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REPORT ON A COASTAL ZONE ASSESSMENT SURVEY OF ORKNEY:





BURRAY

FLOTTA

GRAEMSAY

HOY

SOUTH RONALDSAY

AUGUST 1997

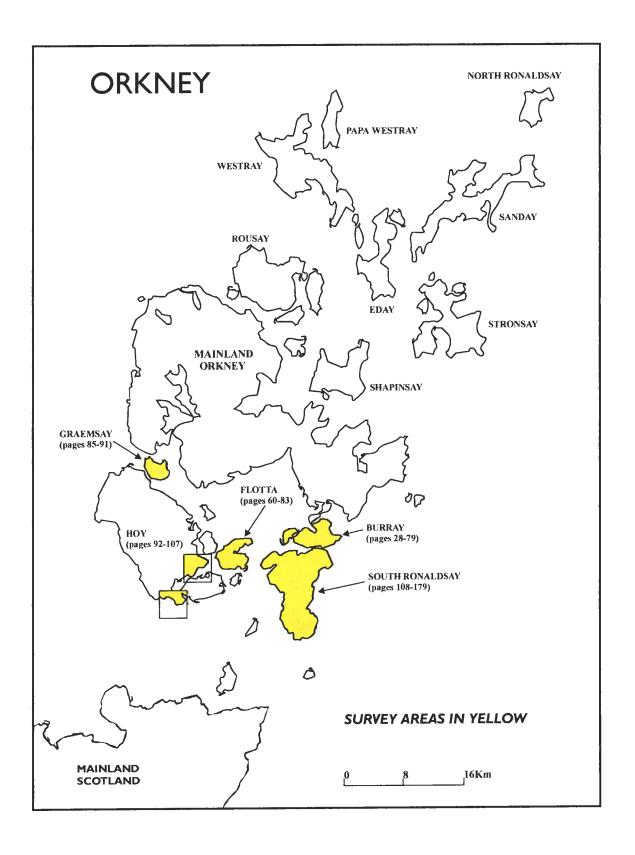




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1.0 INTRODUCTION

This report documents the results of a coastal zone assessment survey carried out in Orkney over four weeks in August 1997. The field survey was carried out by a team of four people, comprising two archaeologists and two geomorphologists. The work was commissioned by the Orkney Archaeological Trust (OAT) and funded with a grant from Historic Scotland (HS). The commission defined the area to be surveyed and work was carried out in accordance with Historic Scotland's Procedure Paper 4: Coastal Assessment Survey (Historic Scotland, 1996).

Survey Area

The survey area comprised the Orcadian islands of Burray, South Ronaldsay, Flotta, Graemsay and parts of Hoy (see location map). Survey was limited to the coastal zone, defined as a 100m wide strip of land adjacent to the coast edge, including the foreshore (intertidal zone). No marine survey was undertaken; previously recorded sites located in the marine zone, however, have been included in this report.

The length of coastline walked varies, depending on the scale of map used (Ashmore 1993). In order to gain the most accurate estimate possible, the entire survey area was measured at a scale of 1:10 000, this being the largest scale of map available. When measured at 1:10 000 the distance is **153.20km**. During the preparation of this report it proved inconvenient and unwieldy to use 1:10 000 maps to gauge distances. Instead, the smaller scale 1:25 000 maps were used, this was also convenient because each map section is presented at this scale.

Permission to cross the land was sought from the various landowners by OAT in advance of fieldwork. In all but one instance permission was generously granted on the proviso that crops and young stock were not unduly disturbed. The exception was a strip of land on the east coast of Burray, where commercial sand extraction is taking place (clearly marked on Burray Map 4).

Desk-Based Study

A desk-based review of the known sites and monuments was carried out prior to fieldwork. It was found that, in total, there were 109 previously known sites located within the survey area, of which 17 are protected (either as scheduled ancient monuments or listed buildings). Where possible, each known site was visited in the field and re-examined. In a very few cases it was either not possible to locate a known site or to inspect a site. In such instances the site description given in this report has been taken directly from the NMR record cards; such sites are labelled 'not inspected' or 'not located', as appropriate.

Survey Conditions

In general, the weather conditions under which the survey was carried out were good, with only occasional showers and strong winds. Carrying out a survey in the height of summer, although pleasant for the surveyors, did have some disadvantages in that vegetation was at its most lush and parts of the survey area were under crop. New financial incentives encouraging the cultivation of oats in 1997 saw an increase of land under arable crops (J Gibson, pers comm). This phenomenon was noted on South Ronaldsay, in particular. With stock outdoors in the field, caution had to be exercised in entering fields and navigating electric fences. Over most of the survey area there were few sheep to graze the uncultivated strip between the fields and the coast edge and thus the vegetation was frequently overgrown.

Under these conditions, it is probable that site visibility was somewhat reduced; one known site in particular (SR123, South Ronaldsay Map 7) could not be re-located due to overgrown vegetation. This problem was, however, localised and is not considered to have been a major impediment to the survey. The disadvantages of carrying out a survey in summer must be set against those of other times of the year, however. High winds and inclement weather would probably have imposed more restrictions on the speed and scale of the work given that many parts of the coastline are exposed and dangerous under bad conditions.

1.1 AIMS AND METHODS

Built Heritage and Archaeology Survey

The aim of the survey was to characterise the built heritage and archaeology of the coastal zone. Previously known sites were revisited and assessed for change and new sites were located and recorded. All of the sites within the survey area were assessed for vulnerability to erosion. There was no selection criteria; sites of all types and periods within the coastal zone were investigated. A survey of the physical characteristics of the coastal zone was carried out as an integrated part of this work. The results, presented separately, provide a tool for evaluating the implications of coastal erosion on the cultural heritage

The entire coastline of the survey area was walked and observed, where possible, from both the hinterland and foreshore. To investigate the hinterland up to 100m from the coast edge, frequently necessitated the walking of transects perpendicular to the coast at c.20m intervals.

The field record comprised a card system; each site was given a unique identifier made up of an area code and a number (e.g., HY3 = Hoy, site 3). These identifiers have been kept as the primary site reference within this report, although some site entries have been amalgamated. The dimensions and characteristics of each site were recorded, together with measured sketch plans and a photographic record. Measurements were calculated with a tape for smaller sites; the dimensions of larger sites were estimated by a systematic pacing out of the area. Directions were found using a compass. The sites were located onto a 1:25,000 OS Pathfinder base map, measured, where possible, from fixed features such as field boundaries.

Geology/Geomorphology and Erosion Class Survey

Alan Stapf

The aim of the survey was to characterise the hinterland geology and coastal geomorphology and to classify the erosion status of the coastal zone within the survey area. The survey areas were observed from the hinterland and/or foreshore as conditions allowed. The survey record comprised field notes, a photographic record and annotations made on 1:25000 OS pathfinder base maps. The field records for hinterland geology/coastal geomorphology and erosion class were made separately, although field observation was carried out at the same time.

In assessing the erosion status it is important to note that marine erosion is not the sole agent; subaerial erosion by water and wind also play key roles, especially of the softer drift deposits which contain the majority of archaeological information. Present land use is also of importance, since the erosion of drift deposits can be instigated or aggravated by land use (e.g., cultivation on steeply sloping land or sand extraction from the hinterland). Therefore

this survey includes information on soils, drainage and land-use, in addition to the geological, geomorphological and erosion data prescribed in the procedural guidelines (Historic Scotland 1996).

1.2 THE REPORT

This report is the product of both field survey and desk-based research. The body of the report was produced by EASE Archaeological Consultants. The gazetteers which accompany the Hinterland Geology & Coastal Geomorphology and Erosion Class maps, along with other (marked) contributions to the text are by A. Stapf. The following notes explain the terminology and shorthand descriptions used throughout the report.

Built Heritage and Archaeology: Gazetteer Entries

The gazetteer entries comprise a set of characteristics for each site. The categories are as follows:

<u>CATEGORY</u> <u>EXAMPLE</u>

Site Code (NMR Number)	B19 (ND 49 NE 1)
Grid Reference	ND 4897 9881
Placename	Ayresdale
Site type: protected status (scheduled/listed)	
Date (approximate)	1st mill BC/1st mill AD
Condition	
Recommendations	Monitor

Built Heritage and Archaeology: Site Description Entries

The site description entries comprise a set of characteristics for each site. The categories are as follows:

<u>CATEGORY</u> <u>EXAMPLE</u>

Site Code	B19
Island: Map Section number	Burray: Map 4
Grid Reference	ND 4897 9881
Placename	Ayresdale
Site type (NMR number):status (HS index no.)	East Broch of Burray (ND 49 NE1):
	Scheduled (HS index 1438,
	. 07ND 489 988)
Date	.1st mill BC/1st mill AD
Location in relation to coast edge	Elements located <10m from coast edge
Description	This site was partially excavatedetc.
Condition	Good
Recommendation	Monitor

Built Heritage and Archaeology: Site Type

While the categories of site types was not restricted (i.e. types were not selected from a pre-set list), efforts were made to standardise the labels given for this report. For example, ruinous buildings of 19th/20th C date which could be positively identified were divided into categories such as dwelling houses, mills, farm buildings or outbuildings; where their use was not apparent, they were labelled as 'structures'. The use of 'croft' and 'farmstead' and 'smallholding' has been avoided where possible, since it was often not apparent whether the 'structure' was associated with a parcel of land.

Prehistoric sites, and mounds in particular, are frequently difficult to date and characterise from the visible remains. The identification of mounds as chambered cairns, burial mounds or more recent refuse or farm mounds, for example, was made on the basis of previously recorded information, or where this was not available, the *most probable* explanation of the visible remains. In such cases, the true identity of these sites would require further assessment and/or excavation.

The interpretations of WWI and WWII remains are largely based on the works of others (most notably Guy, 1993 and Dorman, 1996). Frequently these site complexes contain many elements which have not been previously recorded and require the attention of a 20th C military specialist to provide a full explanation. This situation may be soon remedied by ongoing RCAHMS survey of these sites. For this report, we have tried to enumerate and provide a general overview of those remains which lie in the coastal zone.

Built Heritage and Archaeology: Dating

The date ranges set out for various site types within this report are based on an overview of similar sites in Orkney (and elsewhere) which have been scientifically dated or historically recorded. These ranges represent a general consensus; it must be noted that there is much debate about the date ranges of specific sites (such as broch, for example). It is also likely that there are many local variations which provide exceptions to the rule; for example, burials in cists, covered by earthen mounds may have continued for longer in Orkney than elsewhere in Scotland.

With some exceptions, it is frequently difficult to ascribe a date to many prehistoric remains when assessment is based on their visible component alone. In the case of mounds, the general rule employed was to separate them into three categories- chambered cairns (4th-3rd millennium BC), burial mounds (3rd-1st millennium BC) and indeterminate. If a mound appeared to be of some vintage (i.e. stabilised turf, rounded, somewhat reduced appearance) and lay within the bounds of acceptable size and shape, it was categorised as a 'burial mound'. Where a mound had all of these aspects, and appeared to also have a more complex underlying structure (large, protruding stones or substantial hollowed areas, for example) it was classed as a chambered cairn. Where there were any suspicions regarding the origin and date of a mound, it was labelled 'indeterminate'.

In this report, abandoned houses or structures are frequently labelled as of 19th/20th C date. This date range indicates that the structure had elements which appeared to be of both 19th and 20th C date. In many cases the fabric of the building may be largely of 19th C date, with later additions of 20th C date. Some of these structures may incorporate earlier elements as well, but this is very difficult to ascertain; the internal features of most structures were subject to rearrangement and features which would point to an earlier date (e.g., hanging lums, box

beds etc.) are likely to have been replaced by what ever was fashionable at the period of the latest occupation. The materials used in the construction of such buildings are usually locally available and seldom give a clue as to date; the frequent repairs required to maintain traditional houses in Orkney means that construction techniques also generally date to the period of the latest occupancy.

Built Heritage and Archaeology: Condition

The condition of each site entry was assessed under the following criteria:

Good: This label was applied where a site exhibited either high potential or had sufficient visible elements surviving to properly characterise it. An archaeological site was considered to be in 'good' condition where it was undisturbed or only slightly disturbed and retained obvious archaeological potential. Further work at such sites could reasonable be expected to provide information regarding date, nature, extent and complexity. Buildings (especially the large category of 19th/20th C structures) were considered 'good' where there were multiple site elements represented and survived in a reasonable enough condition to provide information regarding their construction, development and use.

Fair: This label was applied to sites considered to have some potential or where limited elements remained and the site could be generally characterised. Archaeological sites of this type were generally somewhat disturbed but retained some potential; a sufficient part of the site remains that it could be more fully characterised via excavation. Standing buildings were considered 'fair' when, although ruinous or disturbed, sufficient of the site remained that it could be generally characterised.

Poor: Sites described as 'poor' have visible elements which are very disturbed and offer little potential for further characterisation. This assumption was made on the basis of the evidence available at the time of this survey and it must be noted that, without recourse to full assessment, the true potential of many sites can only be estimated.

Built Heritage and Archaeology: Recommendations

Recommendations for further work were assessed under the following criteria:

Survey: Where no previous survey was carried out, or, where changes have occurred since the last survey and further work is now necessary.

Monitor: Where there has been little or no change since the last survey or where indeterminate or limited remains are visible and further remains may become exposed in the future. Nil: Where there has been no change since the site was last surveyed or where a site belongs to a type which is common and is unlikely to represent the best example of its type.

Hinterland Geology and Coastal Geomorphology: Gazetteer Entries

The gazetteer entries comprise a set of characteristics for each coastal unit. The categories are as follows:

CATEGORY

EXAMPLE

Label_Placename	4 Greenvale
Grid Reference (to centre of coastline stretch)	ND 465 972
Length of Unit	1.50 Km
Foreshore Type	Rock platform with a 50-60% cobble cover
Coast Edge Type	.Coast edge rising to >5m after 300m
Hinterland Type	.Drift-rock interface visibleetc.
Description	At least one old groyneetc.

Erosion Class: Gazetteer Entries

The gazetteer entries comprise a set of characteristics for each coastal unit. The categories are as follows:

CATEGORY

EXAMPLE

Label_Placename	6 Newhouse
Grid Reference (to centre of coastline stretch)	
Length of Unit	1.40 Km
Erosion Class at time of visit	
Description	There are a few areas ofetc.

Erosion Classes

The following definitions have been used:

Eroding: Where more than 70% of the coastline is actively eroding.

Eroding to Stable: Where there are both active erosion and stable areas with 30-70% of either one.

Stable: The section is more than 70% stable. Usually any erosion is limited and local with any variation specified in the accompanying text.

Accreting to Stable: Where there are both accreting and stable areas with 30-70% of either one.

Accreting: The section has accretion over more than 70% of it's length.

Accreting/Eroding: There are both accreting and eroding processes taking place and may have as much or little as 20-80% of each process. The erosion and accretion may not be linearly arranged along the coastline, e.g., at Ayre of Cara there is erosion of the coastal edge and deposition of sands along the foreshore.

1.3 BACKGROUND TO SURVEY

The Orkney Islands

The Orkney islands lie off the north-east coast of Scotland, separated by the Pentland Firth, which at its narrowest point, is 10 km wide. There are about 90 islands (including very small rocky outposts) of which some 14 are inhabited. The largest island, Mainland, lies to the centre of the archipelago. The two main towns on Orkney, Kirkwall and Stromness, are situated on Mainland. Kirkwall, lies to the east and is the administrative centre, while Stromness, to the west, is the port for travel to the Scottish mainland. Communications within the islands are good, with daily ferry crossings and a regular air service. The economy is based primarily on agriculture (mainly dairy and beef production); fishing and tourism are also important. It has been estimated that 3-4% of Orkney is under arable, with barley, oats, potatoes and turnips being the major crops. About 45% of Orkney is under grass: improved grassland, for grazing, silage and hay, makes up the major part, and less than 1% of the total grassland area is unimproved (Charter, 1995, 9, 17). There are several industries serving the North Sea oil fields, including an oil terminal on the island of Flotta.

The islands visited by this survey surround the waters of Scapa Flow, lying to the south of the Orkney archipelago. While Scapa Flow has dangerous currents and can be treacherously stormy, it has, by dint of being almost completely encircled by islands, provided sheltered harbourage for centuries; it served during both world wars as the base of the British Home Fleet. To the east side of Scapa Flow lie the islands of Burray and South Ronaldsay; since the end of the second world war these have been joined to Mainland Orkney by a series of causeways (the 'Churchill Barriers'). The west side of Scapa Flow is defined by the islands of Flotta, Graemsay and Hoy

Orkney in Earlier Times

(Site codes, in **bold** text, refer to examples of site types found within this survey).

The Orkney Islands became cut off from mainland Scotland around 11,000 BC. The first settlers, who arrived around 4000 BC, came by boat from the north coast of Scotland. Evidence for settled farming communities was found at the settlement at Knap of Howar on Papa Westray and dated to about 3500 BC (Ritchie, 1983, Ashmore, 1996, 45). The remains of early prehistoric settlements and burial monuments are widespread throughout the islands; their survival due in part to the fact that they were built in stone rather than wood. It would appear that there was little natural woodland left on Orkney by about 2600 BC (Davidson and Jones, 1985, 35). Orkney flagstones provided an excellent building material, however, and were used with a high degree of mastery and sophistication, particularly in the construction of tombs.

The earliest known tombs comprise a passage and one or more chambers. These 'chambered tombs' were built from stone and covered over with an earthen mound (Davidson and Henshall, 1989). They were used over many generations as communal burial places and ossuaries (see SR87, SR57, SR132). The earliest settlements, such as Knap of Howar, and slightly later, Skara Brae and Barnhouse on Mainland comprised structures of stone with internal features such as hearths, cupboard recesses, pits and sleeping compartments, although there is much variety in their individual detail. The quantities of domestic midden material which was found surrounding these structures yielded valuable information on the diet and economy of the early farmers. They grew barley and wheat, raised cattle, sheep and pigs and

utilised natural resources such as fish, shellfish, seabirds, seals and whales. Pottery was made from local clay and tools from animal bone and stone of various types.

By about 2000 BC burial in chambered tombs had come to an end and, cremation, followed by burial in individual graves became the dominant burial rite. Cremated remains were deposited in a pot or receptacle or, frequently, directly into a stone-lined cist or pit. The cist could be covered by an earthen mound, cut into a pre-existing burial mound or natural knoll or covered over without a mound. Numerous clusters of such burial mounds survive in Orkney (see SR76, SR77), in contrast to the paucity of known settlements of this period.

Around 1500 BC new types of structures, known as burnt mounds, began to appear. In their simplest form, burnt mounds are formed from heaps of fire-cracked stone, often, but not always, found in association with a stone-lined water trough (see HY1, HY9). This form of burnt mound is thought to have served as an open-air cooking place, where a water-filled tank was heated by the addition of roasting-hot stones. Modern experiments have shown that it is possible to bring the water to boil and cook even large joints of meat in this manner. Some 'burnt mounds' are more structurally complex, however, and may have served as domestic buildings. The burnt mound at Liddel, South Ronaldsay is the best example of this type (Hedges, 1975).

Settlements of the first millennium BC and early centuries of the first millennium AD are numerous in Orkney, although evidence for burial at this time is more scarce. The most visible site type of this period is the broch tower (see B19, HY8), which represents the culmination of a development toward substantial domestic structures. The round houses which preceded brochs are typified by excavated sites at Howe (Ballin-Smith, 1994) and Bu (Hedges, 1987), both on Mainland. Within the area of this survey, the settlement at Little Howe on South Ronaldsay (SR12) may be of similar date and type. The round houses, as the broch which came later, had solid walls and are thought to have been occupied by extended family groups. The interiors of these structures demonstrate clear divisions of space; often they have a central 'communal area' surrounding a large hearth and more private peripheral areas. The economy which sustained this type of settlement remained largely agricultural but with an increasing trend toward specialised craft production. The brochs, because of their complexity and the effort required to construct them, are thought by some to have served as the homes of the local elite's; this is indicated at sites such as Gurness (Mainland), where a group of smaller houses have been built outside the broch, possibly forming a 'village' community.

Other structures dating to this period include souterrains (See SR142), which as the name suggests, are underground passage, often but not always, associated with above-ground settlements. The common explanation is that souterrains were used as storage places, but they may have served a variety of purposes. Promontory forts are an under-investigated class of monument, thought to date to this period. In its simplest form, the promontory fort consists of a set of bank and ditch defences built across a neck of land, restricting access onto the promontory (see SR97, SR68). In some cases, the remains of structures are visible behind the defences, although some of these may be associated with monastic settlements of later date.

During the later prehistoric and early historic periods, Orcadian society was much influenced by outside influences. The adoption of Pictish art styles, metalworking traditions and new house styles reveal that by about 500 AD, Orkney had come within the Pictish cultural and administrative sphere of influence. Carved symbol stones (see **SR138**, **SR144**), of which eight

have been found in Orkney, are the most recognisable type of 'Pictish' artefact. The provenance of most of these stones is unknown, and, as in the case of the stone found built into the window sill at St. Peter's Church in South Ronaldsay (SR138), many were been re-used in later times. Houses of this period were frequently built into the rubble of earlier buildings, particularly brochs, and were not as substantial or ostentatious as their predecessors. The house excavated at Buckquoy (Mainland) comprised a group of cells arranged around a central area, forming a figure-of eight plan (Ritchie, 1977). A more complex development, comprising multiple cellular structures, was revealed at Howe, also on mainland (Ballin Smith, 1994, 91-117). Post-broch 'Pictish' settlements may be represented within the survey area at HY8 and SR127.

In the seventh and eighth centuries AD Christianity spread through Pictland, also reaching Orkney. Few sites of this period have been excavated; the archaeological evidence is limited to a few isolated finds, such as carved cross slabs and metal hand bells. The early buildings on the Brough of Birsay, previously seen as a pre-Norse monastery, have been reassessed and are now thought to represent a secular, rather than religious, settlement (Morris, 1996, 57-62). Studies have indicated the survival of possible eremitic refuges on isolated promontories and stack sites (Lamb 1980). The rectangular buildings noted at Castle of Burwick (see SR72) and Harra Brough (see SR152) may be such sites. Putative early church sites, as indicated by dedications to Irish saints and local traditions, are known within the area of this survey on Graemsay (G34, G32) and South Ronaldsay (SR153, SR145).

The Viking settlement of Orkney appears to have begun during the latter part of the 8th C, although earlier contact is likely. The details of this take-over are unclear, but it appears that by the 9th C Orkney was controlled by Earls, related to the ruling families of Norway. Viking settlements were often built over the ruins of earlier, native houses, such as at Buckquoy (Ritchie, 1977); as befitting competent seafarers, they were generally located close to the sea. In plan, Viking houses were oblong or rectangular, with a long central hearth, benches against the walls and were often supplied with a series of drains. Generally, the walls were built of stone, although wood may have been imported from Scandinavia for flooring and roofs. The settlers were farmers and there was little difference between their farming methods and those of their neighbours. The *Orkneyinga Saga* (Taylor, 1938), written c.1200 by an unknown author, tells of life at this time, and of how farmers would go travelling and raiding to far off place once the agricultural work had been done for the year.

The first Vikings to settler in Orkney were pagan, burying their dead with grave goods, often in boat-shaped graves and, sometimes, in actual boats. Within several generations, in what is known as the Norse period, they had been christianised and begun to build small churches to serve individual estates. The bishopric of Orkney and Shetland was established in 11th C and settled at Birsay by 1160. Orcadian Norsemen made pilgrimages and went on crusades to the Holy Lands. These travels took them as far afield as Jerusalem, where the Church of the Holy Sepulchre provide the inspiration for the round church built at Orphir (Mainland) in the first half of the 12th C. The construction of the great cathedral of St. Magnus in Kirkwall, dedicated to Earl Magnus who was murdered on the island of Egilsay, begun in 1137, was not to be completed until 15th C. After the murder of the last Norse earl of Orkney in 1231, the title passed to the son of the earl of Angus, a Scot who pledged allegiance to the Norwegian crown. This begun a period which saw the power and influence of Scottish Earls grow in Orkney, with concomitant changes in custom. Orkney was finally annexed by the Scottish

Crown in 1481 The turbulent power struggles associated with these changes saw the construction of several castles and fortified houses in Orkney.

The most hated of the Scottish Earls, the Stewarts, were responsible for the construction of two fine palaces at Kirkwall and Birsay in the late 16th and early 17th C. Few buildings of this period have survived; within the area of this survey only the site of a mansion dating to 1633 (SR147) and a meal store in Burray village (B28,37). This was a time of growth in North Sea fishing and trade with German and Dutch merchants of the Hanseatic League. Villages, such as St. Margaret's Hope (see SR120) and Burray Village (see B28,37) began to develop. Farming continued to be the mainstay of the economy, with new improvements becoming fashionable and well-appointed farm buildings were constructed (see G3). The Orcadian kelp industry, beginning in the late 17th C, was to be of great economic importance to the islands. By the mid-18th C kelp was worth up to £10,000 per year to Orkney, although the effort required to collect the raw sea weed and later process it in kilns was such that farming and fishing tasks suffered from neglect (Fenton 1978, 61). The probable remains of a kelp-working area are noted within the area of this survey at Kirkhouse Point on South Ronaldsay (see SR101,102) and Fulzie Geo on Graemsay (see G10). Herring became an increasingly important commodity by the 16th C; by the 19th C trade was booming. The evidence can be seen in the remains of many jetties, slipways, harbours, noosts and storehouses dating to this period. The treat to this trading link with northern Europe posed by American privateers in the early 19th C was taken seriously. A battery with two martello towers (see HY 22) was constructed to guard the anchorage at Longhope on Hoy. A series of light houses (see G2, G12) were built in the mid-19th C to guide shipping around the often treacherous water surrounding the islands.

The ruins of many 19th C farmsteads and houses are scattered throughout the islands, testifying to population decline and the changeover to larger farms which had begun by the 20th C. While some traditional houses and farm buildings of 19th C date are still occupied and even restored (see **SR10**), although many more lie in a state of considerable decay. The remnants of structures associated with 19th C farming include ranges of buildings comprising both house and outbuildings (**B7**), large mill buildings (**B32**) and smaller click (horizontal) mills (**G5**), enclosures (**H7**), planticrues (**H9**) and even refuse pits (**B1**). The presence of boat noosts, or shelters, close to 19th C habitations indicates the importance of sea, not only for fishing but also for transport in the days before metalled roads were built. The islands, although individual, were interdependent, and linked, rather than separated by the sea. This interdependence is evident, for example, in the exchange of fuel from areas with good peat supplies to those with little or none. By the end of the 18th C, Graemsay was supplied with peat from Hoy or Walls, while Burray furnished some of South Ronaldsay's requirements (Fenton, 1978, 212).

In this century, the seas around Orkney, specifically Scapa Flow, have played a part in the defence of Britain by providing a safe anchorage for the Royal Naval Home Fleet. In 1912 a scheme was put forward for the defence of Scapa Flow by the Home Ports Defence Committee, after some disagreement the responsibility for this work fell from the army to the navy. Within days of the outbreak of WWI, nothing had yet been done and the navy set about the hasty erection of temporary coastal batteries at Hoxa Head (SR24) and Stanger Head (F12,13). A command centre and refuelling base was established at Lyness on Hoy (see HY14, 31, 32). The lack of protection around Scapa Flow, however, made Admiral Jellicoe wary of anchoring there for more than a short visit. Defences were enhanced by 1915 with

additional guns, blockship barriers (**B30**, **B33**, **G17**), booms and anti-submarine barriers (**G31**, **G37**, **HY17**), controlled minefields and hydrophone listening stations. In fact, Scapa Flow saw little action throughout the war. When hostilities came to an end and the lengthy peace negotiations begun, 74 ships of the German Imperial Navy's High Seas Fleet, which had not surrendered, were interned in Scapa Flow. On 21 June 1919, with the British fleet away on exercises at sea, the German commander gave orders to scuttle the entire fleet, and despite British efforts to thwart the plan, 52 ships went to the sea bed. Most were later salvaged, but the remains of several still lie there.

With the prospects of another war looming, plans for improving the defence of Scapa Flow were formulated, but were not put into practice until 1938, when the construction of permanent coastal batteries at Hoxa Head and Stanger Head got underway. The sinking of HMS Royal Oak in Scapa Flow in October 1939 by a German submarine, which had got past the blockship barriers, provided the impetus for the construction of permanent defences, the Churchill barriers (B13, B27), which cut off the eastern entrances to Scapa. A new administrative body, Orkney and Shetland Defences, saw to the construction of more coastal batteries (G13, F14,15) as well as anti-aircraft batteries (B21), booms, minefields etc. There were three coastal Regiments stationed in Orkney, based at Stromness, Kirkwall and on Flotta (F16, 17, 18). Scapa, was therefore, very well-defended by the middle years of the war, and was never threatened.

Survey Area: Previous Archaeological Work

The islands in this survey have been previously investigated by Ordnance Survey (1900 6" map) and by the RCAHMS in the 1920's for the purposes of creating an inventory of archaeological sites and monuments (RCAHMS 1946, vol 2). There have been follow up visits by both OS and RCAHMS surveyors and a new survey of parts of Hoy was carried out in the 1980's (RCAHMS 1989). The chambered cairns of Orkney have been reassessed as a group in recent times (Davidson and Henshall 1989). The WWI and II military remains have been recorded (Guy 1993) and are currently being surveyed by RCAHMS as a contribution to the Defence of Britain Project.

Within the survey area, only two sites, Isbister Chambered Cairn (Hedges 1983, see SR87) on South Ronaldsay and a cist burial at Sandside, Graemsay (Hedges 1978, see G35) have been archaeologically excavated in modern times. Less well-documented investigations were carried out in the 19th C by Petrie at Little Howe settlement (SR12), Muckle Howe broch (SR127) and the alleged site of St. Colm's chapel (SR153) and by Farrer at East Broch of Burray (Farrer 1859, see B34) and West Broch of Burray (see B34). There are many sites, mounds in particular, which have been investigated in the past (e.g. SR77), either by landowners or antiquarians, for which no record is available. The site descriptions (4.1 APPENDIX I) incorporate the relevant portions of all earlier records for sites which have been previously recorded.

Physical Background to Survey Area: Geology

Alan Stapf

Geologically the Orkney Islands are quite similar to the flags and sandstones of Caithness. This is reflected in the subdued topography of all islands except Western Hoy, West Mainland, Rousay and Westray. Old Red Sandstones are the major underlying geological unit on all the surveyed areas except North Graemsay, where the Granite Schist Complex makes up an igneous and metamorphic basement complex.

The Old Red Sandstones are a laminated succession of hard and soft layers which repeat as cyclic units (cyclothems) and have been grouped into chronological groups. The three main groups found in the survey areas are (oldest first):-

- . Stromness Flags which tend to be grey siltstone and sandstones.
- . Rousay Flags which are very similar to Stromness Flags but have more pronounced weathering and some purplish, soft limestone, fishbed layers.
- . *Eday Beds* are yellow or red sandstones and marls, some derived from volcanic sediments.

The Eday beds are more readily eroded than the Stromness and Rousay Flags as some of the intervening deposits are soft and so erosion can undermine the tougher, upper layers.

Most of the beds are close to the horizontal or have shallow angles of dip.

Physical Background to Survey Area: Geomorphology

The topography has been further softened by the deposition of till during and towards the end of the ice age. There are relatively few places where thick layers of till are evident in section over the survey area. During the last glaciation, local ice glaciers were only supported on North West Hoy with the majority of the ice flowing across Orkney from the south-east.

The islands have been sinking since the ice age due to isostatic uplift of mainland Scotland with the loss of ice and a consequent down warping of peripheral land masses such as Orkney. Added to this there have been eustatic changes in sea level i.e., sea level rises. A post glacial shoreline of -4m, South Orkney, to -6m, North Orkney, approximately 6,500 BP has been derived by Smith et al (1996); and a 2m rise in mean sea level change since 6,000 BP has been approximated by Lambeck (1991), the latter based on a mathematical model.

If the submergence was consistent over time, which is unlikely, this would equate to 0.67 and 0.33mm / year change in sea level for the respective researchers. More specifically, Emmery and Aubrey (1985) have estimated that at present there is 2 to 4mm/year change in sea level at the specific locations of: Enloch Bay and North Links on Burray, and Herston Head, Widewall Bay, Newark and Manse Bay on South Ronaldsay.

Apart from till, the other main drift deposits are peat and blown sand. The blown sand is localised within the survey area to the Links and Ayre of Cara on Burray, Newark Bay on South Ronaldsay and Melberry Dunes on Hoy.

No raised beaches were seen in the survey area although Steers, 1973, alluded to a possible dead cliff (i.e. relict cliff) at Windwick, South Ronaldsay. A topographical unit which did resemble a raised beach was seen on the north western corner of Graemsay, but no sediments could be seen to substantiate this and it is more likely that the natural boundary between the basement complex and Stromness Flags has given the area a raised platform appearance.

Soils and Land Use within Survey Area

The natural soils tend to be peat, peaty gleys or peaty podzols, however cultivation has modified the soils into more uniform cultivated horizons. The more freely draining and improved soils are cultivatable, i.e. they could be cultivated by mechanical means, although most are down to grass. A few of the less exposed areas are under cultivation with barley and oats the dominant arable crop. In most places the fields are fenced to the very edge of the coastline with much evidence that the fence lines have been relocated further back from the coast line as erosion has advanced.

Susceptibility to Erosion within Survey Area

The coast lines most susceptible to erosion are the low < 5m edges with soft drift materials, tills and peats, or the relatively softer geological cyclothems such as the marls and sandstones of the Eday Beds. Most rock platforms which lie facing into Scapa Flow are quite wide and shallow as compared to those facing the open seas to the south-westerly and easterly coasts. Here the intertidal rock platforms tend to be steep and so forms a much narrower beach which is not capable of dissipating the wave's energy as does a long shallow platform. Another main factor is the exposure of the coast to the long reaches of storm waves. There is little long-term information on wind speeds and direction, two factors affecting of wave size, although Wright, (1976), reviewed meteorological data and found that between 1920-1974 there was an increase in north westerly and northerly winds at the expense of westerly and south westerly winds. However the winds are still predominantly westerly or southerly, Borne 1997, with wave height exceeding 1.5m for 10% of the year and 0.5m for 75% of the year on the south and western facing coasts of South Ronaldsay (Draper 1991).

Types of Erosion within Survey Area

The sea is the main agent of erosion in the survey area and leads to landslip after mechanical undercutting of the cliff face or scouring of the coast edge. Separation of a landmass leading to sea arches and stacks can be instigated by the cutting of geos and coves. Here the sea is directly responsible for erosion. If the wave height, speed and direction are constant along the coast then the rate of erosion is also moderated by the rock platform gradient and the depth of the cove. A deeper cove and a longer, more shallow rock platform tend to dissipate the waves energy before hitting the coastal edge.

Marine erosion also takes place as a storm beach gradually migrates landwards. This type of erosion is not always obvious and a cursory look or a snap-shot in time may lead one to assume an accretion of shingle as one cannot see the gradual landward migration of the coast. Chemical erosion by salt spray is rather more insidious and has not been alluded to in this survey other than in combination with observable weathering processes of rocks.

Subaerial erosion is the other main eroding agent and is mainly due to rain water and wind. With rain water the affects are seen as soil creep, peat flow, land slip and water erosion, i.e., rill and gulley formation or stream erosion. No definite gulley erosion was seen in the survey.

This tends to be locally confined yet aids sea erosion. It is quite likely that in some areas this is the primary cause of drift erosion e.g. Grim Ness, South Ronaldsay.

Wind erosion is usually manifested in soft drift deposits, mainly sand in this case, where wind blow may lead to deflation troughs and scouring of sand dunes as is apparent at Melberry Dunes, Hoy.

Other eroding agents are biological. In this survey the agents are limited to animal, (rabbit, sheep, cattle, etc.) and human disturbance all of which can be controlled by management policies.

Land use practices and management tend to aggravate or alleviate subaerial erosion but appear to have little effect on sea erosion without large resource input.

Accretion within Survey Area

Within the survey accretion was found to be limited and localised. Sand is the major accreting material because of it's size. After deposition on the foreshore it can be easily blown onto the hinterland and subsequently stabilised by vegetation. Although cliff erosion may contribute to the sediments the major proportion of source material comes from sea bottom sediments. Under rainy temperate to rainy marine climatic zones sand makes up almost a half to two thirds of bottom sediments respectively, (Hanson, 1988). Large areas of sea bottom sand sediments have been located a few miles to the south west of Orkney, (I.G.S.1977).

Shingle storm beaches may or may not be accreting, in nearly all cases there appears to be erosion co-existing with the accretion. Generally it is suggested that they are eroding the shoreline. Ayres may also be accreting and may be symptomatic of longshore drift of sediments, notably shingle in relatively sheltered waters. Overall these are probably stable or accreting at a very slow rate.

2.0 ANALYSES, DISCUSSION AND RECOMMENDATIONS

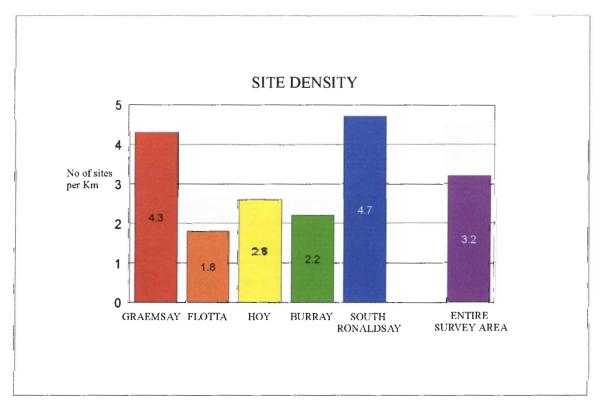
2.1 ANALYSES

Analysis of the Results: Built Heritage and Archaeology

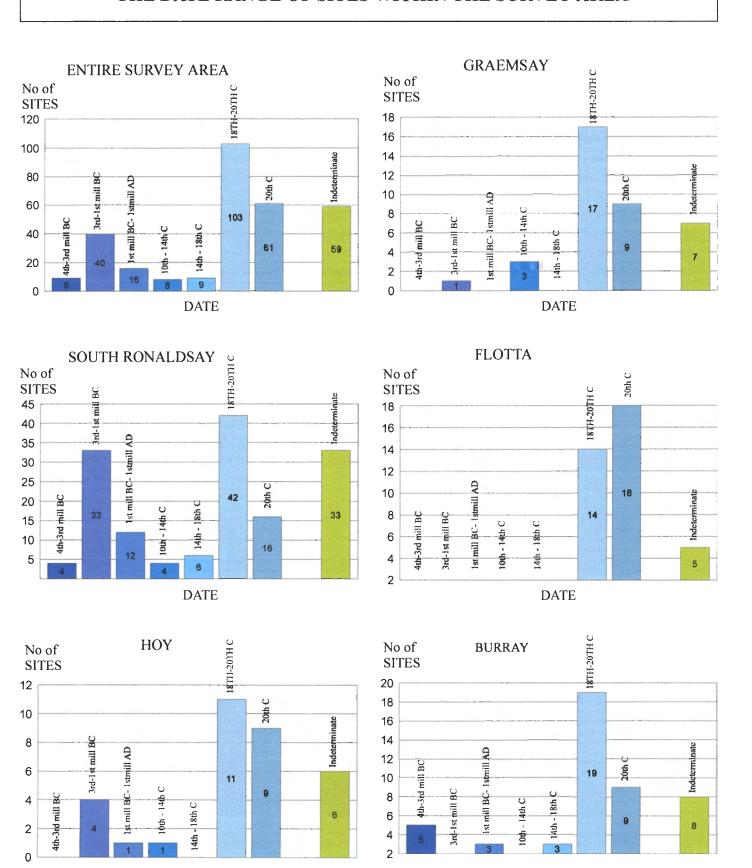
In order to interpret the results of this survey more easily, a series of bar charts have been chosen as a method of presenting data. One of the implications of a study area encompassing several different islands is that each contain different types of sites. Therefore, information has been given separately for each island as well as for together as a whole.

It is worth remembering that each chart is the result of fairly 'coarse' statistics, and the reader is therefore urged to use them with caution- they are intended as guides only. An example of the way in which the data is 'coarse' is illustrated by the various 20th C coastal batteries. Each battery complex comprises many elements. Each of these elements had a specialised, but interrelated purpose. For the charts, a coastal battery has been defined as a single site, even where it operated over two world wars, because it is known that they generally operated as units. This simplification has introduced one bias to the data, however the alternative has its own problems- to define each gun position, engine room, director tower, magazine, observation post, accommodation block etc. as separate sites would also introduce bias.

It should also be kept in mind that the survey area was the *coastal zone*, a part of the landscape which contains many sites (some of which are specialised) not seen further inland. This section serves to highlight trends within the data. Any closer study should refer to the actual site descriptions, which contain more detailed, specific, information.



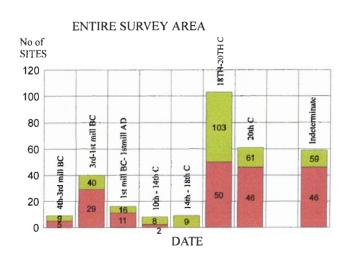
THE DATE RANGE OF SITES WITHIN THE SURVEY AREA

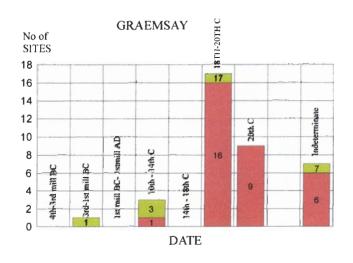


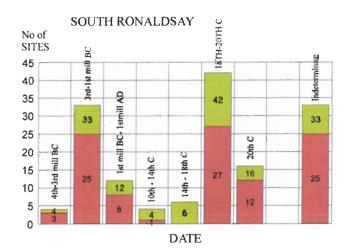
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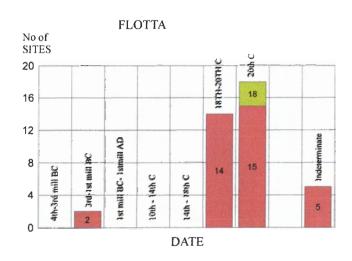
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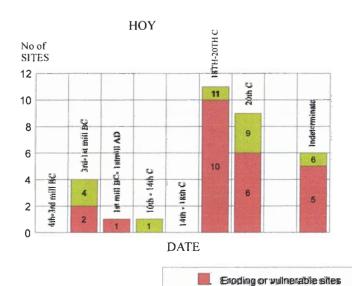
ERODING OR VULNERABLE SITES WITHIN THE SURVEY AREA







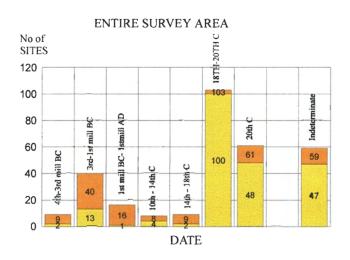


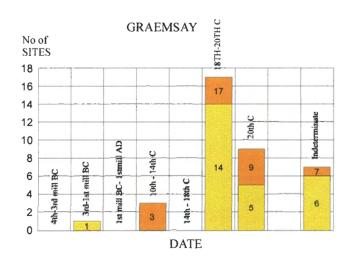


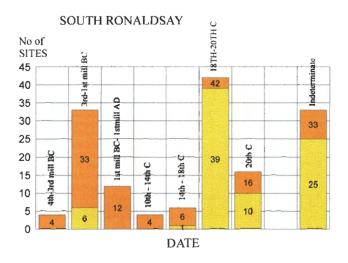


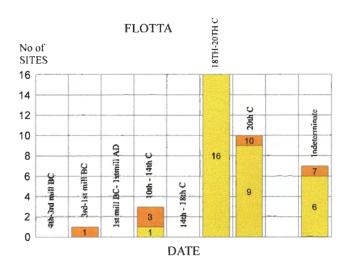
Total number of sites

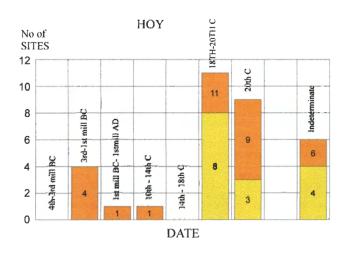
NEW SITES FOUND BY THIS SURVEY



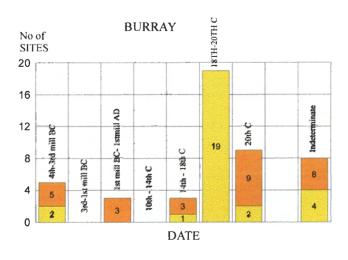








New sites



Total number of sites

Site density

This chart (page 15) shows site density per km of coastline walked. All known sites have been included, even those which could not be located on the ground. There is a noticeably greater concentration of sites on Graemsay and South Ronaldsay, when compared to Flotta, Hoy and Burray. The reasons for this disparity are unclear. In the case of Hoy, the survey areas represent only small proportions of the island, and further survey here would undoubtedly alter the totals for overall site density. Flotta, in recent times at least, contains much low-grade land (a large part of the island is unimproved); the oil terminal covers a large area and sites may have been destroyed during its construction. Sites of earlier date may also have been destroyed by the military works which cover extensive parts of the island. The relative frequency of sites found in the coastal zone of Graemsay may be explained by the small size of the island. The figure for South Ronaldsay includes many individual mounds and cairns; these sites have been entered separately for the purposes of statistical evaluation, since, although they are often found in clusters, they may have been constructed over a long period of time. They are regarded here as separate sites which show an association, rather than multiple elements of the same site.

Site dates

These six charts show the date ranges the sites could be divided into. In most cases the date was assigned on the basis of outward appearance, or on documentary evidence. The 'indeterminate' category has been used for those sites where it was not possible to assign any date with confidence.

It is apparent from the charts that there is a clear preponderance of sites dating to the last three centuries (18th-20th C). For this date range, there is a wide range of site types, from military to domestic. The site types which have been dated to other periods do not exhibit the same degree of variety. All of the sites assigned a 4th -3rd millennium BC date are burial monuments. Most of the sites assigned a 3rd - 1st millennium BC date are mounds, and so are also probably burial monuments. The exception is burnt mounds, all of which have been placed in this date range. Brochs, together with defended promontories, count for a large proportion of the 1st millennium BC-1st millennium AD date range, and chapel sites account for all of the 10th-14th C category.

It is not always easy to explain the apparent differences in site survival. Some sites are monumental or lie on marginal land (such as brochs, cairns, burnt mounds). Some of the chapel sites could not be located, however documentary references survive. It is possible that some of the crofts assigned an 18th-20th C date have much earlier precedents, and this may explain the lack of early medieval domestic settlement. The relative abundance of sites of a later period also indicates that there is a great probability that early sites have been destroyed, either by chance or design.

Eroding or Vulnerable Sites

These charts have been generated to show what proportion of sites might be vulnerable to erosion. The sites have been broken down by date in order to demonstrate whether any one date range is more vulnerable than another. In general, a large proportion of sites of each date range are vulnerable to erosion. In the case of 18th -20th and 20th C sites, many of these are sites such as noosts and jetties, which were built in or near the marine zone. The large numbers of sites shown here to be vulnerable does not imply that action has been recommended in each case.

New Sites

These charts give some idea of the focus of past work, and the usefulness of rapid audit survey for identifying new sites. The greatest number of new sites lie within the 18th-20th C date range. This is because previous survey has largely ignored vernacular buildings and remains of this period. With the exception of a few listed buildings, previously recorded sites dating to 18th-20th C date have largely been 20th C military remains. Several new sites of earlier date have also been added to the record by this survey. Some of the 'new' sites labelled as 'indeterminate' may also be of early date. As part of this work, the record for previously recorded sites has been updated.

Analysis of the Results: Erosion

Alan Stapf

Erosion Class Distances Km

Li voidi Cidos Distances iun								
	Е	E/\$	s	A/S	A	A/E	U	Total
Burray	4.13	8.75	5.87	0.42	0.5	0.14	1.8	21.61
Flotta	3.28	10.28	5.78	0.18	0	0	1.2	20.72
Graemsay	0.8	3.41	4.39	0	0	0	0	8.6
Hoy	1.71	5.32	5.19	0	0	0	0	12.22
S Ronaldsay	7.33	15.69	6.1	0.53	0.65	1.4	0	31.7
Total Survey	17.25	43.45	27.33	1.13	1.15	1.54	3	94.85

Erosion Class Proportions %

	E	E/S	s	A/S	A	A/E	U
Burray	19.11	40.49	27.16	1.94	2.31	0.65	8.33
Flotta	15.83	49.61	27.9	0.87	0	0	5.79
Graemsay	9.3	39.65	51.05	0	0	0	0
Hoy	13.99	43.54	42.47	0	0	0	0
S Ronaldsay	23.12	49.5	19.24	1.67	2.05	4.42	0
Total Survey	18.19	45.81	28.81	1.19	1.21	1.62	3.16

E = Eroding E/S = Eroding to Stable S = Stable A/S = Accreting to Stable

A = Accreting A/E Accreting to Eroding U = Unsurveyed

The total coastline of the survey area is 94.85 km although only 91.85 km was actually surveyed. It is clear that the *eroding to stable* category is the dominant erosion class. However it has to be borne in mind that this class is made up of localised erosion with a mixture of

both stable and eroding areas, between 30-70% of either one. Also some of the erosion is of a low rate, especially where the coastal landmass is greater, i.e. high cliffs. Therefore one can estimate that over 50% of the coastal edge is at present stable.

What is surprising is that such a large area, almost 20%, of the coast is definitely eroding. The eroding coastline is in the main low lying and composed of softer geological sediments such as the Eday Marls and softer cyclothems of other beds.

2.2 DISCUSSION

Built Heritage and Archaeology

This survey was carried out in order to examine the built heritage and archaeology of the coastal zone and to assess vulnerability to coastal erosion. It is one of a number of such surveys being carried out in Scotland. The overall aim of these surveys is to record the heritage located within the coastal zone and to define the threat posed by coastal erosion. The ultimate use of this work will be to inform management strategies and priorities.

By definition, there are limitations to this type of survey, which require discussion at the outset. By limiting the area examined to the coastal zone (defined as the foreshore and 100m behind the coast edge) the number and type of sites recorded is not necessarily representative of the totality of remains extant in the overall area. Without reference to the wider hinterland, sites may be recorded, as it were, 'out of context'.

In practical terms, rapid audit survey, such as this, involves walking the coastline area but does not include topographic survey. Individual elements of extensive sites (such as remnants of field systems) may be encountered successively and, without recourse to an accurate topographic survey, inter-relationships may be difficult to determine.

In Orkney, where much of the land is intensively farmed, there is often a narrow 'unimproved' margin adjacent to the coastal edge. Here, there is a greater chance that sites will have survived destruction by farming; although such sites may face a threat from coastal erosion, instead. Therefore, the coastal zone is a valuable, if vulnerable, resource for built heritage and archaeology.

The full range of site types will not necessarily be located within the coastal zone. Some sites, however, are specific to the coast (i.e. promontory forts, coastal batteries, causeways, jetties, noosts etc.); others are frequently found close to the coast (brochs, early churches) whilst other site types (such as 19th C houses) are numerous throughout the hinterland but are also well represented within the coastal zone.

In Orkney in general, and on small islands such as those within the survey area in particular, the coast has been an important focus for settlement and activity in the past. Orcadians have been called 'farmers with boats'; the nature of subsistence in these islands has always meant that people were reliant on the sea for both food and for transport. This survey has encountered sites of all periods within the coastal zone, although their distribution is not uniform on all the islands.

The major omissions within the survey area are domestic sites of early prehistoric date, of the Viking/Norse and medieval period. Early prehistoric domestic sites are a rare site type, in any case, and more vulnerable to the vicissitudes of time. Settlements of the Viking/Norse period could be expected, on the basis of known sites in Orkney, to demonstrate a coastal bias. The fact that no such sites were found within the survey area is unlikely to indicate a real absence but rather that sites may not have survived, may have been built over in a later period; it is unlikely, however, that such a site has been mis-identified. Sites of the medieval period, with the exception of chapels and churches, were also conspicuously absent. Again, they may not have survived or may be built over. It is possible that where, if ever, such structures continued in a modified form into the 18th/19th C, they have not been recognised by this survey. Within the scope of this survey, although some 286 site entries were recorded within the coastal zone, the variation in type and date of the remains makes it difficult to draw any overall conclusions. Many sites occur in isolation and, although of interest in themselves, unless excavated, they do not provide any more specific information on the period from which they date. A single burnt mound may testify to Bronze Age activity, but little more than this can be said unless the site is excavated and analysed. If, however, a burnt mound is associated with a settlement or field system, we can then gain additional insights, not only to the fact of their presence and survival, but also about inter-site relationships and the nature of Bronze Age activity in the area. There were few such opportunities afforded within this survey. The notable exceptions are outlined below as 'case studies'.

A cluster of burial mounds are located on the south coast of South Ronaldsay. The number of mounds on this stretch of coastline (20 in all, spread over Maps 5 and 6) is not due to the greater survival of such sites in this area; indeed most of the mounds here have been badly reduced and it is likely that further such sites have been erased entirely from the area. Therefore, it must be presumed that there is a true concentration of sites here. The location may be significant; the southern tip of South Ronaldsay is the most southerly point in the Orkney Islands, facing into the Pentland Firth towards the north coast of the Scottish mainland.

At the south-west corner of South Ronaldsay there lie a number of sites, which when considered together, may indicate that the area is of particular archaeological interest. The Castle of Burwick (SR72) is a promontory fort which is thought to date to the 1st millennium BC/1st millennium AD. On the opposite side of the bay, lies a broch (SR74), of similar date. A stone with footprints carved into it (SR144), of a type considered to be 'Pictish' and possibly to have been used in inauguration ceremonies, resides in St. Mary's Church at Burwick. The presence of two sites of probable high-status in this area, together with the carved stone, indicates that this was an area of some importance in the later Iron Age. In addition, the site of the 9th C St. Colm's chapel (SR145), later replaced by St. Mary's Church (SR144) in the 11th C, and the probable secondary monastic settlement on Castle of Burwick promontory testifies to the continuing importance of the area in to the Early Medieval period. A number of large-scale land boundaries (SR70, SR71, SR88, SR90 and SR91), although of indeterminate date, may point to formalised land division associated with a large estate; such an estate may be associated with this centre of power, or its antecedents.

At the north-west of South Ronaldsay the 'enclosure' at Mayfield (SR8), an unusual site putatively dated to 1st millennium BC/1st millennium AD, lies on the opposite side of Dam of Hoxa bay from a broch with possible associated settlement (SR127) and an unenclosed settlement (SR12), which are of similar date. While none of these sites may be contemporary,

they do suggest a concentration of later prehistoric settlement in this area. The undefended settlement and the broch were partially excavated in the last century, but further work will be required to arrive at an understanding of what is, undoubtedly, an area of high archaeological significance.

At the north-east corner of Burray, two brochs lie less than 1km apart (B19 and B34) The presence of a wealthy settlement of similar date at North Links (B40) indicates that the area was of high status in the later Iron Age period. An exposure of anthropogenic deposits, close to the location of a burial ground and an as yet unidentified building (B14) may be of similar date. While both of the brochs have been partially excavated in the last century, more investigation is required to piece together inter-site relationships and to assess their significance. In the case of North Links and at site B14, such work is required urgently, since both sites are actively eroding.

A point of interest is that all of the seven of the pre-reformation chapel sites known on South Ronaldsay are located within the coastal zone. Of these, three are dedicated to St. Colm. The Chapel of St. Colm at Hoxa (SR153) is said to have been founded by Cormac, a disciple of Columba's who arrived in Orkney from Iona at the beginning of the 7th C. A chapel site dedicated to St. Colm on Graemsay is also recorded (G34), where there is also a chapel dedicated to St. Bride (G32). The form of the name 'Colm' may derive from the Irish Colmcille, (while 'Bride' may be 'Bridget') and indicate a period of missionary activity in these islands.

A large number of the sites located by this survey are of 19th/20th C date; these include houses, outbuildings, enclosures, noosts and boat sheds. Most of the houses are now abandoned and ruinous and few of the boat sheds and noosts remain in use. Within the coastal zone the focus of settlement has, in general, moved from the coast to the hinterland and particularly towards roads. The small fields which surrounded these houses are now subsumed into larger units, centred on farmhouses located back from the coast edge. These changes, increasing farm sizes, population shift from rural areas and a lessening of dependency on the sea, reflect broad developments over all of Orkney during the past century.

Hinterland Geology, Coastal Geomorphology and Erosion

Overall, the geomorphological features concur with a mass of evidence that the sea level has been and is still rising due to the relative down-warping of the islands since the last glaciation. Small areas of peat are at present being eroded on the foreshore of Flotta, Hoy and Graemsay; while no real evidence was found for submerged deposits in the survey area (although a few areas are presently at, or slightly below HWM), drowned peat deposits are found around Orkney's coast (Mykura 1976, 114). The complete absence of raised beaches may also be interpreted as a drowned landscape.

The predominant geology of flags and sandstones, where the bedding is largely horizontal, produces straight edged cliffs where marine erosion is greater than subaerial erosion. Only in a few places (e.g. to the north of Halcro Head on South Ronaldsay) where talus has not been removed by the sea, does subaerial erosion exceed sea erosion.

The cyclothems of the various groups of flags makes predicting vulnerability to erosion rather uncertain; although, in the main, Eday beds are more vulnerable than Rousay Flags, Rousay Flags are either more vulnerable or roughly the same as Stromness Flags and metamorphic

basement complexes (only found within this survey on Graemsay) are the least vulnerable of all.

The main erosive power of the sea appears to be generated from the southerly directions. Added to this, the low lying and softer geological areas are more at risk from erosion than the tougher geological units and higher coastlines. As seen from the survey even the more sheltered coves of Scapa Flow can be subject to erosion although is mainly confined to the lower coastal edges with soft sediments.

The majority of the coasts surveyed have a foreshore of rock platform with a clear distinctive coastal edge. Most high energy storm beaches are south facing. The harder, more rugged coastline is generally found along the south facing coasts where horizontal beds of Rousay and Stromness Flags are the main geological units. These are sometimes strongly indented with geos, especially on the eastern facing coasts. Deep tills or saprolites are generally found in low lying areas as a result of past glacial erosion of higher ground and deposition within low troughs or basins. Here the topography is soft and gentle, as this type of medium is also susceptible to subaerial erosion. A much softer coastline is found wherever Eday Marls are predominant (e.g., south-west Burray), although not all Eday beds are soft marls.

Overall the main erosion class is *eroding to stable* with *stable* the next most common and *eroding* third. The main agent of erosion is the sea which dominated the *eroding* class. Subaerial erosion is associated with approximately half of the localised erosion in the *eroding* to *stable* class.

There are two interesting features which can be linked to erosion. The first is the reestablishment of fence lines away from an advancing coastal edge sometimes with relict
fencing left *in-situ* and given up to the sea. The second curious features which has been noted
throughout the survey are the stable rill-like features which run towards the coastal edge. The
various sets of such forms may differ in that each trough or crest distance can be from 5m to
20m apart. In almost all cases they are located on gently to moderate sloping ground (5-20°),
close to cultivable areas. These features are most likely due to either, or both, of the
following:

- (i) Remnant cultivation ridges from rig and furrow practices which have been truncated by marine erosion.
- (ii) Over cultivation or denudation of vegetation cover of ground with consequent subaerial rill erosion of the unstable soils.

Both are expressions of land use and management practices, with the latter especially contributing to subaerial erosion of the soils. An investigation of these features may be relevant in understanding past cultivation practices of Orkney. Although subaerial erosion may only account for 10-15% of the erosion of the actual coastline, it accounts for perhaps as much as 25% of the total erosion. Subaerial erosion can be as damaging to archaeology as marine erosion. Much archaeology is located within the softer, upper sediments, and it is precisely these sediments which are vulnerable to this type of erosion. Subaerial erosion can be tackled at a more economical level. With careful management of the hinterland, and the implementation of practices which prevent or reduce erosion, subaerial erosion could be reduced by as much as 50%.

There is very little accretion within the surveyed area. All significant areas lie on the north-western side of South Ronaldsay and Burray. Unfortunately, an area where accretion is most probable on Burray, North Links, was not surveyed. The source of the sand probably lies to the south west of the islands where vast expanses of sand lie below the sea, (I.G.S. 1977). As prevailing winds and seas are from the south, sand and shell particles in particular would be carried to the Orkney Islands. Longshore drift would also aid in concentrating any loose sands in the natural sediment traps, particularly at Newark Bay and Ayre of Cara, South Ronaldsay, North Links, Burray and Melberry Links, Hoy. These four areas were surveyed in 1973, (Mathews et al 1974) and since then accretion has definitely taken place at the Ayre of Cara. The Churchill Barrier was constructed in 1942 and sands have been steadily accreting since then. Sand extraction has been instigated on the south side of Cara Ayre since the last survey in 1973 and the fragile vegetation cover has been eliminated.

At Newark Bay accretion appears to have been much slower than at Ayre of Cara since 1973, although since the last survey a new (small) area of sand extraction has been instigated to the north of the bay.

At Melberry Links there appears to have been very little further sand accretion since 1973. There has, however, been sand extraction and with some wind erosion of hinterland deposits due to deflation hollows being enlarged, perhaps by extraction as well as wind blow.

North Links, Burray was not surveyed as permission to survey the area was denied by the owner. Extraction is still continuing at Burray Links, as was the case in 1973.

2.3 SUMMARY AND RECOMMENDATIONS

The recommendations for individual sites are given in the gazetteers which accompany each Built Heritage and Archaeology Map (3.0) and in the Site Descriptions (Appendix 4.1). The criteria under which site condition and recommendations were made are outlined at 1.2 above.

Out of a total of 286 site entries, the following recommendations were made:

Survey	48
Monitor	37
Nil 1	58

Where survey has been recommended, the type of survey should be tailored to meet the requirements of each site. In some cases, topographical survey may be sufficient; in some cases, for example where indeterminate anthropogenic deposits are exposed in section, the appropriate response will be more assessment-orientated and may involve section recording, topographic and/or geophysical survey.

The sites where survey and assessment is *urgently* required are:

- * B14: Anthropogenic deposits at Weddell Point, Burray
- * B40: Settlement and artefact scatters at the Bu, North Links, Burray
- * B24: Anthropogenic deposits near Hillock of Fea, Burray
- * SR8: Enclosure at Mayfield, South Ronaldsay
- * SR82 (iv): Cairn at Banks Head, South Ronaldsay

While topographic survey of the various WWI & II sites is currently being carried out by RCAHMS, it should be noted that many of the buildings which form the coastal batteries are dilapidated and require a structural survey; conservation is likely to be necessary where a battery is to be preserved.

There are many 19th/20th C traditional houses within the coastal zone, where survey, if it is to be carried out at all, should be done in the near future. This type of site, although numerous and common, may be better preserved here than further inland (where houses are often robbed for stone or removed from farmland). Many of the buildings found during this survey were abandoned in the early part of the century and have not been maintained. While not always at threat from coastal erosion, these sites are rapidly decaying and information is, therefore, being lost. Within the remit of this survey, the following sites were considered to be of interest; they preserve sufficient detail to characterise their functions or illustrate organic structural development:

- * B7: Wha Taing: Structures, Burray
- * F40, 41, 42: Township at Quoyness-Pan, Flotta
- * HY23: Crock Ness boat sheds
- * G3: Structures and anthropogenic deposits at Sandside, Graemsay
- * G5: Remains of a click mill at Quoys, Graemsay

Ongoing monitoring has been recommended where either a site has been previously surveyed but is vulnerable to erosion, or where an indeterminate site may reveal itself more fully as it becomes more exposed. The information contained on each site within this report will provide a basis for general comparisons of future change. To have any real understanding of the nature and importance of what is being eroded and how much of a site survives, a more detailed assessment of individual sites would be required, however. The level of information contained in this document is *not* sufficient to fully assess the potential of any of the sites mentioned.

In the majority of cases, it has been recommended that no action be taken ('Nil'). Within this category are sites considered to be (i) currently stable *and* not threatened in the immediate future; (ii) so reduced or disturbed as to render any further work unrewarding; (iii) of a type which is common and unlikely to be the best example of its class available.

It must be stated that the recommendation which appear in this report have been formulated on the basis of the data collected within the coastal zone alone. These recommendations refer to a site's condition and the degree of threat posed by coastal erosion. It is not within the remit of this work to point out sites of National or Local importance (other than those which have already been designated as 'scheduled' or 'listed'). It may be that some of the sites documented here will be considered to be of such importance, when considered against the totality of data collected from each island, the Orkney Islands as a whole or within the whole of Scotland.

