.

## Erosion Class

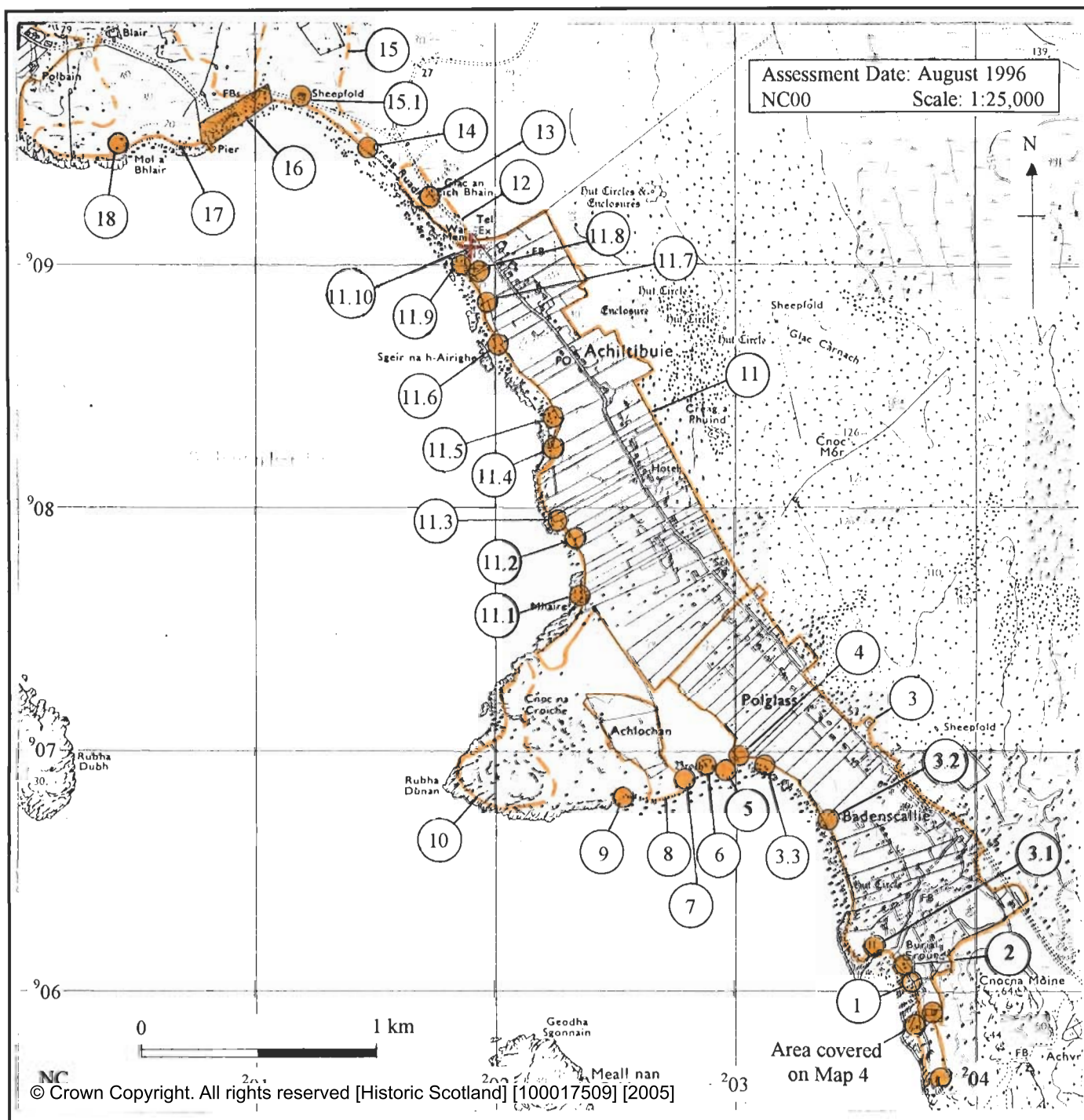


Erosion Class	
<i>Definitely accreting</i>	
<i>Accreting or stable</i>	
<i>Stable</i>	
<i>Eroding or stable</i>	
<i>Definitely eroding</i>	
<i>Both accreting and eroding</i>	
<i>Land below 10m</i>	



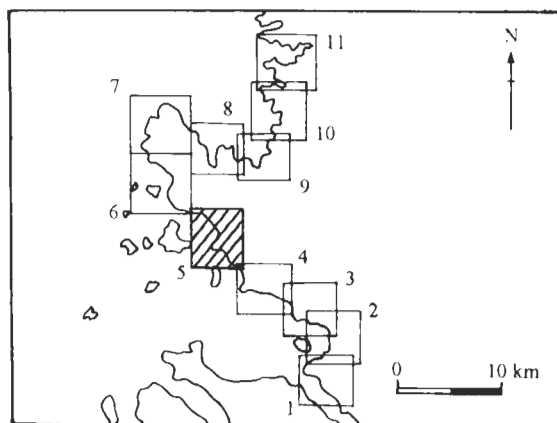
### 3.5.3 Built Heritage and Archaeology

1. BADENSCALLIE Boat nausts, hulks NC 2037 9060 19th-20th Century Fair Nil	18th-20th Century Fair Nil	Monitor
2. BADENSCALLIE Burial ground NC 00 NW 1 18th-20th Century Good Nil	8. ACHLOCHAN Field systems, cultivation NC 2027 9068 16th-19th Century Fair Nil	12. CREAG RUADH Peat cuttings 2017 9092 19th-20th Century Fair Nil
3. BADENSCALLIE-POLGLASS Township, field systems, slipway NC 2036 9067 3.1 Buildings NC 00 NW 56 3.2 Building NC 2034 9067 3.3 Structures, boat naust (?), slipway NC 2031 9070 18th-20th Century Fair Nil	9. ACHLOCHAN Structures NC 2025 9068 19th-20th Century Fair Nil	13. AILTE NA H'UARDIGHEAN Meeting place NC 00 NW 5 18th-19th Century Fair Nil
4. LOCH POLL AN DÙNAIN Footbridge NC 2030 9080 16th-19th Century Good Nil	10. RUBHA DUNAN Peat cuttings, cultivation NC 2020 9071 16th-20th Century Fair Nil	14. BADENTARBAT Structures NC 2015 9095 16th-19th Century Fair Nil
5. LOCH POLL AN DÙNAIN Kelp kilns NC 2030 9069 18th-19th Century Fair Nil	11. ACHILTIBUIE Township, field systems NC 2022 9081 11.1 Boat naust, slipway, hulk fragment NC 2024 9076 11.2 Track, historic midden NC 2023 9078 11.3 Boat nausts, slipway NC 2022 9079 11.4 Structure, rectilinear kelp kiln NC 2022 9082 11.5 Boat nausts, slipway NC 2023 9084 11.6 Boat nausts NC 2020 9086 11.7 Mill NC 2019 9090 11.8 Free Church of Coigach NC 00 NW 50 11.9 Buildings NC 2019 9090 11.10 mill NC 00 NW 27 Listed Building 18th-20th Century Fair	15. BADENTARBAT Field systems NC 2013 9096 15.1 Sheepfold NC 2012 9097 16th-20th Century Fair Nil
6. ACHLOCHAN Broch, later buildings, boat naust NC 00 NW 3 1st-19th Century Fair Nil		16. BADENTARBAT Salmon fishing station NC 2010 9097 18th-20th Century Good Nil
7. ACHLOCHAN Kelp kilns, hut, enclosure NC 2028 9068		17. MOL A' BHLAIR Cultivation, field systems NC 2006 9095 16th-19th Century Fair Nil
		18. MOL A' BHLAIR Buildings NC 2004 9095 16th-19th Century Fair Nil



Key:

Protected Ancient Monument	
Listed Historic Building	
Other known Ancient Monument	
Undesignated wreck	
Site complex	
Undetermined boundary	







### 3.6 Polbain to Reiff Bay

1. **Hinterland Geology and Coastal Geomorphology:** This section comprises an undulating coastal shelf on the western edge of a range of low hills dominated by the steep slopes of Meall Dearg (163m), overlooking two wide bays (Badentarbat Bay & Loch an Alltain Duibh) and a narrow channel (Caolas Eilean Ristol). The most characteristic feature of the coastline is the harbour of Old Dorney Bay (Plate 3), which is entirely sheltered by an adjacent island, Isle Ristol, 300m to the west. The predominant bedrock throughout this section is Torridonian sandstone, which outcrops in the form of cliffs, rock platforms and glaciated slabs on steeper slopes throughout the section. The coastal shelf is largely comprised of peat deposits and infrequent raised beach deposits, covered with a thin layer of soil. The foreshore is predominantly composed of rock platforms strewn with boulders. Occasional shingle and cobble deposits form beaches in sheltered bays. Old Dorney Bay at low tide contains extensive shingle, cobble and mud deposits. The coast edge was characterised by sloping rocky shelves and low cliffs, increasing with height (< 20m) in the north of the section.
  
2. **Erosion Class:** This coastal section is generally erosional in nature, though much of the coast edge is sheltered from long shore wave activity by offshore islands (The Summer Isles). Exposure to the open sea increases in the vicinity of Geodha na Glaic Bàine, and the presence of substantial cobble and boulder storm bars in some of the exposed bays clearly indicates that the coastline does experience high energy wave activity from the west. There were few indications of active erosion and the overall rate of coastal regression is probably very low, however, soft deposits of peat and glacial till were receding from the top of cliffs composed of more resistant sandstone bedrock. Minor accretion was exhibited in Old Dorney Bay, where shingle and mud banks had formed in the intertidal zone. A tombolo almost connects Isle Ristol to the mainland at low tide. Comparatively limited parts of the hinterland are low lying, though some exposed locations would be vulnerable to erosion and / or marine inundation in the event of a change in climatic conditions or rise in sea level.
  
3. **Built Heritage and Archaeology:** As in the Achiltibuie area (Section 3.5), settlement along this stretch is closely associated with the coastal shelf, with particular concentrations in the vicinity of the 18th-19th century crofting townships of Alltan Dubh, Polbain, Dornie and Old Dornie. It is highly probable that prehistoric and medieval settlement is also concentrated in this area, however it is often hard to distinguish these elements from the later settlement pattern. The current townships are scattered along a road located 300m+ from the shoreline, however several buildings and structures, including crofts, mills and boat nausts are situated on or close to the coast edge. Old Dorney Bay (NB 1980 9108) in particular contains extensive lazy bed cultivation, and the highest concentration of slipways, boat nausts and hulks in the study area. Other maritime related site types present include a kelp kiln (NB 1995 9097) and kelp storage pits (NB 1970 9138). An apparently early, pre-improvement settlement comprising at least 4 sub-rectangular buildings and a midden was located in the lee of a storm bar at Old Dorney Bay (NB 1982 9113, see Volume 2), and a similarly highly reduced structure (NB 1982 9113) was situated on a temporary island in the bay. Prehistoric occupation in the area was indicated by a putative hut circle (NB 1975 9131) (Plate 4) and burial cairns (NB 1984 9102 & NB 91 SE 2), which were located on exposed parts of the coastal shelf peripheral to the later settlement.

No site was observed to be actively eroding, however several sites are located in exposed positions and could be subject to erosion or inundation if climatic circumstances change. One structure (NB 1975 9131) was only exposed as a result of disturbance caused by peat cutting.



### 3.6.1 Hinterland Geology and Coastal Geomorphology

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#### 1. RUBHAN NA BUAILE

NB 199 909

0.9 km

*Mainly shingle & cobble beach intersected with rock platforms*

*Low edge < 5m with occasional storm beaches*

*Peat / soil over visible rock interspersed with raised beach deposits*

A wide shelf above low rocky banks, interspersed with small bays containing storm beaches. The foreshore is composed principally of coarse beach deposits with occasional rock platform outcrops.

#### 2. FEAR BHREUG

NB 198 909

1.0 km

*Mainly rock platform interspersed with shingle & cobble beaches*

*Low edge < 5m*

*Peat / soil over visible rock interspersed with raised beach deposits*

A wide shelf above low rocky banks, interspersed with small bays. The foreshore is composed principally of rock platform with occasional sections of coarse beach material deposits.

#### 3. MOL MÓR

NB 198 910

1.75 km

*Mainly rock platform intersected with cobble & boulder beaches*

*Mainly cliffs (< 10m) with occasional storm beaches*

*Peat / soil over visible rock intersected with raised beach*

Steep rocky slopes and low cliffs above rock platforms interspersed with raised beach deposits, storm bars and cobble / boulder forshore.

#### 4. OLD DORNEY BAY

NB 198 911

2.15 km

*Mainly shingle & cobble beach with occasional rock platforms and mud banks*

*Low edge < 5m with occasional storm beaches*

*Peat / soil over visible rock intersected with raised beach*

A complex section comprising a sheltered bay at the base of steep rocky slopes and peat covered shelves. Raised beach deposits occur around the north east and south west sides of the bay. A tombolo comprised of boulders links a former island with the north shore, while another small island in the centre of the bay is accessible at low tide. Extensive foreshore deposits in the bay consist of mud, shingle, cobbles, boulders and occasional sand.

#### 5. CAMAS AN FHÉIDH

NB 198 912

1.2 km

*Mainly rock platform interspersed with cobble & boulder beaches*

*Low edge < 5m with occasional storm beaches*

*Peat / soil over visible rock intersected with raised beach*

A section composed of steep rocky slopes and a wide peat / soil covered shelf above low cliffs and rock platforms. A raised beach is situated at the mouth of a narrow valley behind a storm bar and sand and cobble foreshore.

#### 6. ALLTAN DUBH

NB 198 912

1.8 km

*Mainly rock platform / boulder*

*Low edge < 5m with occasional cliffs (10m)*

*Peat / soil over visible rock*

A wide shelf covered with peat and glacial till deposits is located above low cliffs, sloping rocky shelves and platforms. Occasional boulder beaches are located in small inlets.

#### 7. GEODHA NA GLAIC BÀINE

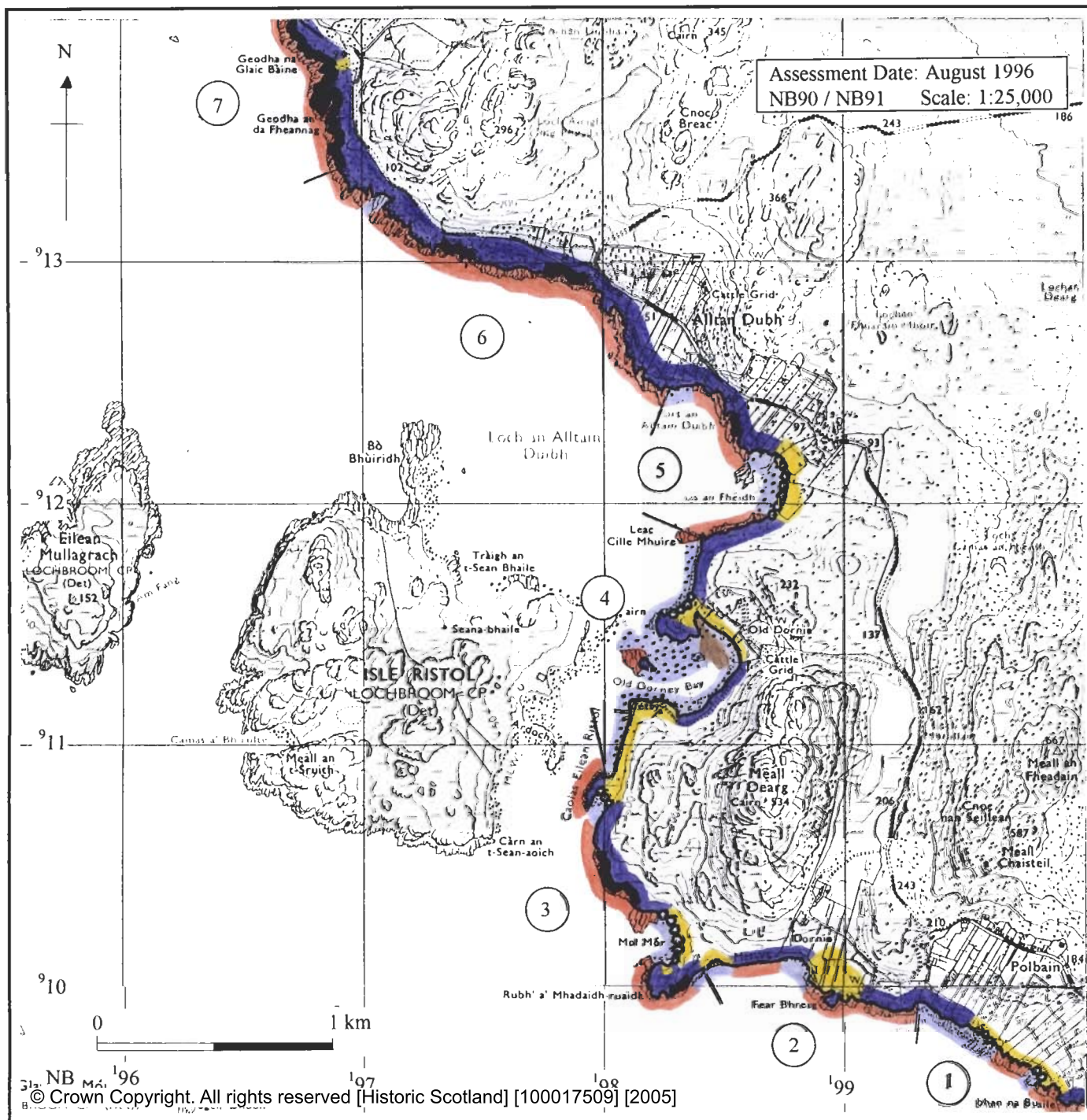
NB 196 913

0.8 km

*Mainly rock platform / boulder Cliffs(20m)*

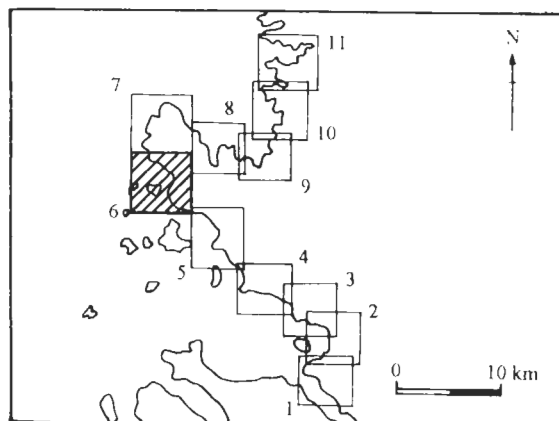
*Peat / soil over visible rock*

A wide shelf covered with peat and glacial till deposits is located above high cliffs, steep rocky slopes and rock platforms. Occasional boulder beaches are located in small inlets.



Key:

Hinterland Geology	
Peat / soil over visible bedrock	
Raised beach and marine deposits	
Blown sand	
Alluvial deposits	
Coast Edge	
Low edge (<5m)	
Cliff (>5m)	
Man made barrier	
Storm beach	
Human disturbance	
Coastal Geomorphology	
Mainly rock platform/boulders	
Mainly shingle/cobbles/boulders	
Mainly sand	
Marsh	



### 3.6.2 Erosion Class

#### 1. RUBHAN NA BUAILE

NB 199 909

0.5 km

*Eroding or stable*

A series of short, grassy banks and cliffs above rock platforms are probably eroding slowly.

#### 2. CAMAS COILLE

NB 199 909

0.4 km

*Stable*

An exposed bay between rocky headlands, backed by grassy banks. Currently there are no indications of either active erosion or accretion.

#### 3. FEAR BHREUG

NB 199 909

0.6 km

*Eroding or stable*

A series of short, grassy banks and cliffs above rock platforms are probably eroding slowly.

#### 4. DORNIE BAY

NB 198 910

0.15 km

*Stable*

A small bay between rocky headlands, backed by grassy banks. Currently there are no indications of either active erosion or accretion.

