# COASTAL ZONE ASSESSMENT SURVEY KINTYRE & ISLE OF ARRAN

Commissioned by The SCAPE Trust on behalf of Historic Scotland Martin .



## CFA ARCHAEOLOGY LTD

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# Coastal Zone Assessment Survey Phase III Kintyre and Isle of Arran

Report No. 997

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## 1. INTRODUCTION

#### 1.1 Background

- 1.1.1 This report is one of several similar studies that have been produced to investigate and characterise the state of coastal erosion and the threat this poses to the cultural heritage sites along the coastline of Scotland. The results presented here are based on the results of two coastal assessment surveys carried out in October 2004 within the Firth of Clyde by CFA Archaeology Ltd. The study area (Fig. 1) includes the east coast of Kintyre from Tarbert to Campbeltown and the southern coast of Arran from Drumadoon Point to Clauchlands Point.
- Previous coastal surveys carried out by Glasgow University Archaeological 1.1.2 Research Division (GUARD) in 2002 in three areas of the Firth of Clyde included areas of the Ayrshire coastline, parts of the Cowal Peninsula and the whole of Cumbrae Island. CFA also carried out coastal surveys of Bute and the Inner Clyde as part of the Phase II works. These programmes of work stemmed from the earlier recognition of the importance of the coastal zone to Scottish archaeology and the need for information to allow Historic Scotland to determine the nature of specific threats to archaeology and formulate solutions for specific areas (Ashmore 1994). More recent coastal zone assessments have secured external funding from other parties and as a result greater public involvement is now required. The SCAPE Trust (The Scottish Coastal Archaeology and the Problem of Erosion) has overseen the establishment of newly formed Shorewatch groups within each of the aforementioned study areas. Local involvement is now seen as a crucial way of allowing locally interested parties to become actively involved in coastal archaeology and in the long term monitoring of the coastline in their respective areas (Fraser et al. 2003).
- 1.1.3 In addition to the archaeological dimension, these surveys have been conducted against a broader regional interest in the management of the Firth of Clyde. The Firth of Clyde Forum (FCF) has generated a large corpus of information designed to promote management objectives for the area centred on a cultural and environmental perspective. The FCF has been established to promote integrated approaches to managing the environmental, economic and community resources of the Firth of Clyde. The Forum's area extends from the tidal limit of the river in Glasgow's City Centre, westwards along the sea lochs to the Mull of Kintyre, and southwards down the Ayrshire Coast to Loch Ryan, taking in the islands of Arran, Bute and Cumbrae Island.

#### 1.2 Project aims

- 1.2.1 The objectives of this project were:
  - to conduct coastal survey along specific sections of the Firth of Clyde in order to increase our knowledge of coastal archaeological sites in the Firth of Clyde;

- to identify which particular sites are presently at risk from active coastal erosion and to predict which sites are likely to be at risk in the future;
- to train and encourage newly established Shorewatch groups in line with the SCAPE Trust procedures.

#### 1.3 Acknowledgements

Tom Dawson (SCAPE) provided advice during the early stages of the survey. Kintyre and Arran sector coastguards (Ian Plater and Bill Currie) provided health and safety information during the surveys. Fiona Davidson at the Council for Scottish Archaeology supplied information on potential Shorewatch members. Mrs Francis Hood (Kintyre Shorewatch) and Mrs Margaret Bruce (Arran Shorewatch) are warmly thanked for agreeing to coordinate the Shorewatch teams within their respective areas. Rod McCullagh at Historic Scotland agreed to changes in the report format. Richard Strachan at Historic Scotland for his GIS technical assistance.

# 2. METHODOLOGY

## 2.1 Introduction

- 2.1.1 The methodology used during the study was based on that set out in Historic Scotland's Procedure Paper 4: *Coastal Zone Assessment* (1996), and discussions in *Archaeology and the Coastal Erosion Zone: Towards a Historic Scotland Policy* (Ashmore 1994). With the permission of Historic Scotland, alterations have been made in the layout of the data sets to make these more user friendly for Geographical Information System (GIS) integration. During this project a staged approach was adopted and included the following elements:
  - *Phase 1* Preliminary desk-based survey. CFA conducted a rapid scan assessment to identify archaeological and geomorphological zones along the full length of the coastal units cited above.
  - *Phase 2* Comprehensive desk based assessment. CFA carried out a full desk-based assessment in accordance with Historic Scotland procedures.
  - *Phase 3* Coastal geomorphological assessment and ground-truth and setting up of Shorewatch groups on Kintyre and Arran.
  - *Phase 4* Report Compilation. The compilation of the report involved the creation of a Geographical Information System that amalgamated all respective data sets.

#### 2.2 Preliminary desk-based survey

2.2.1 During this initial stage, contact was made with the relevant bodies listed in Historic Scotland's procedure document and CFA's Project Outline. It was at this stage that contact was made with all relevant bodies involved in coastal issues associated with the Firth of Clyde coastline. Information on the coastal geomorphology and geology was amalgamated at this stage.

#### 2.3 Desk-based assessment

- 2.3.1 West of Scotland Archaeology Service (WoSAS) provided GIS information. This consisted of a Microsoft Access database of all known sites and monuments within the survey areas extracted from the local Sites and Monuments Record (SMR). Map-based information of the survey areas was provided in ArcView and consisted of 1:10,000 and 1:50,000 scale maps and digitised Ordnance Survey First Edition 6 inch to 1 mile maps.
- 2.3.2 Historic Scotland provided information on all the Listed Buildings within the coastal survey transects. This information was provided in an Excel spreadsheet and added to the database of known archaeological sites and monuments.

- 2.3.3 The desk-based assessment involved an examination of material from various sources and included the following information:
  - Examination of documentary sources held in various libraries, including the National Library of Scotland (NLS) and the University of Edinburgh Library.
  - Examination of the National Monuments Record of Scotland (NMRS) held at the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS) which contains a record of all known sites and monuments in Scotland.
  - An examination of available cartographic sources held at the NLS map library including First Edition Ordnance Survey maps, historical maps dating from the 18<sup>th</sup> -19<sup>th</sup> centuries, Admiralty Charts and other historical maps.

#### 2.4 Coastal assessment survey parameters

- 2.4.1 The coastal survey area included three specific zones. The first zone is the intertidal zone including the area between the Mean High Water Spring Tide (MHWST) and the Mean Low Water Spring Tide (MLWST). The second zone was the shoreline. This zone included the immediate area behind the MHWST line. The third zone included the hinterland, varying between 50m and 100m from the edge of the coastal edge.
- 2.4.2 The following areas were surveyed:
  - Kintyre coastline (estimated survey length 78km): Tarbert (NR 865 685) to Trench Point (NR 735 203)
  - South Arran (estimated survey length 40km): Drumadoon Point (NR 881 287) to Clauchlands Point (NS 057 328).
- 2.4.3 The archaeological surveys were undertaken following procedures outlined in Historic Scotland's Procedure document. Two teams of archaeologists working in pairs surveyed the study areas described above. The island of Arran presented no problems in terms of access. Health and safety considerations restricted access along the shoreline between Tarbert and Skipness and again from south of Grogport to north of Carradale on Kintyre.
- 2.4.4 Information on the general condition of existing and newly recorded archaeological sites was recorded onto coastal zone assessment sheets. Each site was allocated an identifying location number. The location of each site was established using a hand-held Global Positioning System (GPS) instrument that provided a ten-figure grid reference with 5-10m accuracy. Information on the character of the coastline was also collected during the survey and this information was fed back to the project geomorphologist for checking during targeted site visits. Known archaeological sites and monuments within the survey transect were visited wherever possible. On the

advice of the Tarbert Coastguard the section of coastline to the south of Tarbert to the north of Pier House (NGR NR 880 686 to NR 922 609), presented a health and safety hazard owing to the precipitous nature of the steep sloping cliffs, therefore no survey work was carried out on this particular section of coast.

### 2.5 Coastal geology and geomorphology

2.5.1 A comprehensive review of the available documentary and cartographic sources covering the coastal geology/geomorphology and erosion criteria within the study area was undertaken by Dr Michael Cressey, CFA's Environmental Scientist. Targeted site visits were carried out for field inspection following the walkover survey. Field notes, digital photographs and other topographical information were added to the coastal geomorphology maps.

## 2.6 Shorewatch group training

- 2.6.1 Two Shorewatch Groups were established during the early stages of this study. The Argyll group, working out of Campbeltown, are currently monitoring coastal cells on the east of Kintyre. The Arran Shorewatch group are monitoring sites along the south coast of Arran.
- 2.6.2 The SCAPE Trust provided a new Shorewatch Information Pack which includes a revised set of recording and monitoring forms along with detailed information explaining how to use them.

# 2.7 Report Format

- 2.7.1 In this report we use the term *shoreline* to refer to the distinct boundary between land and sea that changes with the tides. A *coastal unit* defines the areas between numbered cut-off points that demarcate individual sections of coastline which has been classified according to its eroding, stable or accreting status.
- 2.7.2 The results are presented in two sections. Section 1 (chapters 5 and 7) deals with Kintyre. Section 2 (chapters 6 and 8) deals with the Isle of Arran. The results are presented sequentially for each coastal unit and follow the standard format (Ashmore 1994). Elements include an introductory section followed by sections detailing the coastal geology/morphology, coastal erosion and archaeological gazetteer and maps. These are followed by a section incorporating results and observations. This is followed by a list of references and appendices.
- 2.7.3 Each survey area is accompanied by three individual maps. These maps contain data on the Built Heritage and Archaeology and Erosion Class. The gazetteer entries include the following categories:

#### Hinterland Geology and Coastal Geomorphology

Identification number and name of coastal section National grid reference Distance of coastal section Typical deposit type on the foreshore Height of cliff Hinterland geomorphology Description

#### Erosion

Identification number and name of coastal section National grid reference Distance of coastal section Type of erosion present Description

#### Built Heritage and Archaeology

Identification number and coastal section National grid reference National Sites and Monument Record Number Site name or type Condition Period/date Recommendation

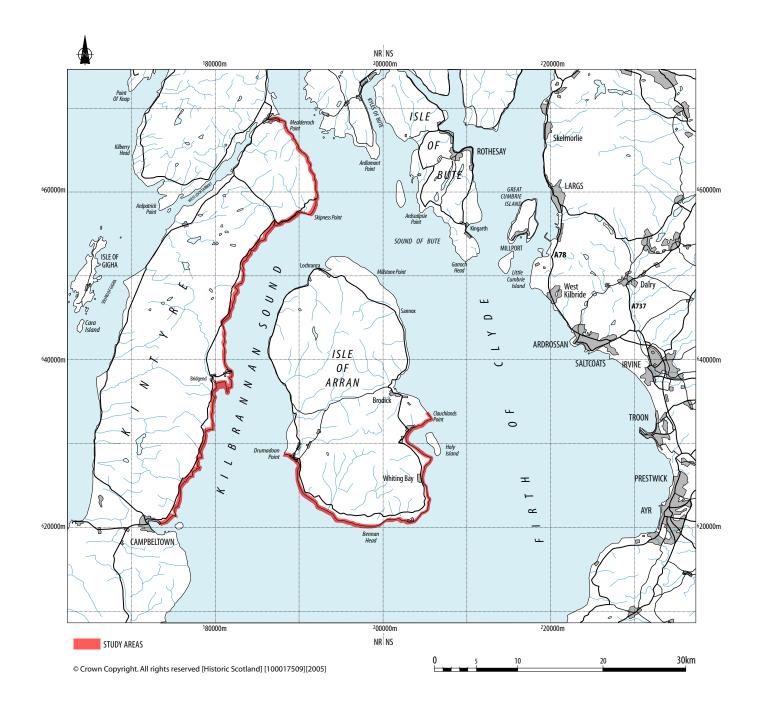


Fig.1 - Location plan outlining the Kintyre and Arran study areas.

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#### 3. THE PHYSICAL ENVIRONMENT OF THE STUDY AREAS

#### 3.1 Late Quaternary landforms and environments on Kintyre

- 3.1.1 In general there is great uniformity in the geological formations along the east Kintyre coastline, and this has had an important role in shaping the character of this coastline, which is of notable outstanding scenic beauty. The geology within the study area is mainly dominated by Precambrian age metamorphose schists associated with the Dalradian Metamorphic Assemblage (Macgregor 1965). These rocks are mainly metamorphosed marine sediments that produce a rugged coastline with often steep coastal gradients. At various points along the coastline, igneous dykes outcrop at the shore. The dykes are predominantly composed of basaltic olivine-dollerite and are of Tertiary age. These features are very resilient to coastal erosion and in general they vary in height from between 0.5-3m and extend well beyond the mean low water spring tide (MLWST).
- 3.1.2 At the risk of oversimplification, the internal structural weaknesses within the schists, typically areas such as joints, fractures and faults, exert a primary control on both the morphology and rate of cliff erosion in many areas. These zones of weakness provide areas where accelerated wave erosion has formed embayments, arches and sea-caves as well as smaller irregularities in the coastline within the study region (cf Steers 1973). In general terms the rate of cliff erosion and the resulting landforms are related to both cliff-forming materials and the physical processes to which they are exposed. Although the study area lies in a reasonably sheltered sea-loch environment within the Kilbrannan Sound, storm surges and dominant south westerly wind-driven wave action continue to shape this area of coastline.

#### Raised marine shorelines

3.1.3 As with much of the Clyde region, a rock platform occurs above the present tidal limit along much of the Kintyre coast. The relict shorelines have been mapped extensively and are depicted on the modern solid and drift edition 1:50 000 produced by the British Geological Survey (BGS). The older 1 inch seventh series maps also produced by BGS depict the three main raised shorelines, namely the low, medium and high raised beach. Isostatic recovery has altered the altitude at which these features now rest. Between Skipness and Claonaig, a former intertidal platform up to 150m wide is visible and is largely covered by Juncus wetland (Firth and Collins 2002). Typically these platforms are backed by relict cliff lines (e.g. Smerby Rocks NR 760 232). In other areas, the intertidal platform is less well defined (e.g. Port Righ NR 8170 3795) but is better preserved at the sheltered heads of small embayments. Other platforms possibly attributable to the Loch Lomond Re-advance and more recent Holocene age storm levels are more common above the mean high water spring tide (MHWST) and the backshore area. These are often more pronounced in areas where softer marine sediments have been redeposited or where areas of Devensian age till have been remodelled as a result of higher sea levels during the Maximum Marine Transgression.

#### Sand dunes

3.1.4 Sand dunes are not extensive within the study area and are mainly confined at the head of bays or small embayments. More significant accumulations of beach sediment occur at the mouths of a number of rivers and streams, representing both local sediment supply and in places, slightly more sheltered positions resulting from low off shore gradients. The main area of dunes is at Carradale Bay at the head of a wide open beach.

#### Coastal wetlands and mudflats

3.1.5 The development of saltmarshes is very limited along the Kintyre east coast, reflecting the limited supply of fine sediment and energy conditions that are generally too high for these sediments to be deposited (Firth and Collins 2002). The are a few rare examples where saltmarsh is present, for example to the south of Skipness. Here the intertidal rock platform is irregular, producing small sheltered narrow embayments penetrating a short distance inland. Thin formations of sand, silt and clay have been deposited at Port an Leinibh (NR 895 570), Auchameanach Farm (NR 885 565) and Island Muller (NR 755 2240). Such formations act as a buffer for wave action at the MHWST and as such are prone to undercutting and slope failure where erosion is well established. As these formations are relatively young (mid-late Holocene) it is conceivable that they could mask hitherto unrecorded archaeological features.

#### Sea defences

3.1.6 The seafronts of Campbeltown and Tarbert are defended by concrete sea walls and other defensive works. In other parts boulder dump sea defences are also common, for instance Port Righ (NR 817 378) where a boulder dump protects a cliff comprised of glacial till.

#### Sites of Special Scientific Interest (SSSI)

3.1.7 The section of coastline between Tarbert and Skipness includes an area comprising 592.3ha of ancient broad-leaved woodland with altitude zonation and a variety of vascular plants. This is the only designated SSSI within the survey area on Kintyre.

#### 3.2 Late Quaternary landforms and environments of the Isle of Arran

3.2.1 The isle of Arran is situated between the Kilbrannan Sound and the Main Firth of Clyde (Figure 1). Arran's geology is famous for its complexity and variety. The island is divided into two zones by the Highland Boundary Fault and the northern part exhibits the characteristics of the Highlands of Scotland while the southern part mirrors those of the Lowlands. In the north, the main coastal outcrops of bedrock consist of schistose grit with less extensive outcrops of slates, Devonian, Carboniferous and Permian sandstone. The southern coast is dominated by Triasic marls, Permian sandstone and Tertiary intrusive dykes and sills. A particular characteristic of the southern coastline is the large number of dykes, which extend out from the modern shore to the sub-tidal

zone. A sloping platform cut into bedrock and generally backed by a steep relict cliff extends as an almost continuous feature round the island (Firth and Collins 2002). It reaches its maximum on the southern coast where a platform extends up to 250m wide. Where valleys have formed, the rock platform merges into raised beach deposits. These types of raised platforms were originally considered to be abrasion platforms cut by wave action at a time of higher relative sea level. However work by Dawson *et al* (1987), has shown that freeze thaw activity and periglacial weathering along ice-sheet margins are largely responsible for this type of coastal geomorphology.

#### Raised marine shorelines

3.2.2 Numerous raised surfaces occur around the southern coast of Arran. These deposits are well represented at Drumadoon Bay (NR 891 283) and along the coastline between Aird nan Ron to Porta Leacach. Raised shorelines are also present from Kingscross Point, in the south, to north of Dippin Head. Commonly these deposits can be differentiated by the high quantity of marine derived gravel and sand. Lower terraces may be rich in marine shells. Where these are exposed their inherent structural weakness makes them prone to erosion.

#### Sand dunes

3.2.3 Several small dune fields are present, usually at the mouths of valleys. The low frequency of well established dune formation is extricably linked to the low offshore nutrient supply. The sandy beaches along the south coast have been classified by Ritchie (1975). The main areas of blown sand are at Blackwaterfoot (NR 885 287) and Lenamhor Farm (NR 960 205).

#### Coastal wetlands and mudflats

3.2.4 Owing to the absence of low energy wave activity and the lack of sediments that allow the formation of coastal wetlands, salt marsh is absent within the study area. However where conditions are damp enough, particularly at the base of cliffs were seepage is held behind a natural or man-made barrier, then wetland plants will flourish. A good example of the effect of soligenous bog formation and emergent wetland habitat is at the site of a large field enclosure near Auchenhew (NR 0038 2104). Here common reed (*Phragmites communis*) and sedges (*Carex* undiff) is well established behind the upstanding field walls.

#### Sea defence works

3.2.5 Sea defence works occupy the coastline at all the major settlements along the south coast. At Blackwater Foot, boulder dump protection is extensive. The mouth of the river that outfalls within the bay has been protected by a series of boulder dump breakwaters in 2003. The coastal track leading from Whiting Bay to Kingscross Point has also been heavily defended by boulder sea defences.

#### Sites of Special Scientific Interest (SSSI)

3.2.6 The south coast of Arran has an area encompassing 218.3ha and is designated a SSSI because of the main Arran Dyke swarm (NS 042 213 and NR 951 208).

#### **3.3** Wave climate in the Firth of Clyde

3.3.1 The Firth of Clyde has been classified as a mesotidal area, with tides at the head of the Firth being described as semi-diurnal, meaning there is a high tide every 12 hours. Table 1 shows the normal tidal ranges at key points within the Firth of Clyde. Within the study area these results show that there is no significant difference between the spring tidal ranges. However, local topography and the limit of exposure to direct wave impact will have a bearing on the potential impacts of erosion at the HWMST area.

Site	MHWST	MLWST	Spring Tidal Range	MHW NT	MLWNT	Neap Tidal Range
Campbeltown	1.61	-0.99	2.6	1.11	-0.49	1.6
E. Loch Tarbert	1.58	-1.12	2.7	1.18	-0.62	1.8
Millport	1.78	-1.12	2.9	1.18	-0.62	1.8
Rothesay	1.78	-1.22	3.0	1.28	-0.62	1.9
Inveraray	1.68	-1.42	3.1	1.38	-1.12	2.5
Greenock	1.78	-1.22	3.0	1.28	-0.62	1.9

Table 1: Predicted tidal ranges at the main ports close to the study areas with values in metres OD. (MHWST=Mean high water spring tides, MLWST = Mean low water spring tides, MHWNT= Mean high water neap tides, and MLWNT = Mean low water neap tides) Data derived from 1994 Admiralty, after Firth and Collins (2002, Table 2.1)

#### Patterns and predictive rates of sea level rise in the Firth of Clyde.

3.3.2 The predictive rates of sea level rise and its effect on the intertidal areas within the study area have recently been well documented (Dawson et al 2001, Firth and Collins 2002). A critical factor in evaluating future sea level changes is the importance of natural vertical land movements. These are the rates at which the coastline is rising or falling as a result of isostatic adjustments. By combining the proposed rates of uplift with the patterns associated with the Main Postglacial Shoreline, maps illustrating the maximum and minimum rates of crustal movement can be produced. Firth and Collins (2002, Illus. 11.2 & 11.3) propose that within the Clyde region, the minimum rates of uplift are estimated to range from 0.6-0.95 mm/yr., whilst the maximum rates lie between 2.0-2.3mm/yr. The lower estimates are considered by these researchers to be a better approximation since they closely correlate with the uplift rates identified from the most recent geological evidence. The impact of patterns of relative sea level change around Scotland at the present time will vary according to a number of different parameters. Dawson et al. (2001) considered the following factors in their examination on the likely impact resulting from a future rise in sea level:

- Areas experiencing relative sea level rise are becoming progressively more susceptible to the effects of storm surge activity. However it is noted that this will vary according to exposure.
- The impact of sea surface rise will be less noticeable in areas with a strong sediment supply and where coastal progradation is taking place, for example the Moray Firth coastline, parts of the north east and east of Scotland, parts of northern Scotland and parts of south-west Scotland. In areas where sediment supply is scarce, the effect of a sea surface rise will be more noticeable.
- In areas where the coastal features are easily eroded, the impact of sea level rise will have greater effect than in other, more resistant areas.
- 3.3.3 The results of Dawson *et al.* (2001) were based on the uplift data of Shennan (1989) together with the UK Climate Impacts Programme (UKCIP) emissions scenario that envisages that most of the projected sea level rise in the next century will be as a result of thermal expansion. Their data shows that the study area lies within Zone B where intermediate rates of uplift are predicted at c. 0.5-1.00mm per annum (Figure 2). Their "best estimate" for the next 50 years is a predicted rise of around 16cm, and by the year 2100 a rise of 31.5cm is predicted. However they provide a cautionary statement that their sea level return period analyses are not linked to patterns of storminess change derived from the analyses of the North Atlantic Oscillation Index and other empirical storm data. These authors rightly note that storm frequency will be a major causative factor in relative sea level change in the short term.
- 3.3.4 Increases in recent storm frequency have been a central point in assessing the vulnerability of the Scottish coastline, particularly where 'softer' sediment forms a main component of a given coastal cell. Its location in relation to direct wave impact during the tidal cycle will have a bearing on the relative rates of recession and in some cases, if conditions are right, on accretion. Previous coastal zone assessment surveys already undertaken on behalf of Historic Scotland have highlighted the vulnerability of the softer regions of the Scottish coastline and the effects of storm activity that has, and continues to have, an effect on coastal archaeology. Cressey and Toolis 1997and Cressey et al 2001 showed that within parts of the Solway Firth, cliffs containing softer sediment, including marine clay and loosely consolidated materials such as shingle and sand, were extremely vulnerable to rapid coastal erosion. This was especially bad in areas where building refuse had been dumped in attempts to slow down cliff recession. It was found that during high spring tides these areas were badly affected by excessive scouring and abrasion as the dump material was hammered against the base of the soft cliffs.
- 3.3.5 The enclosed nature of the Firth of Clyde with its narrow system of fjords severely limits the wave field affecting the coastline of this area. As a result the height and direction of waves reaching the coast are highly dependent on the wind direction (Firth and Collins 2002). Both sections of coastline within the study area display the effect of wind direction. The south coast of Arran is directly affected by winds derived from the south-west sector. Although

sheltered by the west coast of Arran, the east side of Kintyre appears to be equally exposed, with a tendency for exposure to south-south-easterly gales. A good example of the effect of this activity can be found in Skipness Bay were a series of shingle storm ridges have been formed at the east end of the south-facing bay. The ridges decline in altitude towards the west end of the bay, thus demonstrating that the south-south-westerly storms register the greatest impact along this particular section of coastline.