In addition to surveying or monitoring known sites, future work should continue to monitor the coastline as a whole, since further sites are likely to appear. It may also be the case that sites which could not be located by this survey will be rediscovered at a later date. This may occur, for example, under conditions which render sites more visible, if disturbance brings them to light or they may appear on new aerial photographs.

In the authors' opinion it is better to carry out further work at a site *before* it begins to be eroded by the sea. Sites which are already eroding should be assessed to determine their nature, extent, date, condition and rarity; this information can be used to inform decisions regarding further work. On sites which have been assessed, it is unlikely to be worth re-recording each new exposure as it occurs. The amount of new information gained from re-recording sections rarely repays the cost of this work; multiple records from the same site my not even be capable of being related to one another. There is a critical stage in the history of each site which marks the 'point of no return', after which further recording or excavation is of little value; the object must be to accurately assess how near to this stage each site lies. This level of information requires more detailed assessment survey than it is within the remit of rapid audit survey to provide.

The overall objective of audit surveys such as this is to provide information for decisions regarding the built heritage and archaeology of the coastal zone, at a national level. Before the data set is complete it will be necessary to make decisions regarding the future of vulnerable sites such as those mentioned above, and elsewhere in this document. If decisions are deferred such sites may have passed the critical point of no return.

Hinterland Geology, Coastal Geomorphology and Erosion

Alan Stapf

It seems that there is little that can be done to negate marine erosion unless huge resources are committed to the control. However where concrete rubble is more readily available, sea erosion has been slowed down considerably (e.g., Crockness on Hoy). Ultimately, where there are monuments of singular and significant importance the cost of more elaborate sea defences may be the only option in order to slow down marine erosion significantly

It is likely that land management and practices account for some of the subaerial erosion, which in turn enhances coastal erosion. Much of the subaerial erosion could be reduced by good agricultural husbandry methods, e.g., reducing overstocking of grass fields by the coastal edge or leaving a permanent grassed strip between cultivated fields and the coastal edge. A strip of well vegetated land, perhaps 5m or so in width between the cultivated fields and the coastal edge, could help in the prevention of rill formation.

It is also recommended that monitoring of coastal erosion be implemented to assess the rate of erosion especially of the more vulnerable low lying areas. There is no firm data at present on rates of erosion. Perhaps a second survey of the more sensitive areas could be carried out in five or so years time to give an average annual erosion rate.

3.0 MAP SECTIONS AND GAZETTEERS

3.1 THE ISLAND OF BURRAY (4 Maps)

Archaeology and Built Heritage

The coastal zone of Burray is sparsely settled. Most of the inhabited houses focus on roads rather than the coast and are surounded by enclosed fields of improved grassland. There is a settlement cluster at Burray Village on the south coast. The south-west corner of Burray is largely uninhabited and there are large unenclosed areas. Forty-five sites were recorded on Burray, of which eighteen had been noted previously. Two sites are listed (B28,37 and B35) and one site is scheduled (B19). The largest group of sites are of 19th/20th C date and include WWI and WWII coastal defence sites.

Geomorphology

This island, including Hunda, has 21.61km of coastline and is joined to Mainland and South Ronaldsay by the Churchill Barriers. It is relatively low lying with the highest point being 80m OD and a large proportion (>60%) of the coastal edge is less than 5m. Most areas with an edge over 5m lie on the west of Burray. Eday Beds lie to the west of the island with the tougher Rousay Flags to the east. This is reflected in the soils, with most podzols to the west and gleys to the east. Most of Burray, especially to the west, is fenced to the coastal edge with good cultivable fields. A large area to the east, North Links, was not surveyed The small island of Hunda, is joined to the west of Burray by a causeway. Hunda is mainly unfenced with rough grazing.

Erosion

The erosion on Burray is mainly confined to the south west and westerly facing shores with most of the erosion taking place on the soft Eday Beds where shales and soft sandstones predominate the geology to the west of the island. There are also large areas where the coastal edge is less than five metres and is underlain with soft sediments. In total, almost 20% of the coastal edge is actively eroding. To the east there is more stability, with areas of accretion at Cara Ayre and, perhaps, North Links (although this area was not surveyed).

The main erosion on Hunda is limited to the south easterly and easterly facing coasts.

BURRAY MAP 1: CHURCHILL BARRIER #3 TO REEF POINT

Built Heritage and Archaeology

This area extends from the northern access road onto the island (built over Churchill Barrier #3, see B13) to a point adjacent to the causeway which links Burray with the small isle of Hunda. It is characterised by scattered settlements adjoining enclosed fields of improved grassland which run down to the coast edge. A road which runs parallel to the coast, at an average distance of 300m from it, provides the focus for most of the settlements, which lie closer to the road than the coast. The strip of land immediately between the coast edge and field ends is frequently very overgrown with coarse grasses and spreading wild rose (*Rosa rugosa*).

Seven sites/site complexes were recorded in the area covered by this map section; none are scheduled or listed. Two sites (B13 and B30) had been previously recorded but it was not possible to inspect B30 (Blockships in East Weddell Sound) since the site lies in the marine zone. Four sites were considered to be vulnerable to coastal erosion.

The fertile coastal strip has undoubtedly been cultivated over a long period of time; the fields adjacent to the coast are even and level and a deep topsoil was visible in occasional exposures throughout the area. The implication of this is that early sites, if they exist in this area, are not now visible, either because they have been entirely removed or that they have been buried beneath cultivated soils.

Geomorphology

North-western Burray faces into Scapa Flow and therefore, is protected to some degree from the open seas and long fetches. Generally it has a gently undulating landscape and the coastal edge is greater than 5m in height; although it dips to below 5m at Echnaloch Bay and for part of Hunda Sound. Behind the road at Echnaloch Bay a small loch has formed on a low-lying area; this depression extends from north to south through the Island.

Erosion

The relatively softer Eday Marls make up the western side of Burray. Erosion is most obvious on the western facing coast of Echnaloch Bay and at the head of the bay where the coastal edge is <5m. Erosion is also prevalent on the western facing coast of Hunda Sound.

BURRAY MAP 1 BUILT HERITAGE & ARCHAEOLOGY

B13 (ND 49 NE 16)

ND 4735 9850

East Weddell Sound

Churchill Barrier #3

1943

Good

Nil

B10

ND 4589 9738

Swannies

House

19th/20th C

Good

Nil

B31

ND 4749 9835

East Weddell Sound

Construction Debris from Churchill Barrier

20th C

Fair

Nil

B30 (ND 49 NE 8718, 8899, 8900, 8901, 8902)

ND 480 951

East Weddell Sound

WWI & II Blockships

20th C

Not Inspected

B12

ND 4719 9670

Echna Loch

House and outbuilding

19th/20th C

Fair

Nil

B32

ND 4719 9670

Echna Loch

Mill

19th/20th C

Good

Nil

B11

ND 4628 9725

Nearhouse, NE of lookout

Field boundary and clearance cairn

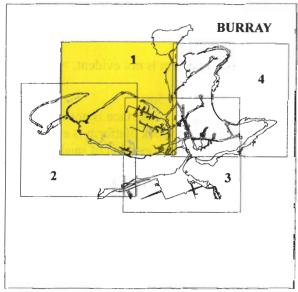
18th/19th C

Fair

Nil



- PROTECTED ANCIENT MONUMENT OR AREA OF DESIGNATED WRECK
- OMONUMENT FORMALLY PROPOSED BY HISTORIC SCOTLAND FOR SCHEDULING OR WRECK FOR DESIGNATION
- + LISTED HISTORIC BUILDING
- UNDESIGNATED WRECK
- KNOWN ANCIENT MONUMENT
- SITE FOUND BY THIS SURVEY
- SITE COMPLEX



BURRAY MAP 1

HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

1 Ward Point

ND 473 980

0.65km

Predominantly rock platform with discrete patches of cobbles, 20-30% cover.

Coast edge < 5m but rises to > 5m after 200m
The drift/rock interface is visible in most parts.
Disturbance in two areas is due to a disused track
cutting and an abandoned quarry. The rock
cannot be seen under the quarry floor debris but
is well exposed in section around the rim of the
quarry. A few old concrete sea defence blocks lie
close to the HWM, although some have been
displaced. Drift consists of a freely draining thin
podzol, 20-30cm, which overlies a thin till,
<20cm. Bedrock is made up of dipping Rousay
Flags. Good grazing land lies on the hinterland
which is fenced up to the coast edge.

2 Gillietrang

ND 474 973

0.80 km

Rock platform with cobbles, 30-50% cover. Coast edge > 5m.

The drift/rock interface is visible in most parts. The rock platform is evident although there are a great many more cobbles, some quite large and almost boulder size. The drift is composed mainly of a freely drained podzol but now overlies an intermittent till. Just south of Gillietrang, the geology change from the Rousay Flags to the relatively softer rocks of the Eday Marls. Some of these rocks are oil bearing shales. Cultivatable fields are fenced up to the cliff face which are grassed down.

3 Echna Loch/Bay

ND 473 968

0.35 km

Rock platform is not evident, >90% shingle, <5% sand.

Coast edge < 5m.

The drift/rock interface is not visible.

Although no rock platform is evident there is only a small proportion of sand at the centre of the bay and at extreme LWM The foreshore is chiefly made up of cobbles to the east with more gravel to the centre of the bay and then extremely well sorted rounded cobbles to the west which grades into shingle. The main road lies within 5m of the coast edge and a small lock lies beyond the

road in the hinterland. The predominant soil is an imperfectly to poorly drained peaty podzol.

4 Greenvale

ND 465 972

1.50 km

Rock platform with a 50-60% cobble cover. Coast edge rising to > 5m after 300m.

The drift/rock interface is visible for the majority of the coastline. At least one old groyne or stone dyke is apparent close to Newhouse. For much of the first 300m on the east side the drift/rock interface is not visible and also in various places where vegetation has covered the edge. Two old slipway cuts are overgrown with vegetation. A few buildings lie close within 20m of the coast edge. The Eday Marls continue with bedding planes almost horizontal. Soils are imperfectly drained peaty podzols with no till evident. Small cultivatable fields are fenced to the coastal edge.

5 Swannies Point

ND 455 971

0.95 km

Rock platform with negligible cobble cover. Coast edge > 5m.

The drift/rock interface is visible in most parts. Soils are imperfectly to poorly drained peaty podzols grading to a peat drift north east of Vestlybanks. The fields are generally small and fenced right up to the edge with the exception of the unfenced peat area by Vestlybanks.

6 Vestlybanks

ND 448 965

0.70 km

Rock platform with >50% shingle cover and <10% sand.

Coast edge is predominantly < 5m.

The drift/rock interface is not visible for the most part. A shingle beach is dominant with some discrete patches of sand over a partially exposed rock platform. The edge is > 5m for 200m to the north east and the drift/rock interface is visible for most of this length. A small length of sea walling lies close to Littlequoy bordering a track. Soils are poorly drained gleys with fields being less cultivatable and unfenced by the causeway.



FORESHORE



ROCK PLATFORM
MAINLY SAND
MAINLY ALLUVIAL/MARINE MUD
MARSH

HINTERLAND

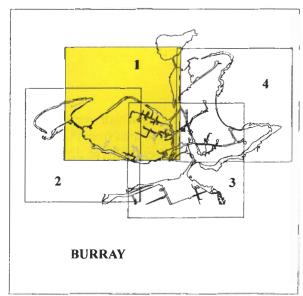


DRIFT DRIFT ON VISIBLE ROCK RAISED BEACH ETC BLOWN SAND GLACIAL SAND/GRAVEL ALLUVIUM

MODIFIERS



LOW EDGE <5M CLIFF >5M MAN MADE BARRIER SHINGLE/STORM BANK HUMAN DISTURBANCE



BURRAY MAP 1 EROSION CLASS

1 Ward Point

ND 4740 9825

0.10 km

Eroding to stable

Facing WNW into Scapa Flow. Localised erosion and displacement of at least two old concrete sea defence blocks.

2 West of Ward Point

ND 4730 9815

0.15 km

Eroding

Some slumping and erosion of land partly due to and old track cutting which is being eroded. Slumping may also be enhanced in part by cattle scraping the slump areas.

3 Gillietrang

ND 474 976

0.90 km

Eroding to stable.

Some soil creep and slumping around the rim of the quarry. in noticeable in a few areas. The geology changes from the Rousay Flags to the Eday Marls by Gillietrang. The softer Eday Marls are potentially more easily eroded than the Rousay Flags. This appears to be borne out to the south of Gillietrang where there is more localised erosion of a soft oil shale.

4 Viewforth

ND 475 970

0.30 km

Stable.

Vegetation has stabilised this length of coastline as it slopes to < 5m.

5 Echna Loch

ND 473 968

0.30 km

Eroding.

The vegetated bar which carries the main road and separates the loch from the sea is eroding on the seaward side. Areas of disturbance and tipping, which appear to be associated with past road works, are being eroded.

6 Newhouse

ND 467 970

1.40 km

Stable.

There are a few areas of negligible localised erosion north west of Loch House otherwise the whole length of this coast to Swinnies Point is remarkably stable.

7 Swinnies Point

ND 454 970

1.60 km

Eroding to stable.

Mostly localised sea erosion although at Vestlybanks there has been slumping, or flow of the peat, leaving a hummocky terrain with a few bare patches of underlying bedrock or till. Some erosion is also taking place around the slipway at Littlequoy.

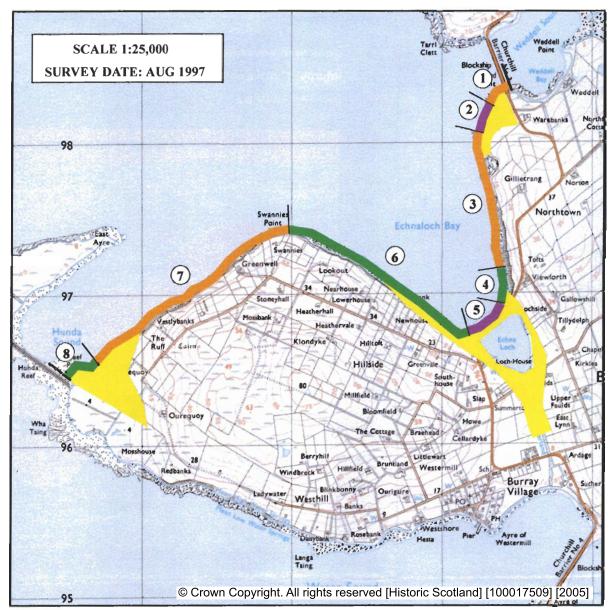
8 Reef Point

ND 4465 9645

0.20 km

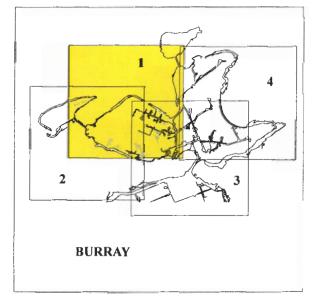
Stable.

A farm track with sea walling has stabilised most of this area.





DEFINITELY ACCRETING ACCRETING OR STABLE STABLE ERODING OR STABLE DEFINITELY ERODING ACCRETING AND ERODING NO ACCESS LAND BELOW 10M





BURRAY MAP 2: REEF POINT TO LANGA TAING

Built Heritage and Archaeology

This area extends from the causeway linking Burray with the isle of Hunda, around the coast of Hunda and along the south-west coast of Burray, stopping short of Burray Village. Hunda isle is approximately 2km long and is up to 625m wide at its southern end, tapering to a less than 100m wide at its north end. A modern house lies adjacent to the end of the causeway and is surrounded by enclosed fields of improved grass. Outwith this area, the vegetation cover is a mixture of coarse grass and heathery moorland. The south-west coast of Burray is largely uninhabited and what field boundaries as do exist, appear to be of early 20th C date at the latest. A rough track extends parallel to the coast behind the coastal strip, at a minimum distance of 100m to the rear of the coast edge. At Ladywater, the track joins up with a metalled road leading into Burray Village.

Twenty sites/site complexes were recorded in the area covered by this map section, none are scheduled or listed. Three sites (B36, H5, B29) were previously recorded. The presence of a copper mine (B29) was noted by Mykura (1976, 119) but the site was not recorded by OS or RCAHMS surveyors; it was not located by this survey either. Of the ten sites considered vulnerable to erosion, three were found to be actively eroding. The eroding sites, all of which date to 19th/20th, comprise a dry-stone dyke enclosure (H6); a ruinous house, enclosure and a refuse pit (which is exposed in the coastal section) (B5); and refuse pits (B1), which are also exposed in section. No action is recommended since all of the sites affected are unremarkable. The current state of theses sites indicates a significant rate of recession, however, since it is likely that all were originally located at least 5m, if not more, behind the coast edge.

The earliest structures identified in this area were three burial mounds (H3, H4, H5), all of which were located at the southern end of Hunda. The survival of these sites undoubtedly owes much to the fact that Hunda has not been intensively farmed in modern times. The largest mound (H5) was previously recorded as a chambered cairn, although doubts expressed by previous surveyors as to the validity of this interpretation are reiterated here. Although not immediately threatened by coastal erosion, this site is vulnerable and has suffered severe degradation from animal poaching and sub-aerial erosion. Other mounds recorded on Hunda (H10, H8, H2) may be of more recent date. A ruinous range of buildings on the south-west coast of Burray (B7), which may have been inhabited in to this century, provide a good illustration of the organic development of a traditional farmstead.

Geomorphology

Hunda is essentially an elongated hill, the greater part of which (to the west and south) has a coastal edge greater than 5m. The area of south-west Burray adjacent to Hunda has a coastal edge which is less than 5m; it rises to 5m and more in the vicinity of Mosshouse.

Erosion

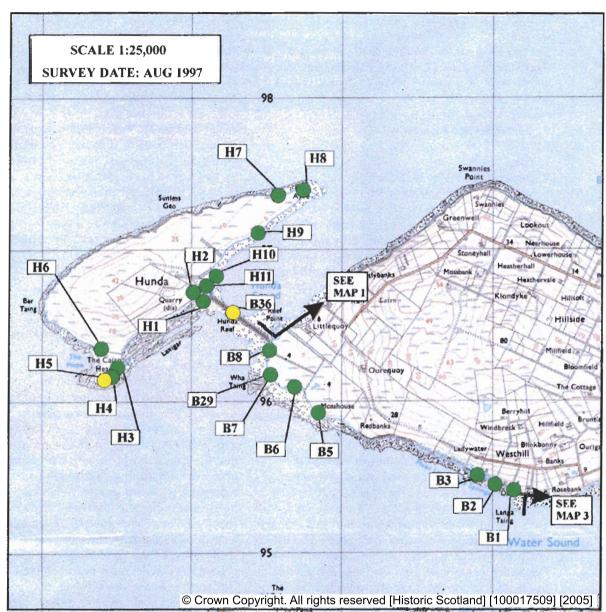
Erosion is mainly confined to the eastern side of Hunda and along the south west coast of Burray where the low lying areas are particularly vulnerable.

BURRAY MAP 2 BUILT HERITAGE & ARCHAEOLOGY

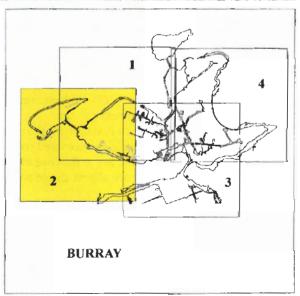
B36 (ND 49 NW 2)	<u>H6</u>	<u>B8</u>	<u>B3</u>
ND 441 967	ND 4340 9635	ND 4454 9635	ND 4592 9550
Hunda Sound	The Hope	Reef Point	S of Ladywater
	Enclosure	Two structures	•
Barrier			Slipway
WWII	19th/20th C	19th/20th C	19th/20th C
Good	Fair	Poor	Fair
Nil	Nil	Nil	Nil
H11	H5 (ND 49 NW 1)	B29	B2
ND 4408 9678	ND 4340 9615	ND 444 962	ND 4601 9546
Hunda	The Cairn Head	Wha Taing	Stonefield
		_	
Quarry	Cairn	Copper mine	Slipway
20th C	4th/2nd mill BC	17th/18th C	19th/20th C
Good	Fair	Not located	Fair
Nil	Monitor		Nil
H10	H4	B7	B1
ND 4425 9682	ND 4348 9618	ND 4453 9618	ND 4611 9542
Hunda	The Cairn Head	Wha Taing	Daisybank
Mound	Cairn	Structures	Refuse pits
Indeterminate	4th/2nd mill BC	19th/20th C	19th/20th C
Fair	Poor	Good	Fair
			Nil
Nil	Survey	Survey	INII
Н9	Н3	<u>B6</u>	
ND 4441 9711	ND 4355 9620	ND 4468 9611	
Hunda	The Cairn Head	Wha Taing	
Planticrub	Cairn	Shed	
19th/20th C	4th-2nd mill BC	19th/20th C	
Fair	Poor	Fair	
Nil	Survey	Nil	
1111	Sarvey	1 141	
<u>H8</u>	H2	<u>B5</u>	
ND 4475 9745	ND 4405 9675	ND 4486 9594	
East Ayre	Hunda	Mosshouse	
Three mounds	Mound	Structure, enclosure	
Indeterminate	Indeterminate	and pit	
Fair	Fair	19th/20th C	
Survey	Nil	Fair	
Sui vey	1411	Nil	
H7	H1	7 411	
ND 4460 9735	ND 4408 9672		
East Ayre	Hunda		
Enclosures	Structure		
19th/20th C	18th/19th C		
Fair	Poor		
ran	1 001		

Nil

Nil



- PROTECTED ANCIENT MONUMENT OR AREA OF DESIGNATED WRECK
- O MONUMENT FORMALLY PROPOSED BY HISTORIC SCOTLAND FOR SCHEDULING OR WRECK FOR DESIGNATION
- + LISTED HISTORIC BUILDING
- O UNDESIGNATED WRECK
- NOWN ANCIENT MONUMENT
- SITE FOUND BY THIS SURVEY
- SITE COMPLEX



BURRAY MAP 2

HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

Hunda Causeway

ND 443 966

0.50 km

The causeway, which links Hunda to Burray, is a flagged and concreted causeway which is in good maintenance, with more patching evident on the south western side.

1 East of Hunda Causeway

ND 445 971

1.20 km

Rock platform with 10-30% shingle cover.

Coast edge is predominantly < 5m.

The drift/rock interface is visible for the most part. The rock platform has shingle to the north east of the causeway which becomes predominantly cobble sized towards East Ayre and ends abruptly to the south of the point. Apart from a small 100m stretch close to the causeway, the edge is <5m. Flags of Upper Eday Sandstones are exposed under a poorly drained peaty gley. A thin till <30cm can be seen in some places. Most of the hinterland is gently sloping unfenced rough grazing.

2 East Ayre, Hunda

ND 434 970

2.32 km

Rock platform.

Coast edge is predominantly > 5m.

The drift/rock interface is visible for the most part. The rock platform has no cover and is quite narrow, 10-20m for the most part. The edge rises 200m from East Ayre to >5m. There is little till and the soil is a peaty podzol, freely drained for the most part although becoming imperfectly drained to the south. The area is unfenced apart from a small section close to Sunless Geo which lies at about 20m from the edge. Also at this point there are a number of small rills, more pronounced than rig and furrow, run coastward. Towards Bar Taing the hill becomes slightly steeper, >20° as is runs down to the coast.

3 The Hope (Cairn Head)

ND 434 961

0.50 km

Rock platform mostly <10% cobble cover.

Coast edge is predominantly > 5m.

The drift/rock interface is visible for the most part. Although predominantly an uncovered rock platform, shingle with some sand lies in the cove of The Hope. Cobbles and pebbles are almost absent around the head.

The hinterland is sloping, 10° to 20°, and up to 40% of the edge is <5m. The geology changes to the Eday Marls and the soil is a poorly drained gley for the most part with a small, exposed unit of peat to the south of the cairn and covers the rock/drift interface.

4 Laxigar

ND 438 966

0.90 km

Rock platform with 20-40% cobble cover.

Coast edge is predominantly > 5m.

The drift/rock interface is visible for the most part. A small ayre of approximately 40m in length lies at the S.W. side of this unit and is made up of cobbles and small boulders. The rock platform from then on, although very evident, is littered with small, subangular boulders and cobbles. The edge is less than 5m by Cairn Head but rises after 100m to >5m. The geology, red beds of the Eday Marls, are well exposed in the cliff sections and a freely drained peaty podzol soil overlies the rock with an horizon of saprolite separating the till and bedrock. The land above 5m is fenced to the edge.

5 Wha Taing

ND 446 961

0.68 km

Rock platform with 60 to >80% shingle and sand cover

Coast edge is < 5m.

The drift/rock interface is not visible.

The rock platform has a greater cover of fine sands and shingle by the causeway with the sands becoming less common towards Wha Taing. The shingle then grades into cobbles which become much more abundant towards the east. By Mosshouse there is an abundance of cobbles and small, angular to sub-rounded boulders. A small ridge, almost an ayre, which lies below Mosshouse is made up from small boulders and large cobbles. Other cobbles covered by vegetation resemble a storm beach and are found along the edge of a shallow bay to the west of Mosshouse and may be classed as a derelict storm beach. The soil is a gley with some peat in places which grades into a more poorly drained peaty gley to the east. Overall the hinterland is a poorly drained, unfenced, rough grazing area.

6 Mosshouse

ND 455 956

1.60 km

Rock platform with 60-90% cobble cover.

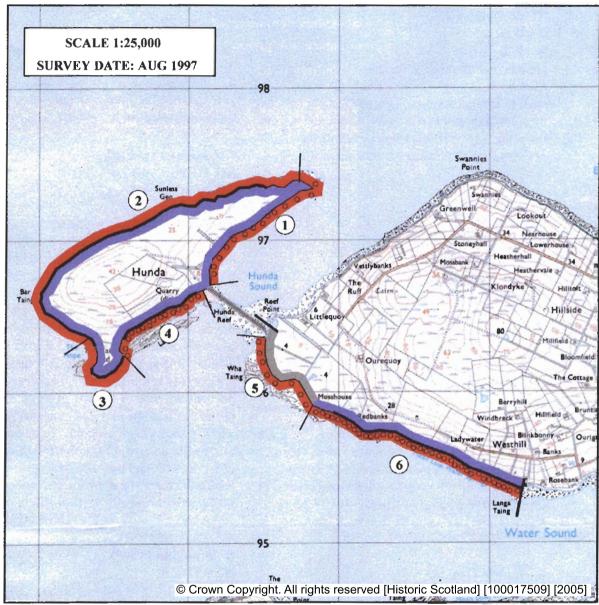
Coast edge is predominantly > 5m.

The drift/rock interface is visible.

The cobbles and small boulders which litter the rock platform are sub-rounded. A storm beach of cobbles lies below Redbanks and another close to Langa Taing. Between Mosshouse and Redbanks the edge rises to >5m with the eroding Eday Marls well exposed. Till is evident in localised areas along with a deep (<m) section of peat and a peat layer by Langa Taing and Ladywater. The predominant soil type is a freely draining peaty podzol. The hinterland is cultivatable and fenced to the edge.

HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

BURRAY MAP 2



FORESHORE



ROCK PLATFORM MAINLY SAND MAINLY ALLUVIAL/MARINE MUD MARSH

HINTERLAND

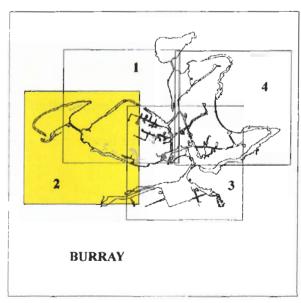


DRIFT DRIFT ON VISIBLE ROCK RAISED BEACH ETC BLOWN SAND GLACIAL SAND/GRAVEL ALLUVIUM

MODIFIERS



LOW EDGE <5M CLIFF >5M MAN MADE BARRIER SHINGLE/STORM BANK HUMAN DISTURBANCE



BURRAY MAP 2 EROSION CLASS

1 East of Hunda Causeway

ND 442 969

0.50 km

Eroding

Human disturbance by the causeway has assisted in erosion. Sea erosion is actively taking back the edge in localised areas. A corner fencing post has been left exposed at it's base. About 400m from the causeway some dumping of rubble has perhaps slowed down some erosion in this one area.

2 East Ayre

ND 446 972

0.90 km

Eroding to Stable

Localised erosion of the cliff face by sea. This becomes less evident on the north west facing side of the Ayre although areas of local erosion still exist.

3 South West of East Ayre

ND 443 973

0.56 km

Stable

A relatively stable length of coastline. There are at least five rills which run towards the coast edge which are grassed and stable. Possible evidence of erosion due to vegetation removal at one time or slumping of a peaty soil. A fence along this stretch is up to 20m back from the edge.

4 Sunless Geo

ND 434 970

1.20 km

Eroding to Stable

Peat slumping/flow and eroded sheep scrapes have increased terrestrial erosion in a few localised areas. These are very slow processes of erosion individually, but combined they tend to enhance the crosion of each another.

5 The Hope (Cairn Head)

ND 433 964

1.00 km

Eroding

Local erosion in the cove at Hope with land slip on the west of Cairn Head. A thick section of exposed peat drift to the south of the Head is breaking up and eroding into the sea.

6 East Side of Cairn Head

ND 4352 9630

0.06 km

Eroding to Stable, (possible accreting to eroding) An ayre of boulder and cobble is either stable, or possibly accreting, at the upper foreshore although there is erosion to either side, north and south, of the length.

7 Laxigar

ND 445 965

1.70 km

Eroding

The length of eroding coastline does not include the causeway. The cliffs along Laxigar are definitely eroding although the height of the cliff face and volume of rock making actual migration of the eroding edge land wards very slow. From Hunda Reef towards Redbanks the erosion is more striking as the low height of the edge and it's composition of soft drift, till, peat and gleys, affords little protection An abandoned croft and buildings is being encroached upon and fence posts lie exposed or eroded, even an animal burial had become exposed. One or two areas where cobbles have been thrown up have tended to stabilise an area for the short term. Where the coast rises to >5m between Mosshouse and Redbanks there is a dramatic example of fresh land slip in the almost vertical rilling of these soft rocks.

8 Redbanks (West)

ND 451 958

0.08 km

Stable

Almost vertical rills have been stabilised by vegetation in one small area.

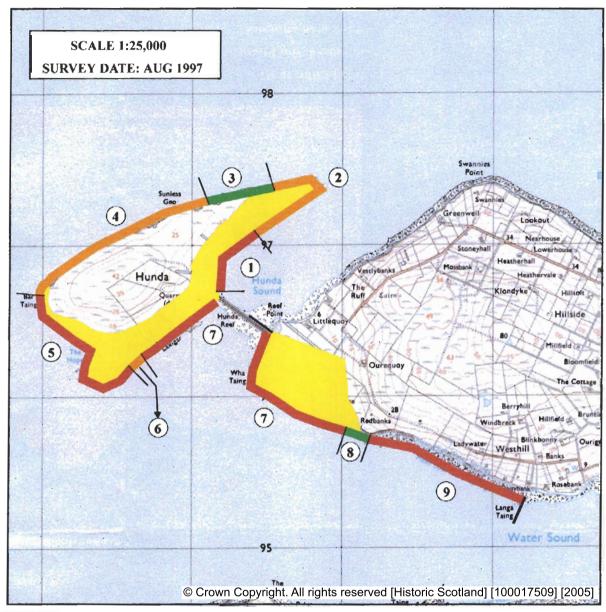
Redbanks (East)

ND 458 956

1.20 km

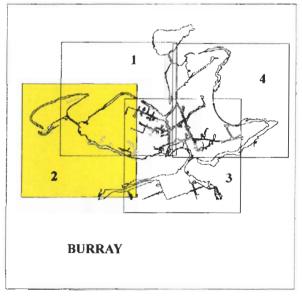
Eroding

The deep eroding, almost vertical rills give way to straight erosion of the cliff face. Almost the whole length is being eroded and areas of softer drift materials, peat and till by Ladywater are perhaps eroding at a faster rate.





DEFINITELY ACCRETING ACCRETING OR STABLE STABLE ERODING OR STABLE DEFINITELY ERODING ACCRETING AND ERODING NO ACCESS LAND BELOW 10M





BURRAY MAP 3: LANGA TAING TO SEA GEO

Built Heritage and Archaeology

This map section extends from the west side of Burray Village to a point on the south-eastern coast. Outwith Burray Village, this area is characterised by scattered settlements adjoining enclosed fields of improved grassland which run down to the coast edge. The modern centre of Burray Village is set back from the pier.

Eight sites/site complexes were recorded in the area covered by this map section; one site complex (B28,37) contains a listed building. Five sites had been recorded previously in this area but two of these could not be re-examined. One site (B33 blockships in Water Sound) was not inspected because it lies in the marine zone; the other site (B38 site of mound) could not be located. In total, six sites were considered vulnerable to coastal erosion and of these four are actively eroding. The eroding sites include a slipway (B25) and a trackway (B26), both of 19th/20th C date. No action is recommended at these sites on the grounds that they are unremarkable and common site types. The remaining two eroding sites are interpreted as a putative chambered cairn (B23) and anthropogenic (possibly midden) deposits (B24). It is recommended that the cairn, which has been previously surveyed, be kept under surveillance since it is threatened by coastal and subaerial erosion as well as human disturbance. The anthropogenic deposits and their relationship to the cairn should be assessed via survey.

Geomorphology

The majority of the south Burray coastline has a coastal edge less than 5m. Along Wester Sound the foreshore is littered with cobbles and there is little visible accretion of sediments on the west side of the Churchill Barrier. In complete contrast, at the eastern side of the barrier large volumes of sand have accumulated and stabilised since the 1940's when the barriers were constructed.

Erosion

There is a greater degree of erosion along the coast to the west of the barrier than to the east. Definite accretion of sand is taking place along the barrier's eastern side and on part of Burray itself.

BURRAY MAP 3 BUILT HERITAGE & ARCHAEOLOGY

B28, 37 (ND 49 NE 12, 13, 14)

ND 472 955

Burray Village

Village

17th C onward

Good Nil

B27 (ND 49 NE 17)

ND 4789 9522

Water Sound

Churchill Barrier # 4

1943 Good

Nil

<u>B33</u> (ND 49 NE 8739, 8740, 8741, 8744,

8895, 8897, 8898, 8894, 8955)

ND 478 952

Water Sound

WW I & II Blockships

20th C

Not Inspected

B38 (ND 49 NE 8)

ND 4851 9531

Kyelittle

Mound

Indeterminate

Not located

B26

ND 4865 9522

Sea Taing

Trackway

19th/20th C

Poor

Nil

B25

ND 4895 9553

Hillock of Fea

Slipway

19th/20th C

Poor

Nil

B24

ND 4922 9557

Hillock of Fea

Anthropogenic deposits

Indeterminate

Fair

Survey

B23 (ND 49 NE 7)

ND 4929 9557

Hillock of Fea

Cairn

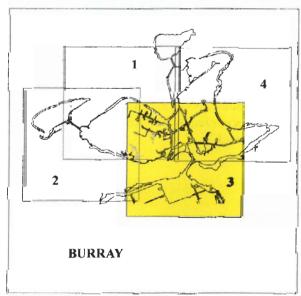
4th/2nd mill BC

Fair

Monitor



- PROTECTED ANCIENT MONUMENT OR AREA OF DESIGNATED WRECK
- OMONUMENT FORMALLY PROPOSED BY HISTORIC SCOTLAND FOR SCHEDULING OR WRECK FOR DESIGNATION
- + LISTED HISTORIC BUILDING
- UNDESIGNATED WRECK
- KNOWN ANCIENT MONUMENT
- SITE FOUND BY THIS SURVEY
- SITE COMPLEX



BURRAY MAP 3

HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

1 Rosebank

ND 463 954

0.20 km

Sandy foreshore with 20-40% cobble cover. Coast edge is < 5m.

The drift/rock interface is not visible. Some boulder clay is apparent under a freely drained organic podzol. Fencing of cultivatable fields runs along the coastal edge.

2 Rosebank (East)

ND 467 955

0.50 km

Rock platform with 80-90% cobble cover.

Coast edge is < 5m.

The drift/rock interface is not visible.

The cobbles grade into shingle towards Hesta where a cobbled storm beach lies above the shingle. The soils are freely to imperfectly drained podzols and cultivatable fields are fenced right to the coastal edge.

3 Westshore

ND 471 955

0.34 km

Rock platform with 80->90% shingle cover. Coast edge is < 5m.

The drift/rock interface is not visible. Sea defences are in place in front of a few houses and pier facilities. Small fields, gardens and buildings lie on the hinterland.

4 Ayre of Westermill

ND 476 957

1.00 km

Sandy foreshore with 70->80% shingle cover. Coastal edge is < 5m.

The drift/rock interface is not visible.

Freely drained brown soils lie close to the village with the soil becoming a poorly drained gley closer to causeway No.4. Apart from a small paddock lying between Burray Village and Sutherland the rest of the hinterland to this unit is occupied by buildings, gardens and the main road.

5 East of Churchill Barrier No.4

ND 483 954

0.35 km

Sandy foreshore grading to rock platform with 20-30% shingle cover.

Coastal edge is < 5m.

The drift/rock interface is not visible.

The stoneless sands extend along to the east for perhaps 200m before they thin and the rock platform is exposed. The unit is therefore transitory change, from sand to a rock platform to the east. Cultivatable fields lie on the hinterland with an imperfectly drained gley soil.

6 Felli Geo

ND 488 953

0.90 km

Rock platform with >50% sand, localised, and 10-20% cobble/shingle cover.

Coastal edge is predominantly < 5m.

The drift/rock interface is not visible for the most part. A rock platform with slight cover of cobbles, then changing to a moderate sand/slight shingle cover and then back to a moderate cobble cover. The edge rises to > 5m at the start of the unit for less than 100m then < 5m until the Hillock of Fea where the edge rises again. The geology/drift interface can only be seen in the areas above 5m. Both the till and soil tends to be sandy in a few areas where the edge is under 5m. Otherwise the soil appears to be an imperfectly to poorly drained gley with cultivatable land fenced up to the edge.

7 Hillock of Fea

ND 4930 9555

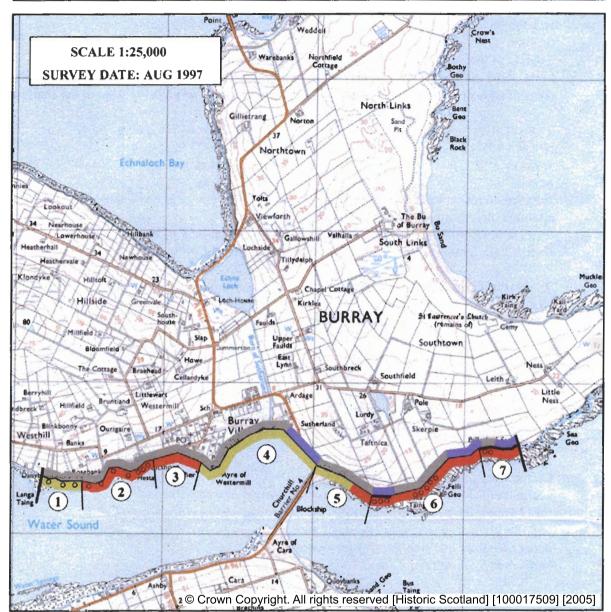
0.20 km

Rock platform with 10-40% cobble cover.

Coastal edge is > 5 m.

The drift/rock interface is visible.

Most of the hinterland is fenced, with slightly sloping fields. The land is cultivatable with some arable crops.



FORESHORE



ROCK PLATFORM
MAINLY SAND
MAINLY ALLUVIAL/MARINE MUD
MARSH

HINTERLAND

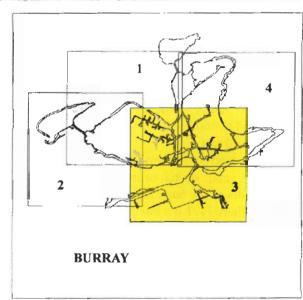


DRIFT DRIFT ON VISIBLE ROCK RAISED BEACH ETC BLOWN SAND GLACIAL SAND/GRAVEL ALLUVIUM

MODIFIERS



LOW EDGE <5M CLIFF >5M MAN MADE BARRIER SHINGLE/STORM BANK HUMAN DISTURBANCE



BURRAY MAP 3 EROSION CLASS

1 Rosebank

ND 464 954

0.24 km

Eroding to Stable.

Most of the erosion is found to the east as small areas of edge erosion and wave gouging.

2 Westshore

ND 473 955

1.60 km

Stable

Very little erosion has taken place recently although there is an old storm beach lying close to Westshore. Buildings and sea defences by Burray Village appear to be in good condition.

3 West of Churchill Barrier No.4

ND 4800 9555

0.20 km

Eroding

A small corner area of the coast is being eroded close to buildings and the main road.

4 East side of Churchill Barrier No.4

ND 482 954

0.42 km

Accreting to Stable

On the west side of the causeway there is an accretion of sands which almost banks up against the old coast edge. Where sands fade out to the east, the coast face is stable. The sands area being colonised and stabilised by grasses and herbs. See 6.11, Ayre of Cara.

5 East of Cara Sands

ND 4848 9518

0.13 km

Stable

A small area of coast which is stable with no apparent accretion of sands.

6 Sandy Bank

ND 4860 9530

0.14 km

Accreting and eroding

A small stretch of land where the sandy soil and tills of the bank is being eroding in patches. There is also a build up of sand over the rock platform and the foreshore. Part of the upper foreshore sandy material appears to originate from the eroding bank.

7 Sea Taing

ND 488 955

0.38 km

Eroding to Stable

Here there is no accumulation of sand although there is localised erosion of the shallow bank.

8 East of Sea Taing

ND 4905 9555

0.08 km

Eroding

Definite edge erosion of soils and till.

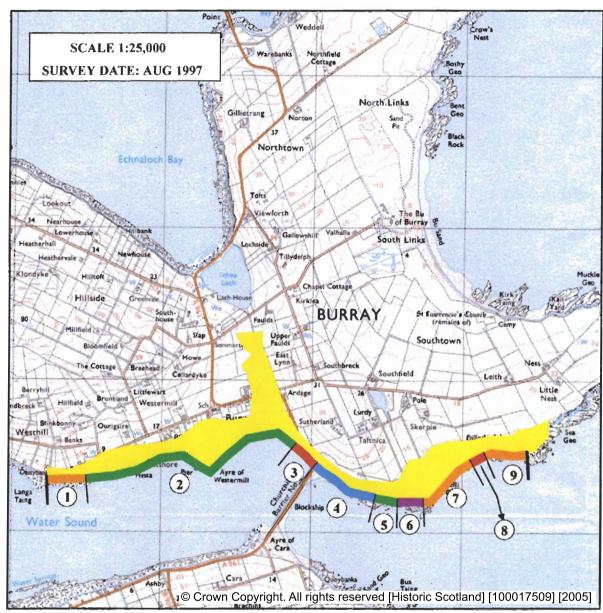
9 Hillock of Fea

ND 492 956

0.30 km

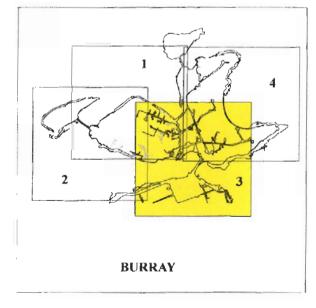
Eroding to Stable

As the land rises above 5m more areas appear to be stable.





DEFINITELY ACCRETING ACCRETING OR STABLE STABLE ERODING OR STABLE DEFINITELY ERODING ACCRETING AND ERODING NO ACCESS LAND BELOW 10M



BURRAY MAP 4: SEA GEO TO CHURCHILL BARRIER #3

Built Heritage and Archaeology

The area covered by this map section extends from a point on the south-eastern coast, along the east coast and around to a point on the north coast adjacent to Churchill Barrier #3; the access route on to Burray from the north. This area is sparsely settled and is dominated by three large farms, surrounded by large enclosed fields of improved grassland. An area in the centre of this section could not be surveyed since access was denied by the landowner; this area is clearly marked on Map 4. Within the area not surveyed commercial sand extraction has been taking place over a number of years and chance finds have been frequently reported (B40). The nature of these finds indicates that a high status settlement of the 1st millennium AD is being disturbed at North Links both as a direct result of sand extraction and also by the deflation of the dune system which this is causing. Survey is urgently required in this area.

Ten sites were recorded in this area, of which eight had been recorded previously. A 17th C church (B35) is listed grade 'B' and a broch (B19) is scheduled. Two previously known sites were not inspected; one was the site of a chambered cairn (B39) which was completely removed in the last century; the other was the grade 'B' listed church (B35) to which access was denied by the landowner. Six sites were considered vulnerable to erosion, of which three are actively eroding. In addition to the disturbed site at North Links, mentioned above, of most immediate concern is an exposure of anthropogenic deposits noted on the north coast (B14). These deposits are visible in a soft sandy coastal section and are located close to an area where burials and part of a structure were found previously. It is recommended that this site be assessed via survey in the near future.

Geomorphology

Burray Ness is fairly flat with a coastal edge greater than 5m along it's south eastern coast. This area has a broad rock platform and conveys a more rugged, storm washed scene than does the northern coast. The coastal edge drops to below 5m and a large expanse of sand makes up the South Links area. The sand grades out further north to a rock platform around Burray Haas; sand again becomes dominant in Weddell Sound.

Erosion

There is little definite erosion within the area covered by this map section. There are, however, large expanses of sand, most notably Burray Links which were not surveyed. Sand deposits at Weddell Sound are accreting.

BURRAY MAP 4 BUILT HERITAGE & ARCHAEOLOGY

B22

ND 4995 9603 Wife's Geo

Earthen bank and ditch

19th/20th C

Fair Nil

B21 (ND 59 NW 4)

ND 5038 9639 Burray Ness

WWII Coastal Battery

20th C Fair Survey

B20

ND 5029 9658 Flood Crag

Planticrub and Dyke

19th/20th C

Poor Nil

B35 (ND 49 NE 6)

ND 4917 9644

Kirk Taing

St. Lawrence's Church: Listed 'B'

17th C

Not inspected

B40 (ND 49 NE 18)

North Links ND 485 975 The Bu

Settlement & artefact scatters

1st mill BC/1st mill AD

Not inspected

Survey

B19 (NE 49 NE 1)

ND 4897 9881

Ayresdale

East Broch of Burray: Scheduled

1st mill BC/1st mill AD

Good Monitor **B39** (ND 49 NE 3)

ND 4887 9880

Northfield

Site of chambered cairn

4th/3rd mill BC

Not located

B15, B16, B17, B18 (ND 49 NE 19)

ND 4855 9878

Ayresdale

WWII Burray Coastal Battery

1940/1943

Fair

Survey

B34 (ND 49 NE 2)

ND 4847 9871

Ayresdale

West Broch of Burray

1st mill BC/1st mill AD

Fair

Monitor

B14 (ND 49 NE 11)

ND 4800 9869

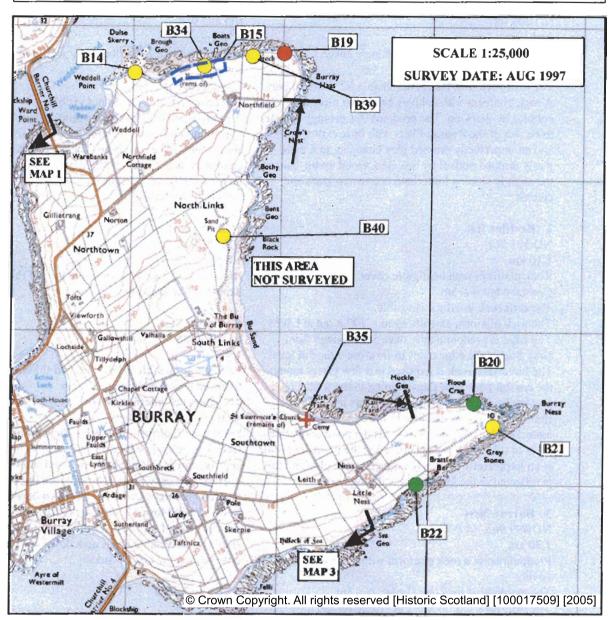
Weddell Point

Anthropogenic deposits

Indeterminate

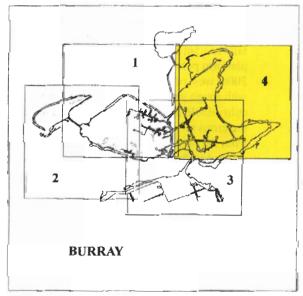
Fair

Survey





- OMONUMENT FORMALLY PROPOSED BY HISTORIC SCOTLAND FOR SCHEDULING OR WRECK FOR DESIGNATION
- + LISTED HISTORIC BUILDING
- O UNDESIGNATED WRECK
- **O KNOWN ANCIENT MONUMENT**
- SITE FOUND BY THIS SURVEY
- SITE COMPLEX



BURRAY MAP 4

HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

1 East of Hillock of Fea

ND 495 957

0.35 km

Rock platform with <10-40% shingle cover.

Coastal edge is predominantly < 5m.

The drift/rock interface is not visible for the most part. A rock platform with cobbles becoming clear of cobbles by Sea Geo. The predominant geology appears to be that of the Rousay Flags with little exposed till and an imperfectly drained gley changing to a more freely drained podzol by Sea Geo. Good arable land of the slightly sloping hinterland is down to grass and cereals.

2 Brattlee Bar

ND 501 961

1.10 km

Rock platform with negligible cover.

Coastal edge is > 5m.

The drift/rock interface is visible.

The rock platform extends up to > 100m out at LWM The edge is predominantly over 5m although from Grey Stones the edge tends to lie around the 5m level. The hinterland rock is exposed in a few places along the coastal edge with flags dipping to the south. Consequently, exposure to the sea has left a very shallow soil over rock close to the edge. The hinterland becomes level towards the point and a thin layer of till, 10-20cm, is exposed at the point. The soil is an imperfectly to poorly drained saline gley and this is reflected in the land, unfenced rough grazing.

3 Burray Ness

ND 499 965

1.30 km

Predominantly a rock platform with < 10% cobble cover.

The majority of the coastal edge is < 5m.

The drift/rock interface is not visible for the most part.

Although this unit is predominantly a rock platform foreshore, it starts just west of Burray Head with a small sandy cove with 30% cobble cover. The edge falls to <5m after the small sandy cove and the rock platform persists to Kirk Taing with an area of cobbles 200m west of the cemetery. The hinterland is fairly flat with rough grazing to Muckle Geo and then good cultivatable arable land is fenced to the edge. Again the crops reflect the soils. Poorly drained saline gleys from the point to Muckle Geo and then imperfectly drained to freely drained gleys, all over Rousay Flags.

4 St Laurence's Church

ND 492 965

0.30 km

Predominantly a sandy foreshore with <10% shingle cover.

Coastal edge is < 5m.

The drift/rock interface is not visible.

A sandy foreshore, part of Bu sands. As this is a transition phase from rock to sand, some rock outcrops are evident in the foreshore. The edge is made up of grassed banks. Sandy, freely drained soils appear to lie over shelly sand. Fenced, cultivatable grassed land lies on the hinterland.

5 Bu Sands

ND 487 972

1.80 km

An unsurveyed area. Permission to visit this area was denied by the landowner.

6 Crows Nest

ND 488 988

1.40 km

Rock platform with <10% sand and shingle cover. Coast edge is predominantly < 5m.

The drift/rock interface is visible for 50% of the section.

Some sand lies over platform to the west by Brough Geo. The geology with drift interface is evident for approximately half of the section and shows till overlying Rousay Flags. The soils are imperfectly drained gley from Crow's Nest which becomes more freely drained towards the Burray Ness and a freely drained podzol for the rest of the unit. Good gently sloping, cultivatable fields area down to grass and are unfenced on the coastal side.

7 Brough Geo

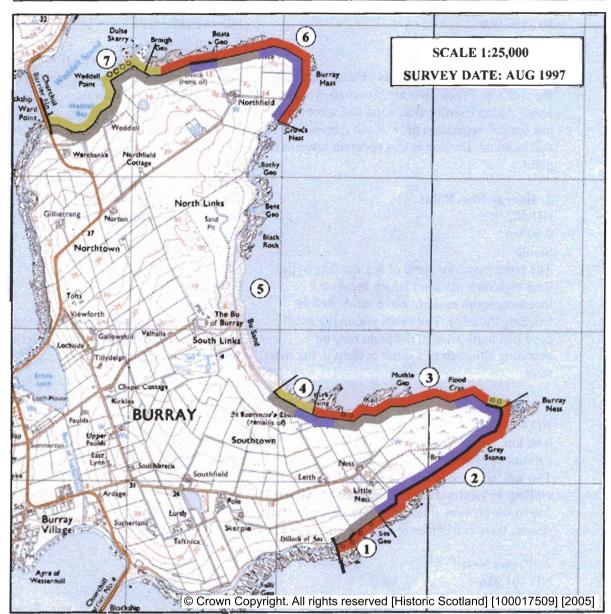
ND 478 983

0.90 km

Sandy foreshore with patchy pebble or cobble cover. Coastal edge is < 5m.

The drift/rock interface is not visible.

A vaguely discernable rock platform can be picked out at Brough Geo thereafter becoming a full sandy foreshore with very few outcrops of rock. Pebbles, < 20%, overlie the sand within Brough Geo. A relic storm beach of cobbles lies above HWM at Weddell Point, the vegetation cover indicating it's present dormancy. The hinterland contains rough vegetation in many places with fence lines away from the coast in all places apart from the cove at Weddell. A small outcrop of rock lies at the top of the foreshore by Weddell. Soils range from freely drained sandy soils and gleys from Brough Geo to podzols in the west. The small area of gleys lie in an area of poor drainage from the farm.



FORESHORE:



ROCK PLATFORM
MAINLY SAND
MAINLY ALLUVIAL/MARINE MUD
MARSH

HINTERLAND

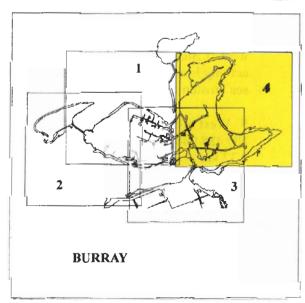


DRIFT DRIFT ON VISIBLE ROCK RAISED BEACH ETC BLOWN SAND GLACIAL SAND/GRAVEL ALLUVIUM

MODIFIERS



LOW EDGE <5M CLIFF >5M MAN MADE BARRIER SHINGLE/STORM BANK HUMAN DISTURBANCE



BURRAY MAP 4 EROSION CLASS

1 Hillock of Fea

ND 499 960

1.20 km

Eroding to Stable

Erosion is seen as small areas of land slip from the cliff top. Fence lines are breached in a few areas. Along Brattlee Bar, wind and wave spray has limited vegetation growth and consequent soil build up. Erosion is less apparent towards the point.

2 Burray Ness Point

ND 502 965

0.60 km

Stable

The point may owe some of it's stability to the long high rock platform which breaks the incoming south easterly wave action before reaching the edge. The sands within the small cove just north west of the point may be accreting although this is not evident in the short term.

3 Kirk Taing

ND 492 964

0.60 km

Eroding to Stable

The soft sandy sediments at the bank edge are eroding in localised areas above HWM Mostly due to sea erosion although where vegetation is sparse, there is a evidence of some wind erosion.

4 Crows Nest

ND 491 986

1.20 km

Eroding to Stable

Localised sea erosion with cattle accentuating the erosion. This is especially so by the first broch west of Burray Ness where rabbit and cattle activity is eroding the hinterland side while some sea erosion is also evident.

5 West of Broch

ND 488 988

0.32 km

Stable/Eroding

A small section of stable coast, 60m, west of the broch may owe it's stability to two groynes. To the west of the groynes the coast is eroding sporadically and definitely eroding for about 100m before Boats Geo.

6 Boats Geo

ND 484 987

0.45 km

Eroding to Stable. (Accreting)

Localised areas of eroding edge and possible accretion of foreshore sands.

7 Weddell Point

ND 480 987

0.40 km

Stable

The cobbles of a storm beach with a low lying area, <2m, have been stabilised by vegetation.

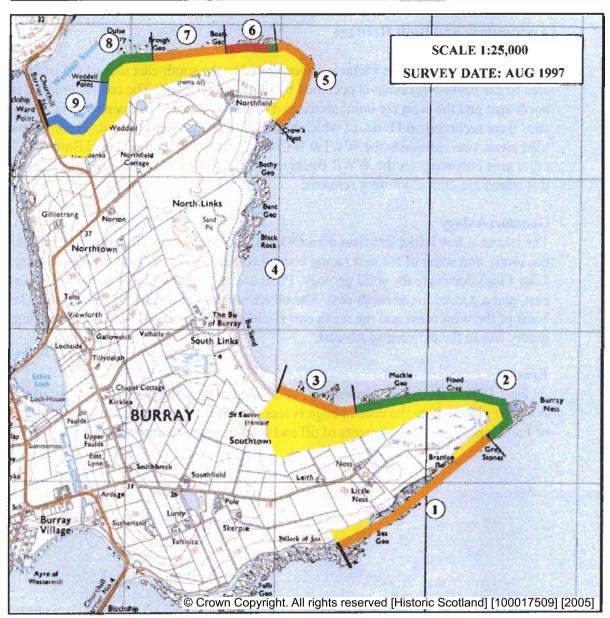
8 Weddell Bay

ND 478 983

0.50 km

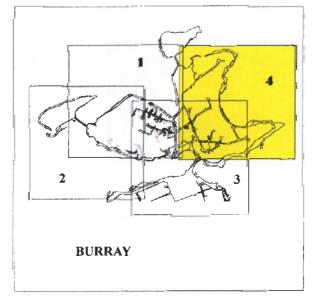
Accreting

Foreshore sands appear to be accreting with very little evidence of erosion of the hinterland, only colonisation by grasses.





DEFINITELY ACCRETING ACCRETING OR STABLE STABLE ERODING OR STABLE DEFINITELY ERODING ACCRETING AND ERODING NO ACCESS LAND BELOW 10M



3.2 THE ISLAND OF FLOTTA (3 Maps)

Archaeology and Built Heritage

The modern settlement on Flotta is concentrated to the south-east side of the island. A large area of the north-west coast is occupied by Flotta oil terminal. The coastal areas of both the north-east and the west are uninhabited and largely composed of open moorland. Thirty-nine sites were recorded on Flotta, of which nine had been previously noted. There are two scheduled areas: one surrounds the WWI & II Coastal Battery at Stanger Head Battery (F12,13); the other area encompasses the WWII Buchanan Battery (F14,15). The largest group of sites on this island are 20th C military remains.

Geomorphology

The island is low lying, less than 60m OD, and the coastline is 20.72 km long. Almost all of the south, and some of the east facing coastal edge is less than 5m in height. Rousay Flags and Eday Flags dominate the solid geology. Peats are dominant to the east, with gleys in the south east, and a podzol to the north-east. The oil terminal takes up almost 15% of the island's area. Most of the west coast and the north east peninsula are unfenced with rough grazing. A large quarry lies to the extreme south-east.

Erosion

At least 16% of the island coastal edge is deemed to be actively eroding. Most of the erosion is taking place where the coastal edge is less than 5m, which is predominantly along the inlet of Pan Hope. The soft sediments of till and soils here are easily eroded.

FLOTTA MAP 1: BOOTHIE GEO TO HEAD OF BANKS

Built Heritage and Archaeology

The area covered by this map section extends from the modern pier on the north-west coast of Flotta, around the west coast to terminate at a point on the south coast. This area is has no modern settlement and is composed mainly of unenclosed hilly moorland.

Six sites were recorded in this area, of which three had been previously noted; none are scheduled or listed. All of the sites were considered vulnerable to erosion, although none was found to be actively eroding.

The most extensive remains were those relating to WWI and II coastal batteries at Innan Neb (F3). The vegetation cover is such that many of the buildings associated with the battery are obscured and it is likely that elements, such as slight earthworks and structural footings, which have a low visibility were not seen.

Geomorphology

The north-west and west coasts of Flotta have a coastal edge which is below 5m and a shingle foreshore. The south-western and south facing coast is, in the main, cliff-like with a narrow rock platform.

Erosion

Along the north-west and western facing coast the edge is mainly croding to stable; whereas the southerly facing coast (excluding the bay at Scar Wick) is relatively stable.

FLOTTA MAP 1 BUILT HERITAGE & ARCHAEOLOGY

F1

ND 3418 9305

Weddel - Wharth

Concrete plinth and flotsam, military

20th C

Poor

Nil

F2

ND 3462 9249

Overgate

Datum marker, military

20th C

Good

Nil

F3 (ND 39 SW 41, 50)

ND 3495 9228 to ND 3535 9255

Innan Neb

WWI & II Innan Neb Battery,

WWII Gate Battery and Neb Battery

1915-18, 1940-44

Fair

Survey

F4

ND 3573 9256

Point of Leval

Cairn

3rd/2nd mill BC

Poor

Survey

F5 (ND 39 SE 3)

ND 3575 9251

Point of Leval

Mound

3rd/2nd mill BC

Fair

Monitor

F6 (ND 39 SE 8)

ND 3619 9245

Head of Banks

Mound

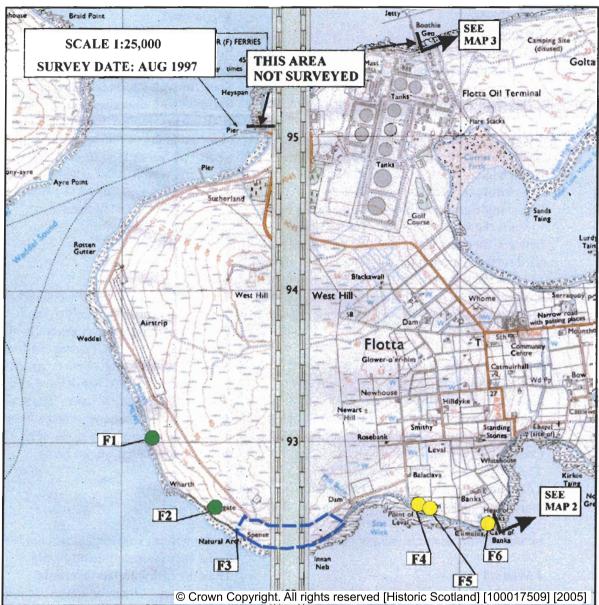
Indeterminate

Fair

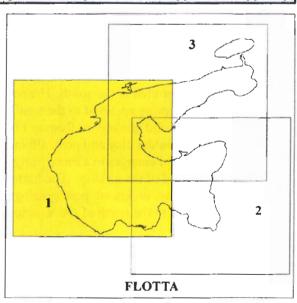
Nil

BUILT HERITAGE & ARCHAEOLOGY

FLOTTA MAP 1



- PROTECTED ANCIENT MONUMENT OR AREA OF DESIGNATED WRECK
- OMONUMENT FORMALLY PROPOSED BY HISTORIC SCOTLAND FOR SCHEDULING OR WRECK FOR DESIGNATION
- + LISTED HISTORIC BUILDING
- UNDESIGNATED WRECK
- KNOWN ANCIENT MONUMENT
- SITE FOUND BY THIS SURVEY
- SITE COMPLEX



FLOTTA MAP 1 HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

1 Flotta Oil Terminal

ND 352 954

1.8 km

This section of the coast was not surveyed as it is occupied by the oil terminal installation.

2 Heyspan Pier

ND 346 947

1.0 km

Sandy foreshore with up to 50% shingle cover. Coast edge is < 5m.

The drift/rock interface is not visible.

The shingle grades to predominant cobble cover towards the west of this unit. The section between the piers is walled. The hinterland is hard surfaced around the oil terminal and grassed towards the second pier then opens to heather covered peat land. Although the underlying rock is not evident, peat, >50cm, lies over a boulder clay.

3 West of Sutherland Pier

ND 340 944

0.5 km

Rock platform with 10-50% sand and shingle

Coast edge is < 5m.

The drift/rock interface is not visible. The sand cover diminishes to reveal the underlying rock platform towards the end of this section. The hinterland is shallow sloping, unfenced with heathers and poor grazing.

4 Weddel

ND 340 935

1.6 km

Rock platform with 30-60% cobble cover.

Coast edge is predominantly < 5m.

The drift/rock interface is visible.

Rather rounded cobbles. The edge is <5m apart from 100m stretch to the south. The rock/drift interface is more apparent to the south with an underlying solid geology of Rousay Flags with overlying boulder clay and peat, although the peat thins and changes to a more peaty podzol to the south end of the airstrip. The hinterland is gently sloping, unfenced, poor grazing with a service road to the north of the airstrip.

5 Wharth

ND 349 942

1.2 km

Rock platform devoid of cover.

Coast edge is > 5m.