#### 5. RUBH' A' MHADAIDH-

RUAIDH

NB 198 910

0.85 km

*Eroding or stable*

A series of short, grassy banks and cliffs situated above rock platforms, around the south side of a small promontory.

#### 6. MOL MÓR

NB 198 910

0.3 km

*Stable*

A small bay on the north side of a small promontory enclosed by protruding rock platforms. Currently there are no indications of either active erosion or accretion, though the bay is in an exposed situation.

#### 7. MEALL DEARG

NB 198 910

1.0 km

*Eroding or stable*

Grassy banks and cliffs situated above rock platforms at the south end of a sheltered channel between the mainland and Isle Ristol, at the base of a steep rocky hill. The coast edge is probably eroding very slightly.

#### 8. CAOLAS EILEAN RISTOL

NB 198 910

0.35 km

*Stable*

The east side of a sheltered channel between Isle Ristol and the mainland is characterised by a peat covered shelf at the base of a steep rocky shelf, behind a cobble and boulder beach. Currently there are no indications of either active erosion or accretion.

#### 9. OLD DORNEY BAY

NB 198 911

1.3 km

*Accreting or stable*

An enclosed bay in a sheltered position opposite Isle Ristol, which contains slack water. A wide foreshore consisting of extensive mud, boulders, cobbles and shingle indicates that active accretion is occurring, in particular in the lee of a tombolo in the north west corner of the bay. Isle Ristol is almost accessible from the bay at low tide. A deep channel around the south east side of the bay is stable.

#### 10. LEAC CILLE MUIRE (SOUTH)

NB 198 911

0.5 km

*Stable*

The north east side of a sheltered channel between Isle Ristol and the mainland is characterised by a heather covered slope behind a boulder foreshore. Currently there are no indications of either active erosion or accretion.

#### 11. LEAC CILLE MUIRE (NORTH)

NB 198 911

0.3 km

*Eroding or stable*

The south side of a bay, consisting of steep rocky slopes above a narrow rock platform foreshore. Recent signs of rock fall were evident, indicating an erosional environment.

#### 12. CAMAS AN FHÉIDH

NB 198 912

0.5 km

*Stable*

A small bay at the mouth of a minor stream valley enclosed by protruding rock platforms. Currently there are no indications of either active erosion or accretion.

#### 13. ALLTAN DUBH

NB 197 912

2.5 km

*Eroding or stable*

A wide peat / soil covered shelf on the north side of the channel between the mainland and Isle Ristol. The coast edge is indented and comprises of low cliffs, sloping rocky shelves and platforms. Recent evidence of minor erosion include scar exposures on the edge of glacial till and peat deposits above steep slopes and cliffs.

#### 14. GEODHA NA GLAIC BÀINE

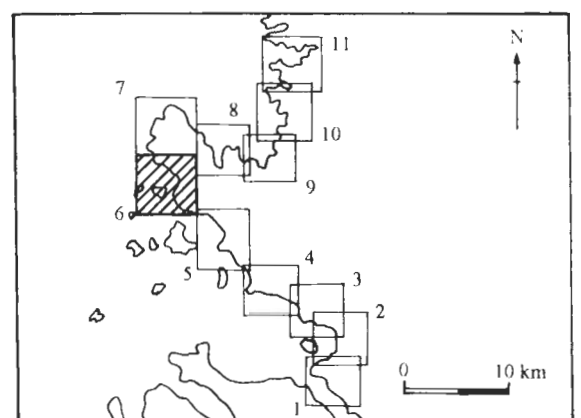
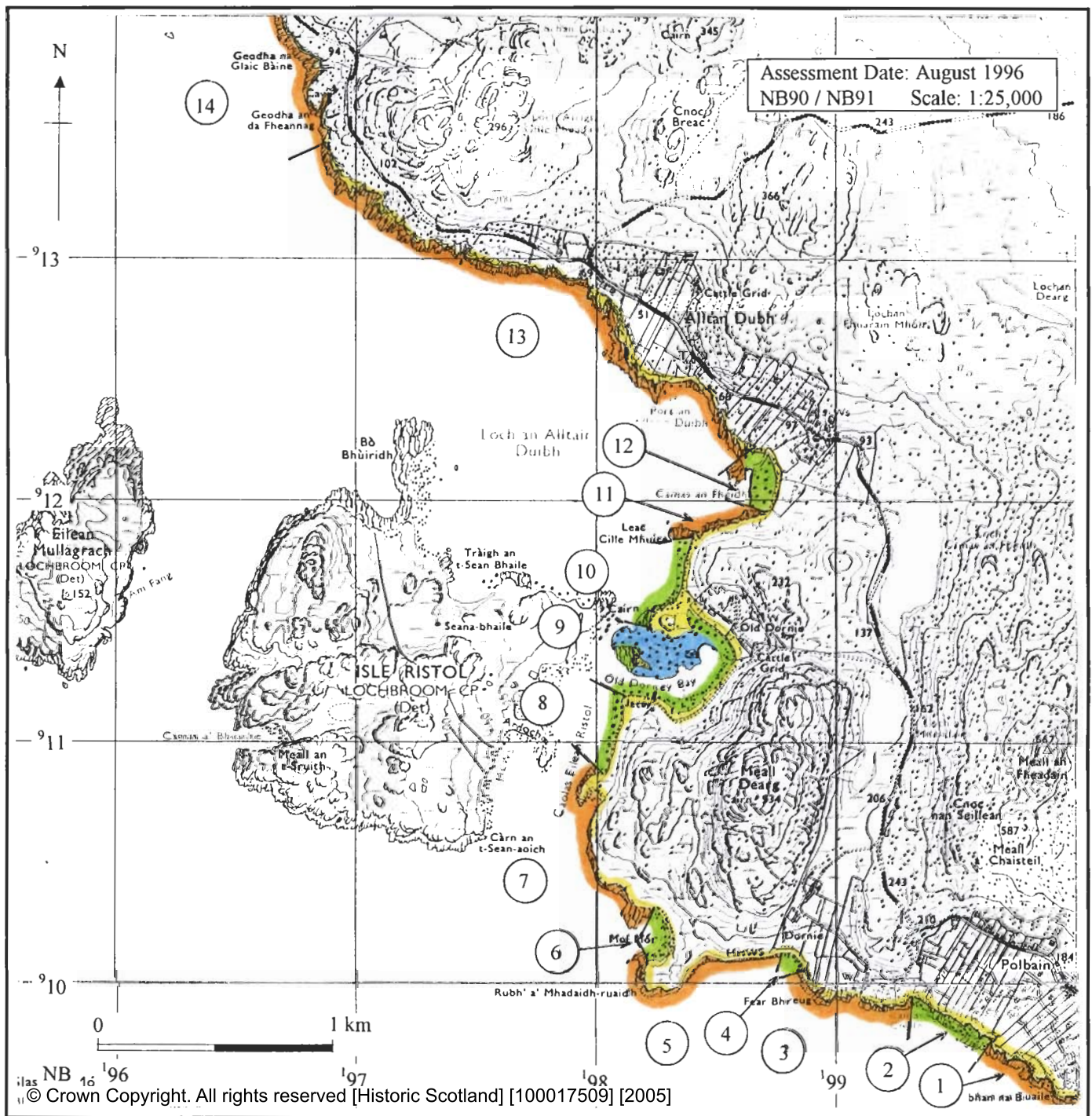
NB 196 913

0.7 km

*Eroding or stable*

A wide peat / soil covered shelf on the north side of the passage between the mainland and Isle Ristol. The coast edge is composed of steep cliffs highly indented by deep, boulder filled geos, caves and rock platforms. Recent evidence of minor erosion include rock falls, slump scars on the edge of glacial till deposits and deflation hollows in peat on the shelf above the steep slopes and cliffs.





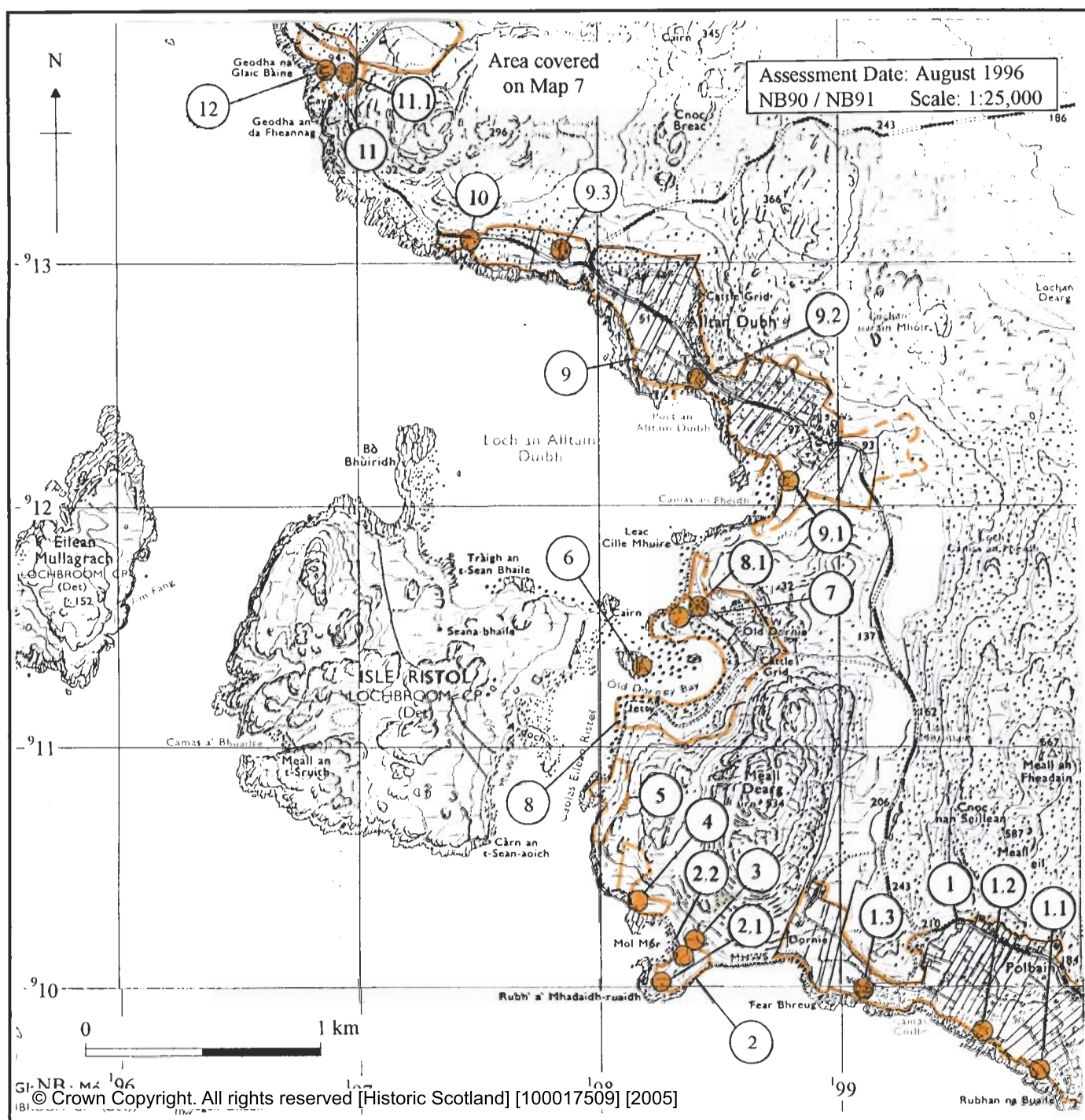
### 3.6.3 Built Heritage and Archaeology

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1. POLBAIN- DORNIE Township, field systems, cultivation NB 1995 9099 1.1 Structures NB 1997 9096 1.2 Rectilinear kelp kiln NB 1995 9097 1.3 Building complex (occupied) NB 1991 9010 16th-20th Century Fair Nil	5. CAOLAS EILEAN RISTOL Field systems, cultivation, peat cuttings NB 1980 9108 16th-19th Century Fair Nil	NB 1984 9125 9.3 Building complex (occupied) NB 1978 9131 16th-20th Century Fair Nil
2. RUBH A' MHADAIDH- RUAIDH Buildings, field systems, cultivation, slipways NB 1984 9101 2.1 Building NB 1982 9100 2.2 Building & pen (not located) NB 1983 9101 16th-19th Century Fair Nil	6. OLD DORNEY BAY Structure, slipway NB 1982 9113 Pre-modern Fair Nil	10. ALLTAN DUBH Hut circle (?) NB 1975 9131 Pre-modern Fair/poor Nil
3. MOL MÓR Burial cairn (?) NB 1984 9102 Pre-modern Not located Nil	7. OLD DORNEY BAY Building complex, midden NB 1984 9115 Pre-modern Fair Nil	11. GEODHA NA GLAIC BÀINE Structures, cultivation, field systems, trackway NB 1970 9138 11.1 Mill (?), kelp storage pits NB 1970 9138 16th-19th Century Fair Nil
4. MOL MÓR Building, compost pit (?), cultivation, peat cuttings NB 1982 9104 16th-19th Century Fair (building not located) Nil	8. OLD DORNIE Township, cultivation, field systems, boat nausts, slipways, hulks NB 1985 9113 8.1 Building complex NB 1984 9116 16th-20th Century Fair Nil	12. GEODHA NA GLAIC BÀINE Burial cairn, modern burial NB 91 SE 2 Pre-modern / 20th Century Fair Nil
	9. ALLTAN DUBH Township, cultivation, field systems, peat cuttings, slipways, hulks, trackway NB 1985 9125 9.1 Mill (?) NB 1988 9121 9.2 Structure	

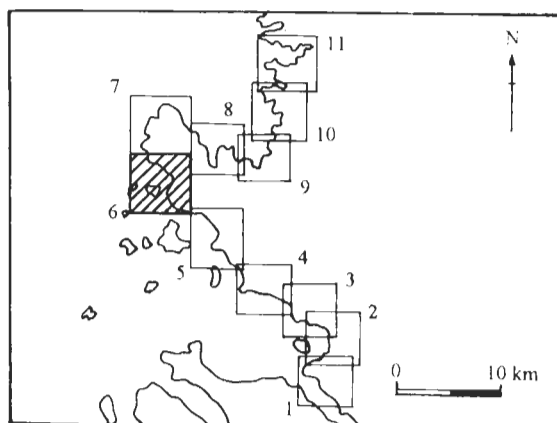
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Key:

<i>Protected Ancient Monument</i>	
<i>Listed Historic Building</i>	
<i>Other known Ancient Monument</i>	
<i>Undesignated wreck</i>	
<i>Site complex</i>	
<i>Undetermined boundary</i>	







### 3.7 Reiff to Rubha Dubh

1. **Hinterland Geology and Coastal Geomorphology:** This section of coastline is consists of a series of high, steep cliffs around the western and northern sides of a broad, peat covered peninsula (Rubha Còigeach). The peninsula is formed by a wide, peat filled valley flanked by ranges of low hills to the south west and north east, which effectively define the position of the coastline. On the north eastern side in particular, long, undercut hillslopes (< 80m) characterise the coast edge. The predominant bedrock throughout this section is Torridonian sandstone. On the exposed western coast the rock is horizontally bedded with a massive blocky structure, resulting in steep, cliffs broken only by occasional bays. In contrast on the northern side of the peninsula the bedding planes are exposed on edge, resulting in frequent geos, caves, narrow peninsulas and sea stacks. Wide wave cut platforms are prevalent throughout this exposed section.

In the south, the Loch of Reiff has been impounded as a result of the linking of an island with the mainland by tombolos composed of huge boulders (Plate 2). Raised beach deposits are distributed along the west coast, though with the exception of the sheltered Loch of Reiff area, they are generally very small, often consisting of only small pebble banks. The foreshore consists predominantly of rock platforms strewn with massive boulders, however sandy stretches of beach do occur in sheltered bays.

2. **Erosion Class:** The Peninsula of Rubha Còigeach is the most exposed stretch of coastline in the study area, and also showed the clearest indications of coastal erosion in the form of steep cliffs, caves, sea stacks, geos and wide boulder strewn rock platforms. Owing to the nature of the bedding structure the western side of the peninsula is predominantly affected by mechanical wave erosion, while the northern and eastern sides are affected by a combination of both mechanical wave erosion and sub-aerial weathering. Two large bays on the west coast (Camas Eilean Ghlais & Faochag Bay) are relatively sheltered and considered stable. Owing to the resistance of the bedrock, it is probable that the coastline is only receding at a very slow rate.

The presence of storm beach composed of huge boulders indicates that in the past the coastline has been exposed to extremely high energy wave activity. At the southern end of the Loch of Reiff the tombolo has been artificially breached by a channel, and the loch is still tidal, which causes some erosion to raised beach deposits around the edge. Otherwise it appears the loch is slowly silting up. The land surrounding the loch is low lying and susceptible to marine inundation, otherwise the coastal strip is likely to be unaffected as a result of changes in climatic conditions or sea level.

3. **Built Heritage and Archaeology:** Settlement in this section is clustered around sheltered inlets and raised beach deposits, and appears more coastal in nature than elsewhere in the study area. In particular the 18th-19th century crofting township of Reiff (NB 1966 9145) is one of the few settlements in the study area to be located entirely within the coastal strip. Consequently, there is a very dense concentration of 19th century buildings at the head of Reiff Bay and on the east side of the Loch of Reiff, with various boat nausts, kelp storage pits and enclosures situated around the loch and in the adjoining settlement of Camas Eilean Ghlais (NB 1968 9155). Several putative kelp kilns have been constructed from storm beach boulders on the tombolo linking Roinn a' Mhill with the mainland, and there is a well preserved lazy bed landscape and an unusual series of low stone field boundaries or enclosures (NB 1964 9147) on the west side of the loch.

Elsewhere in this section sites are less densely distributed. Mills, shelters and other constructions composed of piled boulders are distributed along the west side of the peninsula between Reiff and the outlying settlement of Faochag (NB 1979 9175), however only a single section of peat cutting (NB 1985 9177) was observed along the higher, northern coastline.

No site was observed to be actively eroding, however several sites are in exposed positions and could be subject to inundation and / or erosion if climatic conditions change or in the event of a rise of sea level.

### 3.7.1 Hinterland Geology and Coastal Geomorphology

#### 1. REIFF BAY (SOUTH)

NB 196 914

0.3 km

*Mainly rock platform / boulder*

*Low edge < 5m*

*Peat / soil over visible rock*

A wide shelf covered with peat and glacial till deposits is located above low cliffs, steep rocky slopes and rock platforms. Occasional boulder beaches are located in small inlets.

#### 2. REIFF BAY (NORTH)

NB 196 914

0.4 km

*Mainly sand with shingle & cobble beach*

*Storm beach*

*Raised beach with bedrock outcrops*

A substantial storm bar blocks the entrance to Loch of Reiff and abuts raised beach deposits situated on a rocky, glaciated shelf. The foreshore is composed of sand, shingle and cobbles.

#### 3. LOCH OF REIFF

NB 196 914

1.6 km

*Mainly cobble & boulder beach*

*Low edge < 5m*

*Raised beach with bedrock outcrops*

This tidal loch is impounded by storm bars to the north and south (sub-sections 2 & 5), but has been artificially opened to the sea by means of a channel for boats. To the east and west raised beach deposits are situated at the base of moderately steep rocky slopes. The foreshore within the loch is primarily composed of boulder beaches. The adjacent hinterland regularly floods and has some characteristics of salt marsh.

#### 4. ROINN A' Mhill

NB 196 914

1.3 km

*Mainly rock platform / boulder*

*Cliffs (20m)*

*Peat / soil over visible rock*

A steep sided, rocky headland to the west side of the Loch of Reiff. The coast edge is composed of steep cliffs highly indented by deep, boulder filled geos, rock platforms and boulder storm beaches situated high above the HWM.

#### 5. CAMAS EILEAN GHLAIS

(SOUTH)

NB 196 915

0.2 km

*Mainly boulder beach*

*Storm beach*

*Raised beach*

A massive boulder storm beach linking the Roinn a' Mhill to the mainland. The boulders abut raised beach deposits.