## 4. ARCHAEOLOGICAL BACKGROUND OF THE STUDY AREAS

#### 4.1 Kintyre

#### Prehistoric

- 4.1.1 There are several prehistoric archaeological sites and monuments on Kintyre. These include numerous duns, castles and forts occupying exposed promontories. The so-called promontory forts are widely distributed and have been occupied from prehistory through into the medieval period. Typical examples of these are the forts at Carradale Point and Kildonan Point.
- 4.1.2 Cist burials and cairns are also documented but sadly few of these features survive today. There are at least three cists recorded at Trench Point that have been fully excavated and of which nothing now remains. There are also several cairns recorded, mostly at Kildonan Point, that have been attributed a prehistoric date though this has not been established through excavation.

#### Medieval

4.1.3 There are several sites of medieval date along the east coast of Kintyre. These include castles, a burgh, churches or chapels, bloomery mounds and a well. The east coast of Kintyre is very rugged and rocky which means that it is idea for locating defensive structures as the coastline itself provides a defence against attack from the sea. Two examples of these can be seen at Tarbert Castle and Airds Castle. The natural harbour of Tarbert, although it is now enclosed, is an ideal place to settle with direct protected access to the sea and an easily accessible hinterland. The identification of a medieval burgh around the castle suggests that this area was settled from at least this time if not before.

#### Post-Medieval

4.1.4 There are numerous post-medieval sites along the east coast of Kintyre. These comprise mostly of buildings and tend to concentrate within existing towns or clusters forming smaller settlements, such as at Grogport. The other main types of sites associated with the post-medieval period are boathouses and piers, which given that this is a coastal survey are not unexpected. Other sites such as stone walls may be linked to land improvements during this time.

#### Industrial Period

4.1.5 Sites dated to the industrial period are common. Many of these sites are associated with shipping, including shipwrecks carrying industrial products such as coal or lime. In and around Campbeltown the shipping industry is very obvious, even today. There are the remains of warehouses and shipyards that echo back to the golden age of the shipping industry during the period of industrialisation in the 1800s. The number of shipwrecks noted in the small wayleave of the survey area suggests that shipping was a hazardous occupation, especially along this coast.

## 4.2 Isle of Arran

#### Prehistoric and Early Historic periods

4.2.1 Very few sites from this period have been identified along the southern coast of Arran. There are two defensive structures, Dippen Promontory Fort and Kingscross Dun. The low number of such sites in comparison to those found on Kintyre may be due to the nature of the coastline, which appears to be one of extremes between high cliffs and flat bay areas. It appears that the majority of prehistoric sites are concentrated on the east side of Arran at such places as Kingscross Point, where there is a standing stone and various sites associated with the Vikings.

#### Medieval

4.2.2 There are only two known medieval sites within this portion of Arran's coastline. These are a bloomery mound at Kilpatrick, and Kildonan Castle. It appears that this area was not extensively used during this period or that later settlement has destroyed any trace of earlier sites.

#### Post Medieval and Industrial Period

- 4.2.3 As seen on Kintyre, there are numerous shipwrecks littering the southern coast of Arran. This is a very ragged and rocky coastline and shipwrecks tend to be common around such shores. The majority of these shipwrecks date from the 1800s and appear to be linked to industrial activities as they tended to carry cargoes of coal or lime, two resources in high demand at this time.
- 4.2.4 Most of the other sites along this coastline date to the 19<sup>th</sup> or 20<sup>th</sup> century and are mostly buildings, either residential or commercial, concentrated in and around the main towns on the island such as Whiting Bay or Lamlash. Other features such as stone walls may be associated with land improvements in the 1800s when a lot of the crofting communities were cleared off the land to make way for improved land use. A Clearances Monument dedicated to the people who were evicted can be seen in the centre of Lamlash.

#### Military

4.2.5 There are several sites linked to military activity on Arran, mostly dateable to the Second World War. Several observation posts are located around the east coast of Arran from Kildonan to at least Clauchlands Point where the survey area ends. There is also evidence of a barrier which once stretched from Kingscross Point to Holy Island.

### 5. SURVEY MAPS OF THE EAST COAST OF KINTYRE

#### **MAP 1: TARBERT TO FIONN PHORT**

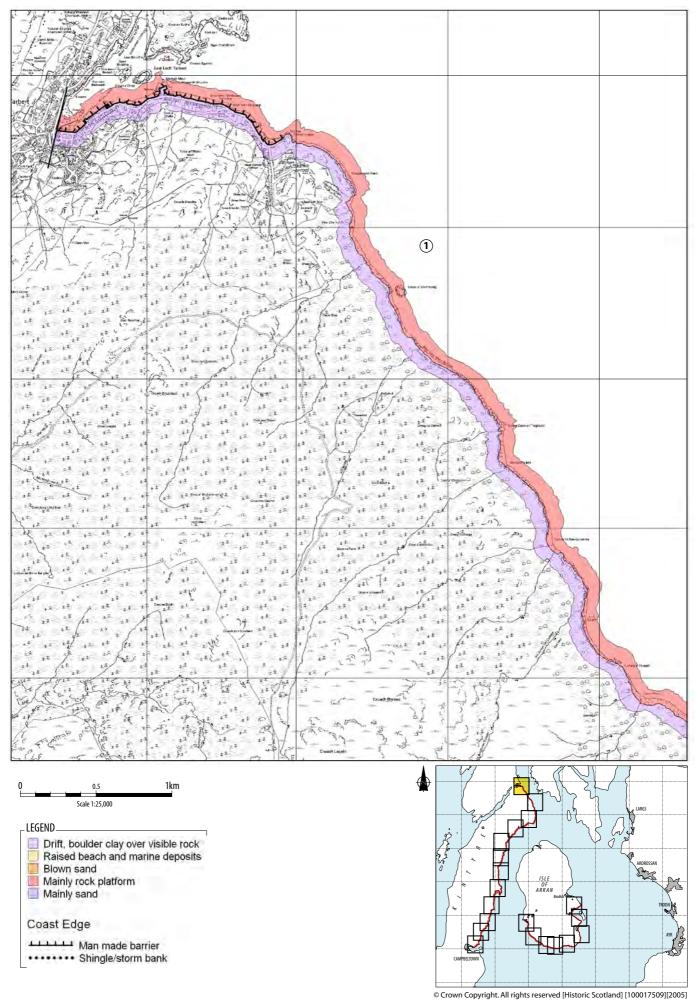
**Hinterland Geology and Coastal Geomorphology**: The hinterland geology along this very uniform coastal cell is dominated by Dalradian schist (greywacke). The coastal edge is generally not highly indented and the intertidal area is narrow. There are no major embayments apart from East Loch Tarbert which lies on a major fault line forming a boundary between an area of basalt and the schist formations. Outcropping Tertiary dykes are rare along this section of coastline. The shoreline gradient is steep and there is very little in terms of backshore area due to the steepness of the cliffs. Access is very limited owing to the narrowness of the shoreline, which is normally inundated at MHWST. The hinterland rises steeply from the shoreline and is dominated by broadleaf cover.

**Erosion Class**: The resilient nature of the cliffs and the lack of beaches in the strictest sense assign this area of coastline to mostly stable. There is some erosion and accretion around Tarbert itself though the sea walls protect the natural coastline. Although this area could not be surveyed by the field teams, a good length of this cell was observed from the ferry crossing from Tarbert to Arran.

**Built Heritage & Archaeology**: The majority of the archaeology in this area is centred in and around Tarbert, although this may be a biased view as access to much of this area was restricted. The town of Tarbert appears to have medieval origins centred on the castle which stands on a prominent hill to the east of the present town. There is a suggestion of a burgh surrounding the castle though there is little known about it. The town of Tarbert contains several Listed Buildings within the survey area, most of which date to the 19<sup>th</sup> or 20<sup>th</sup> century. Other archaeological sites relate to the use of the sea, such as piers and Tarbert harbour, which also appears to date from the 19<sup>th</sup> century.

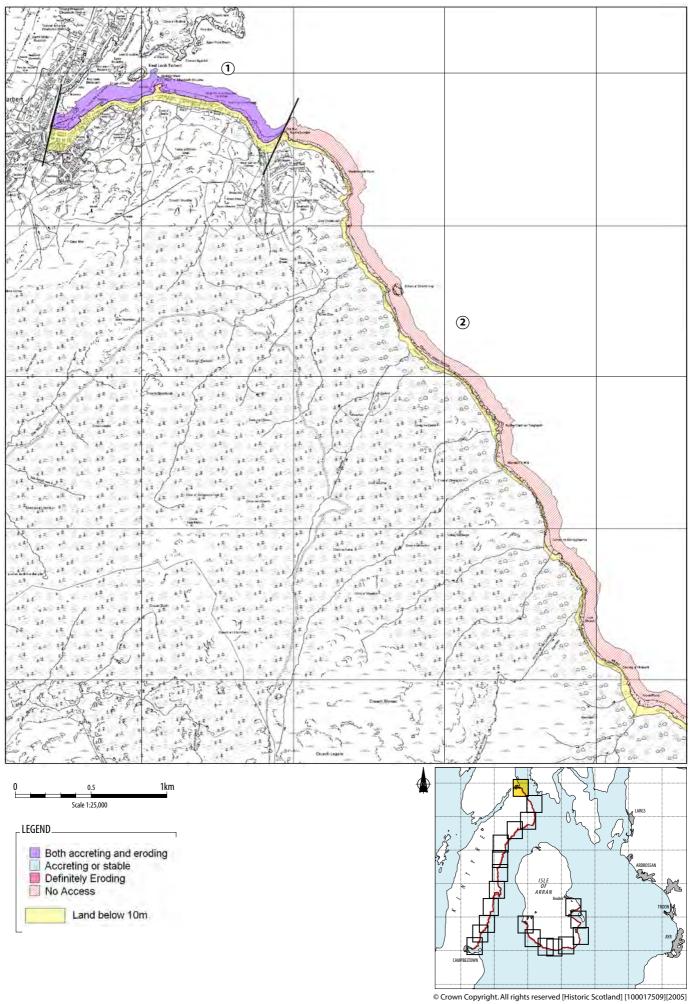
# KINTYRE MAP 1: HINTERLAND GEOLOGY AND COASTAL GEOMORPHOLOGY

ID	Name of section	NGR	Length	Typical deposit type on the foreshore	Height of cliff	Hinterland geomorphology	Description
1	TARBERT TO SGEIR BHUIDHE	NR 8650 6860	12.5km	Man made defence at Tarbert, mainly	Low edge (<5m)	Bedrock at or near surface.	Dalradian schist forms the underlying
		to		rock platform.			rock of this coastal cell. The coastal
		NR 9230 5940		_			edge is generally not highly indented and
							the intertidal area is narrow. Small bays
							contain boulders and shingle at the
							HWMST. Hinterland rises gently,
							dominated by broadleaf cover.



# **KINTYRE MAP 1: EROSION**

ID	Name of coastal section	NGR	Length of coastal section	Type of erosion present	Description
1	Tarbert to Rubha Loisgte	NR 864 686 to NR 879 686	1.6km	Eroding and accreting.	Shingle and sand is accreting with some local scouring at base of sea walls.
2	Rubha Loisgte to Cnoc a' Bharr	NR 879 686 to NR 922 597	10km	Unknown.	Not surveyed.
	Shoulusaich				



# KINTYRE MAP 1: BUILT HERITAGE AND ARCHAEOLOGY

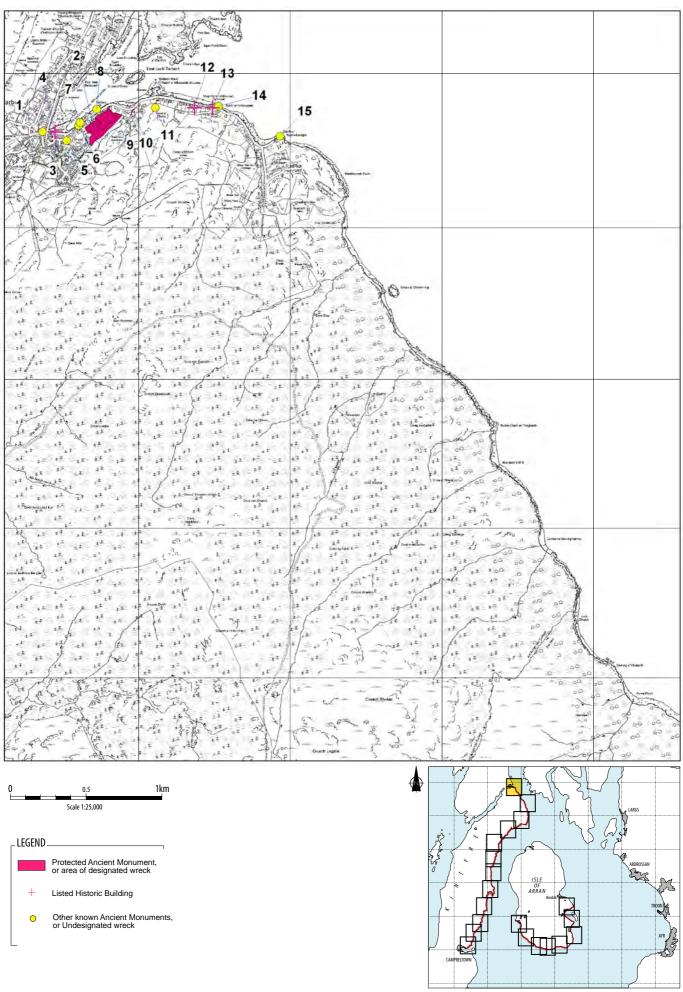
# Sites on the Coast Edge and Foreshore

ID	Name	NMRS	Source	WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
2	Tarbert	NR86NE 14	NMRS	3911	NR 864 686	Scheduled 3410	Burgh; Village	Unknown	14th C	Nil
4	Harbour Walls	NR86NE 18.02	NMRS			Listed B HBNum 48935	Wall	Good	19th C	Nil
7	Tarbert Harbour	NR86NE 18.0	NMRS	3915	NR 866 687		Harbour	Good	18th-20th C	Nil
14	Pier	NR86NE 52	NMRS	45765	NR 8752 6881		Pier	Good	18th-20th C	Nil
15	Old Pier		OS 2nd ed.		NR 8793 6861		Pier	Eroding	18th-20th C	Survey

# Sites in the Hinterland

ID	Name	NMRS	Source	WoSAS Pin	NGR	Status	Туре	Condition	Date	Recommendation
1	Shop, Main Street	NR86NE 51	NMRS		NR 8635 6864		Commercial	Good	18th-20th C	Nil
3	Tarbert Hotel	NR86NE 47	NMRS		NR 8644 6861	( )	Residential; Commercial	Good	19th C	Nil
5	Cottage	NR86NE 43	NMRS		NR 8651 6858		Residential	Unknown	18th-20th C	Nil
6	Harbour Street	NR86NE 57	NMRS		NR 8659 6868		Street	Good	18th-20th C	Nil
8	Ice Factory	NR86NE 18.1	NMRS	46009	NR 8671 6879		Commercial	Good	18th-20th C	Nil
9	Tarbert Castle	NR86NE 1	NMRS	3906	NR 8677 6873	Listed B HBNum 12031 Scheduled 276	Defence	Poor	11th-15th C	Nil
10	Queen's Gate	NR86NE 54	NMRS		NR 8696 6877	Listed C(s) HBNum 12032	Residential	Good	19th C	Nil
11	House and Gear Store	NR86NE 56	NMRS	43849	NR 871 688		Residential; Store	Unknown	18th-20th C	Nil
12	Columba Hotel	NR86NE 45	NMRS		NR 8736 6880	( )	Residential; Commercial	Good	19th C	Nil

13	Pier House	NR86NE 53	NMRS	N	NR 8748 6880	Listed C(s)	Residential	Good	19th C	Nil
						HBNum				
						12034				



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# MAP 2: FIONN PHORT TO TOBAR A' GHAILL

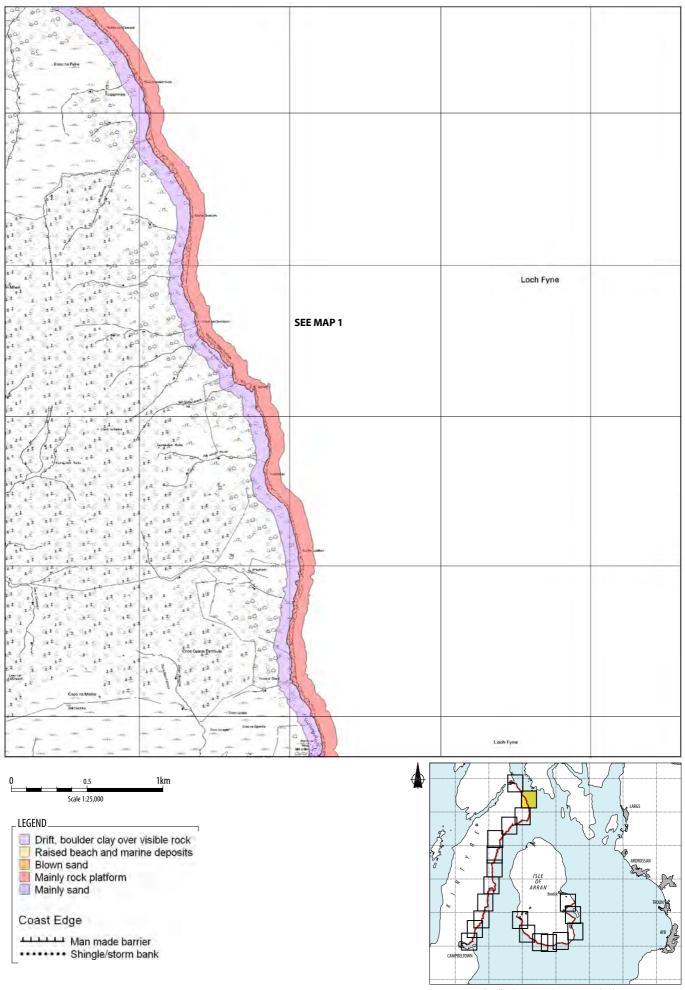
**Hinterland Geology and Coastal Geomorphology**: The hinterland geology along this very uniform coastal cell is dominated by Dalradian schist (greywacke). The coastal edge is generally not highly indented and the intertidal area is narrow. There are no major embayments. The shoreline gradient is steep and there is very little in terms of backshore area due to the steepness of the cliffs. Access is very limited owing to the narrowness of the shoreline, which is normally inundated at MHWST. The hinterland rises steeply from the shoreline and is dominated by broadleaf cover.

**Erosion Class**: This area could not be surveyed by the field team although most of this length of coastline was visible from the ferry crossing.

**Built Heritage & Archaeology**: There are several sites recorded within this area including platforms, a whisky still and a pier, all of which appear to date between 18<sup>th</sup>-20<sup>th</sup> century. However, it was not possible to visit these sites during the survey due to the nature of this stretch of coastline.

# KINTYRE MAP 2: HINTERLAND GEOLOGY AND COASTAL GEOMORPHOLOGY

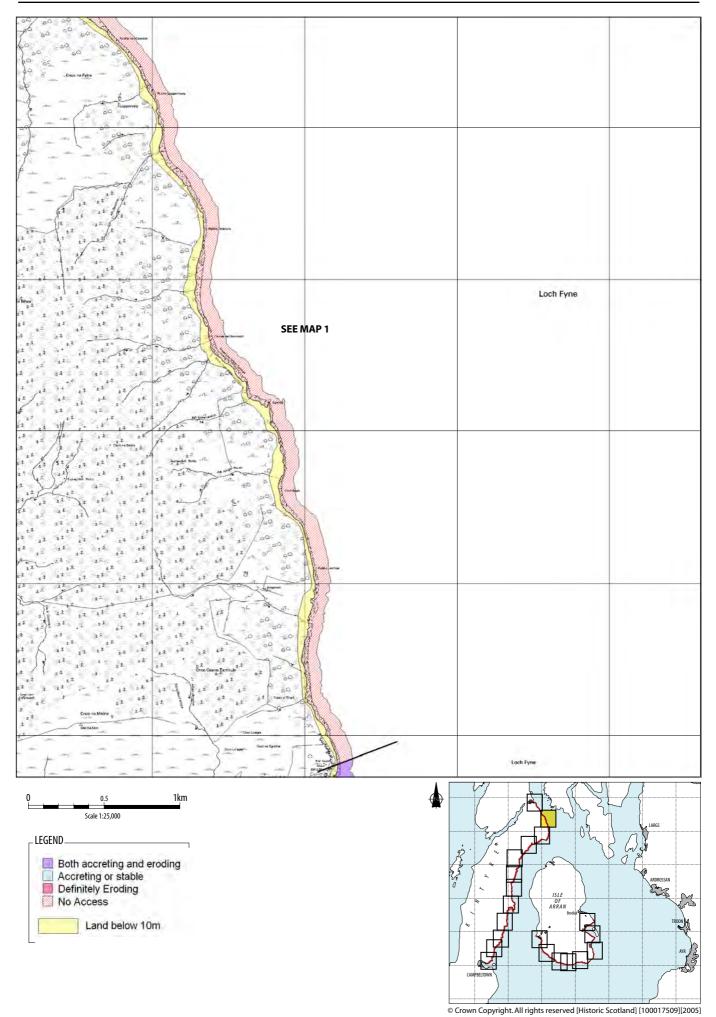
ID	Name of section	NGR	Length	Typical deposit type on the foreshore	Height of cliff	Hinterland geomorphology	Description
1	TARBERT TO SGEIR BHUIDHE	NR 8650 6860	12.5km	Man made defence at Tarbert, mainly	Low edge (<5m)	Bedrock at or near surface.	Dalradian schist forms the underlying
		to		rock platform.			rock of this coastal cell. The coastal
		NR 9230 5940		_			edge is generally not highly indented and
							the intertidal area is narrow. Small bays
							contain boulders and shingle at the
							HWMS. Hinterland rises gently,
							dominated by broadleaf cover.