The drift/rock interface is visible.

Rousay Flags underlies boulder clay, usually 10-30cm, although a depth of > 1m was observed at the beginning of the unit. The soil is a peaty podzol at Wharth which grades into peat, 30-50cm, within 200m. The slope is more accentuated perhaps up to 15°. Heathers give way to rough grasses east of Spence.

6 Scat Wick

ND 355 927

0.4 km

Rock platform with 60-90% cobble cover.

Coast edge is predominantly ≥ 5 m.

The drift/rock interface is generally visible. The edge falls to <5m, rises above for a few tens of metres and then falls below 5m again. Cobbles above HWM are defined as a storm beach to the east of the cove. The soil is a freely draining podzol to the west and a more imperfectly drained gley to the west. Grass is predominant with pastured fields.

7 Point of Leva

ND 359 925

0.5 km

Rock platform with negligible cobble cover.

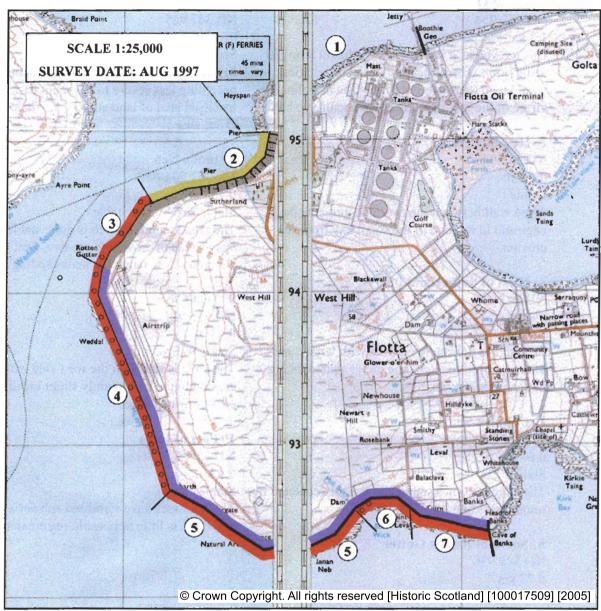
Coast edge is predominantly > 5m.

The drift/rock interface is visible.

Boulder clay, <30cm or non-existent lies beneath imperfectly drained gleys with freely drained podzols further east. Cultivatable fields are fenced with an unusual 2-5m uncultivated stretch between the fields and coast edge.

HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

FLOTTA MAP 1



FORESHORE



ROCK PLATFORM
MAINLY SAND
MAINLY ALLUVIAL/MARINE MUD
MARSH

HINTERLAND

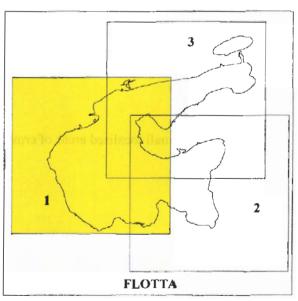


DRIFT DRIFT ON VISIBLE ROCK RAISED BEACH ETC BLOWN SAND GLACIAL SAND/GRAVEL ALLUVIUM

MODIFIERS



LOW EDGE <SM CLIFF >5M MAN MADE BARRIER SHINGLE/STORM BANK HUMAN DISTURBANCE



FLOTTA MAP 1 EROSION CLASS

1 Flotta Oil Terminal

ND 352 954

1.2 km

Unsurveyed as it is occupied by the oil terminal installation. The protection of the installation would tend to assure stability of the coastline by virtue of the fact that it is economically viable.

2 Heyspan Pier

ND 348 947

0.6 km

Stable

A sea wall between the two piers protects the edge and hinterland of the small bay from sea erosion.

3 West of Sutherland Pier

ND 343 946

0.4 km

Eroding

The edge is definitely eroding with large pieces of land, approximately one meter square, being undercut by the sea.

4 Cobbled Shore

ND 340 943

0.67 km

Stable

The edge becomes stable and is well vegetated by rough grass and heathers.

5 South of Rotten Gutter

ND 340 936

0.77 km

Eroding to Stable

A higher degree of erosion for the northern 400m of this coastal stretch with perhaps more areas of stability to the south.

6 South End of Landing Strip

ND 342 929

0.66 km

Stable

Only very small localised areas of erosion.

7 Whorth

ND 347 925

0.75 km

Stable/Eroding to Stable

Erosion of peat and soft drift sediments, becoming less severe to the south east. One localised area of land slip taking place by Overgate.

8 Innan Neb

ND 351 944

0.45 km

Stable/Eroding to Stable

The area around the Neb is quite stable with some areas of erosion to the east, peat slumping/flow being the main eroding agent.

9 Seat Cove

ND 355 927

0.4 km

Stable to Eroding

The cove is stable on the west side with some erosion to the east, mainly slight localised erosion from cattle.

10 Part of Lava

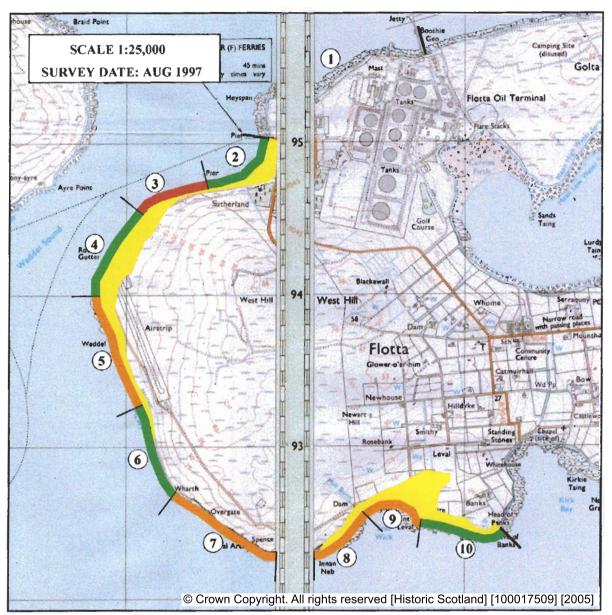
ND 359 925

0.5 km

Stable

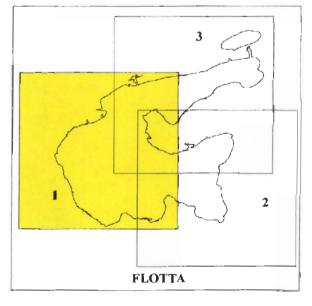
Thick grasses have stabilised sub aerial erosion and there is little noticeable sea erosion.

EROSION CLASS FLOTTA
MAP I





DEFINITELY ACCRETING ACCRETING OR STABLE STABLE ERODING OR STABLE DEFINITELY ERODING ACCRETING AND ERODING NO ACCESS LAND BELOW 10M



FLOTTA MAP 2: HEAD OF BANKS TO CURRIES FIRTH

Built Heritage and Archaeology

The area of this map section encompasses the area of modern settlement. Settlement is dispersed and mostly set back from the coastal zone. Houses and farmsteads are surrounded by regular fields of improved grassland.

Sixteen sites were recorded in this area. Of these, four had been previously noted and one site complex, WWII Buchanan Coastal Battery (B14,15), is scheduled. Thirteen sites were considered vulnerable to erosion; assessment via survey is recommended at one site (F7), where anthropogenic deposits of indeterminate nature and date are actively eroding from the coastal section. A concentration of coursed stone (F36) which is also exposed in the coastal section is less amenable to assessment via survey and therefore it is recommended that the site should be monitored for the appearance of further remains.

The presence of several abandoned crofts and a number of slipways, jetties and boat noosts and sheds within the coastal zone indicates that 19th C and earlier settlement was more focused on the sea than it is today. These sites are concentrated around Kirk Bay and Pan Hope and testify to the importance that fishing once played in the economy of this island. Pan Hope is said to take its name from the salt industry which flourished in the 17th C, although no evidence of this now survives.

Geomorphology

From Kirk Bay the coastal edge rises to cliffs greater than 20m high around Stanger Head. There is little cover over the rock platform along this section of coast. To the north of Stanger head the edge falls to less than 20m, with a steeply sloping hinterland. Within Pan Hope there is much shingle cover of the foreshore and there are very few observable outcrops of solid geology.

Erosion

There is little definite erosion along the cliff faces of the south and east of the island but erosion is much more apparent where the coast is less than 5m, for example in the cove at Kirk Bay and, more especially, in the elongated confines of Pan Hope.

FLOTTA MAP 2 BUILT HERITAGE & ARCHAEOLOGY

<u>F7</u> ND 3632 9276 Whitehouse

Anthropogenic deposits

Indeterminate

Fair Survey

F8

ND 3628 9284 Whitehouse Structure 18th/19th C Fair

Survey

F9

ND 3630 9290 Kirk Bay Noosts, boat house and

slipway 19th/20th C

Fair Nil

F10

ND 3711 9264 Noust of Greeniber Slipway and noosts 19th/20th C

Fair Nil

F11

ND 3711 9264 Noust of Greeniber

Well 19th/20th C Fair

Nil

F44 (ND 39 SE 37) ND 3745 9250 Stanger Head

Enclosure, military

20th C Good Nil

F12,13 (ND 39 SE 11)

ND 3740 9232 to 3780 9270

Stanger Head

WWI & II Stanger Battery:

Scheduled

1914-18, 1938-45

Poor Survey

F14, 15 (ND 39 SE 10)

ND 3750 9340 Sillock Geo

WWII Buchanan Battery:

Scheduled 1940-45 Good Nil

F43

ND 3790 9405 to 3775 9384

Lee Craig Military remains

20th C Fair Survey

F45 (ND 39 SE 38)

ND 3777 9438 Quoyness

Structures, military

20th C Fair Nil F40, 41, 42

ND 3772 9441 Quoyness - Pan Township 19th/20th C

Fair Nil

F39

ND 3685 9405

Lurdy

Boat shed and jetty

19th/20th C Fair

ran Nil

<u>F38</u>

ND 3640 9400

Avil

Noost, boat shed and hulk

19th/20th C Fair

Nil and survey

F37

ND 3611 9418 Burn of Busta

Jetty

19th/20th C

Fair Nil

F36

ND 3611 9418

Burn of Busta Structural deposits Indeterminate

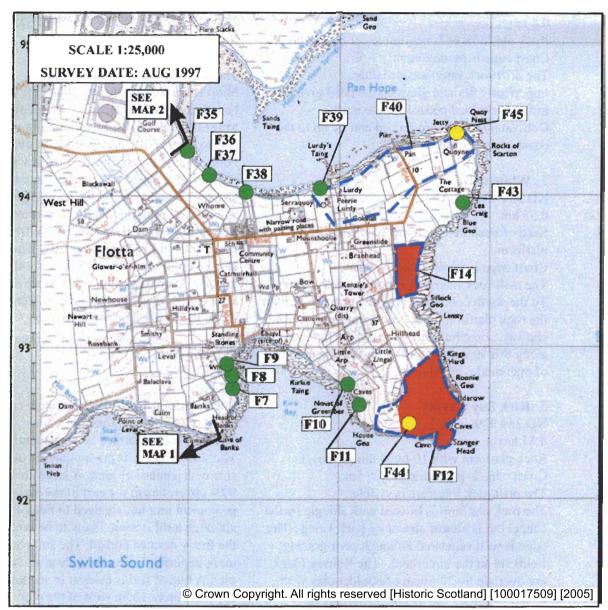
Poor Monitor

F35

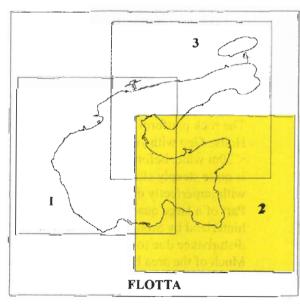
ND 3594 9432

Whome - Curries Firth

Noosts 19th/20th C Fair, Nil



- PROTECTED ANCIENT MONUMENT OR AREA OF DESIGNATED WRECK
- OMONUMENT FORMALLY PROPOSED BY HISTORIC SCOTLAND FOR SCHEDULING OR WRECK FOR DESIGNATION
- + LISTED HISTORIC BUILDING
- UNDESIGNATED WRECK
- KNOWN ANCIENT MONUMENT
- SITE FOUND BY THIS SURVEY
- SITE COMPLEX



FLOTTA MAP 2

HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

1 Head of Banks

ND 363 926

0.4 km

Rock platform with negligible cobble cover.

Coast edge is predominantly > 5m.

The drift/rock interface is visible.

Imperfectly drained gleys on the head give way to freely drained podzols to the north.

Cultivatable fields are fenced and lie up to the coast edge towards the north.

2 Whitehouse

ND 364 931

0.55 km

Sandy foreshore overlying 80- > 90% of the rock platform.

Coast edge is predominantly < 5m.

The drift/rock interface is not generally visible. To the south cobbles overlie the gritty sand with the rock platform more prominent to the north. A slipway, some buildings and old sea defences lie along this stretch of coast with varying amounts of man-made disturbance.

3 Kirk Bay Chapel

ND 369 929

0.55 km

Rock platform with 10-60% shingle cover.

Coast edge is predominantly > 5m.

The drift/rock interface is visible.

The rock platform is littered with shingle by the chapel but is almost absent by Kirk Taing. The edge is well vegetated although poor grazing fields lie on the hinterland. The Rousay Flags are overlain by 20-50cm of boulder clay with poorly drained organic gley above the till.

4 Noust of Greenniber

ND 375 924

1.2 km

Rock platform with negligible cover.

Coast edge is predominantly > 5m.

The drift/rock interface is visible. The rock platform falls off to deep water by House Geo with very little observable foreshore, < 20m wide, before the cliff face. The hinterland is quite steeply sloping, 20-30°, from House Geo with imperfectly drained thin podzols and peats. Part of a large quarry lies within 50m of the hinterland by Stonger Head, with much fresh disturbance due to dumped quarry overburden. Much of the area has also been disturbed by second world war fortifications.

5 Hullderow

ND 375 935

2.0 km

Rock platform with negligible cobble cover.

Coast edge is predominantly > 5m.

The drift/rock interface is visible.

Short steep rock platform below cliff edge becomes a much wider foreshore platform towards the north. Th hinterland is a steep slope, approximately 30°, becoming less severe to the north, and relatively flat after Sillock Geo. The geology changes to lower Eday Sandstones with sparse tills and imperfectly drained gley organic soils before replacement by an approximate 80m stretch of peats at Blue Geo before freely drained podzols from Lea Craig onwards. The steep slopes to the south are overgrown with tall grasses, A small portion of the steep sloped area is littered with scrap and old cars. Fenced fields lie on the flatter land to the north.

6 Quoy Ness

ND 372 942

1.2 km

Rock platform with 20-50% shingle cover.

Coast edge is predominantly < 5m.

The drift/rock interface is intermitently visible. The shingle cover is predominantly of cobble size with patches of sand. A large area of sand, > 90% cover, lies to the east of the main pier. The geological unit has changed to Eday Flags although a till is more likely to be seen beneath the freely drained podzol. The soil changes to a more imperfectly drained gley after the main pier. A buried soil is evident in section approximately 120m west of the pier. The fields are fenced, grassed and slope gently towards the coast.

7 Serraquoy

ND 362 941

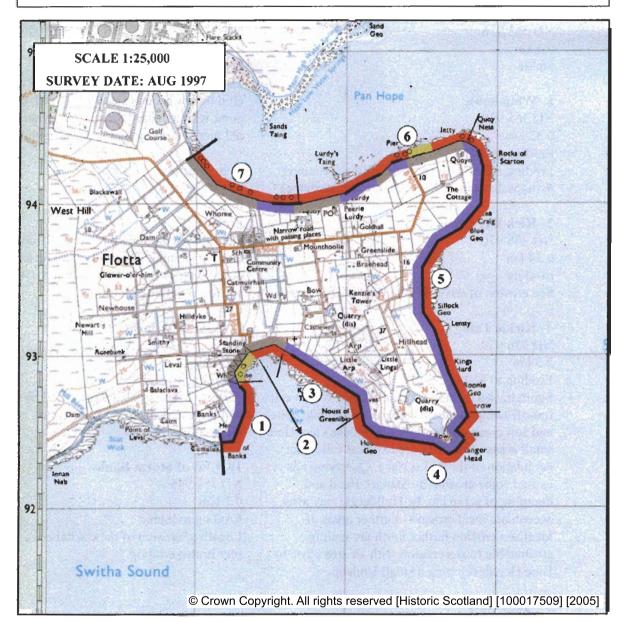
0.75 km

Rock platform with > 80% cobble cover.

Coast edge is predominantly < 5m.

The drift/rock is rarely visible.

This is a shallow bay area. A storm beach of cobbles lies north west of Whome. Very little solid geology is evident. The soils are imperfectly to poorly drained gleys with grassed fenced fields. At one point a 60cm depth of soil horizon was observed below Whorne.



FORESHORE



ROCK PLATFORM
MAINLY SAND
MAINLY ALLUVIAL/MARINE MUD
MARSH

HINTERLAND

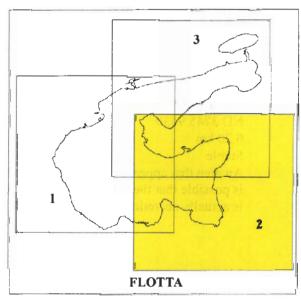


DRIFT DRIFT ON VISIBLE ROCK RAISED BEACH ETC BLOWN SAND GLACIAL SAND/GRAVEL ALLUVIUM

MODIFIERS



LOW EDGE <5M CLIFF >5M MAN MADE BARRIER SHINGLE/STORM BANK HUMAN DISTURBANCE



FLOTTA MAP 2 EROSION CLASS

1 Head of Banks

ND 363 926 0.4 km Stable

2 Whitehouse

ND 363 930

0.42 km

Eroding to Stable

Eroding areas lie towards the cliff edge and is perhaps accentuated by man-made disturbance.

3 Kirk Bay Chapel

ND 368 930

0.34 km

Eroding

Sea erosion of the cliff face west of the chapel.

4 Kirkie Taing

ND 376 930

3.3 km

Eroding to Stable

Sporadic sea erosion of the cliff face with water run-off being the main cause of slumping, slide and soil creep on the slopes by House Geo. Here small areas of till/rock are exposed following denudation of the soil surface. Quarrying has caused some erosion by Stanger Head and dumping of scrap etc, by Hullderaw may also accentuate local erosion. Further areas of localised erosion farther north are mainly attributable to sea erosion with an area close to Blue Geo developing a small landslip.

5 Quoy Ness

ND 378 944

0.45 km

Eroding

The area at the point and to the west is definitely eroding

6 East of Pier

ND 3745 9430

0.20 km

Stable

An area that appears to be completely stable. It is possible that the area of sand on the foreshore is actually accreting at this one point.

7 Pier

ND 371 941

0.72 km

Eroding to Stable

The first 100m west of the pier is definitely eroding but becomes eroding to stable past this point with localised erosion to Serraquoy. An old pier is eroding by Lundy's Taing.

8 Serraquoy

ND 364 940

0.52 km

Eroding

Definite sea erosion of the edge, becomes eroding to stable a further 200m on and then definite erosion a further 100m on. Overall the section is definitely eroding.

9 N.W. of Whorne

ND 3610 9415

0.18 km

Accreting to Stable

A storm beach has been colonised by vegetation and there appears to be an accretion of cobbles around this area.

10 N.W. of Storm Bank

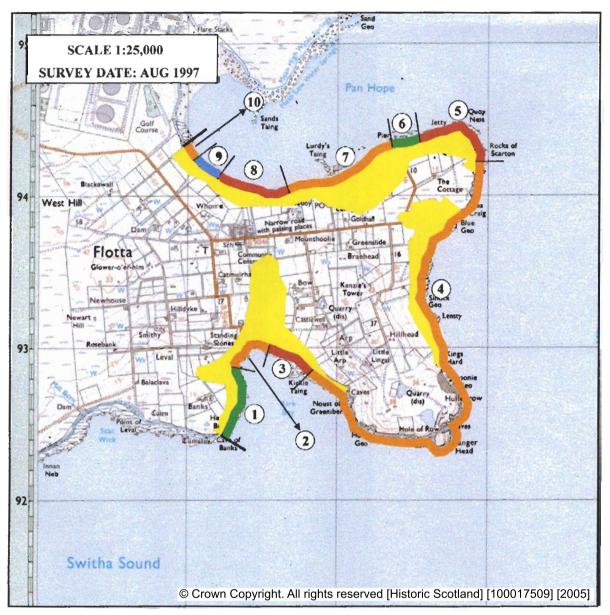
ND 359 945

0.1 Km

Eroding to Stable

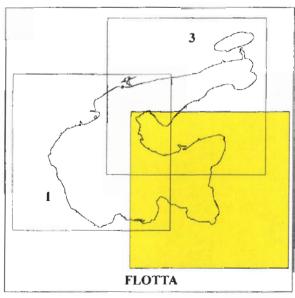
Localised erosion of the coastal edge. An old pier is also eroding.

EROSION CLASS FLOTTA
MAP 2





DEFINITELY ACCRETING ACCRETING OR STABLE STABLE ERODING OR STABLE DEFINITELY ERODING ACCRETING AND ERODING NO ACCESS LAND BELOW 10M



FLOTTA MAP 3: CURRIES FIRTH TO BOOTHIE GEO

Built Heritage and Archaeology

This map section covers the long peninsula which extends to the north side of Pan Hope and terminates to the east side of Flotta Oil Terminal. The peninsula is dominated by a high central ridge with moorland vegetation and rough grass on the coastal strip; it is uninhabited and largely unenclosed.

Seventeen sites/site complexes were recorded in this area; two had been previously recorded. All of the sites are vulnerable to erosion or contain elements which are. Other than one mound of indeterminate date and nature (F24), the sites recorded can be summarised as 19th C enclosures, boundaries and boat sheds/noosts and 20th C military sites. Flotta was the HQ of one of the three coastal regiments stationed in Orkney during WWII and there are numerous military remains in this area centred on the coastal battery at Roan Head (F27) and the camp at Golta (F16,17,18).

Geomorphology

Within the shallow cove by Flotta oil terminal there is much shingle cover of the rock platform; this grades out to rock platform to the extreme east of Pan Hope. Along this southern edge of Golta the coastal edge rises to over 5m and the underlying geology is evident. The north side of Golta has a coastal edge less than 5m with barely any shingle cover.

Erosion

Erosion is most apparent within the head of the bay and along the south coast of Golta which faces into Pan Hope. There is little definite erosion on the north facing shore even though the coastal edge is less than 5m.

FLOTTA MAP 3 BUILT HERITAGE & ARCHAEOLOGY

F34
ND 3595 9465
Curries Firth
Boat shed

F28
ND 3813 9562
Red Face
Earthwork, military

19th/20th C 20th C Fair Fair Nil Nil

 F33
 F27 (ND 39 NE 1)
 F21

 ND 3585 9484
 ND 3865 9580
 ND 3786 9620

 Curries Firth
 Roan Head
 Calf Sound

Noosts WWI Roan Head Battery

19th/20th C1915-18FairFairNilSurvey

<u>F32</u> <u>F26</u>

 ND 3652 9477
 ND 3865 9590
 F20

 Sands Taing
 Roan Head
 ND 3769 9610

 Datum marker military
 Dyke and enclosure
 Calf Sound

F22

ND 3835 9631

Lighthouse base

jetty, military

20th C

Survey

Fair

Structural foundations and

Calf Sound

20th C

Fair

Nil

Datum marker, military Dyke and enclosure Calf Sound
20th C 19th/20th C Telegraphy station, military

Good Fair 20th C
Nil Nil Fair
Nil

F31 F25

ND3723 9530 ND 3851 9604 <u>F19</u>

Sand Geo-Row Taing

Earthworks and datum

markers, military

20th C

Fair

Roan Head

ND 3756 9608

Calf Sound

Earthen bank

Indeterminate

Fair Nil Fair Survey Nil

 F30
 F24
 F16, 17, 18 (ND 39 NE 2-7)

 ND 3750 9559
 ND 3855 9610
 ND 3645 9581 to 3722 9595

Row Taing Roan Head Golta

Dyke Mound Structural remains, military

19th/20th CIndeterminate20th CFairFairFairNilMonitorSurvey

F29 F23

ND 3780 9565 ND 3855 9618

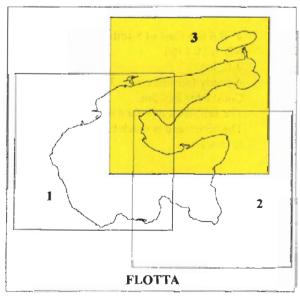
Villigar Roan Head - opp.Calf Flotta

Enclosure Earthworks, military

19th/20th C 20th C Poor Fair Nil Nil



- PROTECTED ANCIENT MONUMENT OR AREA OF DESIGNATED WRECK
- MONUMENT FORMALLY PROPOSED BY HISTORIC SCOTLAND FOR SCHEDULING OR WRECK FOR DESIGNATION
- + LISTED HISTORIC BUILDING
- UNDESIGNATED WRECK
- KNOWN ANCIENT MONUMENT
- SITE FOUND BY THIS SURVEY
- SITE COMPLEX



FLOTTA MAP 3

HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

1 Golf Course

ND 359 946

0.65 km

Rock platform with 50-60% cobble/shingle cover.

Coast edge is < 5m.

The drift/rock interface is not visible.

A very shallow bay area where the cobble strewn rock platform which becomes shingle strewn towards the oil installations. A number of grassed rill-like formations lie to the east of the section on the hinterland. Soils are imperfectly to freely drained podzols, a thin iron pan podzol lies to the north. Further north a peat overlies a very thin marine sediment. Close to a number of nousts.

2 Oil Installation (South)

ND 362 950

1.1 km

Rock platform with 30-50% shingle cover.

Coast edge is < 5m.

The drift/rock interface is not visible.

Sea defences lie at the head of the cove protecting a road and the oil installation. On the east side of the this cove there appears to have been some man-made disturbance such that 20th century rubbish underlies a deep soil/rubble overburden of approximately 50cm - 1m. The hinterland is vegetated with rough grazing. Soils are man-made, imperfectly to poorly drained.

3 Sands Taing

ND 367 947

0.4 km

Rock platform with 20-40% cobble cover.

Coast edge is < 5m.

The drift/rock interface is rarely visible.

The hinterland has deep peats > 50cm covering a deep till, up to 1m. The till to the east of this unit contains a possible glacio-fluvial horizon. The overlying soil is imperfectly drained podzol. The area is unfenced with much heather and poor grasses.

4 0.5 km East of Sands Taing

ND 3680 9494

0.12 km

A sandy foreshore with 30% cobble cover.

Coast edge is < 5m.

The drift/rock interface is not visible.

The hinterland is much the same as the preceding unit in character.

5 600m East of Sands Taing

ND 374 953

1.3 km

Rock platform with 30-40% cobble cover.

Coast edge is generally > 5m.

The drift/rock interface is visible.

The geology is of the Upper Eday Sandstones. A thin till is evident, < 30cm depth in most places. The soils are mainly imperfectly drained podzols with poorly drained peaty gleys to the east. The hinterland is unfenced with rough grazing.

6 Red Face

ND 384 956

0.9 km

Rock platform with <10-40% boulder and cobble cover.

Coast edge is predominantly > 5m.

The drift/rock interface is visible.

The last 200m of the rock platform to the east is devoid of stones. Upper Eday Sandstones lie beneath a thin till and an imperfectly drained peaty podzol.

7 Roan Head

ND 385 962

0.9 km

Rock platform with negligible and 60% shingle cover. Coast edge is predominantly < 5m.

The drift/rock interface is visible.

Two localised areas of foreshore cover are found in the bay at Roan Head and cobbles opposite Calf of Flotta. The soil is a poorly drained peaty podzol with rough grazing. Human disturbance is evident as war defences.

8 Opposite Calf of Flotta

ND 370 958

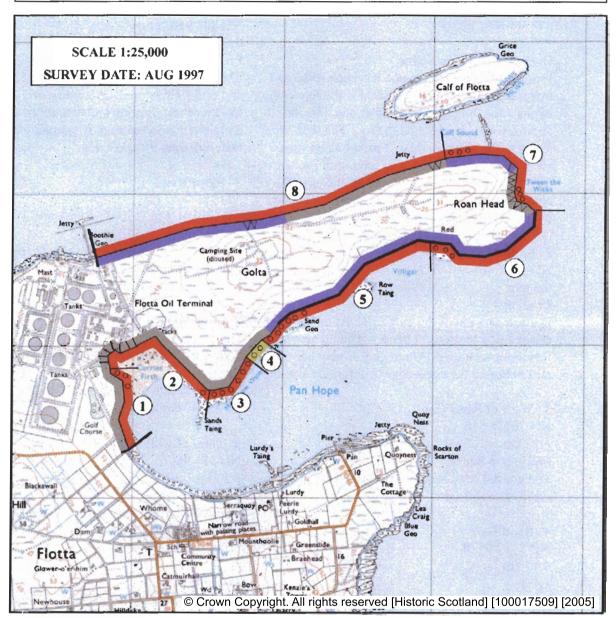
2.3 km

Rock platform with negligible cobble cover.

Coast edge is < 5m.

The drift/rock interface is rarely visible.

Upper Eday sandstone flags are only visible where erosion has taken place. Soils change from imperfectly drained peaty podzol to peaty gleys 1km west of the jetty. Also west of the jetty there are a number of ridges/drains running down-slope to the coast through heather and rough grazing. A trackway lies on the hinterland within the last kilometre of this section.



FORESHORE



ROCK PLATFORM MAINLY SAND MAINLY ALLUVIAL/MARINE MUD MARSH

HINTERLAND

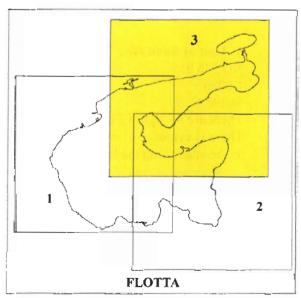


DRIFT DRIFT ON VISIBLE ROCK RAISED BEACH ETC BLOWN SAND GLACIAL SAND/GRAVEL ALLUVIUM

MODIFIERS



LOW EDGE <5M CLIFF >5M MAN MADE BARRIER SHINGLE/STORM BANK HUMAN DISTURBANCE



FLOTTA MAP 3 EROSION CLASS

1 Golf Course

ND 360 950

1.75 km

Overall, Eroding to Stable

Presumably, past rill erosion has been stabilised by grasses, the rills now lie outside the fence line by the edge. It is apparent that at one time the rill areas lay within a field boundary. The first 300m to the south is fairly stable. Further along there are small areas of definite erosion until the sca defences by the oil installation, stabilises to the coast. The coastal edge is then stable to eroding by the land fill area.

2 Sands Taing

ND 367 948

0.6 km

Eroding

Definite crosion of the cliff face. At the extreme eastern side of this unit there is a small area of foreshore with sand. Although this may be accumulating the coast edge is definitely eroding.

3 West of Sand Geo

ND 3695 9510

0.20 km

Eroding to Stable

The coastal edge becomes progressively more stable by Sand Geo.

4 Sand Geo

ND 3712 9520

0.17 km

Eroding

There is an abrupt change to an croding edge by Sand Geo which then becomes more stable at the end of this section.

5 East of Sand Geo

ND 376 955

1.0 km

Stable

There are no signs of crosion until Red Face. There is evidence of stabilised short rills running to the edge along the hinterland of this section.

6 Red Face

ND 384 956

0.6 km

Eroding to Stable

The cliff edge is eroding in small localised areas and is definitely eroding before a brief 100m stretch of stabilisation and then returns to localised erosion caused by slumping of drift material over the coast edge.

7 Roan Head

ND 385 961

1.2 km

Stable

Even though the geomorphology changes, from cliff edge to cobbled bay to edged coast, the whole area is free of erosion.

8 Opposite Calf of Flotta

ND 378 961

0.20 km

Eroding

A small stretch of coast, within a sable section, is definitely eroding.

9 West of Calf of Flotta

ND 374 960

0.55 km

Stable

The coast returns to a more stable character. Several drainage ditches here have no apparent effect on coastal stability.

10 Golta

ND 368 958

0.80 km

Eroding to Stable

Much of this erosion is terrestrial in that peat flow/soil creep tends to move the drift coast wards with consequent denudation of the drift in small areas.

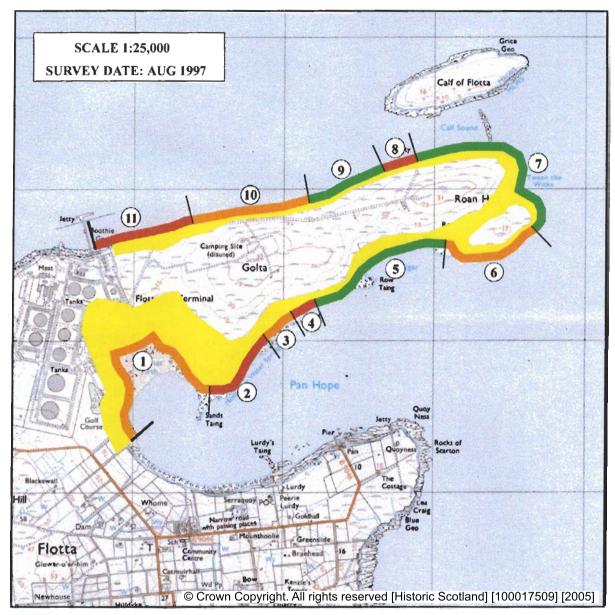
11 West of Golta

ND 361 956

0.60 km

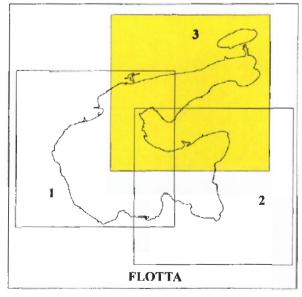
Eroding

Areas of coastal crosion are common along this section with perhaps a slightly more stable area towards Boothie Geo.





DEFINITELY ACCRETING ACCRETING OR STABLE STABLE ERODING OR STABLE DEFINITELY ERODING ACCRETING AND ERODING NO ACCESS LAND BELOW 10M



3.3 THE ISLAND OF GRAEMSAY (1 MAP)

Built Heritage and Archaeology

This map section covers the entire area of Graemsay. The island is sparsely inhabited, and what settlement there is, tends to be set back from the coast. The landscape is one of enclosed fields of improved grassland with rough grass and bracken immediately outside the field boundaries on the coastal strip.

A total of thirty-seven sites were recorded on Graemsay, of which eleven were previously noted. Six of the previously noted sites were not inspected as four lay in the marine zone (G17, G31, G37 and G39), and two could not be located (G35 and G34). Two sites are listed: Hoy Sound (High) lighthouse at Sandside (G2) is listed grade 'A', while Hoy Sound (Low) lighthouse (G12) at Fulzie Geo is listed grade 'B'. Thirty-three sites were considered vulnerable to coastal erosion, of which three are actively eroding (G3, G16 and G23). At Sandside (G3) a large quantity of anthropogenic deposits are eroding from the coastal section. They appear to relate to 18th/20th C structures which stand immediately behind the coast edge but it should be noted that a long-cist burial was previously exposed in this section and it is possible that further, early deposits may be present. It is recommended that this area should be closely monitored.

Geomorphology

The smallest island of the survey area has a maximum height of 62m with a coastline of 8.6km, and all but 300m is under 5m in height. The north part of the island is underlain by the Granite Schist Complex with the Lower Stromness Flags underlying the rest of the island. A complex of soils with podzols tend to dominate the north, with gleys more prevalent to the south. Fields are cultivable although most are down to grass. Fields tend not to be fenced up to the coastal edge. Shingle is a dominant feature of the foreshore on the island, particularly to the south where it appears to be related to storm beaches.

Erosion

Proportionally, Graemsay suffers the least from active erosion than any of the other islands in this survey: only c.9% was found to be actively eroding, while over 50% is quite stable. This is, in part, due to the tougher geology of the northern part, but it is likely that the main influencing factor is that the adjacent island of Hoy affords shelter from the more severe southerly storms.

GRAEMSAY

BUILT HERITAGE & ARCHAEOLOGY

HY 2709 0560 Graemsay Pier Locker, possibly military 20th C

Fair, Nil

G2 (HY 20 NE 75) HY 2680 0609 Sandside Hoy Sound (High) Lighthouse: Listed 'A' 1851 Good, Nil

G3

HY 2660 0595 Sandside Structures & anthropogenic deposits 18th/20th C Fair-poor, Monitor

G35 (HY 20 NE 28) HY 2656 0605 Sandside Long cist 11th C Not inspected

G4

HY 2622 0575 Sandside - Quoys Noosts 19th/20th C Fair, Nil

HY 2615 0576 Quoys Cliek mill (site of) 18th/20th C Poor, Nil

G₆

HY 2590 0590 Quoys House 19th/20th C Fair, Nil

G7 HY 2587 0599

Quoys Boat shed and noosts 19th/20th C Fair, Nil

<u>G8</u>

HY 2580 0615 The Lash Mound Indeterminate Fair, Nil

G9

HY 2519 0653 Cooper's Noust Jetty & noosts 20th C Fair, Nil

G10 HY 2502 0664 Fulzie Geo Pir

Indeterminate

Fair, Nil

G11

HY 2486 0664 Fulzic Geo Wall and noost 19th/20th C Fair, Nil

G12 (HY 20 NW 24) HY 2469 0663 Fulzie Geo Hoy Sound (Low) lighthouse: Listed 'B' 1851

Good, Nil

G13 (HY 20 NW 26) HY 246 065 Fulzie Geo WWII Graemsay Battery 1943-45 Good, Survey-monitor

G34 (HY 20 NW 14) HY 2462 0656 Point of Oxan Site of St. Colm's Chapel 10th-14th C Not located

HY 2451 0645 Point of Oxan Noosts and trackway 19th/20th C Fair, Nil

HY 2459 0624 Backagill Wall Indeterminate Fair, Nil

<u>G16</u> HY 2460 0615 Backagill Anthropogenic deposits Indeterminate Poor, Monitor

G17

HY 2445 0525 Burra Sound WWI & II Blockships 20th C Not inspected

G18

HY 2477 0534 Howabreck Locker, possibly military 20th C Fair, Nil

G19

HY 2482 0517 Brides Noust Enclosure and shed 19th/20th C Fair, Monitor

G32 (HY 20 NW 22) HY 2482 0517

Upper Corrigal/ Brides Noust Three mounds, alleged site of St. Bride's chapel and burial ground Indeterminate Fair, monitor

G20

HY 2486 0495 Hestor Mound 3rd/2nd mill BC Fair, Survey

G21

HY 2512 0480 Skeafea Boat shed and noosts 20th C Fair, Nil

<u>G22</u> HY 254 046 Skeafea Earthen bank boundaries Indeterminate

G23 HY 2549 0452 Kirk Gco Stone setting Indeterminate Poor, Nil

Fair, Survey

G24 (HY 20 SE 1) HY2566 0452 Dean, Kirk Geo Church 19th C Fair, Nil

G36 (HY 20 SE 1) HY2566 0452 Dean, Kirk Geo Settlement Indeterminate Poor, Monitor

G25

HY 2595 0436 Hellia Boat shed and noosts 19th/20th C Fair, Nil

G26

IIY 2629 0431 Hellia Drain and fences 19th/20th C Fair, Nil

<u>G27</u>

HY 2698 0477 Clett Boat sheds and jetty 19th/20th C Fair, Nil

G39 (HY 20 SE 8000) HY 272 049 Off Scarataing Wreck off Viola, trawler 20th C Not inspected

G28,29

HY 2712 0499 South Scarrataing House and enclosures 19th/20th C Fair, Nil

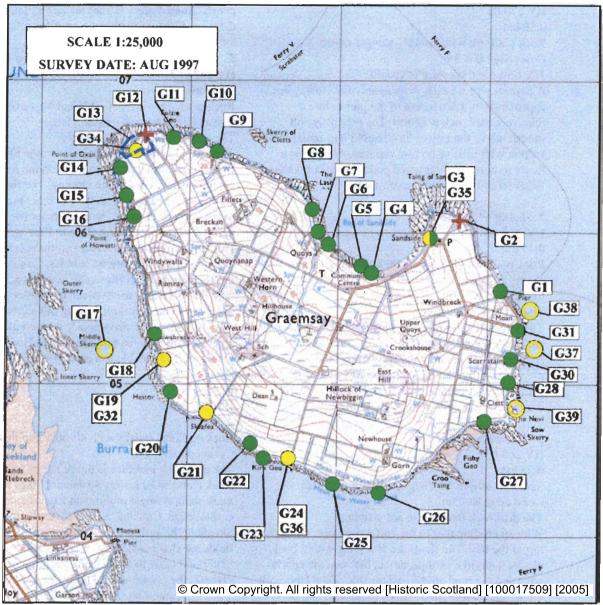
G30

HY 2716 0518 Scarrataing House and outbuilding 19th/20th C Fair, Nil

G37 (HY 20 NE 8865) HY 2795 0541 Clestron Sound WWI Anti-submarine barrier 1914 Not inspected

<u>G31</u> HY 2720 0535 Moan Boat sheds and jetty 19th/20th C Fair, Nil

G38 (HY 20 NE 8866) HY 2829 0558 Clestron Sound WWI Anti-submarine barrier 1914 Not inspected



- PROTECTED ANCIENT MONUMENT OR AREA OF DESIGNATED WRECK
- MONUMENT FORMALLY PROPOSED BY HISTORIC SCOTLAND FOR SCHEDULING OR WRECK FOR DESIGNATION
- T LISTED HISTORIC BUILDING
- UNDESIGNATED WRECK
- KNOWN ANCIENT MONUMENT
- SITE FOUND BY THIS SURVEY
- SITE COMPLEX



GRAEMSAY

HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

1 Moan Pier

HY 270 057

0.55 km

Rock platform with 20-40% shingle cover.

Coast edge is < 5m.

The drift/rock interface is visible.

A definite storm beach, with mainly flat stones, lies approximately 120m north of the pier before a relatively bare rock platform. The relatively soft sandstones of the Lower Stromness Flags underlie this section with little or no tills exposed. The soil is a freely to imperfectly drained podzol with cultivable fields fenced almost to the coast edge.

2 Taing of Sandside

HY 267 061

0.45 km

Rock platform with 20 to >90% sand and cobble cover

Coast edge is < 5m.

The drift/rock interface is visible.

The sand becomes more dominant towards the west and grades to a shelly sand, almost coral-like in appearance. Eventually the sand covers the rock platform. A lighthouse stands on part of the coast edge with a derelict croft at Sandside. The soils are freely draining brown soils with shelly sands.

3 Bay of Sandside

HY 265 058

0.35 km

Sandy foreshore with negligible stone content. Coast edge is $\leq 5m$.

The drift/rock interface is not visible.

With an eroding pier to the east a road runs along the top of the bay. The fields are low lying with a bank, almost dune-like in appearance, between the coastal edge and the road on the eastern side of the bay. Soils are freely drained shelly sands to the east and poorly drained peaty gleys to the east and low lying areas.

4 West of Bay of Sandside

HY 257 062

1.9 km

Rock platform with 10-30% cobble cover. Coast edge is ≤ 5 m.

The drift/rock interface is generally visible.

The rock platform is much more rugged than most other platforms seen in Orkney. This is due to the underlying geology of the Granite Schist Complex where there are no (or few) straight bedding planes. A storm beach lies opposite the Skerry of Cletts and many flat cobbles lie in two small coves at Fulzic Geo. The slopes of the hinterland are normally < 20° although steepen temporarily below Fillets. Between Skerry of Cletts and Fulzie Geo the land flattens out to give the impression of a relict raised beach, although this is in reality not probable. The soils are mainly

freely drained podzols on the slopes and become poorly drained gleys or rankers on the flatter areas to the west. Fields are cultivable and down to pasture..

5 Point of Oxan

HY 247 057

1.85 km

Rock platform with < 10-30% cobble cover.

Coast edge is predominantly < 5m.

The drift/rock interface is visible.

The geology changes back to the Lower Stromness Flags and the rock platform takes on the form most commonly associated with Orkney. The flags dip to the west. Storm beaches lie at the Point of Oxon and one to the north of Howesti Point. Another two well defined storm beaches lie close to Romray and north of Hester. Between the first three storm beaches there are very few areas of scattered cobbles. Cobbles do lie between the last two respective storm beaches. It is of note that the tidal race between Graemsay and Hoy appeared to be very strong along this stretch of coast. The soils are in the main poorly drained gleys with an area of freely drained podzols around Howesti Point. Fields are cultivatable and are down to grass.

6 Heston

HY 257 045

2.20 km

Rock platform usually with 40-60% cobble cover. Coast edge is < 5m.

The drift/rock interface is intermitantly visible. Rock platform of Lower Stromness Flags has a much more shallow angle of dip with a consequent lower coastal edge. Cobbles, > 60% cover, lie in the cove at Skeafea. The soils are poorly drained gleys and the fields are shallow sloping. A small section of hinterland close to Croo Taing becomes quite marshy. Overall, the poor drainage limits the land use to grazing. A small section by Kirk Geo exhibits a soil depth of over 50cm.

7 Croo Taing

HY 272 050

1.40 km

Rock platform with 40-80% cobble cover. Coast edge is < 5m.

The drift/rock interface is intermittantly visible. A small storm beach lies in Fishy Geo. On the hinterland between Croo Taing and Fishy Geo there is a low lying marshy area. The soils are poorly drained gleys west of The Nevi but become imperfectly to almost freely drained gleys north of The Nevi. The land is flat and consequently cultivatable fields are fenced right to the coast edge. Derelict farm croft buildings lie next to the eroding east coast.

HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY



FORESHORE



ROCK PLATFORM
MAINLY SAND
MAINLY ALLUVIAL/MARINE MUD
MARSH

HINTERLAND



DRIFT DRIFT ON VISIBLE ROCK RAISED BEACH ETC BLOWN SAND GLACIAL SAND/GRAVEL ALLUVIUM

MODIFIERS



LOW EDGE <5M CLIFF >5M MAN MADE BARRIER SHINGLE/STORM BANK HUMAN DISTURBANCE



GRAEMSAY EROSION CLASS

1 Moan

HY 271 055

0.34 km

Stable

A stable section on both sides of pier

2 North of Moan Pier

HY 269 060

0.7 km

Eroding to Stable

The soft sandstones are eroding and undercutting much of the cliff face. There are a few areas of stable cliff, south of the lighthouse.

3 East of Sandside Bay

HY 266 059

0.2 km

Eroding

Definite erosion by derelict buildings and erosion of pier.

4 Sandside Bay

HY 257 062

2.2 km

Stable

Stability in Sandside Bay is due to man-made sea defences running across over half of the bay beneath the road. The change in geology on the west side of the bay accounts for the persisting stability. Local erosion of limited areas occurs from Quoys to The Lash before returning to a stable coastal edge.

5 Point of Oxan

HY 246 063

0.55 km

Eroding to Stable

Sea erosion of edge is localised.

6 North of Howesti Point

HY 247 056

1.05 km

Stable

Area of relative stability with three storm beaches. Part of the storm beach just north of Heston is accreting.

7 Hestor

HY 250 059

0.76 km

Eroding to Stable

Just south of Hestor there is definite erosion followed by patchy erosion and stability.

8 West of Skeafea

HY 257 045

0.80 km

Stable

Vegetation is found right up to the cobbled foreshore.

9 East (400m) of Kirk Geo

HY 242 043

0.35 km

Eroding to Stable

Local erosion increases towards Gorn.

10 Gorn

HY 267 046

1.05 km

Stable to Eroding

Generally stable to eroding section of coastline although there is definite crosion of Croo Taing, approximately 100m, and on the east side of Sow Skerry, almost 40m.

11 The Nevi

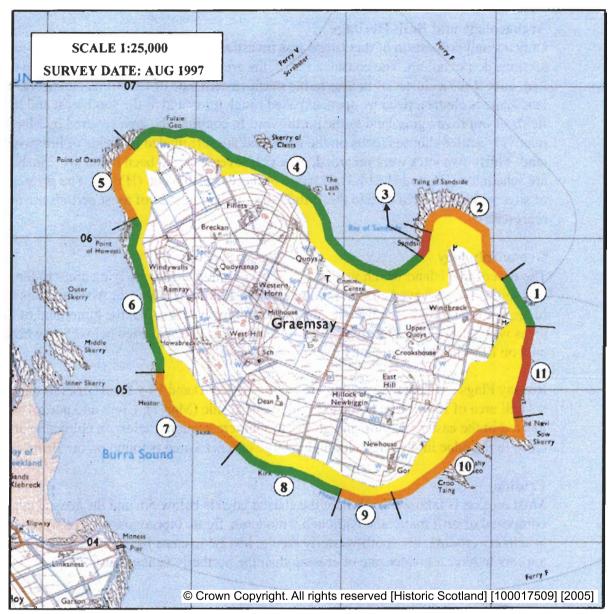
HY 272 051

0.60 km

Eroding (to Stable)

Although some areas are stable the overall process is one of crosion. Two small areas of relative stability are north of Clett, a small sea wall helps to protect a small stretch, ~50m, and north of Scarrataing where another short sea wall gives some protection and stability.

EROSION CLASS GRAEMSAY





DEFINITELY ACCRETING ACCRETING OR STABLE STABLE ERODING OR STABLE DEFINITELY ERODING ACCRETING AND ERODING NO ACCESS LAND BELOW 10M



3.4 THE ISLAND OF HOY (2 Maps)

Archaeology and Built Heritage

Only a small proportion of this island was investigated during this survey and the map sections do not adjoin. The coastal zone of the area covered by Map 1 was largely uninhabited, except for a cluster of houses to the north-eastern side of the Brims peninsula. The landscape is characterised by open, exposed rough grassland to the south-east and by enclosed fields of improved grassland to the north-west. In contrast, the area covered by Map 2 is relatively settled; houses focus on the roads and are surrounded by fields of improved grassland. Thirty-two sites were recorded, of which seventeen had been noted previously. Two sites are scheduled (HE and HY14,31,32); one of these is also listed (HY22). The greatest number of sites within this area date to the 19th/20th C, although sites of most periods are also represented.

Geomorphology

The part of this island which was surveyed was limited to the low lying areas to the south east and south. The surveyed coastal section came to 12.22 km in length. Although this is the most rugged of the Orkney Islands, with the highest point at 479m OD, the hinterland of the survey areas was below 20m. The area shown on Map 2 has a coastal edge below 5m, whereas the area on Map 1 is predominantly over 5m.

Rousay Flags dominate the geology to the east (Map 2) and Hoy Sandstones to the south with a small area of Hoy Lavas to the extreme western side (Map 1). Gleys and podzol soils are located in the eastern section and gleys the southern section. Fields are cultivable and fenced close to the edge in the main although a large unfenced area is found on the Brims peninsula.

Erosion

Most erosion is taking place where the coastal edge is below 5m and the coastal edge is composed of drift materials. Although a moderate figure (approximately 14%) of coastal edge is actively eroding, the south-westerly facing, low lying coast from Little Ayre to Crock Ness appears to have a greater rate of erosion than the northerly facing coasts.

HOY MAP 1: SOUTH WALLS AYRE TO MELBERRY DUNES

Built Heritage and Archaeology

This map section extends from the south side of the Ayre which joins Hoy to South Walls, around the Brims peninsula and up to the massive sand dunes at Melberry. The eastern coast of Brims peninsula is sparsely settled but there is no settlement within the coastal zone beyond this point. The tip and western sides of Brims peninsula are characterised by rough, unenclosed grassland and tussocky vegetation. From a point midway along the west coast of the peninsula to the end of this section, the hinterland is composed of large enclosed fields of improved pasture, belonging to the Melsetter Estate.

Sixteen sites were recorded in this area. Ten sites had been previously noted, but three of these could not be inspected: two are located in the marine zone (HY35 and HY36) while one is located on a rock in the sea. Twelve sites were considered vulnerable to erosion and of these, three are actively eroding (HY8, HY11 and HY12).

Five sites of probable prehistoric date and an early chapel were recorded in this area and their survival is undoubtedly due to the fact that the land appears never to have been intensively cultivated.

Geomorphology

As compared the area covered by Hoy map 2, this area is more rugged and more solid geology is exposed. The coastline is indented, with many small geos, and faces the open sea. Almost all of the coastal edge is greater than 5m. Towards Melberry the cliff edge drops to below 5m, where isolated sand dunes are located over Hoy Lavas.

Erosion

Localised erosion is dominant in small areas where geos cut into the coast. Interesting features of note are the storm beaches with well sorted cobbles and the dunes at Melberry. This area was surveyed in 1973 by Matthews et al (1974) and in the intervening years, a substantial area of the dunes appears to have been eroded, possibly as a result of deflation caused by south- westerly winds.

HOY MAP 1

BUILT HERITAGE & ARCHAEOLOGY

HY1 (ND 28 NE 1) ND 2876 8869 Hillock of Salwick Burnt Mound 2nd/1st mill BC

Fair Nil

HY2

ND 2918 8861 Brims, Dyke-end Haven Boat shed and noost

19th/20th C Fair Nil

HY3

ND 2939 8847 Brims, Judashill

Noost 19th/20th C

Fair Nil

HY5

ND 2898 8789 Geo of Rottenloch

Structure Indeterminate

Poor Nil

<u>HY4</u> (ND 28 NE 11) ND 2898 8788

Geo of Rottenloch

Structure 3rd/1st mill BC

Poor Survey-monitor

HY6

ND 2890 8780 Duncan's Geo

Enclosure and turf cuttings Indeterminate

Fair Nil HY7 (ND 28 NE 5) ND 2879 8781 Duncan's Geo

Cairn

3rd/2nd mill BC

Fair Survey

HY35 (ND 28 NE 8946)

ND 2867 8717 Off Brims Ness

Wreck of cargo ship Aase

20th C

Not inspected

HY36 (ND 28 NE 8753)

ND 286 877 Off Brims Ness Wreck of Neptunia

20th C

Not inspected

<u>HY8</u> (ND 28 NE 3) ND 2857 8796

The Skeo

Broch and assoc settlement 1st mill BC/1st mill AD

Fair Monitor

HY9 (ND 28 NE 10)

ND 2846 8820

Skeo

Burnt Mound 2nd/1st mill BC

Fair Survey

HY27 (ND 28 NE 12)

ND 2837 8810 Grassy Clett Shell midden Indeterminate Not inspected HY10 (ND 28 NE 2)

ND 2840 8821 Chapel of Brims

Chapel 10th/14th C Fair Monitor

HY11 (ND 28 NE 6)

ND 2840 8828 Skippi Geo, Brims

Boat shed 19th/20th C Fair

rair Nil

HY12

ND 2643 8868

Melberry

Anthropogenic deposits

Indeterminate

Poor Monitor

HY13

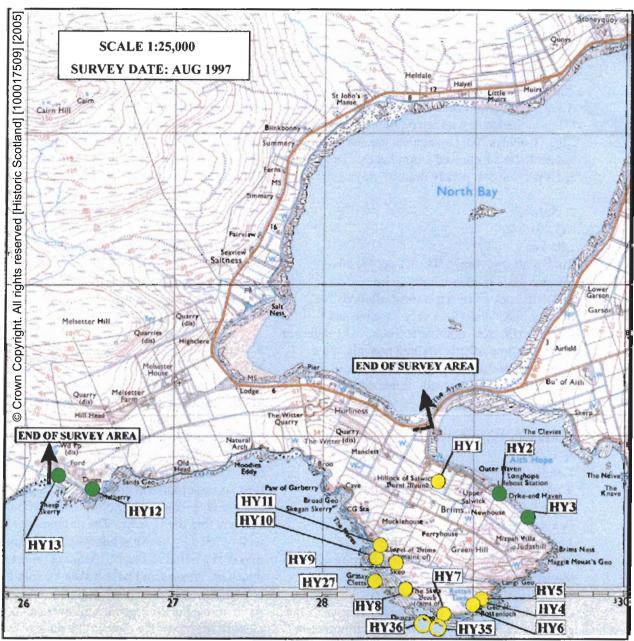
ND 2625 8875

Melberry

Flotsam, possibly military

19th/20th C Fair

Nil



- PROTECTED ANCIENT MONUMENT OR AREA OF DESIGNATED WRECK
- OMONUMENT FORMALLY PROPOSED BY HISTORIC SCOTLAND FOR SCHEDULING OR WRECK FOR DESIGNATION
- + LISTED HISTORIC BUILDING
- UNDESIGNATED WRECK
- MNOWN ANCIENT MONUMENT
- SITE FOUND BY THIS SURVEY
- SITE COMPLEX



HOY MAP 1

HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

1 The Ayre

ND 287 889

0.30 km

A sandy foreshore with 30-40% cobble cover. Coast edge is < 5m.

The drift/rock interface is not visible A sea defence wall runs from the causeway and 150m to the south with a road behind the coastal edge. Cobbles lying up against the sea wall appear to be a truncated storm beach. The fields are low lying and poorly drained gleys.

2 Salwick

ND 291 886

1.05 km

Rock platform with < 10-30% cobble cover. Coast edge is predominantly > 5m. The drift/rock interface is most often visible Rousay Flags underlie a very variable and sporadic till, from nothing to 30cm. The soils are a freely to imperfectly drained podzols and a poorly drained saline gley by Brims Ness. The land is gently sloping with unfenced grazing predominant.

3 Maggie Mouat's Geo

ND 290 879

1.40 km

Rock platform generally with < 20% cobble cover.

Coast edge is predominantly > 5m. The drift/rock interface is visible

A steeply shelving rock platform becomes less so towards the west and a storm beach, which includes cobbles and large boulders, lies within Geo of Rottenlock. A newly cut ditch reveals the cove has vegetation over a derelict storm beach. At least five separated storm beaches, large cobbles to small rounded boulders, lie between Duncans Geo and Grassy Cletts. The coastal edge lies below 5m by Geo of Rottenlock and from west of The Skeo. The hinterland is unfenced with grass. The terrain is slightly undulating with some steep slopes, > 25°, by Largi Geo and Grassy Cletts. Rousay Flags are overlain by intermitent tills, with imperfectly drained saline gley soils.

4 Grass Cletts

ND 277 889

2.40 km

Rock platform with negligible cover. Coast edge is predominantly > 5m.

The drift/rock interface is visible

The rock platform becomes very narrow and steeply shelving by Old Head before widening out again westwards. The coastal edge is cut by geos and a cobbled cove lies below Broo. Although barely noticeable, the geology changes slightly to the Hoy Sandstone. Tills are almost absent and the soils are freely draining podzols to Moodies Eddy with a peat lying over Old Head. A ditch runs almost continuously and parallel to the cliff edge from Paw of Garberry westwards

for over 300m. The land is sloping, 10-20°, grassed and fenced almost to the edge. Most

5 Sands Geo

fields are cultivatable.

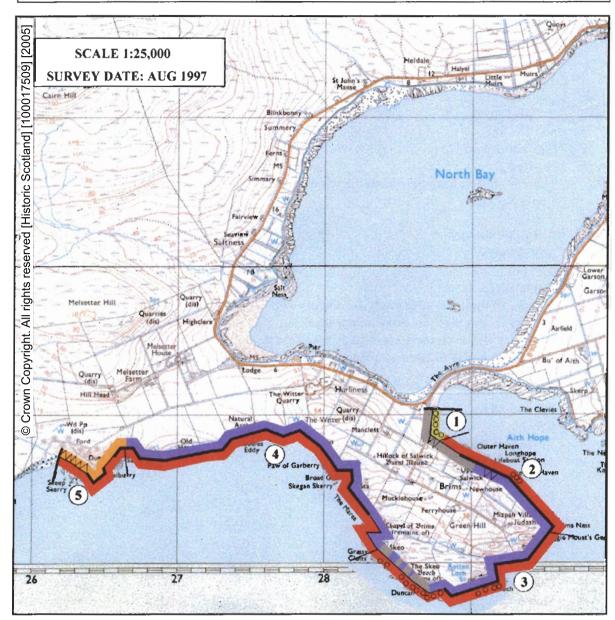
ND 265 887

0.55 km

Rock platform with negligible cover.

Coast edge is < 5m.

The drift/rock interface is visible A dramatic change is geology is seen at Sands Geo. This section is underlain by an almost flowing rock platform composed of Hoy Lavas and which extends in a shelf like formation up to 100m before the L.W.M. The coastal edge is well defined by blown sands which is mounted into dunes >10m in height. Although most of the dunes are grassed and have a skeletal soil, there is a large area at the top which is quite organic. At least one buried organic soil layer can be seen close to the top of the dunes. The dunes extend back into the hinterland. A large cobble/boulder strewn storm beach to the west delineates the end of the section.



FORESHORE



ROCK PLATFORM
MAINLY SAND
MAINLY ALLUVIAL/MARINE MUD
MARSH

HINTERLAND



DRIFT DRIFT ON VISIBLE ROCK RAISED BEACH ETC BLOWN SAND GLACIAL SAND/GRAVEL ALLUVIUM

MODIFIERS



LOW EDGE <5M CLIFF >5M MAN MADE BARRIER SHINGLE/STORM BANK HUMAN DISTURBANCE



HOY MAP 1 EROSION CLASS

1 The ayre

ND 2865 8895

0.20 km

Stable

The sea walls provide stability to this section.

2 Salwick

ND 287 888

0.25 km

Eroding

There is erosion from the end of the sea wall to Upper Salwick.

3 Upper Salwick

ND 293 885

0.80 km

Stable

The rise of the coast edge tends to coincide with stability on this section. Some minor localised erosion is visible on the hinterland by the lifeboat station due to man-made disturbance.

4 Brims Ness

ND 293 881

0.55 km

Eroding to Stable

There is definite erosion on the point before a small stable section then erosion from Maggie Mouat's Geo. The coast becomes slightly more stable towards Geo of Rottenloch.

5 Geo of Rotherlock

ND 287 879

0.90 km

Stable

This area is relatively low lying and gently undulating and many south westerly facing storm beaches. A relatively stable section with very localised erosion by the broch, compounded by rabbit warren erosion. There is possibly some accretion of rounded boulders/cobbles in the first storm beach past the broch.

6 Grassy Cletts

ND 283 884

0.92 km

Eroding to Stable

Where the deep geo's cut the coastal edge there is some terrestrial erosion caused by landslip or soil creep on the steep sides of the geos.

7 Brood Geo

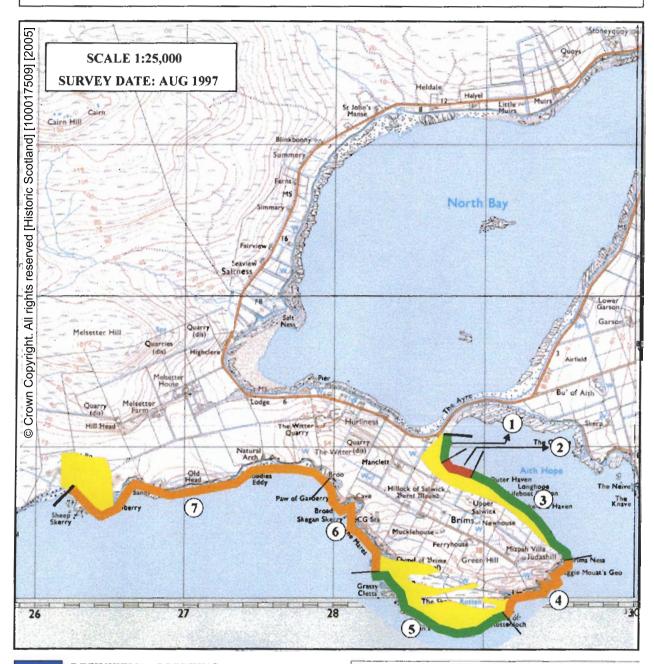
ND 273 888

2.05 km

Eroding to Stable

Local area of erosion dominates this section and most of this erosion is on the sand dunes. Two of the larger erosional areas are on the east side of Sands Geo and on the west facing bay of the Dunes where sand extraction is aggravating the erosion. A huge deflation trough, approximately 20m wide, has cut through the dune system. Most dunes are stable due to vegetation cover although erosion is taking place in localised areas. Along the Old Head there is evidence that the fence line has been moved back 1m from the edge.

EROSION CLASS
HOY
MAP 1





DEFINITELY ACCRETING ACCRETING OR STABLE STABLE ERODING OR STABLE DEFINITELY ERODING ACCRETING AND ERODING NO ACCESS LAND BELOW 10M



HOY MAP 2: LYNESS PIER TO NORTH NESS

Built Heritage and Archaeology

The area covered by this map section extends from Lyness pier, which is the main ferry terminal for the island, around North Walls and finishes at the promontory of North Ness. It does not connect with the area covered on Hoy map 1. The area is relatively evenly settled with the main focus for modern settlement being the B9047 road which runs, for the most part, away from the coast edge. This is in contrast to the 19th C pattern of settlement, which was focused on the coast. The north end of this area comprises large unenclosed areas of rough grass, frequently occupied by the footings of buildings associated with the WWI and II naval base at Lyness. The central and southern end of the area is characterised by regular enclosed fields of improved grassland.