#### 6. CAMAS EILEAN GHLAIS

(NORTH)

NB 196 915

0.7 km

*Mainly sand and boulder beach*

*Low edge < 5m*

*Raised beach with bedrock outcrops*

A wide bay sheltered behind a steep rocky islet. The coast edge is composed of small, steep sided headlands and isolated raised beach deposits. The foreshore is composed of boulder and sand beaches.

#### 7. AN STIÙIR

NB 196 916

2.2 km

*Mainly rock platform / boulder*

*Cliffs (20m)*

*Peat / soil over visible rock*

A highly indented, exposed stretch of coast composed of steep cliffs, geos and wide boulder strewn rock platforms. High storm beaches occur at locations along the coast, and a single isolated section of raised beach is situated at the mouth of a shallow valley (Allt

nan Clàr-Lochan). A large glacial deposit composed of massive boulders located at the coast edge has been partially eroded by wave activity to form a feature resembling a massive storm beach.

#### 8. FAOCHAG BAY

NB 197 917

1.8 km

*Mainly rock platform / boulder*

*Low edge < 5m*

*Peat / soil over visible rock*

A relatively sheltered, indented west facing bay, enclosed behind protruding headlands and rock platforms. A small sheltered inlet on the north side of the bay contains a storm beach, with indications of tidal flooding behind. Sand deposits are exposed at low tide in the northern part of the bay. A single isolated section of raised beach is situated on the southern shore of the bay.

#### 9. RUBHA CÒIGEACH

NB 198 917

4.1 km

*Mainly rock platform / boulder*

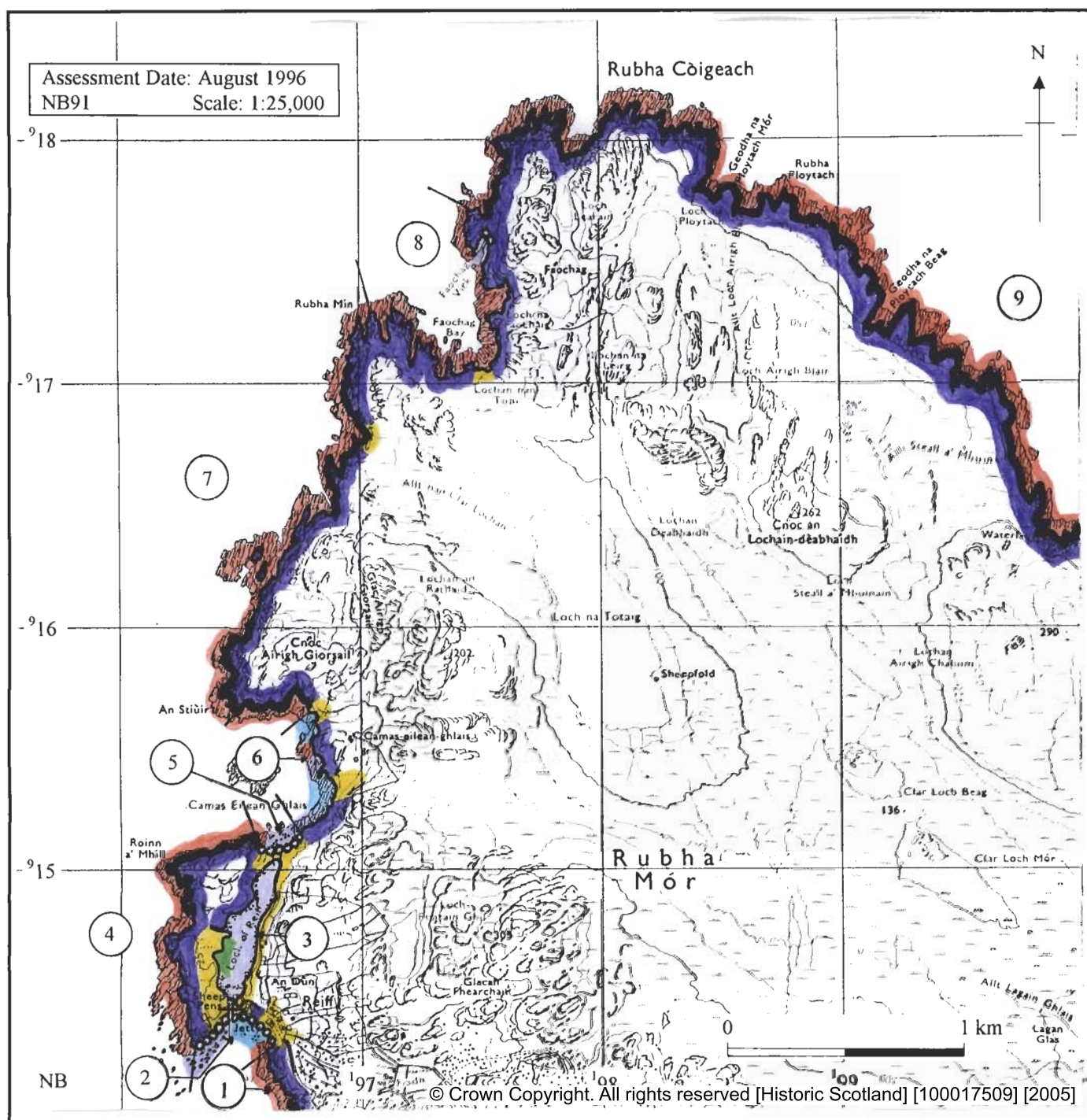
*Cliffs (60m)*

*Peat / soil over visible rock*














A highly indented, exposed stretch of coast composed of steep rocky slopes, high cliffs, geos, stacks, caves and wide boulder strewn rock platforms. The character of gradually changes to the east as the coast runs along the base of a range of low hills, and the bedding structure is exposed on end. Longer, shallower slopes with an base of undercut cliffs predominate.

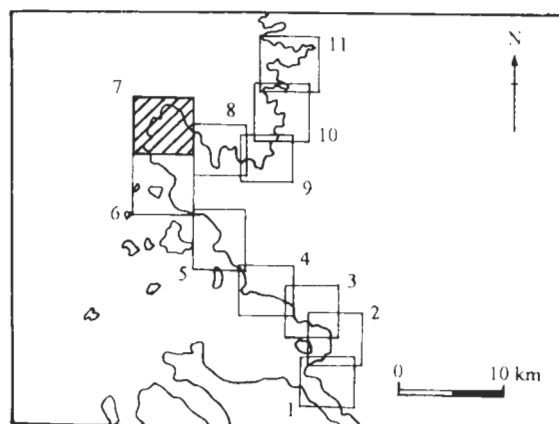
### MAP 7 REIFF TO RUBHA DUBH

## Hinterland Geology and Coastal Geomorphology



Key:

<b>Hinterland Geology</b>	
Peat / soil over visible bedrock	
Raised beach and marine deposits	
Blown sand	
Alluvial deposits	
<b>Coast Edge</b>	
Low edge (<5m)	
Cliff (>5m)	
Man made barrier	
Storm beach	
Human disturbance	
<b>Coastal Geomorphology</b>	
Mainly rock platform/boulders	
Mainly shingle/cobbles/boulders	
Mainly sand	
Marsh	



### 3.7.2 Erosion Class

#### 1. REIFF BAY (SOUTH)

NB 196 914

0.3 km

*Eroding or stable*

A wide peat / soil covered shelf on the south side of Reiff Bay. The coast edge is composed of steep cliffs highly indented by deep, boulder filled geos, caves and rock platforms. Recent evidence of erosion includes fresh rock falls and scar exposures at the edge of glacial till and peat deposits above steep slopes. The rate of regression is probably very slow.

#### 2. REIFF BAY (NORTH)

NB 196 914

0.4 km

*Stable*

A sheltered bay at the entrance to Loch of Reiff. The coast edge is composed of an extensive storm bar and raised beach deposits behind a sand, cobble and boulder foreshore. There are no indications of either active erosion or accretion.

#### 3. LOCH OF REIFF

NB 196 914

1.6 km

*Both accreting and eroding*

An almost totally enclosed tidal loch situated behind a storm bar and connected to the sea by an artificial channel. The coast edge is composed of peat covered shelves and low angle rocky slopes above a boulder foreshore. The marine environment within the loch is stagnant, and the artificial channel has clearly silted up, however erosion to the coast edge is evident at HWM. Much of

the adjacent land is low lying and vulnerable to inundation.

#### 4. ROINN A' MHILL

NB 196 914

1.3 km

*Eroding or stable*

A steep sided, rocky headland defining the west side of Loch of Reiff. The coast edge is composed of steep cliffs highly indented by deep, boulder filled geos and rock platforms and high storm beaches composed of boulders. This section is extremely exposed, but the rate of regression is probably very slow.

#### 5. CAMAS EILEAN GHLAIS

NB 196 915

1.0 km

*Stable*

A wide bay sheltered behind a steep rocky islet. The coast edge is composed of small, steep headlands, raised beach deposits and a storm beach composed of massive boulders. The foreshore is composed of boulder and sand beaches. There are no indications of either active erosion or accretion.

#### 6. AN STIÙIR

NB 196 916

2.3 km

*Eroding or stable*

A highly indented, exposed stretch of coast composed of steep cliffs, geos, wide boulder strewn rock platforms and high storm beaches comprised of boulders. The rate of regression is probably very slow. The erosion of the base of a glacial deposit of massive boulders

graphically demonstrates the erosive force of the sea along this coast.

#### 7. FAOCHAG BAY

NB 197 917

0.9 km

*Stable*

A relatively sheltered west facing bay, enclosed behind protruding headlands and rock platforms. There are no indications of either active erosion or accretion, but the aspect of the bay is very exposed and may be susceptible to erosion under extreme conditions.

#### 8. RUBHA CÒIGEACH

NB 198 917

1.6 km

*Eroding or stable*

A highly indented, exposed stretch of coast composed of steep cliffs, geos, wide boulder strewn rock platforms and high storm beaches comprised of boulders. The rate of regression is probably very slow.

#### 8. RUBHA PLOYTACH

NB 198 917

3.0 km

*Definitely eroding*

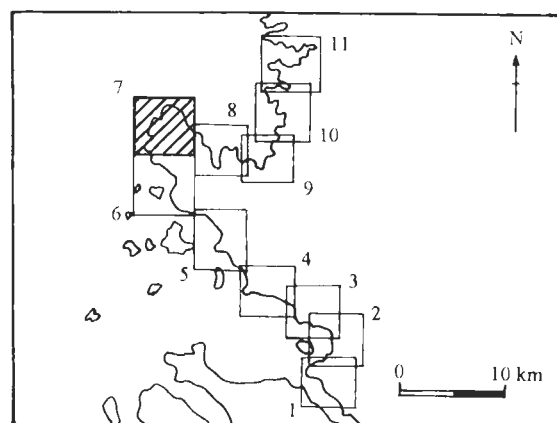
A highly indented, exposed stretch of coast composed of high rocky slopes, steep cliffs, geos, caves and wide boulder strewn rock platforms. There is extensive evidence of fresh erosion and rockfall along this section, though the rate of regression is negligible for the purposes of cultural resource management. The peat deposits above the cliffs are also badly deflating in parts.



## Erosion Class



Erosion Class	
<i>Definitely accreting</i>	
<i>Accreting or stable</i>	
<i>Stable</i>	
<i>Eroding or stable</i>	
<i>Definitely eroding</i>	
<i>Both accreting and eroding</i>	
<i>Land below 10m</i>	



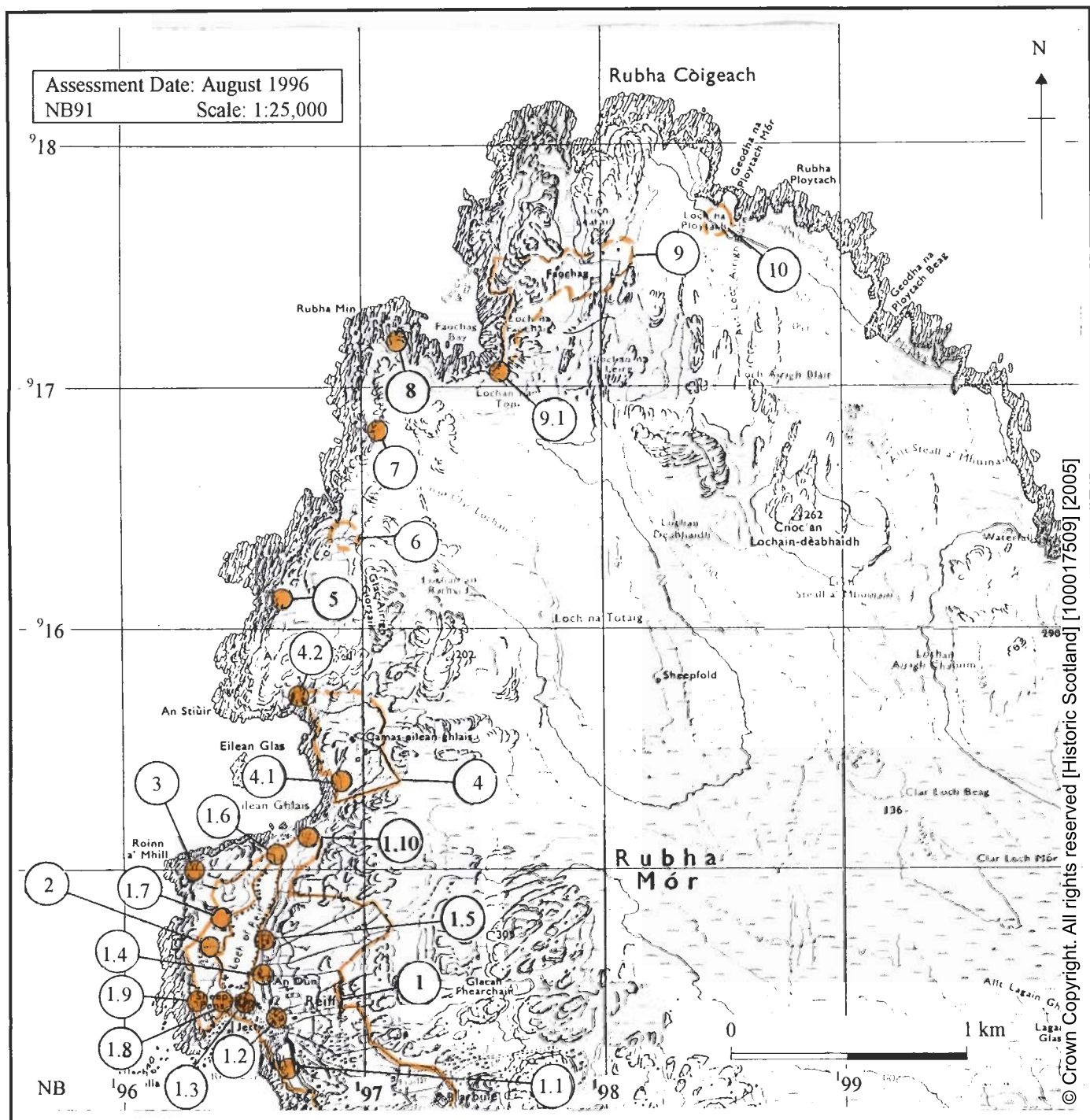


### 3.7.3 Built Heritage and Archaeology







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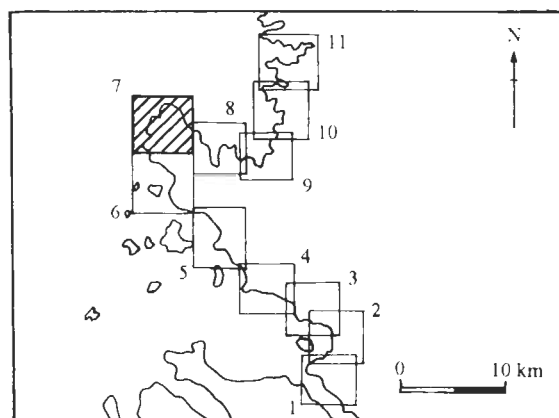
1. REIFF Township, field systems, cultivation, boat nausts, slipways, kelp kilns and storage pit (?), NB 1966 9145 1.1 Buildings, kiln (?) NB 1967 9142 1.2 Buildings, boat naust NB 1966 9144 1.3 Buildings, boat naust NB 1965 9145 1.4 Buildings, boat nausts NB 1966 9146 1.5 Buildings (occupied) NB 1966 9147 1.6 Boat naust, slipway, hut NB 1967 9151 1.7 Boat naust, hut NB 1964 9148 1.8 Kelp storage pit (?) NB 1964 9144 1.9 Kelp kilns (?) NB 1963 9144 1.10 Pen NB 1967 9151 16th-20th Century Fair Nil	Nil	Nil
2. LOCH OF REIFF Enclosures NB 1964 9147 Pre-early modern Fair	3. ROINN A' MHILL Structure NB 1963 9150 18th-20th Century Fair Nil	7. ALLT NAN CLÀR-LOCHAN Mill NB 1971 9168 18th-19th Century Fair Nil
	4. CAMAS EILEAN GHLAIS Township, field systems, cultivation NB 1968 9155 4.1 kelp storage pit (?), boat naust, pens NB 1969 9154 4.2 Structure (pen ?) NB 1967 9157 16th-20th Century Fair Nil	8. RUBHA MIN Shelters NB 1971 9172 16th-19th Century Fair Nil
	5. CAOLAS NA SGEIRE Shelters, kelp kilns (?) NB 1967 9162 16th-20th Century Fair Nil	9. FAOCHAG Township, cultivation, field systems, peat cuttings NB 1979 9175 9.1 Structure (mill ?) NB 1976 9171 16th-19th Century Fair / poor Nil
	6. GLAC AIRIGH GORSALL Peat cuttings NB 1969 9164 19th-20th Century Fair	10. GEODHA NA PLOYTACH MÒR Peat cuttings NB 1985 9177 19th-20th Century Fair Nil

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Key:

Protected Ancient Monument	
Listed Historic Building	
Other known Ancient Monument	
Undesignated wreck	
Site complex	
Undetermined boundary	





### 3.8 Camascoille to Garvie Bay

1. **Hinterland Geology and Coastal Geomorphology:** This section of coastline comprises the edge of an undulating peat covered plateau on the south side of Enard Bay, characterised by numerous small headlands and inlets, dominated by the estuary of Achnahaird Bay. The predominant bedrock is Torridonian sandstone, though Lewisian gneiss extensively outcrops in the Cnoc Mòr an Rubha Bhig area. On the north facing Torridonian sandstone stretches of coastline, the bedding planes are exposed on edge, forming a series of steep headlands interspersed with deep geos and inlets. On the east side of Achnahaird Bay, however, the bedding planes dip seaward and the coast edge is composed of sloping rock slabs which are comparatively resistant to wave erosion. The west side of Garvie Bay displays extensive evidence of storm beach development, with the development of a tombolo (Rubh' a' Choin) and bars blocking a number of valleys. The foreshore consists predominantly of rock platforms with cobble and boulder beaches in small bays and inlets, however sandy stretches of beach occur in some sheltered bays and inlets. Achnahaird Bay represents the most extensive section of sand foreshore and adjacent coastal dune system in the study area, though the head of the bay is largely composed of tidal marsh.
2. **Erosion Class:** The predominant character of this coastline is very similar to the preceding Rubha Còigeach peninsula (Section 3.7), though with a more sheltered aspect. Much of the coast is comprised of rocky headlands indented by boulder filled coves and geos clearly indicating erosional conditions; however, the overall rate of regression is probably very slow. Interestingly, the development of massive storm beaches along the west side of Garvie Bay illustrates the effects of high energy wave activity from the north west, on a stretch of coastline seemingly in the lee of the prevailing winds. Archaeological evidence dates this activity to before the mid 18th century.