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# **KINTYRE MAP 2: EROSION**

ID Name of coastal section	NGR	Length of coastal section Type of erosion present Description						
NOT SURVEYED								



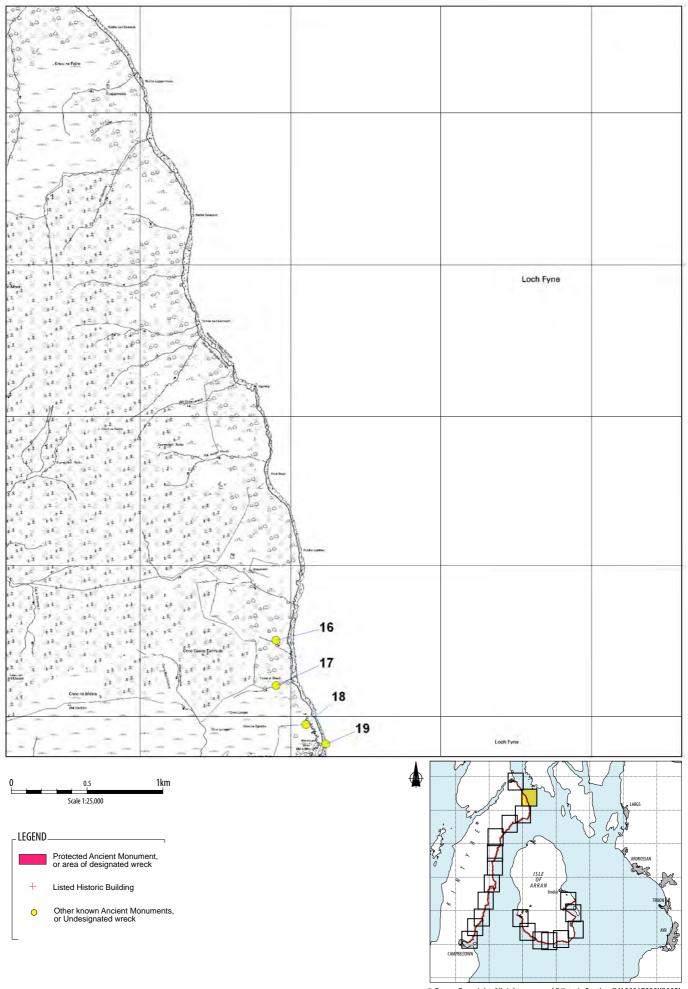
# KINTYRE MAP 2: BUILT HERITAGE AND ARCHAEOLOGY

# Sites on the Coast Edge and Foreshore

ID	Name	NMRS		WoSAS Pin	NGR	Status	Туре	Condition	Date	Recommendation
16	Tobar A' Ghail	NR96SW 4	NMRS		NR 919 605		Platforms	Unknown	Unknown	Nil
17	Tobar A' Ghail	NR96SW 6	NMRS		NR 919 602		Platform	Unknown	Unknown	Nil
18	Allt Na L'Uinnisinn	NR95NW 13	NMRS	4376	NR 9210 5994		Whisky Still	Unknown	Unknown	Nil
19	Skipness Pier		OS 2nd ed.		NR 9223 5981		Pier	Fair	18th-20th C	Nil

# Sites in the Hinterland

ID	Name	NMRS	Source	WoSAS Pin	NGR	Status	Туре	Condition	Date	Recommendation
NO	NE			1 111						



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# MAP 3: SGEIR BHUIDE TO SGEIR NA LUING

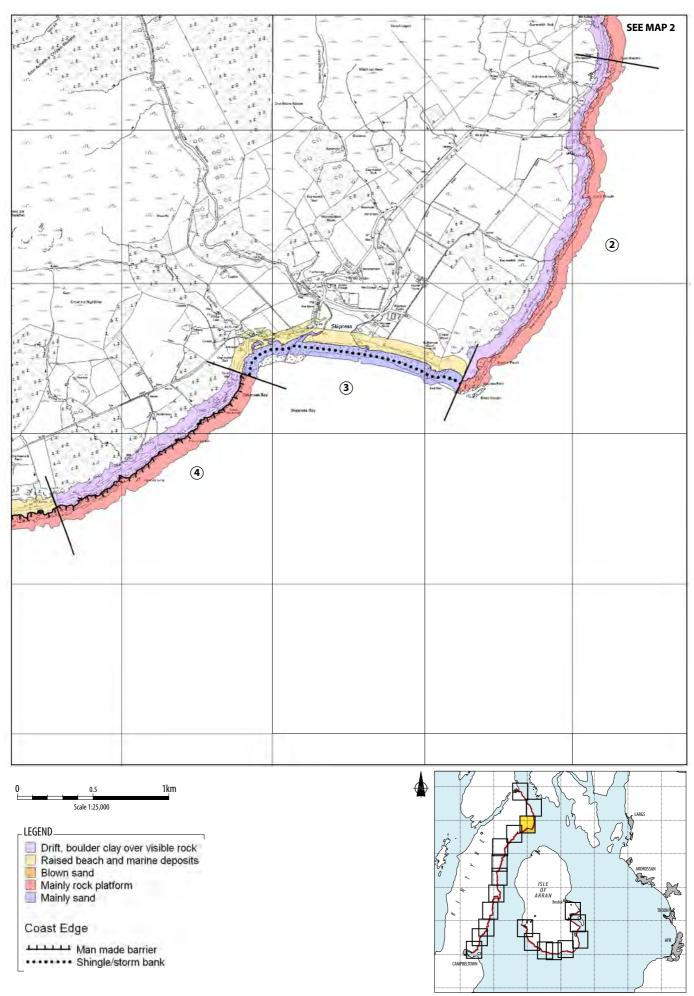
**Hinterland Geology and Coastal Geomorphology:** North of Skipness Bay, Beinn Bheula schists continue to dominate this coastal region. Much of this area has superficial deposits of glacial till providing a mantle of mixed clay, rock and boulders. The coastal edge is exposed producing wide rock platforms at Skipness Point. The coastal edge is slightly indented. Skipness Bay is backed by a series of raised beach terraces of shingle and gravel. The top of the beach is dominated by shingle storm ridges, which are up to 2m high towards the northern end. There is a noticeable falloff in the gradient towards the southern end of the beach. Towards the low water mark, the beach is mainly coarse sand with gravel and cobbles. The coastline from Skipness Bay is mainly exposed rock platform with a steep gradient falling of to the MHWST area. In parts, deep skerries have been formed along weaker faults within these formations.

**Erosion Class**: The Beinn Bheula schists are eroding at a very slow rate although the area has abrasion platforms and deep gullies. Parts of Skipness bay display good evidence of accretion at the northern end where shingle has been dumped in a series of terraces. East of the Skipness River, a c.400m stretch of the beach-head has a low erosion cliff (c.0.5m high) that runs parallel with a fence-line. South of Skipness Bay the coastline is both stable and eroding.

**Built Heritage & Archaeology**: Most sites identified within this area date to between the 18<sup>th</sup> and 20<sup>th</sup> centuries, several of which are associated with seafaring. One of the most outstanding sites in this section is that of Skipness Chapel, which is medieval in date. Only one site, that of a pier (site 22), is currently at risk though given its natural location this is not surprising.

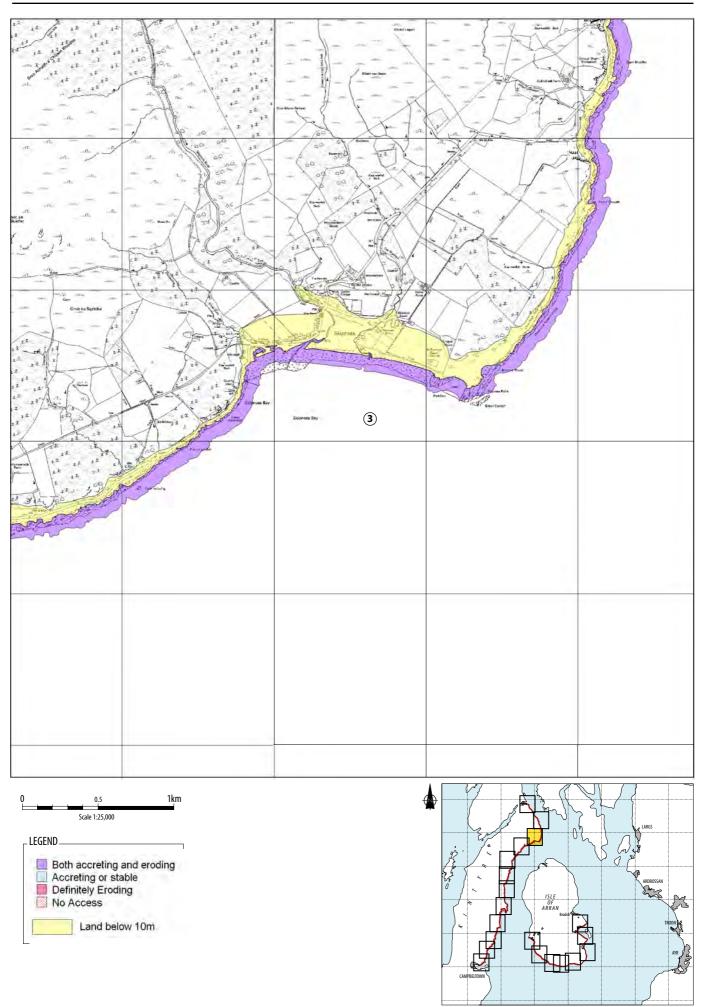
# KINTYRE MAP 3: HINTERLAND GEOLOGY AND COASTAL GEOMORPHOLOGY

ID	Name of section	NGR	Length	Typical deposit type on the foreshore	Height of cliff	Hinterland geomorphology	Description
2	NORTH OF SKIPNESS POINT	NR 922 595 to	2.6km	Mainly rock platform.	Cliff (<10m)	Marine deposits.	Beinn Bheula Schists dominate this cell.
		NR 913 573					Much of this area has superficial deposits
							of glacial till providing a mantle of
							mixed clay, rock and boulders. The
							coastal edge is exposed producing wide
							rock platforms at Skipness Point. The
							coastal edge is slightly indented.
							Hinterland rises gradually.
3	SKIPNESS BAY	NR 913 573 to	1.6km	Sand	U (	Undifferentiated marine	The hinterland is dominated by
		NR 898 574				deposits.	undifferentiated Flandrian marine
							deposits. The coastal edge is linear with
							a wide sandy beach.
4	SGEIR NA LUING	NR 898 574 to	1.6km	Narrow rock platform.	Low edge (<5m)		Rocky coastal edge with superficial till
		NR 886 565					cover in hinterland. Coastal edge
							dominated by exposed rocky platforms
							with locally outcropping Tertiary dykes
							visible at LWM. Pockets of accreting
							shingle between outcrops.



#### **KINTYRE MAP 3: EROSION**

Π	Name of coastal section	NGR	Length of coastal section	Type of erosion present	Description
3	Cnoc a' Bharr Shoulusaich to	NR 922 597 to NR 836 517	13.1km	Eroding and accreting.	Port a' Chruidh – sand blown erosion, possible sand extraction also (NR
	Crossaig				9133 5744).
					Skipness Bay - Sandy beach with pebbles. Mostly eroding along stream
					channels, and short section of low cliff, accreting on beach itself.
					Gortaneorn - Rock abrasion platforms eroding and shingle accretion.



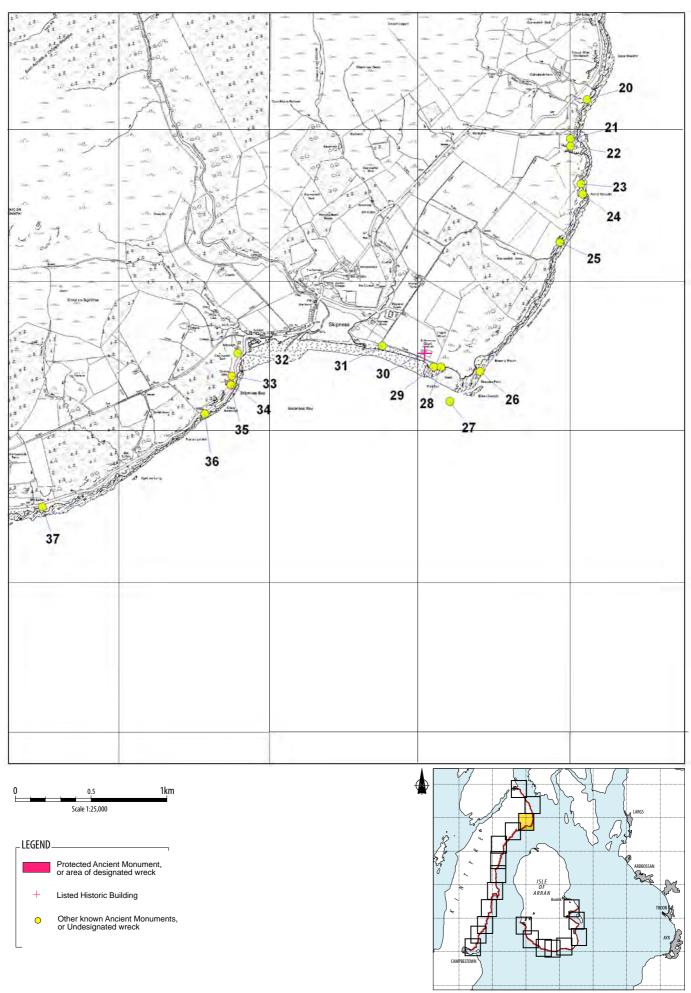
# KINTYRE MAP 3: BUILT HERITAGE AND ARCHAEOLOGY

### Sites on the Coast Edge and Foreshore

ID	Name	NMRS	Source	WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
22	Old Pier	NR95NW 15	NMRS	4378	NR 920 589		Pier	Eroding	18th-20th C	Monitor
23	Port a' Chruidh		Fieldwalking		NR 9207 5865		Cairn	Fair	Unknown	Monitor
24	Port A' Chruidh	NR95NW 16	NMRS	4379	NR 9208 5858		Landing-place	Fair	Unknown	Monitor
25	Port a' Chruidh		Fieldwalking		NR 9193 5826		Enclosure	Poor	Unknown	Nil
26	Brann A' Phuirt	NR95NW 17	NMRS	4380	NR 914 574		Landing-place	Fair	Unknown	Nil
27	Bee Orchis: Skipness Point	NR95NW 8004	NMRS		NR 912 572		Shipwreck	Unknown	18th-20th C	Nil
28	Port Ban		Fieldwalking		NR 9114 5743		Boat mooring	Poor	Unknown	Nil
31	Skipness		OS 2nd ed.		NR 9075 5757		Boat House	Fair	19th C	Nil

### Sites in the Hinterland

ID	Name	NMRS	Source	WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
20	Port a' Chruidh		Fieldwalking		NR 9211 5921		Building/ enclosure	Fair	Unknown	Nil
21	Port a' Chruidh		OS 2nd ed.		NR 9200 5895		Building; Enclosure	Good	18th-20th C	Nil
29	Skipness		Fieldwalking		NR 9109 5743		Structure	Fair	Unknown	Nil
30	Skipness Chapel	NR95NW 6	NMRS	4386			Chapel; Burial Ground	Good	11th-15th C	Nil
32	Tigh na Craoibhe		OS 1st ed.		NR 8979 5752		Buildings; Enclosures	Unknown	Unknown	Nil
33	Creag Aoranaigh		OS 2nd ed.		NR 8975 5737		Quarry	Unknown	18th-20th C	Nil
34	Creag Aoranaigh		OS 2nd ed.		NR 8975 5731		Mile post	Unknown	18th-20th C	Nil
35	Araneigh	NR85NE 70	NMRS	50383	NR 8974 5731		Observation Post	Good	20th C	Nil
36	Creag Aoranaigh		Fieldwalking		NR 8957 5712		Cave	Good	Unknown	Nil
37	Auchameanach Farm		OS 2nd ed		NR 8849 5650		Mile post	Fair	18th-20th C	Monitor



#### MAP 4: SGEIR NA LUING TO PORT CHUILE

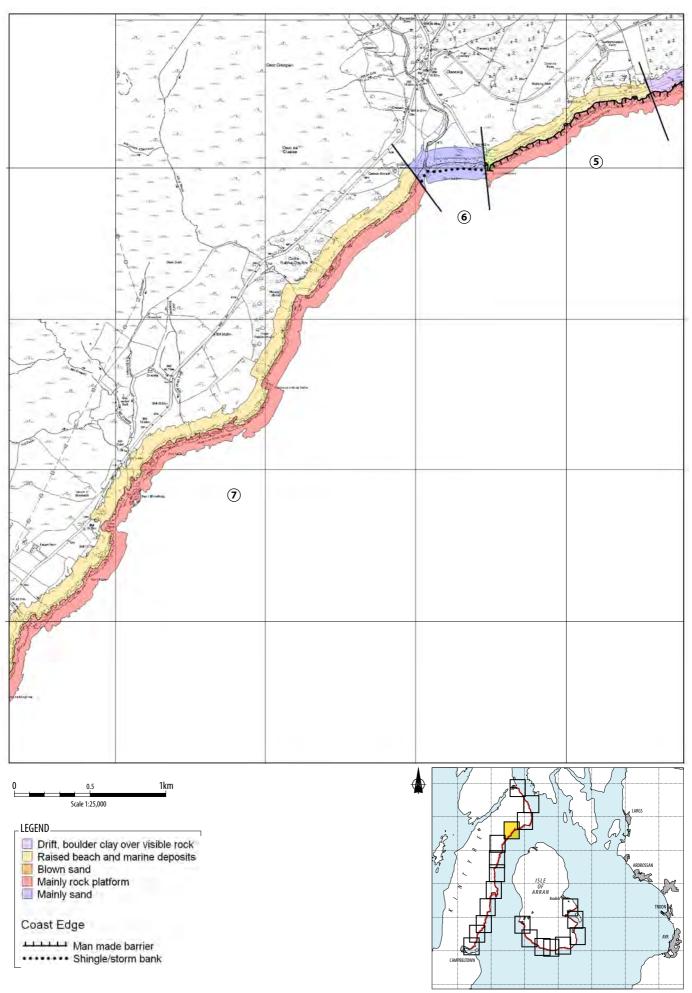
**Hinterland Geology and Coastal Geomorphology**: The coastline between Skipness Bay and Claonaig Bay is mainly exposed rock platform with a steep gradient falling of to the MHWST area. In parts, deep skerries have been formed along weaker faults within these formations. Claonaig Bay has formed in a south-facing embayment flanked by rocky outcrops. A high raised marine platform has been dissected by the Claonaig Water. A wide river terrace has formed along the eastern bank of the stream. Fluvial deposits have been deposited at the mouth of the stream. South of Claonaig Bay, the shoreline continues to be dominated by Beinn Bheula schists of Dalradian age. The shoreline is indented and comprises mainly of exposed abrasion rock platforms. Tertiary dykes and sills are exposed at the coastline running into the narrow intertidal area. At Port Fada (NR 8555 5420) the beaches are dominated by storm derived gravel deposited at the MHWMST. The hinterland is dominated by raised beach deposits.

**Erosion Class**: Erosion was recorded along the edge of Claonaig Bay where a low marine cliff is eroding at the MHWST area. The rest of this section is mostly eroding and accreting where there are exposed abrasion platforms with pockets of boulders, sand and shingle.

**Built Heritage & Archaeology**: There are only two sites on the foreshore in this section. These are field boundary walls, which possibly date to the 19<sup>th</sup> century and the times of land improvement. The majority of the sites within the hinterland are of unknown date except for a medieval bloomery mound and a prehistoric Dun at Escairt. The majority of sites are associated with land use, farming in particular.

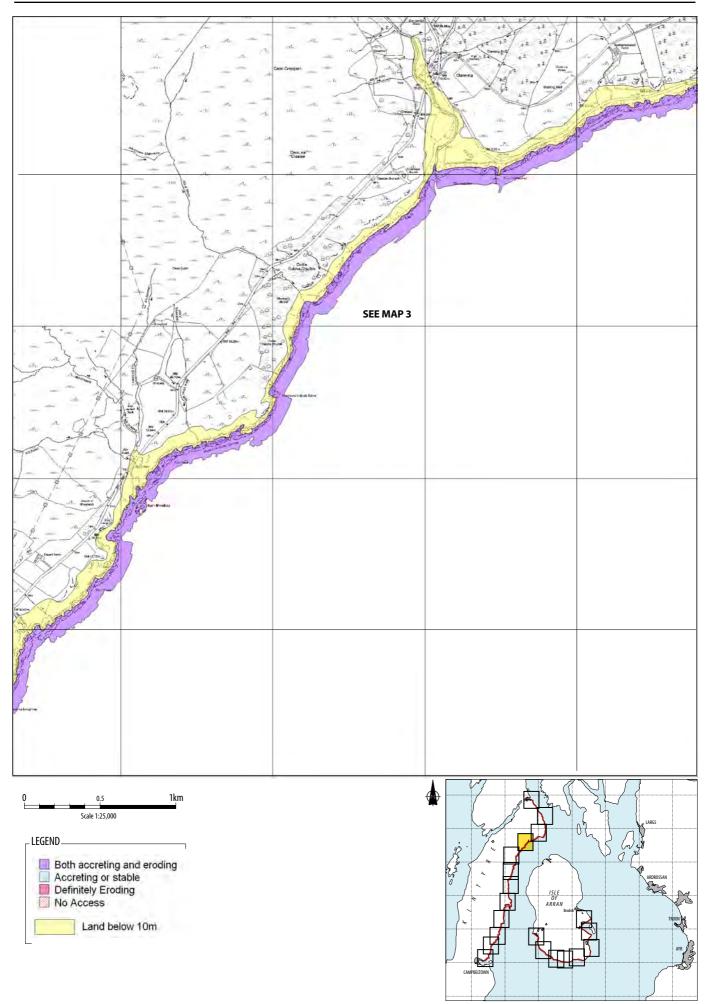
#### KINTYRE MAP 4: HINTERLAND GEOLOGY AND COASTAL GEOMORPHOLOGY

ID	Name of section	NGR	Length	Typical deposit type on the foreshore	Height of cliff	Hinterland geomorphology	Description
5	SGEIR NA LUING TO CLAONAIG	NR 886 565 to	1.2km	Narrow rock platform.	Low edge (<5m)	Raised beach deposits.	Till covered rock predominated
	BAY	NR 875 560					hinterland rising steeply to landward.
							The nearshore zone is dominated by
							raised marine deposits.
6	CLAONAIG BAY	NR 875 560 to	0.5km	Shingle beach.	Low edge (<10)	Raised beach deposits.	Wave cut platforms are exposed until the
		NR 870 560					mouth of the Claonaig Water outfall
							where freshwater alluvial deposition is
							mapped. Narrow shingle beach.
7	PORT FADA	NR 870 560 to	5.3km	Raised beach deposits.	Low edge (<10m)	Mainly sand.	Indented coastal edge with
		NR 835 517					undifferentiated overlying till. Tertiary
							activity present. Exposed abrasion
							platforms on shoreline, immediate
							coastal edge is crenulated.



#### **KINTYRE MAP 4: EROSION**

ID	Name of coastal section	NGR	Length of coastal section	Type of erosion present	Description
3	Cnoc a' Bharr Shoulusaich to	NR 922 597 to NR 836 517	13.1km	Eroding and accreting	Claonaig Bay - Accreting shingle beach with extensive erosion along the
	Crossaig				bank and mouth of Claonaig Water.
					Claonaig Bay to Sgeir Bheathaig - Exposed abrasion platforms affected by
					erosion with accretion boulders, sand and shingle in between.



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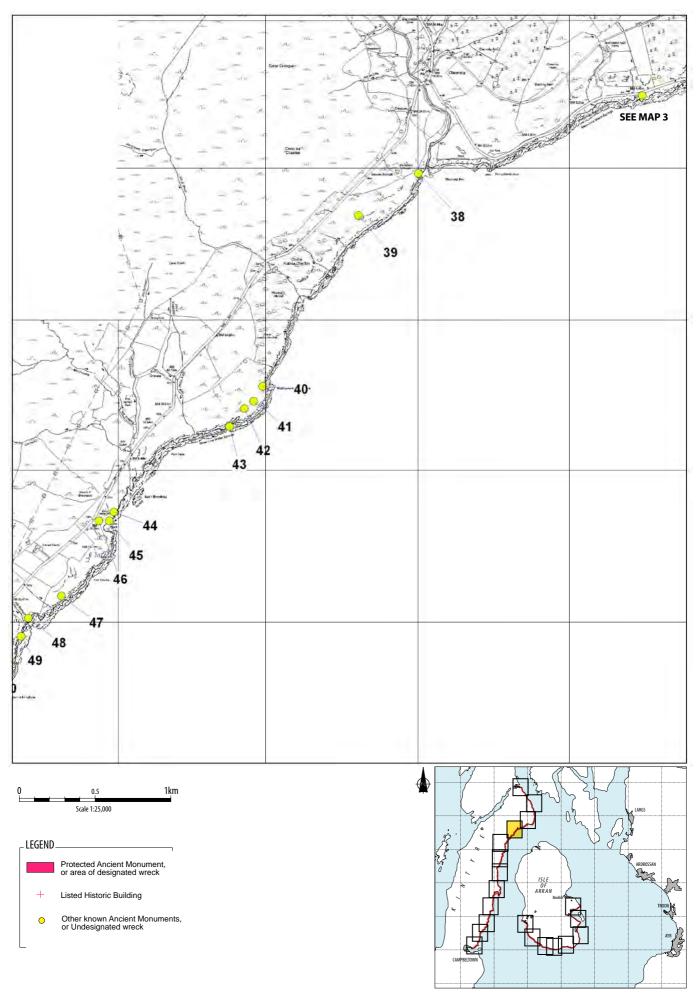
#### KINTYRE MAP 4: BUILT HERITAGE AND ARCHAEOLOGY

#### Sites on the Coast Edge and Foreshore

ID	Name	NMRS		WoSAS Pin	NGR	Status	Туре	Condition	Date	Recommendation
43	Port Fada		Fieldwalking		NR 8574 5429		Wall	Poor	Unknown	Nil
49	Allt Romain		Fieldwalking		NR 8435 5289		Walls	Fair	Unknown	Nil

#### Sites in the Hinterland

ID	Name	NMRS	Source	WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
38	Rockfield		OS 1st ed		NR 8700 5598		Structure	Fair	Unknown	Nil
39	Cnocan Biorach	NR85NE 44	NMRS		NR 866 557		Bloomery Mound	Unknown	11th-15th C	Nil
40	Rubha na h-Airde Baine		Fieldwalking		NR 8596 5456		Enclosure; field	Poor	Unknown	Nil
							system			
41	Rubha na h-Airde Baine		Fieldwalking		NR 8590 5446		Clearance Cairn	Good	Unknown	Nil
42	Rubha na h-Airde Baine		Fieldwalking		NR 8584 5441		Clearance Cairns	Good	Unknown	Nil
44	Brian Phort		Fieldwalking		NR 8497 5372		Walls	Poor	Unknown	Nil
45	Brian Phort		Fieldwalking		NR 8494 5366		Structure	Poor	Unknown	Nil
46	Eascairt	NR85SW 1	NMRS	3902	NR 8487 5366		Dun	Fair	1st mill BC-5th C	Nil
									AD	
47	Allt Romain		Fieldwalking		NR 8462 5316		Wall	Poor	Unknown	Nil
48	Allt Romain		Fieldwalking		NR 8440 5301		Possible kiln	Poor	Unknown	Nil



KACL/997/0

#### MAP 5: SGEIR NA H-INGHINN TO COUR BAY

**Hinterland Geology and Coastal Geomorphology**: The hinterland and coastal geology is dominated by Dalradian age schists with undifferentiated overlying till. Tertiary activity is also present along this section of coastline. The hinterland rises steeply and is well wooded with deciduous trees. The coastal edge is indented with wide expanses of intertidal platforms. At Crossaig and Cour Bay these small embayments are backed by marine deposits with shingle and sand beaches.