Sixteen sites were recorded in this area, all but one of which date to 19th/20th C (the odd one out being of indeterminate date). Of these, seven sites were noted previously. Three sites could not be inspected: two because they are located in the marine zone (HY33 and HY34) and one because it could not be located (B28- a threshing machine). One site (HY22, Crock Ness martello tower) and a site complex (Lyness naval base) are scheduled. Twelve sites were considered vulnerable to erosion; one site (HY23- boat sheds) is being actively eroded by the sea.

Geomorphology

This part of the Hoy coastline faces into Scapa Flow. It has a coastal edge entirely below 5m and a low-lying hinterland with gently undulating topography. There is little observable solid geology in coastal sections and the rock platform is moderately covered.

Erosion

The large areas of sea defences bear witness to the vulnerability of this stretch of coastline. Erosion is prevalent along the south-west facing coastal edge.

HOY MAP 2 BUILT HERITAGE & ARCHAEOLOGY

HY14,31,32 (ND 39 SW 17, 20) ND 313 947 to ND 307 939

Lyness

WWI & II, military remains:

Scheduled 20th C Good-Fair Nil **HY18** ND 3144 9384

Rinnigill House and outbuilding

19th/20th C Fair Nil HY22 (ND 39 SW 10)

ND 3244 9344 Crock Ness

Crockness martello tower: Scheduled, Listed 'B'

1815 Good Nil

HY33 (ND 39 SW 8746,

8783, 8784) ND 3139 9448 Off Lyness Unassigned craft Indeterminate Not inspected **HY19**

ND 316 937 to ND 318 937

Rinnigill

Structures, military

20th C Fair Survey **HY23**

ND 3238 9310 Crock Ness Boat sheds 19th/20th C

Fair Nil

HY15

ND 3109 9385 Orraquoy Noost 19th/20th C Fair Nil HY26, 30 (ND 39 SW 16)

ND 3180 9380 Rinnigill Hulk 20th C Good Monitor HY24, 29 (ND 39 SW 15)

ND 3220 9301

Crock Ness - Wellbraes

House 19th/20th C Fair Nil

HY16

ND 3123 9384 Rinnigill Mound Indeterminate Poor Survey

ND 3128 9390

HY20

ND 3203 9370 Towerhouse Structures 19th/20th C Fair Nil HY25

ND 3206 9292 Wellbraes Structures 19th/20th C Fair Nil

HY17

Rinnigill WWII anti-submarine netting 20th C

Fair Nil **HY21**

Nil

ND 3216 9367 Towerhouse Boat shed and military telegraphy station 20th C Fair HY28 (ND 39 SW 13)

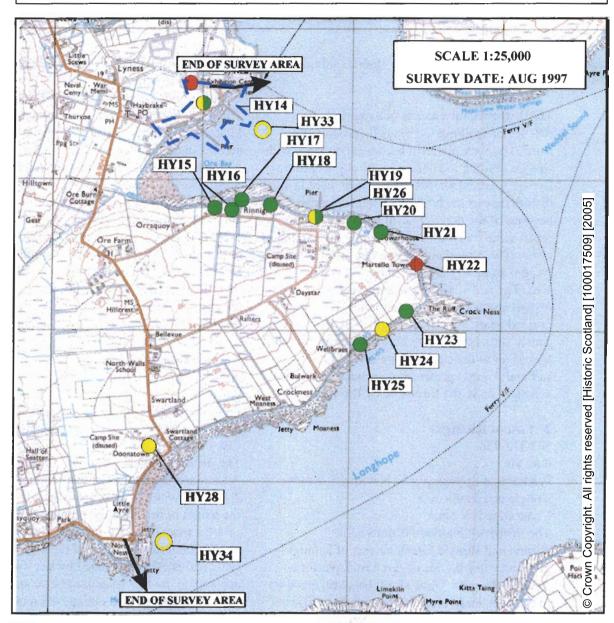
ND 306 921 Doonatown Threshing machine 19th/20th C Not Inspeted

HY34 (ND 39 SW 8776)

ND 3077 9139 Off Longhope

Dolphin (mooring buoy)

20th C Not inspected



- PROTECTED ANCIENT MONUMENT OR AREA OF DESIGNATED WRECK
- MONUMENT FORMALLY PROPOSED BY HISTORIC SCOTLAND FOR SCHEDULING OR WRECK FOR DESIGNATION
- + LISTED HISTORIC BUILDING
- UNDESIGNATED WRECK
- **KNOWN ANCIENT MONUMENT**
- SITE FOUND BY THIS SURVEY
- SITE COMPLEX



HOY MAP 2

HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

1 Lyness Pier

ND 296 938

2.25 km

Rock platform usually with 40-60% shingle cover.

Coast edge is < 5m.

The drift/rock interface is not visible Patches of sand/marine muds lie around Ore Burn. The rock platform becomes dominant with shingle grading to cobbles by Rinnigill. From Lyness Pier and almost to Ore Burn there is much disturbance of the hinterland and foreshore because of the derelict naval installation with much scrap and rubble lying along this stretch of coast. The hinterland around Ore Burn is low lying with poorly drained gleys but is not a marsh area. The soil is a shallow imperfectly drained podzol around Orraquoy becoming a poorly drained peaty gley by Rinnigill. The fields are gently sloping to flat with rough grazing which is fenced up to the coastal edge east of Ore Burn. A salt marsh grass grows on un-eroded patches of soil right up to the foreshore by Rinnigill.

2 East of Rinnigill

ND 312 936

0.85 km

Predominantly rock platform with 40- > 80% shingle and sand cover.

Coast edge is < 5m.

The drift/rock interface is not visible A sand and shingle foreshore east of Rinnigill gives way to a cobble covered rock platform towards the pier. Three storm beaches, made up of cobbles, lie in close succession from Tower house to the Martello Tower. Derelict naval installations lie by and to the east of the pier. Good, cultivatable, relatively flat fields are fenced to the edge. The soil is a freely draining podzol.

3 South of the Martello Tower

ND 315 933

0.30 km

Sandy foreshore with < 10-30% shingle cover. Coast edge is < 5m.

The drift/rock interface is not visible
The sandy foreshore runs into a shingle ayre at
Crock Ness. The soil, imperfectly drained
podzol, probably limits crops to grass.

4 The Ruff

ND 309 928

1.95 km

Rock platform with 40-70% shingle cover.

Coast edge is < 5m.

The drift/rock interface is not visible
The cover becomes more gravelly west of
Moaness. There is disturbance around some
derelict and inhabited crofts and a large stretch of
rubble makes up a 400m long sea defence by
Wellbrakes. The edge is predominantly a sharply
defined 2-3m eroding cliff face with little
evidence of the solid geology. A till of perhaps
1-2m underlies a deep, > 30cm, podzol for most
of the coast. An iron pan up to 3cm thick lies
from 50cm to >1m beneath the podzol east of
Swartland Cottage. Poorly drained peaty gleys
are evident around West Moaness. The land is
good, cultivatable and slightly sloping.

5 Doonatown

ND 296 919

0.60 km

Predominantly sandy foreshore with 20-50% shingle cover.

Coast edge is < 5m.

The drift/rock interface is not visible A sand and shingle foreshore dominates this bay. A seawall with the accompanying road also runs the length of this unit and represents a small raised barrier of perhaps 1-2m height in front of a marshy hinterland. Much of the hinterland is low lying and is often inundated by sea water with accompanying marine sediments, consequently the soil is classed as a salting, ie supports salt resistant vegetation.

6 North Ness

ND 293 916

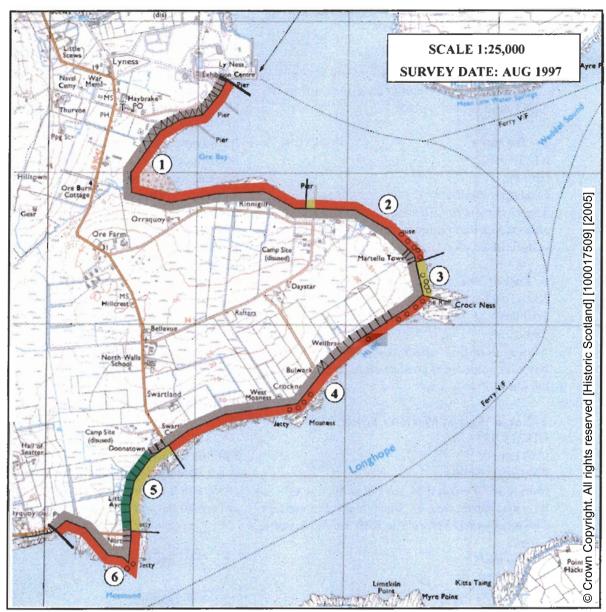
0.60 km

Rock platform with 20-30% shingle cover.

Coast edge is < 5 m.

The drift/rock interface is not visible

The sea wall from the previous section continues for approximately 80m towards an old jetty. A small group of houses lie on the ness.



FORESHORE



ROCK PLATFORM MAINLY SAND MAINLY ALLUVIAL/MARINE MUD MARSH

HINTERLAND



DRIFT DRIFT ON VISIBLE ROCK RAISED BEACH ETC BLOWN SAND GLACIAL SAND/GRAVEL ALLUVIUM

MODIFIERS



LOW EDGE <5M CLIFF >5M MAN MADE BARRIER SHINGLE/STORM BANK HUMAN DISTURBANCE



HOY MAP 2 EROSION CLASS

1 Lyness Pier

ND 298 943

1.05 km

Stable

The pier and derelict installations are stable although erosion of derelict concrete outflow pipe stacks is taking place.

2 Ore Burn

ND 299 938

0.90 km

Eroding to Stable

The eroding areas are small and localised although east of Oraquoy and by Rinnigill there is definite erosion.

3 East of Rinnigill

ND 310 937

1.10 km

Stable

Almost all of this section is stable. There is however some local erosion close to the pier of the old military camp.

4 North West of Martello Tower

ND 315 933

0.38 km

Eroding to Stable

Mainly local erosion by sea but some due to terrestrial processes, ie. Sheep and water erosion. The sandy areas before The Ruff are fairly stable.

5 The Ruff

ND 3138 9310

0.16 km

Erosion

Definite erosion of the cliff edge close to a derelict croft.

6 West of The Ruff

ND 311 929

0.46 km

Stable

Dumped concrete rubble has stabilised this length of coast. Although there is some localised erosion where the rubble ends by Bulwork the coast is relatively stable towards Moaness.

7 Moaness

ND 304 925

1.30 km

Eroding

The edge face is being cut back in a number of places.

NB. As a corollary, this area of coast was visited in November during a harsh south easterly gale. It was noted that large chunks of soil and till had been eroded from the edge leaving the turf to fall into the sea. Almost 1m was seen to have been eroded from one localised area east of Swartland Cottage.

8 Doonatown

ND 296 919

0.68 km

Stable

Mainly stable although there appears to be some accretion of sands at the centre of the sandy foreshore and probably a small accumulation of trapped marine sediments behind the road.

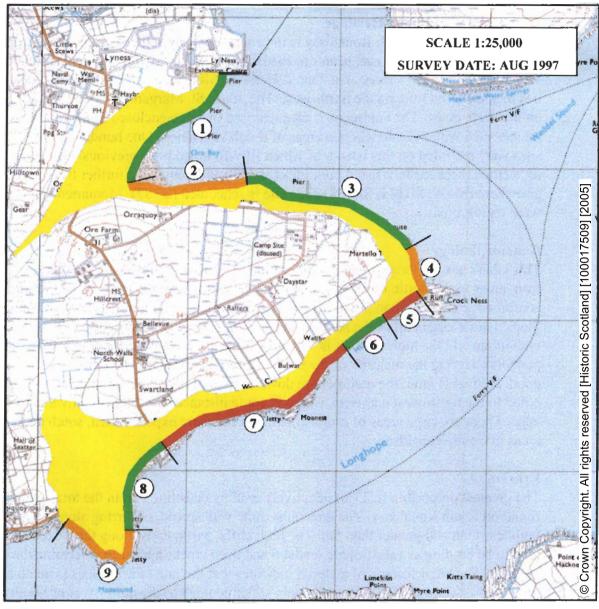
9 North Ness

ND 293 916

0.52 km

Eroding to Stable

A sea defence wall by the jetty is starting to erode and there are other areas of localised erosion to the west.





DEFINITELY ACCRETING ACCRETING OR STABLE STABLE ERODING OR STABLE DEFINITELY ERODING ACCRETING AND ERODING NO ACCESS LAND BELOW 10M



3.5 THE ISLAND OF SOUTH RONALDSAY (9 Maps)

Archaeology and Built Heritage

The coastal zone of South Ronaldsay is in general sparsely settled. Modern settlement is situated away from the coast, nearer to roads. There are, however, two concentrations of settlement within the survey area. One is Herston (SR121), a small village or hamlet which lies in a sheltered inlet on the north-west. The other, St. Margaret's Hope (SR120) is situated on the north coast. The landscape is characterised by large enclosed fields of improved grass, interspersed with occasional open areas of rough vegetation. One hundred and thirty-three sites were recorded on this island, of which fifty-four had been previously noted. In St. Margaret's Hope there are four listed buildings (SR120) and there are a further three listed sites elsewhere (SR49, SR144, SR138). One site is scheduled (SR87). Monuments of all periods were represented.

Geomorphology

This island has the longest length of coastline (31.7 Km) of the islands in this survey. Apart from areas to the north, north-west and extreme south-west, the majority of the island's coastal edge is lower than 5m in height. The main geological unit is Eday Sandstone and Flags, with a large part of the south composed of Rousay Flags. The topography is gently undulating and the highest point is 94m OD. Soils are predominantly gleys, with some podzols covering the majority of the north-western peninsulas. The fields tend to comprise good, cultivable land; the majority are down to grass. Large areas of arable cultivation were noted to the north-west and west, where in some instances the land is cultivated to the coastal edge. There are large areas of rough grazing on the more exposed west, south and eastern areas of South Ronaldsay.

Erosion

The greatest proportion (c.23%) of actively eroding coastline within the total survey area is found on South Ronaldsay. The erosion is quite widespread, occurring along coastal edges of both less than and greater than 5m. The high cliffs, particularly along the eastern-facing coast, tend to be eroding as catastrophic landslip and deep cracks appear to determine the next landslip. The huge volume of material indicates that the rate of aerial loss is much slower than on the lower coastal edges. The relatively softer geology to the north-west of South Ronaldsay is more easily eroded. Accretion is minor, accounting for approximately 2% of the north and eastern coastlines.

SOUTH RONALDSAY MAP 1: ASHBY TO GILL

Built Heritage and Archaeology

This map section extends along the north-west coast of South Ronaldsay and encompasses the village of St. Margaret's Hope. This area is characterised by a regular pattern of enclosed fields of improved grassland. The A961 road runs parallel and close to the coast as far as St. Margaret's Hope and settlement is mainly located to the landward side of the road. To the west of St. Margaret's Hope a road runs along the coast, leading to a modern pier. Between this point and the township of Lowertown, coastal settlement is sparse and the area is characterised by large, enclosed hilly fields of improved pasture.

A total of seven sites were recorded in this area, of which three were previously noted. One site was not inspected since it lies in the marine zone (SR157). There are four listed buildings (grades B and C) in St. Margaret's Hope, all of which date to the later 18th C. Three sites were considered vulnerable to erosion.

Geomorphology

This portion of coastline faces into Scapa Flow. The coastal edge is predominantly below 5m to the east of St. Margaret's Hope and solid geology is exposed to the side of a new cutting (for a track). To the west of the village, the coast edge rises to over 5m and there are a few outcrops of solid geology along this stretch.

Erosion

Erosion is localised to the east side of St. Margaret's Hope. To the west side of the village the erosion of the cliff edge appears to be linked with the construction of a track and is due to subaerial rather than marine erosion. The area within the village of St Margaret's Hope is protected by sea walls.

SOUTH RONALDSAY MAP 1 BUILT HERITAGE & ARCHAEOLOGY

SR119

ND 4505 9385

St. Margaret's Hope

Hulk 'The Crop'

20th C

Poor

Nil

SR120 (ND 49 SW 22, 23, 24)

ND 446 935

St. Margaret's Hope

Village

16th C onwards

Good

Nil

SR147 (ND 49 SW 10)

ND 4452 9387

Smiddybanks

Site of mansion

17th C

Fair

Nil

SR1

ND 4448 9430

St. Margaret's Hope

Concrete lockers, possibly military

20th C

Fair

Nil

SR2

ND 4447 9448

Needle Point

Earthen and stone boundary bank

19th/20th C

Fair

Nil

SR157 (ND 49 SW 8893)

ND 4420 9434

Off Needle Point

Wreck, Submarine U53

20th C

Not inspected

SR3

ND 4440 9460

The Golt

Earthen boundary bank

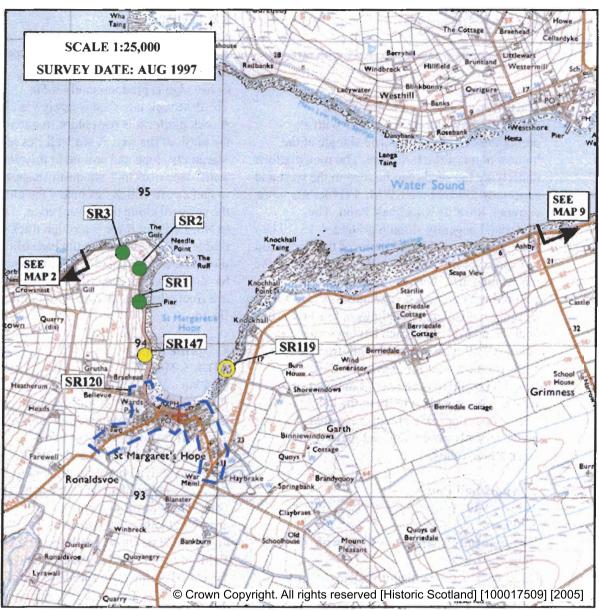
19th/20th C

Poor

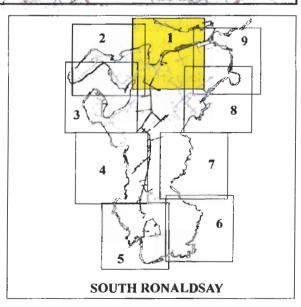
Nil

BUILT HERITAGE & ARCHAEOLOGY

SOUTH RONALDSAY MAP 1



- PROTECTED ANCIENT MONUMENT OR AREA OF DESIGNATED WRECK
- MONUMENT FORMALLY PROPOSED BY HISTORIC SCOTLAND FOR SCHEDULING OR WRECK FOR DESIGNATION
- + LISTED HISTORIC BUILDINGS
- UNDESIGNATED WRECK
- KNOWN ANCIENT MONUMENT
- SITE FOUND BY THIS SURVEY
- SITE COMPLEX



SOUTH RONALDSAY MAP 1 HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

1 Ashby

ND 463 944

1.80 km

Predominantly a sandy foreshore with 60 to > 90% shingle cover.

Coast edge is < 5m.

The drift/rock interface is not visible A very shallow sloping foreshore with a predominance of cobble sized shingle at the highest point of the foreshore. The rock platform underlying the sands can be seen to the west and especially towards the LWM. Pebbles are more common towards Knockhall Point. The hinterland is gently sloping ground, < 15°. The main road lies within the limits of the hinterland to the east of this section with a great deal of the intervening area, between coast and road, covered with unfenced vegetation. There are also a number of isolated dwellings in this area which abut the coastal edge, each having some sea defence wall with a larger length from Scapa View running west for 300m. To the east of Scapa View there is an area of dumped soil waste. This is adding more to the height of the coast rather than extending it seawards. Soils are predominantly poorly drained gleys with cultivatable fields.

2 Knockhall Point

ND 452 940

0.70 km

Predominantly a sandy foreshore with 40-80% shingle cover.

Coast edge is predominantly < 5m.
The drift/rock interface is rarely visible
A rock platform is quite evident by Knockhall.
The shingle becomes more common towards St
Margaret's Hope. The small areas of rock
exposed in section are Eday Flags. A till, 20->
40cm deep is overlain with an imperfectly
drained gley soil. Fields are fenced to the edge of
the coast.

3 St Margaret's Hope

ND 445 938

1.60 km

A sandy foreshore generally with > 60% shingle cover.

Coast edge is predominantly < 5m.

The drift/rock interface is rarely visible
A rock platform is seen more frequently towards
the north of the bay. A sea wall lies in front of St
Margarets Hope and around to the pier. Although
a cliff face rises to > 5m northwards, the edge is
in fact a road which lies below the cliff and has
the sea wall along the coastal edge. From the pir
to Needle Point there is a rough track with a
rubble sea defence along the base of the cliff
face. The exposed geology is of Upper Eday
Sandstone with a deep till, 1-2m deep. The soil
is a freely draining podzol with cultivatable
fields.

4 Needle Point

ND 445 946

0.55 km

Rock platform with 40-60% shingle cover.

Coast edge is predominantly > 5m.

The drift/rock interface is visible

A small ayre lies on the Ruff and is predominantly composed of cohbles. Subangular cobbles and boulders lie to the west The coastal edge slopes down to a house on the point. Soils are imperfectly to well drained podzols with cultivatable fields on gently sloping ground. The fields are not fenced to the edge and a well vegetated 5-10m strip stabilises the soil.

HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

SOUTH RONALDSAY MAP 1



FORESHORE



ROCK PLATFORM
MAINLY SAND
MAINLY ALLUVIAL/MARINE MUD
MARSH

HINTERLAND

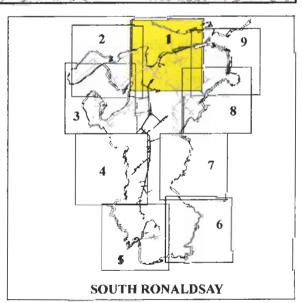


DRIFT
DRIFT ON VISIBLE ROCK
RAISED BEACH ETC
BLOWN SAND
GLACIAL SAND/GRAVEL
ALLUVIUM

MODIFIERS



LOW EDGE <5M CLIFF >5M MAN MADE BARRIER SHINGLE/STORM BANK HUMAN DISTURBANCE



SOUTH RONALDSAY MAP1 EROSION CLASS

1 Ashby

ND 467 946

0.65 km

Stable

This section of coast is stable and minor localised erosion is negligible. Stability may be due in part to the sea defences along much of this stretch.

2 Scapa View

ND 454 943

1.90 km

Eroding to Stable

There is local erosion of the dumped soil material although this may be short lived. The marsh grasses on the low-lying area west of Starllie is eroding in patchy areas beyond fence lines. Occasional erosion is taking place on the western facing part of this section.

3 St Margaret's Hope

ND 445 936

1.10 km

Stable

The whole of this unit is faced with a sea wall in good repair.

4 Pier

ND 4445 9440

0.40 km

Eroding

There is a great deal of terrestial erosion mainly caused by the construction or upgrading of a coastal track beneath the cliff face. Much of the cliff is slumping with sections of slip 3-4m long. The actual sea edge of the track is protected by a rubble defence.

5 Needle Point

ND 444 946

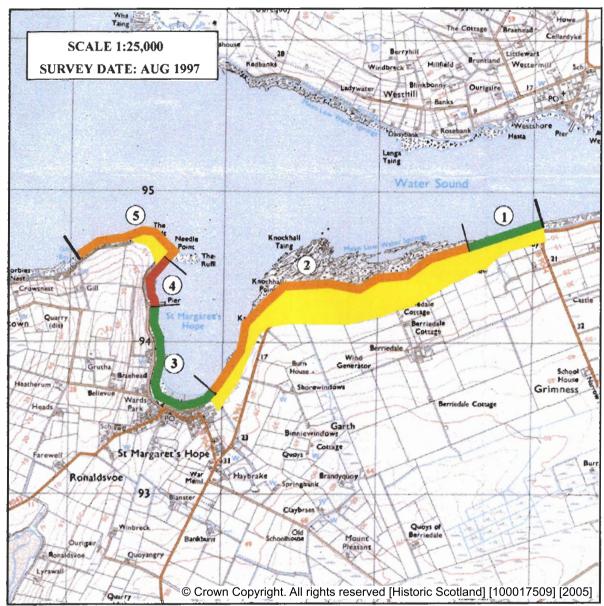
0.60 km

Eroding to Stable

Sea erosion has caused small portions of rock to come away from the face to the west of The Golt. Localised landslip/slump at the cliff top is evident.

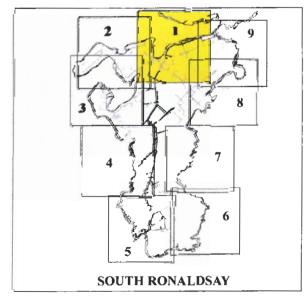
EROSION CLASS

SOUTH RONALDSAY MAP 1





DEFINITELY ACCRETING ACCRETING OR STABLE STABLE ERODING OR STABLE DEFINITELY ERODING ACCRETING AND ERODING NO ACCESS LAND BELOW 10M



SOUTH RONALDSAY MAP 2: GILL TO LYNEGAR

Built Heritage and Archaeology

The area covered by this map section extends from the enclosed regular fields of improved grass which characterise the coastal areas of Lowertown and Uppertown to rougher, more open land near Lynegar. This area is sparsely settled, although the presence of several abandoned farmsteads indicates that it was more densely populated in the last century. The small fields which surround these farmsteads appear to have now been subsumed into larger units.

Eighteen sites were recorded in this area; of which three had been previously noted. Fourteen sites were considered vulnerable to erosion, and of these, three sites are actively eroding. One of the entries for this map, SR4, is not a site of archaeological or historical interest, but has been included to prevent mis-identification in the future.

One of the sites which is actively eroding, SR8, was previously noted as an enclosure. It is defined by a bank and ditch and is of probable prehistoric date. A portion of the ditch is visible in an eroding section and assessment of the deposits via survey is urgently recommended. It is worthy of note that this enclosure lies in a similar position on the opposite side of Dam of Hoxa Bay to an undefended settlement of the 1st millennium BC/1st millennium AD (SR12) and a broch with probable associated settlement (SR127). While none of these sites may be contemporary, they do suggest a concentration of later prehistoric settlement in this area. The undefended settlement and the broch were partially excavated in the last century but further work in this area will be required to achieve an understanding of what is undoubtedly an area of high archaeological significance.

Geomorphology

The coastline unit on this map section faces north, into Scapa Flow. To the east side, the coastal edge has a boulder strewn rock platform and is over 5m high. At Dam of Hoxa the coastal edge reduces to less than 5m and is covered with shingle. The hinterland to the rear of Dam of Hoxa is low lying and there is are several small lochs. This depression lies is below 10 metres O.D. and, in topographical terms, separates the Hoxa peninsula from the rest of South Ronaldsay. From Howe Taing to Lynegar there are only a few areas where the rock platform is covered with shingle.

Erosion

The main area of erosion is in the vicinity of Mayfield, to the east side of Hoxa Dam. Most other areas are quite stable although there is a pocket of disturbance and erosion adjacent to a quarry at Quarryhouse which is too small to be indicated as an area of erosion on the map.

SOUTH RONALDSAY MAP 2 BUILT HERITAGE & ARCHAEOLOGY

SR4 ND 4404 9449 Gill Bay Pitted rock face Indeterminate

Fair Nil

SR5

ND 4395 9445 Gill Bay Trackway 19th/20th C Poor Nil

SR₆

ND 4350 9432 East Swartiquoy Field system 19th/20th C Poor Nil

<u>SR7</u>

ND 4313 9422 Mayfield Earthen boundary bank

Indeterminate

Fair Nil

SR8 (ND 49 SW 13)

ND 4307 9416 Mayfield Enclosure

1st mill BC/1st mill AD

Fair Survey

SR9

ND 4308 9416 Mayfield Boat shed 19th/20th Fair Nil **SR10**

ND 4295 9380 Dam of Hoxa Structures 19th/20th C Good Nil

SR127 (ND 49 SW 1)

ND 4252 9396 The Howe

Muckle How Broch 1st mill BC/1st mill AD

Fair Monitor

SR11

ND 4242 9402 Howe Taing House 19th/20th C Fair Nil

SR12 (ND 49 SW 2)

ND 4243 9403 Little Howe Settlement

1st mill BC/1st mill AD

Fair Monitor

SR13

ND 4209 9420 The Hall, Uppertown Cairn

Indeterminate

Poor Nil

SR14

ND 4203 9422 The Hall, Uppertown Flotsam

20th C Poor Nil **SR15**

ND 4148 9431 Quarryhouse Noosts 19th/20th C Poor Nil

SR16

ND 4139 9422 Quarryhouse Mound Indeterminate

Fair Nil

SR17

ND 4125 9408 Uppertown

Earthen and stone bank

19th/20th C Fair Nil

SR18

ND 4092 9370 Lynegar

Datum marker, military

20th C Good Nil

SR19

ND 4086 9362 Lynegar Shelter Indeterminate

Poor Nil

SR20

ND 4079 9351 Lynegar

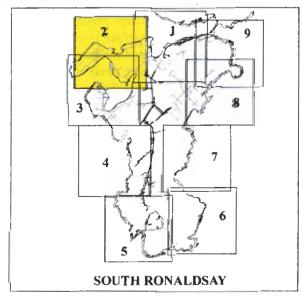
Two datum markers, military

20th C Good Nil

SOUTH RONALDSAY MAP 2



- PROTECTED ANCIENT MONUMENT OR AREA OF DESIGNATED WRECK
- MONUMENT FORMALLY PROPOSED BY HISTORIC SCOTLAND FOR SCHEDULING OR WRECK FOR DESIGNATION
- + LISTED HISTORIC BUILDING
- UNDESIGNATED WRECK
- KNOWN ANCIENT MONUMENT
- SITE FOUND BY THIS SURVEY
- SITE COMPLEX



SOUTH RONALDSAY MAP 2 HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

1 Gill

ND 437 934

1.10 km

Rock platform with 50-80% cobble and boulder cover.

Coast edge is predominantly > 5m.
The drift/rock interface is visible
The foreshore rocks are subangular and
sub-rounded. The hinterland is fenced almost to
the edge with cultivatable fields down to grass.
Upper Eday Sandstone is generally overlain with
< 50cm of till with an imperfectly drained peaty
podzol.

2 Mayfield (Dam of Hoxa)

ND 429 938

1.05 km

A rock platform with 60-> 90% cobble cover. Coast edge is predominantly < 5m.

The drift/rock interface is rarely visible

By Howe Taing the rock platform is becomes apart from a small shingle ayre. A storm beach lies on the eastern side of the bay and a small sea wall lies in front of a building at the centre of the bay. A sloping hinterland lies to the east, a flat low lying area with a salt marsh and pool behind a track to the south and a small hill with broch to the west of the bay. Soils appear to be poorly drained gleys in the centre of the bay's hinterland with peaty podzols to each side.

3 Little Howe

ND 416 943

2.25 km

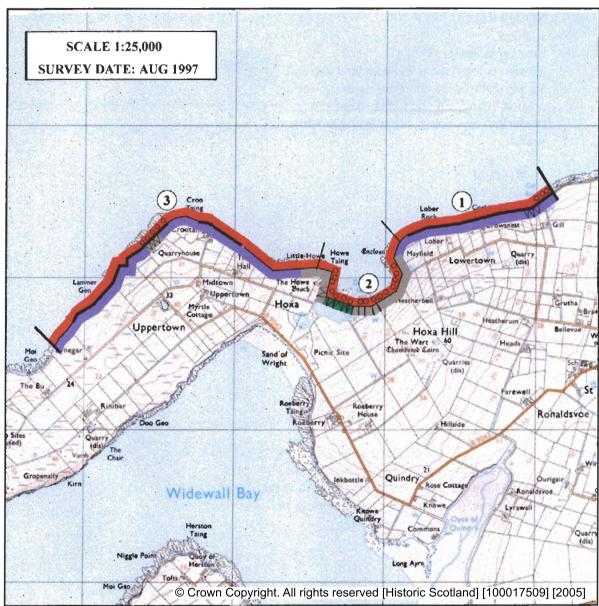
A rock platform generally with no or < 10% cobble cover.

Coast edge is perhaps predominantly > 5m. The drift/rock interface is visible.

The foreshore flags are gently sloping. Most noticeable is a large covering of cobbles in front of the quarry at Quarryhouse, where quarrying has reduced the height of the coastal edge in a 40m stretch. There was no till in evidence for the whole of the Hoxa Peninsula. Soils are freely to imperfectly drained peaty podzols for the most part with poorly drained peaty gleys above Lammer Geo. The fields are cultivatable and fenced, apart from the quarry, up to Lammer Geo where a rough grazing runs westward on a moderately sloping hinterland.

HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

SOUTH RONALDSAY MAP 2



FORESHORE



ROCK PLATFORM
MAINLY SAND
MAINLY ALLUVIAL/MARINE MUD
MARSH

HINTERLAND

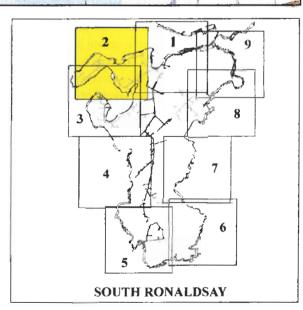


DRIFT DRIFT ON VISIBLE ROCK RAISED BEACH ETC BLOWN SAND GLACIAL SAND/GRAVEL ALLUVIUM

MODIFIERS



LOW EDGE <5M CLIFF >5M MAN MADE BARRIER SHINGLE/STORM BANK HUMAN DISTURBANCE



SOUTH RONALDSAY MAP 2 EROSION CLASS

1 Gill

ND 436 943

1.08 km

Eroding to Stable

Erosion is localised with some land slip and human disturbance contributing to sub-aerial erosion below Gill and Lober. Almost a borderline case between stable and eroding to stable.

2 Mayfield

ND 4315 9405

0.30 km

Eroding

Heavy erosion by Mayfield gives way to a slightly less erosion to the south. At Mayfield the erosion is responsible for collapse of a small building. A local source of information suggests that the rate of erosion at this point for one year was 30cm. A storm beach on the west side of the bay may be transgressing landwards.

3 Dam of Hoxa

ND 428 938

0.75 km

Stable

The bay is fairly stable with localised erosion. The sea wall in the centre of the bay has slight erosion taking place on each end. An ayre to the east of Howe Taing may be both accreting and eroding.

4 Howe Taing

ND 423 940

0.58 km

Eroding to Stable

Some erosion of a wall on the point of Howe Taing gives way to a stable section before definite erosion in front of a derelict croft, Little Howe, where midden material and soils are being eroded. There is localised erosion thereafter up to the Hall.

5 The Hall

ND 414 942

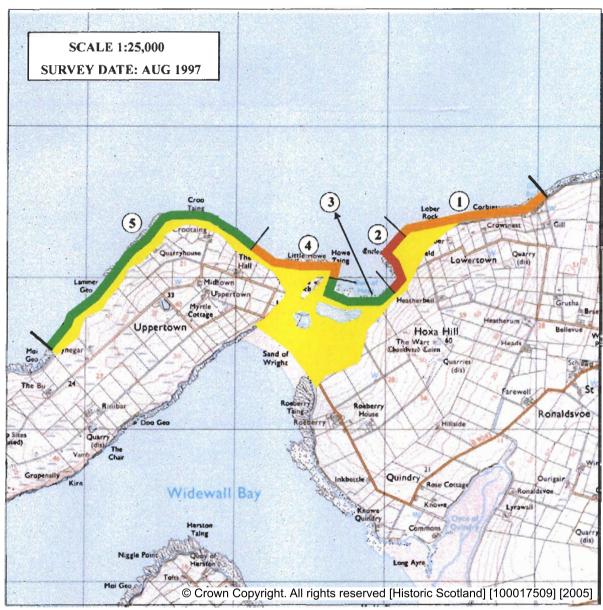
1.67 km

Stable

This whole section is relatively stable although a small section, 80m, by Quarryhouse has definite erosion and is due to the quarrying.

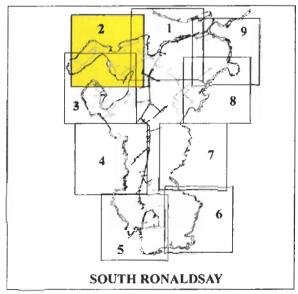
EROSION CLASS

SOUTH RONALDSAY MAP 2





DEFINITELY ACCRETING ACCRETING OR STABLE STABLE ERODING OR STABLE DEFINITELY ERODING ACCRETING AND ERODING NO ACCESS LAND BELOW 10M



SOUTH RONALDSAY MAP 3: LYNEGAR TO BALL HILL

Built Heritage and Archaeology

The area covered by this map section extends from the Uppertown peninsula, around Hoxa Head and traverses the periphery of Widewall Bay, progressing past the hamlet of Herston and terminates on the south side of the Herston peninsula. For the first leg of this area, the B9043 road from Hoxa to St. Margaret's Hope runs parallel with the coast for a time, separated by large enclosed fields of improved grassland. From the southern side of Widewall Bay to Kirkhouse there are large, enclosed hilly fields of improved grassland and coastal settlement is sparse. At Kirkhouse the B9042 road to Herston rejoins the coast and has unenclosed rough pasture to its seaward side. At Herston there is a cluster of inhabited houses which back onto the coast edge. Beyond this point, there is no settlement in the coastal zone and the landscape is dominated by unenclosed rough pasture.

Twenty-four sites were recorded in this area; nine of these had been previously noted. One site, an 18th C mill at Kirkhouse (SR49), is listed grade 'B'. Four sites were not visited: two sites could not be located (SR148 & SR154); one site was not inspected because access was considered dangerous (SR152) and one site was not fully accessed since it was not possible to contact the landowner (SR149). Twelve sites were considered vulnerable to erosion and, of these, two sites are actively eroding (SR47 & SR152).

Geomorphology

The unit covers the west of Hoxa Head, Widewall Bay and the western facing promontory of Herston. All coasts face into Scapa Flow although the south western side is also open to south-westerly storms. Hoxa Head has cliff faces which run to steep slopes on the south-eastern side but decrease lower than 5m by the Sands of Wright. Apart from Roeberry and Kirkhouse, the coasts of Widewall Bay are covered with sand or shingle and have a low lying hinterland. The coastal edge rises to over 5m to the west of Herston, and is thereafter, much more rugged and indented. Here the rock platform is very narrow and mostly devoid of any sediment cover.

Erosion

Erosion is more apparent on the bare rock platforms and coastal edge at Roeberry, and in the softer drift sediments to the north of Kirkhouse and Muckle Mire, within Widewall Bay. A small sea wall has been constructed in front of Herston. Erosion is occurring at Ancroft, where there is no sea wall defence. The west-facing part of the Herston peninsula is predominantly stable.

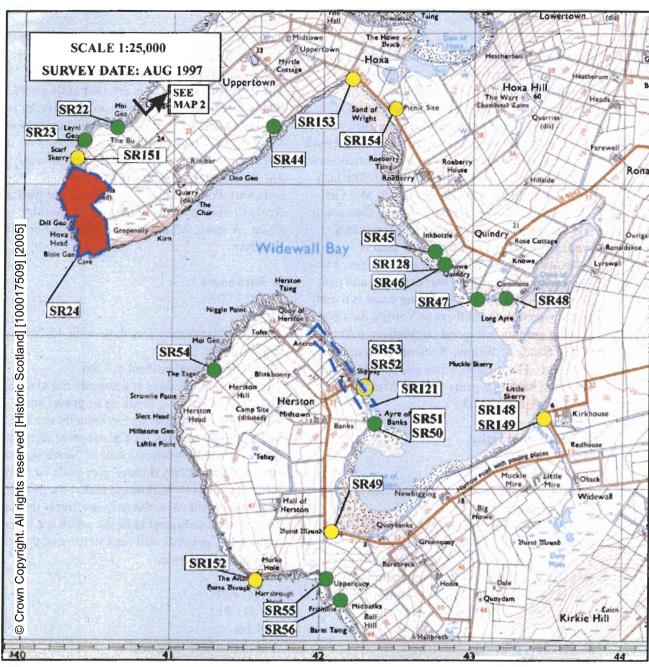
SOUTH RONALDSAY MAP 3 BUILT HERITAGE & ARCHAEOLOGY

SR22 ND 6065 9336	SR45 ND 4276 9254	SR49 (ND 49 SW 15) ND 4205 9072	<u>SR54</u> ND 4125 9182
Moi Geo	Inkbottle	Oyce of Herston	The Eager
Boat sheds, track &	House	Burnt Mound	Structure, possibly
slipway	19th/20th C	2nd/1st mill BC	military
19th/20th C	Fair	Fair	20th C
Fair	Nil	Nil	Poor
Nil	MII	7411	Nil
SR23	SR128	SR50	<u>SR152</u> (ND 49 SW 3)
ND 4039 9332	ND 4281 9252	ND 4232 9145	ND 4157 9038
Leyni Geo	Inkbottle	Ayre of Banks	Harra Brough
Flotsam	Structure	House	Structure
20th C	19th/20th C	19th/20th C	1st mill BC/1st mill AI
Poor	Poor	Fair	Not inspected
Survey	Nil	Nil	- 1
SR151 (ND 49 SW 25)	SR46	SR51	<u>SR55</u>
ND 403 931	ND 4283 9251	ND 4232 9145	ND 4206 9046
Hoxa Head	Knowe Quindry	Ayre of Banks	Big Civie Geo
Lighthouse base	House	House	Earthwork
20th C	19th/20th C	19th/20th C	Indeterminate
Fair	Fair	Fair	Fair
Nil	Nil	Nil	Survey
<u>SR24</u> (ND 49 SW 19,	<u>SR47</u>	SR121	
27)	ND 4304 9228	ND 421 918	<u>SR56</u>
ND 403 931	Knowe Quindry	Herston	ND 4212 9029
Hoxa Head	House	Hamlet	Frithille
WWI & II Hoxa and	19th/20th C	18th C	Two mounds
Balfour Batteries:	Fair	Good	3rd/1st mill BC
Scheduled	Nil	Nil	Fair
1915-18, 1939-45			Survey
Fair/poor			
Monitor			
SR44	SR48	SR52	
ND 4170 9345	ND 4325 9232	ND 4225 9165	
Uppertown	Commons	Herston	
Structure	Structure and planticrub	Structure	
20th C	19th/20th C	19th/20th C	
Poor Nil	Fair	Poor Nil	
NJI	Survey	NII	
SR153 (ND 49 SW 8)	SR148 (ND 49 SW 7)	<u>SR53</u> (ND 49 SW 8891)	
ND 4222 9369	ND 4343 9148	ND 4225 9165	
Hoxa	Kirkhouse	Herston	
Site of St. Colm's Chapel	St. Ola's Chapel	Hulk	
7th C	10th-14th C	19th/20th C	
Poor Monitor	Not located	Fair	
Monitor		Survey	
SR154 (ND49SW 32)	SR149 (ND 49 SW 21)		

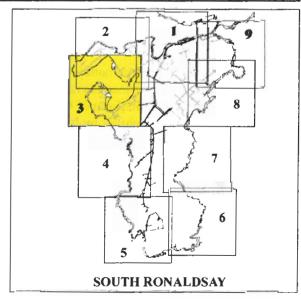
ND 4250 9345 ND 4350 9144 Sand of Wright Kirkhouse Camp, military Kirkhouse mill:Listed 'B'

wwi/ii 18th C Not located Not inspected

SOUTH RONALDSAY MAP 3



- PROTECTED ANCIENT MONUMENT OR AREA OF DESIGNATED WRECK
- OMONUMENT FORMALLY PROPOSED BY HISTORIC SCOTLAND FOR SCHEDULING OR WRECK FOR DESIGNATION
- T LISTED HISTORIC BUILDING
- UNDESIGNATED WRECK
- KNOWN ANCIENT MONUMENT
- SITE FOUND BY THIS SURVEY
- SITE COMPLEX



SOUTH RONALDSAY MAP3 HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

1 Lynegar

ND 410 928

3.48 km

A rock platform generally with negligable cover. Coast edge is predominantly > 5m.

The drift/rock interface is visible.

The rock platform foreshore narrows and steepens by Skarf Skerry and remains so until Doo Geo where boulders lie over part of the rock platform before giving way to a more uncluttered foreshore before the Sands of Wright. The only large accumulation of cobbles lies in Moi Geo. The hinterland is moderately sloping then south and east of Bloie Geo the land steepens to a gradient >30° to The Chair. The land is cultivatable as far as Skarf Skerry and gives way to rough grazing around war defences and past Bloie Geo. The south east facing coast is mostly peat covered with heathers to Varmh, then poor grazing grading into good cultivatable pasture before Sands of Wright. Soils range from peaty podzols to Hoxa Head, peats and gleys to Doo Geo then back to a peaty podzol. Middle Eday Sandstone underlies the soils.

2 Sands of Wright

ND 424 935

0.50 km

A sandy foreshore with negligable cover. Coast edge is < 5m.

The drift/rock interface is not visible.

Cobbles are only found on the upper foreshore. Possible derelict storm beach and sands make up a shallow skeletal soil with vegetation. A road lies behind the coastal ridge with low lying poorly drained gleys behind the road.

3 Roeberry Taing

ND 426 928

1.30 km

A rock platform with 10-60% boulder/cobble

Coast edge is predominantly > 5m.

The drift/rock interface is visible.

A wide flat rock platform of red sandstones. A shingle storm beach lies by Inkbottle. The platform becomes more cobble covered by Know Quindry.

Tills are exposed beneath a freely drained podzol. Fields are gently sloping and cultivatable.

4 Know Quindry

ND 438 927

2.60 km

A sandy foreshore with 20-50% shingle cover. Coast edge is predominantly < 5m.

The drift/rock interface is intermittantly visible. Sandy foreshore gives way to an alluvium at the head of Quindry Oyce. An ayre of shingle lies at Long Ayre. A rock platform is exposed south of Lyrawall to Little Skerry. A till approximately Im deep overlies a saprolite of 1.2m south of Lyrawall. Poorly drained gleys lie to the west and freely drained podzols to the east of Quindry Oyce. A small salt marsh area lies at the head of the Ovce.

5 Kirkhouse

ND 423 907

3.15 km

A predominant sandy foreshore with 40-70% shingle cover.

Coast edge is predominantly < 5m.

The drift/rock interface is generally not visible. The Ayre of Banks is made up of gravel and sands. The sandy foreshore eventually grades into a shingle covered rock platform at Herston. Apart from a 400m stretch east of Newbriggs the edge is <5m. Poorly drained gley soils lie on the low lying areas by Kirkhouse and at the head of Quoybanks otherwise the soils are freely drained podzols with cultivatable fields which are fenced to the edge. A small wall runs in front of the road and houses at Herston.

6 Ancroft

ND 411 914

4.23 km

A rock platform with negligable cover. Coast edge is predominantly > 5m.

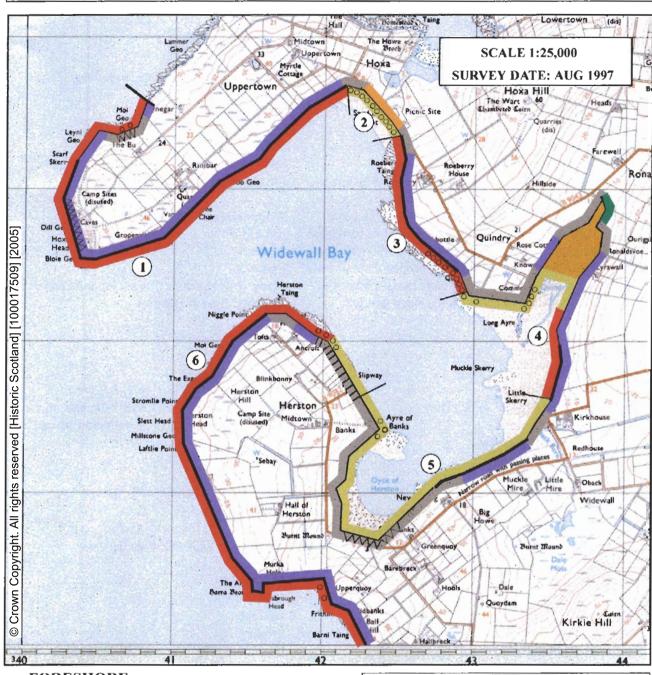
The drift/rock interface is visible.

The rock platform has 30-40% cobble cover at

Ancroft and then becomes clear of rocks by Quoy of Herston. Some cobbles lie in the cove at Upper Quoy. The rock platform narrows by Laftlie Point and broadens again by Upperquoy. Fields are cultivatable although are grassed down because of exposure. All fields are fenced almost to the edge. Soils are podzols but become peaty podzols between The Eager and Altar. At Laftlie point, a buried peat layer, < 20cm, lies beneath wind blown sand and a soil layer at 50cm depth.

HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

SOUTH RONALDSAY MAP 3



FORESHORE



ROCK PLATFORM MAINLY SAND MAINLY ALLUVIAL/MARINE MUD MARSH

HINTERLAND

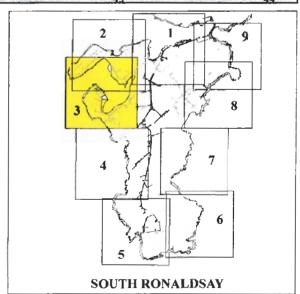


DRIFT DRIFT ON VISIBLE ROCK RAISED BEACH ETC **BLOWN SAND** GLACIAL SAND/GRAVEL **ALLUVIUM**

MODIFIERS



LOW EDGE <5M CLIFF >5M MAN MADE BARRIER SHINGLE/STORM BANK HUMAN DISTURBANCE



SOUTH RONALDSAY MAP 3 EROSION CLASS

1 Lynegar

ND 406 933

0.55 km

Stable

Negligible erosion along this section of coast

2 Moie Geo

ND 412 930

2.93 km

Eroding to Stable

The shear height of the cliffs shows only minor localised areas of sea erosion. However, on the head by the military installation there is some subaerial erosion. This is expressed as land slip and creep on the steeper slopes. Colluvium from such slip and creep has been eroded from the cliff base. To the south of the head the peat deposits are likewise slumping on the steep gradient.

3 Sands of Wright

ND 424 935

0.50 km

Stable

The sands appear to be stable.

4 Roeberry Taing

ND 433 924

3.00 km

Eroding to Stable

Erosion of the cliff face at Roeberry is localised. Stable areas lie at Inkbottle and on the sands to Long Ayre. The Long Ayre itself appears to be both eroding and accreting. There is also localised erosion of the low sloping area around Quintry Oyce

5 South of Lyrawall

ND 436 920

0.25 km

Eroding

Definite erosion of an exposed section of till and saprolite.

6 Kirkhouse

ND 435 916

0.68 km

Stable to Eroding

Localised sea erosion.

7 Muckle Mire

ND 432 912

0.365 km

Eroding

A complete 400m section is eroding.

8 Newbigging

ND 427 910

0.765 km

Eroding to Stable

Localised erosion of the softer drift.

9 Quoybanks

ND 421 907

0.35 km

Stable

Stable low edged section at Herston Quoy and along the road at Herston.

10 Banks

ND 422 913

1.00 km

Stable to Eroding

Localised erosion. The Ayre of Banks, as most other ayres, appears to be both eroding and accreting.

11 Herston

ND 421 918

0.48 km

Stable

A small sea wall stabilises the coast.

12 Ancroft

ND 414 920

1.50 km

Eroding

Erosion of coast for most of this section. At Herston Taing there is a section, approximately 200m, where there is a relative lessening of erosion.

13 Laftlie Point

ND 415 905

02.25 km

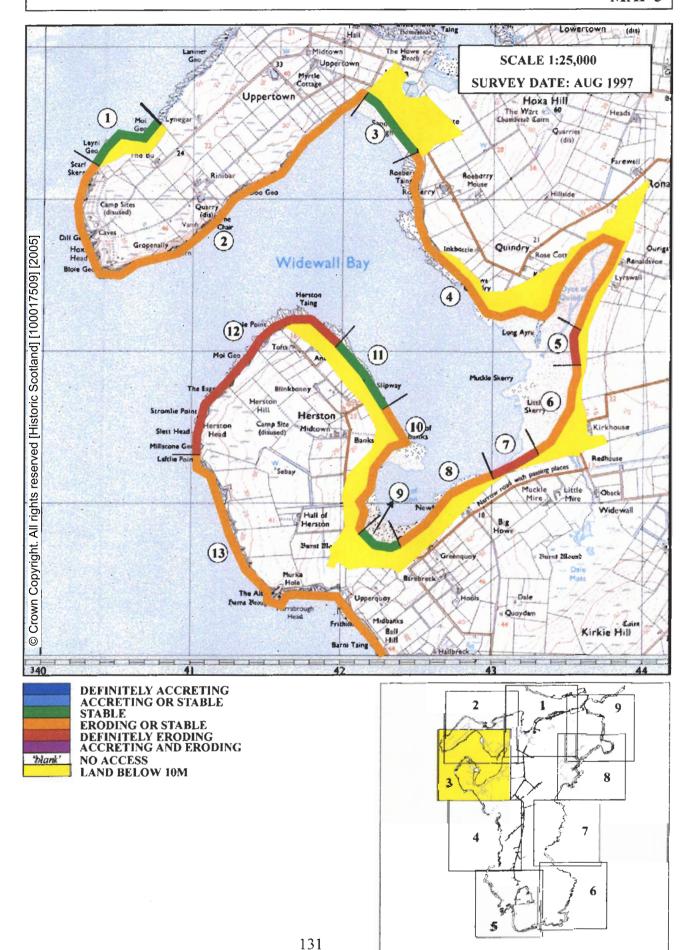
Eroding to Stable / Stable

The cliff face is relatively stable although localised areas of land slip occur in geo-type coves. In the cove at Upperquoy human disturbance has accelerated subaerial erosion. Sea erosion at the base of the cliff appears to be almost non-existent.

SOUTH RONALDSAY

SOUTH RONALDSAY

MAP 3



SOUTH RONALDSAY MAP 4: BALL HILL TO TAINGA

Built Heritage and Archaeology

Between Ball Hill and Tainga there is virtually no settlement within the coastal zone. The landscape varies between large enclosed fields of enclosed grassland to open stretches of rough pasture. A chambered cairn (SR57), a broch with substantial outworks (SR146), a series of burial mounds (SR60 & SR65) and an enclosed promontory (SR63) indicate the variety of archaeological remains which survive in this area. The survival of seven sites, in all, of probable prehistoric date in the coastal strip may be due to the fact that the land has not been ploughed in recent years and may have served as marginal grazing in the past also.

Fifteen sites were recorded in this area; of which eight were noted previously. It was not possible to inspect one site, SR146- site of Ruid Chapel and burial ground, since it could not be located. Nine sites were considered vulnerable to erosion. The promontory which is the location for site SR63 is actively eroding, as are burnt mound deposits (formerly noted as two burnt mounds), SR61. In the latter case, human disturbance and sub-aerial processes are more likely a cause than coastal erosion.

Geomorphology

For the most part, the coastal edge in this map area is over 20m high and only decreases to a height of less than 5m at the low lying cove at Sand Wick. The coastline has a fairly rugged appearance, and becomes even more rugged to the south. The cove at Beswick is narrow and steep sided.

Erosion

Erosion is patchy, with many small localised areas of landslip. A notable feature of the section between South Slett and Hoston Head is the large, 80m length of landslip. Erosion is also obvious on the north side of Beswick.

SOUTH RONALDSAY MAP 4 BUILT HERITAGE & ARCHAEOLOGY

SR57 (ND 48 NW 10)

ND 4284 8921 The Nev

Chambered Cairn 4th/3rd mill BC

Fair Nil

SR146 ND 48 NW 4

ND 4363 8911 Mucklehouse farm

Site of Ruid Chapel & burial

ground 10th/14th C Not located

SR58 (ND 48 NW 2)

ND 4337 8885 Castle Taing

Weems Castle Broch 1st mill BC/1st mill AD

Fair Monitor

SR61 (ND 48 NW 7)

ND 4350 8830 Hune Bay Burnt Mounds 2nd-1st Mill BC

Poor Nil

SR59

ND 4340 8785 Goosie Geo Upright slab Indeterminate

Fair Nil

SR60 (ND 48 NW 15)

ND 4346 8751 Hoston Head Mound 3rd/1st mill BC

Fair Monitor **SR62**

ND 4359 8730 Hoston Bay Stone heaps Indeterminate

Poor Nil

SR64

Nil

ND 4345 8705 The Kist Enclosure 19th/20th C Poor

SR63 (ND 48 NW 20)

ND 4339 8705 The Kist

Enclosed promontory
1st mill BC/1st mill AD

Fair Survey

SR65 (ND 48 NW 19)

ND 4341 8662 Green Clivie Four mounds 3rd/1st mill BC

Fair Survey

SR66

ND 4342 8642 Husanter Point

Mound

Indeterminate Poor

Monitor

SR67

ND 4336 8630 Husanter Point Boat shed 19th/20th C

Fair Nil SR155 (ND 48 NW 11)

ND 4346 8627 Greenquoy Burnt mound 2nd/1st mill BC

Fair Monitor

SR68

ND 4282 8615 Shortie Geo

Enclosed promontory

Indeterminate

Fair Nil

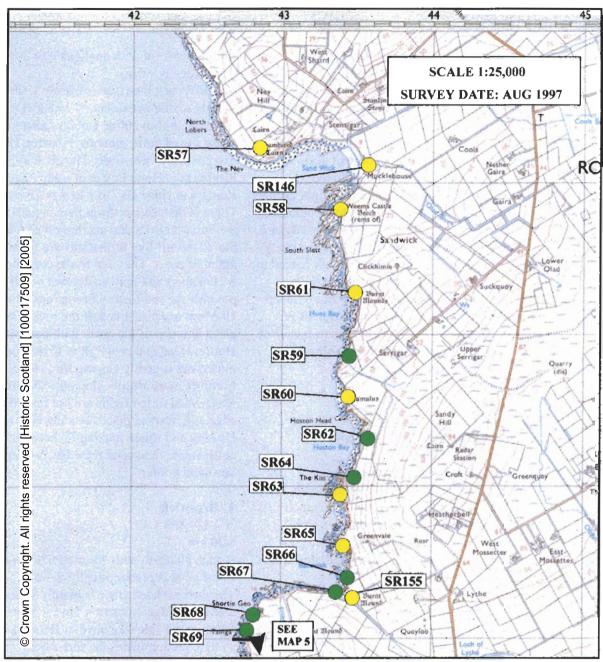
SR69

ND 4278 8608 St. John's Geo

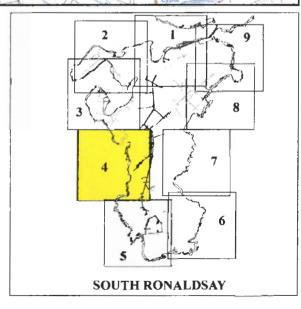
Enclosed promontory

Indeterminate

Fair Nil



- PROTECTED ANCIENT MONUMENT OR AREA OF DESIGNATED WRECK
- O MONUMENT FORMALLY PROPOSED BY HISTORIC SCOTLAND FOR SCHEDULING OR WRECK FOR DESIGNATION
- **†** LISTED HISTORIC BUILDING
- UNDESIGNATED WRECK
- KNOWN ANCIENT MONUMENT
- SITE FOUND BY THIS SURVEY
- SITE COMPLEX



SOUTH RONALDSAY MAP 4 HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

1 North Lobers

ND 427 892

1.75 km

A rock platform with negligable to 50% cover. Coast edge is predominantly > 5m. The drift/rock interface is mainly visible. Cobbles in a shallow cove close to North Lobers with cobbles and boulders along most of the south facing coast of Sandwick in a talus-like fashion. There is disturbance of drift north of Lobers, approximately 100m, and in the Sandwick cove, < 200m. There is a slight change in geology at Lobers and changes to Middle Eday Sandstone from Upper Eday Sandstone. Tills are overlain with peats or imperfectly drained peaty podzols. The cultivatable fields are not fenced to the coastal edge and 10-20m border area is vegetated with heather or rough grazing. Sheep are allowed to walk these coastal strips. A few steep sloping fields in the north eastern corner of Sandwick Bay are cultivated for arable crops.

2 Sandwick

ND 435 892

0.25 km

A sandy foreshore with 10-50% cover.

Coast edge is < 5m.

The drift/rock interface is not visible. A storm beach lies above most of the sandy foreshore. A track lies above this with much disturbance around the cove from past and present human use. The low lying vale of the hinterland has an imperfectly drained gley and is cultivatable grass land.

3 Mucklehouse

ND 436 875

3.22 km

A rock platform with negligable to 20% cover. Coast edge is > 5m.

The drift/rock interface is mainly visible. Cobble scatter is evident by Mucklehouse but fades out within 200m. Cobbles also lie in coves at the site of burnt mounds, Houston Head and two coves by Greenvale. The geology from Sandwick is Hune Bay is of Eday Flags and then changes at Hune Bay to a Lower Eday Sandstone. There is disturbance from human activity close to the burnt mounds and south west of Clickhimin. Stabilised rill-like formations are found along 400m of coast. They run to the coast edge and are 5-10m apart and may be derelict of rill erosion or possible rig and furrow formations. Boulder clay, 10-60cm overlies much of the rock. The soils are gleys in much of the north with peaty podzols at Horton Head and peaty gleys to the south. The hinterland is gently sloping for the most part and becomes more steeply sloping, >20°, around the Kist. Most of the fields are not fenced up to the edge and in some places fencing is absent. Heather and rough grazing lie between cultivatable fields and the edge, 5-40m wide headland border.

4 Breswick

ND 434 863

0.20 km

A rock platform with 40 to > 90% cover. Coast edge is predominantly > 5m. The drift/rock interface is mainly visible. The coast edge drops to < 5m for approximately 100m in the vale-like cove of Beswick where shingle predominates the foreshore.

5 Shortie Geo

ND 429 862

0.75 km

A rock platform with negligable cover.

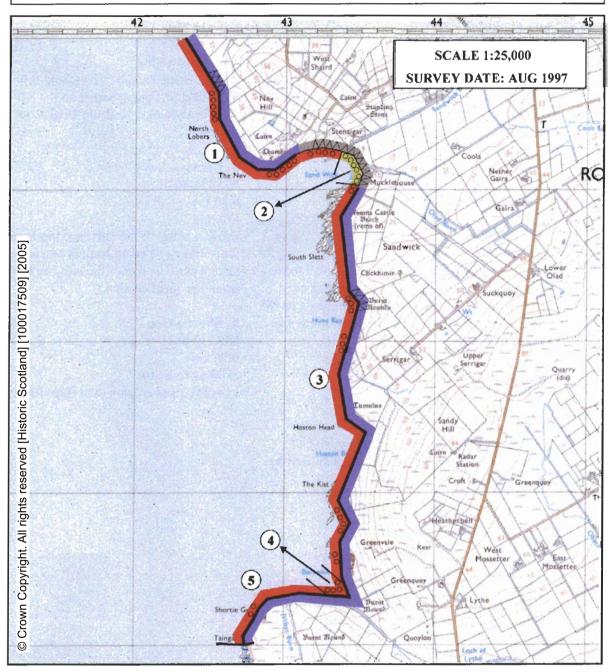
Coast edge is > 5 m.

The drift/rock interface is visible.

The cove at Shortie Geo is coverede with cobbles. The majority of the hinterland is unfenced with rough grazing and saline gleys lie on the exposed areas south of Shortie Geo. A large tidal current is observable just off the coast of Shortie Geo and down to Tainga.

HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

SOUTH RONALDSAY MAP 4



FORESHORE



ROCK PLATFORM
MAINLY SAND
MAINLY ALLUVIAL/MARINE MUD
MARSH

HINTERLAND

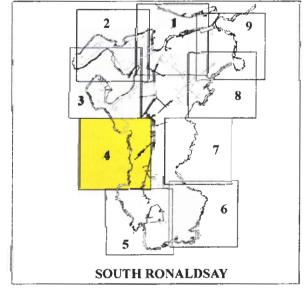


DRIFT DRIFT ON VISIBLE ROCK RAISED BEACH ETC BLOWN SAND GLACIAL SAND/GRAVEL ALLUVIUM

MODIFIERS



LOW EDGE <5M CLIFF >5M MAN MADE BARRIER SHINGLE/STORM BANK HUMAN DISTURBANCE



SOUTH RONALDSAY MAP 4 EROSION CLASS

1 Burnt Taing

ND 427 893

1,60 km

Eroding to Stable

Erosion is mainly due to land slip in localised areas. Disturbance north of Lobers has caused some local erosion of the drift deposits. Erosion is also caused by the peaty drift deposits slipping or creeping on the steep gradient of the south facing coast by Sandwick.