The narrow estuary of Achnahaird Bay has a highly complex morphology and erosional state, and is unique in the study area. Essentially, sand is being deposited across an extensive tidal flat through a combination of aeolian, fluvial and tidal processes, and subsequently transported by wind to an adjacent coastal dune and machair complex to the west. The bay has a high tidal range, which appears to be increasing, as both sides of the bay and a raised area in the centre of the bay are experiencing increasing inundation and conversion to salt marsh. This is evident through a inspection of early maps of the area (e.g. Peter May's Map of the Barony of Coigach 1756 (SRO/RHP 85395) & 1st ed. O.S. 1875) and the visible affects on adjacent stone and turf dykes (Plate 11). The dune system is highly unstable, and extensive areas are being denuded, due to a combination of factors, including a possible decrease in the supply of sand to the system, stock trampling and rabbit burrows. High visitation levels also present an erosional threat to the dune system. Much of the area around the estuary is low lying and highly susceptible to marine inundation, as indicated by occurrence of salt marsh at the head of the bay.

3. **Built Heritage and Archaeology:** Achnahaird Bay has clearly been a focus for settlement over a long period of time, with a large number of structures including a dun (NC 01 SW 3), hut circles (NC 2023 9127 & NC 2023 9128), subrectangular buildings (NC 2023 9129), weirs, lazy bed cultivation plots and dyke systems occurring around the estuary. A particularly significant structural complex and midden is exposed in a badly eroding section of the dune system on the west side of the bay (NC 01 SW 2). It is probable that the development of the dune system has caused a shift of focus in the post-medieval settlement pattern further west away from the bay. Elsewhere along the coast sites are less densely distributed, however several isolated 19th century buildings (e.g. NC 2029 9146), kelp kilns (e.g. NC 2033 9148), an enclosure (NC 2038 9141) and a salmon 'creave' (NC 2029 9137) are clustered around inlets and the mouths of valleys dammed by massive storm beaches (Plate 6). The kelp kilns are a feature of particular interest, as they are composed of hollows created within storm beaches, and effectively provide a *terminus ante quem* for the storm beach formation activity (Plate 5). Few sites are directly threatened by coastal erosion, with the exception of low lying elements of field systems around Achnahaird Bay. The structures and midden deposits at Achnahaird Sands are however the most significant and seriously threatened archaeological features in the entire study area, and require immediate action.



### 3.8.1 Hinterland Geology and Coastal Geomorphology

#### 1. RUBHA A' CHAIRN

NC 200 915

2.6 km

*Mainly rock platform / boulder*

*Cliffs (< 60m)*

*Peat / soil over visible rock*

A highly indented, exposed stretch of coast composed of steep rocky slopes, high cliffs, stacks, geos, caves and wide boulder strewn rock platforms. The bedrock is weakly bedded Torridonian sandstone dipping to the west.

#### 2. CAMAS NAN SOITHECHEAN

NC 201 914

0.3 km

*Mainly cobble & boulder beach*

*Cliffs (< 50m)*

*Peat / soil over visible rock*

An enclosed bay backed by steep rocky slopes below a flat peat covered shelf, containing an extensive boulder and cobble beach. The bedrock is weakly bedded Torridonian sandstone with the strata exposed on edge.

#### 3. RUBHA LEARAIN

NC 201 914

1.0 km

*Mainly rock platform / boulder*

*Cliffs (< 25m, becoming lower to the south)*

*Peat / soil over visible rock*

An indented stretch of coastline on the west side of Achnahair Bay backed by steep rocky slopes and low cliffs below a flat peat covered shelf. The foreshore is principally rock platform with occasional boulder and cobble beaches in small coves. The bedrock is weakly bedded Torridonian sandstone with the strata exposed against the dip.

#### 4. ACHNAHAIRD SANDS

NC 201 913

3.5 km

*Mainly sand, with marsh at the south end*

*Low edge < 5m*

*Peat / soil over visible rock and raised beach, with blown sand on the west side*

An enclosed bay containing an extensive sandy foreshore and surrounded by peat covered shelves and isolated raised beach deposits. A large adjoining sand dune & machair system is situated to the west. The sides of the bay are fringed by low shingle ridges.

The southern end of the bay is composed of semi-tidal salt marsh. A tidal stream flows around the southern and eastern side of the marsh and sand flats.

#### 5. RUBHA BEAG

NC 202 914

1.3 km

*Mainly rock platform / boulder*

*Low edge < 5m*

*Peat / soil over visible rock*

The east side of Achnahair Bay is composed of sloping rocky shelves and platforms backed by grassy slopes and peat covered shelves at the base of a low hill (Cnoc Mór an Rubha Bhig). A cobble beach is situated in a small enclosed bay below an isolated raised beach.

#### 6. CAMAS A' BHOTAIN

NC 202 914

1.4 km

*Mainly rock platform / boulder*

*Low edge < 5m with occasional cliffs (< 15m)*

*Peat / soil over visible rock, with isolated raised beach deposits in occasional coves*

An indented section of coastline at the base of a low rocky hill (Cnoc Mór an Rubha Bhig). The coast edge is defined by two rocky promontories, and backed by short, steep rocky slopes and low cliffs. The predominant bedrock is Torridonian sandstone with westward dipping strata, interspersed with occasional outcrops of Lewisian gneiss. The foreshore is primarily rock platform with occasional boulder and cobble beaches in small coves.

#### 7. RUBH' A' CHOIN

NC 203 914

1.2 km

*Mainly rock platform / boulder, with shingle, cobbles, boulders and sand to the east*

*Low edge < 5m and storm beach*

*Peat / soil over visible rock*

A tombolo created by a large cobble and boulder storm bar linking a skerry with the mainland. The storm bar is underlain by rock platforms. The eastern foreshore is composed of an extensive shingle, cobble & boulder beach with occasional exposures of sand. This landform is situated at the base of a low rocky hill, fringed by

sloping rock slabs and steep grassy slopes.

#### 8. CREAG A' CHOIN MHÓIR

NC 203 914

0.5 km

*Mainly rock platform / boulder*

*Cliffs (< 25m, becoming lower to south)*

*Peat / soil over visible rock*

An indented stretch of coastline below a low rocky hill on the west side of Garvie Bay, characterised by steep rocky slopes and low cliffs. The foreshore is principally rock platform with occasional boulder and cobble beaches in small coves.

#### 9. LOCH NAM PREAS

NC 203 914

0.15 km

*Mainly sand (over rock platform)*

*Storm beach*

*Raised beach*

An extensive cobble & boulder storm bar blocks the mouth of a minor valley (Allt nam Preas ?), impounding a small freshwater marsh, with extensive sand deposits and frequent exposures of rock platform occurring on the foreshore.

#### 10. GARVIE BAY (WEST)

NC 203 913

0.4 km

*Mainly rock platform / boulder*

*Low edge < 5m*

*Peat / soil over visible rock*

An indented stretch of coastline on the west side of Garvie Bay backed by steep rocky slopes and low cliffs below a flat peat covered shelf. The predominant bedrock is Torridonian sandstone interspersed with occasional outcrops of Lewisian gneiss. The foreshore is principally rock platform with occasional boulder and cobble beaches in small coves.

#### 10. GARVIE BAY (EAST)

NC 204 913

0.2 km

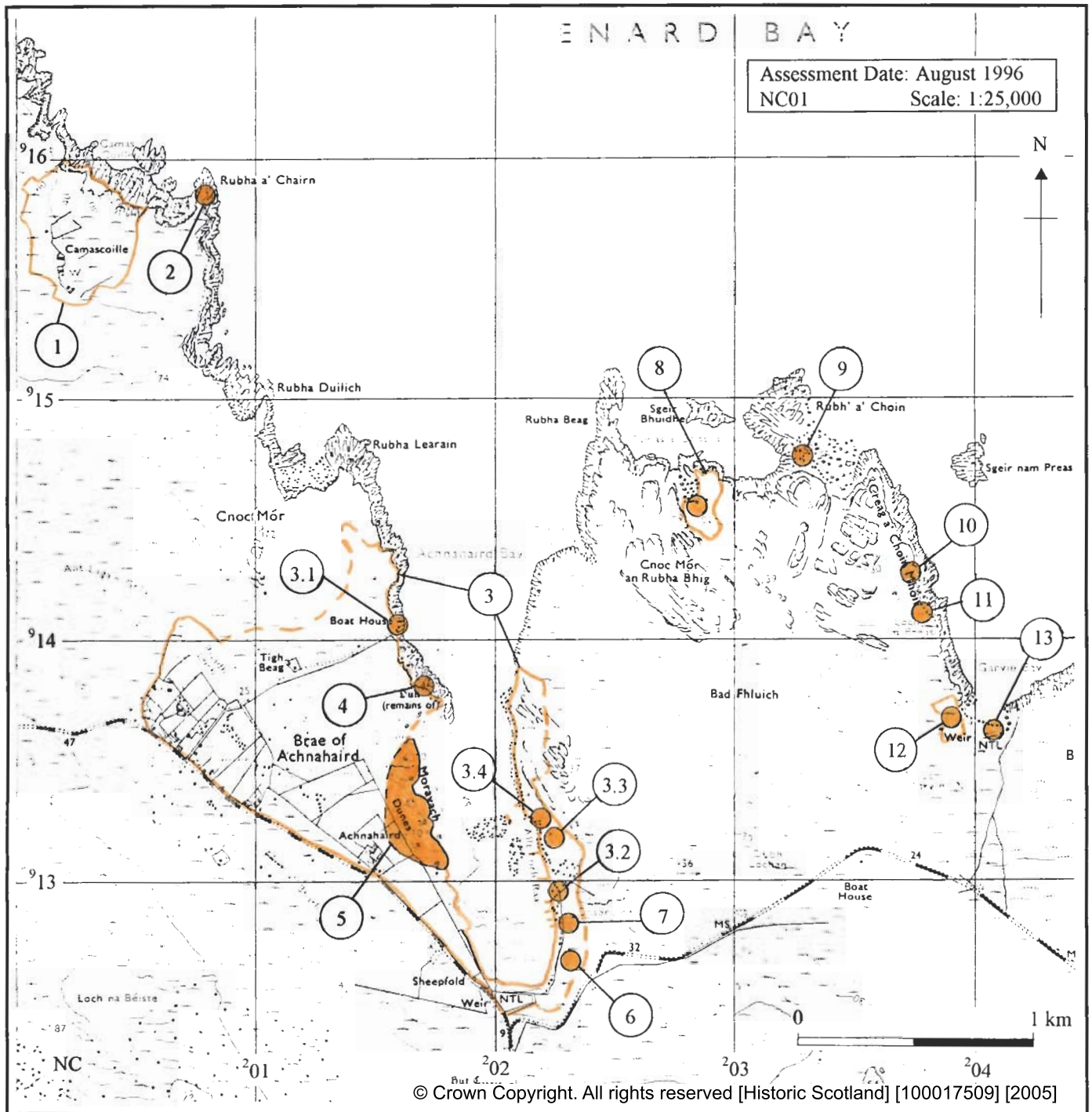
*Mainly sand*

*Storm beach*

*Raised beach*

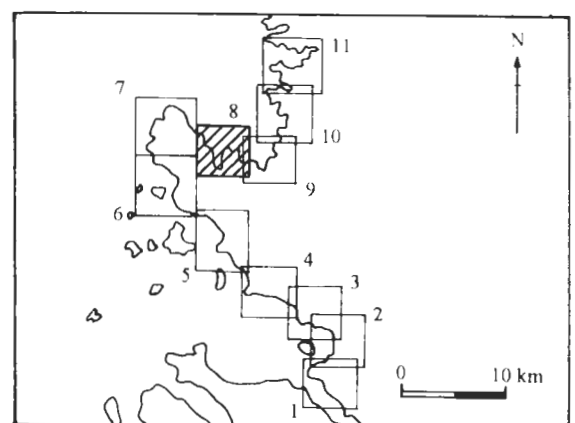
An extensive cobble & boulder storm bar blocks the mouth of the River Garvie valley, impounding a small freshwater loch (Loch Garvie). The foreshore is composed almost entirely of sand.

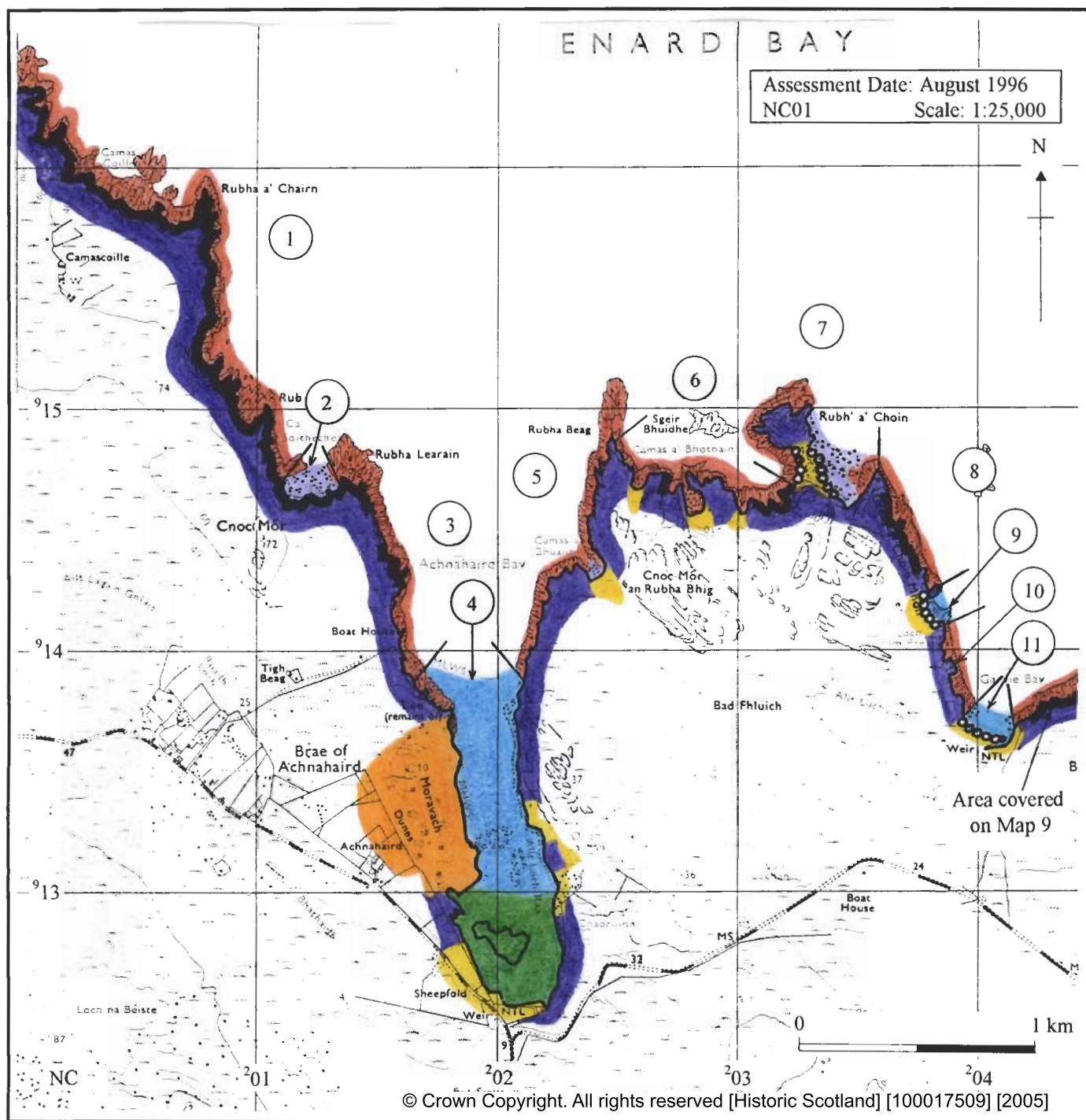




Key:

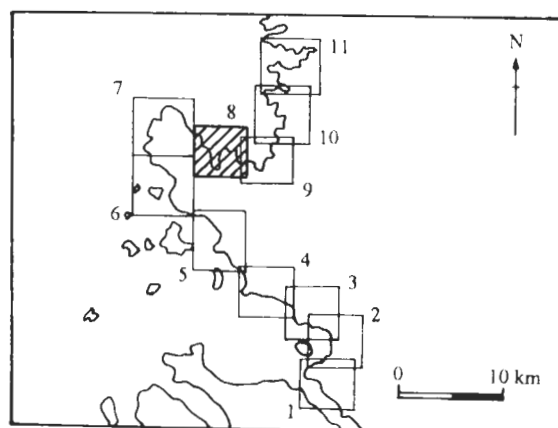
Protected Ancient Monument	●
Listed Historic Building	+
Other known Ancient Monument	●
Undesignated wreck	●
Site complex	○
Undetermined boundary	○





Key:

Hinterland Geology	
Peat / soil over visible bedrock	
Raised beach and marine deposits	
Blown sand	
Alluvial deposits	
Coast Edge	
Low edge (<5m)	
Cliff (>5m)	
Man made barrier	
Storm beach	
Human disturbance	
Coastal Geomorphology	
Mainly rock platform/boulders	
Mainly shingle/cobbles/boulders	
Mainly sand	
Marsh	



### 3.8.2 Erosion Class

#### 1. RUBHA DUBH

NC 200 916

0.6 km

##### *Definitely eroding*

The coast edge in this section displays clear characteristics of steady erosion, including steep unstable cliffs and slopes, sea stacks, narrow promontories, wide boulder strewn rock platforms, fresh rockfall, geos and caves. The coastline has a north-easterly aspect, and forms the rear slope of a high hill (96m ASL). The rate of regression is likely to be slow.

#### 2. CAMASCOILLE

NC 200 915

0.5 km

##### *Eroding or stable*

A wide bay sheltered between short headlands contains wide, boulder strewn rock platforms and a steep rocky backslope with minor erosion scars indicating a general trend towards erosion. A shingle and cobble beach along the HWM at the rear of the bay indicates that recently the section has been experiencing a period of relative stability. The rate of regression is likely to be slow.

#### 3. RUBHA A' CHAIRN

NC 200 915

1.2 km

##### *Definitely eroding*

The section is partially sheltered on the west side of Enard Bay, but the strata has been exposed on edge. There is clear evidence of steady erosion, including steep unstable cliffs, narrow promontories interspersed with deep geos, wide boulder strewn rock platforms and fresh rockfall. The rate of regression is likely to be slow.

#### 4. CAMAS NAN SOITHECHEAN

NC 201 914

0.7 km

##### *Eroding or stable*

A wide bay sheltered between short headlands contains wide, boulder strewn rock platforms and steep rocky backslope, indicating a general trend towards erosion. A shingle and cobble beach along the

high tide mark at the rear of the bay indicates a period of relative stability. The rate of regression is likely to be slow.

#### 5. RUBHA LEARAIN

NC 201 914

1.0 km

##### *Eroding or stable*

This stretch of coast consists of weakly bedded sandstone cliffs with a westward dipping strata. The section is in a partially sheltered position on the west side of Achnahaird Bay, but has been exposed against the dip. There is clear evidence of steady erosion, including steep unstable cliffs, narrow promontories interspersed with geos, wide boulder strewn rock platforms and fresh rockfall. The rate of regression is likely to be slow.

#### 6. ACHNAHAIRD SANDS

NC 201 913

3.5 km

##### *Both accreting and eroding*

This semi-tidal estuarine environment contains an extensive sandy foreshore which may have been created through the supply of beach material from the erosion of glacial till deposits on adjoining cliffs. Fluvial deposition from Allt Loch Raa and Allt Lagain Ghlais has also contributed to the supply of beach material. There are clear indications of active aeolian erosion in an adjacent dune complex and machair to the west, and the inundation of adjacent peat deposits at a rising HWM at the head of the bay.

#### 7. RUBHA BEAG

NC 202 914

1.3 km

##### *Eroding or stable*

The coast edge in this section is eroding very slowly. The coastal aspect is north westerly, and the bedrock is exposed along the gently dipping bedding planes. Low slabs and shelves of westward dipping Torridonian sandstone present an effective barrier to rapid erosion, and the rate of regression is likely to be slow.