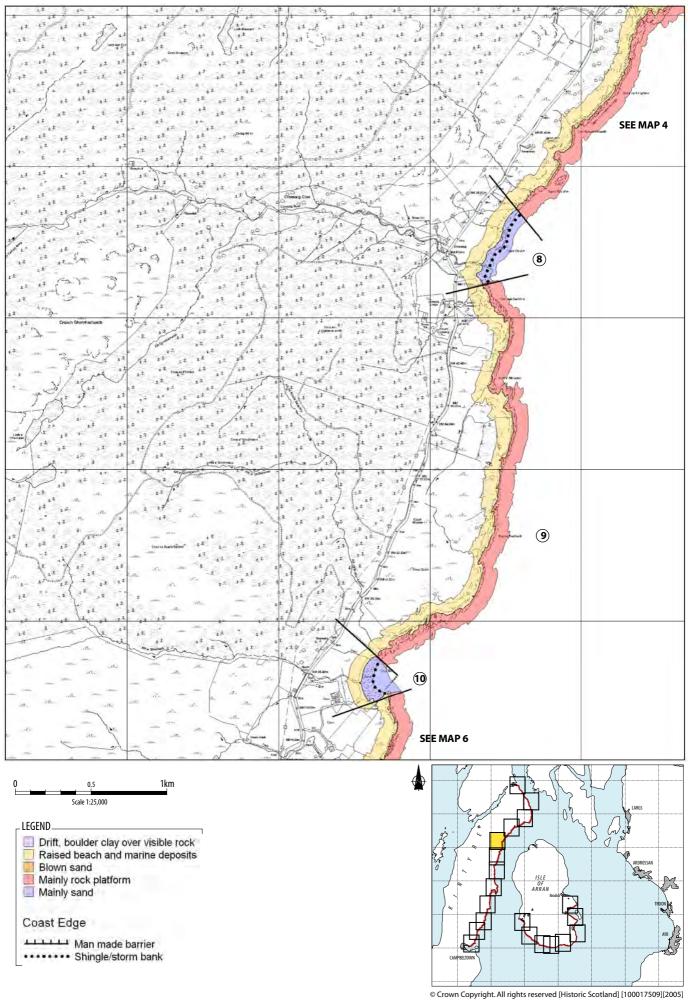
**Erosion Class**: The majority of this coastline is eroding albeit at a very slow rate. Erosion was noted at Crossaig where slight erosion is affecting some 30m of low cliff at NR 83465 51609 and also at the Crossaig Burn (NR 83340 51376) where modern glass shards were found to be eroding from a low cliff, 0.5m high. Coastal recession is mainly confined to small embayments where marine sand and shingle is prone to wave impact at the MHWMST. At Cour Bay the beach is both eroding and accreting. Sediment supply is sufficient here to form shingle banks but loss sediment is occurring from the back-shore area.

**Built Heritage & Archaeology**: There is a concentration of sites around Crossaig in this section, many of which are associated with waterborne activities. Most also appear to date to the  $18^{th}$ - $20^{th}$  century though it is possible that there are earlier origins especially for the buildings. There is also evidence for more recent activities within this area in the form of an observation post, which probably dates to the Second World War.

#### KINTYRE MAP 5: HINTERLAND GEOLOGY AND COASTAL GEOMORPHOLOGY

ID	Name of section	NGR	Length	Typical deposit type on the foreshore	Height of cliff	Hinterland geomorphology	Description
8	CROSSAIG	NR 835 517 to	0.6km	Marine deposits.	Low edge (<10m)	Mainly sand.	Sheltered small bay backed by marine
		NR 833 512					deposits in hinterland. Small stream
							outfalls onto sand and shingle beach.
9	RHUBHA RAIBHACH	NR 833 512 to	2.8km	Mainly rock.	Cliff (>10m)	Mainly rock abrasion	Steeply rising hinterland dominated by
		NR 826 487				platforms.	Dalradian schists covered with a thin
							mantle of cover soils (mainly till). The
							coastal edge is highly indented with
							exposed rock platforms down to the
							LWM.
10	COUR BAY	NR 826 487 to	0.4km	Sand.	Cliff (>5m)	Marine deposits.	Undifferentiated raised marine deposits
		NR 827 484					within a sheltered bay area. Beach sand
							and shingle.

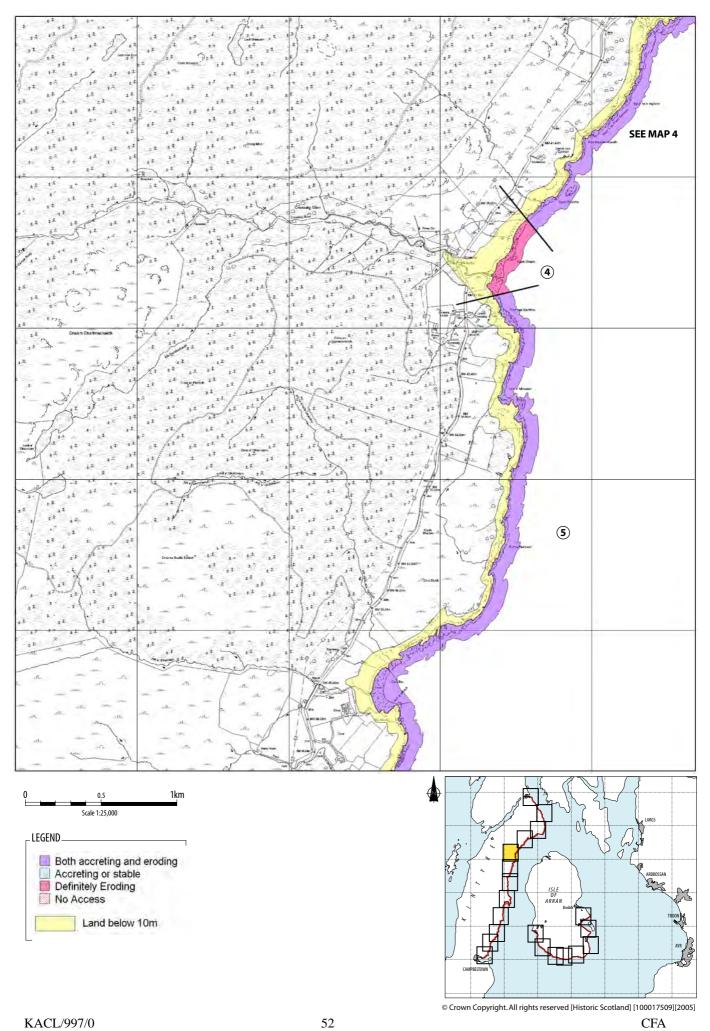
#### KINTYRE MAP 5 -HINTERLAND GEOLOGY AND FORESHORE GEOMORPHOLOGY



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#### **KINTYRE MAP 5: EROSION**

I	Name of coastal section	NGR	Length of coastal section	Type of erosion present	Description
4	Crossaig	NR 836 517 to NR 834 512	0.6km	Definitely eroding	Slight erosion evident along the shoreline and mouth of Crossaig Burn.
5	Crossaig to Grogport	NR 834 512 to NR 811 445	7.4km		Crossaig Bay to Cour Bay - Erosion on exposed platforms with marine sediment trapped at the MHWM. Cour Bay - Erosion and accretion at Cour Bay, most erosion evident at mouths of the burns that flow into the bay.



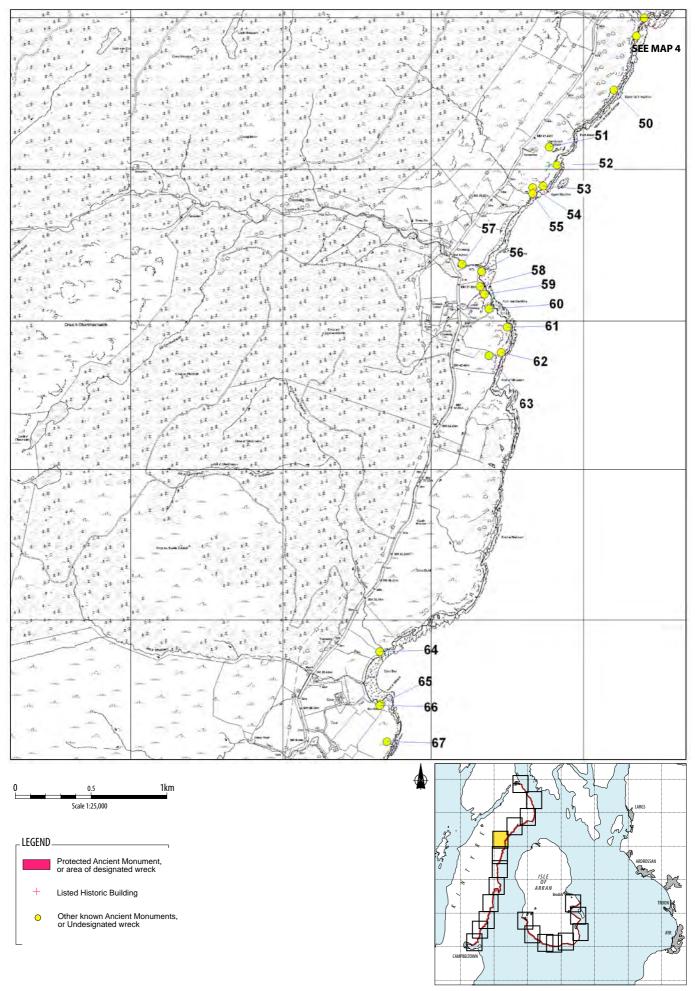
# KINTYRE MAP 5: BUILT HERITAGE AND ARCHAEOLOGY

#### Sites on the Coast Edge and Foreshore

ID	Name	NMRS	Source	WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
52	Port Alasdair Ruaidh		Fieldwalking		NR 8382 5203		Walls	Fair	Unknown	Nil
53	Ravens Bay		Fieldwalking		NR 8373 5189		Wall	Fair	Unknown	Nil
55	Crossaig		Fieldwalking		NR 8366 5184		Bridge	Good	Unknown	Monitor
56	Crossaig		Fieldwalking		NR 8332 5132		Possible Old Jetty	Eroding	Unknown	Monitor
60	Port na Crossaig		Fieldwalking		NR 8337 5107		Boathouse; shed	Fair	18th-20th C AD	Nil
62	South Crossaig		Fieldwalking		NR 8345 5078		Boathouse; slipway	Good	18th-20th C	Nil
65	Cour Bay		Fieldwalking		NR 8265 4844		Landing place	Eroding	Unknown	Survey
66	Boathouse	NR84NW 7.01	NMRS	42826	NR 8264 4843		Boathouse	Good	18th-20th C	Nil

#### Sites in the Hinterland

ID	Name	NMRS	Source	WoSAS Pin	NGR	Status	Туре	Condition	Date	Recommendation
50	Sgeir na h-Inghinn		Fieldwalking		NR 8420 5253		Wall	Good	Unknown	Nil
51	Eascairt		Fieldwalking		NR 8377 5215		Observation post	Good	18th-20th C	Nil
54	Ravens Bay		Fieldwalking		NR 8366 5188		Wall	Poor	Unknown	Nil
57	Crossaig		Fieldwalking		NR 8319 5137		Wall; possible cairn	Eroding	Unknown	Monitor
58	Crossaig		OS 1st ed		NR 8331 5122		Well	Unknown	18th-20th C	Nil
59	Crossaig		OS 1st ed		NR 8334 5117		Building	Poor	18th-20th C	Nil
61	Port na Crossaig		Fieldwalking		NR 8349 5095		Building	Poor	18th-20th C	Nil
63	South Crossaig	NR85SW 13	NMRS	44952	NR 8337 5076		Farmstead	Poor	Unknown	Nil
64	Cour Bay		Fieldwalking		NR 8264 4879		Buildings	Poor	Unknown	Nil
67	Cour		Fieldwalking		NR 8269 4819		Promontory	Fair	Unknown	Survey



## MAP 6: COUR BAY TO GROGPORT

**Hinterland Geology and Coastal Geomorphology**: The coastline within this section continues to be dominated throughout by Dalradian schists. There are exposed rock platforms with occasional gullies filled with boulders and sand. The hinterland is backed by undifferentiated marine deposits overlying superficial deposits of glacial till.

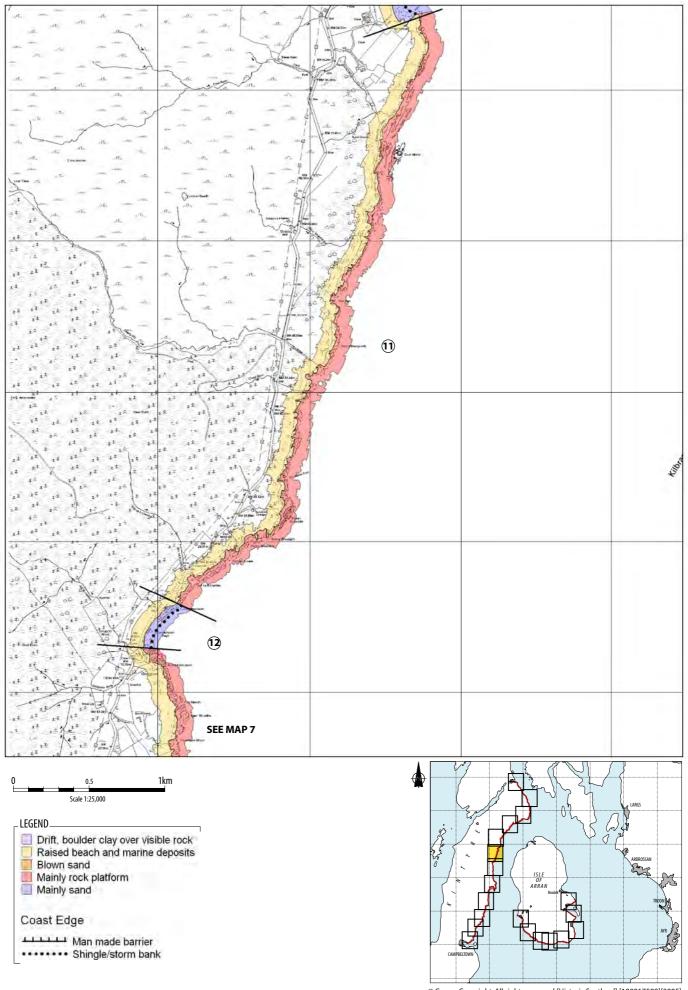
**Erosion Class**: At the Sunadale area (NR 8118 4470), erosion and accretion is occurring similar to that at Cour Bay. Much of the geology in this area comprises exposed rock platforms. This gives rise to pockets of accreting sand and shingle. The beach at Grogport is mostly stable as it is protected by a sea wall.

**Built Heritage & Archaeology**: The majority of sites within this area date to between the  $18^{th}$  and  $20^{th}$  centuries. Only three of the sites, the stone walls, were identified during the field survey. The only site of great interest within this section is that of Sunadale Dun though this is now buried under very thick undergrowth.

#### KINTYRE MAP 6: HINTERLAND GEOLOGY AND COASTAL GEOMORPHOLOGY

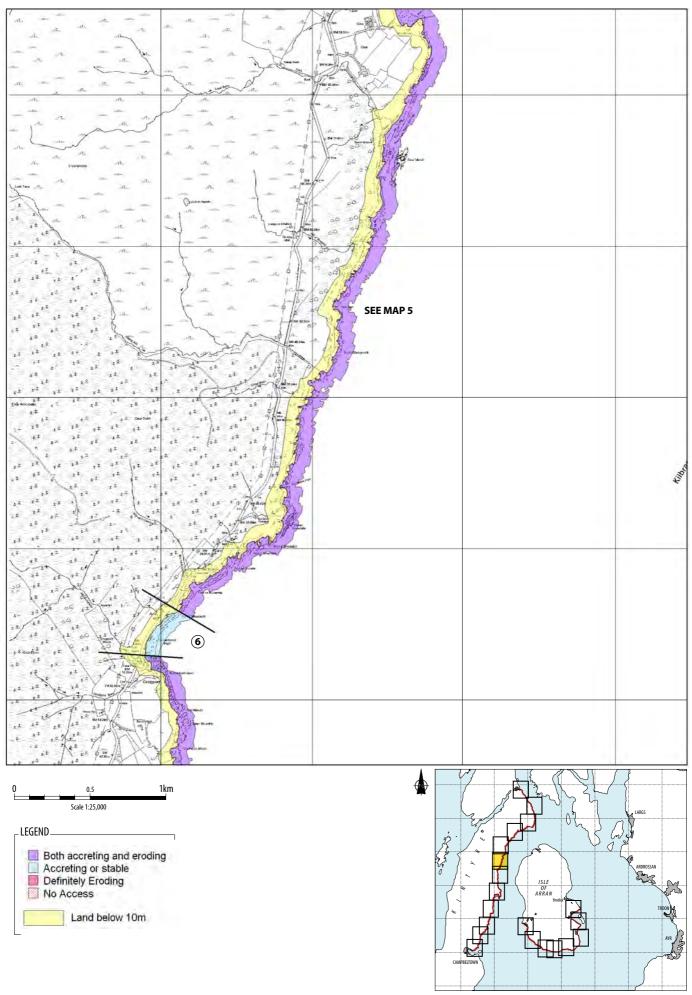
ID	Name of section	NGR	Length	Typical deposit type on the foreshore	Height of cliff	Hinterland geomorphology	Description
11	PORT BAN	NR 827 484 to	4.4km	Undifferentiated till over exposed rock.	Cliff (<5m)	Rock abrasion platform.	Indented coastal with steep sloping
		NR 811 446					hinterland. Exposed rock platform with
							boulder and sand filled gullies.
							Occasional Tertiary dyke exposed at
							cliff-face.
12	SUNADALE	NR 811 446 to	0.4km	Marine deposits.	Cliff (<5m)	Mainly rock platforms.	The hinterland is dominated by
		NR 809 443					undifferentiated marine deposits backed
							by an area covered by superficial
							deposits of till. The coastal edge is
							exposed rock along a narrow coastal
							platform.

#### KINTYRE MAP 6 -HINTERLAND GEOLOGY AND FORESHORE GEOMORPHOLOGY



#### **KINTYRE MAP 6: EROSION**

II	Name of coastal section	NGR	Length of coastal section	Type of erosion present	Description
5	Crossaig to Grogport	NR 834 512 to NR 811 445	7.4km		South of Cour Island - Exposed rock platform giving rise to channels where sand and shingle is trapped, main accretion is shingle banking at MHWM.
6	Grogport	NR 811 445 to NR 810 443	0.4km	Accreting or stable	This short stretch of beach is stable protected by sea defence works.



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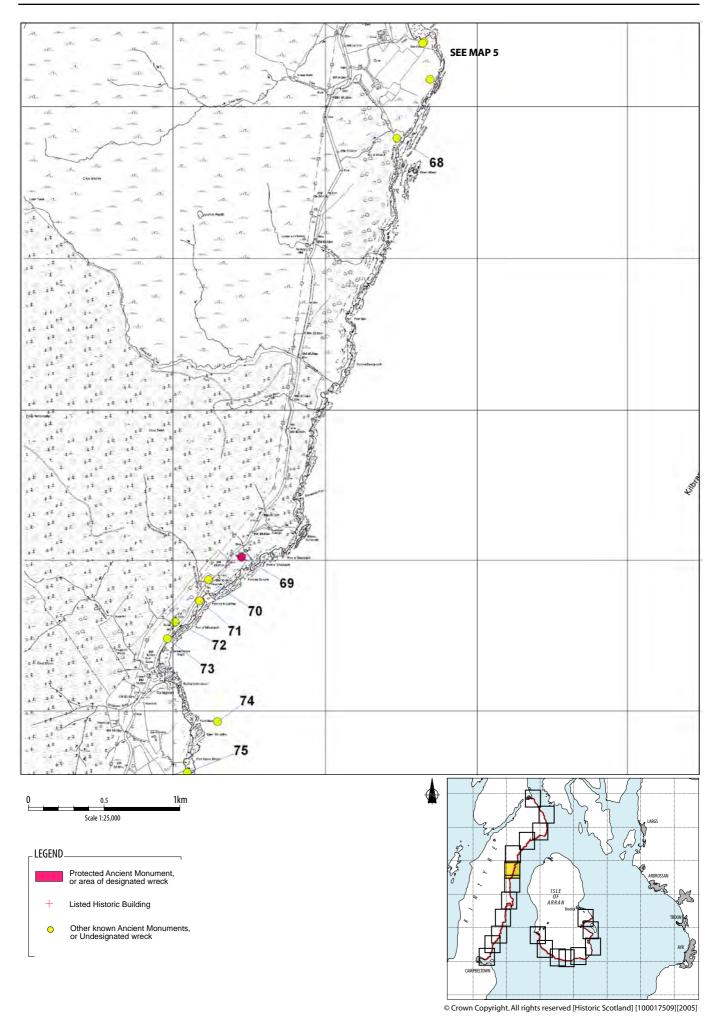
#### KINTYRE MAP 6: BUILT HERITAGE AND ARCHAEOLOGY

#### Sites on the Coast Edge and Foreshore

ID	Name	NMRS		WoSAS Pin	NGR	Status	Туре	Condition	Date	Recommendation
71	Sunadale		OS 1st ed		NR 8116 4473		Well	Unknown	18th-20th C	Nil

### Sites in the Hinterland

ID	Name	NMRS	Source	WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
68	Cour		Fieldwalking		NR 8247 4780		Stone wall	Fair	18th-20th C	Nil
69	Sunadale	NR84NW 2	NMRS	3855	NR 8144 4502	Scheduled	Dun	Unknown	1st mill BC-5th C	Nil
						3643			AD	
70	Sunadale Inn		OS 1st ed		NR 8122 4487		Public House	Good	18th-20th C	Nil
72	Acra		OS 1st ed		NR 8100 4459		Building	Fair	18th-20th C	Nil
73	Grogport		OS 1st ed		NR 8095 4448		Milestone	Unknown	18th-20th C	Nil
74	Grogport		Fieldwalking		NR 8128 4393		Stone wall	Fair	18th-20th C	Nil
75	Grogport		Fieldwalking		NR 8108 4359		Stone wall	Fair	18th-20th C	Nil



### MAP 7: GROGPORT TO TORR MOR

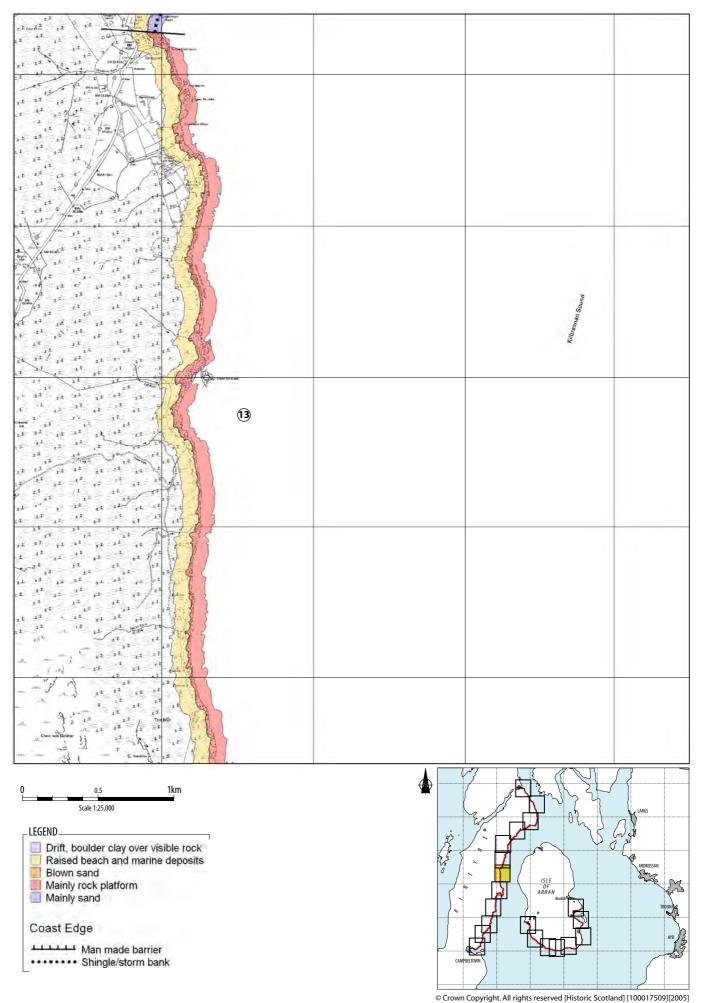
**Hinterland Geology and Coastal Geomorphology**: Towards Eilean Grianain (NR 8140 4200) the coastline is inaccessible for most part, being very rocky with dense forest above. The shoreline is highly indented with erosion platforms and boulder gullies. The hinterland rises steeply with a thin soil cover which supports the coniferous woodland which dominates this section.