2 Sandwick

ND 435 892

0.40 km

Stable

The storm beach above the sands appears to be stable with some vegetation encroaching over many parts. Some erosion has taken place on the old concrete steps and slipway in the north east corner of the bay.

3 Mucklehouse

ND 434 883

1.30 km

Eroding to Stable

Localised erosion caused mainly by land slip. Rill-like erosion channels are now stabilised by vegetation.

4 West of Serrigar

ND 4340 8775

0.12 km

Eroding

There is a large area of land slip north of Hoston Head where 80m of cliff edge seems destined to slip into the sea within the few years.

5 Hoston Head, North

ND 4345 8760

0.35 km

Eroding to Stable

The head is fairly stable with localised erosion of the coastal edge.

6 Hoston Head, South

ND 4355 8745

0.15 km

Stable

No crosion is obvious.

7 The Kist

ND 434 870

1.00 km

Eroding to Stable

Local erosion extends throughout this section. Stabilised rills are apparent on the Kirst where there is also some land slip close to an old enclosure.

8 Beswick Bay

ND 434 864

0.30 km

Eroding

Erosion at top of the cliff face has forced the fence line to be taken back in one area south of Greenvale. The rest of the unit has fairly extensive local erosion.

9 Shortie Geo

ND 430 863

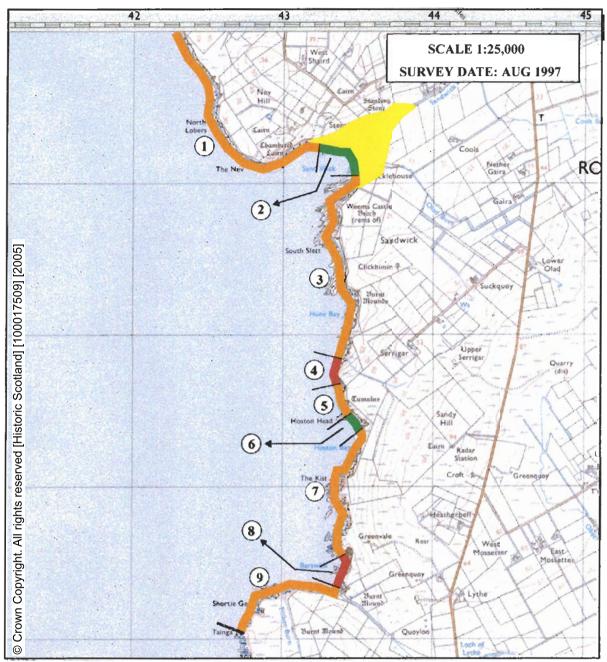
0.95 km

Eroding to Stable

Less localised erosion than Beswick Bay.

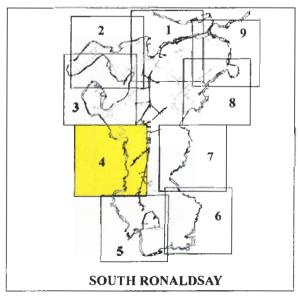
EROSION CLASS

SOUTH RONALDSAY MAP 4





DEFINITELY ACCRETING ACCRETING OR STABLE STABLE ERODING OR STABLE DEFINITELY ERODING ACCRETING AND ERODING NO ACCESS LAND BELOW 10M





SOUTH RONALDSAY MAP 5: TAINGA TO BANKS HEAD

Built Heritage and Archaeology

The area covered by this map section extends from the west coast, around the south-west tip of South Ronaldsay and progresses to a point on the south coast. From Tainga, on the west, to Burwick, at the south west corner, the landscape is characterised by unenclosed land with rough vegetation cover; there is no modern settlement and no trace of 19th C farmsteads either. A modern road and pier serve Burwick ferry terminal, from which there is a seasonal service connecting with John O'Groats. Public toilets and a large car park have been constructed in this area. From Burwick to Banks Head there are large enclosed fields of improved grassland, with scattered settlements situated in the hinterland.

Nineteen sites were recorded in this area, of which, six sites had been noted previously. One site, SR144- St Mary's Church and burial ground, is listed, grade 'B'. Six sites were not visited because they could not be located on the ground. Twelve sites were considered vulnerable to erosion, of which, one site, SR72- Castle of Burwick. is actively eroding. This site, which is thought to be of 1st millennium AD date, has been actively eroding for many years and access on to the promontory is now hazardous. Archaeological deposits are visible within large clumps of land which have loosened and are slipping over the cliffs.

It is noteworthy that, in this area there are two known churches of early date and a putative monastic site on the Castle of Burwick promontory, suggesting that the area may have been a centre of some religious importance. It may be coincidental that the remains of several large earthen land boundaries (SR70 and SR71) were found in the near vicinity, but further work may reveal a connection.

A cluster of burial mounds (SR75, SR76 & SR77) are located on the south coast, near to Banks Head. A further cluster of similar mounds were found beyond this point and are documented on Map 6. The number of mounds on this stretch of coastline (20 in all, spread over Maps 5 and 6) is not due to the greater survival of such sites in this area; indeed most of the mounds here have been badly reduced and it is likely that further such sites have been erased entirely from the area. Therefore, it must be presumed that there is a true concentration of sites here. The location may be significant; the southern tip of South Ronaldsay is the most southerly point in the Orkney Islands, facing into the Pentland Firth towards the north coast of the Scottish mainland.

Geomorphology

The eastern facing coastal edge is, on average, over 40 metres high and is cut by many geos. Here, the coast does not face directly into Scapa Flow and is more open to the sea. To the south the coastal edge drops to below 5m by The Wing. The most striking feature of the south facing coast, beyond Brough Ness, are the large, high energy storm beaches.

Erosion

Erosion is localised in the crenulated western facing coast and is much more definite by the Castle of Burwick. Beyond Brough Ness, along the south coast, the broad rock platforms support huge storm beaches and are probably retreating landwards in some areas and, hence, eroding back the coastal edge.

SOUTH RONALDSAY MAP 5 BUILT HERITAGE & ARCHAEOLOGY

SR70

ND 4280 8570 Sinilie Field system Indeterminate

Fair Survey

SR71

ND 4309 8502 Creara Head Two earthen banks Indeterminate

Poo:

SR124

ND 4360 8483 Turri Geo Field system 18th/20th C Not located Monitor

SR125

ND 4366 8452 Grootfall Field system 18th/20th C Not located Monitor

SR126

ND 4370 8425 Burwick Field system 18th/20th C Not located Monitor

SR72 (ND 48 SW 2) ND 4345 8425 Castle of Burwick Promontory Fort 1st mill BC/1st mill AD

Fair Monitor

SR73 ND 4361 8410 Windi Geo Enclosure Indeterminate

Fair Monitor SR160

ND 437 840 Burwick Enclosure Indeterminate Not located

SR144 (ND 48 SW 10, 9, 6)

ND 4401 8426 Burwick

St. Mary's Church: Listed 'B', tombstones and carved stone

18th C Good Nil

SR145 (ND 48 SW 4)

ND 4417 8426 Burwick

Site of St. Colm's Chapel and

burial ground 9th C Not located

SR74 (ND 48 SW 1)

ND 4429 8330 Brough Broch

Ist mill BC/1st mill AD

Fair Nil

SR75

ND 4430 8301 Brough Ness Two mounds 3rd/1st mill BC

Poor Survey

SR76 (ND 48 SW 8)

ND 4455 8295 Brough Ness Three mounds 3rd/1st mill BC

Fair Monitor

<u>SR77</u> (ND 48 SW 8)

ND 4465 8291 Brough Ness Four mounds 3rd/1st mill BC

Poor Monitor SR161

ND 448 830 Brough Ness Enclosure Indeterminate Not located

SR78

ND 4489 8298 Brough Ness Enclosures 19th/20th C Poor Nil

SR79

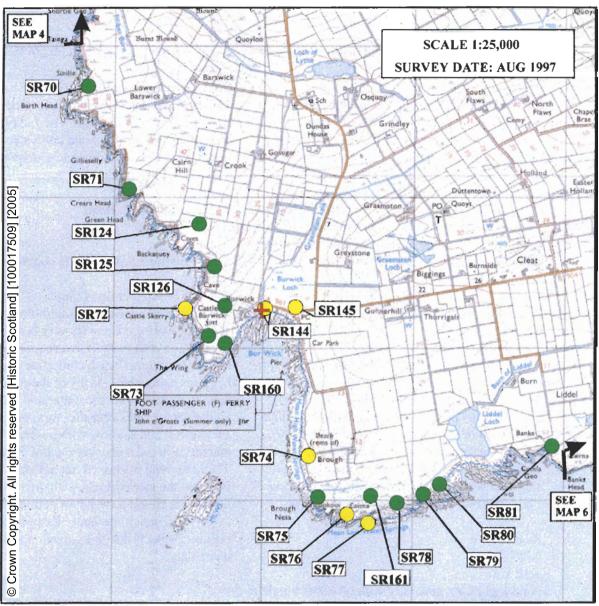
ND 4505 8305 Liddel Loch Enclosure and walls 19th/20th C Poor Nil

SR80

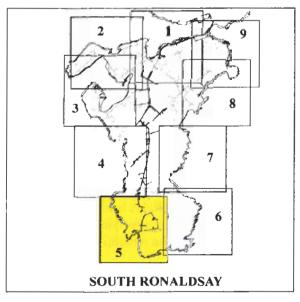
ND 4505 8310 Liddel Loch Enclosure 19th/20th C Poor Nil

SR81

ND 4591 8335 Banks Geo Upright slab 19th/20th C Poor, Nil



- PROTECTED ANCIENT MONUMENT OR AREA OF DESIGNATED WRECK
- O MONUMENT FORMALLY PROPOSED BY HISTORIC SCOTLAND FOR SCHEDULING OR WRECK FOR DESIGNATION
- + LISTED HISTORIC BUILDING
- O UNDESIGNATED WRECK
- KNOWN ANCIENT MONUMENT
- SITE FOUND BY THIS SURVEY
- SITE COMPLEX



SOUTH RONALDSAY MAP 5 HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

1 Sinilie

ND 430 855

1.75 km

A rock platform generally with negligable cover. Coast edge is > 5m.

The drift/rock interface is visible.

Pebbles lie in the cove at Sinilie. The cliff face is quite shear although south of Barth Head to Gears Head the west rock faces of the Rousay Flags dip steeply to the sea and form a stable buttress-like slope >50°. The soils are predominantly saline gleys. There is arable cultivation on the hinterland from Barth Head to Creara Head and is cultivated and fenced to within <1m from the edge. The land is relatively flat, even sloping up towards the cliff edge from Sinilie to Barth Head.

2 Green Head

ND 436 834

1.85 km

A rock platform generally with negligable cover. Coast edge ispredominantly > 5 m.

The drift/rock interface is visible.

The coastline becomes more convoluted with geos south of Creara Head. Cobbles lie in the cove at Backaquoy. Soils are improved, imperfectly to freely draining podzols. Blown sands lie within the drift deposits on the Wing. Fields are cultivable and are down to grass.

3 Burwick

ND 442 842

1.10 km

A rock platform generally with 60-80% shingle cover.

Coast edge is < 5m.

The drift/rock interface is not visible.

The platform there has only moderate patches of cobbles. There are large sea defences around the piers at Burwick and a great deal of disturbance from construction work both on the hinterland and edge. A storm beach lies in the cove by the church at Burwick with other sea defences and pier to the south where a road lies above this sea wall and continues for a further 150m south. The soils of the hinterland are poorly drained peaty gleys. A few fields behind the storm beach east of Burwick are low lying, wet and barcly cultivable. The remaining fields are grassed and cultivable.

4 Brough

ND 443 830

1.25 km

A rock platform generally with 20-30% cobble cover.

Coast edge is predominantly < 5m.

The drift/rock interface is visible to the south. No till deposits are evident. The fields on the hinterland are fairly flat and cultivatable. Imperfectly drained saline gleys dominate the area.

5 East of Brough Head

ND 453 832

1.50 km

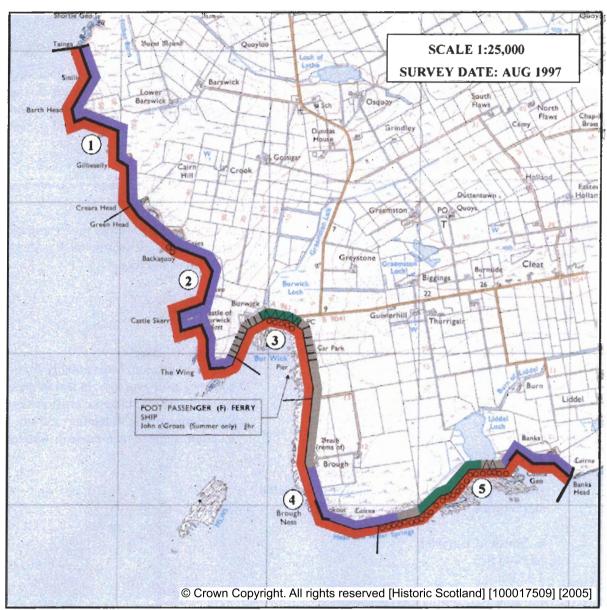
A rock platform with 30-90% cobble and boulder cover.

Coast edge is generally < 5m.

The drift/rock interface is intermittantly visible. The rock platform becomes very broad before Cumla Geo with most of this section containing a high energy storm beach composed of small boulders and cobbles. Many of the rocks have been flung back over the hinterland. Till is evident before and after the storm beach. Soils are skeletal and shallow with poorlyly drained, marshy, alluvial soils over the low lying area. The hinterland is grassed but not cultivable. This is due to the storm beaches with many storm thrown rocks and a stretch of perhaps 300m of low lying marsh hinterland. Disturbance on the cliff by Banks is due to excavation and rutting by machinery.

HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

SOUTH RONALDSAY MAP 5



FORESHORE



ROCK PLATFORM MAINLY SAND MAINLY ALLUVIAL/MARINE MUD MARSH

HINTERLAND

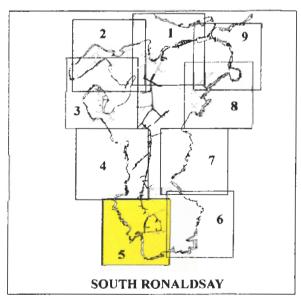


DRIFT DRIFT ON VISIBLE ROCK RAISED BEACH ETC BLOWN SAND GLACIAL SAND/GRAVEL ALLUVIUM

MODIFIERS



LOW EDGE <5M CLIFF >5M MAN MADE BARRIER SHINGLE/STORM BANK HUMAN DISTURBANCE



SOUTH RONALDSAY MAP 5 EROSION CLASS

1 Sinilie

ND 431 851

2.60 km

Eroding to Stable

Localised erosion in small areas for the most part. The steeply dipping, westerly facing buttresses of the Rousay Flags around Gillieselly are quite stable although there is land slip and erosion on the southerly facing areas. There is a large, almost stabilised land slip south of Green Head

2 South of Backaquoy

ND 436 841

1.00 km

Eroding

Definite erosion from the start of this section and past Castle of Burwick. This latter archaeological feature is dangerously eroding with a whole 60m section splitting away from the hinterland. The edge becomes relatively stable towards the south of The Wing.

3 Burwick

ND 440 842

0.64 km

Stable

Sea defences have stabilised the edge by Burwick. There is slight localised erosion by the storm beach to the east.

4 South of Burwick

ND 443 835

1.32 km

Eroding to Stable

There is erosion of some sea wall below the minor road. The edge to Brough Ness has localised areas of erosion.

5 Brough Ness

ND 446 829

0.39 km

Stable

Mainly stable with minor local erosion close to the start of the storm beach.

6 Storm beach East of Brough Ness

ND 450 830

0.30 km

Accreting and Eroding

Although there is accretion of boulders on the western side of the storm beach this section also appears to be migrating landwards and so must constitute some erosion of land surface.

7 West of Banks

ND 453 833

0.65 km

Stable

A stable area lies across the eastern side of the storm beach. Lichens on the boulders attest to the present stability.

8 Banks

ND 459 834

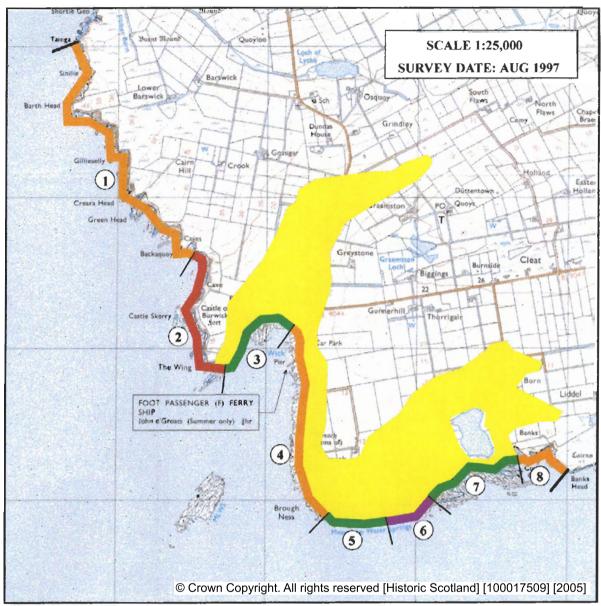
0.55 km

Eroding to Stable

Localised erosion. Most notably from where the edge begins to rise to >5m and in the corner cove by Banks where subaerial erosion has occurred. Denudation of the vegetation and soil at the latter location is due to man-made disturbance.

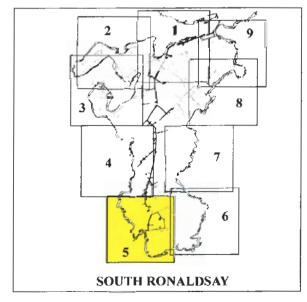
EROSION CLASS

SOUTH RONALDSAY MAP 5





DEFINITELY ACCRETING ACCRETING OR STABLE STABLE ERODING OR STABLE DEFINITELY ERODING ACCRETING AND ERODING NO ACCESS LAND BELOW 10M



SOUTH RONALDSAY MAP 6: BANKS HEAD TO OSSI TAING

Built Heritage and Archaeology

This map section extends from a point on the south coast of the island, along the high rugged coastline which forms the south-east corner and up the east coast to Ossi Taing. From Banks Head to Halcro Head the landscape is characterised by large regular enclosed fields of improved grassland. Settlement is centred on a few large farms and is not located within the coastal zone. A coastal path leads from Liddel Farm, giving public access to the chambered cairn at Isbister. From Halcro Head, there is no coastal settlement and the land is unenclosed and covered with rough vegetation.

Ten sites were recorded, of which, five had been noted previously. One site, SR87- Isbister chambered cairn, is scheduled. All of the sites in this area were considered vulnerable to either coastal or sub-aerial erosion, or both.

As noted under Map 5, this area has a dense cluster of burial mounds, apparently spanning the 4th-2nd millennium BC. The excavated chambered cairn at Isbister was found to have been in use as a burial place for over a thousand years. A large and very disturbed cairn at Banks Head (SR82 (iv)) may have been a chambered cairn and, may therefore, predate the smaller mounds which cluster close to it. The condition of this site is such that urgent rescue work is now required to fully record the structure and recover the remainder of the burial deposits, currently strewn about.

A group of large earthen banks (SR88, SR 90 & SR91), noted along the east coast, may be associated with land boundaries noted to the north of Burwick (see Map 5).

Geomorphology

The coastline covered by this map section is very rugged and indented. The coastal edge is over 5m, and, generally over 30m high. There is little covering over the narrow rock platforms, which are directly exposed to the North Sea. North of Halcro Head, some of the sheer cliff faces give way to steep slopes and large stabilised talus masses.

Erosion

Although exposed and rugged in nature, there is little apparent erosion of the coast other than the areas of localised landslip.

SOUTH RONALDSAY MAP 6 BUILT HERITAGE & ARCHAEOLOGY

SR82 (ND 48 SE 4)

ND 4609 8325
Banks Head
Six mounds
4th/1st mill BC
Fair-poor
Survey

SR83

ND 4629 8335 Trunki Geo Mound 3rd/1st mill BC

Fair Survey

SR84 (ND 48 SE 3)

ND 4633 8323 Quarrel Geo Two mounds 3rd/1st mill BC

poor Monitor

SR85

ND 4692 8345 Old Head Cairn

3rd/1st mill BC

Fair Survey

SR86

ND 4709 8439

Isbister

Earthen bank

Indeterminate

Fair Nil

SR87 (ND 48 SE 1)

ND 4704 8449

Isbister

Chambered Cairn: Scheduled

4th/2nd mill BC

Good Monitor **SR88** (ND 48 SE 6)

ND 4718 8475 Black Geo Earthen bank Indeterminate

Fair Nil

SR89 (ND 48 SE 17)

ND 4735 8565 Halcro Head Mound Indeterminate

Fair

Survey/monitor

SR90

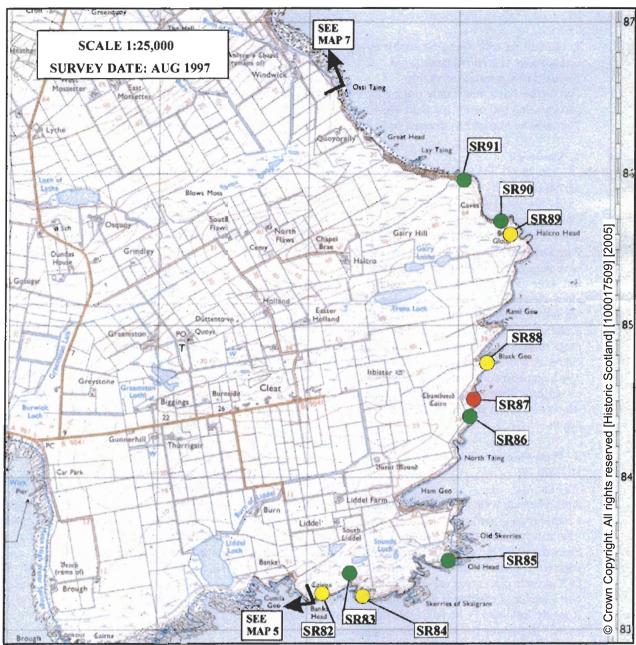
ND 4729 8568 Halcro Head Earthen bank Indeterminate

Fair Nil

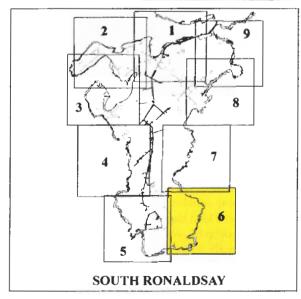
SR91

ND 4704 8595 Angly Bar Earthen bank Indeterminate

Fair Nil



- PROTECTED ANCIENT MONUMENT OR AREA OF DESIGNATED WRECK
- O MONUMENT FORMALLY PROPOSED BY HISTORIC SCOTLAND FOR SCHEDULING OR WRECK FOR DESIGNATION
- **†** LISTED HISTORIC BUILDING
- UNDESIGNATED WRECK
- **KNOWN ANCIENT MONUMENT**
- SITE FOUND BY THIS SURVEY
- SITE COMPLEX



HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY MAP 6

1 Nista Skerries

HU 2780 7735

0.67 km

Rock platform with negligible cobble cover.

Coastal edge is predominantly > 5m.

The drift/rock interface is visible.

The section has a moderately sloping hinterland with good grazing and cultivable field which are fenced. The soils are imperfectly drained podzols.

2 Sandwick

HU 276 780

0.67 km

Sandy foreshore with a storm beach to the west. Coastal edge is predominantly < 5m.

The drift/rock interface is not visible.

Pure sand lies along the foreshore to the east of the cove with a large storm beach at the top of the foreshore to the west. Backwash patterns are obvious along the sands. The hinterland is part of an alluvial basin with peaty alluvium soils with the eastern side probably made up of blown sand or containing a large proportion. The far hinterland has a wet almost marshy character with some sedges and rush with the fescues. The hinterland rises steeply to the west with a consequent steep slope and grades into a cliff face which runs into a gorge, probably of glacio-fluvial origin.

3 West Side of Sandwick

HU 268 775

1.87 km

Rock platform with <10-50% Cobble cover.

Coastal edge is predominantly > 5m.

The drift/rock interface is visible.

From the gorge the coastal edge is defined by a cliff edge with perhaps 1-2m of foreshore at the foot of the cliff in some places and varying amounts of cobble. More cobbles lie within Harry's Pund. The hinterland is gently undulating with cultivable fields down to. A change in geology begins to become apparent in the topography west of Harry's Pund where the cliffs rise up to the Head of Grocken with the hinterland sloping down away from the cliff edge landwards. The soils are freely to imperfectly drained podzols and a poorly draining peaty podzol behind Harry's Pund.

4 Stoura Pund

HU 259 777

0.77 km

Sandy foreshore with <30% cover.

Coastal edge is > 5m.

The drift/rock interface is visible.

At the base of a steep cliff lies a sandy foreshore with some cobbles. The cliff rises to the west and there is some land slip in the centre and to the west of the bay. A deep till, over 1m deep underlies imperfectly to poorly drained peat and peaty podzol.

5 The Runk

HU 2525 7780

1.67 km

Rock platform with small discrete areas of sand and shingle cover.

Coastal edge is > 5m.

The drift/rock interface is visible.

The cliffs slope slowly down to the west of the Neap. The granite has been weathered into stacks and shear crenulations of the coastline. There are a few small geos/coves where the rock platform is covered by sand. The till is not always obvious but is up to 5m deep to the east of Braewick and lies beneath imperfectly to freely draining peaty podzols. The hinterland is steeply to moderately sloping with some outcrops of granite on the Neap but becoming rock free towards Braewick. Rough grazing is dominant even in the fenced fields towards Braewick.

6 Braewick

HU 2460 7865

0.97 km

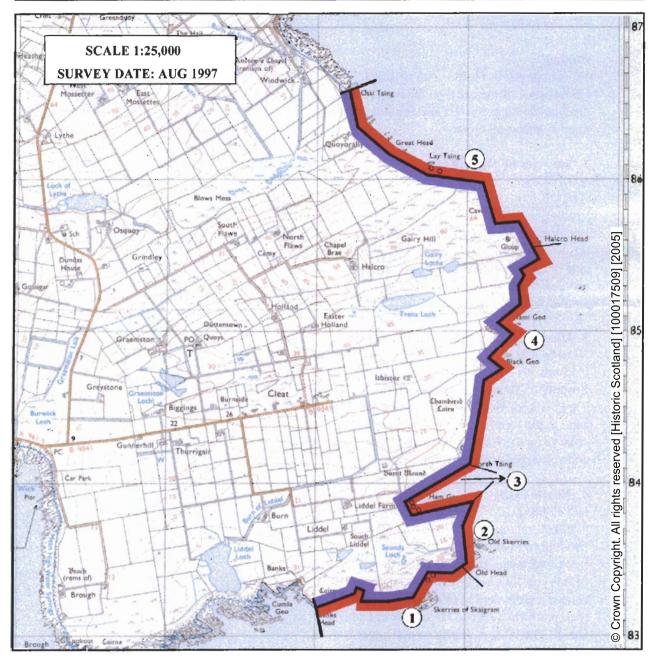
Sandy foreshore is predominant with cobbled berms. Coastal edge is < 5m.

The drift/rock interface is not visible.

A sandy foreshore extends around the cove with two large cobbled berms/storm beaches extending along the top of the foreshore making up a bar which helps to separate the foreshore from a small loch. The hinterland behind the cobbled area slopes back down to the small loch. Some skeletal organic soils and podzols lie within the hinterland. Fescues are the dominant grasses. To the west the sandy foreshore grades into rock platform where the geology changes to sandstone and then basalt. Rough grazing lies over poorly drained peaty podzols and gleys.

HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

SOUTH RONALDSAY MAP 6



FORESHORE



ROCK PLATFORM
MAINLY SAND
MAINLY ALLUVIAL/MARINE MUD
MARSH

HINTERLAND

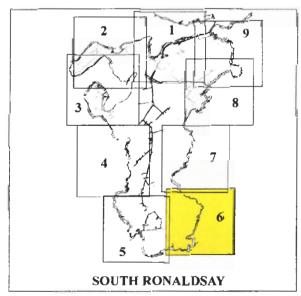


DRIFT DRIFT ON VISIBLE ROCK RAISED BEACH ETC BLOWN SAND GLACIAL SAND/GRAVEL ALLUVIUM

MODIFIERS



LOW EDGE <5M CLIFF >5M MAN MADE BARRIER SHINGLE/STORM BANK HUMAN DISTURBANCE



SOUTH RONALDSAY MAP 6 EROSION CLASS

1 Banks Head

ND 4608 8380

0.15 km

Eroding

Erosion at Banks Head is mainly due to land slip. Disturbance of the cairn on the hinterland by mechanical digger is left unconsolidated and open to subaerial erosion

2 Skerries of Skaigram

ND 468 835

2.10 km

Eroding to Stable

Localised erosion is apparent with some storm throw of rocks from the rocky edge. On the west side of Skaigram Skerries a land slip is in progress. The south side of Ham Geo has a large area of localised land slip.

3 Ham Geo

ND 466 839

0.55 km

Eroding to Stable and some accretion / Eroding There is a relative accumulation of cobbles and sand at the west end of the geo and definite erosion on the north side caused by both land slip and sub-aerial erosion of top soil.

4 North Taing

ND 474 855

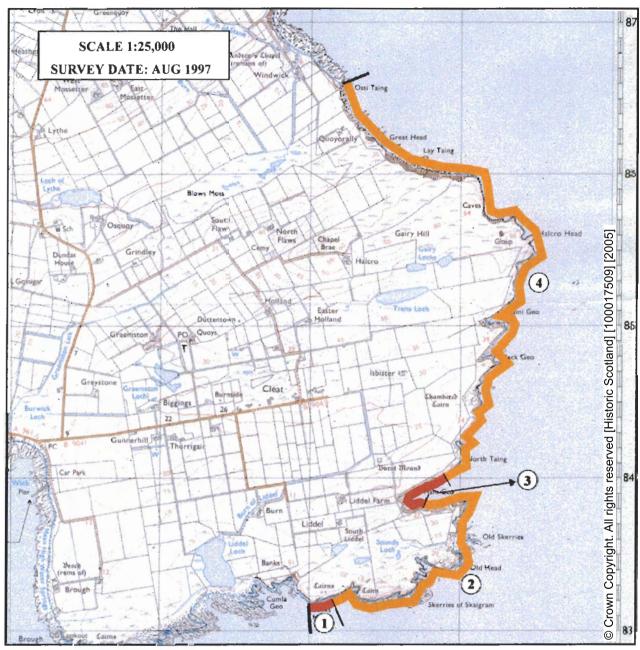
3.80 km

Eroding to Stable

Localised land slip occurs along the whole length of this coastline section. Large land slips have caused a great deal of talus to build up on the rock platform between Halcro Head and Great Head. The talus is vegetated and appears to be quite stable. The largest talus accumulations lie by Lay Taing. Slumping and soil creep are common on the steep to moderate slopes. Stabilised rill erosion features can be seen on Halcro Head. A minor erosion problem may arise from the use of a footpath to the Tomb of Eagles close to North Taing.

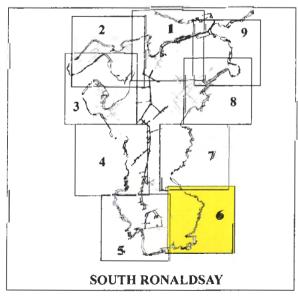
EROSION CLASS

SOUTH RONALDSAY MAP 6





DEFINITELY ACCRETING ACCRETING OR STABLE STABLE ERODING OR STABLE DEFINITELY ERODING ACCRETING AND ERODING NO ACCESS LAND BELOW 10M



SOUTH RONALDSAY MAP 7: OSSI TAING TO MUCKQUOY

Built Heritage and Archaeology

From Ossi Taing to Windwick there is scattered settlement within the coastal zone; there are large enclosed fields of improved grassland as far as Clett of Crura. From this point to Stews, the landscape is characterised by open rough grassland and heather. Between Stews and Newark Bay, there is only one settlement and the landscape is dominated by regular, enclosed fields of improved grassland.

Eleven sites were recorded in this area, of which, eight had been noted previously. Seven sites could not be visited: four sites could not be located on the ground; two sites are located in the marine zone and; the access to one site was hazardous. Nine sites are considered to be vulnerable to erosion; of these three sites, which were not visited, are thought to be either eroding or now removed by erosion. An anthropogenic deposit (SR143) seen in an eroding coastal section in 1973, could not be re-located and may now be completely eroded away. The promontory on which site SR97 stands is fast eroding; the bank was not inspected but is likely to be also eroding. The site of St. Andrew's Chapel and burial ground (SR123) could not be located due to dense vegetation cover, but was last recorded as suffering from coastal erosion in 1973.

Geomorphology

This rugged coastline, predominantly over 5m in height, faces directly east to the North Sea. The rock platform at Wind Wick has some shingle cover, but other than this, and a few localised areas to the west of Stews Taing, there is little sediment cover over the narrow rock platform. To the north of Wind Wick the height of the coastal edge increases to over 80m. Steep slopes and talus mounds are prevalent from Hesta Head to Stews Head where the edge drops below 80m. Beyond this point, the coast edge falls below 5m before the sandy foreshore of Newark Bay.

Erosion

Erosion is most noticeable in Wind Wick and up to Clett of Crura; from here to Kame of Stews erosion is still prevalent, but is defined more as landslip on the high cliffs. In this area deep cracks and crevices were observed up to 40m inland. At Newark Bay the sandy foreshore shows evidence of accretion.

SOUTH RONALDSAY MAP 7 BUILT HERITAGE & ARCHAEOLOGY

SR142 (ND 48 NE 8)

ND 4595 8668

Windwick

Site of souterrain

1st mill BC/1st mill AD

Not located

SR143 (ND 48 NE 20)

ND 4595 8678

Windwick

Anthropogenic deposits

Indeterminate

Not located

SR123 (ND 48 NE 4)

ND 4585 8685

Windwick

14th C

Site of St. Andrew's Chapel

Not Located

SR92

ND 4578 8689

Windwick

Noost

19th/20th C

Good

Nil

SR158 (ND 48 NE 8748)

ND 4578 8703

Off Windwick

Wreck

Indeterminate

Not inspected

SR159 (ND 48 NE 8887, 8749)

ND 4579 8736

Off Windwick

Wrecks of HMS Opal & HMS Narborough

20th C

Not inspected

SR97 (ND 48 NE 11)

ND 4586 8724

The Brough

Promontory Fort

1st mill BC/1st mill AD

Not inspected

SR141 (ND 48 NE 21)

ND 459 874

Linklater

Earthen bank

Indeterminate

Not inspected

SR96

ND 4649 8790

Hesta Head

Earthen bank

Indeterminate

Fair

Nil

SR95 (ND 48 NE 2)

ND 4650 8800

Hesta Head

Mound

3rd/1st mill BC

Poor

Monitor

SR94

ND 4671 8885

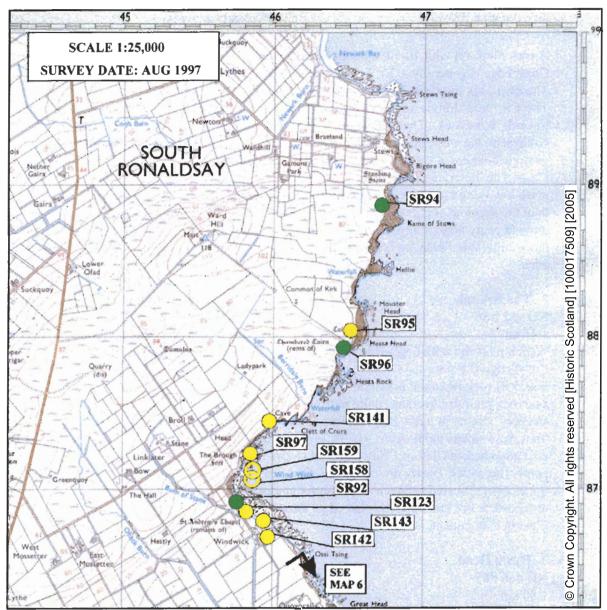
Kame of Stews

Earthen bank

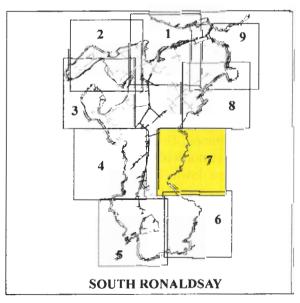
Indeterminate

Fair

Survey



- PROTECTED ANCIENT MONUMENT
 OR AREA OF DESIGNATED WRECK
- MONUMENT FORMALLY PROPOSED BY HISTORIC SCOTLAND FOR SCHEDULING OR WRECK FOR DESIGNATION
- + LISTED HISTORIC BUILDING
- UNDESIGNATED WRECK
- NOWN ANCIENT MONUMENT
- SITE FOUND BY THIS SURVEY
- SITE COMPLEX



SOUTH RONALDSAY MAP 7 HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

1 Ossi Taing

ND 459 868

0.75 km

A rock platform with 40-60% shingle/sand cover. Coast edge is generally > 5m.

The drift/rock interface is predominantly visible. There is more shingle and a few patches of sand towards Windwick. The shingle grades towards cobbles by the western corner of Windwick. The geology changes at Ossie Taing to the Eday Flags. The hinterland reflects the change in a more low lying area with more cultivable fields than the previous sections to the south. Poorly drained peaty gleys still persist, although a few more cultivable fields are fenced to the coast edge.

2 The Brough

ND 462 868

1.35 km

A rock platform with negligible cobble cover. Coast edge is > 5m.

The drift/rock interface is visible.

The rock platform becomes quite narrow and steeply shelving in many places. Most of the hinterland slopes moderately, 10-20°, towards the cliff edge before Clett of Crura and then slopes gently thereafter. Poorly drained peaty gleys are not easily cultivated so much of the hinterland is unfenced or not fenced to the cliff edge. Rough grazing is dominant.

3 Hesta Head

ND 466 885

1.80 km

A rock platform with perhaps 40% talus cover. Coast edge is > 5m.

The drift/rock interface is rarely visible. The rock platform carries large amounts of stabilised talus as far as Bigore Head. The cliff edge is >60m for the most part. The talus and land slip angles are generally > 40°. The hinterland is peaty and quite boggy north of Kirk Common. The soils become poorly drained peaty gleys north of Bigore Head as the land starts to slope down. There are small crevices opening up along most of the edge, most notably at Mouster Head.

4 Stews Head

ND 467 895

0.75 km

A rock platform with 10-50% shingle cover.

Coast edge is predominantly > 5m.

The drift/rock interface is generally visible.

West of Stews Taing patches of sand and shingle become more frequent. The hinterland has many fields which are cultivable with imperfectly drained peaty gleys.

5 West of Stews Head

ND 462 898

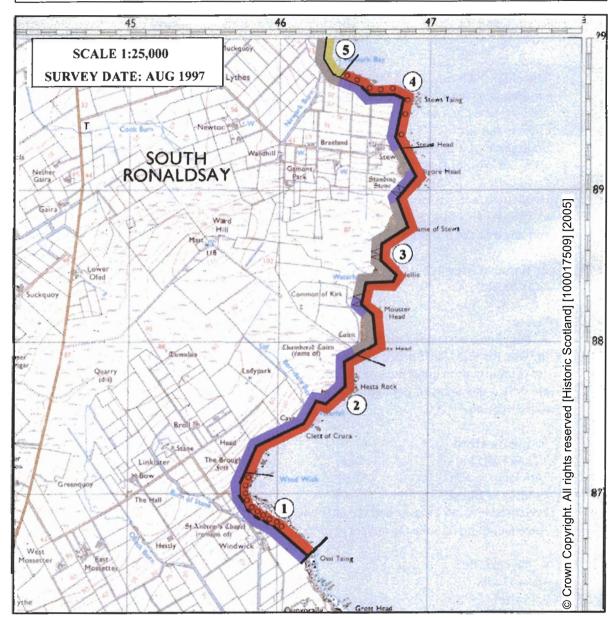
0.35 km

Sandy foreshore.

Coast edge is < 5m.

The drift/rock interface is not visible.

The foreshore sands abut a vegetated sandy area. The underlying drift is a shelly sand with skeletal soil at the foreshore edge grading to brown soil further back on the hinterland.



FORESHORE



ROCK PLATFORM MAINLY SAND MAINLY ALLUVIAL/MARINE MUD MARSH

HINTERLAND

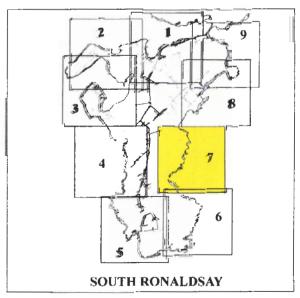


DRIFT DRIFT ON VISIBLE ROCK RAISED BEACH ETC BLOWN SAND GLACIAL SAND/GRAVEL ALLUVIUM

MODIFIERS



LOW EDGE <5M CLIFF >5M MAN MADE BARRIER SHINGLE/STORM BANK HUMAN DISTURBANCE



SOUTH RONALDSAY MAP 7 EROSION CLASS

1 Ossi Taing

ND 462 875 2.95 km

Eroding

The cliff which runs along Windwick is almost eroding in a continuous stretch with no more than 20m stretches in a stable condition. The high cliffs to the north of Windwick give an impression of a rather more stable section although erosion is active. The Brough fortification is highly unstable. North of Hesta Head there is much land slip and small crevices at Mouster Head lie up to 40m in from the edge and attest to the instability of the cliff edge.

2 Kame of Stews

ND 468 888

0.65 km

Stable

Although there has been massive land slip into the sea, the talus has formed stable areas which are presently protecting the coastal edge. There are only a few areas of negligible localised subacrial erosion.

3 Bigore Head

ND 467 895

1.05 km

Eroding to Stable

Localised erosion of talus and the cliff edge with some slumping of soils on steeper gradients.

4 Newark Bay

ND 462 898

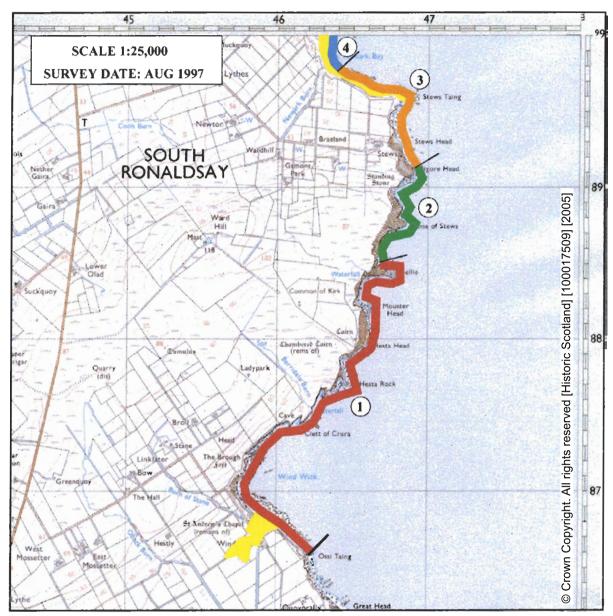
0.35 km

Accreting

There is accretion of sands both onto beach with probable subsequent aeolian accretion of the sands onto the hinterland on this side of the bay.

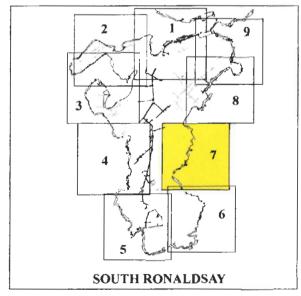
EROSION CLASS

SOUTH RONALDSAY MAP 7





DEFINITELY ACCRETING ACCRETING OR STABLE STABLE ERODING OR STABLE DEFINITELY ERODING ACCRETING AND ERODING NO ACCESS LAND BELOW 10M



SOUTH RONALDSAY MAP 8: MUCKQUOY TO HONEYSGEO

Built Heritage and Archaeology

From Muckquoy to Grim Ness the hinterland is characterised by regular, enclosed fields of improved pasture. At Grim Ness, the landscape is bleak and barren; the unenclosed headland is partially denuded of vegetation. Overall, settlement is sparse and focused on the B9044 road, which lies 1km, on average, from the coast edge.

Sixteen sites were recorded in the area covered by this map section. Of these, seven sites were previously noted. One site, SR138- St. Peter's Church at Kirkhouse, is listed grade 'B'. Three sites could not be located and therefore, were not inspected. Seven sites were considered vulnerable to erosion. Of particular interest is the site complex at Kirkhouse point (SR99, 100 & SR101, 102), which appears to be an early industrial centre, provisionally dated to 17th C. The scattered nature of the various structural elements makes it difficult to appreciate the exact nature of the site during a rapid survey such as this; it is recommended that topographic survey be carried out here.

Geomorphology

The unit starts at Newark Bay where the coast edge is less than 5m. At low water, the rock platform is partially visible beneath the long sandy beach. Storm beaches lie along the Grud. North of the small sandy foreshore of Manse Bay, the coastal edge rises to over 5m. While the entire length of this stretch of coastline is exposed to the North Sea, it has a much more gentle appearance, apart from the area around Grim Ness, than the preceding three units, shown on Maps 4, 5 and 6.

Erosion

Accretion is apparent in parts of Newark Bay, although there is also some erosion occurring at the north end of the bay. Other points of notable erosion lie to the north of The Grud and on Grim Ness. Subaerial erosion accounts for most of the drift erosion on Grim Ness.

SOUTH RONALDSAY MAP 8 BUILT HERITAGE & ARCHAEOLOGY

SR93 SR136 (ND 49 SE 16) SR105 ND 4724 9084 ND 4688 9089 ND 4825 9255 Kirkhouse Kirkhouse Cruive Structure inc corn drying kiln Cairn, possible Hulk 18th/19th C 4th/3rd mill BC 20th C Poor Not located Poor Survey Nil SR139 (ND 49 SE 20) SR137 (ND 49 SE 19) SR122 ND 4695 9089 ND 484 928 ND 4738 9117 Kirkhouse Kirk Ness Grim Ness Cist, possible Mound Lead Mine

Indeterminate Indeterminate 18th C Not located Not located Not located **SR138** (ND 49 SE 1, 23, 27) **SR103 SR108** ND 4707 9084 ND 4898 9255 ND 4745 9120 Kirkhouse; St. Peter's Kirk Ness Sheep Bight Dyke and enclosure Enclosure Church: listed 'B', graveyard,

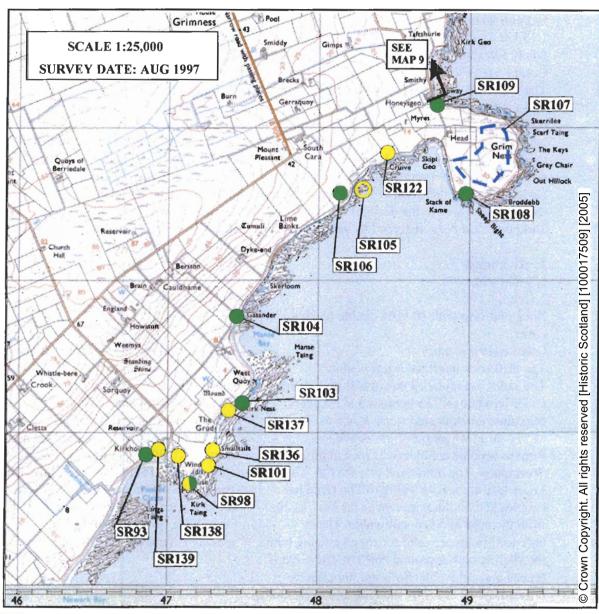
Church: listed 'B',graveyard, Dyke and enclosure
symbol stone 19th/20th C Indeterminate
17th C Poor Fair
Good Nil Nil

SR98, 99, 100 (ND49 SE 18) SR107/140 (ND 49 SE 24) SR104 ND 4708 9079 ND 4749 9180 ND 489 926 Kirkhouse Point Gasander Grim Ness Structure, windmill base, & House Mounds wharf 19th/20th C Indeterminate 17th/19th C Fair Poor Fair Nil Nil Survey

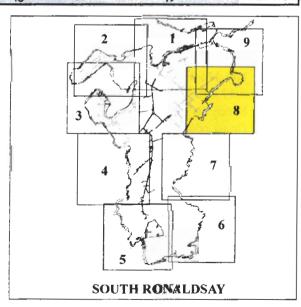
SR109 SR101,102 **SR106** ND 4729 9075 ND 4819 9255 ND 4875 9315 Kirkhouse Point South Cara Honeysgeo Kelp pits, industrial remains, Earthen bank Structures fish drying area Indeterminate 19th/20th C 17th/19th C Fair Fair Fair Nil Nil

Survey

SR134 (ND 49 SE 2) ND 4868 9317 Honeysgeo Site of burnt mound 2nd/1st mill BC Not located



- PROTECTED ANCIENT MONUMENT
 OR AREA OF DESIGNATED WRECK
- OMONUMENT FORMALLY PROPOSED BY HISTORIC SCOTLAND FOR SCHEDULING OR WRECK FOR DESIGNATION
- T LISTED HISTORIC BUILDING
- UNDESIGNATED WRECK
- KNOWN ANCIENT MONUMENT
- SITE FOUND BY THIS SURVEY
- SITE COMPLEX



SOUTH RONALDSAY MAP 8 HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

1 Newark Bay

ND 466 904

1.15 km

Sandy foreshore.

Coast edge is < 5m.

The drift/rock interface is not visible.

The sandy foreshore continues from 6.22 ± 4 up to Kirkhouse. The hinterland has much blown sand which has been stabilised by vegetation with thin freely drained brown soils lying over part of the sandy hinterland. There is also evidence of buried soils and stabilised sand surfaces beneath the sands. An area to the north of the bay by Kirkhouse has been disturbed by sand extraction.

2 Kirkhouse

ND 474 911

1.15 km

Rock platform with 80-90% cobble and boulder cover.

Coast cdge is < 5m.

The drift/rock interface is not visible.

The sands are replaced by cobbles and boulders under Kirkhouse. The cobbles and boulders constitute an elongated storm beach as far north as The Grud where the storm beach looses it's form to become cobbles over rock platform to West Quoy. The hinterland is quite flat. The lower land from Kirk Taing to The Grud has cobbles and boulders strewn as far back as 20m from the edge and is uncultivable. These unfenced fields are used for rough grazing with the slightly higher ground north of The Grud is fenced and cultivable. Soils are imperfectly drained blown sands by the Kirk and West Quoy with poorly drained gleys and peats north of The Grud, where some tills are exposed in section.

3 West Quoy

ND 474 916

0.47 km

Sandy foreshore with 10-20% cobble cover.

Coast edge is generally > 5m.

The drift/rock interface is visible to the north. A sandy foreshore and few cobbles fade out by Gasander to a rock platform. An occupied farm, with a small sea wall, lies on the lower ground to the south whilst a derelict building lies on a partially eroding edge. A track and rough grazing lie between the foreshore and gently sloping fields on the higher ground approximately 20-40m back from the edge

4 Lime Banks

ND 480 924

1.68 km

Rock platform with 20-30% intermittent cobble cover.

Coast edge is > 5m.

The drift/rock interface is visible.

Machinery/plant wreckage lies on the foreshore close to Skipi Geo. The geo itself has 50% cobble cover. The hinterland slopes gently towards the edge with fencing 10-30m from the edge. Most of the fields are cultivable with freely drained brown sandy soils. There is some disturbance by Lime Banks and old lime kilns can be seen along part of the hinterland. Galena can be found in an exposed vein in Skipi Geo.

5 Grim Ness

ND 493 927

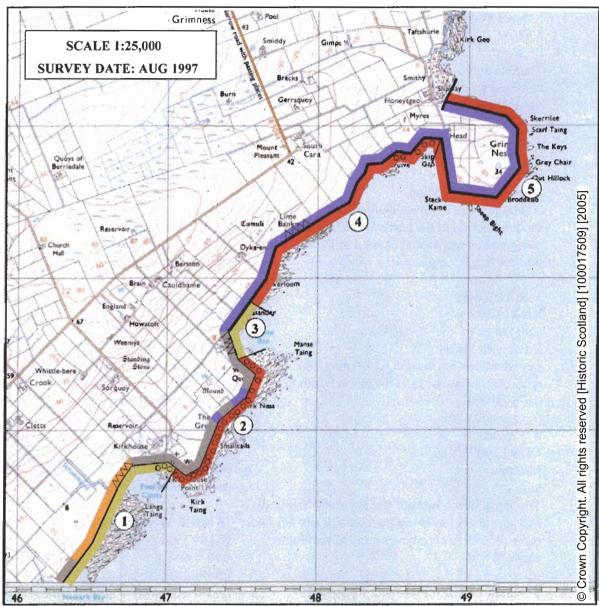
1.60 km

Rock platform with rare intermittent shingle cover.

Coast edge is > 5m.

The drift/rock interface is visible.

Shingle and some sand patches are found to the west of Skerilee. The hinterland is moderately sloping, 10-20°, with more gradient to the east side. Large areas of denuded till/rock are seen by Broddrebb due to peat flow. The soils are poorly drained peaty saline gleys to peats with a thin underlying till over Rousay Flags. The rough grazing is fenced 2-10m from coast edge.



FORESHORE



ROCK PLATFORM
MAINLY SAND
MAINLY ALLUVIAL/MARINE MUD
MARSH

HINTERLAND

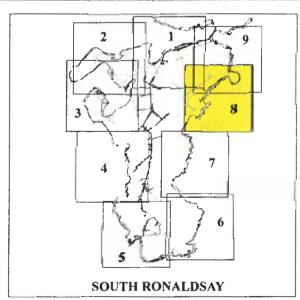


DRIFT
DRIFT ON VISIBLE ROCK
RAISED BEACH ETC
BLOWN SAND
GLACIAL SAND/GRAVEL
ALLUVIUM

MODIFIERS



LOW EDGE <5M CLIFF >5M MAN MADE BARRIER SHINGLE/STORM BANK HUMAN DISTURBANCE



SOUTH RONALDSAY MAP 8 EROSION CLASS

1 Newark Bay

ND 464 902

0.52 km

Eroding

There is definite erosion of the sand dunes/edges at the centre of the bay as compared to the accreting sands to the south.

2 Kirk House

ND 467 907

0.55 km

Accreting and Eroding

Although there is strong evidence of accretion, sand extraction in the north of the bay has instigated or aggravated erosion of the edges cut into the fragile vegetation.

3 Kirk Taing

ND 471 908

0.30 km

Eroding to Stable

Localised erosion around Kirk Taing with possible transgression of the storm beach below the windmill.

4 Smalltails

ND 473 909

0.30 km

Stable

The storm beach is quite stable around Smalltails and appears not to be transgressing landward for some time as lichens cover most of the stones above HWM.

5 North of The Grud

ND 474 911

0.18 km

Eroding

Definite erosion from The Grud to Kirkness where the storm beach is transgressing and breaking up the shallow coast edge.

6 West Quoy

ND 475 914

0.60 km

Stable to Eroding

Localised erosion close to a small wall in front of the farm and definite erosion, approximately 80m, beneath a derelict building south of Gassander.

7 Lime Banks

ND 482 926

2.00 km

Stable

Although mostly stable there is localised human disturbance on the hinterland at Lime Banks and some minor cliff erosion just before Gruive. There are also a few stabilised rills which run seawards east 400m east of Lime Banks.

8 Sheep Bight

ND 4905 9255

0.25 km

Eroding to Stable

Localised erosion with land slip to the east and minor slumping of drift deposits.

9 Grim Ness

ND 493 927

0.58 km

Eroding

A large area of peat and drift has been eroded between Braddeff and Grey Chair. Perhaps up to 80% of the top soil has been eroded by slump/creep leaving only a denuded rock or till. Most of the debris has been eroded over the cliff edge. It is probable that wave throw during storms on this exposed promontory has also participated in the denudation.

10 North Westerly Coast of Grim Ness

ND 490 931

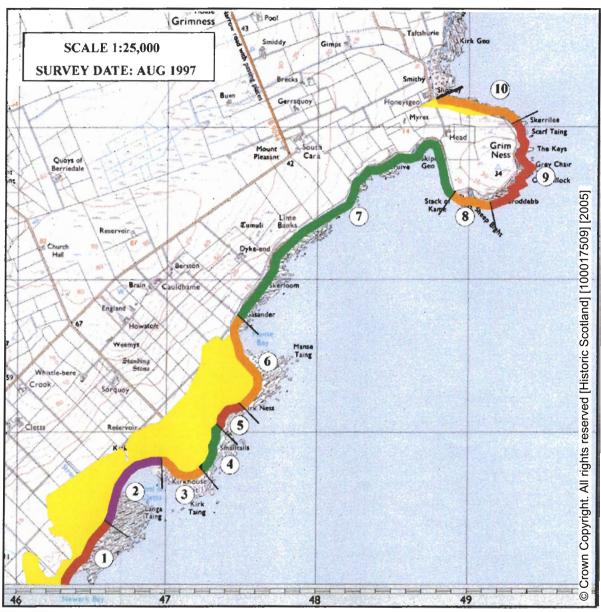
0.52 km

Eroding to Stable

Localised sea erosion with limited sub-aerial erosion.

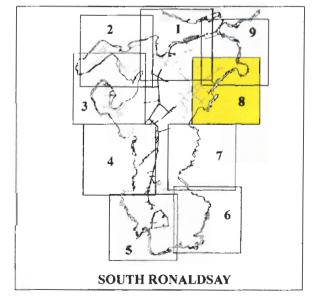
EROSION CLASS

SOUTH RONALDSAY MAP 8





DEFINITELY ACCRETING ACCRETING OR STABLE STABLE ERODING OR STABLE DEFINITELY ERODING ACCRETING AND ERODING NO ACCESS LAND BELOW 10M



SOUTH RONALDSAY MAP 9: HONEYSGEO TO ASHBY

Built Heritage and Archaeology

The landscape of this area is characterised by a regular pattern of enclosed fields of improved grassland. The area is dominated by several large farms and settlement is sparse and focused on the B9044 road, which lies, on average, 1.5km behind the coast.

Thirteen sites were recorded in the area covered by this map section. Of these, five had been noted previously. Four sites were not visited because they could not be located on the ground. Nine sites were considered vulnerable to erosion and, of these, two sites are actively eroding: SR110, a probable kelp pit and SR112, an indeterminate stone structure, are visible in coastal exposures.

Geomorphology

The coast edge is below 5m for the entirety of this stretch of coastline. There is sand accretion occurring on the eastern side of the Churchill Barrier, by the Ayre of Cara.

Erosion

Erosion is taking place within the small cove of Honeysgeo and intermittently along the coast to the north; especially at the point at Hallbreck. Sands are accreting along the Ayre of Cara and along the east side of the barrier; however there is also some erosion of the coastal edge by the Ayre of Cara. On the west side of the barrier there is much shingle with possible evidence of both accretion and erosion, close to the barrier.

SOUTH RONALDSAY MAP 9 BUILT HERITAGE & ARCHAEOLOGY

SR110

ND 4875 9325 Honeysgeo Kelp pit

18th/20th C

Poor Monitor **SR131** (ND 49 SE 22)

ND4854 9435 Old Crutha

House and field system

17th C

Not inspected

SR117, 118, 129

(ND 49 SE 28) ND 4789 9480 Ouoybanks

WWII Cara Battery

1940-1944 Fair/poor Monitor

SR111

ND 4874 9335 Honeysgeo Structures 19th/20th C

Good Nil SR114

ND 4845 9447 Grutha, Bus Taing

Noost 19th/20th C

Fair Nil

SR133 (ND 49 SE 4)

ND 4880 9353 Kirk Geo

Site of St. Colms Chapel

13th C Not located SR115

ND 4835 9456 Quoynathues Strucures 19th/20th C Fair/poor Survey

SR132 (ND 49 SE 5)

ND 4879 9404 Hallbreck Site of cairn 4th/3rd mill BC

Not located

SR130

ND 4835 9456 Quoynathues Mound

Indeterminate

Fair Survey

SR112

ND 4882 9421 Croo Stone Structure Indeterminate Poor

SR113

Monitor

ND 4875 9436 Rumley Point Datum marker, military

20th C Good Nil **SR116**

ND 4819 9460 Quoynathues House 19th/20th C

Fair Nil

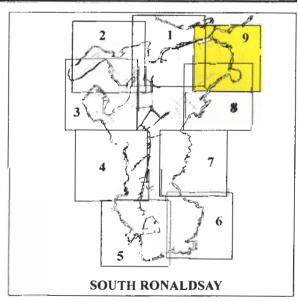
SR135 (ND 49 SE 11)

ND 4799 9465 Hall of Cara

Site of burnt mound 2nd/1st mill BC Not located



- PROTECTED ANCIENT MONUMENT OR AREA OF DESIGNATED WRECK
- OMONUMENT FORMALLY PROPOSED BY HISTORIC SCOTLAND FOR SCHEDULING OR WRECK FOR DESIGNATION
- + LISTED HISTORIC BUILDING
- UNDESIGNATED WRECK
- NOWN ANCIENT MONUMENT
- SITE FOUND BY THIS SURVEY
- SITE COMPLEX



SOUTH RONALDSAY MAP 9 HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

1 Honeysgeo

ND 487 933

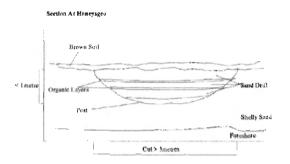
1.15 km

Rock platform with patchy 40-60% shingle/sand cover.

Coast edge is < 5m.

The drift/rock interface is not visible.

The sand and shingle patches lie close to Honeysgeo and Smithy with some disturbance in front of the farm. The hinterland is gently sloping with cultivable fields fenced to the edge and freely draining brown soils. The brown soil overlies up to 2m of shelly sand at Smithy where a buried peat lies in a 3m basin cut, over 1m deep, within the sand drift. Various other organic/sandy soil layers (4) overlie the peat layer.



2 Taftsburie

ND 488 940

1.27 km

Rock platform with < 20% shingle/sand cover. Coast edge is < 5m.

The drift/rock interface is Intermittently visible. Shingle and sand lies below Limbo with cobbles in front of Hallbreck. Sands start to increase to > 50% by Bus Taing. The hinterland is gently sloping with good cultivable fields fenced to the edge. Apart from a 50m length of imperfectly drained gley soils from Kirk Gco, they are freely draining brown soils to Limbo and then mixed with imperfectly drained peaty gleys to the end of this section at Bus Taing. There is disturbance by the farms at Hallbreck.

3 Quoybanks

ND 480 948

1.20 km

Sandy foreshore.

Coast edge is < 5m.

The drift/rock interface is not visible.

There are some rocks protruding through the foreshore sands at Quoybanks. Blockships have been inundated with sand and the barrier (No.4) has a wide headland of accreted sands, > 50m on the east side, with stabilising vegetation along it's length. A few houses and military defences lie along the coast from Quoybanks to Ayre of Cara. The land is cultivable with some arable fields which are fenced to the edge. A track with stored silage lies below Quoynathues.

4 West Side of Barrier No.4

ND 479 952

0.55 km

Rock platform.

Coast edge is < 5m.

Artificial causeway.

Concrete sea defences have no sand cover and are embedded in shingle. The road lies close to the western edge with an accreted hinterland of vegetated sand.

5 West of Ayre of Cara

ND 474 948

0.68 km

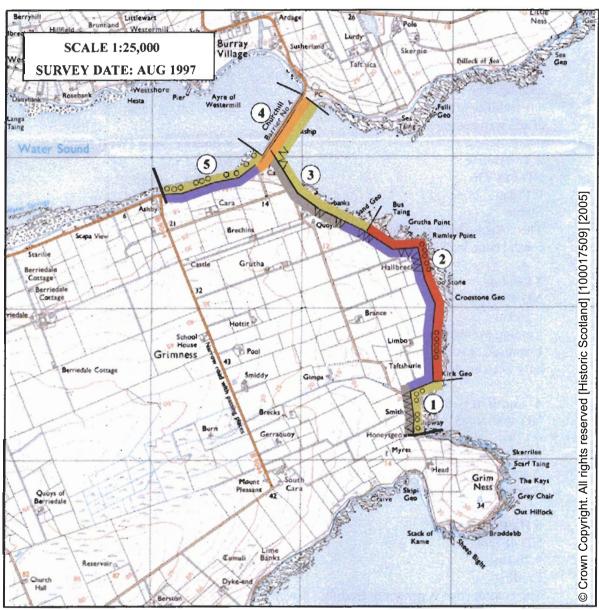
Sandy foreshore with > 80% shingle cover.