#### 8. CAMAS A' BHOTAIN

NC 201 914

2.0 km

##### *Eroding or stable*

This section is partially sheltered by offshore skerries, but the bedding planes have been exposed on edge. There is clear evidence of a general erosional trend, including steep, unstable cliffs, narrow promontories interspersed with deep geos, wide boulder strewn rock platforms and fresh rockfall. The rate of regression is likely to be slow.

#### 9. RUBH' A' CHOIN

NC 203 914

0.6 km

##### *Stable*

An enclosed bay with a north easterly aspect, situated in a sheltered position behind a promontory and storm bar. The presence of an extensive sand, shingle and cobble foreshore indicate a stable environment, though there are no indications of active accretion.

#### 10. CREAG A' CHOIN MHÓIR

NC 203 914

1.15 km

##### *Eroding or stable*

The section is in a partially sheltered situation on the west side of Garvie Bay, with the strata exposed against the dip. There is some evidence of an erosional trend, including steep rocky slopes and occasional cliffs, rock platforms and boulder accumulation in occasional inlets. The rate of regression is likely to be slow.

#### 11. GARVIE BAY

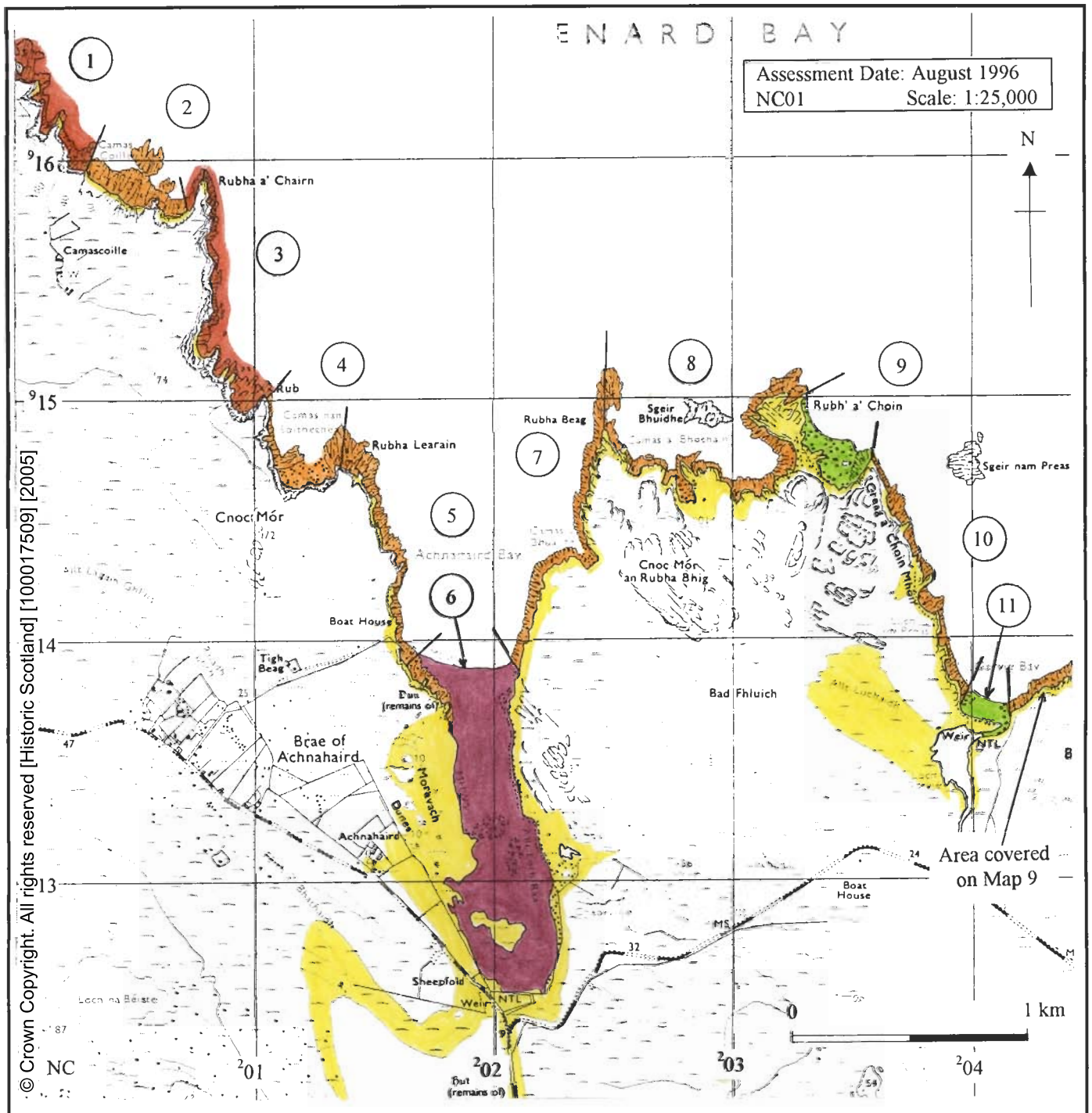
NC 204 913

0.2 km

##### *Stable*

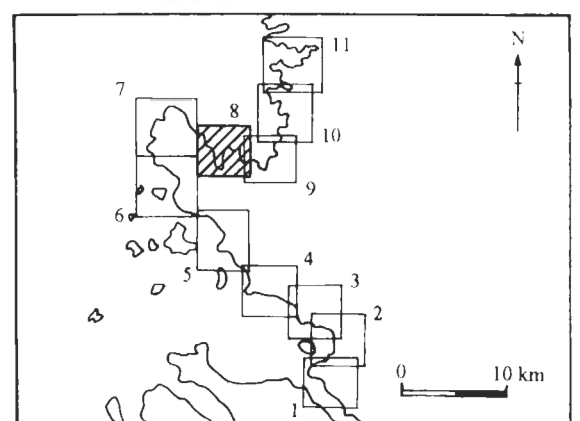
A north facing beach at the head of Garvie Bay. A sand & cobble beach foreshore abuts an overgrown storm bar, but there is no indication of progressive accretion.





Key:

Erosion Class	
Definitely accreting	Blue
Accreting or stable	Light Blue
Stable	Green
Eroding or stable	Orange
Definitely eroding	Red
Both accreting and eroding	Purple
Land below 10m	Yellow



### 3.8.3 Built Heritage and Archaeology

1. CAMASCOILLE Township, field systems, cultivation, trackway NC 2004 9158 16th-20th Century Fair Nil	Late Prehistoric Fair Monitor	Fair Nil
2. RUBH A' CHÀIRN Cairn (?) NC 01 NW 1 Natural Non-site Nil	5. ACHNAHAIRD SANDS Building complex, cairn, midden NC 01 SW 2 5th - 19th Century Poor Survey	10. CREAG A' CHOIN MHÓIR Kelp kiln (?) NC 2037 9143 18th - 19th Century Fair Nil
3. ACHNAHAIRD Township, cultivation, field systems, boat nausts, weirs, earthworks NC 2015 9131 (includes Achnahaird House; NC 01 SW 34) 3.1 Boat house NC 2016 9141 3.2 Buildings NC 2023 9129 3.3 Building NC 2023 9132 3.4 Boat naust NC 2022 9133 16th - 20th Century Fair Nil	6. ALLT LOCH RAA Hut circle NC 2023 9127 Late prehistoric Fair Nil	11. GARVIE BAY Enclosure, structures / kelp kilns (?) NC 2038 9141 18th - 19th Century Fair Nil
4. ACHNAHAIRD Dun NC 01 SW 3	7. ALLT LOCH RAA Hut circle, enclosures NC 2023 9128 Late prehistoric Fair Nil	12. GARVIE BAY Building, hut circle, cultivation NC 2039 9137 Late prehistoric - 19th Century Fair Nil
	8. CAMAS A' BHOTHAIN Buildings, cultivation, boat naust, slipways, marker cairn NC 2028 9146 16th - 20th Century Fair Nil	13. LOCH GARVIE Structure / kelp kiln (?), 'salmon creave' (weir) NC 2041 9136 18th - 20th Century Fair Nil
	9. RUBH' A' CHOIN Kelp kilns (?), structures NC 2033 9148 18th - 20th Century	





### 3.9 Garvie Bay to Lochan Sàl

1. **Hinterland Geology and Coastal Geomorphology:** This section is situated at the south east corner of Enard Bay, and comprises two distinctly different stretches of coastline. This is a result of a major change in geological formation, where the Torridonian sandstone of the Coigach area runs out onto the underlying Lewisian gneiss of Assynt. In the south west lies the edge of an undulating Torridonian sandstone plateau, characterised by the development of steep cliffs with rock platforms and occasional boulder-filled geos (cf. Section 3.8). In contrast, to the north of Camas a' Bhothain the coast is dominated by Lewisian gneiss, which is characterised by high, rocky hillsides sloping down to narrow tidal rock platforms. There is only limited development of coastal cliffs, which tend to take the form of low angle slabs, reflecting earlier glacial processes rather than mechanical wave erosion. This type of coastal environment has been termed a 'skerry' coast (Price 1991, 96), and is typical of a drowned landscape with an underlying resistant bedrock. Shingle foreshores and raised beach deposits occur in sheltered bays and inlets, while storm beaches have blocked the mouths of the larger valleys.
  
2. **Erosion Class:** This character of this section is essentially erosional, comprising a series of rocky headlands interspersed with enclosed bays, and in the northern part, small fjords. The rate of regression is extremely slow, and in the case of the Lewisian gneiss from Camas a' Bhothain to Lochan Sàl, dominated by sub-aerial weathering. The incidence of wave notch development is negligible, and underlying form of the glaciated landscape is largely unmodified. Fluvial deposition is occurring in the intertidal zone at the head of Polly Bay; however, there is no evidence of the coast edge actively prograding, and it is probable the deposited beach material is being subsequently eroded by longshore wave activity in this exposed situation. The incidence of storm bar development around the back of Enard Bay indicating exposure to high energy waves from the north west, however, on the basis of archaeological evidence, this activity predates the 19th century. An extensive area of low lying land is located in the wide valleys of Strath Polly and Gleann Lochan Sàl and on a shelf overlooking Lag na Saile, otherwise very little of this section is vulnerable to marine inundation in the event of a rise in sea level.
  
3. **Built Heritage and Archaeology:** The settlement pattern of the area is dominated by the larger valleys (Strath Polly and Gleann Lochan Sàl), since much of the coast edge is very steep and inaccessible. On the edge of the sandstone plateau in the south west, sites are also located on terraces overlooking sheltered bays. The majority of the recorded sites are 18th / 19th century buildings and associated boat nausts, field systems, peat cuttings and lazy bed cultivation, with a particular clustering in Strath Polly (NC 01 SE 1 & NC 01 SE 8). There are documented references to a 19th century shipwreck approximately located in Polly Bay (Baird 1996, 264) which would warrant some maritime investigation. The only prehistoric and possible medieval sites in the area include the vitrified fort located on the isolated promontory of Meall an Iaruin (NC 01 NE 1) and a highly reduced subcircular structure at Camas a' Bhothain (NC 2054 9130). This does not preclude the possibility of other, as yet undetected sites existing beneath later settlement patterns

None of the recorded sites are affected by coastal erosion, though much of the settlement and cultivation in Strath Polly is very low lying and potentially susceptible to inundation. A storm beach blocking the mouth of the valley is higher than the surrounding valley floor and defines the course of a disused 19th century trackway (1st ed. O.S. map 1875), flanked by possible milestones (no markings). May (1756) marks a salmon creave at the mouth of the River Polly on his map of the Barony of Coigach (SRO / RHP 85395). Several 18th / 19th century buildings and structures (e.g NC 2070 9153) are situated on overgrown storm bars, effectively providing a *terminus ante quem* for this period of high energy wave activity.

### 3.9.1 Hinterland Geology and Coastal Geomorphology

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#### 1. GARVIE POINT

NC 204 913

1.2 km

*Mainly rock platform / boulder*

*Cliffs (< 10m)*

*Peat / soil over visible rock*

A low headland comprised of steep rocky slopes and low cliffs below a flat peat covered shelf. The predominant bedrock is Torridonian sandstone. The foreshore is principally rock platform with occasional boulder and cobble beaches located in small coves.

#### 2. LAG NA SAILLE

NC 205 913

1.1 km

*Mainly rock platform / boulder with isolated cobble beaches*

*Cliffs (< 10m) and storm beach*

*Peat / soil over visible rock with isolated raised beach deposits*

An enclosed, indented bay situated between steep, rocky headlands (Rubha Lag na Saille and Creig Liath), with a primarily rock platform and boulder foreshore. The predominant bedrock is Torridonian sandstone. Two minor valleys at the rear of the bay are blocked by storm bars. Each contains an extensive cobble foreshore abutting raised beach deposits.

#### 3. RUBHA NA MÒINE

NC 205 913

2.0 km

*Mainly rock platform / boulder*

*Cliffs (< 100m)*

*Peat / soil over visible rock*

An indented headland formed by the base of a steep rocky hill between two pronounced bays (Lag na Saille and Polly Bay). The predominant bedrock is Lewisian gneiss. The coast edge consists of high grassy slopes and rock slabs with a rock platform foreshore.

#### 4. POLLY BAY

NC 206 914

0.8 km

*Mainly shingle & cobble beach*

*Low edge < 5m and storm beach*

*Peat / soil over visible rock enclosing raised beach deposits*

A substantial cobble storm bar has partially blocked the mouth to a wide valley containing raised beach deposits (Strath Polly) forming a steep sided bay between rocky headlands (Creig Liath and Creag na Speireig). The foreshore is primarily composed of shingle and cobbles with some sand exposures.

#### 5. RUBHA PHOLLAIDH

NC 206 914

1.8 km

*Mainly rock platform / boulder*

*Cliffs (< 100m, with some lower sections)*

*Peat / soil over visible rock*

An indented headland formed by the base of a steep rocky hill between two pronounced inlets (Lag na Saille and Polly Bay). The predominant bedrock is Lewisian gneiss. The coast edge consists of high grassy slopes and rock slabs with a rock platform foreshore.

#### 6. LOCHAN SÀL

NC 206 915

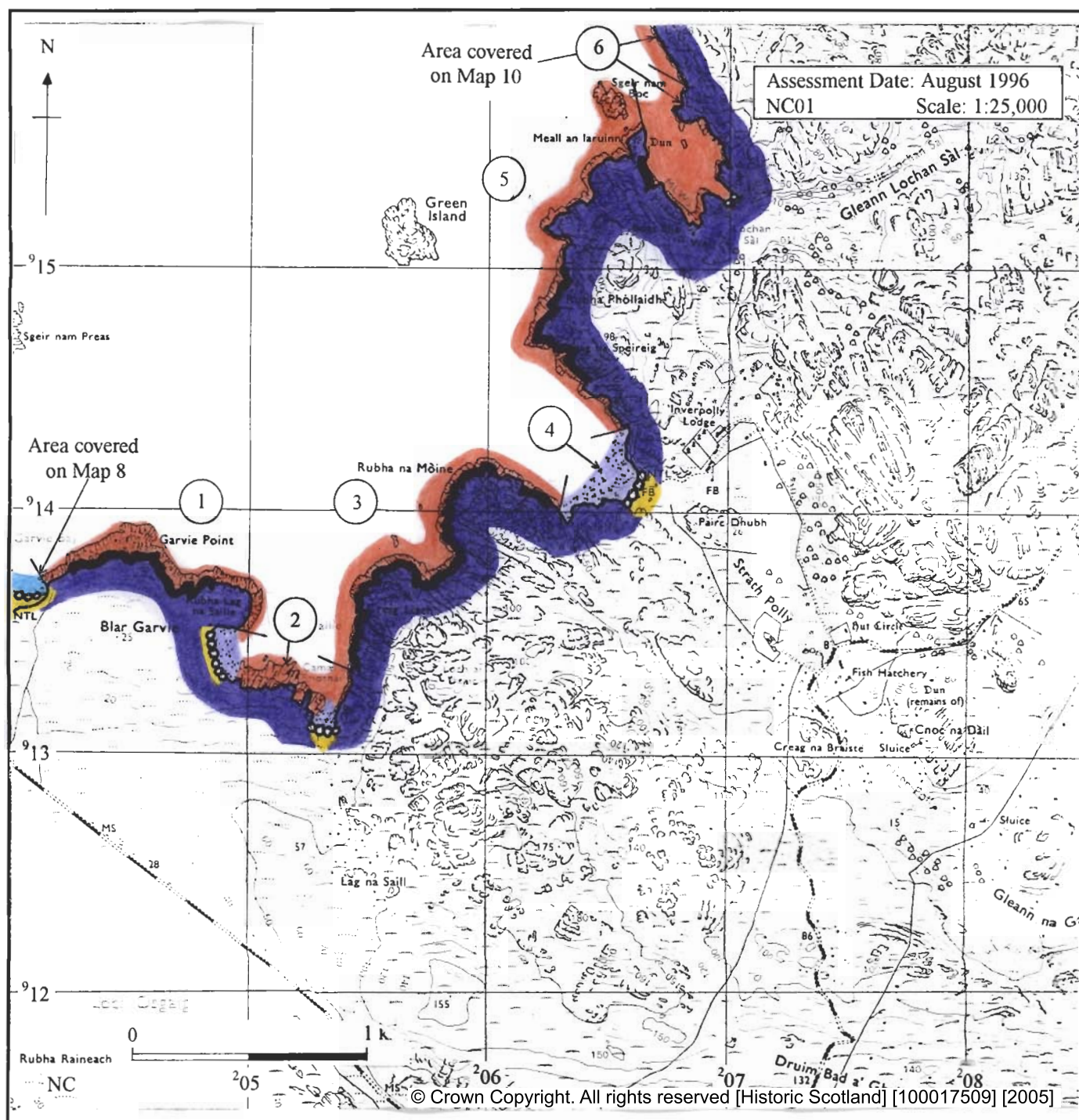
1.3 km

*Mainly rock platform / boulder*

*Low edge < 5m and storm beach*

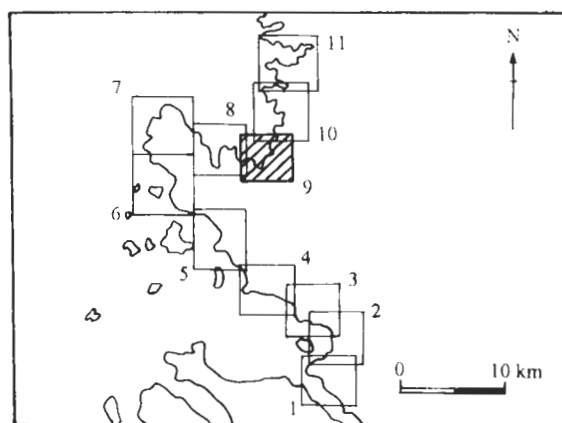
*Peat / soil over visible rock*

A fjord-like inlet at the mouth of a wide valley (Gleann Lochan Sàl) ringed by high grassy slopes and low cliffs. The head of the bay is enclosed by low knolls and a storm bar which have impounded a small freshwater loch (Lochan Sàl). The foreshore is primarily composed of narrow rock platforms with occasional cobble & boulder beaches in small coves.



Key:

Hinterland Geology	
Peat / soil over visible bedrock	
Raised beach and marine deposits	
Blown sand	
Alluvial deposits	
Coast Edge	
Low edge (<5m)	
Cliff (>5m)	
Man made barrier	
Storm beach	
Human disturbance	
Coastal Geomorphology	
Mainly rock platform/boulders	
Mainly shingle/cobbles/boulders	
Mainly sand	
Marsh	



### 3.9.2 Erosion Class

---

#### 1. GARVIE POINT

NC 204 913

1.2 km

*Eroding or stable*

This stretch of coast has an exposed northerly aspect. There is clear evidence of an erosional trend, as demonstrated by the presence of steep cliffs, rock platforms, caves and the accumulation of boulders in occasional inlets. The rate of regression is probably very slow.