**Erosion Class**: Part of this section was not surveyed during the fieldwork due to the nature of the terrain. However, the areas that were accessible were assessed as eroding and accreting. This was mostly around the area of Grogport old Manse where there are sections of exposed abrasion platforms which attract shingle and boulder accretion.

**Built Heritage & Archaeology**: The sites within this area appear to concentrate around Grogport and are associated with settlement in this area. The prehistoric Dun at Grogport Old Manse is potentially at risk as it sits on top of a knoll on the foreshore. However, given the height at which it sits there is no immediate threat.

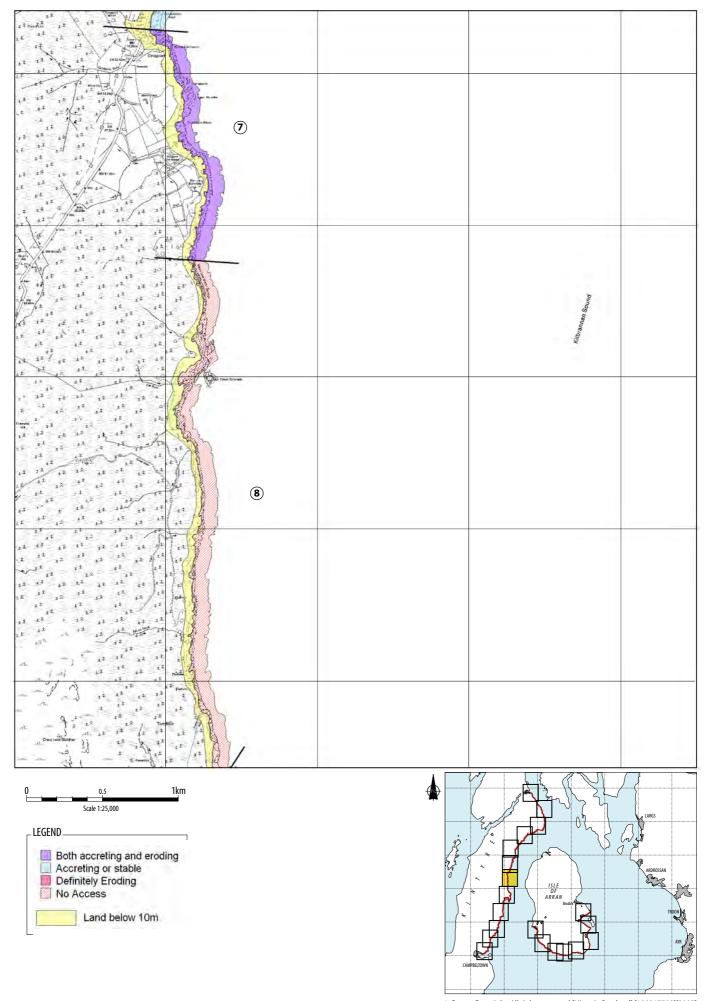
#### KINTYRE MAP 7: HINTERLAND GEOLOGY AND COASTAL GEOMORPHOLOGY

ID	Name of section	NGR	Length	Typical deposit type on the foreshore	Height of cliff	Hinterland geomorphology	Description
13		NR 809 443 to NR 818 387	5.5km	Mainly rock.	Low cliff (<10m)		Highly indented shoreline with erosion platforms and boulder gullies. Occasional Tertiary dykes outcrop at the shore. The hinterland rises steeply and is dominated by schistose rock with a thin cover soil supporting coniferous woodland.



# **KINTYRE MAP 7: EROSION**

ID	Name of coastal section	NGR	Length of coastal section	Type of erosion present	Description
7	Grogport to Barr na Buinneig	NR 810 443 to NR 812 428	1.6km	Eroding and accreting.	Grogport Old Manse - Exposed section of abrasion platform with boulders
					and shingle banking at MHWS.
8	Barr na Buinneig to Port na Cuile	NR 812 428 to NR 814 392	3.5km	Unknown.	Not surveyed.



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#### KINTYRE MAP 7: BUILT HERITAGE AND ARCHAEOLOGY

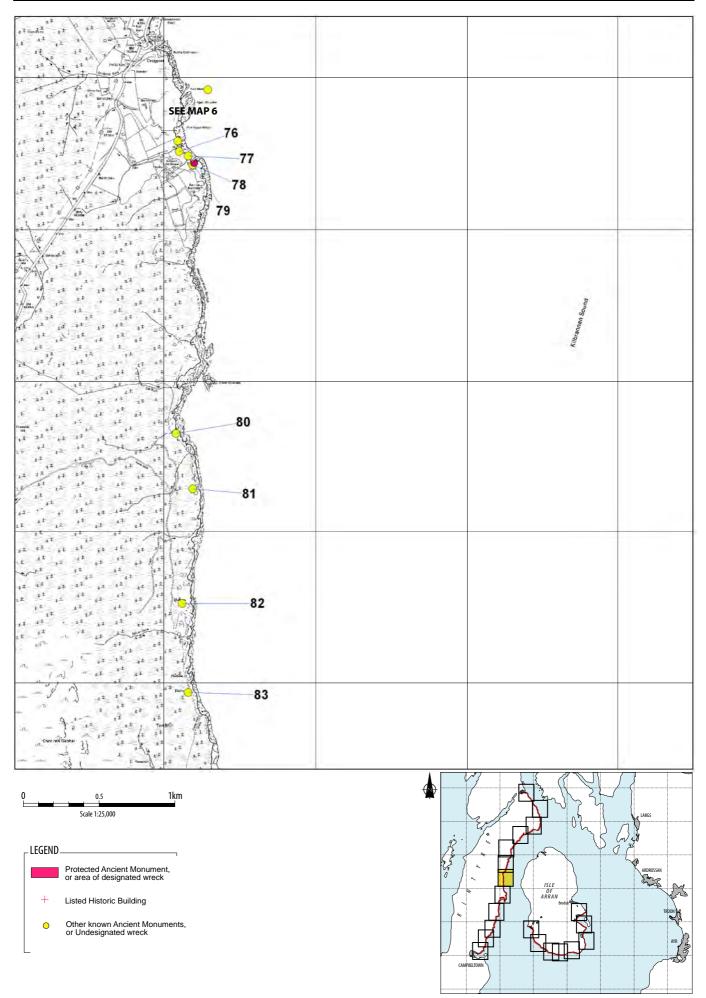
#### Sites on the Coast Edge and Foreshore

ID	Name	NMRS	Source	WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
<b>78</b>	Grogport		Fieldwalking		NR 8118 4343		Stone wall	Fair	18th-20th C	Nil
79	Grogport Old Manse	NR84SW 4	NMRS	3865	NR 8118 4344	Scheduled	Dun	Poor	1st mill BC-5th C	Nil
						3649			AD	
80	Grianain	NR84SW 7	NMRS	44961	NR 8107 4165		Building	Unknown	Unknown	Nil
81	Grianan		OS 1st ed		NR 8118 4128		Building	Unknown	Unknown	Nil

#### Sites in the Hinterland

ID	Name	NMRS	Source	WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
76	Grogport		Fieldwalking		NR 8109 4352		Boathouse	Fair	18th-20th C	Nil
77	Grogport		Fieldwalking		NR 8115 4349		Stone wall	Fair	18th-20th C	Nil
82	Allt An Torra	NR84SW 5	NMRS	3866	NR 8111 4052		Platform	Unknown	Unknown	Nil
83	Carradale	NR83NW 4	NMRS	3815	NR 8115 3993		Platforms	Unknown	18th-20th C	Nil

#### KINTYRE MAP 7 - BUILT HERITAGE AND ARCHAEOLOGY



#### MAP 8: PORT NA CHUILE TO GREENHILL

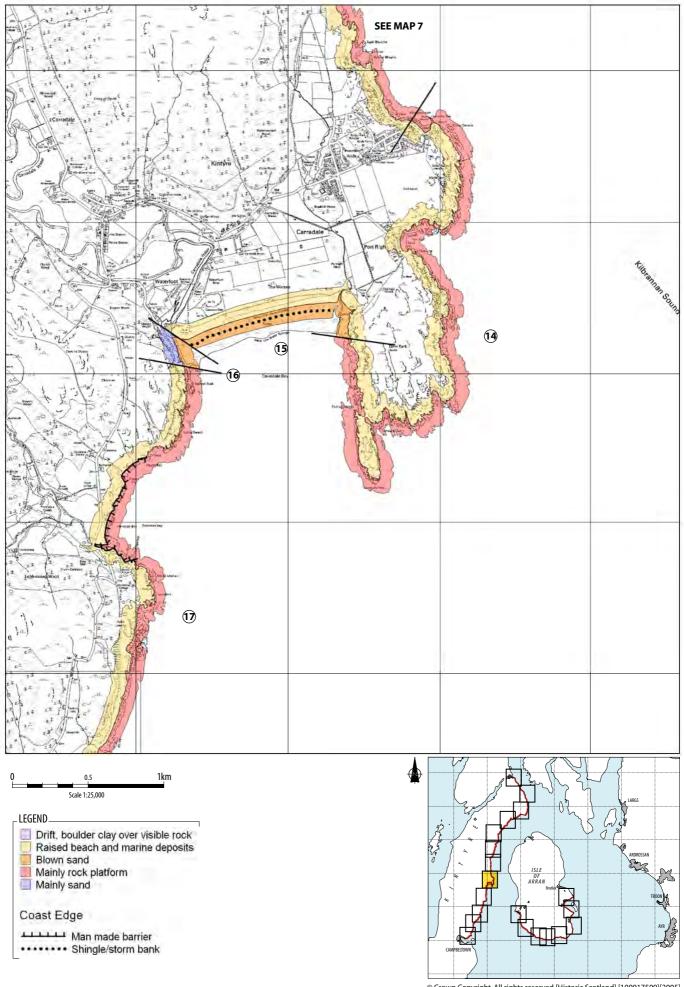
**Hinterland Geology and Coastal Geomorphology**: This section of coastline includes Carradale Point and Carradale Bay and a fairly sinuous rocky coastline to the south. Carradale Point including Port Righ and the immediate hinterland is dominated by the Beinn Bheula schist formations of Dalradian age. At the head of Carradale Bay raised marine deposits are well represented for well over 2km to the north and outcrop at Port Righ. Basalt dykes cross the promontory. Within Carradale Bay, dune sand formation extends inland. At the east end of the bay freshwater alluvium is confined to the outfall of the River Carradale. Raised beach deposits surround a pocket of alluvium at the head of Torrisdale Bay (NR 7980 3582). South of Torrisdale Bay the hinterland geology is dominated by schist covered by undifferentiated deposits of glacial till. Tertiary activity is represented by occasional NNW trending olivine-basalt dykes.

**Erosion Class**: The main areas of erosion recorded during the survey are at Port Righ, Carradale Bay and Torrisdale Bay. At Port Righ boulder dump sea defence works are offering some protection at the MHWMST area but slope failure of the cliff above is occurring. These cliffs, being dominated by marine sediment and slope-wash are highly exposed to rill-erosion. At Carradale Bay visitor erosion of the dune cliff is the main problem. At least 30-40m of exposed cliff is actively eroding. Elsewhere along the bay, local pathways cut through the dune sands have been formed, providing areas where erosion has got a foothold. At Torrisdale Bay and Dippen Bay to the north, active erosion was noted. Here wave hammer action is affecting the structurally weak cliff. A pier is severely eroding here and the remains of a 19<sup>th</sup> century house are falling into the sea.

**Built Heritage & Archaeology**: There are numerous sites within this section which perhaps suggest a long history of settlement within this area. Several shipwrecks have been identified off this section of coast, mostly dating to between the 18<sup>th</sup> and 19<sup>th</sup> centuries. There are also many sites associated with seafaring along this section such as the pier in Torrisdale Bay. Most of the sites lie either on the coast edge or the foreshore making them more susceptible to erosion. This may explain why there are several sites that have been identified as being at risk and many more that have been recommended for monitoring.

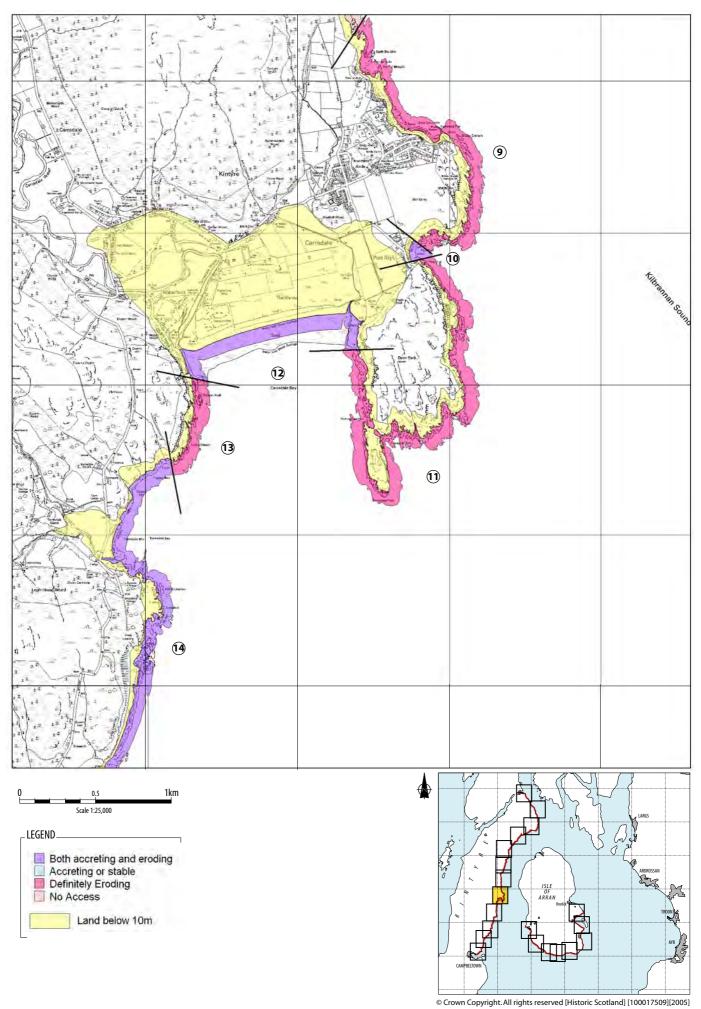
#### KINTYRE MAP 8: HINTERLAND GEOLOGY AND COASTAL GEOMORPHOLOGY

ID	Name of section	NGR	Length	Typical deposit type on the foreshore	Height of cliff	Hinterland geomorphology	Description
14	CARRADALE POINT	NR 818 387 to NR 814 372	_	Marine deposits.	Cliff (<10m)	rock platform.	Rocky promontory with indented shoreline. This coastal cell includes the sheltered bay of Port Righ, behind which lies undifferentiated river terrace deposits formed by fluvioglacial processes. Towards Port Crannaich, a small headland has dyke intrusions.
15	CARRADALE BAY	NR 814 372 to NR 802 372	1.2km	Freshwater alluvium/windblown sand.	Low edge (<5m)	Sand.	Freshwater alluvium and river terrace deposits dominate the hinterland and have been distributed by the Carradale Water that outfalls. The near shore area comprises windblown sand forming warren. The beach comprises wide sand flats.
16	CARRADALE BAY	NR 802 372 to NR 802 370	0.2km	Freshwater alluvium/windblown sand.	Low edge (<10m)		The foreshore comprises mostly of blown sand with a raised beach hinterland.
17	DIPPEN BAY TO SADDELL BAY	NR 802 370 to NR 796 318	5.7km	Marine deposits.	Low edge (<10m)		The shoreline is highly irregular with a series of small embayments formed as a result of the unconformity between the quartzite dominated rock and the more resilient bedrock. Raised marine deposits are represented with glacial till, mainly thin clays present. The shoreline consists of mainly rock skerries and shingle beds at shoreline.



#### **KINTYRE MAP 8: EROSION**

ID	Name of coastal section	NGR	Length of coastal section	Type of erosion present	Description
9	Port na Cuile to Port Righ	NR 814 392 to NR 818 379	1.9km	Definitely eroding	Erosion on shore platforms with boulders and sand in more sheltered areas.
10	Port Righ	NR 818 379 to NR 818 398	0.2km	Eroding and accreting	1m high erosion section exposed.
11	Port Righ to Carradale Bay	NR 818 398 to NR 814 372	2.2km	Definitely eroding	Carradale Point - Exposed promontory receiving direct wave impact,
					eroding albeit slowly.
12	Carradale Bay	NR 814 372 to NR 804 370	1.8km	Eroding and accreting	Erosion evident along length of beach, especially at mouths of burns and
					Carradale Water which flow into the bay.
13	Carradale Bay to Dippen Bay	NR 804 370 to NR 802 365	0.6km	Definitely eroding	Scouring at MHWM, mainly accreting shingle
14	Dippen Bay to Ugadale Point	NR 802 365 to NR 784 284	9.1km	Eroding and accreting	Both natural and animal erosion evident at Dippin Bay. Severe erosion at
					Torrisdale Bay, especially at site <b>100</b> .
					Torrisdale Bay to Saddell Bay - Exposed abrasion platforms with deep
					gullies filled with boulders, shingle and sand.
					Shingle present at the MHWM.



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## KINTYRE MAP 8: BUILT HERITAGE AND ARCHAEOLOGY

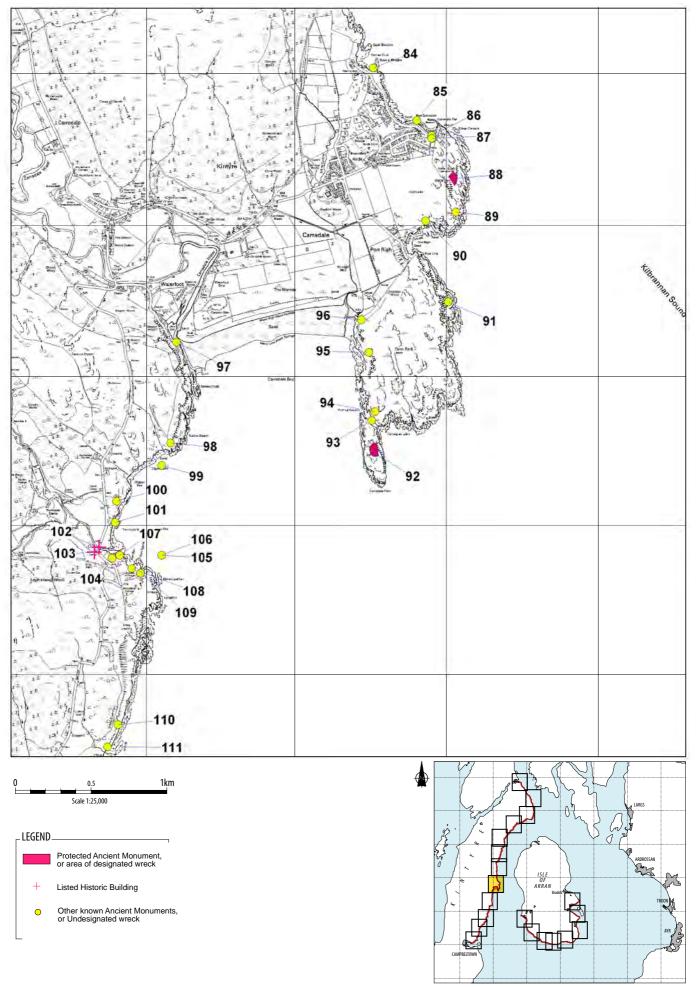
#### Sites on the Coast Edge and Foreshore

ID	Name	NMRS	Source	WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
84	Sgeir a' Bhogha		Fieldwalking		NR 8151 3905		Pier	Eroding	18th-20th C	Monitor
85	Mary McColl: Carradale Pier	NR83NW 8009	NMRS		NR 818 387		Shipwreck	Unknown	1882	Nil
90	Port Righ		Fieldwalking		NR 8186 3803		Platform	Good	Unknown	Nil
91	Port Righ		Fieldwalking		NR 8201 3749		Possible Boathouse	Poor	18th-20th C	Nil
93	Carradale Point		Fieldwalking		NR 8150 3670		Causeway	Fair	Unknown	Survey
96	Carradale Bay		Fieldwalking		NR 8143 3737		Building; Wall	Fair	18th-20th C	Survey
97	Carradale Bay		OS 2nd ed		NR 8020 3722		Jetty	Eroding	18th-20th C	Survey
99	Dippen Bay	NR83NW 8	NMRS		NR 801 364		Stone	Good	20th C	Nil
100	Springwell Cottage		Fieldwalking		NR 7980 3616		Cottage	Eroding	18th-20th C	Survey
101	Torrisdale Bay		Fieldwalking		NR 7979 3602		Pier	Eroding	18th-20th C	Survey
105	Priscilla: Torrisdale Bay	NR83SW 8001	NMRS		NR 801 358		Shipwreck	Unknown	18th-20th C	Nil
106	Jane Taylor: Torrisdale Bay	NR83SW 8004	NMRS		NR 801 358		Shipwreck	Unknown	18th-20th C	Nil
107	Torrisdale Bay		Fieldwalking		NR 7982 3580		Rock shelter	Good	Unknown	Monitor
108	Torrisdale Bay		Fieldwalking		NR 7990 3571		Boathouse	Fair	18th-20th C	Monitor
109	Torrisdale Bay		Fieldwalking		NR 7996 3568		Jetty	Fair	18th-20th C	Monitor
110	Greenhill		Fieldwalking		NR 7981 3467		Rock shelter; Potato	Good	Unknown	Monitor
							House			
111	Greenhill		Fieldwalking		NR 7974 3452		Rock shelter; Potato House	Good	Unknown	Monitor

## Sites in the Hinterland

ID	Name	NMRS	Source	WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
86	Port Crannaich	NR83NW 6	NMRS	3817	NR 819 386		Bloomery Mound	Unknown	11th-15th C	Nil
87	Carradale		OS 1st ed		NR 8190 3858		Milestone	Good	18th-20th C	Nil
88	Aird's Castle	NR83NW 2	NMRS	3813	NR 8203 3831	Scheduled	Defence; Residential	Poor	11th-15th C	Nil
						3177				
89	Aird's Castle		Fieldwalking		NR 8206 3809		Wall	Fair	Unknown	Nil

92	Carradale Point	NR83NW 1	NMRS	3812	NR 8151 3649	Scheduled 2180	Fort	Fair	1st Mill BC-5th C AD	Monitor
94	Carradale		Fieldwalking		NR 8152 3676		Building	Good	18th-20th C	Nil
95	Carradale		Fieldwalking		NR 8148 3715		Enclosure	Fair	Unknown	Nil
<b>98</b>	Dippen Bay		Fieldwalking		NR 8016 3655		Stone wall	Good	18th-20th C	Nil
102	Torrisdale Bridge	NR73NE 23	NMRS			Listed B HBNum 18401	Road Bridge	Good	1840	Nil
103	Gate Lodge	NR73NE 8.01	NMRS			Listed B HBNum 18400	Residential	Good	19th C	Nil
104	Torrisdale Bay		OS 1st ed		NR 7977 3578		Building	Good	18th-20th C	Nil



## MAP 9: RUBHA NAN SGARBH TO UGADALE

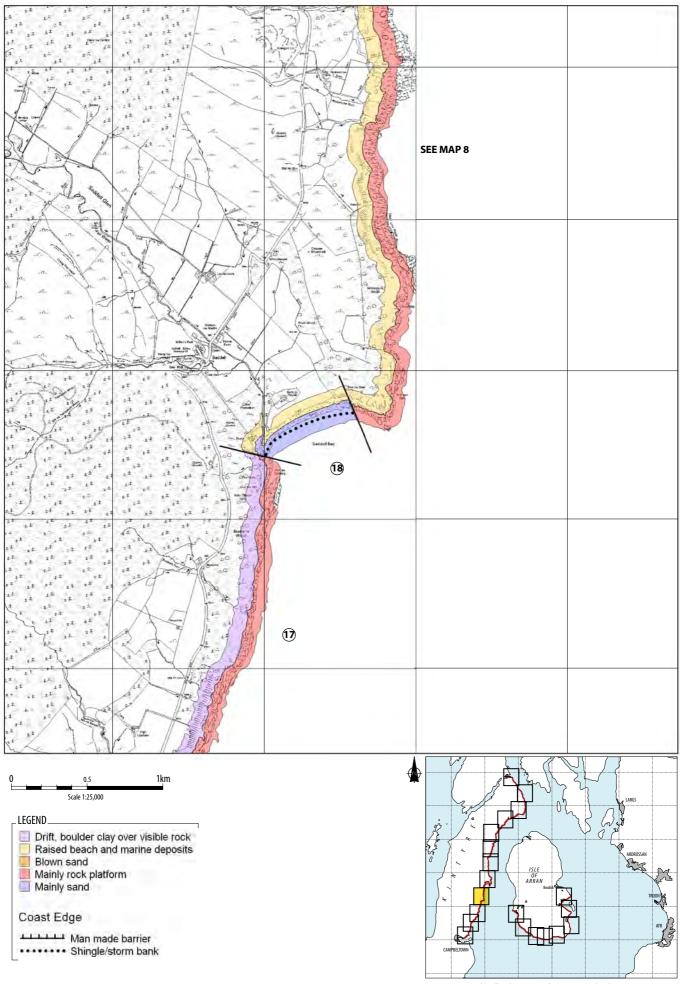
**Hinterland Geology and Coastal Geomorphology**: Saddell Bay has at least two sequences of marine sediment surrounding a deposit of freshwater alluvium derived from the Saddell Water. The shoreline itself is dominated by sand and shingle. Towards Ugadale, to the south, the hinterland rises steeply and the shoreline is dominated by rock platforms.