Coast edge is < 5m.

The drift/rock interface is intermittently visible. A small ayre of shingle runs almost parallel to the barrier for 30m from the south shore, close to an occupied house. A shingle beach lies to the south of the house. The main road runs along top of the hinterland to Ashby. The land is gently sloping with cultivable fields and imperfectly drained gleys.

HINTERLAND GEOLOGY & COASTAL GEOMORPHOLOGY

SOUTH RONALDSAY MAP 9



FORESHORE



ROCK PLATFORM
MAINLY SAND
MAINLY ALLUVIAL/MARINE MUD
MARSH

HINTERLAND

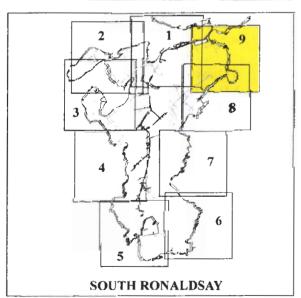


DRIFT DRIFT ON VISIBLE ROCK RAISED BEACH ETC BLOWN SAND GLACIAL SAND/GRAVEL ALLUVIUM

MODIFIERS



LOW EDGE <5M CLIFF >5M MAN MADE BARRIER SHINGLE/STORM BANK HUMAN DISTURBANCE



SOUTH RONALDSAY MAP 9 EROSION CLASS

1 Honevsgeo

ND 487 933

0.40 km

Eroding

The cove between Honeysgeo and Kirk Geo is eroding. The soft sandy drift is easily eroded and any stability of the area is due to a small stretch of sea wall and rock outcrops.

2 Taftsburie

ND 488 936

0.15 km

Stable

The coast is stable with much vegetation on the coastal edge/bank.

3 Limbo

ND 488 939

0.30 km

Eroding to Stable

Localised erosion where parts of the bank/edge have been eroded.

4 South of Croo Stone

ND 4880 9405

0.12 km

Stable

A small stretch of coast which is completely vegetated to the foreshore.

5 Hallbreck

ND 487 943

0.70 km

Eroding

The coastal edge is generally eroding. A wall on the north facing coast past the farm is close to being undermined by the sea. There is negligible sub-aerial erosion.

6 Quoybanks

ND 481 946

0.55 km

Eroding and Accreting

Sands are accreting along the coast, however the soft tills exposed at the edges above the sands are being eroded and some protection has been afforded around some areas with cages of stones.

7 Barrier No. 4 (East Side)

ND 479 950

0.65 km

Accreting

Sands are definitely accreting and have been since construction in 1942. The sands have been stabilised by vegetation.

8 Barrier No. 4 (West Side)

ND 479 952

0.55 km

Stable

The western side of the barrier is stable with no accretion.

9 West of Cara Ayre

ND 4764 9490

0.18 km

Accreting and Eroding

Accretion and erosion of small shingle ayre. Apart from this and very localised erosion the coast is stable.

10 Cara

ND 473 947

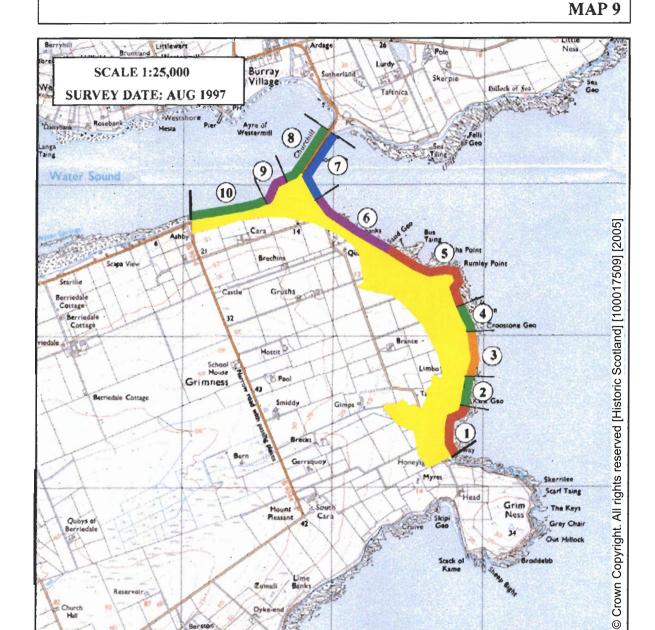
0.50 km

Stable

Vegetation lies close to the foreshore for much of this section down to Ashby.

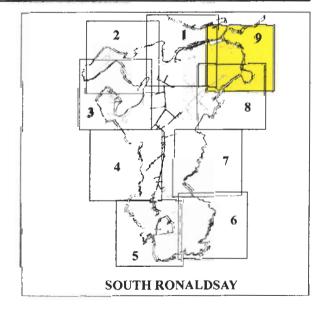
EROSION CLASS

SOUTH RONALDSAY





DEFINITELY ACCRETING ACCRETING OR STABLE STABLE ERODING OR STABLE DEFINITELY ERODING ACCRETING AND ERODING NO ACCESS LAND BELOW 10M



4.0 APPENDICES

4.1 APPENDIX 1: SITE DESCRIPTIONS

BURRAY MAP 1 (CHURCHILL BARRIER #3 TO REEF POINT)

B13

Burray: Map 1 ND 4735 9850 East Weddell Sound Churchill Barrier # 3, WWII Coastal Defences (ND 49 NE 16) 1943

Located in marine zone

Barrier # 3 joins Glimps Holm to Burray, forming one link in the chain of artificial coastal defences which connects Orkney Mainland to the islands of Lamb Holm, Glimps Holm, Burray and South Ronaldsay. These barriers were built during WWII to block off the eastern approaches to Scapa Flow which served as the base of the British Home Fleet. The barriers were constructed by Italian prisoners of war from numerous five to ten ton concrete blocks set on rubble foundations, laid onto the sea bed. After the war, a road surface was laid over the barriers, creating a causeway which forms part of the A961 road between St. Mary's Holm (Mainland) and St. Margaret's Hope (South Ronaldsay).

Good Nil

B31

Burray: Map 1 ND 4749 9835 East Weddell Sound

WWII debris associated with construction of Churchill Barrier #3

20th

Located in inter tidal zone

Parts of four containers lie strewn about the foreshore, at the HWM, to the E side of Churchill Barrier #3. They each measure 1.5m³ and are constructed from railway sleepers with a sheet metal lining; some have metal chains at their corners. They appear to be fragments of the moulds which were used in the construction of the concrete blocks for the Churchill Barriers. Fair

Burray: Map 1 ND 480 951

East Weddell Sound

WWI & II Blockships (ND 49 NE 8718, 8899, 8900, 8901, 8902)

20th C

Located in inter tidal and marine zones

Throughout the two World Wars Scapa Flow served as the base of the British Home Fleet. Access to these waters was guarded by a series of coastal batteries, booms and blockships. The blockships comprised old and damaged vessels which were deliberately sunk in position so as to form a submarine obstacle to deter enemy incursions. By 1943, the completion of the Churchill barriers, which cut off the eastern approaches to Scapa Flow, rendered the blockships obsolete. After 1945 some of the blockships were dispersed by explosive to clear the shipping lanes while many others were salvaged for parts and metal. The wrecks of several blockships remain on the sea bed and in the inter tidal zone.

- (i) To the E side of Churchill Barrier #3, the wreck of the *Reginald* (ND 49 NE 8899) lies in shallow water. This 930 tons iron three-masted motor schooner was built in 1878 in Glasgow and was sunk in 1915. The stern section of the hull is visible above the water line.
- (ii) The Lapland (ND 49 NE 8902), a 1,234 ton steel single-screw steamer was built in Dundee in 1890 and registered in Liverpool. Little of this blockship is now visible, since the barrier was constructed over it.
- (iii) The *Gartshore* (ND 49 NE 8901), a 1,564 tons iron single-screw steamer, was built and registered in South Shields. She lies to the W side of the barrier.
- (iv) The *Martis* (ND 49 NE 8900), a 2,483 ton steel single-screw steamer, was built in South Shields in 1894. She lies to the W side of the barrier.
- (v) The *Empire Seaman* (ND 49 NE 8718))was a steel single-screw steamer of 1,921 tons. Built in Lubeck in 1922, she was seized by the Royal Navy in 1940 and sunk as a blockship. She lies to the W side of the barrier.

Not inspected

B12

Burray: Map 1 ND 4719 9670 Echna Loch House and outbuilding 19th/20th C

Located <50m from coast edge

A house and an outbuilding, which are roofless and ruinous, lie 12m apart and are may be associated with a nearby mill building (B32). The outbuilding lies 48m from coast edge, is aligned SW-NE and measures 5m long by 3.3m wide. The walls, which are of rubble and roughly dressed blocks, are clay bonded and partially mortared. They stand to a height of 3.5m high at the SW gable end. A pair of opposed doorways are situated in the long walls towards the NE end. Both gable ends have small central apertures. The interior is overgrown. Metal fixings on the internal walls may be the remnants of tethering positions.

The house lies c.36m from the coast edge, on the same SW-NE alignment as the outbuilding. It measures 6m by 10m and stands to a maximum height of 2.5m at the SW gable end. The walls, which are up to 0.7m, are constructed from roughly dressed blocks and rubble and are clay bonded. Traces of render are visible on the internal wall faces around the windows;

patches of a rough render also survive on the external walls. Two small windows pierce the NW wall; the SE wall is reduced to foundation level. A hearth lies to the SW end of the interior. The remains of a small yard adjoin the SW end of the house. The yard and interior of the house are now overgrown with dense vegetation.

Fair Nil

B32

Burray: Map 1 ND 4719 9670 Echna Loch Mill

19th/20th C

Located <10m from coast edge

A disused mill building lies c.5m from the foreshore. It is roofed and intact and currently serves as a store. Site examination was limited to the exterior of the building since it was not possible to gain access. It is aligned NE-SW and measures 10m by 6m, standing to a height of c.3m. It is constructed from roughly dressed blocks and rubble and is mortared on the exterior; it has a slate roof. A metal rod, the remains of the drive shaft for the mill wheel, protrudes at ground level from an aperture at the SW end of the building. The mill pool has been filled in but part of the mill lade is still visible. A door is located in a central position in the SE long wall and is flanked by two window apertures of equal size. At the NE end a small recessed annex adjoins the mill. Measuring 5m by 5m, the annex has a door in its SE wall and a small aperture beneath the apex of its gable.

Good Nil

B11

Burray: Map 1 ND 4628 9725 Nearhouse, NE of lookout Field boundary and clearance cairn

18th/19th C

Located <10m from coast edge

A field boundary, in the form of an intermittent earthen and stone bank, runs parallel to the coast edge for up to 100m. It has been built against a break-in-slope and lies, at most, 10m from the cliff edge. The bank stands up to 1m in height, but is frequently much reduced or removed entirely.

A clearance cairn, 3m in diameter, lies 4m from the cliff edge, to the landward side of the field boundary. It is formed from a loose pile of stones of various sizes, is sub-circular in shape and. is overgrown with coarse vegetation.

Fair

Burray: Map 1 ND 4589 9738

Swannies

House

19th/20th C

Located <100m from coast edge

A stone-built dwelling house with outbuildings and an enclosed garden is located 70m from the coast edge. The structures are intact and may be in use. A small shed (3.5m by 3.5m) and a portion of ruinous drystone walling, associated with the house, lie within 20m of the coast edge.

Good

Nil

BURRAY MAP 2: (REEF POINT TO LANGA TAING)

B36

Burray Map 2

ND 4412 9670 to ND 4452 9641

Hunda Sound

WWII Hunda Reef Barrier (ND 49 NW 2)

1941

Located in marine zone

The causeway between Hunda and Burray was constructed in 1940-1941 to provide a safe anchorage for the barrage balloon trawlers protecting the Scapa Flow base.

Good

Nil

H11

Burray: Map 2 ND 4408 9678

Hunda Quarry

20th C

Elements located <10m from coast edge

A sheer-sided quarry hollow, 6m wide and 4m deep extends inland from foreshore for almost 100m. It lies adjacent to the modern causeway. The base of the hollow is level and has been colonised by rough grass.

Good

H₁₀

Burray: Map 2 ND 4425 9682

Hunda Mound

Indeterminate

Located <20m from coast edge

An oval grassy mound is located within enclosed grazing land, at a distance of 15m from the coast edge. It measures 3m from E-W by 5m from N-S and stands up to 0.75m high. A small exposure revealed undifferentiated sandy soil. The mound lies close to a modern house and may be of recent origin.

Fair Nil

H9

Burray: Map 2 ND 4441 9711

Hunda Planticrub 19th/20th C

Located <20m from coast edge

A rectangular drystone enclosure with central division lies 12m from the coast edge. It is aligned NW-SE and measures 10m by 5m. The walls are reduced to piles of rubble, 0.2m high or less.

Fair Nil

H8

Burray: Map 2 ND 4475 9745 East Ayre

Three mounds

Indeterminate

Located <10m from coast edge

- (i) A conical mound, measuring 3m in diameter and standing up to 1m high, is situated less than 1m from the cliff edge. Stones of various sizes protrude from the base and several small stones are visible towards the top. The sharp outline of this feature may suggest that it is of relatively recent origin.
- (ii) A second mound, of similar shape, lies 3m to the E of mound (i). It stands to 0.3m high and contains little visible stone.
- (iii) To the W side of mound (i) a small concentration of grass-covered stones may represent the last vestiges of a third mound.

Fair

Survey

H7

Burray: Map 2 ND 4460 9735 East Ayre Enclosures 19th/20th C

Located <20m from coast edge

A large rectangular enclosure lies to the NE corner of the island of Hunda. It measures 44m E-W by 34m N-S. The drystone walls are ruinous and several portions have been entirely robbed out. There is an entrance at the SW corner. A smaller enclosure adjoins the southern wall; this measures 5m by 5m. Both enclosures are overgrown with coarse grass and no trace of previous cultivation is evident.

Fair Nil

H6

Burray: Map 2 ND 4340 9635 The Hope Enclosure 19th/20th C

Located <10m from coast edge

A large rectangular enclosure extends from the coast edge over sloping land to the side of a small hill. It is aligned NW-SE and measures approximately 100m by 50m. Its drystone walls are largely ruinous and reach a maximum height of 0.5m. The SW corner of the enclosure is eroding over the cliff edge. The land enclosed is now boggy and colonised by coarse vegetation; there are no signs of past cultivation

Fair Nil

H5

Burray: Map 2 ND 4340 9615 The Cairn Head Cairn (ND 49 NW 1) 4th/2nd millennium BC

Located <10m from coast edge

The classification of this site as a cairn is tentative: during this survey opinion was divided as to whether the site was that of a broch or a chambered cairn was represented; this debate is also evident in earlier records. It has been described as a cairn on the basis that there was no sign of a broch wall and there were no clearly anthropogenic deposits visible in the small exposures. The true nature of this site, however, is unlikely to be determined without recourse to excavation.

The site is clearly visible, being a large artificial mound built on top of a natural rise at the southern tip of Hunda. It measures some 15m in diameter and stands up to 2m high. A large quantity of loose stone is strewn around the immediate area whilst both in-situ and disturbed structural stone is visible to the hollowed centre. The mound is denuded of vegetation in several places, apparently the result of human and animal disturbance. A loose stone cairn has

been erected to the S side of the mound in recent times. The mound provides fine views across to the north coast of South Ronaldsay and Muckle Howe broch.

Monitor



SITE H5

H4

Burray: Map 2 ND 4348 9618 The Cairn Head

Cairn

4th/2nd millennium BC

Located <20m from coast edge

A scatter of loose and earth fast stones forms a circular feature, some 2.5m in diameter. The stones may represent the remnants of a kerb to cairn which has been almost completely obliterated.

Poor Survey

H3

Burray: Map 2 ND 4355 9620 The Cairn Head

Cairn

4th/2nd millennium BC

Located <20m from coast edge

A much reduced cairn is located 15m from low cliffs leading to the coast edge. Only the stone kerb remains to define this sub-circular feature. It measures c.3.5m in diameter and has a hollowed-out centre. Whilst no stone is visible to the centre of the cairn, a couple of larger stones to the SE side may be the remains of a facade which adjoined the kerb.

Poor Survey

H₂

Burray: Map 2 ND 4405 9675

Hunda Mound

Indeterminate

Located <100m from coast edge

A large shapeless mound lies in an enclosed field, close to a modern house at a distance of c.60m from the coast edge. It is grass-covered and measures 15m in diameter, standing to 2.5m high. Its size and proximity to a modern building may indicate that this feature is of relatively recent origin.

Fair Nil

H1

Burray: Map 2 ND 4408 9672

Hunda Structure 18th/19th C

Located <20m from coast edge

The remains of a rectangular bipartite structure lie in an enclosed grazing field, adjacent to the causeway terminus on Hunda. It is aligned NE-SW and measures, overall, 17m by 5m. The walls, which are of roughly dressed blocks and rubble, are up to 0.75m thick and are part clay-bonded and part mortared. The best preserved portion of walling is located to the NE end and stands to 2m. Inside, the chambers are equal in size. There are no traces left of internal features or of windows or doors. An area of concrete slabbing, located outside the SE side of the building, although of more recent origin, may be the threshold to a doorway which has now gone.

Poor Nil

B8

Burray: Map 2 ND 4454 9635 Reef Point Two structures 19th/20th C

Elements located <10m from coast edge

A ruinous structure, probably an outbuilding, is aligned N-S and measures 10m by 4m. The rubble walls are mortared and stand up to 2m high at the S end. The N end wall is entirely gone. It lies 15m from the coast edge. At a distance of 10m from the outbuilding lies a ruinous dwelling house. It is aligned E-W, measures 7m by 4m and lies 5m from the coast edge. The S wall is entirely gone, the surviving walls are up to 0.6m thick and clay-bonded with some traces of mortar on the exterior. There is a window aperture in the N wall and a hearth against the W wall.

Poor

Burray: Map 2 ND 444 962 Wha Taing Copper Mine 17th/18th C

Proximity to coast unknown

A copper mine, located in the area of Wha Taing, was worked in the period prior to 1774 (Mykura, 1976, 119). No trace of the mine or associated features was found during this survey.

Not located



B7

Burray: Map 2 ND 4453 9618 Wha Taing Structures

19th/20th C

SITE B7

Elements located <10m from coast edge

A range of buildings, extending for over 20m, comprises five conjoined structures which were built at different times. The buildings are aligned E-W and face S. They are all ruinous, although most stand almost to roof height. An enclosed garden plot lies in front of the buildings and a ruined boat shed, two noosts and several portions of collapsed drystone dyke are located in the immediate vicinity.

- (i) This structure forms the W end of the range of buildings and lies within 5m of the coast edge. It measures 2.5m X 2.5m; the walls stand to 1.4m and the W end gable reaching 2.5m. The walls are clay-bonded with additional mortaring on the interior. It abuts, but is not tied into, structure (ii). The single doorway which lies to the W end, retains part of a timber frame. There are no windows nor internal features other than a stone plinth, possibly the stand for a quern, which is located in the SE corner.
- (ii) & (iii) A small dwelling house comprises two chambers of separate build. The walls stand up to the height of the eaves. The presence of asbestos sheeting around the windows together with iron fire implements indicate that this structure was inhabited into the 20th C. The westernmost chamber (structure (ii)) measures 3m by 3.3m. It has two small windows which are situated opposite each other in the N and S walls. The E gable wall, which is 1m thick, has a large stone hearth recessed into it and carries a chimney stack. The mantel above the hearth is formed from a section of salvaged timber and there is a cupboard recess to one side. An external doorway is located to the SW corner, while a passage to the SE provides access into chamber (iii). The interior of chamber (iii) measures 3m by 3m. A single window is located to the centre of the S wall. A hearth against the E end wall is furnished with an iron grate.

- (iv) This room, measures 4m by 2.5m and is entered via a doorway to its SW end. The walls abut, but are not tied into, the end walls of structures (iii) and (v). A small aperture is located just above ground level on the N wall and there is a recess let into the E wall.
- (v) The N wall of this structure is almost entirely collapsed. The interior measures 5m by 3m. A single door and window are present in the S wall. A hearth occupies a recess in the E end gable wall. The internal walls retain traces of render and parts of the window and door frame timbers survive in-situ. The doorway is constructed from roughly dressed blocks.
- (vi) This small annex abuts the E end of structure (v). It measures 1.9m by 2.6m. The N wall is very ruinous. The doorway lies to the SW end whilst there is a small window in the E end wall.

Good

Survey

B6

Burray: Map 2 ND 4468 9611 Wha Taing Shed

19th/20th C

Located <10m from coast edge

A small rectangular structure lies 5m from low cliffs. It measures 3m by 2.2m and is aligned N-S. The walls are 0.6m thick and stand 1m high on average, at up to 2m at the S end gable. They are constructed from rubble with roughly dressed blocks at the corners and doorway. The doorway is located in the N end, facing inland. This shed is surrounded by overgrown peat cuttings and it may have served either as a fuel store or boat shed.

Fair Nil

B5

Burray: Map 2 ND 4486 9594 Mosshouse

Structure, enclosure and pit

19th/20th C

Located <10m from coast edge, some elements are eroding

A rectangular structure, 4m by 13m, is aligned E-W and lies 3m from the coast edge. The W end is best preserved with the gable end wall standing up to 2m high. The E end is ruinous and the E gable is completely gone. The walls are built from clay-bonded rubble and roughly dressed stone. The doorway is located in the S wall; traces of external render survive in this area. The structure is divided internally into two unequal portions. The remains of iron rings attached to the walls of the W end chamber indicate that it probably served as a byre. Nothing remains of the internal fittings of the E chamber, but its larger size suggests that it may have served as a dwelling house. An enclosed field, measuring 11m by 13m, lies 30m due E of the ruinous structure. The clay-bonded walls stand to 1m in places, with coping stones intact. A pit containing the remains of a pony and of a stone-lined drain are exposed in the coastal section in front of the ruinous structure. The pit is being actively eroded by the sea.

Fair

Burray: Map 2 ND 4592 9550 S of Ladywater

Slipway 19th/20th C

Located in inter tidal zone

A rough alignment of edge-set stones extend for up to 10m from the upper foreshore into the sea. To the E side of the stones, the foreshore has been cleared of large stones and may have been trenched. At the head of the stone alignment, the slipway terminates in an area of rough flagging which measures $4m^2$.

Fair Nil

B2

Burray: Map 2 ND 4601 9546 Stonefield Slipway 19th/20th C

Located in inter tidal zone

An intermittent line of large boulders lead from the base of the cliffs across the foreshore and into the sea; a distance of some 15m. Several of the boulders have iron rings inserted in their upper surfaces. A slight depression at the upper end of the slipway may be a boat noost.

Fair Nil

B1

Burray: Map 2 ND 4611 9542 Daisybank Refuse pits 19th/ 20th C

Located <10m from coast edge

A large refuse pit or filled-in ditch is exposed in the eroding coastal section. The cut measures 3m wide and is up to 0.75m deep. It is located 2.5m up from the base of the cliff. The rounded base is lined, or filled, with small to medium sized stones. The upper layers contain quantities of crockery sherds and fragments of metal. The landward extent of this feature could not be determined duc to the presence of dense vegetation.

Fair Nil

BURRAY MAP 3: LANGA TAING TO SEA GEO

B28, 37

Burray: Map 3 ND 472 955 Burray Village

Village (ND 49 NE 12, 13, 14): Store house Listed grade 'B'

17th C onward

Elements located <10m from coast edge

This village grew up in the 19th C as the premier centre of the herring industry in Burray. Its prosperity dwindled after WWI when the blockship barrier across Water Sound cut off direct access to the North Sea.

(i) (ND 49 NE 12) Storehouse, Westshore: Listed grade 'B'

A two-storied building with a loft, probably built as a girnell-house (meal store) for Burray Estate, is dated on the skew-putt to 1645. It has a harled exterior and a roof of Caithness flags. There is a forestair to an entrance on the second story.

(ii) (ND 49 NE 13) Burray Pier, wide sandstone pier, still in use.

(iii) (ND 49 NE 14) Warehouse, a two-storied former herring store, packing and curing house (now renovated as Sands Motel), dates to 1860. It is built from variegated local stone with sandstone dressings. Good, Nil

B27

Burray: Map 3 ND 4789 9522 Water Sound

Churchill Barrier # 4. WWII Coastal Defences (ND 49 NE 17)

1943

Located in marine zone

Barrier # 4 joins Burray to South Ronaldsay, forming one link in the chain of artificial coastal defences which connect Orkney Mainland to the islands of Lamb Holm, Glimps Holm, Burray and South Ronaldsay. These barriers were built during WWII to block off the eastern approaches to Scapa Flow which served as the base of the British Home Fleet. The barriers were constructed by Italian prisoners of war from numerous five to ten ton concrete blocks set on rubble foundations, laid onto the sea bed. After the war, a road surface was laid over the barriers, creating a causeway which forms part of the A961 road between St. Mary's Holm (Mainland) and St. Margaret's Hope (South Ronaldsay).

Good

Nil

B33

Burray: Map 3 ND 478 952 Water Sound

WWI & II Blockships (ND 49 NE 8739, 8740, 8741, 8744, 8895, 8897, 8898, 8894)

20th C

Located in inter tidal and marine zones

Throughout the two World Wars Scapa Flow served as the base of the British Home Fleet. Access to these waters was guarded by a series of coastal batteries, booms and blockships. The blockships comprised old and damaged vessels which were deliberately sunk in position

so as to form a submarine obstacle to deter enemy incursions. By 1943, the completion of the Churchill barriers, which cut off the eastern approaches to Scapa Flow, rendered the blockships obsolete. After 1945 some of the blockships were dispersed by explosive to clear the shipping lanes while many others were salvaged for parts and metal. The wrecks of several blockships remain on the sea bed and in the inter tidal zone.

- (i) The *Pontos* (ND 49 NE 8739), a 3, 265 ton steel single-screw steamer was built in Glasgow in 1891. She was sunk in 1914 and now rests c.12m offshore to the SE of Water Sound.
- (ii) The *Clio* (ND 49 NE 8895), a 2,733 ton steel single-screw steamer was built in Hartlepool in 1889. She was sunk in 1914 and is visible to the centre of Water Sound at low tide.
- (iii) The *Lorne* (ND 49 NE 8898), a 1,186 ton single-screw steamer was built in Hull in 1873 and sunk in 1915. The wreck was later dispersed by explosives and only fragments now survive.
- (iv) The Naja (ND 49 NE 8897), a concrete barge, was sunk in 1939 and lies to the centre of Water Sound.
- (v) The *Carron* (ND 49 NE 8741), a 1, 017 ton single-screw steel steamer, was built in Dundee in 1894. She was sunk as a blockship in 1940 and now lies, partially buried under sand, to the NE side of Churchill Barrier #4.
- (vi) The *Juniata* (ND 49 NE 8955), a twin-screw steel motor tanker, was built in Sunderland in 1918. Sunk in 1940, she now lies to the NE side of Churchill Barrier #4.
- (vii) The *Gondolier* (ND 49 NE 8894) was a 173 ton paddle steamer built in Glasgow in 1866. Sunk in 1940, she now lies on the SE side of the barrier.
- (viii) The *Collingdoc* (ND 49 NE 8744), a 1,1780 ton steel single-screw steamer was built in 1925 in Hill-on-Tees. She was sunk in 1942 and lies partially buried under the sand to the SE end of the barrier.
- (ix) Unidentified wreckage (ND 49 NE 8740) stands above HWM. Not inspected

B38

Burray: Map 3 ND 4851 9531

Kvelittle

Mound (ND 49 NE 8)

Indeterminate

Located <10 from coast edge

When surveyed in 1929, this site was visible as a slightly hollowed mound, some 30m in diameter. It stood up to 2m high and there were traces of a wall to the NE side. It was located on the margins of cultivated land and was thought to be the remains of a much denuded broch or chambered cairn. By 1973, all that survived was an uneven, roughly circular area of ground, c.20m in diameter and it was thought to have suffered coastal erosion. This site was not located during this survey.

Not located

Burray: Map 3 ND 4865 9522 Sea Taing Trackway 19th/20th C

Located on coast edge

A line of flat slabs and concrete, extending for 2m, is exposed in the coastal section beneath sand dunes. It appears to form part of a trackway of recent origin and to be associated with a gate which lies further inland.

Poor Nil

B25

Burray: Map 3 ND 4895 9553 Hillock of Fea Slipway 19th/20th C

Located at coast edge

A line of rough slabs are exposed in the coastal section. The slabs lie beneath topsoil and are bedded over a deposit of gravel, which is up to 0.4m deep. The deposits are related to a very degraded track or slipway which runs inland from the foreshore.

Poor Nil

B24

Burray: Map 3 ND 4922 9557 Hillock of Fea

Anthropogenic deposits

Indeterminate

Located on coast edge

Anthropogenic deposits are exposed over 8m in the coastal section. At the base of the section, a quantity of slabs forming a flat surface, which is covered by an accumulation of soil containing frequent shell and bone fragments. The second and third levels of stone are separated by stony brash which contains small fragments of burnt bone. This exposure is located to the immediate SW side of the Hillock of Fea (B23) and may be associated with it.

Similar deposits were noted by RCAHMS in 1929 and OS in 1973, although in both cases the deposits were described as part of the adjacent cairn (B23: ND 49 NE 7). The 1929 record notes the presence of kitchen-midden in a location where human remains had been found previously (OS 6" map, 1900, Name Book 1879). The 1973 record noted drystone walling, shell and bone deposits in the erosion face to the SW of the cairn. Since no direct relationship could be established between the eroding deposits and the cairn during this survey, they have been described separately.

Fair Survey



SITE B24

Burray: Map 3 ND 4929 9557 Hillock of Fea Cairn (ND 49 NE 7) 4th/2nd millennium BC Located <10m from coast edge

This site, previously described (RCAHMS, 1929, ii #865) as having been almost completely destroyed, is visible as an artificial mound, situated on a natural rise and located immediately behind the coast edge. It is amorphous, measuring 15m by 16m approximately and standing up to 3.5m high. The centre is depressed and appears disturbed. Smaller hollowed areas on the periphery of the mound also suggest disturbance. A quantity of structural stone is visible in the sides of a large pit cut into the highest point of the mound; the pit is of recent origin and may have held a fence post. An exposure to the seaward side of the mound contains an edge-set slab and some smaller stones.

This site is here classified as a cairn on the basis of its size and form; there is no direct evidence of any burials being found within it. Given, however, that the site was said to have been almost completely destroyed by 1929, it may be that the remains now visible are unrepresentative and thus any classification must be regarded as speculative.

Monitor

BURRAY MAP 4: SEA GEO TO CHURCHILL BARRIER #3

B22

Burray: Map 4 ND 4995 9603 Wife's Geo

Earthen bank and ditch

19th/20th C

Located <10m from coast edge

An earthen bank runs along the coast for up to 50m. It stands up to 1m high and is 1m wide. A ditch, 1m wide and 0.5m deep, runs parallel with the bank, to its landward side. Bank and ditch form the boundary between cultivated fields and a steep 15m high cliffs.

Fair Nil

B21

Burray: Map 4 ND 5038 9639 Burray Ness

WWII Anti-aircraft Battery (ND 59 NW 4)

1939-1945

Elements located <10m from coast edge

The most visible elements of the military remains in this area include:

- (i) An OS trig point, labelled #10648, lies to the NW periphery of the site.
- (ii) Two concrete gun emplacements, 4.5m in diameter, are located 9m from the coast edge.
- (iii) A subterranean magazine or bunker, constructed from mortared rubble with a concrete-covered corrugated iron roof, lies to the rear of the gun emplacements (ii). It measures 6m by 4m and is covered by a mound which measures 12m by 10m. The single doorway faces seaward and is reached via a set of concrete steps. There is a metal flue in the roof and the interior is flooded.
- (iv) A set of concrete blocks, set out in the shape of a cross, may be a barrage balloon mooring site.
- (v) A single gun emplacement lies to the immediate WSW of (iv). It is located 10m from the coast edge and has a diameter of 3m.
- (vi) A length of drystone walling, which turns two acute angles, may have served as a gun position
- (vii) The remains of several concrete plinths and the footings for a nissan hut are located to the rear of the battery, alongside piles of concrete and stone rubble.

Fair

Survey

Burray: Map 4 ND 5029 9658 Flood Crag

Planticrub and dyke

19th/20th C

Located <50m from coast edge

The footings of a robbed out drystone dyke run parallel to the coast for over 200m. The wall stands nowhere more than 0.3m high and it obscured by coarse vegetation in places. A 25m^2 square planticrub enclosure lies to the seaward side of the dyke. The enclosing banks are earthen and stand up to 0.4m high. The ground level inside the planticrub is up to 0.3m higher than the surrounding area.

Poor Nil

B35

Burray: Map 4 ND 4917 9644 Kirk Taing

Ruins of St. Lawrence's Church (ND 49 NE 6): Listed grade 'B'

17th C

Located <50m from coast edge

An oblong, roofless building with moulded windows and doorway is constructed from rubble. It dates from 1621 and fell into ruin around 1800. This site was not inspected since access to the area was denied by the landowner.

Not inspected

B40

Burray: Map 4

ND 485 975 and ND 487 975

North Links

Settlement and artefact scatters

1st millennium BC/1st millennium AD

Elements on coast edge

The landowner withheld permission to visit this site: the following account is based on previous reports.

Copious surface finds of animal bone, worked stone tools, an upper rotary quern stone, iron and glassy slag, sherds of pottery dating to the early Iron Age and Later Iron Age, and a fragment of a double-sided composite hair comb indicate extensive settlement in the Links.

Scattered finds, extensive horizons of organic midden deposits, broken-off orthostats and scant wall foundations have been noted over several acres. This is the result of past and present sand extraction.

Four decorated antler mounts were discovered by tourists among midden material on the settlement site which is being quarried away by the landowner. The mounts are decorated with geometric motifs and ring and dot patterns which are best paralleled in late Roman and early Germanic objects from Britain and the Continent. Following a Treasure Trove enquiry, these

objects have been disposed to Tankerness House Museum, Kirkwall. A stone 'egg' amulet was found in 1989 and is now also at the Museum in Kirkwall (acc.#1989.38.1), (Hunter, 1993).

An inspection of aerial photographs shows increasing and widespread disturbance to the N end of the bay, presumably the result of sand extraction. While no damage is apparent on AP's from 1948, localised damage was visible on the 1975 survey. The latest APs (taken in 1987) show the damage to be widespread, and, by all accounts, sand extraction has continued apace up to the present time.

Not inspected Survey

B19

Burray: Map 4 ND 4897 9881 Avresdale

East Broch of Burray (ND 49 NE 1): Scheduled (HS index 1438, 07ND 489 988)

1st millennium BC/1st millennium AD

Elements located <10m from coast edge

This site was partially excavated by Farrer in 1852-3 (Farrer, 1859, 5-6). The interior was found to be 36'6" in diameter with an entrance to the E. Two guard cells stood either side of the entrance passage. There was a scarcement 12' above the 'floor level' and intramural cells were found to the W, S and N. The broch walls were found to be 13-15' thick. On the exterior, a passage with stone steps led to a well. Finds included several stone vessels, a lamp, combs pins and a fragment of Samian ware. More recent analysis of the finds indicates that some of the pins are of Roman-derived type (Robertson, 1970, Stevenson, 1955).

Today, the remains of this substantial and well-preserved broch lie within 15m of the coast edge. The interior of the structure, which measures 11m in diameter, has been partially cleared of rubble, but appears not to have been fully excavated. The internal wall face survives to a height of 4m in places; the external wall face lies beneath collapsed and accumulated deposits and is not visible. The entrance, which is mostly obscured by rubble deposits, lies on the NE side, facing seaward. Two intramural cells are visible. In front of the broch a large mound of anthropogenic deposits is being eroded by the sea. The upper part of the mound may be spoil derived from clearance work within the broch interior.

Good Monitor



SITE B19

Burray: Map 4 ND 4887 9880 Northfield

Site of chambered cairn (ND 49 NE 3)

4th/3rd millennium BC

Located <20m from coast edge

A short-horned cairn of Orkney-Cromarty type was completely destroyed in 1863. It stood in what is now cultivated land 100 yards of the East Broch of Burray (see B19). The demolition of the cairn was observed by Petrie, who made field notes on its dimensions and structure (see Henshall, 1989, ORK 7, 106-7). It was turf-covered and measured c. 15m E-W by 13.5m N-S and stood up to 1.6m high. The N and S ends of the exterior were concave, the E and W sides only very slightly so. The chamber measured 4m long and about 2.4m wide with built side walls, a pair of transverse slabs at each end, and two more pairs of slabs dividing it into three compartments. It is uncertain whether the whole extent was uncovered. The remains of a large number of unburnt human skeletons, domestic animals, including seven skeletons of dogs, were found in the chamber. One dog skull is preserved in NMAS (EQ 62). Not located

B15, B16, B17, B18

Burray: Map 4 ND 4855 9878 Ayresdale WWII Burray Coastal Battery (ND 49 NE 19)

1940-1943 Elements located on coast edge

This battery, located at the northern tip of Burray, guarded the waters of Weddell sound in the years prior to the completion of Churchill Barrier #3. At the outset, the battery was armed with two twelve-pounder guns, both housed in temporary emplacements. In 1941 these were replaced with a twin six-pounder unit, housed in a concrete shelter with a directing tower. The battery continued in use until the end of 1943. The remains are described as encountered, moving from east to west:

- (i) (ND 4865 9879) A concrete searchlight emplacement is positioned at the top of low, steep cliffs, facing out to Weddell Sound. It is entered through a break in the E side wall. Three long slit 'windows' at the seaward end originally served to disperse the beam of the searchlight.
- (ii) (ND 4846 9873) The surviving remains include the twin six-pounder emplacement, its concrete shelter and directing tower; one of the temporary twelve-pounder emplacements; two engine rooms; a magazine and a shelter. Three searchlight emplacement are also associated with this battery. The fabric of all of the structures is showing signs of deterioration. Several of the structures have been reused as sheds and stores and some are presently inaccessible. (iii) (ND 4856 9879) A concrete searchlight emplacement is positioned at the top of low, steep cliffs, facing out to Weddell Sound. It is entered through a break in the E side wall.
- steep cliffs, facing out to Weddell Sound. It is entered through a break in the E side wall. Three long slit 'windows' at the seaward end originally served to disperse the beam of the searchlight.
- (iv) (ND 4839 9874) A searchlight emplacement is set into the top of low, steep cliffs, facing out to Weddell Sound. It is entered via a set of four steps leading down to a break in the E side wall. The opening at the seaward end spans 180°.

Fair

Survey

R34

Burray: Map 4 ND 4847 9871 Avresdale

West Broch of Burray (ND 49 NE 2) 1st millennium BC/1st millennium AD

Located <20m from coast edge

This site was partially excavated by Farrer, who revealed 12'6" thick walls and an internal area of 31'. An intramural gallery and cell were also found. Today, the site appears as an amorphous mound, much disturbed by the construction of Burray Coastal Battery. It is located 20m from the coast edge, measures c.15m in diameter and stands up to 1.5m high. It is now covered with vegetation and there are no archaeological exposures or structural remains visible. The sides of the mound are pitted and the entire area appears to have been thoroughly disturbed. A number of large slabs which have been used in the construction of the battery, may derive from the broch. The mound, however, remains a substantial feature and may conceal undisturbed archaeological deposits.

Fair Monitor

B14

Burray: Map 4 ND 4800 9869 Weddell Point

Anthropogenic deposits, possibly associated with human burials (ND 49 NE 11)

Indeterminate

Located at coast edge

Anthropogenic deposits are visible in a 25m long coastal exposure which has been cut into the sand dunes by marine erosion. The uppermost deposit visible in section is a 0.4m layer of wind-blown sand. Beneath this, a portion of walling, up to 13 courses/1m high, runs parallel with the section face for 1.9m, before curving outwards towards its W end. The W end of the wall is formed from several orthostatic blocks; the remainder of the structure at this end has been lost to the sea. Further to the W, a deposit of loose stones may represent collapsed walling, this sits over an old ground surface and shell-rich deposits. The old ground surface is visible beneath the E end of the wall also; the terminus of this wall is obscured by slumped sand deposits. Several small fragments of iron were noted amongst the deposits in section, but these may be intrusive. No features or deposits of an archaeological nature were noted in the field adjacent to the shore, although the depth of blown sand is such that any remains are likely to be deeply buried. The deposits are tentatively interpreted as part of the interior wall face of a curvilinear structure.

Local tradition holds that there is a burial ground in this area. It is recorded that in about 1960 part of a grave, containing two individuals and covered with a slab, was found eroding from the shoreline (ND 49 NE 11). Human bones have been seen in the erosion face on occasion, and several were noted by OS surveyors in 1973. A local man, Mr. Laird of Weddell, encountered traces of an indeterminate building whist digging in this area.

The frequency with which deposits have been noted in this area suggests that there are substantial buried remains in the area. The deposits found during this survey, if as is suggested, form part of a structure, may be part of the same structure as that found by Mr.

Laird. Since his discovery was made whist digging, presumably in the field which lies adjacent to the shore, the remains now visible may be only beginning to erode. The presence of human burials (not seen during this survey) in close proximity to a structure may indicate the site of a chapel and burial ground of early (pre-Reformation) date.

Fair

Survey



SITE B14

FLOTTA MAP 1: BOOTHIE GEO TO HEAD OF BANKS

F1

Flotta: Map 1 ND 3418 9305 Weddell - Wharth

Concrete plinth and flotsam, military

20th C

Located in intertidal zone

A concrete plinth, measuring 3m long by 2m wide and 3m high, is set into the foreshore. The plinth has an iron ring attached to its seaward end. A large metal drum (1.75m in diameter and 4m long) lies close by, sunken into the beach at the LWM. A length of metal chain is fastened to a ring on the side of the drum. These features may be associated with a mooring position, possibly related to military operations.

Fair Nil

F2

Flotta: Map 1 ND 3462 9249

Overgate

Datum marker, military

20th C

Located <10m from coast edge

A concrete marker is set into the ground 2m from high sloping cliffs. It bears the legend 'W D, B.S.'. It is likely to be associated with military operations in the area, centred on the battery at Innan Neb.

Good Nil

F3

Flotta: Map 1

ND 3495 9228 to 3535 9255

Innan Neb

WWI & II Innan Neb Battery, WWII Gate Battery and Neb Battery: (ND 39 SW 41, 50) 1915-1918, 1940-1944

Elements located <10m from coast edge

The Innan Neb Battery was originally constructed in 1915 to provide cover for the southern approach to Scapa Flow, via Switha Sound. Two 4.7 Quick Fire guns were emplaced and a boom was erected, running from Innan Neb to South Walls on the island of Hoy. In 1940 it was brought back into use with the temporary emplacement of a 4.7 quick fire gun. This battery now served as a support for the new batteries at Neb and Gate. It was abandoned in 1944.

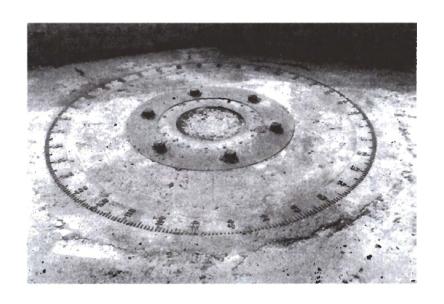
Gate Battery was set up with the temporary installation of a single twelve-pounder gun in 1940. A second twelve-pounder was added, and later on, both guns were relocated to new concrete gun houses. This battery had the task of guarding the access point through the boom. Operations were ceased in 1945.

The Neb Battery comprised a twin six-pounder emplacement with a directing tower. It became operational in 1940 and continued in use up until the end of the war. It was charged with providing anti-motor-torpedo-boat protection.

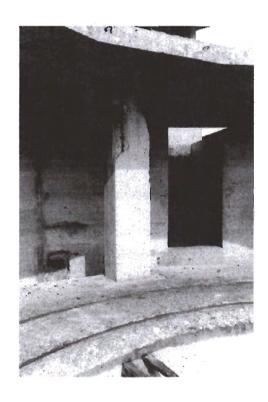
All three batteries are located close together, in fact, the two gun emplacements of the Gate battery are located to either side of the Neb battery. This, together with the overgrown nature of the site, makes it difficult to separate the various structures associated with each battery from its neighbours. Only the most readily identifiable elements are described here and illustrated on the accompanying plan.

- (i) This semi-subterranean rectangular structure is probably a magazine. It measures 10m by 5m, lies 2m from the cliff edge and is much obscured by vegetation.
- (ii) Two semi-subterranean rectangular concrete bunkers lie to either side of a raised concrete plinth. This structure served as a temporary gun emplacement for one of the twelve-pounder quick-fire guns supplied to the Gate battery in the early part of WWII. The battery lies 4m from the cliff edge. An earthwork curves from bunker to bunker to the rear of this position. A second, rectilinear earthwork lies 10m to the rear of the first.
- (iii) The second of the Gate battery's temporary gun positions lies 20m W of (ii) and differs only in that it is surrounded by a single rectilinear earthwork. It lies 8m from the cliff edge.
- (iv) This twin 4.7" quick-fire battery belongs to the WWI phase of Innan Neb Battery. The gun emplacements are located 12m from the cliff edge. A curving rock-cut passage runs from each gun emplacement to a semi-subterranean rectangular concrete magazine building.
- (v) Two concrete searchlight emplacements, each with three-slit openings, served both the Neb and Gate batteries. The are set into the cliff edge.
- (vi) This complex is one of the two permanent twelve-pounder gun emplacements which constituted the Gate Battery. The gun emplacement is surrounded by a graduated metal ring showing 0°-360°. A magazine and directing tower are located to the rear. The complex lies 2m from the cliff edge.
- (vii) The Neb Battery complex comprises an emplacement for a twin six-pounder gun, a directing tower and several ancillary buildings. It is located 2m from the cliff edge.
- (viii) This is the second of the permanent emplacements which constituted the Gate Battery. A magazine and directing tower are located to the rear. The complex lies 1.5m from the cliff edge.
- (ix) An open-fronted concrete searchlight emplacement, which served both the Neb and Gate batteries, is set into the cliff edge.
- (x) Two small concrete buildings, probably associated with wartime coastal defence operations, are situated within 5m of the coast edge. Fair

Survey



SITE F3:(vi)



SITE F3: DETAIL OF CRUMBLING CONCRETE
204

Flotta: Map 1 ND 3573 9256 Point of Leval

Cairn

3rd/2nd millennium BC

Located <10m from the coast edge

An amorphous mound of stone, measuring 5m by 3m, stands up to 0.5m high and is aligned E-W. It is surrounded by old peat cuttings and may have been covered by peat at one time.

Poor Survey

F5

Flotta: Map 1 ND 3575 9251 Point of Leval Mound (ND 39 SE 3) 3rd/2nd millennium BC

Located <10m from coast edge

A low grassy mound, circular in shape, measures 7m in diameter and stands up to 0.75m high. The mound was investigated by a local man earlier this century. A central cist, formed from orthostatic slabs, was found and remains partially exposed. Nothing was found in the cist. The cist measures c.0.7m by 0.5m and is 0.3m deep. The mound is located close to overgrown peat cuttings and may have been covered by peat at one time.

Fair Monitor

F6

Flotta: Map 1 ND 3619 9245 Head of Banks Mound (ND 39 SE 8) Indeterminate

Located <10m from cliff edge

A conical, flat-topped earthen mound lies less than 5m from the cliff edge. It measures 5m in diameter and stands to 1.5m high. It has a central cavity which has vertical sides and is circular in plan. The cavity is 0.7m in diameter and 0.7m deep; it has a flat base. Deposits of gravel are visible in the sides of this cut. It was not possible to determine whether the central cavity was a feature of the original design or a later alteration. It appears to be of relatively recent origin and may be associated with military operations in the area.

Fair Nil

FLOTTA MAP 2: HEAD OF BANKS TO CURRIES FIRTH

F7

Flotta: Map 2 ND 3632 9276 Whitehouse

Anthropogenic deposits

Indeterminate

Located on coast edge

A 0.5m thick band of anthropogenic deposits are eroding from the coastal section in an 8m long exposure. The deposits comprise a basal layer of flat slabs, laid over an old ground surface. The slabs are covered with numerous lenses of ashy and organic soils. Small inclusions of shell, unworked flint and bone, both burnt and unburnt, were noted. The area immediately inland is under cultivation and no further indications of archaeological remains were visible.

Fair Survey

F8

Flotta: Map 2 ND 3628 9284 Whitehouse Structure 18th/19th C

Located on coast edge

A ruinous square stone building is set into the banks, immediately on the coast edge. It measures 4m by 4m and has a door to the N end. The walls survive to a maximum of 2m at the seaward side (west) but are reduced to less than 0.5m to the landward side (east). There is a narrow slit 'window' in the E wall. The coastal section underneath the building is 'armoured' against erosion by a wedge of edge-set stones.

Fair Survey

F9

Flotta: Map 2 ND 3630 9290 Kirk Bav

Noosts, boat house and slipway

19th/20th C

Elements located <10m from coast edge and in intertidal zone

- (i) Three shallow boat noost depressions are cut into the grass at the head of the foreshore. Each measures c.8m long by 4m wide and is up to 0.4m deep.
- (ii) The footings of a small square building, probably a boat shed, are located at the head of the foreshore. It measures 4m by 3.5m.
- (iii) This slipway comprises a passage, measuring 10m wide by 15m long (approximately), which has been cleared through the rocky intertidal zone. A 10m wide 'shelf', surfaced with pebbles, lies to the W side of the slipway. The sides of the slipway and 'shelf are defined by stone revetting.

Fair, Nil

Flotta: Map 2 ND 3711 9264 Noust of Greeniber Slipway and noosts 19th/20th C

Elements located on coast edge and in intertidal zone

- (i) A passage, measuring 7m wide by 15m long (approximately), which has been cleared through the beach and rocky intertidal zone to form a slipway.
- (ii) Two shallow sub-rectangular depressions in the grass at the head of the foreshore are currently in use as boat noosts.

Fair Nil

F11

Flotta: Map 2 ND 3711 9264 Noust of Greeniber Well

19th/20th C

Located <10m from coast edge

A well, formed from a square tank with drystone sides, is sunk into the ground 4.5m from the cliff edge. It is 0.8m wide and up to 1m deep. Three courses of stone lining are visible, a wooden structure at the base is now obscured by accumulated debris. The well is now dry. It may be associated with a ruined house which lies 60m further inland.

Fair Nil

F44

Flotta: Map 2 ND 3745 9250 Stanger Head Enclosure, military (ND 39 SE 37) 20th C

Elements located on coast edge

A roughly square enclosure, with three sides c.100m long, backs on to the cliff edge. The banks are 1m wide, on average and up to 1.5m high. It has been suggested that it was built in 1914 to serve as an emergency gun position.

Good Nil

F12, 13

Flotta: Map 2

ND 3740 9232 to 3780 9270

Stanger Head

WWI & II Stanger Battery (ND 39 SE 11): Scheduled (HS Index 3302 07ND 374 924- 07ND 378 926)

1914-1918, 1938-1945

Elements located <10m from coast edge

Stanger Battery came into being at the outbreak of WWI to guard Hoxa Sound. Initially, the battery was armed with four temporarily emplaced twelve-pounder guns. Later, these were replaced with four 4" quick fire guns in permanent concrete emplacements. In 1915 two 6" quick fire guns were added.

In 1938, in preparation for war, the Stanger battery was reopened with the installation of two 6" guns on temporary emplacements. By 1940, a permanent emplacement had been built and was now backed up by an additional 4.7" gun, set on a temporary emplacement nearby. This battery served to guard Hoxa and Switha Sounds.

Little survives of the batteries, due in part to extensive post-war quarrying and land disturbance. Other military remains cover an extensive area, mostly located 100m or more inland. Within the coastal zone there are frequent fragments of earthworks. These possibly represent military training areas and firing ranges. The ruinous footings of concrete and brick buildings which do survive in this area are now very obscured by vegetation.

Poor

Survey

F14, 15

Flotta: Map 2 ND 3750 9340 Sillock Geo

WWII Buchanan Battery (ND 39 SE 10): Scheduled (HS Index 3253 07ND 374 933) 1940-1945

Located <50m from coast edge

Buchanan Battery served to provide anti-motor-torpedo-boat cover for Hoxa Sound and boom. It was set up in 1940 with two twelve-pounder guns mounted on temporary emplacements. The construction of a permanent complex, armed with twin six-pounder guns, was completed by 1941.

The battery and its ancillary buildings are well-preserved. There are four searchlight emplacements; one lies to the S of the battery, three lie to the N side. The ancillary buildings comprise an engine room, a directing tower, a magazine, storage lockers and shelters; all of which lie 10m or more from the cliff edge.

Good

Survey

Flotta: Map 2

ND 3790 9405 to 3775 9384

Lee Craig

Military remains

20th C

Elements located <50m of coast edge

The remains of various concrete structures, of military type, are spread out over a wide area.

Fair

Survey

F45

Flotta: Map 2 ND 3777 9438

Quoyness

Structures, military (ND 39 SE 38)

20th C

Located <20m from coast edge

The remains of two brick and concrete buildings are located in an enclosed field, adjacent to Quoyness farm house. They may have served as look-out positions, guarding the entrance to Pan Hope.

Fair

Nil

F40, 41, 42

Flotta: Map 2 ND 3772 9441 Quoyness-Pan Township 19th/20th C

Elements located < 10m from coast edge

A group of ruinous stone buildings, centred on Quoyness and Pan, abandoned earlier this century, are surrounded by enclosed fields, currently under pasture. A ruinous stone jetty and a refurbished pier are probably contemporary in date.

Fair



SITE F40, 41, 42

Flotta: Map 2 ND 3685 9405

Lurdy

Boat shed and jetty

19th/20th C

Located on coast edge and intertidal zone

A stone-built jetty extends seaward for c.30m from the foreshore. It is constructed from large roughly dressed blocks.

A ruinous rectangular structure, aligned E-W, is constructed from mortared beach stone. It is built on the coast edge, with edge-set stones set beneath its seaward side as 'armouring' against coastal erosion. It measures 6m by 10m and has a doorway to either end. It lies 5m from the jetty.

Fair

Nil

F38

Flotta: Map 2 ND 3640 9400

Avil

Noost, boat shed and hulk

19th/20th C

Located on coast edge and in intertidal zone

- (i) A rectangular shed, measuring 10m by 5m, is constructed from mortared rubble. The shed is roofed, has a window in each of its side walls and a door on its N side.
- (ii) A shallow sub-rectangular depression, which lies on the foreshore in front of the shed, is in use as a boat noost.
- (iii) The hulk of a wooden vessel lies buried in the sand of the intertidal zone with only its ribs protruding. It measures 3m wide and is at least 22m long. Roughly made iron nails and bolts survive in the timbers.

Fair

(i) & (ii): Nil, (iii): Survey

F37

Flotta: Map 2 ND 3611 9418 Burn of Busta

Jetty

19th/20th C

Located in intertidal zone

A jetty constructed from squared stone blocks extends seaward from the foreshore for over 15m. It measures 3.5m in width and is best preserved in the intertidal area. It is no longer in use.

Fair

Flotta: Map 2 ND 3611 9418 Burn of Busta Structural deposits Indeterminate

Located on coast edge

A concentration of stone blocks, 3m long and 0.75m high, is exposed in the coastal section.

The blocks appear to be coursed and may be the remains of a structure.

Poor Monitor

F35

Flotta: Map 2 ND 3594 9432

Whome - Curries Firth

Noosts 19th/20th C

Located on coast edge

Three boat noosts, formed from sub-rectangular shallow depressions, are located at the head of the beach. They each measure 2m wide by 5m long and are up to 1m deep.

Fair Nil

FLOTTA MAP 3: CURRIES FIRTH TO BOOTHIE GEO

F34

Flotta: Map 3 ND 3595 9465 Curries Firth Boat shed 19th/20th C

Located <10m from coast edge

The footings of a rectangular structure, measuring 6m by 4m, lie 1.5m from the coast edge at the head of a sandy bay. Constructed from mortared beach stone, the walls survive to a height of 1.25m. A door and a window aperture are situated in the S wall of the structure.

Fair Nil

F33

Flotta: Map 3 ND 3585 9484 Curries Firth Noosts 19th/20th C Located on coast edge

Two groups of four boat noosts lie at the head of a sandy bay. On average, they measure 5m long and 4.5m wide and are up to 0.75m deep; they are somewhat eroded toward the seaward end and are not presently in use.

Fair Nil

F32

Flotta: Map 3 ND 3652 9477 Sands Taing Datum marker, military

20th C

Located <10m from coast edge

A 2m² concrete marker is set into the ground surface 5m from the coast edge. To the centre of the marker a cylindrical hollow measures 0.25m in diameter. The marker bears the legend 'O.C.M. R'.

Good Nil

F31

Flotta: Map 3 ND 3723 9530

Sand Geo - Row Taing

Earthworks and datum markers, military

20th C

Elements located <10m from coast edge

Several earthworks and datum markers lie in the grassy coastal plain. The earthworks are often much reduced and overgrown. The remains represent a series of firing ranges and training areas, associated with military operations centred at Roan Head and Golta camp, which lie over 100m inland. Only the most visible elements are described here, recorded moving from SW to NE:

- (i) A 1m² concrete marker is set into the ground surface 8m from the coast edge. To the centre of the marker is a cylindrical hollow. The marker bears the legend 'MQ 2'.
- (ii) A 2m² concrete box with metal fittings is set into the ground surface. It is 0.6m deep and is located 10m from the coast edge.
- (iii) An earthwork stands up to 1.5m high and is 2m wide. It is triangular in section and has a 1.5m deep ditch running along one side. To the seaward end there is a concrete 'shelf' or step set into the side of the ditch. The earthwork and ditch are aligned parallel to the coast.
- (iv) A 1.6m² concrete marker is set into the ground surface 5m from the coast edge. To the centre of the marker is a cylindrical hollow; it bears the legend 'O.C.M C'.
- (v) An earthwork stands up to 3m high and is 6m wide. It is triangular in section and is aligned perpendicular to the coast; it runs for 30m to the coast edge.
- (vi) A 1m² concrete marker is set into the ground surface 1m from the coast edge. To the centre of the marker is a cylindrical hollow; it bears the legend 'O.C.M.Datum'.

Fair

Survey

Flotta: Map 3 ND 3750 9559 Row Taing Dyke

19th/ 20th C

Located <10m from the coast edge

A drystone dyke, one end of which is located within 8m of the cliff edge, extends inland for over 150m. It is ruinous and stands to a maximum of three courses or 0.5m high.

Fair Nil

F29

Flotta: Map 3 ND 3780 9565

Villigar Enclosure 19th/20th C

Located <10m from coast edge

The footings of a drystone wall define a sub-oval enclosure which backs onto the cliff edge.

The enclosure measures 17m by 15m.

Poor Nil

F28

Flotta: Map 3 ND 3813 9562 Red Face

Earthwork, military

20th C

Located <10m from coast edge

An earthwork, forming a right angle, is located 6m from the coast edge. Each 'leg' measures 2m in width and 8m in length and stands up to 0.75m high.

Fair Nil

F27

Flotta: Map 3 ND 3865 9580 Roan Head

WWI Roan Head Coastal Battery (ND 39 NE 1)

1915-1918

Located <10m from cliff edge

Roan Head Battery came into being in 1915 to cover the gate in an anti-submarine boom which lay between Roan Head and South Ronaldsay. It was initially equipped with three three-pounder guns; these were later replaced by four twelve-pounders.

The remains of the four gun emplacements are clearly visible, although somewhat overgrown. The emplacements are grouped into two sets of two. Each set is linked, via a semi-

subterranean passage, to a magazine building at the rear. The northernmost gun emplacement has had a modern shipping beacon set upon it.

Fair Survey



SITE F27: 1st WORLD WAR GUN EMPLACEMENT

F26

Flotta: Map 3 ND 3865 9590 Roan Head Dyke and enclosure 19th/20th C

Located <10m from coast edge

A grass-covered earthen and stone bank runs parallel to the coast for over 50m. It is up to 2m wide and stands to 0.5m high. A three-sided rectangular enclosure which backs on to the cliff edge to the seaward side of the bank. The enclosure measures 2m by 4m.

Fair Nil

F25

Flotta: Map 3 ND 3851 9604 Roan Head Telegraphy Station, military 20th C Located <10m from coast edge A concrete shed, measuring 3m by 3m and standing to 3m high, is located 2.5m from the coast edge. The entrance lies to the inland side and there are two windows. The remnants of wiring and metal fixtures are strewn about inside the hut. Outside, two metal trap doors are set into the ground at the front and back of the shed. A telegraph pole lies, disconnected, close to the shed.

Fair Nil

F24

Flotta: Map 3 ND 3855 9610 Roan Head Mound Indeterminate

Located <10m from coast edge

A grassy mound is located 5m from the coast edge. It covers an area of 9m² and stands up to 0.75m high. Occasional medium-sized stones can be seen protruding from its S side.

Fair Monitor

F23

Flotta: Map 3 ND 3855 9618 Roan Head - opposite. Calf of Flotta

Earthworks, military

20th C

Elements located <10m from coast edge

- (i) A grass-covered earthen bank, roughly triangular in section, follows the coastline for c.35m. It stands up to 0.5m high and is 1.5m wide.
- (ii) To the rear of (i), a platform is further defined by two lengths of earthwork which form a right angle. The area to the rear of the platform is slightly depressed. The seaward-facing angle of this earthwork is 19m long and up to 0.75m high, the return side is 15m long and <0.5m high. It lies 20m from the coast edge.
- (iii) The outline of a second platform is barely visible to the N of (ii). It lies 25m from the coast edge.

Fair Nil

F22

Flotta: Map 3 ND 3835 9631 Calf Sound Lighthouse base 20th C

Located in intertidal zone

A tripod structure, which previously served as the base for a lighthouse, stands on a skerry between Roan Head and Calf of Flotta. A quantity of metal debris which may be associated lies on the rocks nearby. A flat metal structure extends into the intertidal zone on the Flotta

side of Calf Sound. It is 1m wide and at least 5m long. The remnants of winding gear are attached to the seaward end.

Fair Nil

F21

Flotta: Map 3 ND 3786 9620 Calf Sound

Structural foundations and jetty, military

20th C

Elements located <10m from coast edge

- (i) Two rectangular depressions have been cut into the ground surface at the coast edge. Each 'pit' measures 6m by 5m and is up to 1.5m deep.
- (ii) A series of ruinous reinforced concrete piers, the last vestiges of a jetty, extend from the foreshore into the sea for over 20m.
- (iii) The concrete and brick footings of a rectangular building, aligned E-W, measure 34m by 8m. The concrete floor is badly slumped and under floor piping is exposed.
- (iv) A concrete plinth, measuring 2m by 1m is located to S of (ii).
- (v) A structure with a concrete floor (raised on brick foundations) measures 9m by 3m. To the W of this structure an area of disturbed ground appears to have been previously paved or surfaced.
- (vii) A metalled trackway leads uphill from the stone jetty in the direction of the military camp at Golta.

(viii) A stone jetty, 1.75m wide, extends into the sea for 50m.

Fair

Survey

20th C

F20

Flotta: Map 3 ND 3769 9610 Calf Sound Telegraphy Station, military

Located <10m from coast edge

A concrete shed, measuring 3m by 3m and standing to 3m high, is located 5m from the coast edge. The entrance lies to the inland side and there are two windows. Two metal trapdoors are set into the ground to the fore and rear of the shed. The remnants of wiring and metal fixtures are strewn about inside the hut.

Fair

Nil

F19

Flotta: Map 3 ND 3756 9608 Calf Sound Earthen bank Indeterminate

Located <10m from the coast edge

A portion of grass-covered earthen bank runs parallel with the coast for more than 75m. It stands up to 0.75m high and is 1.5m wide. It lies 6m from the coast edge.

Fair Nil

F16, 17, 18

Flotta: Map 3

ND 3645 9581 to 3722 9595

Golta

Structural remains, military (ND 39 NE 2, 3, 4, 5, 6, 7)

20th C

Elements located on coast edge

This area contains extensive structural remains associated with WWI and II military operations centred on the military camp at Golta and the coastal batteries at Roan Head. The main concentration of these remains, which include an anti-aircraft rocket and dummy camp (ND 39 NE 2), three light anti-aircraft batteries (ND 39 NE 3, 6, & 7), a barrage balloon mooring position (ND 39 NE 4) and a large shed of pre-WWI date (ND 39 NE 5), lie outwith the area of this survey. Within the coastal zone lie the remains of a metalled trackway lined with concrete bollards and numerous small earthworks and concrete footings. Only the most substantial remains are described here:

- (i) (ND 3729 9590) A concrete shed, possibly a telegraphy station, is located on the beach. It measures 3m by 3m and stands to 3m high. It has a single door and window, both of which face inland.
- (ii) (ND 3686 9584) A rusted metal pipe, supported on a series of concrete pillars, issues from the coastal section and extends into the sea.
- (iii) (ND 3645 9581) The concrete footings of a building lie 15m from the coast edge. Aligned E-W, it measures 5m by 4m and has a set of two steps to its W end.