#### 2. BLAR GARVIE

NC 204 913

0.4 km

*Stable*

A sheltered beach with an easterly aspect at the head of a minor bay (Lag na Saille). A sand and cobble beach foreshore has accumulated against an overgrown storm bar, but there are no current indications of either active erosion or accretion.

#### 3. LAG NA SAILLE

NC 205 913

0.5 km

*Eroding or stable*

This stretch of coast has a northerly aspect, but is sheltered at the head of deep bay. There is clear evidence of an erosional trend, as demonstrated by the presence of steep cliffs, rock platforms, caves and the accumulation of boulders in occasional inlets. The rate of regression is probably very slow.

#### 4. CAMAS A' BHOTHAIN

NC 205 913

0.2 km

*Stable*

A sheltered beach with a northerly aspect at the head of a minor bay (Lag na Saille). A cobble foreshore has accumulated against an overgrown storm bar, but there are no current indications of either active erosion or accretion.

#### 5. RUBHA NA MÒINE

NC 205 913

2.0 km

*Eroding or stable*

This stretch of coast has an exposed north-westerly aspect, but is sheltered at the head of deep bay. There is clear indication of an erosional trend, in the form of steep rocky slopes, talus, rock platforms, occasional cliffs, rock fall and boulder accumulation in small inlets. The resistance of the bedrock however ensures that this is a very slow process. The steep form of the topography is largely a result of glacial processes.

#### 6. POLLY BAY

NC 206 914

0.8 km

*Both accreting and eroding*

An exposed beach with a westerly aspect at the head of Polly Bay. An extensive sand, shingle and cobble foreshore has accumulated against an overgrown storm bar. The marine deposits have been supplemented by fluvial deposition

from the River Polly, which enters the bay at the north end of the beach via a system of distributaries. In spite of this intensive deposition, there is no indication of active accretion, and it is likely the beach deposits are being continually reworked by tidal processes.

#### 7. RUBHA PHOLLAIDH

NC 206 914

2.3 km

*Eroding or stable*

This stretch of coast has an exposed north-westerly aspect, but is sheltered at the head of deep bay. There is clear indication of an erosional trend, in the form of steep rocky slopes, talus, rock platforms, occasional cliffs, rock fall and boulder accumulation in small inlets. The resistance of the bedrock however ensures that this is a very slow process. The steep form of the topography is largely a result of glacial processes.

#### 8. LOCHAN SÀL

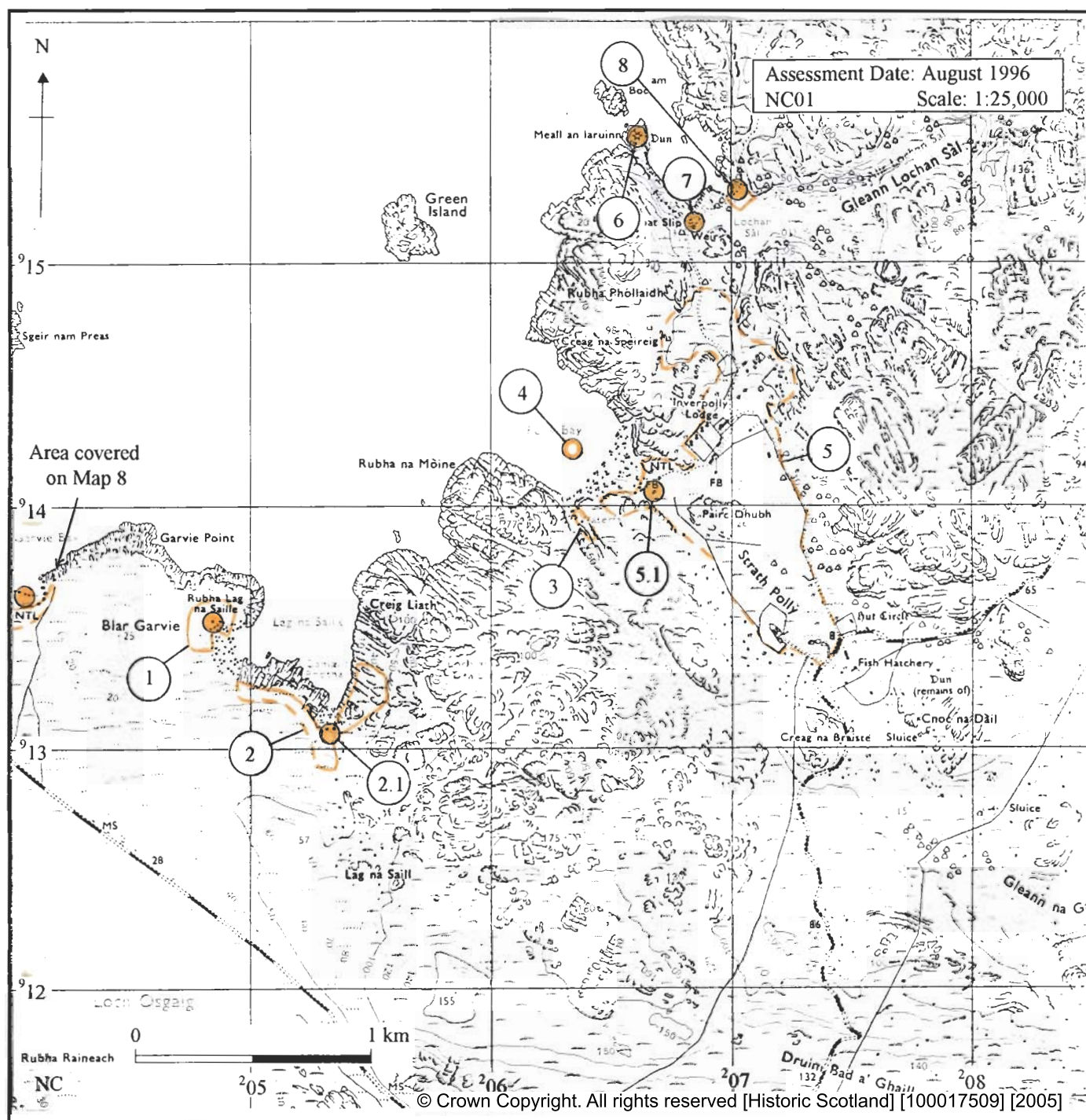
NC 206 915

0.65 km

*Stable*

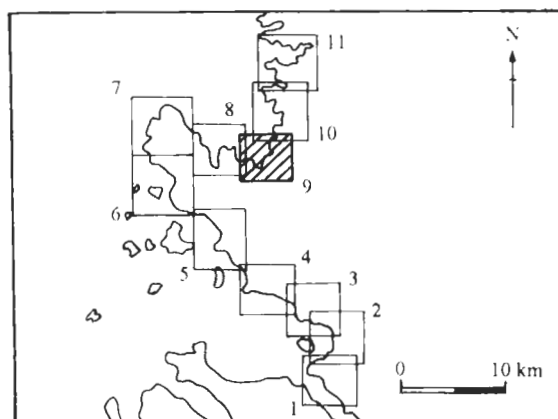
The head of a small fjord with a sheltered north-westerly aspect. An overgrown storm bar and glaciated knoll have impounded a small loch and adjacent raised beach deposits, indicating exposure to high energy wave activity in the past. There are however no current indications of either active accretion or erosion.





Key:

Protected Ancient Monument	
Listed Historic Building	
Other known Ancient Monument	
Undesignated wreck	
Site complex	
Undetermined boundary	

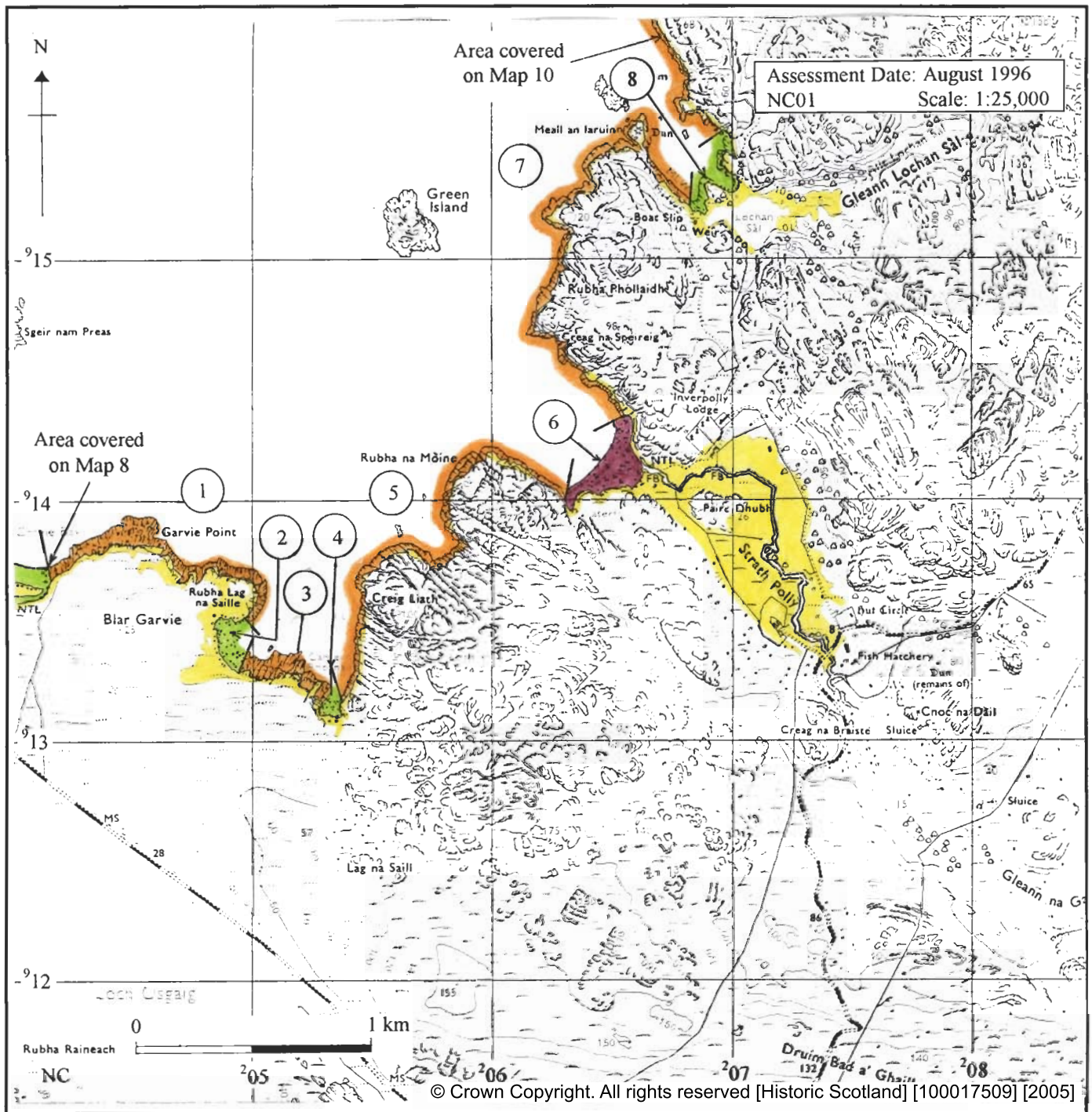


### 3.9.3 Built Heritage and Archaeology

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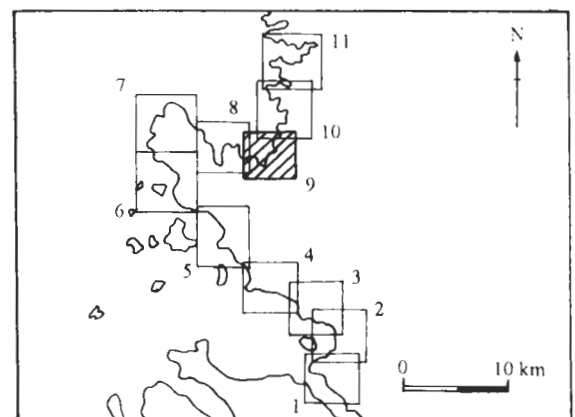
1. RUBHA LAG NA SAILLE Building, cultivation, peat cuttings, slipway NC 2048 9135 16th-20th Century Fair Nil	19th-20th Century Fair Nil	6. MEALL AN IARUINN Vitrified fort NC 01 NE 1 Late prehistoric Fair Nil
2. CAMAS A' BHOTHAIN Buildings, cultivation, peat cuttings NC 01 SE 7 2.1 Buildings & subcircular structure NC 2054 9131 Early modern-20th Century Fair Nil	4. "GOTFREDE" Shipwreck Decca lat. 5804.00 N, Decca long. 0517.00 W 1882 Not inspected Survey	7. LOCHAN SÀL Building (occupied), weir, slipway NC 2068 9151 19th - 20th Century Fair Nil
3. POLLY BAY Peat cuttings NC 2064 9139	5. INVERPOLLY Township, field systems, cultivation, trackway, weirs, footbridge, milestones (?) NC 01 SE 1 5.1 Building NC 01 SE 8 16th-20th Century Fair Nil	8. LOCHAN SÀL Building, cultivation, boat nausts, slipway (?) NC 2070 9153 16th-19th Century Fair Nil

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Key:

Erosion Class	
Definitely accreting	Blue
Accreting or stable	Light Blue
Stable	Green
Eroding or stable	Orange
Definitely eroding	Red
Both accreting and eroding	Purple
Land below 10m	Yellow







### 3.10 Lochan Sàl to Loch Kirkaig

1. **Hinterland Geology and Coastal Geomorphology:** This section of coastline is situated in the north east corner of Enard Bay, where the heavily glaciated Assynt plateau adjoins the bay. The coastline is deeply indented by a series of fjords, bays and narrow inlets, characterised by high, rocky hillsides sloping down to narrow, sloping tidal rock platforms and offshore reefs and islands. The predominant bedrock throughout the section is highly resistant Lewisian gneiss seamed with dyke lines. There has only been limited development of coastal cliffs, which tend to take the form of low angle slabs. This type of coastal environment has been termed a 'skerry' coast (Price 1991, 96) (Plate 1), and is typical of a drowned landscape with a resistant bedrock. Occasional cobble and boulder beaches are located in isolated coves and bays, though no significant storm beach development was apparent. Fine to medium grade beach sediments are very rare throughout this section. An isolated raised beach is situated on the south shore of Loch an Eisg-Brachaidh adjacent to the mouth of Gleann an t-Srathan.
  
2. **Erosion Class:** This section of coastline has an essentially erosional character, comprising a complex series of exposed rocky headlands interspersed with small, well defined fjords (e.g. Poll Loisgann). The rate of regression is negligible and the active processes are probably dominated by sub-aerial weathering, as indicated by several recent rock falls along the north side of Rubha na Brèige, rather than mechanical wave activity. The incidence of wave notch development is very slight, and the underlying form of the glacial landscape is largely unaltered. Fluvial deposition is occurring in the intertidal zone at the mouth of Gleann an t-Srathan, however there is no evidence of the coast edge actively prograding at this point. The lack of storm bar development is possibly a result of the limited number of exposed inlets, most beach environments being located at the heads of sheltered inlets or bays. There is very little low lying land vulnerable to marine inundation in the event of a rise of sea level, with the exception of the lower reaches of Gleann an t-Srathan.
  
3. **Built Heritage and Archaeology:** The settlement pattern of this area was very sparse and generally confined to the mouths of the larger valleys or on terraces overlooking sheltered bays. Much of the coast edge in this section is very steep and inaccessible, and the majority of sites relate to the 19th and 20th centuries. Despite the difficult topography lazy bed cultivation and peat cuttings do occur in very isolated locations (e.g. NC 2072 9161). A particularly significant settlement was located at the head of Gleann an t-Srathan (NC 01 NE 5 & NC 2075 9172) on the south shore of Loch an Eisg-Brachaidh, which comprised 18th / 19th century buildings, boat nausts, slipways, weirs and a complex of cairns and crude, potentially early subcircular structures on an adjacent raised beach. A further building, footbridge, track and stone field boundary was located in a neighbouring valley at Polly More (NC 2075 9176). Other sites located in this sheltered bay area include an abandoned 20th century oyster farm (NC 2070 9186), a boat naust complex (NC 2070 9180) and an enclosed peninsula (NC 2073 9172) dating to the 19th / 20th centuries.

No positively identified prehistoric or medieval sites were situated in the coastal strip, though a complex of hut circles and other superimposed structures was noted on the crest of an isolated headland at Bealach Mór, located 400m from the coast edge at NC 2065 9190<sup>2</sup>. This indicates the possibility of other earlier sites occurring along the coast in this area, possibly superimposed by later settlement owing to the paucity of flat, cultivable land.

No sites are at immediate threat from coastal erosion or related processes, though most archaeology is situated immediately at the coast edge or on adjacent low lying land.

<sup>2</sup> A description of this site has not been included in the site gazetteer included in this project (Volume 2), but is reported in *Discovery and Excavation in Scotland*, 1996.



### 3.10.1 Hinterland Geology and Coastal Geomorphology

#### 1. POLL LOISGANN

NC 206 916

3.1 km

*Mainly rock platform / boulder*

*Cliffs(20m) and storm beach*

*Peat / soil over visible rock*

A highly indented section of coastline consisting of steep rocky headlands and a fjord-like inlets (Poll Loigann), ringed by high grassy slopes and cliffs. The foreshore is primarily composed of narrow rock platforms with occasional cobble / boulder beaches in small coves.

#### 2. RUBH' A' BHROCHAIRE

NC 207 917

1.4 km

*Mainly rock platform / boulder*

*Low edge < 5m*

*Peat / soil over visible rock*

A small, steep sided island linked to the mainland at low tide, on the south side of Loch an Eisg-Brachaidh. The island is bordered by steep, rocky slopes with occasional low cliffs. The foreshore is primarily composed of narrow rock platforms with

occasional cobble and boulder beaches in small coves.

#### 3. LOCH AN EISG-BRACHAIDH (SOUTH)

NC 207 917

0.5 km

*Mainly cobble & boulder beach*

*Low edge < 5m*

*Raised beach & Peat / soil over visible rock*

A small, enclosed bay at the mouth of the Gleann an t-Srathain, containing small islands. The mouth of the valley contains a small raised beach, and foreshore consists of extensive cobble and boulder beach material.

#### 4. LOCH AN EISG-BRACHAIDH (NORTH)

NC 207 917

2.6 km

*Mainly rock platform / boulder*

*Low edge < 5m*

*Peat / soil over visible rock*

A highly indented bay containing a narrow tidal inlet (Port na Bò Ruaidhe) and ringed by short, steep rocky slopes. The foreshore consists of principally of narrow

rock platforms with small cobble and boulder beaches in frequent minor coves.

#### 5. CAIS-BHAIGH

NC 206 918

3.3 km

*Mainly rock platform / boulder*

*Low edge < 5m*

*Peat / soil over visible rock*

A highly indented section of skerry coastline bordered by steep rocky slopes. The foreshore principally consists of narrow rock platforms with small cobble and boulder beaches in minor coves.