**Erosion Class**: the whole of this section has been classed as eroding and accreting. The rocky platforms, which are prominent in areas, are prone to accretion by sand, shingle or even boulders. Saddell Bay is also prone to erosion and accretion as is usual on sandy bays.

**Built Heritage & Archaeology**: There are few sites within this area though there is a variety of periods represented. The prehistoric Dun at Rubha nan Sgarbh lies slightly in land and is quite a prominent feature in the landscape. Saddell Castle dates to the medieval period and appears to be well protected from the sea by modern defences. There are several shipwrecks noted within this section though the precise locations of such features are often unknown due to the nature of the sites.

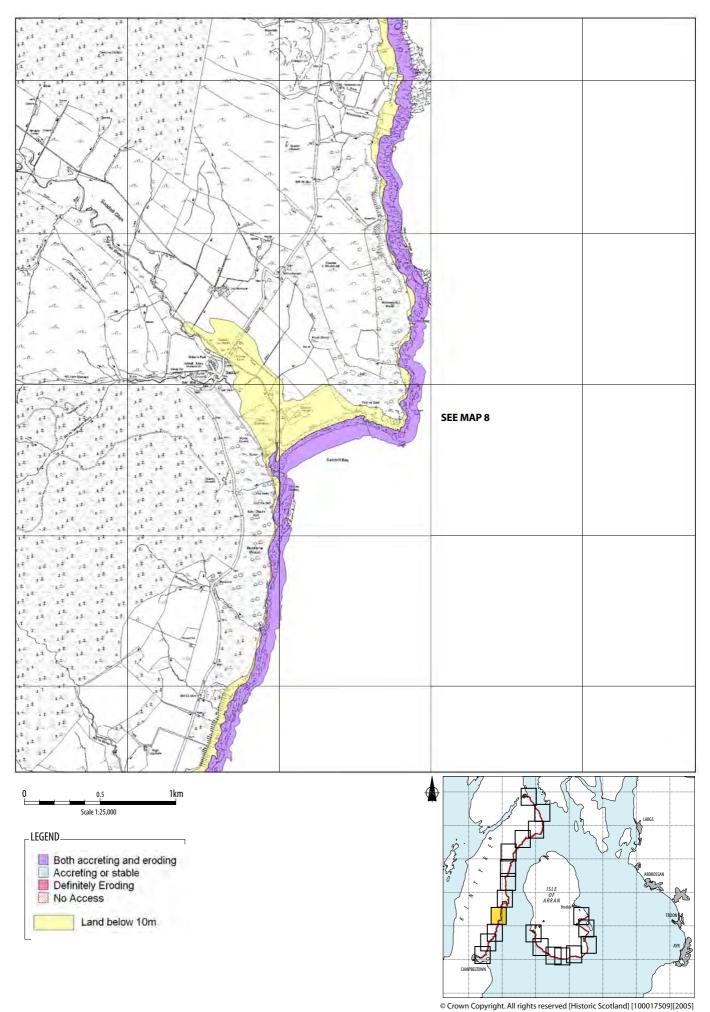
#### KINTYRE MAP 9: HINTERLAND GEOLOGY AND COASTAL GEOMORPHOLOGY

ID	Name of section	NGR	Length	Typical deposit type on the foreshore	Height of cliff	Hinterland geomorphology	Description
18	SADDELL BAY	NR 796 318 to	0.7km	Marine deposits.	Low edge (<5m)	Sand and shingle.	Small sheltered bay dominated by
		NR 790 314					freshwater and river terrace gravel
							derived from the course of the Saddell
							Water. The immediate shoreline is
							dominated by sand and shingle.
19	UGADALE POINT	NR 790 314 to	3.2km	Till over exposed rock.	Low edge (<10m)		Low cliff overlooked by steeply rising
		NR 784 284					hinterland. The hinterland is mainly till
							over exposed schistose rock. The
							shoreline is irregular with a promontory
							at Ugadale Point.



#### **KINTYRE MAP 9: EROSION**

ID	Name of coastal section	NGR	Length of coastal section	Type of erosion present	Description
14	Dippen Bay to Ugadale Point	NR 802 365 to NR 784 284	9.1km	6 6	Saddell Bay - Sand and shingle build up MHWM, erosion on the edge of riverlets, wind blown sand nourishment derived from the wide beach.
					South of Saddell Bay to Ugadale Point - Exposed in parts with sheltered embayments with boulders and shingle.



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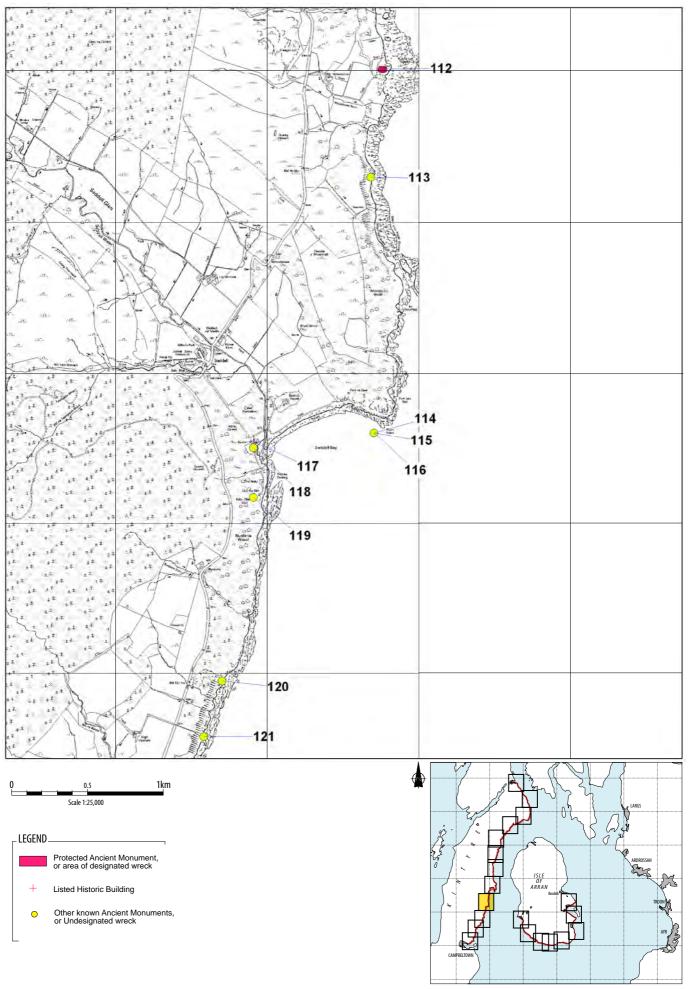
#### KINTYRE MAP 9: BUILT HERITAGE AND ARCHAEOLOGY

#### Sites on the Coast Edge and Foreshore

ID	Name	NMRS	Source	WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
113	Pluck		OS 1st ed		NR 7968 3330		Building	Fair	18th-20th C	Survey
114	Leo: Pluck Point	NR73SE 8001	NMRS		NR 797 316		Shipwreck	Unknown	1890	Nil
115	Golden Fleece: Pluck Point	NR73SE 8003	NMRS		NR 797 316		Shipwreck	Unknown	18th-20th C	Nil
116	Victoria: Pluck Point	NR73SE 8004	NMRS		NR 797 316		Shipwreck	Unknown	1894	Nil
118	Jane: Saddell castle	NR73SE 8005	NMRS		NR 789 315		Shipwreck	Unknown	18th-20th C	Nil
120	High Ugadale		Fieldwalking		NR 7869 2995		Trackway	Good	18th-20th C	Nil
121	High Ugadale		Fieldwalking		NR 7857 2958		Wall	Poor	Unknown	Nil

#### Sites in the Hinterland

ID	Name	NMRS		WoSAS Pin	NGR	Status	Туре	Condition	Date	Recommendation
112	Rubha Nan Sgarbh	NR73SE 4	NMRS		NR 7975 3402	Scheduled 3100	Dun		1st mill BC-5th C AD	Nil
117	Saddell Castle	NR73SE 2	NMRS	3459		Listed A HBNum 18403	Defence	Good	1500s	Nil
119	Lady Mary's Well	NR73SE 3	NMRS	3460	NR 7890 3117		Well	Good	16th C	Nil



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#### MAP 10: UGADALE TO CARRICK POINT

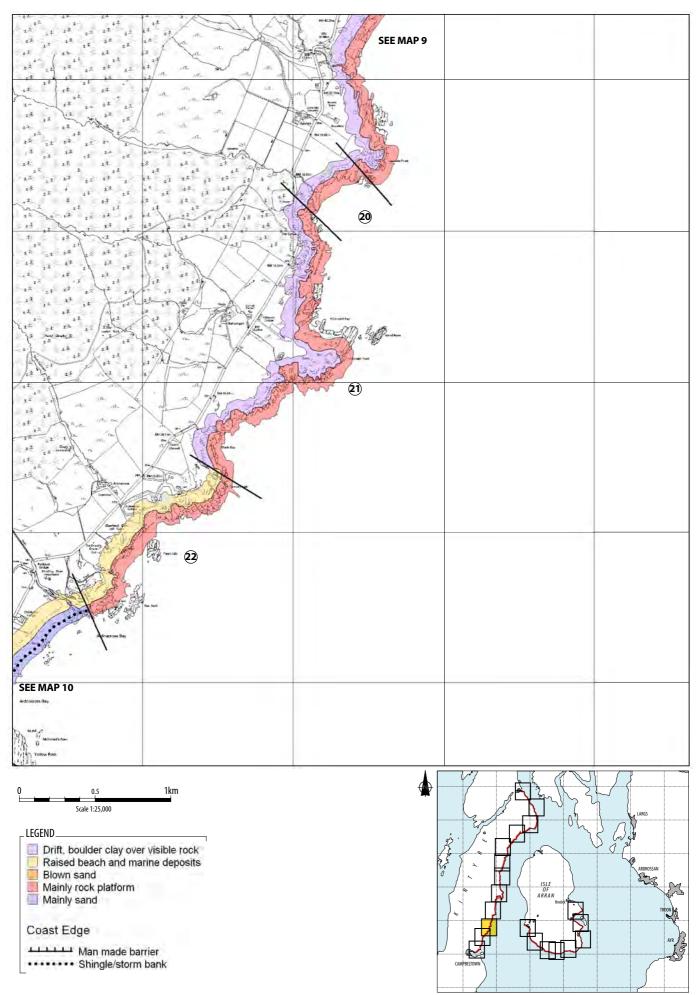
**Hinterland Geology and Coastal Geomorphology**: The hinterland along this section is uniform with mainly schist until Kildonald Point, which lies on a major fault line called the Kildonald Slide (BGS 1996a). Quartz schists become the dominant type within this fault area along with massive formations of intrusive hornblende schists of Tertiary age. At Kildonald Bay marine sands extend landwards. The coastline is highly fragmented, backed by impressive high rock platforms. At Seal Rock (NR 7677 2700) a series of sea stacks are present and fairly precipitous bluffs overlooking abraded rock platforms.

**Erosion Class**: The highly indented coastline with a fairly resilient outcropping lithology would suggest that this area is a fairly stable section of coastline and erosion is occurring at a very slow rate. The small embayments and gullies making up the indentations within this sector are recipients of shingle towards the back-shore. Here these deposits are vegetated and therefore stable to some extent. However when exposed to wave hammer action during the spring tides these areas can recede fairly rapidly, particularly when salt-marsh cover is removed. A section of this type of shoreline was found to be eroding to the north of Kildonald Bay (NR 7820 2820).

**Built Heritage & Archaeology**: There are numerous sites located close to the coastal edge within this section. The majority of these appear to be relatively modern in date, between 18<sup>th</sup> and 20<sup>th</sup> century. The identification of a shell midden within this section is a rarity on Kintyre as there is only one other recorded shell midden, located close to the shores of West Loch Tarbert (NMRS no. NR75NE 17).

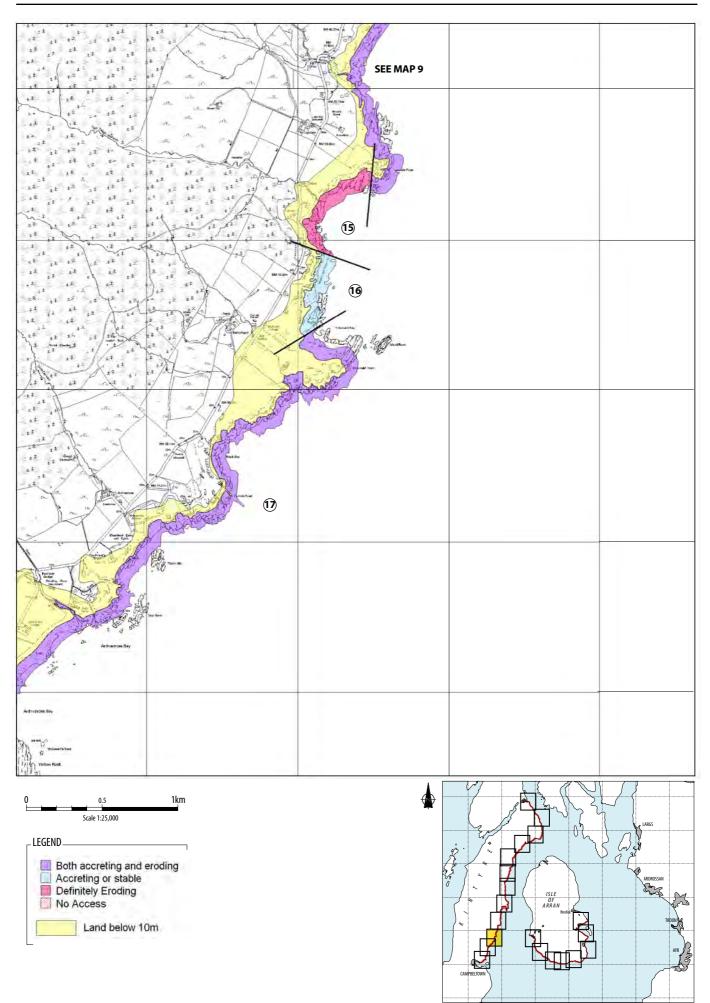
#### KINTYRE MAP 10: HINTERLAND GEOLOGY AND COASTAL GEOMORPHOLOGY

ID	Name of section	NGR	Length	Typical deposit type on the foreshore	Height of cliff	Hinterland geomorphology	Description
20	KILDONAN	NR 784 284 to	0.4km	Alluvium.	Low edge (<10m)	Rock platform.	Freshwater alluvium formation, possibly
		NR 781 282					a relict fan derived from outwash down a
							local valley. This overlooks a rocky
							shoreline with gullies and abrasion
							platforms.
21	KILDONALD POINT	NR 781 282 to	2.3km	Dollerite Rock.	Low edge (<10m)	1	This coastal cell is very irregular and
		NR 775 264					contains the indented shore of Kildonald
							Point, which has eroded to form a series
							of sea stacks and spits. This point is
							exclusively dollerite. Dalradian schists
							form the boundary of this geological
							formation. The coastline is abraded rock
							platform.
22	SEAL ROCK	NR 775 264 to	1.3km	River deposits (undifferentiated).	Cliff (>10m)		The low lying hinterland is dominated by
		NR 766 255					alluvium derived as a result of erosion
							processed down Glen Lussa. Dollerite
							intrusions are also present in the form of
							stacks. The shoreline is mainly exposed
							rock platform backed by a low cliff.



#### KINTYRE MAP 10: EROSION

ID	Name of coastal section	NGR	Length of coastal section	Type of erosion present	Description
15	Ugadale Point to Kildonan	NR 784 284 to NR 782 279	0.7km	Definitely eroding	Erosion in bay area.
16	Kildonan to Kildonald Bay	NR 782 279 to NR 781 274	0.6km	-	Scouring and loss of softer saltwater marsh at MHWM, shingle and boulders filling in the erosion gullies.
17	Kildonald Bay to Ardnacross Bay	NR 781 274 to NR 760 244	4.1km		Shelter derived from Kildonald Point is leading to accretion of sand and shingle at the MHWM. Marine shell is eroding out of the low cliffs in parts. Kildonald Point to Ardnacross Bay - Highly indented shoreline with scouring at MHWM, shingle also forming banks in sheltered sections.



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## KINTYRE MAP 10: BUILT HERITAGE AND ARCHAEOLOGY

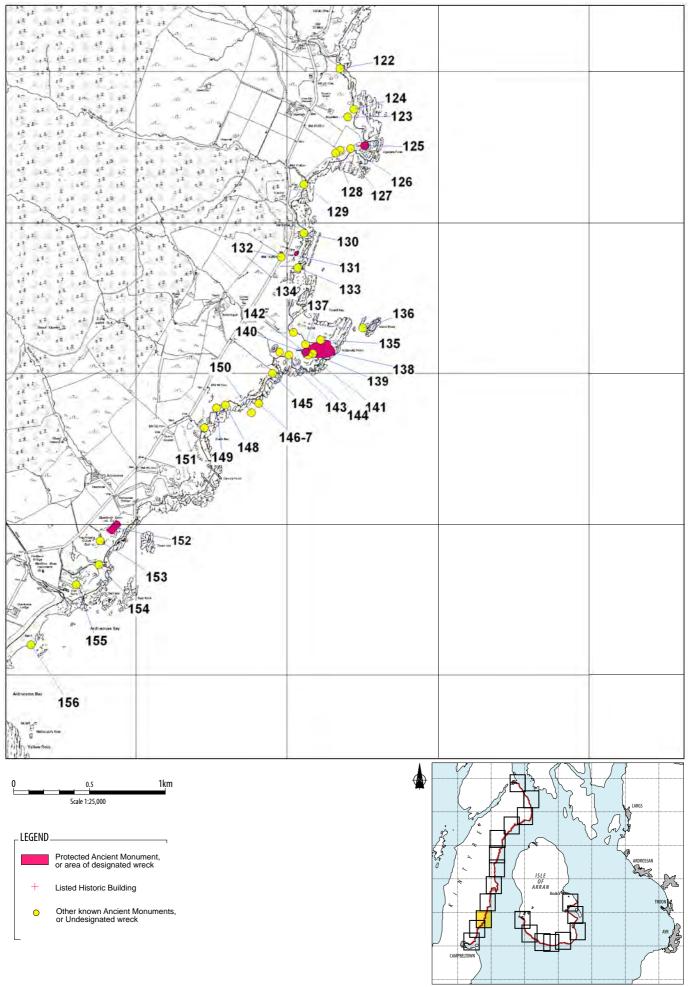
### Sites on the Coast Edge and Foreshore

ID	Name	NMRS	Source	WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
122	High Ugadale		Fieldwalking		NR 7835 2902		Wall	Eroding	Unknown	Nil
124	Brucefield		Fieldwalking		NR 7844 2875		Sheds	Good	18th-20th C	Nil
129	Ugadale		Fieldwalking		NR 7811 2825		Wall	Good	18th-20th C	Nil
130	Kildonan		Fieldwalking		NR 7811 2793		Wall	Good	Unknown	Nil
133	Kildonald Bay		Fieldwalking		NR 7807 2770		Wall	Fair	Unknown	Nil
134	Kildonald Bay		Fieldwalking		NR 7804 2727		Structure	Fair	18th-20th C	Nil
135	Kildonald Point		Fieldwalking		NR 7822 2722		Shell midden	Poor	unknown	SURVEY
136	Robert and Christian: Island Ross	NR72NE 8003	NMRS		NR 785 273		Shipwreck	Unknown	1820	Nil
137	Kildonald Bay		Fieldwalking		NR 7812 2719		Quarry scoops	Good	Unknown	Nil
143	Kildonald Point		Fieldwalking		NR 7795 2714		Wall	Fair	Unknown	Survey
145	Kildonald point		Fieldwalking		NR 7790 2700		Wall	Fair	Unknown	Nil
146	Glenhead Pier	NR72NE 36	NMRS		NR 7781 2680		Shipwreck; pier	Poor	20th C	survey
147	Colonial: Black Bay	NR72NE 8001	NMRS		NR 7781 2680		Shipwreck	Unknown	18th-20th C	Nil
148	Black Bay		Fieldwalking		NR 7759 2679		Gravel pit	Good	18th-20th C	Monitor
150	Bisco 9: Black Bay	NR72NE 8002	NMRS		NR 7776 2674		Shipwreck	Unknown	18th-20th C	Nil
151	Black Bay		OS 2nd ed		NR 7745 2664		Cave	Fair	Unknown	Nil
154	Shore cottage		Fieldwalking		NR 7675 2573		Stone wall	Fair	18th-20th C	Nil

## Sites in the Hinterland

ID	Name	NMRS	Source	WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
123	Brucefield	NR72NE 35	NMRS	46521	NR 784 287		Findspot	Unknown	Unknown	Nil
125	Ugadale Point	NR72NE 9	NMRS	3352	NR 7851 2851	Scheduled	Dun	Fair	1st Mill BC-5th C	Nil
						3225			AD	
126	Ugadale Point		Fieldwalking		NR 7842 2849		Wall	Poor	Unknown	Nil
127	Ugadale	NR72NE 30	NMRS	45063	NR 7835 2848		Building	Fair	18th-20th C	Survey
128	Ugadale		Fieldwalking		NR 7832 2846		Possible Kiln	Poor	Unknown	Survey