Fair

Survey

GRAEMSAY

G1

Graemsay: Map 1 HY 2709 0560 Graemsay Pier

Locker, possibly military

20th C

Located <10m from coast edge

A rectangular structure, measuring 1.75m by 1.5m, is located in rough grass 1m from the cliff edge. It is constructed from brick and has a concrete roof. It has an aperture to its N end and a small 'annex' to its S end.

Fair Nil

G2

Graemsay: Map 1 HY 2680 0609

Sandside

Hoy Sound (High) Lighthouse (HY 20 NE 75): Listed grade 'A'

1851

Elements located <10m from coast edge

This lighthouse, together with its range of keepers cottages, sheds, outbuildings, slipway and perimeter wall was built in 1851. The lighthouse tower is 33m high and its gallery is carried on gothic-arched corbels. The interior is decorated with angel statuettes and representations of the classical wind gods (on the ventilators of the lamp-room). The flat-roofed, single-storied 'cottages' have massive projecting door surrounds and tall, tapering chimneys and are said to have been modelled on Egyptian temples. The lighthouse is now operated automatically and the cottages are currently occupied.

Good Nil

G3

Graemsay: Map 1 HY 2660 0595

Sandside

Structures and anthropogenic deposits: House Listed grade 'C',

18th/20th C

Located <10m from coast edge

Anthropogenic deposits seen in section are associated with a series of upstanding farm buildings, located immediately inland.

The farmstead is of 18th C date and belonged to the Stewarts, lairds of this locality. The two-storied house (Listed, grade 'C') is three bays wide and has a flagged roof. It is currently unoccupied and is now on the Buildings at Risk Register (January 1998). The remains of the other buildings include:

(i) A 35m long range of conjoined buildings aligned E-W, perpendicular to the coast The remains of two dwelling chambers form the E end of the range, At the seaward end the

structure has been rebuilt as a small flag-floored shed. The gable end of the shed lies immediately on the coast edge and is severely undermined. The shed is currently in use.

- (ii) The footings of a second range of conjoined outbuildings lies parallel to (i).
- (iii) Two further parallel ranges of conjoined structures are located c.50m S of (ii). They are now ruinous but both appear to have served, as outbuildings.
- (iv) A stone jetty is severely storm damaged in places. At the S end of the jetty, adjacent to a trackway, the banks have been consolidated with a revetted wall made from sandbags which are cemented into place.

The deposits seen in section comprise:

- (v) A pit containing rubble is visible in section between structures (i) and (ii).
- (vi) A second pit, containing flat slabs and anthropogenic deposits is eroding from the coastal section to the S of structure (ii).
- (vii) Undifferentiated rubble and stony brash deposits, up to 0.4m thick, are visible between pits (v) and (vi).
- (viii) A portion of walling, measuring 2m long and standing to 3 courses high, is located in section immediately N of structure (iii).
- (ix) Stratified deposits of anthropogenic soils, gravel, rubble and sand are visible in section to the immediate S of the jetty, beyond the sandbags. The deposits are up to 0.5m thick and extend for 15m. A

stone-lined drain is also visible in this section. Fair/poor

Monitor



SITE G3

G35

Graemsay: Map 1 HY 2656 0605 Sandside

Long cist with burial (HY20 NE 28)

11th C

Located on coast edge

Rescue excavation was carried out at this site in 1977, following the appearance of a human skull in an eroding coastal section. Work revealed a long cist, containing the skeleton of a human male. The cist measured 2m long by 0.65m wide and was 0.35m deep. The skeleton was almost complete. A radiocarbon date of 1085+/- 55 AD was obtained from the bone (Hedges, 1978). The site is no longer visible.

Not located

Graemsay: Map 1 HY 2622 0575 Sandside - Quoys

Noosts 19th/20th C

Located on coast edge

Two boat noosts are cut into the grass at the head of the foreshore to the S end of a sandy bay. They are each 2m wide, 6m long and up to 1.5m deep. The noosts are overgrown and no longer in use.

Fair Nil

G5

Graemsay: Map 1 HY 2615 0576

Quoys

Click mill (site of)

18th/19th C

Located <10m from coast edge

An artificially cut watercourse runs to one side of an enclosed field towards the sea. At a distance of 10m from the coast edge, the watercourse widens and curves to one side of a small mound. Its exit on to the foreshore is contained within a stone-revetted channel. The small mound is partly formed from loose rubble, amongst which no structural elements can be discerned.

Poor Nil

G6

HY 2590 0590

Quoys

House

19th/20th C

Located <50m from coast edge

A dwelling house with outbuildings and enclosed garden plot extends up to 100m inland from the coast. Part of this holding has been refurbished and is currently occupied. The ruinous structures include a dwelling house with a built-in corn-drying kiln.

Fair

Nil

G7

Graemsay: Map 1 HY 2587 0599

Ouovs

Boat shed and noosts

19th/20th C

Located <10m from coast edge

A drystone shed lies in rough grass 5m from the head of the beach. It measures 6m by 4m and is roofed. The roof slopes from 2m high at the NW side to 1.5m on the SE side. Two piers of

rough walling protruding from the grass to the NW side of the shed may be the remains of boat noosts.

Fair

Nil

G8

Graemsay: Map 1 HY 2580 0615

The Lash

Mound

Indeterminate

Located <10m from the coast edge

A rounded grassy mound, located in the corner of an enclosed pasture field, measures 20m in diameter and stands to 2m high.

Fair

Nil

G9

Graemsay: Map 1 HY 2519 0653 Cooper's Noust Jetty & noosts

20th C

Located on coast edge

- (i) A series of stone steps leads from a rough track down to a concrete Jetty. The jetty is 3m wide and extends seaward for up to 15m. Two iron mooring loops are set into the concrete surface.
- (ii) To the E of the jetty, a pier of walling separates two depressions, which may have served as boat noosts. They are now very overgrown.
- (iii) A concrete floor is all that now remains of a small structure, located to the W of the jetty. Pieces of corrugated iron roofing lie close by.
- (iv) An amorphous, sub-oval mound lies to the W of the jetty. It appears to be a natural rise which has been built up with flat slabs.

Fair

Nil

G10

Graemsay: Map 1 HY 2502 0664 Fulzie Geo

Pit

Indeterminate

Located on coast edge

A well defined artificial depression, possibly a kelp burning pit, is located in rough grass, 3m from the HWM. It is 1.2m in diameter and up to 0.3m deep.

Fair

Nil

Graemsay: Map 1 HY 2486 0664 Fulzie Geo Wall and noost 19th/20th C

Located <10m from coast edge

A pile of loosely arranged beach stones form a short wall 4m long and up to 0.4m high. It is located in rough grassland to the rear of a stony beach. An overgrown boat noost at the beach head measures 4m long by 2m wide and is less than 0.5m deep.

Fair Nil

G12

Graemsay: Map 1 HY 2469 0663 Fulzie Geo

Hoy Sound (Low) Lighthouse (HY 20 NW 24): Listed grade 'B'

1851

Elements located <10m from coast edge

Built in 1851, the buildings comprise a low, lime washed circular lighthouse tower of staggered ashlar and a range of single-storied keepers houses with platformed roofs. The lighthouse has been automated; the keepers cottages are currently occupied Good

Nil

G13

Graemsay: Map 1 HY 246 065 Fulzie Geo

WWII Graemsay Battery (HY 20 NW 26)

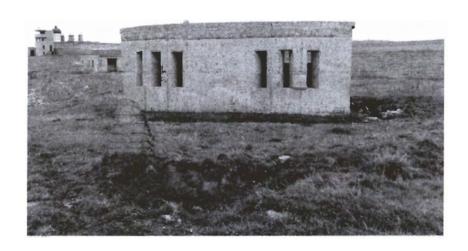
1943-1945

Elements located <10m from coast edge

Graemsay Battery was constructed in 1943 to provide additional anti-motor-torpedo-boat cover for Stromness harbour. It was armed with a twin six-pounder gun. The lack of an overhead cover to the gun emplacement and the design of the twin searchlight structures are unusual features.

The remains comprise the gun battery, the two searchlight emplacements and a range of buildings built to the rear of the battery against the perimeter wall of Hoy Low lighthouse. The camp buildings for the battery were located inside the perimeter wall.

- (i) The battery is constructed from both mortared stone and concrete and lies 2m from the cliff edge.
- (ii) The searchlight emplacements are located 95m and 160m, respectively, to the S of the battery. They are identical in plan; two bays, each accommodating a searchlight, are located at the N and S corners of the structure. They measure 7.5m long by 6m wide and are entered via a door to the S side.
- (iii) To the rear of the gun battery, backing onto the perimeter wall of the lighthouse, lie the directing tower and the concrete footings of the engine room, shelters and magazine. Good, monitor



SITE G13

Graemsay: Map 1 HY 2462 0656 Point of Oxan

Site of St. Colm's Chapel and burial ground (HY 20 NW 14)

Located <100m from coast edge

The site of St. Colm's Chapel and burial ground, of pre-Reformation date, is alleged to be located in this area. Local information, however, suggests that it may lie further inland at HY 2472 0643 (HY 20 NW 18). The site was not located during this survey.

Not located

G14

Graemsay: Map 1 HY 2451 0645 Point of Oxan Noosts and trackway 19th/20th C

Located <10m from coast edge

- (i) The remains of a 2m wide trackway leads from rough pasture to the head of the beach. The rough earthen surface of the track lies over stone foundations. This feature has been badly eroded by cattle poaching.
- (ii) At a distance of 10m S of (i), lies an overgrown boat noost. It is cut into the grassy banks at the head of the foreshore and measures 7m by 3m; it is up to 1.5m deep. A second, less recognisable, noost lies 30m S of (ii).

Fair

Nil

Graemsay: Map 1 HY 2459 0624

Backagill

Wall

Indeterminate

Located on coast edge

A wall, constructed from rough beach stone, is situated at the top of 2.3m high banks at the coast edge. It is 0.5m wide, 0.3m high and extends for 2m. It may have served as a kelp-drying wall.

Poor

Nil

G16

Graemsay: Map 1 HY 2460 0615

Backagill

Anthropogenic deposits

Indeterminate

Located on coast edge

Anthropogenic deposits are visible in an exposure measuring 2m long and up to 0.5m high. Turf and topsoil covers a concentration of stone blocks and small stone shatter and a layer, 0.35m deep, of highly organic sandy soil.

Poor

Monitor

G17

Graemsay: Map 1 HY 2445 0525 Burra Sound

WW I & II Blockships

20th C

Located in marine zone

Throughout the two World Wars Scapa Flow served as the base of the British Home Fleet. Access to these waters was guarded by a series of coastal batteries, booms and blockships. The blockships comprised old and damaged vessels which were deliberately sunk in position so as to form a submarine obstacle to deter enemy incursions. After 1945 some of the blockships were dispersed by explosives to clear the shipping lanes while many others were salvaged for parts and metal. The wrecks of several blockships remain on the sea bed and in the intertidal zone.

- (i) The *Gobernador Bories*, a 2,332 ton iron steamer, was built in 1882 at West Hartlepool. She was sunk in Burra Sound in 1915. She lies S of Hoy Skerries and is relatively intact.
- (ii) The *Ronda* was built in 1889 in Sunderland and was sunk in 1914. She was a steel single-screw 1,941 ton steamer. She was dispersed with explosives in 1962.
- (iii) Built in Glasgow in 1882, the 2,252 steel single-screw steamer, *Budrie*, was sunk in 1915. She was dispersed with explosives in 1962.
- (iv) The *Rotherfield* was a 2,831 ton steel single-screw steamer. Built in West Hartlepool in 1889, she was sunk in Burra Sound in 1914. She was dispersed with explosives in 1962.

- (v) A 3,423 ton steel single-screw steamer, the *Urmstone Grange*, was built in Belfast in 1894 and was sunk in 1914. She was dispersed with explosives in 1962.
- (vi) Built in 1938 in Germany, the 8,900 ton tanker *Inverlane* was holed by a mine off South Shields in 1939. She was patched up, towed to Burra Sound and, there, sunk as a blockship in 1944. She remains relatively intact and her bows are clearly visible, rising from the waters to the S of Hoy Skerries.
- (vii) The *Tarbraka* was a single-screw steamer of 2,624 tons. Built in Rotterdam in 1909, she was captured by the Royal Navy in 1940 and was sunk as a blockship, initially in Kirk Sound. At the completion of Churchill Barrier #1, the *Tarbraka* was re-floated and sunk in Burra Sound in 1944. She now lies, upside down, in 12m of water to the S of Hoy Skerries.
- (viii) The 1,761 ton single-screw steamer the *Doyle*, built in Troon in 1907, was sunk in 1940. She lies relatively intact beneath 15m of water.

Not inspected

Nil



SITE G17: THE 'INVERLANE'

G18

Graemsay: Map 1 HY 2477 0534 Howabreck Concrete locker, possibly military 20th C

Located <10m from coast edge

An open-fronted concrete structure sits in rough grass, 5m from the cliff edge. It measures 1.6m by 0.94m and stands to 1.2m high. It may be the remains of a locker, possibly an ammunition store.

Fair Nil

Graemsay: Map 1 HY 2482 0517 Brides Noust

Enclosure and shed

19th/20th

Located <10m from coast edge

An enclosed pasture field, measuring 50m by 44m, is located within 10m of the coast edge. The enclosure wall is drystone and stands to an average height of 1.5m. A ruinous structure lies against the S side of the enclosure. It measures 4m by 2.5m, stands to 2m high and has a doorway to the seaward side. Attached to the N side of this ruin is a small plot, measuring 7m by 4m and enclosed by turf banks.

Fair Monitor

G32

Graemsay: Map 1 HY 2482 0517

Upper Corrigal/Brides Noust

Three mounds, alleged site of St. Bride's Chapel and burial ground (HY 20 NW 22) Indeterminate

Located <50m from coast edge

It has been alleged that a 12th C chapel, possibly dedicated to St. Bride, and burial ground were located in this area. Previous investigations noted only a grassy mound, 0.9m high. It is likely that this mound is the same as (i) below. The features noted during this survey comprise:

- (i) An uneven, sub-circular mound is situated to centre of an enclosed pasture field. It occupies a natural rise, is grass-covered and measures 9m by 5m. Small stones protrude through the grass in a crescentic pattern reminiscent of a burnt mound.
- (ii) A small mound, measuring 3m in diameter, lies to the NW corner of an enclosed pasture field. It is grass-covered, sub-circular in shape and stands up to 0.5m high. It is located c.12m from the coast edge.
- (iii) In the NE corner of an enclosed pasture field lies an irregularly-shaped, grass-covered mound. It measures approximately 4m in diameter and stands to 0.5m high. It is located c.50m from the coast edge.

Fair, Monitor

G20

Graemsay: Map 1 HY 2486 0495

Hestor Mound

3rd/2nd millennium BC

Located <50m from the coast edge

A well defined mound is located in rough grassland, 30m from the coast edge. It is sub-oval in shape, aligned N-S and measures 7m by 5m. It is 1m high and occupies a 0.5m high natural rise. Several large stones are visible toward the base. Up to 10% of the mound is denuded by cattle poaching.

Fair, Survey

Graemsay: Map 1 HY 2512 0480

Skeafea

Boat shed and noosts

20th C

Located on coast edge

A drystone boat shed is located at the head of a stony beach. It measures 4m by 8m and has a sloping roof of thin flagstones; the floor is also flagged. A single doorway faces seaward. It is currently in use. A group of five very overgrown boat noosts lie to the SE of the boat shed; one is currently in use.

Fair Nil

G22

Graemsay: Map 1 HY 254 046 Skeafea

Earthen bank boundaries

Indeterminate

Elements located <10m from coast edge

A substantial earthen bank, located 50m from low cliffs, runs parallel with the coastline for over 100m. It is up to 2m in width and stands to an average height of 0.5m. It is adjoined by a second, of similar dimensions, which extends at 90° for 50m to the cliff edge. Two orthostatic slabs, remnants of an old fence line, protrude from the bank and a ditch lies to its W side.

Fair Survey

G23

Graemsay: Map 1 HY 2549 0452

Kirk Geo

Stone setting

Indeterminate

Located in intertidal zone

A curving line of edge-set stones extend for 15m from the foreshore into the intertidal zone.

This setting may be the remains of a slipway.

Poor

Nil

G24

Graemsay: Map 1 HY 2566 0452 Dean, Kirk Geo

Dean Church, graveyard, trackway mound (HY 20 SE 1)

19th C

Elements located <10m from coast edge

This is the site of the old parish church of Graemsay, built in 1780. The church was replaced in 1867 and has since been abandoned; the building is currently used as a hay barn. This later

church lies 15m from low cliffs. It measures 16m by 8m, has an arched doorway and is surrounded at its W end by a graveyard. The walls are of ashlar masonry, partly rendered. The roof is relatively intact. A porch or vestry annex, measuring 4m by 6m, lies at the E end and has a south-facing door. The graveyard is enclosed by a mortared perimeter wall and extends to within 3m of the cliff edge. A metalled trackway lies to the E of the church.

Fair Nil

G36

Graemsay: Map 1 HY 2566 0453 Dean, Kirk Geo Settlement (HY 20 SE 1)

Indeterminate

Located <10m from coast edge

A number of artefacts and structural footings have been found in the vicinity of Dean Church. It is reported that three circular drystone structures with interconnecting passages were excavated by the parish Minister of Hoy earlier this century. Three stone axes and a stone lamp were found; the lamp is now at Stromness Museum. In 1964 a 2' wide passageway with a slabbed roof was discovered by accident in the kirkyard. In the NW corner of the kirkyard an empty cist-like structure was unearthed while ploughing. It measured 1.1m by 0.6m and was 0.6m deep; it was covered with a slab. A small mound, in which quantities of limpet shells were visible, was found nearby. The visible remains were surveyed at 1:2500 by OS. During this survey, an amorphous grassy mound to the SE of the church, adjacent to the coast was noted. It appeared to be an accumulation of structural debris, but was so overgrown that it was not possible to tell if the debris was in-situ or an old spoil heap. No trace of the footings described above was visible.

Poor Monitor

G25

Graemsay: Map 1 HY 2595 0436 Hellia Boat shed and noosts 19th/20th C Located on coast edge

A rectangular drystone structure, measuring 6m by 3.5m, is currently in use as a boat shed. The doorway, which faces seaward, is 1.4m high and 0.5m wide. To the W of the shed are a short portion of rubble walling, possibly for drying kelp, fish or nets, and a modern water pipe. To the E of the shed are three boat noosts. The noosts are separated by piers of drystone walling. They each measure 3m wide by 5m long.

Fair Nil

Graemsay: Map 1 HY 2629 0431

Hellia

Drain and fences

19th/20th C

Located <10m from coast edge

A 'notch' cut into the face of low cliffs is revetted to the rear with a wall of beach stone. The cut is 5m long, 5m wide and 2m deep. The wall is 2m long and stands up to 1.25m high. This feature may form part of a field drain. Frequent orthostatic stones found in this general area are related to fence lines, the wire elements of which have long since perished.

Fair, Nil

G27

Graemsay: Map 1 HY 2698 0477

Clett

Boat sheds and jetty

19th/20th C

Located on coast edge and in intertidal zone

- (i) A stone jetty, 1.4m wide, extends seaward for 30m. It is up to 0.6m high. It is of drystone construction, with large edge-set stones forming the seaward end. It has been eroded by the sea and is very damaged in places.
- (ii) The ruins of a shed lie on the foreshore and have been partially eroded by the sea. It measures 5m by a minimum of 2m and stands to 1m high. There is a window to the E end. Loose flagstones strewn about the area may originally have been part of a flagged floor.
- (iii) A roofed shed, measuring 5.6m by 3.75m stands to a height of 2.5m. The roof is of flagstones and the shed is currently in use.

Fair

Nil

G39

Graemsay: Map 1 HY 272 049 Off Scarrataing

Wreck of Viola, fishing trawler (HY 20 SE 8000)

20th C

Located in marine zone

The wreck of the *Viola*, a steam fishing trawler, lies at this location. She was lost on 30th November 1930 while en route to Faeroe from Grimsby.

Not inspected

G28, G29

Graemsay: Map 1 HY 2712 0499 South Scarrataing House and enclosures

19th/20th C

Located <10m from coast edge

The ruins of a dwelling house are situated 1.5m from the coast edge. The structure measures 6m by 3.5m with a central doorway located to the seaward side and a single blocked up window to the SE. The 0.6m thick walls are constructed from clay bonded rubble and stand to 2.5m at the gables. There are traces of internal render. Hearths are recessed into the N and S gable ends and there is a cupboard recess in the E wall, between the door and window. The rear of the house backs onto an enclosed garden, measuring c.22m by 12m. The ruins of a corn drying kiln, 2.1m in diameter, lie adjacent to the NE corner of this enclosure. A second, smaller garden plot, measuring 7m by 5m, lies to the S side of the house. An enclosed field, 30m by 20m, is located 30m to the N. It extends to the coast edge where the seaward-facing wall is armoured against erosion by foundations comprising vertically-set stones. The rest of the wall is horizontally coursed and stands to 1.5m high.

Fair Nil

G30

Graemsay: Map 1 HY 2716 0518 Scarrataing House and outbuilding 19th/20th C

Located <10m of coast edge

Two ruinous buildings are aligned parallel to each other and at 90° to the shore. Both back immediately on to the cliff edge. Several fragmentary drystone field boundary walls are visible in this area, some of which are eroding over the banks. An occupied and refurbished dwelling house is located further inland.

- (i) The southern building comprises two conjoined structures, 5m wide and with a combined length of 15m. A very fragmentary corrugated iron roof survives in-situ. The walls stand to 2m high. The western structure, a former dwelling house, has a central doorway, flanked to either side by a small window. Fragments of concrete lintels and supports surround the windows. The E structure appears to be an outbuilding of later date.
- (ii) The northern building, an outbuilding, measures 15m long by 7m wide. The walls stand to 2.5m high part of a corrugated iron roof survives.

Fair

Nil

G37

Graemsay: Map 1 HY 2795 0541 Clestron Sound

WWI Anti-submarine barrier (HY 20 NE 8865)

Located in marine zone

An anti-submarine barrier, formed from vertical iron girders, was located in Clestron Sound during WWI. It is thought to have been crushed down by an ice-breaker after the war. Not inspected

Graemsay: Map 1 HY 2720 0535

Moan

Boat sheds and jetty

19th/20th C

Located on coast edge and in intertidal zone

A modern concrete jetty extends seaward for over 20m. Two sheds of drystone construction are located at the head of the beach. One stands to roof height (1.5m) and measures 6m by 4m; the other is ruinous.

Fair Nil

G38

Graemsay: Map 1 HY 2829 0558 Clestron Sound

WWI Anti-submarine barrier (HY 20 NE 8866)

1914

Located in marine zone

Anti-submarine hurdles, built from railway lines, were located in Clestron Sound during WWI. They are thought to have been crushed down by an ice-breaker after the war.

Not inspected

HOY MAP 1: SOUTH WALLS AYRE TO MELBERRY DUNES

HY1

Hoy: Map 1 ND 2876 8869 Hillock of Salwick

Burnt mound (ND 28 NE 1)

2nd/1st millennium BC

Located <100m from coast edge

A conical, grass covered burnt mound measures 11m in diameter and stands to 2m high. It is located in an enclosed field of improved grassland to the rear of a range of inhabited 20th C houses.

Fair

Nil

HY2

Hoy: Map 1 ND 2918 8861

Brims, Dyke-end Haven

Boat shed and noost

19th/20th C

Located on coast edge

A shed, now ruinous, is built into a cleft at the base of the banks. It measures 7m long by 3.5m wide and stands to 2m high. The remains of a corrugated iron roof lie strewn about the foreshore. A boat noost with winding gear lies to the immediate SE.

Fair

Nil

HY3

Hoy: Map 1 ND 2939 8847 Brims, Judashill

Noost

19th/20th C

Located on coast edge

A very overgrown boat noost lies at the head of the beach. It measures c.7m by 3.5m and is defined by a line of stones.

Fair

Nil

HY5

Hoy: Map 1 ND 2898 8789 Geo of Rottenloch

Structure

Indeterminate

Located <20m from coast edge

The very ruinous remains of a small rectangular structure lie 18m from the coast edge. Part of the structure is formed from free-standing, drystone walls, and part from stones revetted into

the side of a natural rise. The structure measures 3m by 3.9m and stands up to 0.9m high. The structure may be part of a noost or shed.

Poor Nil

HY4

Hoy: Map 1 ND 2898 8788 Geo of Rottenloch Structure (ND 28 NE 11) 3rd/1st millennium BC

Located <10m from coast edge

A previous survey of this area noted up to three putative prehistoric structures (RCAHMS 1989, #17). During this survey only one putative prehistoric structure was visible (described below). In the intervening years, the bed of the stream which flows from Rotton Loch to the geo has been widened. It may be that the other two structures have been destroyed during the widening of the stream; there is a substantial quantity of loose stone piled up in the area. Alternatively, it may be that the structure described below is the most substantial of the three noted previously and that a rectangular structure, here recorded separately as HY5, was previously interpreted as being of prehistoric date.

A very dilapidated structure, comprised of a concentration of stones protruding from rough grassland, is located 6m from the coast edge. Up to four orthostatically-set stones, the largest measuring 0.9m by 0.5m, and a quantity of slabs and blocks are arranged in such a manner as to suggest a circular or oval plan, c.6m in diameter.

Poor Survey

HY6

Hoy: Map 1 ND 2890 8780 Duncan's Geo Enclosure and turf cuttings Indeterminate

Located <10m from coast edge

- (i) A rectangular enclosure, defined by turf banks and aligned at 90° to the coast, lies 3m from the cliff edge. The banks are up to 0.9m wide and 0.3m high; the enclosed area measures 5.9m by 11.9m. the ground inside is not level; a natural rise runs through the centre of the enclosure. A quantity of loose stone, strewn about in the area, may have been part of the banks.
- (ii) An area, measuring 13m by 4m, has been stripped of turf in the past, and now appears as a slight depression. It lies 5m from the cliff edge. The 'cut' is up to 0.2m deep and has vertical sides. The turf may have been removed for the construction of the nearby enclosure, see (i) above.
- (iii) A second rectangular depression, measuring 14m by 4m and up to 0.2m deep, is aligned parallel to the coast and close to (ii). It may also represent a source for the turf used in the construction of the enclosure (i).

Fair

Nil

Hoy: Map 1 ND 2879 8781 Duncan's Geo

Caim (ND 28 NE 5) 3rd/2nd millennium BC

Located <10m from coast edge

Previous investigations recorded an outer face of masonry and structural components which suggested that this monument was a probable tripartite chambered cairn. The outer face was not seen during this survey and the site interpretation could not be confirmed. The site now appears as an amorphous and denuded mound, located in rough grass immediately adjacent to the cliff edge. It is c.3m in diameter and up to 0.5m high. The periphery of the mound is hollowed and disturbed; up to three orthostatic slabs protrude through the ground surface. The centre contains a cist which has been exposed and damaged. It measures 1.1m by 1m and is partially filled with loose debris. Two large slabs, forming one corner of the cist, remain *in-situ*

Fair

Survey

HY35

Hoy: Map 1 ND 2867 8717 Off Brims Ness

Wreck of the Aase, cargo ship (ND 28 NE 8946)

20th C

Located in marine zone

The Hamburg cargo steamer the Aase was stranded and lost off Brims Ness in 1928.

Not inspected

HY36

Hoy: Map 1 ND 2860 8779 Off Brims Ness

Wreck of the Neptunia (ND 28 NE 8753)

20th C

Located in marine zone

The wreck of the *Neptunia* was reported at this location in 1936.

Not inspected

HY8

Hoy: Map 1 ND 2856 8799

The Skeo

Broch and associated settlement (ND 28 NE 3)

1st millennium BC/1st millennium AD

Located <10m from coast edge

The site was investigated before 1880 by IGM Heddle Esq. of Melsetter. A quantity of bone implements and other antiquities were found (ONB 25, 35). It is now visible as a large artificial mound. It occupies a natural rise and stands up to 4m or so. The mound is

amorphous and spreads extensively to the E and S sides, covering an area 100m by 80m. To the centre, lie the ruins of a broch, covered by collapsed rubble and debris. Structural remains are visible in small exposures, and in a larger erosion face to the seaward side of the mound. Anthropogenic soil deposits visible in these exposures contain inclusions of burnt and unburnt clay, pot sherds, peatash, worked stone, shell and bone. A series of sub-oval hollows, cut or worn into the debris which covers the broch, may represent post-broch settlement. A further series of hollows and level platforms to the SE side of the mound may represent the remains of up to three structures. The broch is partly surrounded by a defensive earthen and stone bank. This is most visible to the N side of the mound, where it stands up to 4m high, above the level of the surrounding land. A ditch on the inner side of the bank is now almost completely filled up. The outer side of the bank appears to have been further enhanced through scarping of the surrounding ground surface.

Fair Monitor



SITE HY8

HY9

Hoy: Map 1 ND 2846 8820

Skeo

Burnt mound (ND 28 NE 10)

2nd/1st millennium BC

Located <50m from coast edge

This site, previously recorded as a putative settlement site (RCAHMS 1989, #16) is now reinterpreted as a burnt mound. An oval mound is conical in profile and has a flat top. It is situated in rough grass 25m from the cliff edge. It measures 7m by 8m and is 2.75m high. Up to 40% of the mound is denuded of vegetation and deposits of burnt soil and burnt angular stones can be seen in the exposures. The average size of the burnt stone fragments is 15cm by 10cm by 5cm and they are derived from beach deposits. A large, unburnt, edge-set slab which protrudes from the W end of the mound may be structural, possibly part of a tank. A watercourse, which has been re-channelled in recent times, lies to the N of the mound.

Fair

Survey

Hoy: Map 1 ND 2837 8810 Grassy Clett

Shell midden (ND 28 NE 12)

Indeterminate

Located in intertidal zone

Grassy Clett is a rock isolated at high tide. Its summit is hummocky with many protruding stones. In a depression a length of drystone walling is exposed. Shell midden deposits are visible in two areas denuded by rabbit burrowing. This site was not inspected.

Not inspected

HY10

Hoy: Map 1 ND 2840 8821

Brims

Chapel of Brims (ND 28 NE 2)

10th/14th C

Located <20m from coast edge

The grass-covered footings of a rectangular building, aligned NE-SW, are located on a gentle rise, 20m from the cliff edge. The structure measures 8.95m by 3.4m; the footings stand up to 0.5m high. The side walls are up to 0.6m thick, while the end walls are 1.05m thick. There is the suggestion of a doorway at the SW corner. A long, low mound of grass-covered rubble fills the interior of the chapel. The footings of the outer enclosure wall lie 4m from the S and W walls of the chapel and enclose an area 22m by 16.5m.

It is believed locally that the chapel was dedicated to St. John, although this has not been confirmed. Human bones have been found in a level area, 30m to the W of the chapel, where there are several low mounds.

Fair

Monitor

HY11

Hoy: Map 1 ND 2840 8828 Skippi Geo, Brims Boat shed (ND 28 NE 6)

19th/20th C

Located on coast edge

The ruins of a drystone structure lie at the head of a stony beach in a small inlet. The structure, most probably a boat shed, is built into a natural recess. It measures 2.5m by 4m and stands to 1.3m high. The walls are constructed from rough beach stone; a single timber roof beam remains *in-situ*.

Fair

Nil

Hoy: Map 1 ND 2643 8868

Melberry

Anthropogenic deposits

Indeterminate

Located <50m from coast edge

A lens of highly organic, peaty, soil is exposed in section in sand dunes, 30m above the head of the beach. A small fragment of butchered bone was noted in this deposit. The exposure extends for 6m and is up to 0.25m thick. It lies beneath 2m of windblown sand and covers a series of discoloured sand lenses.

Poor Monitor

HY13

Hoy: Map 1 ND 2625 8875

Melberry

Flotsam, possibly military

19th/20th C

Located on coast edge

A portion of a timber structure is washed up on the beach at HWM. It comprises four layers, each of four lengths of squared timbers, secured with iron bolts. Each layer is arranged at right angles to its neighbours. The individual timbers are 0.9m² in section and up to 11.6m long. Overall, this structure measures 11.6m long, 3.2m wide and 2m high. It may be part of a jetty or pontoon, possibly of military origin.

Fair Nil

HOY MAP 2: LYNESS PIER TO NORTH NESS

HY14, 31, 32

Hoy: Map 2

ND 313 947 to ND 307 939

Lyness

WWI & II Lyness Royal Naval Base (ND 39 SW 17, 20): Scheduled site (HS Index 5438, 07ND 309 947-07ND 310 947)

20th C

Elements located <10m from coast edge

Lyness served as the centre for naval operations throughout WWI & II. The sheltered harbour offered an ideal location for refuelling and maintaining the fleet. The extensive remains of a wide range of structures associated with the base include:

(i) A boiler, a building, oil tanks, a military camp and a pillbox (ND 39 SW 20.01 -20.05).
(ii) Lyness steam pumping station and oil tank: Scheduled (HS Index 5438, 07ND 309 947-07ND 310 947). The steam pumps were used to drive fuel oil into storage tanks. Originally coal-powered, they were converted to oil-firing in 1936. They now form a display within the

Lyness Interpretation Centre. The oil tank, built in 1917, has a capacity of 12,000 tons and is the last survivor of four such tanks originally housed here.

(iii) A hand crane and pier (ND 39 SW 17)

Good/Fair Monitor

HY33

Hoy: Map 2 ND 3139 9448 Off Lyness

Unassigned craft (ND 39 SW 8746, 8783, 8784)

Indeterminate

Located in marine zone

Three 'obstructions' lie in the waters to the SE of Lyness Pier.

Not inspected

HY15

Hoy: Map 2 ND 3109 9385 Orraquoy Noost 19th/20th C

Located on coast edge

A boat noost, defined by a ruinous curvilinear drystone wall, is situated on a shingle beach at the base of low cliffs. The noost measures 1.8m by 2m, the retaining wall is up to 1.36m high. The lowest course of the wall is formed from edge-set stones.

Fair Nil

HY16

Hoy: Map 2 ND 3123 9384 Rinnigill Mound

Indeterminate

Located <10m from coast edge

A low grassy mound is situated in rough grassland, 3m from the cliff edge. It is sub-oval in shape and measures 5m by 2m, standing to 0.6m high. A curvilinear bank adjoining the mound defines an oval area which measures 5m by 7m. The remains may represent a small prehistoric house or a much reduced burnt mound.

Poor Survey

Hoy: Map 2 ND 3128 9390

Rinnigill

WWII anti-submarine netting

20th C

Located on coast edge

A length of steel-mesh submarine netting has been re-used as fencing wire at the seaward end of a field boundary.

Fair Nil



SITE HY17

HY18

Hoy: Map 2 ND 3144 9384

Rinnigill

House and outbuilding

19th/20th C

Located <20m from coast edge

The ruins of a rectangular stone dwelling house and a byre, set end to end, are located in rough grassland, 20m from the coast edge.

- (i) A dwelling house is aligned E-W and measures 12.5m by 6m. The single doorway, located on the S side of the building, is flanked by a pair of glazed windows. The three other walls each have a central glazed window. They are constructed from mortar-bonded rubble and stand to roof height. The flagstone roof survives over the entire building, although it is now slumped and damaged. The building is currently in use as a hay barn.
- (ii) A byre building is aligned E-W and measures 12.5m by 6m. The roof, which has fallen inwards in parts, is constructed from large flagstones, patched with corrugated iron. The walls are constructed from mortar-bonded rubble. The interior, which is lime washed, has a concrete floor and a row of concrete stalls against the S and W walls. The doorway is located on the N side of the building and there is a small window to the SE corner.

Fair

NiI

Hoy: Map 2

ND 316 937 to ND 318 937

Rinnigill

Structures, military

20th

Located <100m from coast edge

The remains of several large concrete and brick buildings and the footings of a military camp are located between 50m and 100m from the coast edge. These structures are visible on aerial photographs taken in 1975 (Fairey Surveys Ltd 1:10,000). Several overgrown metalled trackways are also visible in the area. A concrete and stone jetty, of WWII date, survives relatively intact. On the foreshore are heaps of steel cabling and assorted metal debris.

Fair Survey

HY26, 30

Hoy: Map 2 ND 3180 9380

Rinnigill

Hulk and crane (ND 39 SW 16)

20th

Located in intertidal zone

A relatively intact steel-hulled boat, equipped with a crane, is tied up to a small concrete slipway. It is flat bottomed and measures 25m long by 15m wide, approximately. It may be a salvage tug remaining from WWII naval operations in the area. This structure is not visible on aerial photographs taken in 1975 (Fairey Surveys Ltd 1:10,000) and it must be presumed that it has been brought to this site since then.

Good Monitor

HY20

Hoy: Map 2 ND 3203 9370 Towerhouse Structures 19th/20th C

Located <50m from cost edge

The ruins of a range of conjoined buildings are situated 25m from the coast edge. Overall, these buildings measure 30m by 5m and are aligned NW-SE. The footings of a planticrub lie close to the NW end of the buildings, while a well and ruined shed lie close to the SE end.

- (i) At the NW end of the range, a dwelling house has a single doorway and window to the seaward side. It measures 10m by 5m; the gable ends stand to over 2m high.
- (ii) A second dwelling house adjoins the SE end of (i). It measures 8m by 5m and has a seaward-facing central door, flanked by a pair of windows. The SE gable end has a hearth recess and a chimney.
- (iii) This small chamber has been built onto structure (ii). It measures 6m by 5m and has a door to the N end. The SE gable end has a hearth recess and a chimney.
- (iii) A second small chamber has been added to the SE end of (iii). It measures 6m by 5m. Fair, Nil

Hoy: Map 2 ND 3216 9367 Towerhouse

Boat shed and military telegraphy station

20th C

Located on coast edge

- (i) A boat shed, constructed from mortar-bonded rubble, has a concrete floor, a roof of corrugated iron and a wooden door. It measures 10m by 7m and stands to 3m high. The foundations at the seaward side are buttressed against erosion with additional stone and concrete armouring.
- (ii) A concrete shed, the remains of a military telegraphy station, is located 2.5m from the coast edge. It measures 3m by 3m and stands to 3m high. It has a single door on the landward side and two small windows to the N and E. The remains of cables can be seen to protrude from an aperture at ground level to the seaward side of the building.

Fair Nil

HY22

Hoy: Map 2 ND 3244 9344 Crock Ness

Crockness martello tower (ND 39 SW 10): Scheduled (HS index 2726, 07ND 324 934);

Listed Grade 'B'

1815

Located <10m from coast edge Crockness martello tower is one of two such structures which served the Hackness battery at Longhope. The battery was built in 1815, during the American War of Independence, to protect the sheltered harbourage at Longhope from American privateers.

The tower is 47m in circumference and 10m high. It appears circular on



the exterior, but due to a thickening of the seaward section of the wall, the interior is elliptical in plan. It was designed to be entered through a doorway on the first floor, via a removable ladder. It is not generally accessible now and thus the interior was not inspected. This site lies 1.5m from the coast edge. The coastline immediately in front of the tower is protected by a gabion wall, 20m long and 1.5m high.

Good

Nil

Hoy: Map 2 ND 3238 9310 Crock Ness Boat sheds 19th/20th C

Located on coast edge

Five ruinous and eroding structures are situated at the HWM. Four of these structures are conjoined simple open fronted sheds, ranging in size up to 3m by 6m. The remains of corrugated iron roofing lies strewn around the foreshore. The fifth building is a small, two storied structure with a doorway on both levels. The lower floor gives out on to the foreshore; the upper floor gives access to the ground which lies above the banks. A refurbished, occupied cottage is located further inland.

Fair Nil

HY24, 29

Hoy: Map 2 ND 3220 9301

Westerough (ND 39 SW 15)

House 19th/20th C

Located <10m from coast edge

The ruins of a dwelling house are aligned parallel to the coast and an outbuilding is set at 90° to it. Both buildings are constructed from rubble which is partly bonded with mortar. The walls survive up to 2.3m high and 4m at the gables. They are located 6m from the coast edge and are separated from the beach by a metalled track. The dwelling house has a central doorway, facing seaward, flanked by a pair of windows. There are hearth recess to either end of the interior. Two smaller chambers have been added on to the W end of the dwelling house. The outbuilding has a corn drying kiln.

Fair Nil

HY25

Hoy: Map 2 ND 3206 9292 Wellbraes Structures 19th/20th C

Located <10m from coast edge

A range of three conjoined buildings are located to the landward side of a metalled track, 6m from the coast. Overall, the buildings measure 30m long by 4.5m wide. The walls are constructed from rubble and are mortar-bonded in places. They stand to 2.3m high and 4m at the gables; the roof has collapsed entirely. The central, and largest, building has a seaward-facing doorway, flanked by a pair of windows. On the interior, the floor is paved with large flagstones and there is a hearth recess to either end of the building. Smaller chambers have been added to either end of the building.

Fair Nil

Hoy: Map 2 ND 306 921 Doonatown

Threshing machine (ND 39 SW 13)

19th/20th C

Located <100m coast edge

A previously-noted threshing machine (RCAHMS 1989, 10) was not located.

Not located

HY34

Hoy: Map 2 ND 3077 9139 Off Longhope

Dolphin (mooring buoy) (ND 39 SW 8776)

20th C

Located in marine zone

The remains of a storm-damaged dolphin survive. The marker was replaced in 1972 by a blue conical buoy.

Not inspected

SOUTH RONALDSAY MAP 1: ASHBY TO GILL

SR119

South Ronaldsay: Map 1

ND 4505 9385

St. Margaret's Hope

Hulk 'The Crop'

20th C

Located in intertidal zone

A steel-hulled vessel, *The Crop*, lies beached in the intertidal area and fragments lie strewn over the foreshore. The hull is damaged, but apparently complete and measures 25m long by 12m wide. This vessel was registered in Cowes

Poor

Nil

SR120

South Ronaldsay: Map 1

ND 446 935

St. Margaret's Hope

Village (ND 49 SW 22, 23, 24): inc Listed buildings grades 'B' and 'C' (S)

16th C

Elements located <10m from coast edge

The first recorded inhabitant of St. Margaret's Hope was one Thomas Cromartie, probably a trader, mentioned in 1589 Rentals. The 'Hope' (Norse *Hop* or bay) provided shelter for ships involved in the east coast trade, coming or returning from the north. In 19th C it became a herring station, but was never as important as Burray Village in this respect. St. Margaret's Hope retained importance as a communication centre up to the early part of this century, as a port of call for the daily mail boat which ran between Scrabster and Stromness, via Scapa. The listed buildings are as follows:

(i) (ND 49 SW 22) Swanson House, Front Road: Listed grade 'B'

This two and a half storied building is aligned at 90° to the road. It is of rubble construction, with a roof of Caithness flag and has crow-stepped gables. It dates to the later 18th C.

(ii) (ND 49 SW 23) 'Lairdene', Front Road: Listed grade 'B'

This building is of similar date and construction to (i) but the exterior is harled.

(iii) (ND 49 SW 24) St. Margaret's House, Front Road: Listed grade 'B'

This building, originally an inn, is of similar date and construction to (i) but the exterior is rendered.

(iv) Corner house, Front Road ('J. Spence and Sons'): Listed grade 'C' (S).

An 18th C building in a traditional L-plan of two and a half stories. It is harled with crow-stepped gables and a roof of Caithness slate.

(v) A Three-storied warehouse of 18th/19th C date which lies to the south side of the bay, on the outskirts of St. Margaret's Hope is currently on the Buildings at Risk Register (January 1998).

Good

Nil

SR147

South Ronaldsay: Map 1

ND 4452 9387 Smiddybanks

Site of mansion (ND 49 SW 10)

17th C

Located <50m from coast edge

A two-storied mansion house once stood on the site of Smiddybank farm house. It was built around three sides of a courtyard. The fourth side was closed by a high wall, to the centre of which stood a Renaissance gateway with a 40' well adjoining it. A heraldic panel on the gateway bears a shield, flanked by the dates 1633 and 1639 (MacGibbon and Ross, 1887-92, vol. 4, 404). The gateway has been re-erected in front of the farm house and the well survives in good condition inside an outbuilding.

Fair Nil

SR1

South Ronaldsay: Map 1

ND 4448 9430 St. Margaret's Hope

Concrete lockers, possibly military

20th C

Located <50m from coast edge

Two open-fronted concrete structures are situated on a sloping hillside, 10m from the cliff edge. They are roofed with corrugated iron. The larger structure measures 2.02m by 1.38m and stands to 1.35m high. The smaller structure has slots to house three shelves on the inside and measures 1.07m 1.38m; it stands to 1.07m high. The concrete plinths on which these structures are based are now raised proud of the surrounding ground surface. They may be the remains of military lockers, possibly an ammunition store. Fair, Nil

SR₂

South Ronaldsay: Map 1

ND 4447 9448 Needle Point

Earthen and stone boundary bank

19th/20th C

Located <50m from coast edge

A grass-covered earthen and stone boundary bank, aligned at 90° to the coast, runs downhill intermittently for over 100m. It stands up to 0.4m high and is 1m wide. It terminates abruptly to the landward side of a metalled track.

Fair Nil

SR157

South Ronaldsay: Map 1

ND 4420 9434 Off Needle Point

Wreck, German submarine U53 (ND 49 SW 8893)

20th C

Located in marine zone

The German submarine U53 is said to have been sunk in 1940, possibly off Needle Point. The co-ordinates given here (as per RCAHMS) are not accurate and actually refer to a location on dry land.

Not inspected

SR3

South Ronaldsay: Map 1

ND 4440 9460

The Golt

Earthen boundary bank

19th/20th C

Located on coast edge

An earthen bank, aligned at 90° to the coast, is eroding over the cliff edge. It extends inland for 10m, stands to 0.4m high, and is up to 1m wide.

Poor

Nil

SOUTH RONALDSAY MAP 2: GILL TO LYNEGAR

SR 4

South Ronaldsay: Map 2

ND 4404 9449

Gill Bay

Pitted rock face

Indeterminate

Located on coast edge

At the N end of a stony beach, a bare vertical rock face is pitted with upwards of twelve small hollows. Some of the hollows are up to 2cm deep and are sharp-sided. These features are not natural solution hollows and are unlikely to be either cupmarks or quarrying marks. They may, however, be gun-shot holes. They are included here only to discount their possible future identification as prehistoric cupmarks.

Fair

Nil

SR5

South Ronaldsay: Map 2

ND 4395 9445

Gill Bay

Trackway

19th/20th C

Located <10m from coast edge

A trackway leads down to the foreshore. It has been artificially levelled and has a stone-lined drain running beneath it. This drain is exposed in the coastal section. A second, more substantial, stone-lined drain is exposed nearby in the section. It stands up to 1.5m high with sides constructed from seven courses of carefully laid slabs. It is covered by large capping slabs.

Poor

Nil

SR6

South Ronaldsay: Map 2

ND 4350 9432 East Swartiquoy Field system 19th/20th C

Elements located <100m from coast edge

A series of ruinous dykes define the boundaries of fields, most of which are now under pasture. A ruinous house is located c.100m inland.

Poor Nil

SR7

South Ronaldsay: Map 2

ND 4313 9422

Mayfield

Earthen boundary bank

Indeterminate

Located <10m from coast edge

A grass-covered earthen bank runs at 90° to the coast. It extends for c.50m up to a drystone dyke, of recent build, which forms the boundary between rough pasture and the foreshore.

Fair

Nil

SR8

South Ronaldsay: Map 2

ND 4307 9416

Mayfield

Enclosure (ND 49 SW 13)

1st millennium BC/1st millennium AD

Located <10m from coast edge

A sub-circular enclosure, measuring 30m in diameter, occupies a small, low-lying promontory. It is defined by an earthen and stone bank with a ditch to the exterior. The bank stands up to 1.5m high and is 3m wide; it is best preserved to the N side. The ditch is now filled in but was probably originally up to 2m wide. A slight bank to the outer rim of the ditch may be upcast from ditch cutting. A 0.5m gap in the bank to the NE side and is flanked by two upright slabs and may be an entrance. The W side of the enclosure is much reduced and cannot be traced on the ground. It appears to extend beneath the foundations of a ruinous boat shed (see SR9). Here, exposed in the coastal section, a vertical sided cut, 2m in width is filled with rubble and peaty deposits.

Fair, Survey

SR9

South Ronaldsay: Map 2

ND 4308 9416

Mayfield Boat shed

19th/20th

Located on coast edge

A ruinous, rectangular drystone structure lies on the cliff edge, 2m above a stony beach. The W corner has been removed by coastal erosion. It measures 3m by 4m and stands to 2.5m high. The mortar-bonded walls have a double face of roughly-dressed stone, with a hollow core. The E end wall, which survives to roof height, contains a doorway. The foundations of the shed are exposed in section, and can be seen to lie over a cut feature, which is filled with deposits of rubble and peaty soil. This feature may be part of the ditch which is associated with an enclosure which lies nearby (see SR8).

Fair

Nil



SITES SR8, SR9

SR10

South Ronaldsay: Map 2 ND 4295 9380 Dam of Hoxa

Structures

19th/20th C

Located <20m from coast edge

A range of conjoined buildings, with a corn-drying kiln to the N end, has been converted into a modern cottage. It measures 25m by 10m and lies 15m from the coast edge. The roof has been covered with a layer of turf.

Good Nil



SITE SR10

SR127

South Ronaldsay: Map 2

ND 4252 9396

Muckle Howe

Broch (ND 49 SW 1)

1st millennium BC/1st millennium AD

Elements located <100m from coast edge

A broch occupy a natural ridge to the centre of a narrow isthmus. This elevated site offers good views over the surrounding landscape and is clearly visible from as far away as St. Mary's Holm on Mainland. The broch was partially excavated by Petrie in 1848 and has been largely 'renovated' since then. The interior was divided by radial slab divisions, although, those now in evidence may be reconstructed rather than original. The internal ground surface has been levelled out and roughly surfaced. The inner wall face has been rebuilt with further, mortar-bonded courses, added. The outer wall face, which is not now visible, is said to have been 14' thick and to have stood to 8' high. The exterior appears not to have been fully exposed; substantial deposits survive around the circuit of the broch. Topographic anomalies indicate the presence of further structures, possibly houses, built over accumulated debris to the immediate E of the broch. Further to the S end of the ridge, two uneven areas may represent the remains of yet more settlement.

Fair

Monitor

South Ronaldsay: Map 2

ND 4242 9402 Howe Taing House 19th/20th C

Located <10m from coast edge

A roofless rectangular dwelling house lies 4m from a shingle beach. It is 9.5m long and 4.5m wide and the walls stand almost to roof height. At the front of the building a central doorway, flanked by two windows, faces seaward. A door and a window are also present on the landward side. Both gable ends contain hearth recesses and the E gable has a small window and a chimney stack. Deposits of ashy soil and debris including metal and china fragments, are exposed in the coastal section in front of this house. A comparison between aerial photographs taken in 1950 and 1987 indicates that the shoreline has retreated by up to 10m during the intervening years.

Fair Nil

SR12

South Ronaldsay: Map 2 ND 4243 9403 Little Howe Settlement (ND 49 SW 2) 1st millennium BC/1st millennium AD Located <20m from coast edge

The grass-covered remains of a settlement extends over an area 28m by 18m, 15m from a shingle beach, to the rear of a ruinous house (see SR11). It was excavated by Petrie, although it would appear that this work was a partial, rather than full, examination of the remains. His plan shows a central chamber, 20' in diameter, surrounded by a curvilinear wall. There was an entrance passage to the S. An 'intra-mural' gallery extended behind the wall, on the interior. The passage and galleries were roofed with lintels. A saddle quern and fragments of 'dark pottery' were found and the site has been attributed to the immediate pre-broch or broch period (Wainwright, 1962).

Today, the central structure is defined by wide turf-covered banks framing a dished, sub-circular interior, 13m in diameter. The banks stand up to 3m high. The interior surface is uneven and there are frequent loose stones strewn about. Some of the stone may derive from a very ruinous cru, or small enclosure, which has been inserted over the ruins. The remains of the 'intra-mural' gallery are visible to the NNW, where it appears to form a semi-subterranean passage. The passage is now blocked up with collapsed masonry. The entrance, which lies on the S side, is via a 3m long passage through the enclosing banks. The fabric of the structure is now prone to collapse and appears to have been disturbed in recent times by opportunistic investigations as well as animal trampling.

Fair Monitor



SITES SR11, SR12. TAKEN FROM BROCH SR127

South Ronaldsay: Map 2

ND 4209 9420

The Hall, Uppertown

Cairn

Indeterminate

Located <10m from coast edge

A concentration of rounded beach pebbles lie in rough grassland which slopes down to a stony beach. The 'cairn' is up to 1.75m high and would appear to be *ex-situ* rubble derived from a collapsed structure.

Poor

Nil

SR14

South Ronaldsay: Map 2

ND 4203 9422

The Hall, Uppertown

Flotsam

20th C

Located on coast edge

Eight large rusted iron objects and a quantity of steel cabling are strewn over the foreshore and rocks. The iron bars are 2m long and have hooks and chains attached. This debris may derive from the boom (WWI & II) which extended across Hoxa Sound, from Roan Head on Flotta, via Nevi Skerry to Croo Taing on South Ronaldsay, which lies to the W of this site. Poor

251

South Ronaldsay: Map 2

ND 4148 9431 Quarryhouse Noosts 19th/20th C

Located on coast edge

Two triangular depressions, cut into the grass at the head of a pebbly beach, represent the landward ends of two boat noosts. The largest measures a minimum of 7m long by 2.5m wide; the other measures 5m long by 4m wide. The noosts are defined by revetted walling, which stands up to 0.75m high.

Poor Nil

SR16

South Ronaldsay: Map 2

ND 4139 9422 Quarryhouse

Mound

Indeterminate

Located <10m from coast edge

A low grassy mound is located 2m from the cliff edge on rough grassland. Aligned N-S, it is oval in plan and measures 11m by 4m. It stands up to 1m high and appears to be of earthen construction. It has been slightly truncated to the S end by a modern fence line.

Fair Nil

SR17

South Ronaldsay: Map 2

ND 4125 9408 Uppertown

Earthen and stone boundary bank

19th/20th C

Located <10m from coast edge

A grass-covered earthen and stone bank is aligned at 90° to the coast. It extends inland for 25m from the cliff edge and has a ditch to its SW side. It is up to 0.75m wide and 0.5m high. Fair

South Ronaldsay: Map 2

ND 4092 9370

Lynegar

Datum marker, military

20th C

Located <10m from coast edge

A concrete marker is set into the ground 2m from high cliffs. It bears the legend 'O.C.M. Datum'. It stands 0.2m high and has a central cavity, 0.1m in diameter. It is likely to be associated with military operations in the area, centred on the Balfour and Hoxa Coastal Batteries.

Good

Nil

SR19

South Ronaldsay: Map 2

ND 4086 9362

Lynegar

Shelter

Indeterminate

Located on coast edge

A corner angle of drystone walling forms the seaward side of a rough shelter built into a cleft in the cliff face. The wall is constructed from thin slabs which are laid directly over exposed bedrock. It stands to 1.5m high; the E-W portion extends for 2m whilst the N-S leg is 1.5m long. To the rear of the wall lies a slight hollow which measures 2m by 5m. This shelter may have served as a winter noost.

Poor

Nil

SR20

South Ronaldsay: Map 2

ND 4079 9351

Lynegar

Two datum markers, military

20th C

Located <10m from coast edge

- (i) A square concrete block, 1.06m long, has a central cavity 0.22m in diameter and bears the legend 'OCM B'. It is located 1m from the cliff edge.
- (ii) A second concrete block of similar dimensions bears the legend 'OCM A'. It is situated 2m from the cliff edge.

Good

SOUTH RONALDSAY MAP 3: LYNEGAR TO BALL HILL

SR22

South Ronaldsay: Map 3

ND 6065 9336

Moi Geo

Boat sheds, track and slipway

19th/20th C

Located on coast edge

- (i) The ruins of two conjoined boat sheds lie at the head of a stony beach. The sheds are partially set into the cliff edge and have revetted rear and side walls. They are each 5m long and 4.5m wide. The front ends of the sheds are very ruinous and are now marked only by pairs of vertical timber posts.
- (ii) An overgrown track leads inland from the foreshore. The footings of a stone building and fragments of winding gear lie to one side of the track at the head of the banks.
- (iii) A stone slipway extends seaward from the foreshore for up to 20m. The landward end of the slipway is now very ruinous.

Fair

Nil

SR23

South Ronaldsay: Map 3

ND 4039 9332

Leyni Geo

Flotsam

20th C

Located in intertidal zone

A quantity of steel cabling, iron chains and metal debris is strewn over the rocks of the intertidal area. Fragments of a large metal structure, possibly part of a ship or a boom, are wedged fast between the rocks. These remains may relate to military operations in the area, centred on Hoxa and Balfour Coastal Batteries.

Poor

Survey

SR151

South Ronaldsay: Map 3

ND 403 931

Hoxa Head

Lighthouse base (ND 49 SW 25)

20th C

Located <50m from coast edge

A cast iron, gas-powered lighthouse of 1901 was built to guide ships into Scapa Flow. The superstructure has been removed, leaving a solid concrete plinth, which formed the base. It is located between two WWII searchlight emplacements (see SR24 (i)). It lies 3m from the cliff edge and measures 4.4m by 5.2m. A modern lighthouse, with solar panels, has been built nearby.

Fair

South Ronaldsay: Map 3

ND 403 931 Hoxa Head

WWI & II Hoxa & Balfour Coastal Batteries (ND 49 SW 19, 27): Scheduled (HS Index 07ND 404 928)

1915-1918, 1939-1945

Elements located <10m from coast edge

Hoxa Head is strategically located for monitoring access into Scapa Flow through Hoxa Sound and Coastal Batteries were operational here during both world wars. Hoxa Battery became operational in 1915. It was equipped with four 4" Quick Fire guns. Located on the east-facing coast of the headland, it operated in conjunction with Stanger Battery on Flotta to defend Hoxa Sound. A second battery was built in 1916; this faced S to cover the entrance to Switha Sound and was armed with two 6" Quick Fire guns.

Hoxa Battery was re-established in 1939 with the emplacement of two 6" Breech Loading guns and the construction of a range of ancillary buildings including an extensive camp. The new battery was located on the south coast of the headland and was charged with guarding access to Hoxa Sound and remained in use until 1943.

Balfour Battery was brought into being in 1940 to defend Hoxa boom. Initially, two twelve-pounder guns were temporarily emplaced c.300m to the N of Hoxa Battery. By 1941 two twin six-pounder guns were permanently installed The battery remained in use until 1945.

The lists below represents the most significant elements associated with the batteries which lie within 50m of the coast. They are described as they occur moving from north to south.

Balfour Battery:

- (i) Two concrete searchlight emplacements, lying 15m apart, are located 2m from the cliff edge. Access is via a set of steps leading down to a single doorway in the S side. The front of the structure has three slit openings, producing a dispersed beam when operational. They measure 5m by 3.5m and stand to 2.5m high. They both retain some internal fixtures and wall paint.
- (ii) A searchlight emplacement, similar to (i) is located 5m from the coast edge, adjacent to a modern lighthouse. A wooden door has been added and the windows have been blocked up; it is currently in use as a store.
- (iii) The northernmost of the twin six-pounder gun emplacements is located on the edge of a steeply sloping cliff. The gun was housed to the centre of the concrete structure, with a covered walkway and a range of stores surrounding it. A directing tower, several shelters and a magazine building are located to the rear. It was noted that exposed iron beams are now very corroded and parts of this structure may be structurally unsound.
- (iv) The second, southern battery, is similar in all respects to (iv) above.

Features associated with either Balfour or Hoxa Batteries (located at ND 4032 9295):

- (v) A horseshoe-shaped earthen bank, built against a natural slope lies 25m from the cliff edge. It measures 9m by 5m and stands up to 1m high.
- (vi) A concrete plinth, measuring 3.2m by 1.5m, lies 25m from the cliff edge.
- (vii) A linear earthen bank extends for 5m and is up to 1.5m wide. It is located 20m from the cliff edge.

WWI & II Hoxa Battery:

- (viii) A searchlight emplacement, located on the cliff edge, is entered via a door in the S wall. The front of the structure is badly damaged and is now completely open. It measures 5m by 3.5m and stands to 2.5m high.
- (ix) The northernmost of two WWI 4" gun emplacements is located within 10m of the cliff edge. The front of the complex comprises two concrete barriers set c.10m apart, behind which the guns would have been set. Each gun position is linked, via a semi-subterranean passage, to a magazine building at the rear.
- (x) The second WWI gun emplacement is located 30m S of (x) and is identical in form.
- (xi) A rectangular pit, measuring 13m by 8m, is cut into the ground surface 10m from the cliff edge. Two narrow linear cuts lead off from either end. This hollow may have housed a storage tank with attached pipelines or drains.
- (xii) A rectangular depression may represent the remains of a semi-subterranean structure. It



measures 13m by 7m, is located 20m from the coast edge. Collapsed stonework to the N side of the depression apparently derives from a hearth and chimney.

- (xiii) The remnants of a structure, which comprise a concrete floor and fragmentary drystone walls, are located 10m from the cliff edge. The floor covers a 36m² area and there are indications of an entrance to the N side.
- (xiv) A searchlight emplacement lies 2m from the cliff edge. It measures 5m by 3m and stands to 3m high. The front has a single large opening with 180° field of vision.
- (xv) The WWI 6" gun emplacements have been disturbed and obscured by the WWII structures. Fragments are still visible, located within 20m of the cliff edge.
- (xvi) Two concrete WWII gun emplacements, which housed 6" Breech Loading guns, are located 50m from the coast edge. They are surrounded by a range of buildings which include two magazines, two shelters, and the battery observation post. A track leads downhill from the gun emplacements to the camp area.
- (xvii) A searchlight emplacement, similar to (xv), is situated to the SW of the gun emplacement (xvii).
- (xviii) An artificial rectangular hollow in the cliff side may have housed storage tanks or a semi-subterranean structure. The cut, which extends into bedrock, measures 20m by 6m and is up to 2m deep in places. A small concrete plinth is located towards the centre of the area. Fair/poor

Monitor



SITE SR24 NORTH SIDE OF HOXA HEAD

South Ronaldsay: Map 3

ND 4170 9345

Uppertown

Structure

20th C

Located <50m from coast edge

The remains of a structure are located 40m from the coast edge. This building may be associated with a WWII anti-aircraft battery (ND 49 SW 30), which lies outwith the study area. The remains comprise a set of steps and a chimney stack, both of brick and concrete construction. The building is estimated to have measured 10m by 5m.

Poor

Nil

SR153

South Ronaldsay: Map 3

ND 4222 9369

Hoxa

Site of St. Colm's Chapel (ND 49 SW 8)

10th/14th C

Located <10m from coast edge

This chapel is said to have stood on a small knoll, known as Kirkie Brae. It is recorded as one of the seven pre-Reformation chapels said to have existed on South Ronaldsay. An old History of Orkney tells that the chapel was founded by Cormac, a disciple of St. Columba, who arrived from Iona around the beginning of the 7th C (OS Name Book 20, 83). Petrie carried out investigations in the area in 1871 and found several artefacts of probable Iron Age

date, indicating that the site may have been previously settled. The top of the hill has been disturbed, apparently for use as a wartime machine-gun position. Part of a drystone wall and a modern wall at the base are now visible and there is no trace of any remains which could confidently be ascribed to either the chapel or the settlement.

Poor

SR154

Monitor

South Ronaldsay: Map 3

ND 4250 9345 Sands of Wright

Military camp (ND 49 SW 32)

20th C

Located <100m from coast edge

A small military camp has been recorded on aerial photographs (Fairey Surveys Ltd, 7343 44 448-9, flown 1975). This area has since been developed as an amenity area with public toilets, a picnic area and carpark. The site could not be located on the ground and it is unclear whether it lay within the coastal zone.

Not located

SR45

South Ronaldsay: Map 3

ND 4276 9254

Inkbottle

House

19th/20th C

Located <50m from coast edge

The ruins of a single-storied sandstone dwelling house is located 20m from a rocky shore. It measures 15m E-W by 7m N-S and stands almost to roof height (3.5m and 4.2m at gables). A central doorway is flanked by a pair of small windows and faces seaward. A shed adjoins the E end of the building and the remains of winding gear lie nearby.