#### 6. RUBHA NA BRÈIGE

NC 206 918

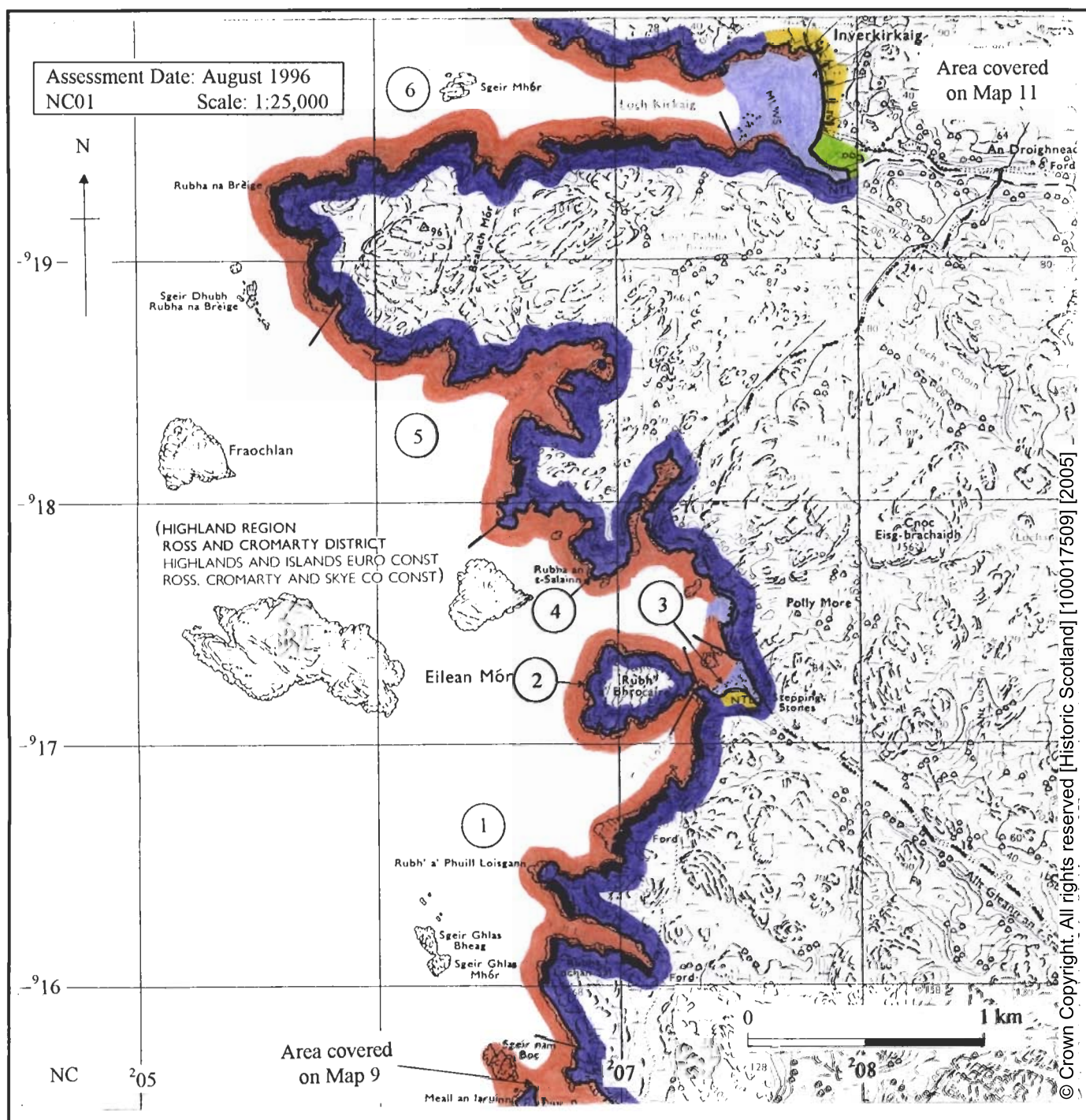
3.2 km

*Mainly rock platform / boulder*

*Cliffs (60m)*

*Peat / soil over visible rock*

A highly indented section of skerry coastline around a headland, bordered by steep wooded slopes and cliffs. The foreshore principally consists of narrow rock platforms with small cobble and boulder beaches in minor coves.



Key:

Hinterland Geology	
Peat / soil over visible bedrock	
Raised beach and marine deposits	
Blown sand	
Alluvial deposits	
Coast Edge	
Low edge (<5m)	
Cliff (>5m)	
Man made barrier	
Storm beach	
Human disturbance	
Coastal Geomorphology	
Mainly rock platform/boulders	
Mainly shingle/cobbles/boulders	
Mainly sand	
Marsh	

### 3.10.2 Erosion Class

#### 1. RUBHA LOCHAN SÀL

NC 206 915

1.0 km

*Eroding or stable*

A section of hillside situated at the head of a sheltered loch. The coast edge is characterised by steep grassy slopes, rock shelves, platforms and occasional cliffs. The rate of regression is probably very slow.

#### 2. POLL LOISGANN

NC 206 916

1.0 km

*Eroding or stable*

A narrow, fjord sheltered by a group of skerries. The coast edge is characterised by steep grassy slopes, rock shelves, platforms and cliffs. The rate of regression is probably very slow.

#### 3. RUBH' A' BHROCHAIRE

NC 206 916

3.2 km

*Eroding or stable*

An island linked to the mainland at low tide and adjacent sections of mainland coast. The coast edge is characterised by steep grassy slopes, rock shelves, platforms and cliffs. The rate of regression is probably very slow.

#### 4. LOCH AN EISG-BRACHAIDH

NC 207 917

2.5 km

*Stable*

A wide sheltered bay situated at the mouth of a series of streams and a small river. Sheltered by a group of offshore islands and a semi-tidal headland. There are no current indications of either active erosion or accretion.

#### 5. RUBHA AN T-SALAINN

NC 206 917

2.5 km

*Eroding or stable*

A deeply indented, section of coast sheltered behind a group of offshore islands. The coast edge is characterised by rock shelves, platforms and low cliffs. The rate of regression is probably very slow.

#### 6. CAIS-BHAIGH

NC 206 918

0.3 km

*Stable*

A sheltered cove situated at the head of a narrow inlet on an exposed section of coast. There are no current indications of either active erosion or accretion.

#### 7. RUBHA NA BRÈIGE

(SOUTH)

NC 205 918

2.5 km

*Eroding or stable*

The south side of an exposed headland, ringed with low cliffs, boulder filled coves and rock platforms. The rate of regression is probably very slow.

#### 8. RUBHA NA BRÈIGE

(NORTH)

NC 205 919

1.3 km

*Definitely eroding*

The north side of an exposed headland, ringed with cliffs and rock platforms. The occurrence of recent rock falls and extensive scree was noted, indicates the current influence of sub-aerial weathering processes. The rate of regression is probably slow.

#### 9. LOCH KIRKAIG (SOUTH)

NC 206 919

1.6 km

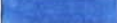
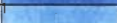
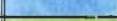




*Eroding or stable*

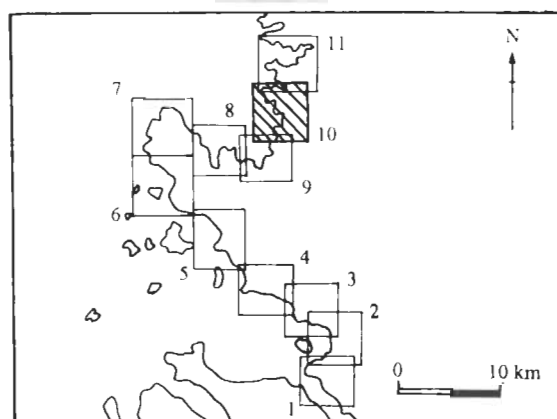
A broad headland on the south side of Loch Kirkaig, featuring short cliffs, rock platforms and occasional narrow inlets. Densely vegetated with birch woodland. The rate of regression is probably very slow.



## Erosion Class



Erosion Class	
<i>Definitely accreting</i>	
<i>Accreting or stable</i>	
<i>Stable</i>	
<i>Eroding or stable</i>	
<i>Definitely eroding</i>	
<i>Both accreting and eroding</i>	
<i>Land below 10m</i>	



### 3.10.3 Built Heritage and Archaeology

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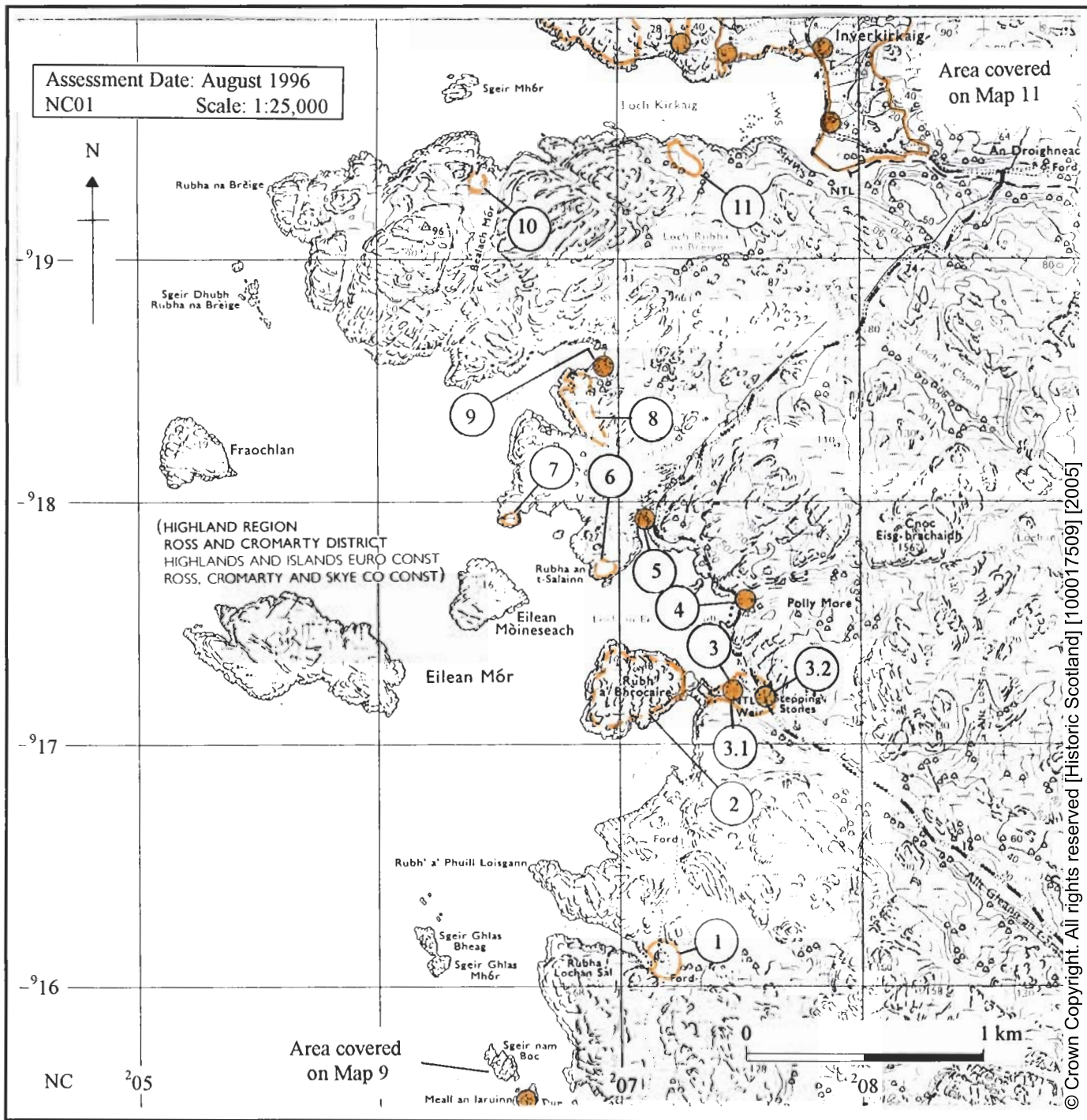
1. POLL LOISGANN Cultivation NC 2072 9161 16th-19th Century Fair Nil	NC 2075 9176 18th-19th Century Fair Nil	NC 2068 9184 16th-20th Century Fair Nil
2. RUBH' A' BROCHAIRE Enclosed peninsula, marker cairn NC 2073 9172 19th-20th Century Fair Nil	5. PORT NA BÒ RUADHE MORE Boat nausts (?), slipways, weir NC 2071 9179 19th-20th Century Fair Nil	9. CAIS-BHAIGH Oyster farm NC 2069 9186 20th Century Fair Nil
3. LOCH AN EISG-BRACHAIDH Buildings, structures, slipways, boat nausts (?), weirs NC 2075 9172 3.1 Circular structures & cairns NC 2075 9172 3.2 Buildings NC 01 NE 5 16th-19th Century Fair Nil	6. RUBHA AN T-SALAINN Peat cuttings NC 2069 9177 19th-20th Century Fair Nil	10. BEALACH MÓR Peat cuttings (?) NC 2064 9193 19th-20th Century Fair Nil
4. POLLY MORE Building, slipway (?), field systems, track, footbridge	7. CAIS-BHAIGH Peat cuttings NC 2065 9179 19th-20th Century Fair Nil	11. LOCH KIRKAIG Cultivation NC 2073 9195 16th - 19th Century Fair Nil
	8. CAIS-BHAIGH Cultivation, peat cuttings	

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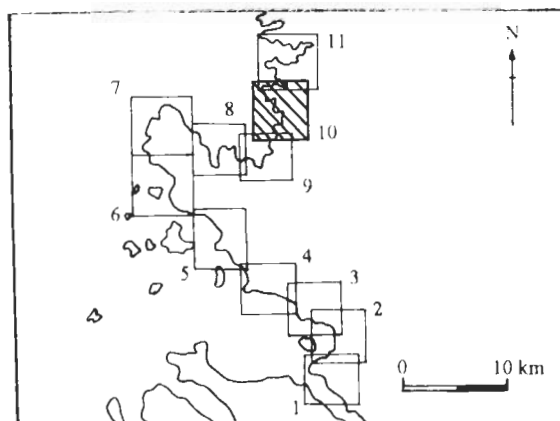
## MAP 10 LOCHAN SÀL TO LOCH KIRKAIG

## Built Heritage and Archaeology



Key:

<i>Protected Ancient Monument</i>	
<i>Listed Historic Building</i>	
<i>Other known Ancient Monument</i>	
<i>Undesignated wreck</i>	
<i>Site complex</i>	
<i>Undetermined boundary</i>	





### 3.11 Loch Kirkaig to Lochinver

1. **Hinterland Geology and Coastal Geomorphology:** This section of coastline comprises of an exposed headland between Loch Kirkaig and Loch Inver (Kirkaig Point). The coastline is deeply indented by a series of steep sided bays and narrow inlets, characterised by high, rocky hillsides sloping down to narrow rock platforms, offshore reefs and islands. The predominant bedrock throughout the section is Lewisian gneiss seamed with dyke lines, which have eroded out to form valleys with deep inlets. There has only been limited development of coastal cliffs, but frequent rock exposures in the form of low angle, glaciated slabs frequently occur. This type of coastal environment has been termed a 'skerry' coast (Price 1991, 96) (Plate 1), and is typical of a drowned landscape with a resistant bedrock. Frequent cobble and boulder beaches are located in isolated coves and bays, particularly along the south shore of Loch Inver. An extensive foreshore of shingle and sand is exposed at the head of Loch Kirkaig, which has an estuarine character; otherwise fine to medium grade beach sediments are very rare throughout this section. There has been extensive storm beach development in the mouths of small valleys and coves, which probably act to funnel wave action. Isolated raised beach and alluvial deposits are situated at the head of Loch Kirkaig and adjacent to the mouth of the Culag River at Lochinver.
  
2. **Erosion Class:** This section of coastline has an essentially erosional character, comprising a rocky headland (Kirkaig Point) located in an exposed position at the mouth of Loch Inver, and a series of smaller headlands interspersed with enclosed bays along the south shore of the loch to the River Culag. The rate of regression is negligible and the active processes are probably dominated by sub-aerial weathering, rather than mechanical wave activity. The incidence of wave notch development is very slight, and the underlying form of the glacial landscape is largely unaltered. Fluvial deposition is occurring in the intertidal zone at the head of Loch Kirkaig and the mouth of the Culag River, which has been substantially modified by recently constructed harbour facilities. It is possible. There was no evidence of the coast edge actively prograding at these locations; however it is possible that the extensive shingle and sand banks in Loch Kirkaig represent a raised beach in the process of formation, though tidal and wave action are still eroding soft deposits around the edge of this loch (Plate 10). There is very little low lying land vulnerable to marine inundation in the event of a rise of sea level, with the exception of the mouths of the larger valleys and raised beach deposits at Lochinver and Inverkirkaig.
  
3. **Built Heritage and Archaeology:** The settlement pattern of the area is characterised by the 18th / 19th century crofting townships of Inverkirkaig, Badnaban, Strathan and fishing port of Lochinver, located in a series of parallel valleys draining into the sea along this section. In the case of Badnaban (NC 02 SE 19) and Strathan (NC 02 SE 18), the majority of the settlement is located inland and only two buildings (NC 2082 9211 & NC 2083 9213), a complex of weirs (NC 2078 9212), occasional boat nausts and field boundaries are located within the coastal zone. Various other 18th / 19th century buildings, associated boat nausts, field systems, enclosures, peat cuttings and lazy bed cultivation are distributed throughout the area, particularly along the north shore of Loch Kirkaig. The township of Inverkirkaig (NC 01 NE 2) has been substantially modified by 20th century developments, and comparatively few older structures are evident in the coastal zone. A 19th century midden has been exposed by wave action on the shore of the loch at Port na Bà (NC 2074 9198; Plate 10). A documented late 20th century shipwreck is approximately located between Kirkaig Point and Soyea Island (Baird 1996, 264-265).

One site of particular note is a possible standing stone near Kirkaig Point, comprising an erratic boulder propped into a vertical position and wedged by smaller stones. Otherwise no conclusive evidence of pre-18th century occupation was identified in the coastal zone, though Inverkirkaig is a very promising candidate for an early medieval settlement, given the clear Norse origin and meaning of the place name (ON *Kirk*- = Church, - *vik* = bay or haven). The precise location of this place is currently unknown.

### 3.11.1 Hinterland Geology and Coastal Geomorphology

#### 1. INVERKIRKAIG

NC 207 919

1.7 km

*Mainly shingle beach, with occasional rock platform*

*Low edge < 5m*

*Raised beach, with some Peat / soil over visible rock and alluvium*

A raised beach and a narrow corridor of alluvial deposits are situated on north side of the River Kirkaig at the head of a long, narrow inlet (Loch Kirkaig). The head of the loch is surrounded by short grassy slopes, an artificial revetment wall and low angle rocky slopes. The extensive foreshore consists of shingle banks and occasional sand deposits.

#### 2. LOCH KIRKAIG

NC 206 919

1.6 km

*Mainly rock platform / boulder*

*Low edge < 5m*

*Peat / soil over visible rock*

The north shore of Loch Kirkaig consists of short grassy slopes and cliffs situated below peat covered shelves and rocky hill slopes. The foreshore consists of narrow rock platforms with occasional boulder and cobble beaches in small inlets.

#### 3. POLL NA CREIGE RUAIDHE

NC 206 920

1.6 km

*Mainly rock platform / boulder*

*Low edge < 5m, with occasional cliffs (10m) and storm beaches*

*Peat / soil over visible rock*

This exposed section consists of short grassy slopes and cliffs situated below peat covered shelves and rocky hill slopes, with storm beaches situated in the deepest inlets. The foreshore consists of narrow rock platforms with occasional boulder and cobble beaches in small coves.

#### 4. KIRKAIG POINT

NC 206 921

1.2 km

*Mainly rock platform / boulder*

*Low edge < 5m, with occasional cliffs (30m)*

*Peat / soil over visible rock*

A headland at the south west edge of Loch Inver, encircled by steep, grassy slopes with frequent small rock outcrops and a narrow rock platform foreshore.

#### 5. POLL NAN GOBHAR

NC 207 921

1.1 km

*Mainly rock platform / boulder*

*Low edge < 5m, with occasional cliffs (< 30m)*

*Peat / soil over visible rock*

This section consists of rocky slopes and low cliffs situated below peat shelves and rocky hill slopes. The foreshore consists of narrow rock platforms with occasional boulder and cobble beaches in small coves.

#### 6. LOCH BAD NAM BAN

NC 207 921

0.2 km

*Mainly cobble beach*

*Storm beach*

*Peat / soil over visible rock*

An enclosed bay at the mouth of a minor valley (Allt an Mhuilinn), containing a small island connected to the mainland at low tide. The bay is backed by a storm beach, and enclosed by steep, wooded slopes. The foreshore is composed of a cobble beach with occasional rock platform exposures.