131	Kildonald Bay	NR72NE 5	NMRS	3348	NR 7806 2778	Scheduled 243	Dun	Good	1st Mill BC-5th C AD	Nil
132	Kildonald Bay		OS 1st ed		NR 7796 2777		Milestone	Good	18th-20th C	Nil
138	Kildonald Point	NR72NE 12	NMRS	3332	NR 7824 2715	Scheduled 3110	Fort	Fair	1st Mill BC-5th C AD	Survey
139	Kildonald Point		Fieldwalking		NR 7817 2713		Banks	Poor	Unknown	Nil
140	Kildonald Point		Fieldwalking		NR 7813 2713		Enclosure	Poor	Unknown	Nil
141	Kildonald Point		Fieldwalking		NR 7814 2712		Kiln	Good	Unknown	Nil
142	Kildonan Point	NR72NE 11	NMRS	3331	NR 7812 2714	Scheduled 3110 (with above)	Cairns	Fair	1st Mill BC-5th C AD	Survey
144	Kildonan Point	NR72NE 20	NMRS	3341	NR 7801 2712		'Dyke'	Fair	18th-20th C	Nil
149	Black Bay		Fieldwalking		NR 7753 2677		Bank	Poor	Unknown	Nil
151	Black Bay		OS 2nd ed		NR 7745 2664		Cave	Fair	Unknown	Nil
152	Ardnacross Bay	NR72NE 6	NMRS		NR 7680 2598		Chambered Cairn; Cairn	Unknown	Unknown	Nil
153	Shore Cottage	NR72NE 32	NMRS	45115	NR 7676 2589		Farmstead (possible)	Good	18th-20th C	Nil
155	Ardnacross Bay	NR72NE 23	NMRS		NR 766 256		Enclosure	Unknown	Unknown	Nil
156	Peninver Beach	NR72NE 25	NMRS	15555	NR 763 252		Findspot	Unknown	Unknown	Nil



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#### MAP 11: CARRICK POINT TO KILCHOUSLAND

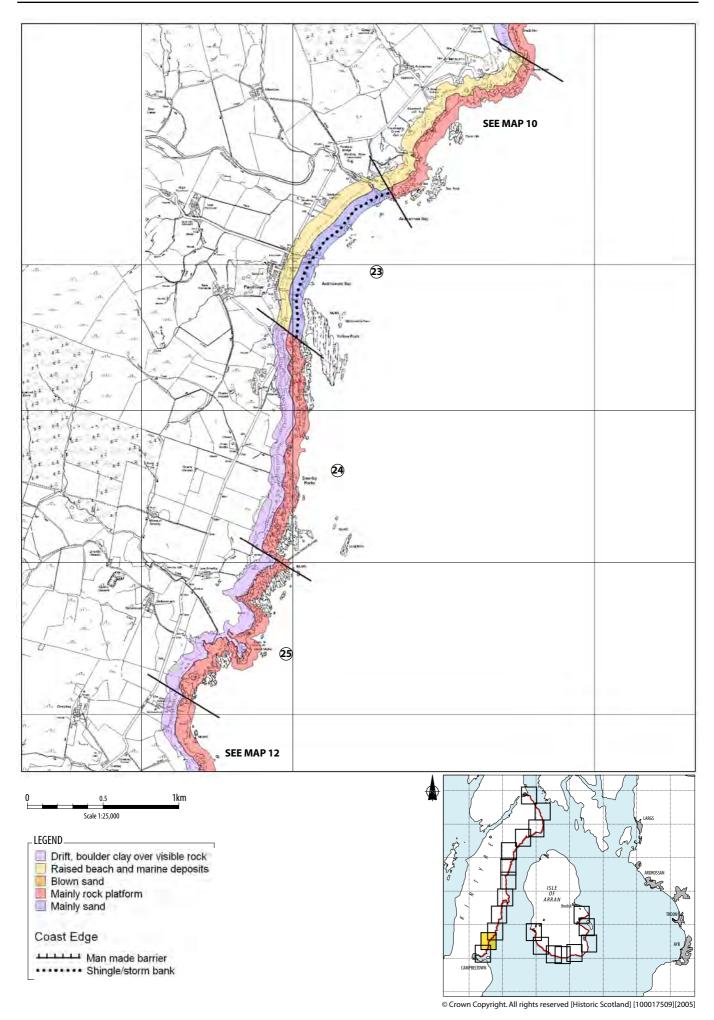
**Hinterland Geology and Coastal Geomorphology**: This section of coastline is the most complex in terms of geological background and is criss-crossed by a series of anticlines. The dominant lithology is schist with subordinate quartz with associated limestones of Dalradian age. The region is further complicated by intrusive Tertiary activity in the form of a major basalt field that is bounded by carboniferous deposits towards Macringan's Point. Tertiary dykes outcrop at the shoreline. A mantle of glacial till and marine deposits are also present along the coast.

**Erosion Class**: The intertidal area is considered to be eroding or stable in parts, with more extreme erosion occurring at other parts. Ardnacross Bay and a smaller bay situated immediately north is undergoing erosion at the MHWMST. In terms of impact on archaeological sites, the causeway leading to Castle Muller (NR 7564 2244) is situated at the MHWMST area and is now is truncated mid-way along its length. A small embayment to the south of Castle Muller is eroding at the MHWMST and well established saltmarsh is currently being cut back and undermined.

**Built Heritage & Archaeology**: There are several sites of interest within this section of coastline. Many of these sites date to between 18<sup>th</sup> and 20<sup>th</sup> centuries though there are a few anomalies. There is a tower house located on Island Muller dated to the medieval period. The causeway leading up to this site is currently suffering the effects of the sea and has been truncated, as mentioned above. Close to the farm of Lower Smerby lie several cairns which have been dated to the prehistoric period. Kilchousland Church and burial ground date to between 11<sup>th</sup> and 15<sup>th</sup> centuries and command a good vantage point from the top of the cliffs.

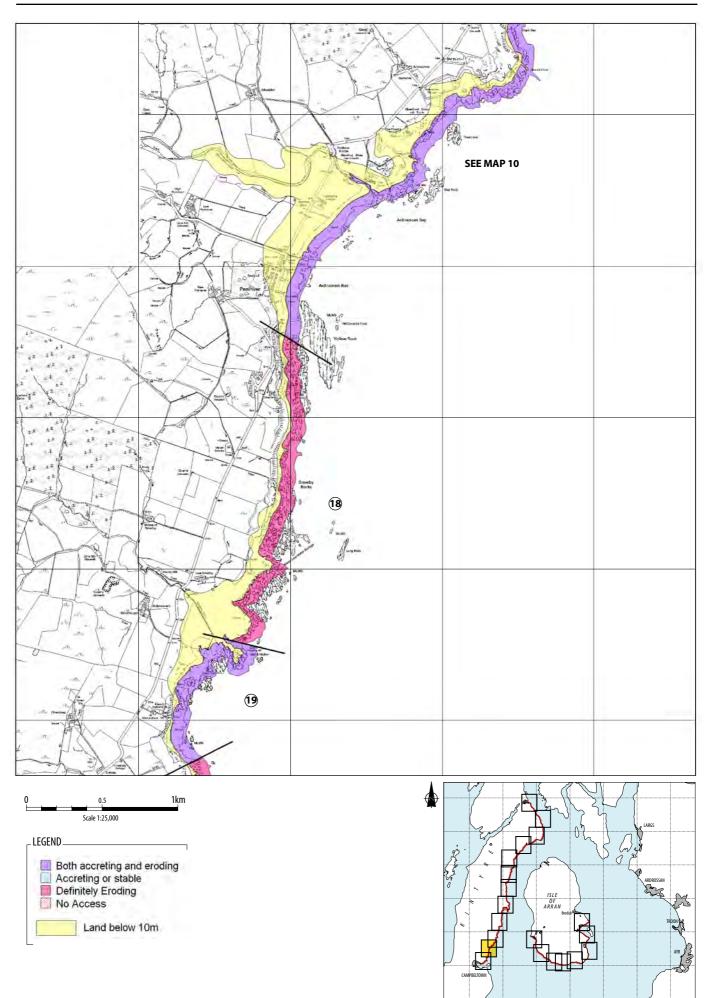
#### KINTYRE MAP 11: HINTERLAND GEOLOGY AND COASTAL GEOMORPHOLOGY

ID	Name of section	NGR	Length	Typical deposit type on the foreshore	Height of cliff	Hinterland geomorphology	Description
23	ARDNACROSS BAY	NR 766 255 to	1.2km	Mainly sand.	Low edge (<10m)	Marine deposits.	The hinterland is dominated by
		NR 760 245					undifferentiated marine deposits. The
							coastal edge is linear with a wide sandy
							beach.
24	SMERBY ROCKS	NR 760 245 to	1.5km	Thin acidic cover soils over schist.	Cliff (>10m)		The hinterland is very convoluted with
		NR 759 230					several geological types present.
							Dollerite intrusions, schist and freshwater
							alluvium are represented. A cliff
							overlooks a very rocky coastline that is
							incised with gullies.
25	BALLYMENACH	NR 759 230 to	1.2km	Raised marine deposits.	Low edge (<10m)	Rock platform.	Raised marine deposits within the
		NR 753 221					hinterland. The shoreline is rock
							platform.



#### **KINTYRE MAP 11: EROSION**

ID	Name of coastal section	NGR	Length of coastal section	Type of erosion present	Description
17	Kildonald Bay to Ardnacross Bay	NR 781 274 to NR 760 244	4.1km	Eroding and accreting	Ardnacross Bay - Sediment building up at MHWM along with local
					erosion on softer back shore areas.
18	Ardnacross Bay to Island Muller	NR 760 244 to NR 757 225	2.1km	Definitely eroding	Highly abraded platforms eroding at a slow rate.
19	Island Muller to Kilchousland	NR 757 225 to NR 753 217	1.1km	Eroding and accreting	Marine sediment is focused at the MHW, salt marsh areas effected by local
					erosion.



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# KINTYRE MAP 11: BUILT HERITAGE AND ARCHAEOLOGY

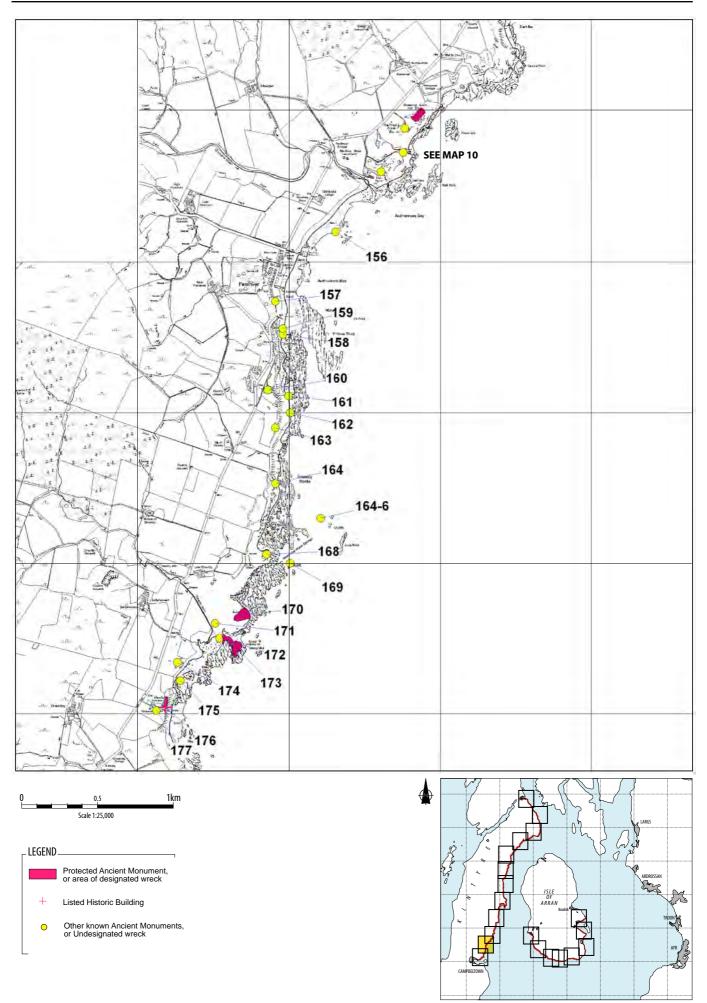
### Sites on the Coast Edge and Foreshore

ID	Name	NMRS	Source	WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
158	Peninver		Fieldwalking		NR 7595 2452		Harbour	Fair	18th-20th C	Monitor
159	Peninver		OS 2nd ed		NR 7595 2456		Jetty	Unknown	19th C	Nil
161	Peninver		Fieldwalking		NR 7599 2411		Slipway	Poor	Unknown	Nil
162	Ben My Chree: Peninver	NR72SE 8032	NMRS		NR 76 24		Shipwreck	Unknown	1883	Nil
164	Smerby Rocks		Fieldwalking		NR 7590 2353		Cave	Fair	Unknown	Nil
165	Grace Wallace: Smerby Rocks	NR72SE 8025	NMRS		NR 762 233		Shipwreck	Unknown	1877	Nil
166	Victor: Smerby	NR72SE 8029	NMRS		NR 762 233		Shipwreck	Unknown	18th-20th C	Nil
167	Reserve: Smerby Rocks	NR72SE 8030	NMRS		NR 762 233		Shipwreck	Unknown	18th-20th C	Nil
168	Low Smerby		Fieldwalking		NR 7584 2306		Quay/jetty	Eroding	18th-20th C	Survey
169	Helena: Smerby Rocks	NR72SE 8005	NMRS		NR 76 23		Shipwreck	Unknown	1877	Nil
172	Island Muller		Fieldwalking		NR 7553 2250		Wall	Fair	Unknown	Nil
175	Kilchousland		Fieldwalking		NR 7527 2222		Wall	Fair	Unknown	Nil

#### Sites in the Hinterland

ID	Name	NMRS	Source	WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
157	Peninver	NR72SE 11	NMRS		NR 7590 2474		Buildings; Enclosure	Unknown	18th-20th C	Nil
160	Greenrigs		OS 1st ed		NR 7585 2415		Buildings	Good	18th-20th C	Nil
163	Peninver	NR72SE 7	NMRS	12923	NR 759 239		Pit	Unknown	Unknown	Nil
170	Lower Smerby	NR72SE 5	NMRS	3380	NR 7568 2266		Cairn; Field Clearance Cairn	Good	Prehistoric	Nil
171	Low Smerby	NR72SE 8	NMRS		NR 755 226		Findspot	Unknown	Unknown	Nil
173	Island Muller	NR72SE 4	NMRS	3379	NR 7564 2244	Scheduled 3222	Tower-house	Fair	11th-15th C	Monitor
174	Ballymenach	NR72SE 15	NMRS		NR 7525 2234		Anti-Aircraft Battery	Good	18th-20th C	Monitor
176	Kilchousland	NR72SE 1	NMRS	3376			Church; Burial ground	Fair	11 <sup>th</sup> -15 <sup>th</sup> C	Nil

				3042				
177	Kilchousland	OS 1st ed	NR 7511 2202		Well	Unknown	Unknown	Nil



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#### MAP 12: KILCHOUSLAND TO TRENCH POINT

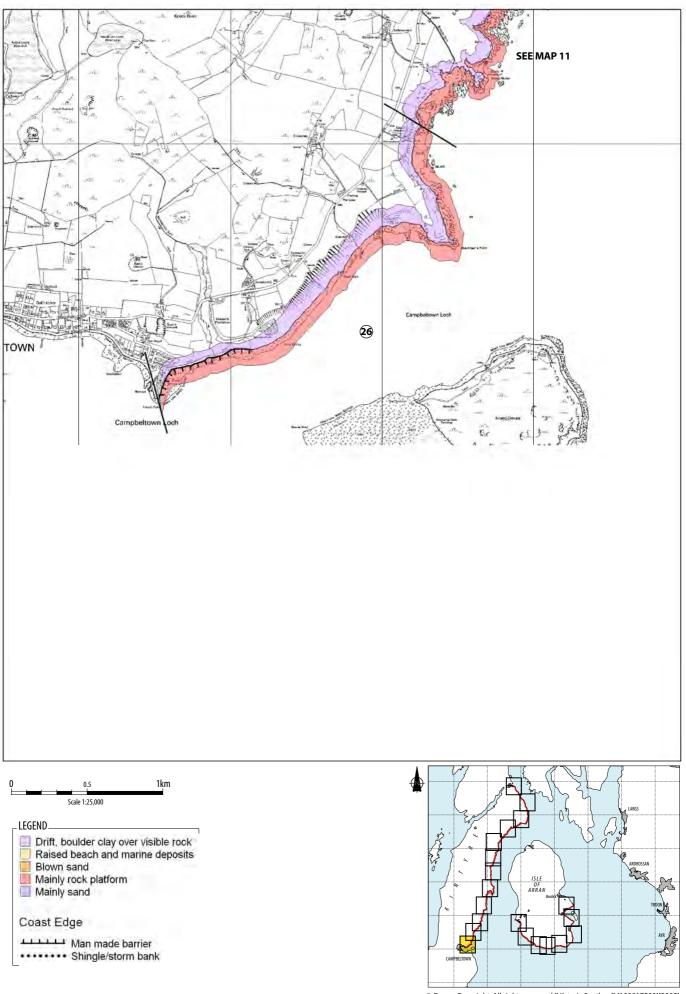
**Hinterland Geology and Coastal Geomorphology**: This coastal unit is situated on the northern shore of Campbeltown Loch. The local geology is the same as that described for the previous coastal cells in Map 11. The anticlines of the basalt masses terminate at the coastline. Interestingly the geology is radically different on the south side of the loch where Dalradian schists are the dominant lithology. Within the survey area, well-defined high raised rock platform is present, overlooking a lower former wave cut platform composed of marine deposits. The character of the shoreline is typically a sea-loch environment with a more define sub-tidal zone comprising of mainly sand, shingle and boulders, the latter are the dominant type. The sub-tidal area is narrow.

**Erosion Class**: Campbeltown Loch is affected by wave fetch from the south-easterly quadrant and is leading to erosion of soft marine sediment at the MHWMST area. Scouring and recession is ongoing albeit at a slow rate.

**Built Heritage & Archaeology**: There are many relatively modern sites located along this stretch, several of which are connected to the shipping trade. Trench Point itself has changed even in recent times. It was noted during the survey that there are now the remnants of demolished warehouses on this site. The history of Trench Point, however, extends back much further to the prehistoric. During construction works on the site in the 19<sup>th</sup> century, several cists were discovered and excavated.

#### KINTYRE MAP 12: HINTERLAND GEOLOGY AND COASTAL GEOMORPHOLOGY

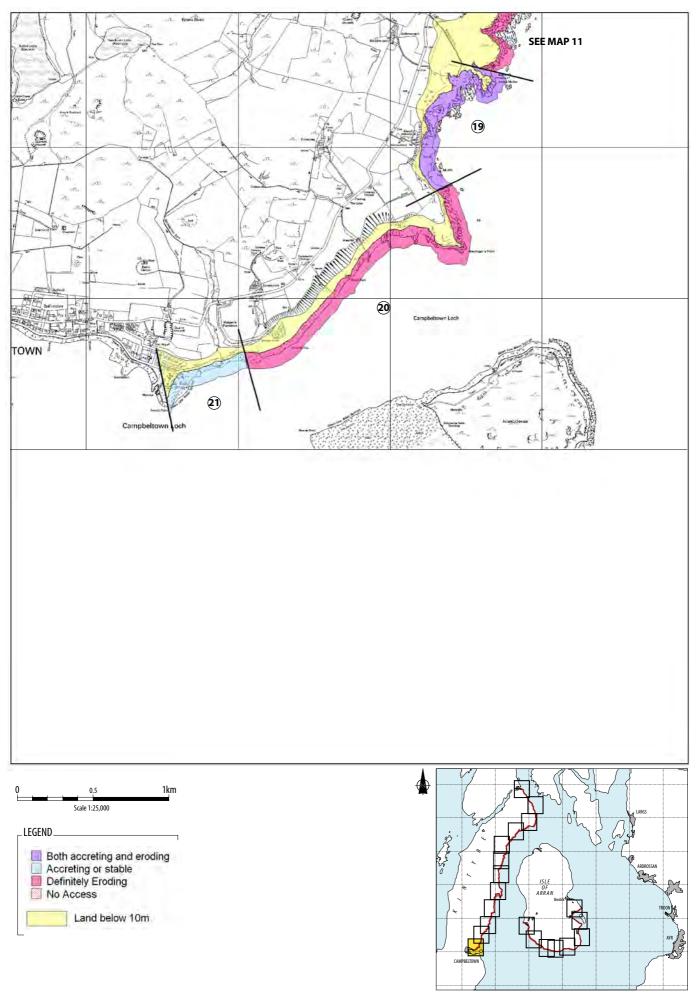
ID	Name of section	NGR	Length	Typical deposit type on the foreshore	Height of cliff	Hinterland geomorphology	Description
26	MACRINGAN'S POINT TO	NR 753 221 to	3.1km	Rock and raised marine deposits.	Cliff (<10m) and	Rock platform and boulders.	Headland of hard basalt lava, headland
	TRENCH POINT	NR 735 203			Low edge (<10m)		formation overlain by deposits of glacial
							till. The shoreline is rocky and exposed.
							The hinterland is mainly olivine-basalt
							lava with a thin mantle of cover soils.
							Raised marine deposits are also
							represented forming a cuspate foreland at
							Trench Point. The shoreline is mainly
							boulders and sand.



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#### **KINTYRE MAP 12: EROSION**

ID	Name of coastal section	NGR	Length of coastal section	Type of erosion present	Description
20	Kilchousland to Slaty Farlan	NR 753 217 to NR 741 206	2km	Definitely eroding	Erosion is occurring at an unknown rate around Black Rock.
21	Slaty Farlan to Trench Point	NR 741 206 to NR 735 203	0.7km		Sea defences are lending stability to this section around Trench Point. Natural and animal erosion particularly from Macringan's Point to Black Rock where there is pasture. Erosion very clear along coast from this point though there are sea defences towards Trench Point.