Fair

Nil

SR128

South Ronaldsay: Map 3

ND 4281 9252

Inkbottle

Structure

19th/20th C

Located <20m from coast edge

The overgrown footings of a building, probably a dwelling house, lie 20m from the coast edge.

Poor

South Ronaldsay: Map 3

ND 4283 9251 Knowe Quindry

House 19th/20th C

Located <20m from coast edge

A ruinous house is located c.20m from the cliff edge. It measures 12m by 8m and stands to 3.5m at the NW gable end; the SW gable is less complete. A central, seaward facing, doorway is flanked by a pair of small windows.

Fair Nil

SR47

South Ronaldsay: Map 3

ND 4304 9228 Knowe Quindry

House 19th/20th C

Located <10m from coast edge

A two-storied ruinous dwelling house, aligned at 90° to the shore, measures 11m by 6m. The walls are mortar-bonded and constructed from rubble and roughly dressed stone. They stand to a maximum height of 4.2m at the gable ends. The ground floor is divided into two chambers which do not interconnect. The northern chamber has a door and window in one side wall and a window in the other; there is a hearth in the gable end. The seaward end of the southern chamber has been partly eroded by the sea. It has a window in either side wall and a door leading into a yard area. The yard is 10m long by 8m wide and is enclosed by a curvilinear drystone wall.

Fair Nil

SR48

South Ronaldsay: Map 3

ND 4325 9232

Commons

Structure and planticrub

19th/20th C

Located <10m from coast edge

The ruins of a solid rectangular, tower-like building lie 8m from saltmarsh at the coast edge. It measures 6m by 5m and stands to 3.2m high. The walls are constructed from large sandstone blocks and are up to 1m thick. The roof has collapsed and the W end gable is slumping outward. A doorway lies to the seaward side and there is a small window in the gable. While it appears that this building has been in use in some form (as a shed) into the 20th C, it may be of considerbly earlier date. A planticrub enclosure lies nearby. It measures 10m by 8m and is currently in use.

Fair

Survey

South Ronaldsay: Map 3

ND 4343 9148

Kirkhouse

Site of St. Ola's Chapel and burial ground (ND 49 SW 7)

10th/14th C

Located <100m from coast edge

The site of St. Ola's Chapel and burial ground lie in the area of Kirkhouse Farm. The chapel is said to have been one of the seven pre-Reformation chapels which existed at one time. In 1830 earth was taken from the burial ground for agricultural purposes and neither it, nor the chapel site are visible now.

Not located

SR149

South Ronaldsay: Map 3

ND 4350 9144 Kirkhouse

Kirkhouse mill (ND 49 SW 21): Listed grade 'B'

Located <100m from coast edge

A two-storied mill building, dating to the later 18th C, has an over-shot wheel housed under the W end. The exterior is harled and the roof is of Caithness slate. There is a three-storied kiln building to the E end. It has a forestair and a slated roof with a vent. Neither site was fully investigated during this survey since the owner could not be contacted.

Not inspected

SR49

South Ronaldsay: Map 3

ND 4205 9072 Oyce of Herston

Burnt mound (ND 49 SW 15)

2nd/1st millennium BC

Located <50m from coast edge

An uneven, sub-circular mound is located in a pasture field 40m from the beach. It measures approximately 18m long and wide and stands up to 1.5m high. Burnt stone is visible in an exposure on the NE side of the mound. A concrete sheep dip has been inserted into the N side. The remainder of the mound is grass covered and, although disturbed, appears to be relatively intact.

Fair

Monitor

SR50

South Ronaldsay: Map 3 ND 4232 9145 Ayre of Banks House

19th/20th C

Located <50m from coast edge

A substantial two-storied building lies, ruinous and unoccupied, 30m from a rocky beach. It is L-shaped in plan and is constructed from mortar-bonded dressed stone blocks. The roof is in place, but is badly damaged. The house measures 15m long by 8m wide and stands up to 9m at the gable ends.

Fair Nil

SR51

South Ronaldsay: Map 3

ND 4232 9145 Ayre of Banks

House

19th/20th C

Located <50m from coast edge

The ruins of a two-storied house, measuring 10m by 6m, stand up to 4m high. The walls are constructed from mortared rubble and roughly dressed stone. It faces seaward and is uninhabited.

Fair Nil

SR121

South Ronaldsay: Map 3

ND 421 918 Herston

Hamlet

18th C onward

Elements located <50m from coast edge

This small fishing hamlet is located on the S side of Widewall Bay. The earliest surviving buildings date to the 18th C and are widely-spaced, two-storied houses which face towards the sea, across large gardens. The main road runs between the houses and the coast edge and there is a low sea wall built to the seaward side of the road.

Good Nil

SR52

South Ronaldsay: Map 3

ND 4225 9165

Herston Structure 19th/20th C

Located on coast edge

A ruinous drystone structure is located at the head of a stony beach. It measures 7m by 4m and is aligned parallel to the coast. The walls stand up to 2m high. The landward side of the structure has been built up with additional courses of rough stone to provide a garden wall for an occupied property which lies to the rear.

Poor Nil

South Ronaldsay: Map 3

ND 4225 9165

Herston

Hulk (ND 49 SW 8891)

19th/20th C

Located in intertidal zone

The hulk of a propeller-driven wooden vessel lies partly submerged in gravel at the HWM . The base and some of the side ribs survive, in a very decayed state; the upper part of the structure has gone. The remains of internal metal fittings, together with iron nails and rivets in the vessel's timbers survive but are very corroded. The vessel is 20m long and c.9m wide. Fair



SITE SR53

SR54

South Ronaldsay: Map 3

ND 4125 9182

The Eager

Structure, possibly military

20th C

Located <10m from coast edge

An amorphous mound, 7m in diameter and 3m high, appears to be of recent origin. A quantity of corrugated iron protrudes from the mound and there are frequent lumps of concrete rubble strewn about the immediate area. The location offers a good vantage point from which to observe activity in Hoxa and Switha Sounds and may have been used as a military look-out position.

Poor

South Ronaldsay: Map 3

ND 4157 9038 Harra Brough

Structure on promontory (ND 49 SW 3) 1st millennium BC/1st millennium AD

Elements located on coast edge

The access to this site is dangerous and it was not visited during this survey. It has been previously recorded as a sub-rectangular building, 21m NW-SE by 6m. Two ridges inside the building are set 3.5m apart and appear to be internal divisions. The structure is built on the slope of a precipitous knoll and access from the landward side has been further protected by a wall. This wall is turf-covered, stands up to 1.5m high and is best preserved to the NE side. Towards the S end there is a gap at the head of an oblique path leading up from the sea rocks below, suggesting that the site was meant to be approached by boat. A hole in the N end of the wall is said to have contained a stone, 5' high. The stone was removed around 1900 and thrown over the cliff; the remains of a cist with bones was said to have been found in the cavity. The site was surveyed at 1:2500 by OS.

Not inspected

SR55

South Ronaldsay: Map 3

ND 4206 9046 Big Civie Geo Earthwork Indeterminate

Located <10m from coast edge

An amorphous linear carthwork is aligned at 90° to the cliff edge. It extends inland for 25m and is up to 10m wide. At the highest point, it stands to 2m above the surrounding ground surface. It is much reduced and is bisected by a rough track.

Fair Survey

SR56

South Ronaldsay: Map 3

ND 4212 9029

Frithille

Two mounds

3rd/1st millennium BC

Located <10m from coast edge

Two mounds are located on a strip of rough grass, to the seaward side of enclosed pasture fields. A rough track separates the mounds from the cliff edge.

- (i) A clearly-defined, grass-covered mound lies 4m from the cliff edge. It is sub-circular in plan and has a domed profile; it measures 7m in diameter and stands to 1.5m high.
- (ii) A sub-circular mound, c.7m in diameter, lies 10m from the cliff edge. The centre of the mound is disturbed and denuded of vegetation.

Fair

Survey

SOUTH RONALDSAY MAP 4: BALL HILL TO TAINGA

SR57

South Ronaldsay: Map 4

ND 4284 8921

The Nev

Chambered Cairn (ND 48 NW 10)

4th/3rd millennium BC

Located <100m from coast edge

Investigations at this site are said to have discovered a cist containing burnt bone and ashes. A later amateur excavation in 1970 revealed the central chamber but failed to recover any artefacts or burial remains. It was surveyed at 1:2500 by OS in the 1970's. The site has since been recorded by Davidson and Henshall (1989) as an Orkney-Cromarty type round cairn, with probable tripartite chamber. It lies in rough pasture, c.100m from the cliff edge. The following description, recorded during a site visit in 1981, remains valid:

'The cairn, 10m in diameter, is well-defined, particularly around the E side where it still rises steeply to the maximum height of 1m above present ground level. The chamber, of rather irregular plan, is exposed in the centre of the cairn, almost for its full depth The entrance was to the S, facing downhill towards the bay. No passage structure is visible unless the flat slab 1m long and 0.25m thick on this side of the cairn is a slightly displaced lintel.... The S and centre compartments have been roughly 1m long, and the N compartment can be estimated as 1m long at maximum; the greatest width of the chamber is 2.2m.... The chamber was exposed in 1970, but this operation produced no finds..... (Davidson and Henshall, 1989, Inventory: ORK70, 179-80).

Fair

Nil

SR146

South Ronaldsay: Map 4

ND 4363 8911

Mucklehouse Farm

Site of Ruid Chapel and burial ground (ND 48 NW 4)

10th/14th C

Located <100m from coast edge

The site of Ruid Chapel and burial grounds is recorded as lying close to Mucklehouse Farm. The footings of the chapel were said to be grass covered and to measure 24' by 12'. The site was not found during this survey.

Not located

SR58

South Ronaldsay: Map 4

ND 4337 8885

Castle Taing

Weems Castle Broch (ND 48 NW 2)

1st millennium BC/1st millennium AD

Located on coast edge

A broch mound, 20m in diameter and 1.5m high, is located on a small headland, surrounded by low cliffs. A double series of ditch and bank defences, to the landward side of the broch, frame a narrow entrance passage on the E side. The broch structure lies beneath a grass-covered mound of accumulated rubble and soil deposits. Several large stones, which may be structural, protrude from the ground surface and there are small exposures of rubble to the seaward side. The outermost defences comprise a curvilinear earthen and stone bank with a ditch to the inside. The bank is 1.5m wide and up to 1m high. The inner bank, which also has a ditch to its inside, survives to a height of 1.5m and is up to 2m wide.

Fair Monitor

SR61

South Ronaldsay: Map 4

ND 4350 8830

Hune Bay

Burnt mounds (ND 48 NW 7)

2nd/1st millennium BC

Located <20m from coast edge

Up to five small amorphous mounds lie in rough grassland to either side of a watercourse, 20m from the cliff edge. Angular burnt stone and blackened soil deposits are visible in frequent small exposures both on the mounds and in the surrounding area. Previous surveys recorded two burnt mounds at this location (RCAHMS 1946 ii, #837, OS 1973) and it would appear that during the intervening years these mounds have been reduced to the scattered piles found during this survey.

Poor Nil

SR59

South Ronaldsay: Map 4

ND 4340 8785 Goosie Geo Upright Slab Indeterminate

Located <10m from coast edge

An upright slab is set into the ground, 10m from the cliff edge. It stands 0.75m above ground and is 0.5m wide. It is likely that this orthostat formed part of a fenceline, the remainder of which is now gone.

Fair Nil

SR60

South Ronaldsay: Map 4

ND 4346 8751 Hoston Head

Mound (ND 48 NW 15) 3rd/1st millennium BC

Located <10m from coast edge

An amorphous, grass-covered mound lies in rough grassland, 10m from the cliff edge. Previously recorded as being up to 13m in diameter and 0.7m high, it is now reduced to 7m in

diameter and 0.6m high. The centre of the mound is slightly depressed, suggesting that it has been disturbed in the past.

Fair, Monitor

SR62

South Ronaldsay: Map 4

ND 4359 8730 Hoston Bay Stone heaps Indeterminate

Located <50m from coast edge

A scatter of small and medium sized stones cover a 100m² area located 15m from the cliff edge. There are faint indications of wall footings amongst the scatter, but no clear plan could be determined. It would appear that the stone derives from a demolished structure, possibly a dyke.

Poor Nil

SR64

South Ronaldsay: Map 4

ND 4345 8705

The Kist Enclosure

19th/20th C

Located <50m from coast edge

The footings of a drystone enclosure, probably a planticrub, protrude through rough grass 30m from the cliff edge. It measures 5m by 7m and stands to 0.2m above the ground surface.

Poor

Nil

SR63

South Ronaldsay: Map 4

ND 4339 8705

The Kist (ND 48 NW 20)

Enclosed promontory

1st millennium BC/1st millennium AD

Elements located on coast edge

A small promontory, surrounded by high cliffs, is 'defended' or cut off by two earthen banks. Both banks extend across the entire width of the promontory: the inner bank is located at the neck while the outer bank is located on the promontory proper. The outer bank is 30m long, 4m wide and stands to 2m high. It encloses an area 25m long by 30m wide. Towards the mid-point of this bank, a smaller earthen bank extends at 90° from it to and is associated with a shallow depression, measuring 6m long by 2m wide. The smaller bank and depression appear to be the remains of an enclosure. The inner bank is located 50m inland of the outer bank. It is up to 2m wide and stands up to 0.75m high. To its landward side, this bank has a sharp vertical profile. An overgrown area of old peat cuttings lies immediately adjacent to its landward side.

Fair

Survey

South Ronaldsay: Map 4

ND 4341 8662 Green Clivie

Four mounds (ND 48 NW 19)

3rd/1st millennium BC

Located <10m from coast edge

A cluster of four earthen mounds lie to the landward side of a modern fence, no more than 10m from the cliff edge.

- (i) A well-defined sub-circular mound is 6m in diameter and up to 0.75m high. It is rounded in profile but somewhat more uneven towards its centre.
- (ii) This sub-circular mound is clearly defined. It has a diameter of 5m and stands up to 0.8m high. The centre is slightly flattened.
- (iii) Set against a gradual slope, this mound is 3m in diameter and up to 0.5m high.
- (iv) This mound is ill-defined, it appears to be sub-circular in shape, with a diameter of c.3m. It stands less than 0.5m high.

Fair

Survey

SR66

South Ronaldsay: Map 4

ND 4342 8642

Husanter Point

Mound

Indeterminate

Located <10m from coast edge

A sub-circular mound is located in moorland immediately adjacent to the cliff edge. It is ill-defined and may be of natural origin. It measures 10m in diameter and stands to no more than 0.5m high.

Poor

Monitor

SR67

South Ronaldsay: Map 4

ND 4336 8630

Husanter Point

Boat shed

19th/20th C

Located on coast edge

A shed, constructed from mortar-bonded rubble, is located at the W end of a small rocky cove. The structure is roofed with slate and corrugated iron, but is in a ruinous condition. A doorway in the SE gable gives access to a single chamber.

Fair

South Ronaldsay: Map 4

ND 4346 8627

Greenquoy

Burnt mound (ND 48 NW 11)

2nd/1st millennium BC

Located <100m from coast edge

A disturbed burnt mound, sub-oval in plan, measures 20m by 14m. It stands up to 1.5m high. It is located in rough pasture and has apparently been quarried in the past.

Fair

Monitor

SR68

South Ronaldsay: Map 4

ND 4282 8615

Shortie Geo

Enclosed promontory

Indeterminate

Elements located on coast edge

An grass-covered bank extends for 20m across the neck of a small promontory. It is 1.5m wide and stands up to 0.5m high. There is a gap, 1.5m long, situated towards the midpoint of the bank. The area to the seaward side of the bank measures approximately 30m long by 20m wide and is surrounded by high cliffs.

Fair

Nil

SR69

South Ronaldsay: Map 4

ND 4278 8608 St. John's Geo

Enclosed promontory

Indeterminate

Elements located on coast edge

An earthen bank curves from one side of a short promontory to the other, taking in an apron of land to the rear to form an enclosure. The bank is most clearly defined at its coastal ends, becoming progressively slighter further inland. It is up to 2m wide and 0.3m high, A marked vegetation change from moorland to the exterior to rough grass on the interior suggests that the enclosed area was previously cultivated or improved.

Fair

SOUTH RONALDSAY MAP 5: TAINGA TO BANKS HEAD

SR70

South Ronaldsay: Map 5

ND 4280 8570

Sinilie

Field system

Indeterminate

Elements located <10m from coast edge

The remnants of a field system is represented by a series of linear and curvilinear earthen banks which extend inland from the cliff edge for over 100m. The best preserved of the banks stand up to 1.5m and are up to 2m wide; all are grass-covered. The complete boundaries of at least one enclosed rectangular field, measuring 23m by 25m, is visible, along with fragments of others.

Fair

Survey

SR71

South Ronaldsay: Map 5

ND 4309 8502

Creara Head

Two earthen banks

Indeterminate

Elements located <10m from coast edge

Two grass-covered earthen banks, aligned at 90° to the coast, run parallel to one another, extending inland for over 100m. The banks each vary in width from 1m to 1.5m; they stand upwards of 0.5m high.

Fair

Nil

SR124

South Ronaldsay: Map 5

ND 4360 8483

Turri Geo

Field System

18th/20th C

Located <100m from coast edge

Traces of rig and furrow cultivation have been previously noted at this location (J. Crossley, FWAG Orkney, *pers comm*) and are visible on aerial photographs taken in 1950 (RAF survey 25th March 1950, 540/R/463, neg.3084). They were not identified during this survey, possibly because they were obscured by vegetation or because the ground has since been brought back into cultivation.

Not located

Monitor

South Ronaldsay: Map 5

ND 4366 8452 Grootfall Field System

18th/20th C

Located <50m from coast edge

Traces of rig and furrow cultivation have been previously noted at this location (J. Crossley, FWAG Orkney, *pers comm*) and are visible on aerial photographs taken in 1950 (RAF survey 25th March 1950, 540/R/463, neg.3084). They were not identified during this survey, possibly because they were obscured by vegetation or because the ground has since been brought back into cultivation.

Not located Monitor

SR126

South Ronaldsay: Map 5

ND 4370 8425

Burwick

Field System

18th/20th C

Located <50m from coast edge

Traces of rig and furrow cultivation have been previously noted at this location (J. Crossley, FWAG Orkney, *pers comm*) and are visible on aerial photographs taken in 1950 (RAF survey 25th March 1950, 540/R/463, neg.3084). They were not identified during this survey, possibly because they were obscured by vegetation or because the ground has since been brought back into cultivation.

No located Monitor

SR72

South Ronaldsay: Map 5

ND 4345 8425 Castle of Burwick

Promontory Fort (ND 48 SW 2)

1st millennium BC/1st millennium AD

Elements located on coast edge

The remains of a defended Iron Age fort and probable secondary monastic settlement occupy a small promontory surrounded by sheer cliffs. The promontory is joined to the mainland by a narrow, eroding rocky ridge. Access to the ridge is restricted by three earthen and stone banks, which extend across the greater part of the neck; a short passage between the banks lies to the S side. The banks are up to 2m high and 5m wide. A series of ditches, which originally accompanied the banks, are now visible as shallow depressions. A fourth bank is situated on the landward side of the promontory. Traces of the footings of a rectangular structure (12m N-S) can be discerned to the rear of this bank. The remains of a further ten rectangular structures, with rounded corners, are spread over the promontory.

The entire promontory is badly eroded and access is hazardous. Archaeological deposits can be seen eroding from several exposures on the promontory. The largest exposure lies to the

NW side, where there has been recent large-scale ground slippage. Fragments of masonry and anthropogenic soil deposits are strewn over the sheer cliff sides. Deposits of stone and a silty soil containing shell can be seen in a smaller exposure to the E side of the promontory.

Fair

Monitor

SR73

South Ronaldsay: Map 5

ND 4361 8410 Windi Geo Enclosure

Indeterminate

Elements located on coast edge

A length of grass-covered earthen bank forms two sides of a rectangular enclosure which backs onto the cliff edge. The bank is 3m wide and up to 1m high.

Fair

Survey

SR160

South Ronaldsay: Map 5

ND 437 840

Burwick

Enclosure

Indeterminate

Located <100m from coast edge

A circular enclosure, c.25m in diameter, was noted on an aerial photograph (RAF survey 25th March 1950, 540/R/463, neg.3084). It appears to have been defined by a bank and ditch. It could not be located on the ground, but is estimated to lie c.100m from the cliff edge. Not located

SR144

South Ronaldsay: Map 5

ND 4401 8426

Burwick

St. Mary's Church, tombstones and carved stone (ND 48 SW 6, 9, 10): Church and graveyard gateway Listed grade 'B'

18th C

Located <50m from coast edge

St. Mary's Church (ND 48 SW 10), also known as South Kirk, is said to have been established in 11th C. The present building dates to 1789, although the interior was remodelled in the late 19th C. The graveyard (ND 48 SW 9) contains two tombstones, dated to 1554 and 1684 respectively. The gateway to the churchyard, built c.1830, is lintelled with a gabled top. A stone, into which two footprints have been carved (ND 48 SW 6), is kept inside the church. It is known as the Lady Kirk stone and is likely to be a 'Pictish' artefact, of 1st millennium AD date.

Good

South Ronaldsay: Map 5

ND 4417 8426

Burwick

Site of St. Colm's Chapel and burial ground (ND 48 SW 4)

9th C

Located <50m from coast edge

St. Colm's chapel, said to have been established in 9th C, was built on an islet in Burwick Loch. The loch has since been drained and the remains are visible only as slight topographic features. A grassy bank, which defines the perimeter of the former islet, may be the enclosure wall of the burial ground and a ridge, 11m NE-SW, may mark the site of the chapel. The site was not located during this survey.

Not inspected

SR74

South Ronaldsay: Map 5

ND 4429 8330

Brough

Broch (ND 48 SW 1)

1st millennium BC/1st millennium AD

Located <10m from coast edge

A large conical, grass-covered mound lies against a break-in-slope to the seaward side of an occupied farm house. The mound stands up to 4m high and is 15m in diameter and is surrounded by several, smaller mounds which may comprise collapsed structural debris.

The structure of the broch is not visible.

Fair

Nil

SR75

South Ronaldsay: Map 5

ND 4430 8301

Brough Ness

Two mounds (ND 48 SW 8)

3rd/1st millennium BC

Located <10m from coast edge

Two grass-covered mounds survive in a very reduced state. One is located in an enclosed pasture field, 10m from the coast edge. It is c.8m in diameter and stands less than 0.5m high. The other, which measures 5m in diameter and no more than 0.2m high, lies on the coast edge.

Poor

Monitor

South Ronaldsay: Map 5

ND 4455 8295 Brough Ness

Three mounds (ND 48 SW 8)

3rd/1st millennium BC

Located <10m from coast edge

Two slight mounds are located in short rough grass 10m from the coast edge; a nearby concentration of stone may represent the remains of a third mound (surveyed by OS at 1:2500). Their clustering habit and structural details suggest that these are burial mounds, of probable Bronze Age date.

- (i) This sub-circular mound has been disturbed in the past and is now partly covered with vegetation. It measures 8m in diameter and stands to 0.75m high. The centre of the mound has been dug into and structural stones are exposed. Occasional stones protrude from the ground to the margins of the mound, suggesting that it may have had a kerb.
- (ii) The centre of this sub-circular mound has been disturbed and collapsed stones are now visible in the depression. The mound is 8m in diameter and stands to 0.6m high. A group of edge-set stones to the S side may be the remains of a kerb or associated structure.
- (iii) A concentration of stone, protruding from the turf, may mark the location of a third mound.

Fair

Monitor

SR77

South Ronaldsay: Map 5

ND 4465 8291 Brough Ness

Four mounds (ND 48 SW 8)

3rd/1st millennium BC

Located <10m from coast edge

Three mounds and two stone concentrations, suggestive of a reduced mound, are located 5m from the coast edge (surveyed by OS at 1:2500). Their clustering habit and structural details suggest that these are burial mounds, of probable Bronze Age date.

- (i) A sub-circular mound, 6m in diameter and up to 0.3m high, has been disturbed in the past. The centre is depressed and several stones, probably the remains of the cist structure, protrude from the turf.
- (ii) This mound is sub-circular in plan and measures 4m in diameter and 0.3m high. It has been disturbed: the centre is hollowed with stones protruding from it.
- (iii) A sub-oval mound, measuring 10m by 8m stands up to 0.4m high. The centre is hollowed from previous disturbance.
- (iv) Two concentrations of stone protrude from the turf and are associated with a slight rise. The remains indicate the site of an almost completely reduced burial mound. The overall diameter of this feature is estimated at 8m and less than 0.2m high.

Poor

Monitor

South Ronaldsay: Map 5

ND 448 830 Brough Ness Enclosure Indeterminate

Located <100m from coast edge

A circular enclosure, defined by a bank and measuring c.60m in diameter, was noted on an aerial photograph taken in 1946 (RAF 3 July 1946, 106G/SCOT/UK137, neg. 4003). At this time, the surrounding land had not yet been improved. AP's taken in 1987, by which time the fields in this area had been improved and ploughed, show the enclosure as a rather indistinct feature. It was not located during this survey.

Not located

SR78

South Ronaldsay: Map 5

ND 4489 8298
Brough Ness
Enclosures
19th/20th C

Located on coast edge

The remains of a number of very ruinous drystone walls are located at the head of a stony beach. The walls are roughly constructed from beach rubble. Among the mass of collapsed stone a rectangular enclosure, measuring 25m by 10m, can be discerned. Several other small enclosures or structures appear to adjoin this enclosure.

Poor Nil

SR79

South Ronaldsay: Map 5 ND 4505 8305 Liddel Loch Enclosure and walls 19th/20th C

Located <10m from coast edge

The ruins of a sub-rectangular enclosure, which probably served as a sheep cru, are situated 5m from the head of a stony beach. It encloses an area 3m wide by 6m long; the drystone walls are constructed from beach rubble and stand up to 1.5m high. A number of short ruinous walls in this area may have been used to spread seaweed for drying.

Poor Nil

South Ronaldsay: Map 5

ND 4505 8310 Liddel Loch Enclosure 19th/20th C

Located on coast edge

A ruinous S-shaped drystone wall is located on a stony beach. It is constructed from beach rubble and stands to 1m high. It may have served either as a sheep shelter or for drying seaweed upon.

Poor Nil

SR81

South Ronaldsay: Map 5

ND 4591 8335 Banks Geo Upright slab 19th/ 20th C

Located <10m from coast edge

An upright slab is set into the ground, 8m from the cliff edgc. It stands 1m above ground and is 0.5m wide. It is likely that this orthostat formed part of a fenceline, the remainder of which is now gone.

Poor Nil

SOUTH RONALDSAY MAP 6: BANKS HEAD TO OSSI TAING

SR82

South Ronaldsay: Map 6

ND 4609 8325 Banks Head Six mounds (ND 48 SE 4) 4th/1st millennium BC

Elements located <10m from coast edge

A cluster of six mounds are located close to high cliffs; all have been disturbed to some extent. Five of the group (i-iii, v, vi) share similarities in size and detail and appear to represent small earthen burial mounds of the 3rd to 1st millennia BC. The sixth mound (iv), which has been badly damaged by recent excavation, is substantially larger, has a large stone constituent and may be a chambered cairn of earlier date.

- (i) A slight, sub-circular mound, 6m in diameter, lies 10m from the coast.
- (ii) An amorphous mound, lying 10m from the cliff edge, measures approximately 10m in diameter.
- (iii) A sub-circular mound with partly exposed central cist and peripheral kerb lies 8m from the cliff edge. It is 3.5m in diameter and stands to 1m high. The cist has been emptied and the slab sides are now slumping slightly. It measures 0.5m by 0.45m and is 0.75m deep. The

remains of the kerb comprise a basal course of carefully laid slabs which define a sub-square rather than circular area. This mound is over 50% denuded of vegetation.

- (iv) A very disturbed, sub-oval mound measuring 20m by 17m is located 8m from the cliff edge. It is aligned E-W and stands to a maximum height of 3.75m. The centre of the mound has been roughly excavated in the recent past, probably by machine, leaving an open trench. The trench measures 11m by 4.5m. A cist, set into the ground surface adjacent to the N side, measures 0.5m by 0.3m is formed from large slabs. The structure of the cist, as presently constituted, may not be in its original form; parts of it appear to have been recently reconstructed. Small fragments of burnt bone are visible in the area surrounding the cist. The trench sections provide an insight into the construction of the mound: the lower 1m -1.5m portion of the interior is formed from flat slabs laid in a diagonal fashion. The standing remains are very unstable and in danger of imminent collapse.
- (v) A small grass-covered knoll lies to the NW side of (iv). It is sub-circular in plan, measuring 8m in diameter; it stands to 0.3m high.
- (vi) A sub-circular mound, 8m in diameter, lies to the E end of (iv). It is up to 1m high and has occasional stones protruding from beneath the turf.

Monitor (i)- (iii) (vi) & (vii), rescue excavation required on (iv)



SITE SR82(iv)

SR83

South Ronaldsay: Map 6

ND 4629 8335 Trunki Geo

Mound

3rd/1st millennium BC

Located <10m from coast edge

A grass-covered mound, 6m in diameter, stands to 0.75m high. It is sub-circular in shape and lies 10m from the cliff edge. It may be an associated outlier to a cluster of mounds at ND 4609 8325 (see SR82).

Fair

Survey/monitor

South Ronaldsay: Map 6

ND 4633 8323 Quarrel Geo

Two mounds (ND 48 SE 3) 3rd/1st millennium BC

Located <10m from coast edge

- (i) A concentration of large stones, possibly the spoil derived from the partial clearance of (ii), protrude from the turf, 8m from the cliff edge. The concentration covers an area measuring 7m by 3m.
- (ii) A disturbed burial mound lies 0.7m from the cliff edge. It is 3m in diameter and up to 0.9m high. The centre is hollow and there are several edge-set stones and what appears to be coursed walling protruding from the turf. This site was surveyed at 1:100 by OS in 1973.

Poor

Monitor

SR85

South Ronaldsay: Map 6

ND 4692 8345

Old Head

Cairn

3rd/1st millennium BC

Located <10m from coast edge

A sub-circular concentration of stones protrude through the turf 10m from the cliff edge. It measures 5m in diameter and stands up to 0.3m high and may represent the last vestiges of a burial mound.

Fair

Survey

SR86

South Ronaldsay: Map 6

ND 4709 8439

lsbister

Earthen bank

Indeterminate

Located <10m from coast edge

An earthen an stone dyke runs at 90° to the coast. It is 3m wide and up to 1m high. It is truncated by a rough track at its seaward end and is most clearly visible to the landward side of a modern fence.

Fair

South Ronaldsay: Map 6

ND 4704 8449

Isbister

Chambered Cairn (ND 48 SE 1): Scheduled (HS Index 2136, 07ND 470 845)

4th/2nd millennium BC

Located <20m from coast edge

This Orkney-Cromarty type cairn, known as the Tomb of the Eagles, is located above 30m high cliffs and had suffered some erosion prior to the first series of excavations, which took place in the 1950's (Ritchie, 1961). It was further investigated in the 1970's and the results have been published (Hedges 1983, Henshall, 1989). The entrance passage faces seaward and runs to the centre of the chamber. The chamber is 8.2m long and is divided into five segments by four pairs of transversely set orthostats. The two end compartments are structurally distinct from the central portion of the chamber. There are three side cells; two are located off the W side of the central chamber and one lies off the E side. A quantity of human and animal bones were found to have been deposited below the floor of the S end compartment during the construction of the tomb. Analysis of the bone indicated that it comprised the remains of fifteen humans and bones of the white-tailed sea-eagle. Within the central chamber were found the disarticulated remains of 342 individuals, along with charcoal, cremated bone, animal bone and peat ash. The cairn is encased around its W half by a rubble mound, 30m across, which was retained by a semi-circular wall. A forecourt at E side of the cairn exterior, although damaged by erosion, nonetheless yielded a rich assemblage of artefacts including three stone axes, a mace head a knife and a jet button. A quantity of animal bone also found there may be associated with sacrificial offerings. The earliest activity at this site has been radiocarbon dated to around 3150 BC and the tomb continued in use until about 2400 BC, when the chamber was deliberately filled in and sealed. At around 1600 BC a cist burial, containing the remains of three individuals, was inserted into the rubble mound. The site has been consolidated and is open to the public.

Good Monitor

SR88

South Ronaldsay: Map 6

ND 4718 8475

Black Geo

Earthen bank (ND 48 SE 6)

Indeterminate

Elements located on coast edge

A grass-covered earthen dyke extends for 20m across the neck of a small headland. It stands up to 1m high and is 3m wide.

Fair

South Ronaldsay: Map 6

ND 4735 8565 Halcro Head

Mound (ND 48 NE 17)

Indeterminate

Located <10m from coast edge

A grass-covered mound lies 3m from the cliff edge. It is sub-circular in plan, measuring 5m in diameter; it stands to 1.5m high and has a slightly dished centre. It is located in the vicinity of an old trigonometric point, although its date and purpose are unknown.

Fair Nil

SR90

South Ronaldsay: Map 6

ND 4729 8568 Halcro Head Earthen bank Indeterminate

Located <10m from coast edge

An earthen bank, aligned at 90° to the coast, extends inland for c.30m. It is grass-covered, measures 1.5m wide and stands up to 0.5m high.

Fair Nil

SR91

South Ronaldsay: Map 6

ND 4704 8595 Angly Bar Earthen bank Indeterminate

Located on coast edge

A grass-covered earthen bank, 3.5m wide and up to 2m high, extends at 90° to the coast for up to 20m. It is now eroding over the cliff edge.

Fair Nil

SOUTH RONALDSAY MAP 7: OSSI TAING TO MUCKQUOY

SR142

South Ronaldsay: Map 7

ND 4595 8668 Windwick

Site of a souterrain (ND 48 NE 8)

1st millennium BC/1st millennium AD

Located <100m from coast edge

A previously-known souterrain was disturbed in 1936 when a lintel stone was ploughed up. It comprised a passage 6m deep and 32' long. The ends terminated in small cells, both of which are said to have 'boat-shaped ends'. Towards the SW end of the passage, a second passage led off to the NW, but was blocked after about 15'. The site is now filled in and is no longer visible.

Not located

SR143

South Ronaldsay: Map 7

ND 4595 8678

Windwick

Anthropogenic deposits (ND 48 NE 20)

Indeterminate

Located on coast edge

Small quantities of shell and animal bone were noted eroding from the coastal section during a visit by the O.S. surveyors in 1973. Nothing comparable was found during this survey.

Not located

SR123

South Ronaldsay: Map 7

ND 4583 8684 Windwick

Site of St. Andrew's Chapel and burial ground (ND 48 NE 4)

14th C

Located <10m from coast edge

This is thought to date to the early 14th C. Previous surveys have located turf-covered footings, measuring 7.5m E-W by 3.5m and a graveyard wall, which survives to the W but is destroyed elsewhere by coastal erosion. The remains were surveyed at 1:2500 by O.S. in 1973. At the time of this survey, the area was very overgrown and no trace of the site was found. Not located

South Ronaldsay: Map 7

ND 4578 8689 Windwick

Noost

19th/20th C

Located on coast edge

A boat noost, formed from a shallow depression, is cut into the banks at a height of 2.2m above the level of the beach. It is 3m wide and 3m long and is currently in use.

Good

Nil

SR158

South Ronaldsay: Map 7

ND 4578 8703 Off Windwick

Wreck (ND 48 NE 8748)

Indeterminate

Located in marine zone

An unassigned craft lies off the coast of Windwick.

Not inspected

SR159

South Ronaldsay: Map 7

ND 4578 8736 Off Windwick

Wrecks of HMS Opal and HMS Narborough (ND 48 NE 8887 & 8749)

20th C

Located in marine zone

Two Royal Naval vessels, HMS Opal and HMS Narborough, both M class destroyers, were wrecked against the rocks in a snowstorm. Both vessels are said to have now broken up and they lie close under the cliffs. Nothing is visible above the water at this location.

Not inspected

SR97

South Ronaldsay: Map 7

ND 4586 8724 The Brough

Promontory Fort (ND 48 NE 11)

1st millennium BC/1st millennium AD

Elements located on coast edge

This site was not inspected due to its dangerous location, surrounded on all sides by high vertical cliffs. Previous investigations record that the promontory (aligned NE-SW) is enclosed on the landward side by a bank and ditch; the area enclosed measures 60m by 14m. The bank is 6m wide and 0.5m high. In a coastal exposure, the bank was seen to be constructed from soil built over horizontally-coursed slabs. The ditch, 3.5m deep, has a revetted drystone wall against its inner face. Fragments of drystone walling to the SE were thought to be the remains of an enclosure wall around the edge of the promontory. Not inspected

South Ronaldsay: Map 7

ND 459 874 Linklater

Earthen bank (ND 48 NE 21)

Indeterminate

Located <50m from coast edge

A much denuded earthen bank, recorded previously, was not found during this survey. It is said to have measured up to 5m wide and 1.2m high and to have run downslope, from NW to SE.

Not inspected

SR96

South Ronaldsay: Map 7

ND 4649 8790 Hesta Head Earthen bank Indeterminate

Elements located on coast edge

A grass-covered curvilinear earthen bank extends inland from the cliff edge where it is visible for up to 30m. It is 2.5 - 3m wide and stands up to 0.75m high. It appears to curve back out towards the coast and may originally have formed an enclosure, backing on to the cliffs.

Fair Nil

SR95

South Ronaldsay: Map 7

ND 4650 8800 Hesta Head Mound (ND 48 NE 2) 3rd/1st millennium BC

Located <10m from coast edge

A low grassy mound, 12m in diameter, is located 8m from the cliff edge. It is sub-circular in plan and stands up to 0.4m high. Protruding stones may be the remains of a kerb and central cist. When previously inspected, it was suggested that this monument may have had two phases of use. This was based upon the observation that some of the stones at the centre of the mound appeared to be intrusive. This could not be confirmed since the structural details are not now so clearly visible. This site was surveyed at 1:2500 by OS in 1973.

Poor Monitor

South Ronaldsay: Map 7

ND 4671 8885 Kame of Stews Earthen bank Indeterminate

Elements located on coast edge

A grass-covered earthen bank, 2m wide and up to 0.5m high, is aligned at 90° to the coast. It extends inland for up to 20m but is best preserved at the cliff edge.

Fair Survey

SOUTH RONALDSAY MAP 8: MUCKQUOY TO HONEYSGEO

SR93

South Ronaldsay: Map 8 ND 4688 9089 Kirkhouse Structure with corn drying kiln 18th/19th C Located <50m from coast edge

A rectangular drystone structure, measuring 10m by 5m, is located to the rear of sand dunes, c.20m from the coast edge. It is aligned E-W, at 90° to the coast. The walls stand to 0.4m high. The remains of a corn-drying kiln, 3m in diameter, adjoin the N end of the building. Topographical indications suggest the presence of further, sub-surface, structural remains. Poor Survey

SR139

South Ronaldsay: Map 8 ND 4695 9089 Kirkhouse Site of cist (ND 49 SE 20) Indeterminate

Located <50m from coast edge

The landowner uncovered part of a 'stone coffin' containing human bone whilst in the act of removing a small, natural, sandy knoll. The cist was located 2m below the surface of the knoll. The remains were re-covered without further investigation. The site was not located during this survey.

Not located

South Ronaldsay: Map 8

ND 4707 9084 Kirkhouse

St. Peter's Church, graveyard and Pictish symbol stone (ND 49 SE 27, 23, 1): Church: Listed grade 'B',

17th C

Located <50m from coast edge

St. Peter's Church (also known as North Kirk) was built in 1642 and renovated in 1801. It is a long, narrow building, harled on the exterior, with a belfry. It has round-headed windows inset (with dates) over the doorway on the seaward side. The graveyard contains several tombstones of mid-17th C date. A Pictish carved stone, now in NMAS, was once built into the window sill of the church.

Good

Nil

SR98, 99, 100

South Ronaldsay: Map 8

ND 4708 9079 Kirkhouse Point

Structure, windmill base (ND 49 SE 18) and wharf

17th/19th C

Elements located <10m from coast edge

- (i) The ruins of a two-storied rectangular structure are located 8m from the beach. The structure measures 10m by 5m and stands up to 5m at the gable ends. The crow-stepped gables are almost intact. An set of external steps at the S end of the building leads to the upper floor. The walls are constructed from mortar-bonded rubble and roughly dressed stone. There are traces of render on the internal wall faces. A central door, flanked by a pair of windows, face W towards the sea. There are hearths at either end of the building and an additional window at the N end of the upper floor. An enclosure, measuring 14m by 7m, adjoins the W side of the building. It is defined by a drystone wall which stands up to 0.75m high and retains its coping stones.
- (ii) (ND 4710 9074) A flat-topped, conical structure; the remains of a windmill base, lie 4m from the coast edge. The structure is formed from mortar bonded rubble. and measures 2.5m in diameter at the base, narrowing to 1.75m at the top. It stands to 2.5m high. A slot at the centre of the structure, into which the windmill sail-pole would have been set, measures 1m in diameter and is 0.5m deep.
- (iii) A series of seven parallel low mortar-bonded walls extend into the intertidal area directly in front of structure (i). Each section measures 2-2.5m long, 0.75m wide and 0.5m or less high. Together they represent the remains of supports for a small wharf.

Fair

Survey



SITE SR98etc., WINDMILL BASE

SR101, 102

South Ronaldsay: Map 8

ND 4729 9075 Kirkhouse Point

Kelp pits, industrial remains and probable fish drying area

17th/19th C

Elements located <10m from coast edge

- (i) A series of six stone-line kelp burning pits are set into the ground surface on rough grassland at the head of a stony beach. Two of the pits are circular and measure 1m in diameter by up to 0.3m deep. The remainder are square or rectangular and vary in size; the average measurement being 1m by 1.5m and up to 0.2m deep. The ground surface in this area is uneven and there are several small mounds which may represent accumulated debris associated with kelp production.
- (ii) A stony area 100m by 20m, aligned parallel to the coast, has a disturbed appearance and may have served as a drying area for seaweed or fish. There are several orthostatic stones within this area but no structures or features could be clearly discerned.

Fair

Survey

SR136

South Ronaldsay: Map 8

ND 4724 9084

Kirkhouse

Cairn (ND 49 SE 16)

Indeterminate

Located <50m from coast edge

A heavily quarried mound is locally believed to have been a burial monument. It measures 17m by 10m, is aligned NE-SW and contains one upright slab, 0.9m long by 0.6m high. It has been variously interpreted as a chambered cairn and a kelp-burning site. It was not located during this survey.

Not located

South Ronaldsay: Map 8

ND 4738 9117 Kirk Ness Mound

Indeterminate

Located <50m from coast edge

An amorphous, turf-covered, stony knoll is locally believed to cover an ancient structure. The mound was not located during this survey.

Not located

SR103

South Ronaldsay: Map 8 ND 4745 9120 Kirk Ness Dyke and enclosure 19th/20th C

Located on coast edge

A length of drystone walling extends, parallel to the coast, for over 20m. It is of crude rubble construction and stands to 0.5m high. A small sub-circular enclosure of similar construction, measuring 4m by 7m adjoins the wall. Both structures are difficult to differentiate from the mass of material forming the adjacent storm beach.

Poor Nil

SR104

South Ronaldsay: Map 8 ND 4749 9180 Gasander

House

19th/20th C

Located <10m from coast edge

The ruins of a rectangular dwelling house are located 10m above the beach on a narrow coastal terrace. It measures 7m by 4m and stands up to 3.5m high at the gable ends. The walls are constructed from mortar-bonded rubble and roughly dressed blocks. The central doorway faces E to the sea and is flanked by two windows; there is a third window to the centre of the W wall. Two recessed hearths occupy the N and S gable ends. A lean-to shed adjoins the N end of the house. Fragments of internal timbers remain in-situ and there are traces of internal render.

Fair

Nil

South Ronaldsay: Map 8

ND 4819 9255 South Cara Earthen bank

Indeterminate

Located <50m from coast edge

A grass-covered earthen bank extends for over 75m aligned parallel to the coast. It is Im wide and up to 0.75m high. It lies to the landward side of a modern fence. A series of three or four very slight banks run at 90° from this boundary to the cliff edge.

Fair Nil

SR105

South Ronaldsay: Map 8

ND 4825 9255

Cruive Hulk 20th C

Located in intertidal zone

A quantity of large metal fragments, relating to a broken-up vessel, are visible above the water at high tide.

Poor Nil

SR122

South Ronaldsay: Map 8

ND 484 928 Grim Ness Lead Mine 18th C

Not located

A lead mine was worked in this area in the latter half of 18th C (Mykura, 1976, 118). The site was not found during this survey and may lie outwith the survey area.

Not inspected

SR108

South Ronaldsay: Map 8

ND 4898 9255 Sheep Bight Enclosure Indeterminate

Located on cliff edge

An enclosure, defined by earthen banks, contains an area 15m by 9.5m immediately adjacent to the cliff edge. The enclosing bank is up to 1.5m wide and 0.5m high.

Fair

Nil

SR107, 140

ND 489 926

South Ronaldsay: Map 8

Grim Ness

Mounds (ND 49 SE 24)

Indeterminate

Located <20m from cliff edge

A group of over 30 small mounds are scattered over a wide area. They measure, on average, 3m to 9m in diameter and stand up to 0.5m high. They are mostly ill-defined and appear to be composed entirely of peat. The surrounding moorland contains frequent bare areas where bedrock is visible. It may be that this area has been heavily exploited for peat (for fuel) or turf (for fuel, composting and animal bedding) in the past. If this is so, the mounds may be the remains of peat stacks or turf piles (known as *mooldie-kooses*).

Poor

Nil

SR109

South Ronaldsay: Map 8

ND 4875 9315 Honeysgeo Structures

19th/20th C

Located on coast edge

Two ruinous rectangular structures are located at the head of a sandy beach. The largest, measuring 15m by 6m, is a dwelling house, the smaller building is a shed. Both structures have been refurbished and in use into the 20th C. The house is now roofless, the shed has a corrugated iron roof and may still be in use. They are both constructed from mortar-bonded rubble and roughly dressed blocks. A concrete slipway, of recent origin, extends from the beach into the intertidal zone.

Fair

Nil

SR134

South Ronaldsay: Map 9

ND 4868 9317

Honeysgeo

Site of burnt mound (ND 49 SE 2)

2nd/1st millennium BC

Located <50m from coast edge

A small turf-covered mound with a flattened top and N side was removed c.1965. It was found to be composed of burnt soil and stones and to have a slab-built 'box', presumably a water tank, to its centre. The box measured 1.9m by 1.1m and is aligned N-S. It is preserved, although the end slabs are missing. The site was not located during this survey. Not located

SOUTH RONALDSAY MAP 9: HONEYSGEO TO ASHBY

SR110

South Ronaldsay: Map 9

ND 4875 9325

Honeysgeo

Kelp pit

18th/20th C

Located on coast edge

Deposits of ashy material and reddened soil are exposed in the 1.5m high coastal section. They appear to be contained within a pit or hollow, 1m wide and 0.5m deep. These remains probably represent a kelp-burning pit and associated debris.

Poor

Monitor

SR111

South Ronaldsay: Map 9

ND 4874 9335

Honeysgeo

Structures

19th/20th C

Located <10m from coast edge

A dwelling house, and its adjoining buildings, has been repaired and converted into a large shed and is currently in use. The range of buildings are aligned with the coast and measure 15m by 9m. An enclosure, backing on to the buildings, extends for 8m to the coast edge. Good

Nil

SR133

South Ronaldsay: Map 9

ND 4880 9353

Kirk Geo

Site of St. Colm's Chapel (ND 49 SE 4)

13th C

Located <50m from coast edge

The vague, turf-covered footings of a structure, measuring 9m E-W by 5m N-S, are thought to be the remains of St. Colm's Chapel. This chapel is believed to have been constructed in the 13th C and dedicated to St. Columba. It is said to have been one of seven pre-Reformation chapels which existed on South Ronaldsay (RCAHMS 1946 ii, #846). The site was not located during this survey.

Not located

South Ronaldsay: Map 9

ND 4879 9404

Hallbreck

Site of cairn (ND 49 SE 5)

4th/2nd millennium BC

Located <50m from coast edge

It is recorded that a large artificial mound, containing human burials, was robbed of stone and eventually almost entirely removed by the landowner. It originally measured 75' by 30' and had a 'stone cist' containing human remains at its centre. Several large slabs and further deposits of human bone were discovered when the last remains of the mound were removed. It has been suggested that this site may have been a chambered cairn, with the structure at the centre being a chamber rather than a cist (RCAHMS 1946 ii, #825). The site was not located during this survey.

Not located

SR112

South Ronaldsay: Map 9

ND 4882 9421 Croo Stone Structure

Indeterminate

Located on coast edge

A concentration of flattish stones are exposed in the coastal section. They lie beneath 0.3m of topsoil on an overgrown slope immediately above the beach. The stones are visible for c.2m and may be more extensive. While they are not obviously arranged or coursed, the stones are not a natural deposit and may be part of a collapsed structure.

Poor

Monitor

SR113

South Ronaldsay: Map 9

ND 4875 9436 Rumley Point

Datum marker, military

20th C

Located <10m from coast edge

A concrete marker bears two copper plates, both of which are inscribed with locational data. It is set into the ground 6m from the cost edge. A plate attached to the base of the marker carries the following information 'SR7, Level related to O.D. = 4.86m, level related to L.A.T. = 6.79m'. A plate attached to the top of the marker carries two sets of co-ordinates, one of which is labelled 'Flotta', and a latitude and longitude position. This marker may be associated with Cara Battery further along the coast or the construction of Churchill barrier #4.

Good

Nil

South Ronaldsay: Map 9

ND 4854 9435 Old Crutha

House and field system (ND 49 SE 22)

Located <100m from coast edge

Previous surveys recorded a ruinous farmhouse of possible 17th C date. The structure had three compartments and was situated adjacent to rig and furrow cultivation (RCAHMS 1946, ii, #813, O.S. 1973). These remains were not inspected during this survey.

Not inspected

SR114

South Ronaldsay: Map 9

ND 4845 9447

Grutha, Bus Taing

Noost

19th/20th C

Located on coast edge

A 6m² level area at the head of the beach is enclosed by a drystone wall, standing to 1m high. It is in use as a boat poost.

Fair Nil

SR115

South Ronaldsay: Map 9

ND 4835 9456 Quoynathues Structures

19th/20th

Located <10m from coast edge

The remains of a drystone walled dwelling house lies to the E of the mound. It measures 10m long by 4m wide and is aligned at 90° to the sea. The remains of three further buildings, of more recent origin but nonetheless ruinous are situated to the E and W of this house. The structures surround and are partially built over an amorphous mound which appears to be artificial in origin (see SR130).

Fair/poor Survey

South Ronaldsay: Map 9

ND 4835 9456 Quoynathues Mound

Indeterminate

Located <10m from coast edge

A sub-rectangular mound is surrounded by the ruins of several ruinous structures (see SR115). Aligned E-W, it measures 40m by 15m and stands up to 3m high. It is flat on top and has gradually sloping sides. It appears to be an artificial construction and there are frequent stones visible in small exposures.

Fair Survey

SR116

South Ronaldsay: Map 9

ND 4819 9460 Quoynathues

House

19th/20th C

Located <10m from coast edge

A ruinous, roofless two-storied dwelling house lies 5m from the beach. It is aligned at 90° to the coast and faces SE. It is 10m long and 6m wide and the gables stand up to 5m high. The interior is very overgrown. There are two fireplaces on either floor, situated at the gable ends. This structure was apparently occupied by two families until 1952 when severe storms caused the building to be abandoned.

Fair Nil

SR135

South Ronaldsay: Map 9

ND 4799 9465 Hall of Cara

Site of burnt mound (ND 49 SE 11)

2nd/1st millennium BC

Located <50m from coast edge

A burnt mound lay close to the E side of the road, near Hall of Cara (RCAHMS 1946 ii, #829). The site was later occupied by a WWII gun emplacement (see SR 117, 118, 129 below). No trace of the site was found during this survey.

Not located

SR117, 118, 129

South Ronaldsay: Map 9

ND 4789 9480

Ouovbanks

WWII Cara Battery (ND 49 SE 28)

1940-1944

Elements Located on coast edge

Cara battery guarded Water Sound prior to the construction of Churchill Barrier #4. It was equipped with two twelve-pounder guns. The battery became redundant in 1944 with the completion of the barrier.

(i) (ND 4800 9468) The remains of this battery are located, for the most part 50 to 100m or more inland. The remains which are situated within 50m of the coast edge comprise very overgrown footings and small concrete buildings which are currently in use as sheds. Two searchlight emplacements associated with this battery (described below) survive on the coast

(ii) (ND 4800 9476) A concrete searchlight emplacement lies on the coast edge and has been partly eroded by the sea. It measures 6m long by 3.5m wide. It has a door to the S side and an entirely open front. Raised patterning on the ceiling indicates that it was cast with metal shuttering, the panels probably came from a water tank. The concrete plinth on which the structure is built, has been undermined by the sea and is fragmented. A low gabion wall has been built in front of the coastal section in an attempt to slow down the pace of erosion. (iii) (ND 4777 9484) A concrete searchlight emplacement is located less than 1m from the coast edge. It measures 3.5m by 6m, and appears to be intact. It is currently in use as a garden shed; the front opening has been blocked up and a window has been put in. Fair/poor

Monitor



SITE SR117: SEARCHLIGHT EMPLACEMENT

4.2 APPENDIX II: GLOSSARY

Built Heritage and Archaeology

Broch: a circular tower found mostly in Northern and Western Scotland. They are sometimes interpreted as the residences of local elites. Evidence suggests that they were built in the last centuries BC and continued in use into the 1st millenium AD.

Boat shed: for the purposes of this survey, this site type refers to a structure designed for the storage of boats or gear associated with boats or fishing.

Chambered tomb: type of burial monument dating to 4/3rd millenium BC, may be subdivided into two main categories (i) 'Orkney-Cromarty' type, where the entrance passage leads into a chamber which is sub-divided into compartments, often by upright slabs; (ii) Maes Howe type, passage leading to a large square or rectangular chamber with further entrances in the central chamber walls leading to side-cells, (for further information see Davidson and Henshall, 1989).

Clearance cairn: a pile of stone or rubble formed from material removed from elsewhere, usually from fields under cultivation.

Enclosed promontory: a promontory which is either defended or enclosed by a bank at the landward end for stock control. It is often difficult to discern which type of site an enclosed promontory is. They are often chosen for eremitic settlement

Flotsam: material deposited, by the action of the sea, onto the foreshore, and which is liable to be moved again.

Hulk/wreck: both terms refer to abandoned boats; hulks have been taken to refer to boats which lie on the foreshore; wrecks lie in the marine zone.

Noost (also naust, noust): a shelter for boats located above the HWM. Some are little more than a hollow dug into the ground; others contain walling and have winding gear associated.

Planticrub: small enclosed garden plots usually used for bringing on cabbage plants from seed. These small enclosures are frequently found close to 19th C settlements, but may also be found in isolated locations.

Slipway: a passage cleared on the foreshore to facilitate the transport of boats to and from the sea. They may be lined with stone, and some may also have had a wooden component.

Souterrain: an underground passage, built of stone and sometimes comprising one or more chambers. Usually regarded as of Iron Age date, and interpreted as storage places; may be associated with above-ground settlement.

Hinterland Geology, Coastal Geomorphology and Erosion **Terms and Abbreviations**

Boulder: The British standard classification is used, ie. > 20cm

Cobble: The British standard classification is used, ie. 6-20cm.

Colluvium: Weathered rock or mixed with till (sometimes other drift materials) which have

run down hill.

Cyclothem: A set of deposits that are laid down by cyclic or rhythmic sedimentation. The set

is then repeated.

Cultivable: Land which has few physical constraints (such as undrained or rocky) and could be, or are, ploughed. Most fields in the survey area were down to grass but are still cultivable.

Drift: The softer material which overlies solid geology, eg. till, peat, soil.

Eustatic changes: Sea-level changes caused by the absolute rise or fall of sea levels.

Foreshore: The intertidal area between the HWM and LWM.

Fluvio-glacial: Sediments laid down with the aid of water under glacial conditions.

Gley: A soil type which is normally waterlogged, reducing conditions.

Gravel: The British standard classification is used, ie. 2-60mm Also described as pebbles.

HWM: High water mark as taken from Ordnance Datum.

Isostatic changes: Sea-level changes caused by the relative movement of the land itself.

LWM: Low water mark as taken from ordnance datum at Newlyn.

Coastal Migration: Movement of the coast edge landwards which may be due to

transgression and/or erosion

Peat: A pure organic soil. In absolute terms one which is > 30cm but in this survey any

organic material > 10cm.

Ranker: Shallow soil over rock with no B horizon, generally <5cm.

Rendzina: As for *ranker* but overlying calcareous rock or shelly sand.

Rock Platform: Intertidal marine platform or wave-cut platform of the solid rock.

Saprolite: The soft weathered rock of *in-situ* material.

Shingle: Mixture of gravel and cobble sized material.

Skeletal Soil: A shallow soil generally < 5cm deep with no B horizon. Usually supporting a fragile plant community usually over sand.

Slope: Three divisions have been arbitrarily delineated

Gentle 5 to 9° Moderate 10 to 19° Steep $> 20^{\circ}$

Till: Collective term for sediments laid down by glacial action. Also includes boulder clay.

Transgression: The inundation of the coast due to rising sea level.

4.3 APPENDIX III: BIBLIOGRAPHY

Armit, I (ed) 1990 Beyond the Brochs: changing perspectives on the Atlantic Scottish Iron Age, Edinburgh University Press.

Ashmore, P J 1993 Archaeology and the Coastal Zone: Towards a Historic Scotland Policy, Historic Scotland.

Ashmore, P J 1996 Neolithic and Bronze Age Scotland, Historic Scotland/Batsford.

Ballin Smith, B (ed) 1994 *Howe: Four Millenia of Orkney Prehistory*, Soc of Antiqs Scot, Monograph Ser 9, Edinburgh.

Barclay, G J and Fojut, N 1994 The Management and Conservation of the Built and Maritime Heritage in the Coastal Zone, Historic Scotland.

Barne, J 1997 Coasts of the UK Region Two: Orkney (draft), Joint Nature Conservation Committee, Peterborough.

Bell, M and Walker MJC 1992 Late Quaternary Environmental Change, Longman.

Berry, RJ and Firth 1986 The People of Orkney, The Orkney Press Kirkwall.

BGS 1932 1"Drift Geology edition, Scotland sheet 117: Hoy.

BGS 1932 1" Drift Geology edition, Scotland sheet 119: Kirkwall.

BGS 1977 Quaternary Map of The United Kingdom (North).

Buckley, V (ed) 1990 Burnt Offerings: International Contributions to Burnt Mound Archaeology, Wordwell, Dublin.

Burgher, L 1991 Orkney: An Illustrated Architectural Guide, RIAS Edinburgh.

Canmore Http://WWW. RCAHMS. gov.uk- NMRS net database

Chandler, T J and Gregory, S (eds) 1976 Climate of the British Isles, Longman.

Charter, E 1995 Farming with Wildlife in mind, Orkney Farming and Wildlife Advisory Group.

Cooke, R U and Doornkamp, J C 1990 Geomorphology in Environmental Management, OUP.

Crawford, B E (ed) 1995 Northern Isles Connections: Essays from Orkney and Shetland. presented to Per Sveaas Andersen, The Orkney Press Kirkwall.

Crawford, B E (ed) 1996 Scotland in Dark Age Britain, Scottish Cultural Press.

Davidson, J L and Henshall, A S 1989 *The Chambered Cairns of Orkney*, Edinburgh University Press.

Davidson, D A and Jones, R L 1985 'The Environment of Orkney' in Renfrew, C 1985 The Prehistory of Orkney (10-36).

Dorman, J 1996 Orkney Coast Batteries 1914-1956, Dorman.

Dry, F T and Muir, J W 1979 1:50,000 Soil Survey of Scotland: Orkney-Hoy, Macaulay Institute for Soil Research Aberdeen.

Edwards, K J and Ralston, I B M 1997 Scotland: Environment and Archaeology, 8000 BC-AD 1000, Wiley.

Emery, K O Aubrey, D G 1985 Sea-levels, Land Levels and Tide Gauges, Springer-Verlag New York.

Fenton, A 1978 The Northern Isles: Orkney and Shetland, John Donald.

Firth, C R, Smith, D E and Cullingford, R A 1993 'Late Quaternary Glacio-isostatic Uplift Patterns for Scotland', *Quaternary Proceedings* 3.

Guy, J A 1983 A Survey of 20th Century Defences in Orkney, Historic Scotland.

Hansom, J D 1988 Coasts, CUP.

Hedges, J W 1975 'Excavation of two Orcadian Burnt Mounds at Liddle and Beaquoy' *Proc Soc Antig Scot* 106, 39-98.

- Hedges, J W 1978 'A long cist at Sandside, Graemsay, Orkney', *Proc Soc Antiq Scot* 109, 374-378.
- Hedges, J W 1983 Isbister: A Chambered Cairn in Orkney (= Brit Arch Rep, Brit Ser, 115).
- Hedges, J W 1987 Bu, Gurness and the Brochs of Orkney (=Brit Arch Rep, Brit Ser, 163-5).
- Historic Scotland 1996 Coastal Zone Assessment Survey: Historic Scotland Archaeological Procedure Paper 4, Historic Scotland.
- Jones, A M 1975 The Marine Environment of Orkney: The Nature of Environment of Orkney, *Proceedings of Nature Conservancy Council*, Edinburgh.
- Lamb, R G 1980 Iron Age promontory forts in the Northern Isles (=Brit Arch Rep, Brit Ser, 79).
- Lambeck, K 1995 'Late Devensian and Holocene Shorelines of the British Isles and North Sea from Models of Glacio-hydro-isostatic Rebound', *Journal of Geological Society of London*, 152, 437-448.
- Macdonald, R 1990 Dive Scapa Flow, Mainstream Edinburgh.
- Matthews, A S, Smith, J S and Ritchie, W 1974 *Beaches of Orkney*, Countryside Commission for Scotland.
- Morris, C 1996 'From Birsay to Tintagel: A Personal View' in Crawford, B E (ed) Scotland in Dark Age Britain (37-78).
- Mykura, W 1976 British Regional Geology: Orkney and Shetland, HMSO Edinburgh
- NMRS- National Monuments Record of Scotland, card and database.
- OS 1994 Pathfinder 1:25,000 map, sheet 33, last reviewed 1993.
- OS 1987 Pathfinder 1:25,000 map, sheet 36, last reviewed 1986.
- OS 1988 Pathfinder 1:25,000 map, sheet 37, last reviewed 1986.
- OS 1987 Pathfinder 1:25.000 map, sheet 38, last reviewed 1986.
- OS Record cards and name books (now incorporated in National Monuments Record)
- Orkney Heritage Society, various authors 1983 Birsay: A Centre of Political and Ecclesiastical Power, Orkney Heritage Vol 2 Kirkwall.
- RCAHMS 1946 Inventory of the Ancient Monuments of Orkney and Shetland, volume 2.
- RCAHMS 1989 Archaeological Sites and Monuments Series 29. Hoy and Waas, Orkney Islands Area.
- Renfrew, C (ed) 1985 The Prehistory of Orkney, Edinburgh University Press.
- Ritchie, A 1977 'Excavation of Pictish and Viking Age farmsteads at Buckquoy, Orkney', *Proc Soc Antiq Scot* 108, 174-227.
- Ritchie, A 1983 'Excavation of a Neolithic farmstead at Knap of Howar, Papa Westray, Orkney', *Proc Soc Antiq Scot* 113, 40-121.
- Ritchie, A 1985 Exploring Scotland's Heritage: Orkney and Shetland, HMSO Edinburgh
- Ritchie, A 1995 Prehistoric Orkney, Historic Scotland/Batsford.
- Ritchie, G and Ritchie, A 1990 The Ancient Monuments of Orkney, HMSO Edinburgh
- Smith, D E, De la Vega, A and Dawson, S 1996 'Relative Sea-level Changes in Orkney', Quaternary of Orkney Field Guide, 16-19.
- Scottish Civic Trust 1997 (with update Jan. 1998) The Buildings at Risk Bulletin.
- Steers, J A 1973 The Coastline of Scotland, CUP.
- Taylor, A B 1938 The Orkneyinga Saga.
- Whittow, J 1992 Geology and Scenery in Britain, Chapman & Hall London.
- Wright, B B 1976 'Recent Climate Change' in Chandler, T J and Gregory, S (eds) Climate of the British Isles, 224-247.

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