#### 7. SGEIR BHUIDHE

NC 207 921

0.9 km

*Mainly rock platform / boulder*

*Low edge < 5m*

*Peat / soil over visible rock*

A small promontory on the south shore of Loch Inver, situated between two bays (Loch Bad nam Ban & Bàgh an t-Srathain). The coast edge consists of short grassy slopes below an undulating peat covered shelf with a narrow rock platform foreshore and occasional shingle or boulder beaches in isolated coves.

#### 8. BÀGH AN T-SRATHAIN

NC 208 921

0.9 km

*Mainly cobble beach*

*Mainly low edge < 5m with storm beaches and man made barriers*

*Peat / soil over visible rock*

An enclosed bay at the mouth of a minor valley (Allt an t-Srathain), containing a small island connected to the mainland at low tide. The bay is ringed by storm beaches, steep, rocky slopes, and a man-made revetment around a recently constructed chalet park. The foreshore is composed of a cobble beach with occasional rock platform exposures.

#### 9. RUBHA NAM FIADHAG

NC 208 921

2.3 km

*Mainly rock platform / boulder*

*Mainly low edge < 5m, with occasional cliffs (< 40m), storm beaches and disturbed edge*

*Peat / soil over visible rock*

A wide bay situated on the south shore of Loch Inver near the head of the loch. This section is, indented with smaller bays, and the coast edge consists of steep, wooded slopes and small cliffs with a rock platform foreshore, and occasional shingle or boulder beaches in coves. The northern part of the section has been disturbed by quarrying at the edge of Lochinver harbour.

#### 10. LOCHINVER

NC 209 922

0.7 km

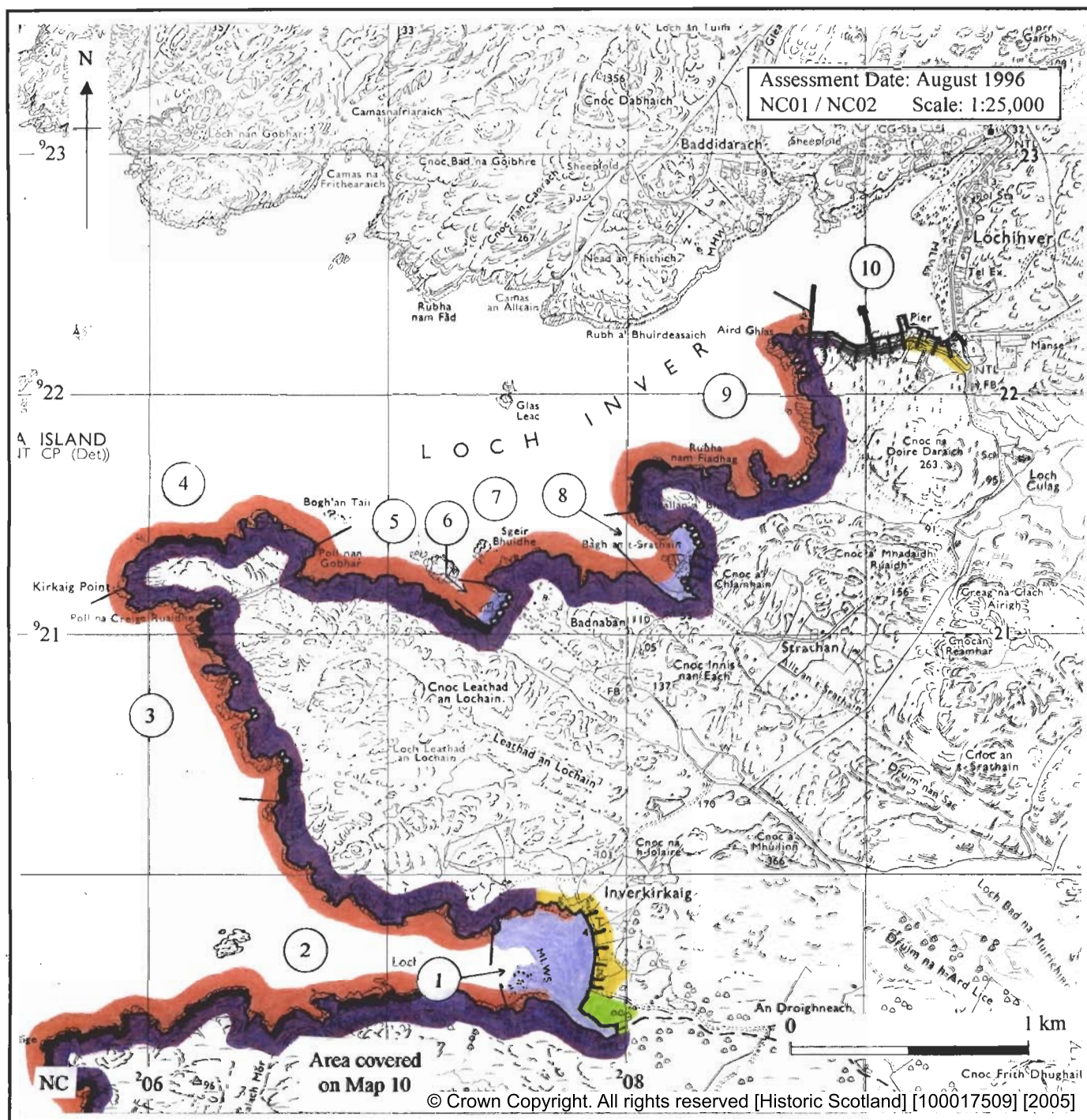
*No foreshore*

*Man made barrier*

*Raised beach and Peat / soil over visible rock*

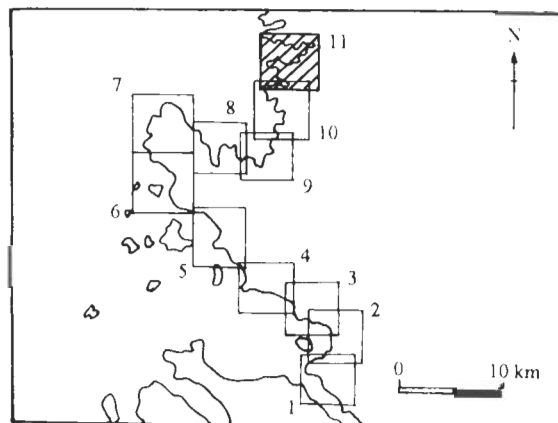
The south shore of Loch Inver at the head of the loch west of, and including the tidal mouth of the Culag River. This section has recently been developed as a major extension to Lochinver harbour complex. The harbour consists of three piers, a massive harbour wall, asphalt surfaces and sheds. A series of quarries contribute to the shoreline disturbance.





Key:

Hinterland Geology	
Peat / soil over visible bedrock	
Raised beach and marine deposits	
Blown sand	
Alluvial deposits	
Coast Edge	
Low edge (<5m)	
Cliff (>5m)	
Man made barrier	
Storm beach	
Human disturbance	
Coastal Geomorphology	
Mainly rock platform/boulders	
Mainly shingle/cobbles/boulders	
Mainly sand	
Marsh	





### 3.11.2 Erosion Class

---

#### 1. INVERKIRKAIG

NC 207 919

1.7 km

*Both accreting and eroding*

An extensive area of intertidal shingle and mud banks exposed at the head of Loch Kirkaig. Though it is clear that considerable fluvial deposition is occurring below HWM, there is little evidence of the coast edge actively prograding. Tidal and wave action is eroding soft deposits around the edge of the loch, exposing 19th century midden deposits (NC 2074 9198).

#### 2. KIRKAIG POINT

NC 205 921

5.5 km

*Eroding or stable*

An exposed headland defining the southern side of the entrance to a major inlet (Loch Inver). This section is characterised by low cliffs and cobble or boulder filled inlets occasionally containing small storm beaches. The rate of regression is probably very slow.

#### 3. LOCH BAD NAM BAN

NC 207 921

0.2 km

*Stable*

A sheltered bay on the south side of Loch Inver containing a pebble foreshore and storm beach. There are no current indications of either active erosion or accretion.

#### 4. SGEIR BHUIDHE

NC 207 921

0.9 km

*Eroding or stable*

A broad headland on the south side of Loch Inver, featuring short cliffs, rock platforms and occasional narrow inlets. The rate of regression is probably very slow.

#### 5. BÀGH AN T-SRATHAIN

NC 208 921

0.7 km

*Stable*

A sheltered bay on the south side of Loch Inver containing a pebble foreshore and storm beach. There are no current indications of either active erosion or accretion.

#### 6. RUBHA NAM FIADHAG

NC 208 921

2.5 km

*Eroding or stable*

A sheltered section of coast consisting of small bays and headlands on the south side of Loch Inver, featuring short cliffs, rock platforms and boulder filled coves containing small storm beaches. A series of large quarries have been recently opened at the northern end of the section adjacent to Lochinver harbour, which have substantially modified this section. Otherwise the rate of regression is probably very slow.

#### 7. LOCHINVER

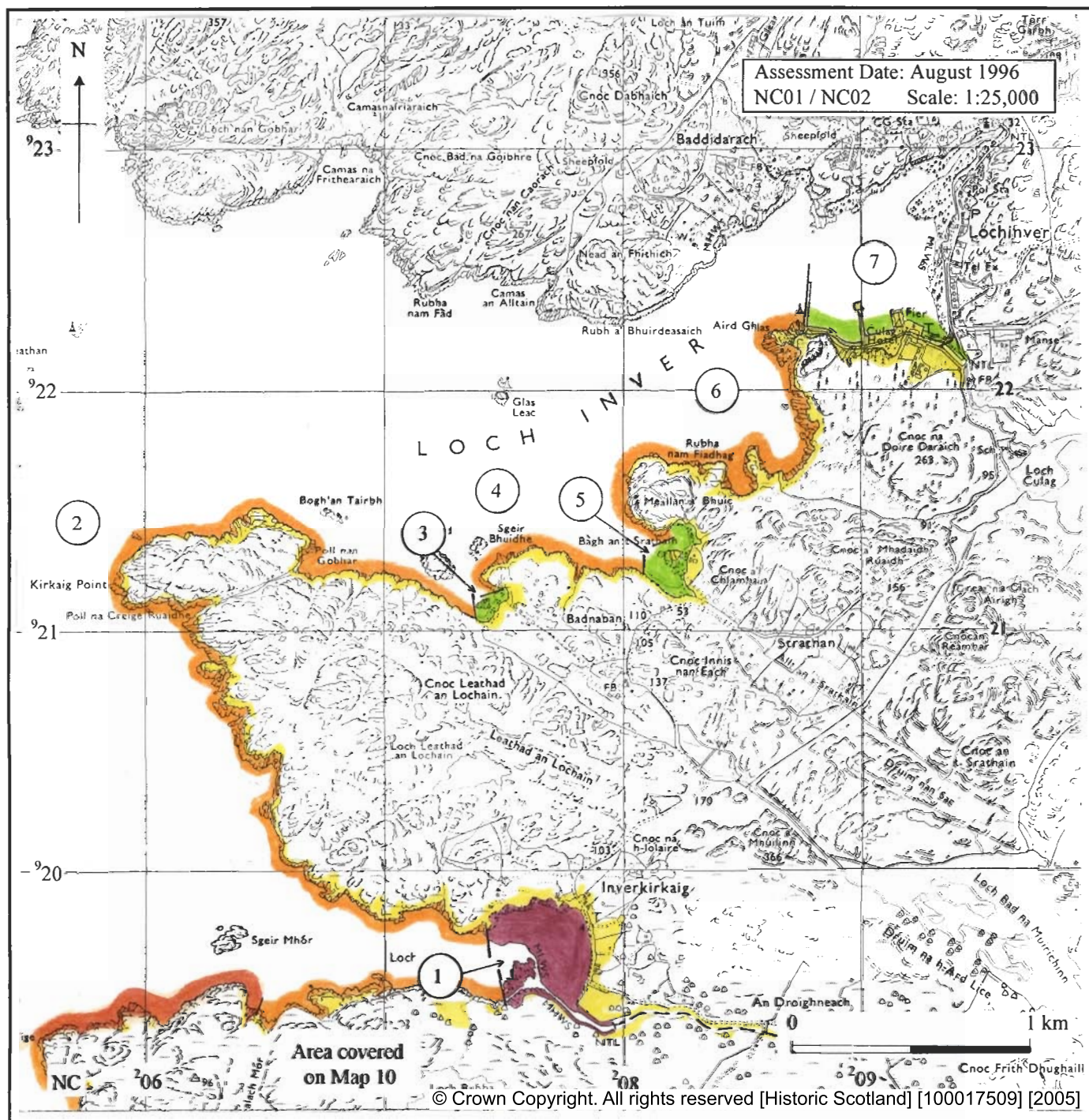
NC 209 922

0.7 km

*Stable*

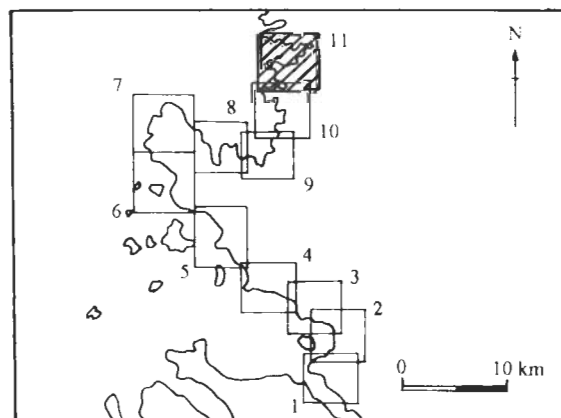
Lochinver harbour has recently been extended and modernised with the construction of substantial piers and a harbour wall. These facilities have created a stable marine environment, which may lead to harbour siltation.

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Key:

Erosion Class	
Definitely accreting	Blue
Accreting or stable	Light Blue
Stable	Green
Eroding or stable	Orange
Definitely eroding	Red
Both accreting and eroding	Purple
Land below 10m	Yellow



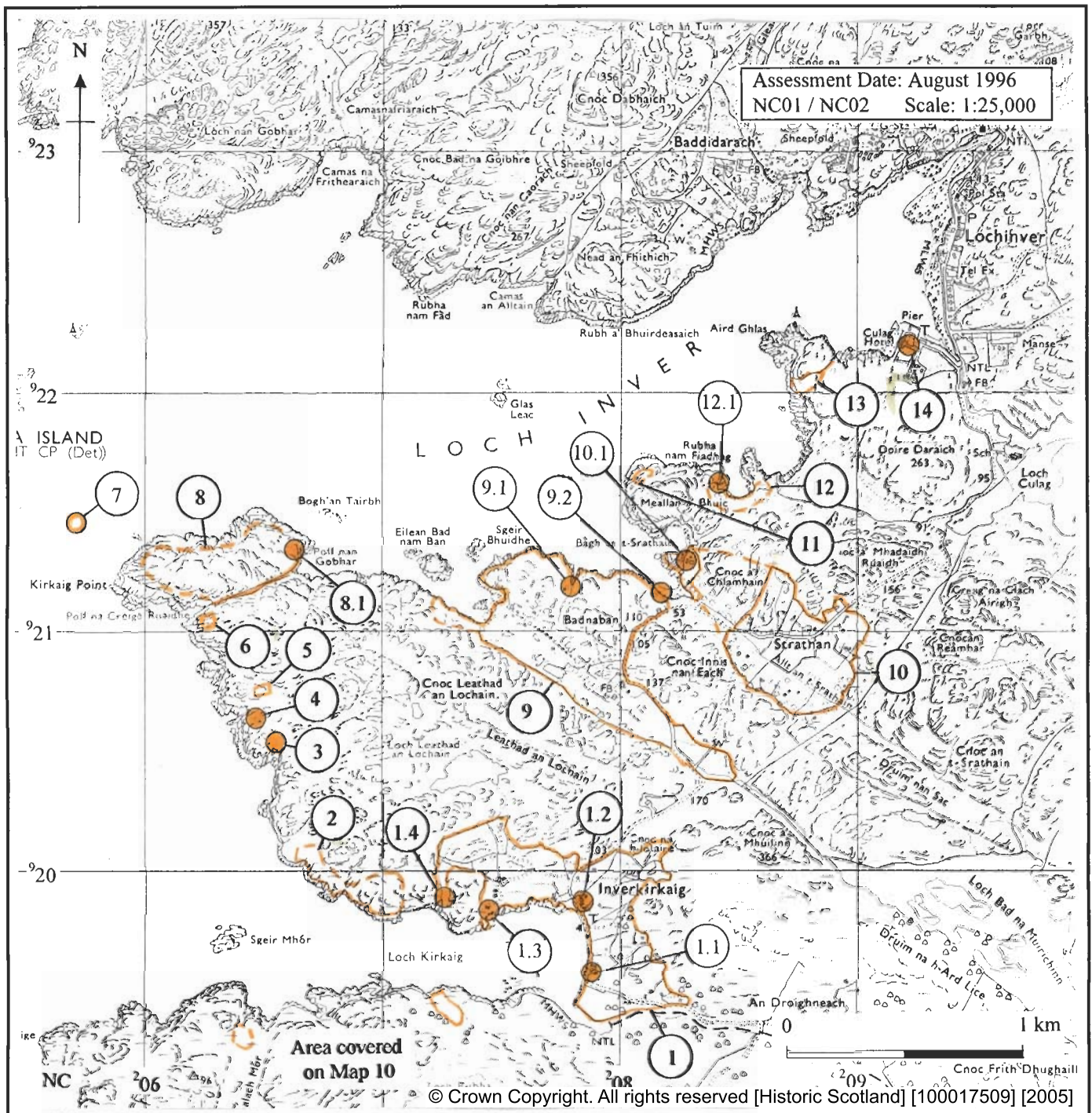
### 3.11.3 Built Heritage and Archaeology

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1. INVERKIRKAIG Township, field systems, boat nausts (?), cultivation NC 01 NE 2 1.1 Building complex (occupied), boat naust (?) NC 2079 9196 1.2 Building complex (occupied) NC 2078 9199 1.3 Building (occupied), boat naust, enclosures, historic midden NC 2074 9198 1.4 Enclosures, track NC 2073 9199 16th - 20th Century Fair / poor Monitor	19th - 20th Century Fair Nil	10. STRATHAN Township, field systems, cultivation, peat cuttings NC 02 SE 18 10.1 Buildings (occupied) NC 2083 9213 16th - 20th Century Fair Nil
2. LOCH KIRKAIG Cultivation, peat cuttings NC 2068 9199 16th - 20th Century Fair Nil	6. POLL NA CREIGE RUADHE Cultivation NC 2063 9210 16th - 19th Century Fair Nil	11. MEALLAN A' BHUIC Peat cuttings NC 2081 9217 19th - 20th Century Fair Nil
3. LOCH KIRKAIG Enclosure NC 2065 9205 19th - 20th Century Fair Nil	7. "LOCH ERISORT" Shipwreck Decca lat. 5808.20 N, Decca long. 0518.00 W 1981 Not inspected Nil	12. RUBHA NAM FIADHAG Fishing complex, field systems NC 2086 9216 12.1 Structure, boat nausts, slipway NC 2084 9216 19th - 20th Century Fair Nil
4. LOCH KIRKAIG Standing stone (?) NC 2065 9206 Pre-modern Fair Nil	8. KIRKAIG POINT Enclosed peninsula, building, peat cuttings NC 2061 9213 8.1 Building, quarry (?) NC 2067 9213 18th - 20th Century Fair Nil	13. AIRD GHLAS Enclosed peninsula NC 2090 9222 19th - 20th Century Poor Nil
5. LOCH KIRKAIG Peat cuttings NC 2065 9207	9. BADNABAN Township, field systems, cultivation, weirs, boat naust (?), slipway, trackway NC 02 SE 19 9.1 Weirs NC 2078 9212 9.2 Building (occupied), boat naust (?), slipway NC 2082 9211 16th - 20th Century Fair Nil	14. CULAG HOTEL Building complex, gardens NC 02 SE 3 18th - 20th Century Fair / poor Nil

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Key:

Protected Ancient Monument	
Listed Historic Building	
Other known Ancient Monument	
Undesignated wreck	
Site complex	
Undetermined boundary	