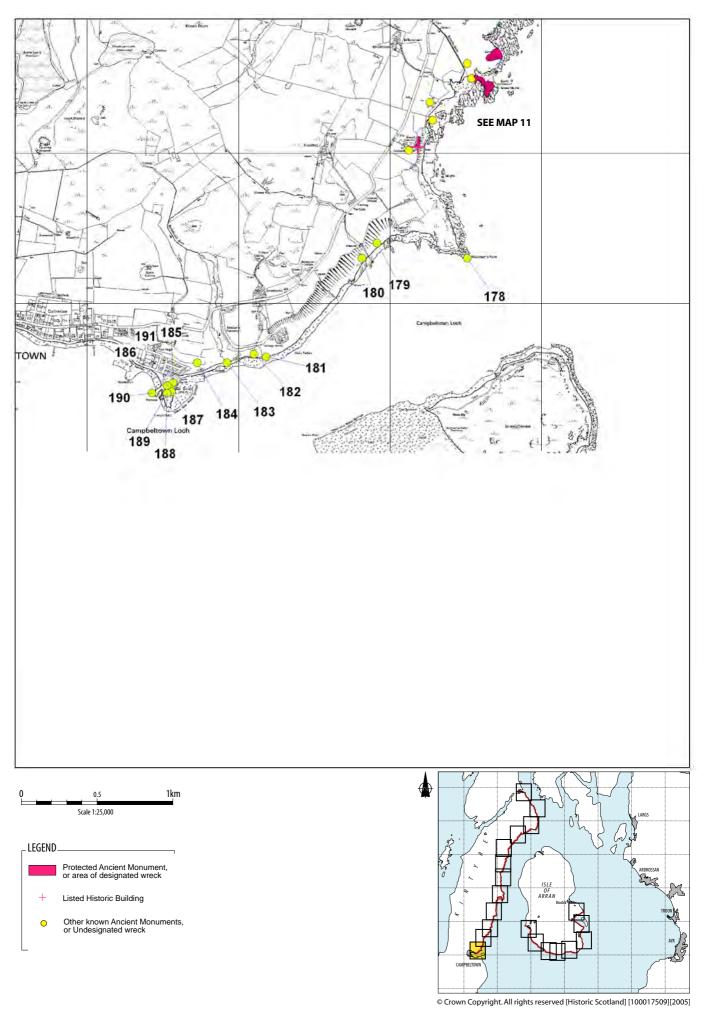
## KINTYRE MAP 12: BUILT HERITAGE AND ARCHAEOLOGY

#### Sites on the Coast Edge and Foreshore

ID	Name	NMRS	Source	WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
178	Catherine: Macringan's Point	NR72SE 8031	NMRS		NR 755 213		Shipwreck	Unknown	18th-20th C	Nil
181	Slaty Farlan		Fieldwalking		NR 7416 2064		Stone structure	Eroding	18th-20th C	Survey
186	Warehouses	NR72SW 161	NMRS	44003	NR 7351 2044		Industrial	Unknown	18th-20th C	Nil
187	The Trench	NR72SW 20	NMRS	3394	NR 7353 2041		Civil War Battery	Unknown	18th-20th C	Nil
188	Trench Point	NR72SW 21	NMRS	3395	NR 735 204		Cist	Unknown	Prehistoric	Nil
189	Trench Point	NR72SW 23	NMRS	3397	NR 735 204		Cist	Unknown	Prehistoric	Nil
190	Trench Point	NR72SW 40	NMRS	3416	NR 734 204		Findspot	Unknown	9th-4th Mill BC	Nil
191	Campbeltown Shipyard	NR72SW 166	NMRS	44239	NR 7350 2045		Boatyard	Unknown	18th-20th C	Nil

## Sites in the Hinterland

ID	Name	NMRS		WoSAS Pin	NGR	Status	Туре	Condition	Date	Recommendation
179	Glenbeg	NR72SW 69			NR 749 214		Mound	Unknown	Unknown	Nil
180	Glenbeg	NR72SW 70	NMRS	43372	NR 748 213		Quarry Scoop	Unknown	Unknown	Nil
182	Baraskomill		OS 1st ed		NR 7408 2066		Target	Unknown	18th-20th C	Nil
183	Baraskomill	NR72SW 72	NMRS	43370	NR 739 206		Structure	Unknown	Post-medieval	Nil
184	Fort Argyll	NR72SW 73	NMRS	43369	NR 737 206		Mound	Unknown	Unknown	Nil
185	Trench Point	NR72SW 19	NMRS	3392	NR 7354 2047		Cairn; Cists	Unknown	Prehistoric	Nil



#### 6. SURVEY MAPS OF THE ISLE OF ARRAN

#### MAP 1: DRUMADOON POINT TO AIRD NAN RON

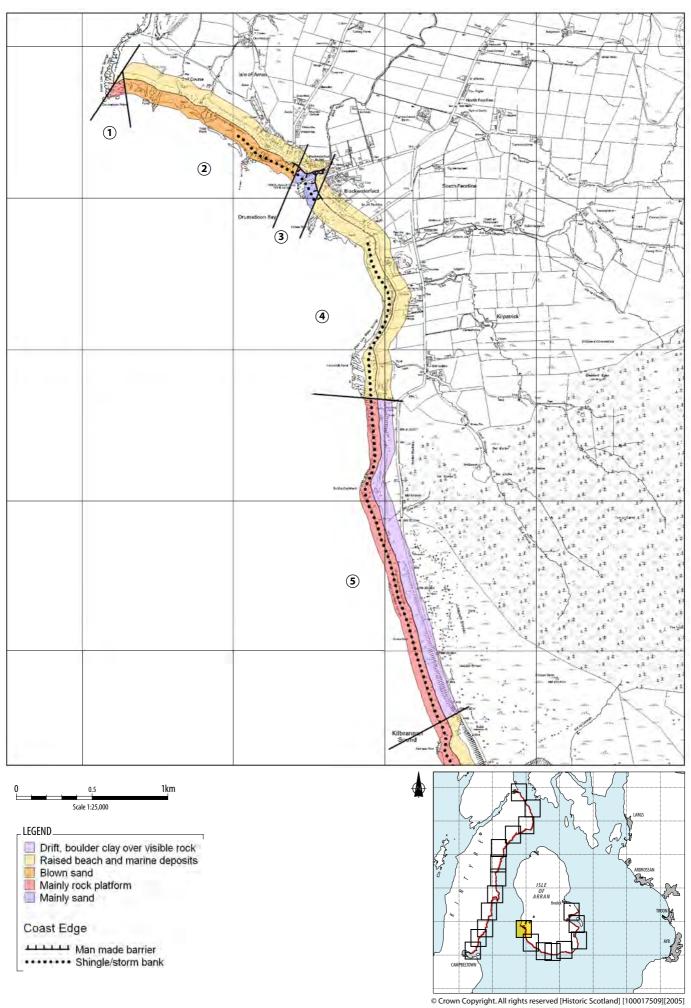
**Hinterland Geology and Coastal Geomorphology**: Both Permian sandstone and Triassic mudstones are represented in this coastal section. Tertiary basalt dykes also outcrop along the inter-tidal zone. An area of marine sand is present towards Drumadoon Point. The dune area is bounded by impressive sequences of raised marine platforms that occur as far as Kilpatrick Point. Freshwater alluvium is present at the outfall of the River Black Water. The beach morphology at Kilpatrick Point becomes very irregular with wide exposed abrasion platforms. South of this area a series of sea caves within the former shoreline are present and these features demonstrate how the area has been effected by isostatic uplift. Towards Aird nan Ron the shoreline is mainly boulders backed by a high raised marine shoreline.

**Erosion Class**: Coastal erosion was noted from Drumadoon Point to Blackwater Foot. The sandy beach along this length of coast has been protected by gabion sea defence works at the border between the beach and the hinterland. At Blackwater Foot sea defence works have been established along the foreshore and around the small harbour. Two boulder dump breakwaters have been built down to the MLWMST area in an attempt to protect the navigable river channel leading into the harbour.

**Built Heritage & Archaeology**: The majority of the archaeology within this area is dated to between the 18<sup>th</sup> and 20<sup>th</sup> centuries. There is one prehistoric site comprising a cist, discovered at Broombrae in 1924, though there is no other information available for them. There is one site dated to the medieval period, that of a bloomery mound. Most of the other sites are of buildings which are either still standing today or successive buildings have been built on the same location. These sites concentrate around Blackwaterfoot. Most sites are set back from the shoreline and therefore are not in imminent danger of erosion from tidal action.

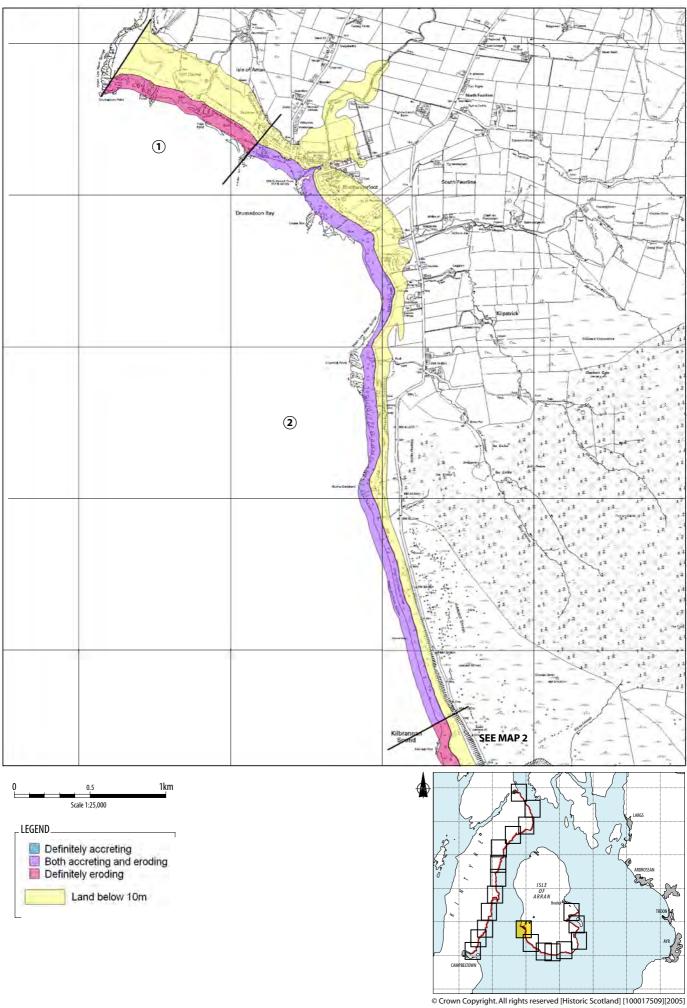
# ARRAN MAP 1: HINTERLAND GEOLOGY AND COASTAL GEOMORPHOLOGY

ID	Name of section	NGR	Length	Typical deposit type on the foreshore	Height of cliff	Hinterland geomorphology	Description
1		NR 882 287 to NR 883 287	0.1km	Mainly rock platform.	Low edge (<10m)		Rocky headland superimposed by marine derived sand.
2		NR 883 287 to NR 894 282	1.4km	Mainly sand.	Low edge (<10m)		Marine derived dunes sand forming links environment within the hinterland. Fossil raised terrace backs onto rocky point at Drumadoon Point where exposed rock platform is present. Minor Tertiary intrusion offshore.
3		NR 894 282 to NR 896 280	0.2km	Mainly shingle.	Low edge (<10m)		Freshwater alluvium present at outfall of Black Water - beach dominated by shingle and sand.
4		NR 896 280 to NR 899 267	1.2km	Marine deposits over rock.	Low edge (<10m)	-	Low cliff with sea caves present. Shoreline dominated by low marine terrace and backed by steep cliffs. Exposed rock platforms at LWM.
5		NR 899 267 to NR 904 246	2.9 km	Mainly rock.	Low edge (<10m)	superficial thin soil mantle.	Low former marine terrace backed by fragments of post-glacial higher marine shoreline. Bedrock dominated shoreline with boulder beds and exposed abrasion platforms. Hint at possible degraded saltmarsh presence at base of cliff. Pasture land to cliff edge.



# ARRAN MAP 1: EROSION

Π	Name of coastal section	NGR	Length of coastal section	Type of erosion present	Description
1	Drumadoon Point to Blackwaterfoot	NR 882 287 to NR 892 284	1.1km	Definitely eroding	Sandy beach along this length of coast with gambions evident on border
					between the beach and hinterland.
2	Blackwaterfoot to Aird nan Ron	NR 892 284 to NR 904 245	4.4km	Eroding and accreting	Pebble beaches with sea defences particularly along the road and around
					the small harbour at the mouth of the Black Water.



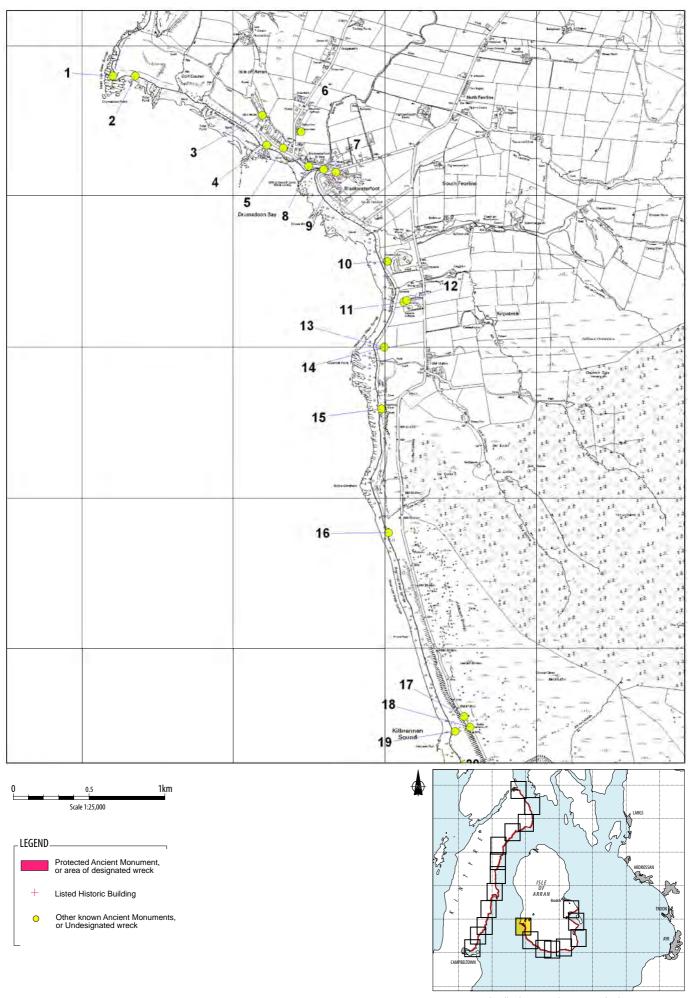
# ARRAN MAP 1: BUILT HERITAGE AND ARCHAEOLOGY

# Sites on the Coast Edge and Foreshore

ID	Name	NMRS	Source	WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
1	Annie: Drumadoon Point	NR82NE 8001	NMRS		NR 882 288		Shipwreck	Unknown	1877	Nil
2	Drumadoon Point		Field walking		NR 8835 2880		Anchor	Fair	18th-20th C	Monitor
7	Blackwaterfoot		OS 1st ed		NR 8960 2818		Footbridge	Unknown	Unknown	Nil
8	Mary: Blackwaterfoot	NR82NE 8003	NMRS		NR 895 282		Shipwreck	Unknown	1897	Nil
9	Blackwaterfoot	NR82NE 16	NMRS		NR 8968 2816		Village	Good	Unknown	Nil
15	Kilpatrick Point		OS 1st ed		NR 8998 2659		Preaching Cave	Good	Unknown	Nil
16	Brown Head		Field walking		NR 9003 2577		Stones	Good	Unknown	Survey

## Sites in the Hinterland

ID	Name	NMRS	Source	WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
3	Blackwaterfoot, Club House	NR82NE 18	NMRS		NR 8919 2854		Club House	Good	18th-20th C	Nil
4	Blackwaterfoot		OS 1st ed		NR 8922 2834		Building	Good	18th-20th C	Nil
5	Blackwaterfoot		OS 1st ed		NR 8933 2832		Building; Enclosure	Unknown	Unknown	Nil
6	Blackwaterfoot		OS 2nd ed		NR 8945 2843		Milestone	Good	18th-20th C	Nil
10	Blackwaterfoot		OS 1st ed		NR 9002 2757		Building	Good	18th-20th C	Nil
11	Blackwaterfoot		OS 1st ed		NR 9013 2730		Well	Unknown	Unknown	Nil
12	Broombrae	NR92NW 7	NMRS		NR 9015 2731		Cist	Unknown	Prehistoric	Nil
13	Kilpatrick Moor	NR92NW 14	NMRS		NR 90 27		Findspot	Unknown	Unknown	Nil
14	Kilpatrick	NR92NW 15	NMRS		NR 90 27		Bloomery	Unknown	11th-15th C	Nil
17	Leacach Bhreac		OS 2nd ed		NR 9053 2455		Milestone	Good	18th-20th C	Nil
18	Leacach Bhreac	NR92SW 1	NMRS		NR 9057 2448		Cairn	Good	Unknown	Nil
19	Leacach Bhreac		OS 1st ed		NR 9047 2445		Enclosures	Good	Unknown	Survey



# MAP 2: AIRD NAN RON TO PORT MOR

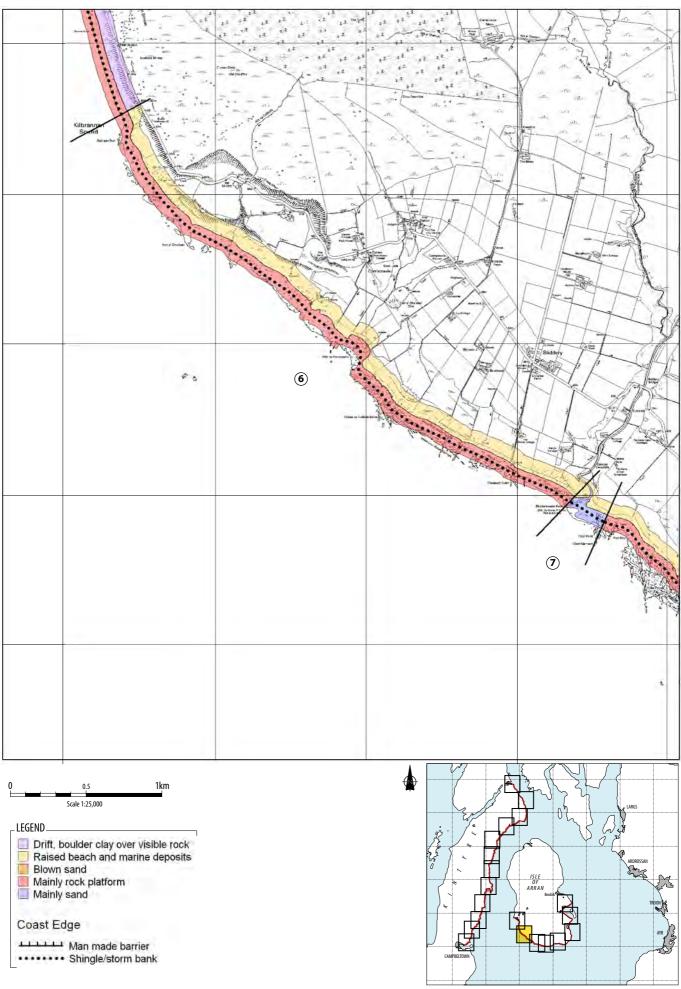
**Hinterland Geology and Coastal Geomorphology**: The basal geology is Triassic mudstones with extensive basalt dykes and sills that swarm along the south coast of Arran. High rock platforms and marine terraces are also a dominant feature along this section of coast. A wide intertidal abrasion platform is present throughout this section with boulder storm beaches present at the MHWMST zone.

**Erosion Class**: There are areas of erosion present between Aird nan Ron and Slidderywater Foot especially where water channels are present running down towards the sea. Around the mouth of Slidderywater Foot there is an area of definite accretion.

**Built Heritage & Archaeology**: Most sites within this section are associated with agriculture with several walls, a cairn and sheepfolds. There are no towns or collections of buildings within the 100m wayleave of this section, which may explain the lack of designated sites, although the majority of sites that were identified were dateable to between the 18<sup>th</sup> and 20<sup>th</sup> centuries.

## ARRAN MAP 2: HINTERLAND GEOLOGY AND COASTAL GEOMORPHOLOGY

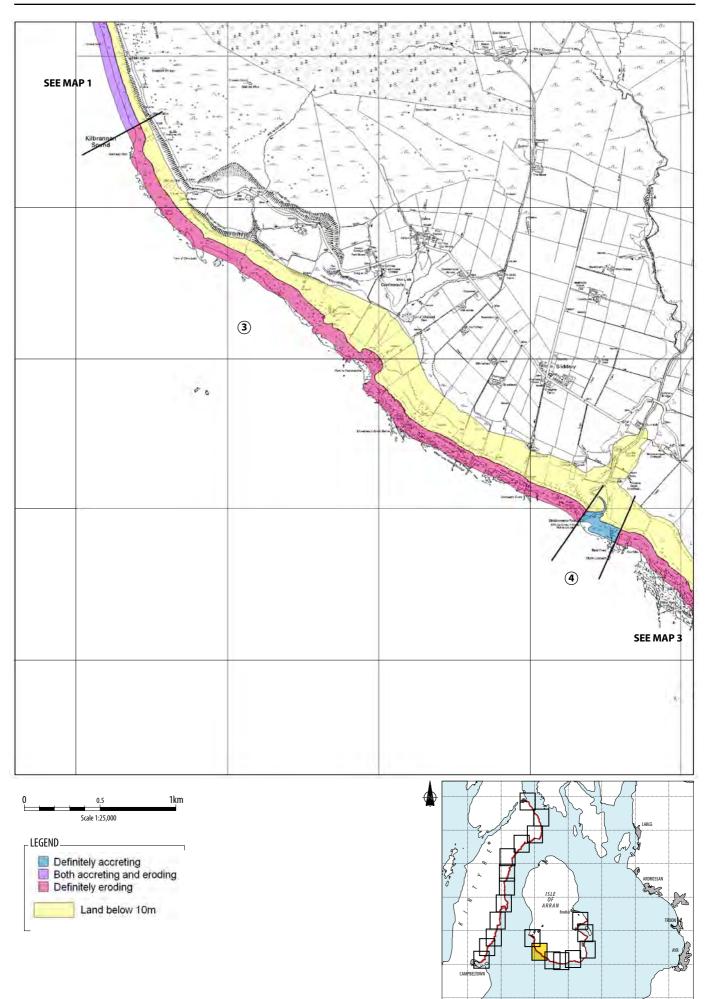
ID	Name of section	NGR	Length	Typical deposit type on the foreshore	Height of cliff	Hinterland geomorphology	Description
6	PORT NA FEANNAICHE	NR 904 246 to	4km	Marine deposits.	Low edge (<10m)	Marine deposits and rock	Marine terraces present overlooking low
		NR 934 220				platforms.	raised beach <10m. Tertiary basalt
							outcrops on exposed sandstone
							platforms. Boulder and shingle beds at
							shoreline.
7	MOUTH OF SLIDDERYWATER	NR 934 220 to	0.1km	Freshwater alluvium.	Low edge (<10m)	Marine deposits.	Wide lower raised marine terraces are
	FOOT	NR 936 219					present on the west side of the burn. The
							shoreline has exposed rock platforms
							with rock and boulders forming a margin
							with sand and gravel derived from
							eroding deposits higher up the burn.



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# ARRAN MAP 2: EROSION

ID	Name of coastal section	NGR	Length of coastal section	Type of erosion present	Description
3	Aird nan Ron to Slidderywater Foot	NR 904 245 to NR 933 220	4km	Definitely eroding	Accreting pebble beaches with recent water channels eroding through.
					Dumping of modern material close to Kelpie Cottage, at NR 9300 2222.
					Corriecravie - Accreting shingle and boulders forming noticeable berm at
					MHWM.
4	Slidderywater Foot	NR 933 220 to NR 936 218	0.4km	Definitely accreting	Alluvial sand and marine gravel focusing at the mouth of the Sidderywater
					Foot Burn.



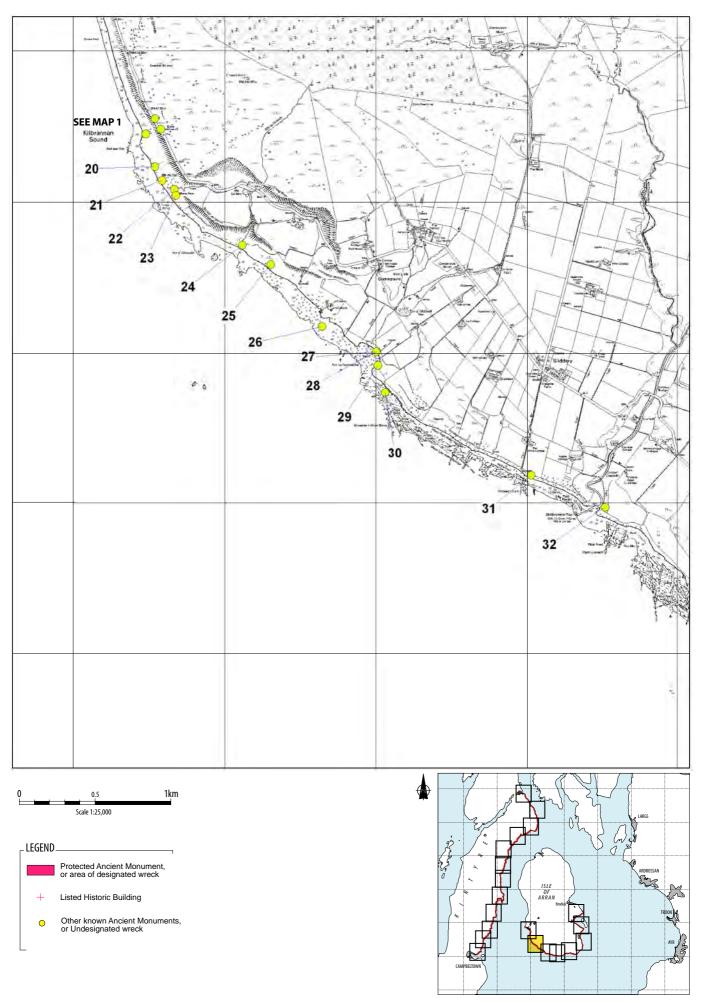
# ARRAN MAP 2: BUILT HERITAGE AND ARCHAEOLOGY

# Sites on the Coast Edge and Foreshore

ID	Name	NMRS	Source	WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
25	Rinn a' Chrubain		Field walking		NR 9130 2358		Barrier	Good	20th C	Nil
26	Port na Feannaiche		Field walking		NR 9164 2317		Breakwater/slipway	Fair	Unknown	Nil
29	Port na Feannaiche		Field walking		NR 9201 2291		Harbour	Good	Unknown	Survey
30	Port na Feannaiche		Field walking		NR 9206 2273		Wall	Eroding	18th-20th C	Nil
31	Cleiteadh Dubh		Field walking		NR 9303 2218		Wall	Eroding	Unknown	Monitor
32	Cnocan Ceusaidh		OS 1st ed		NR 9352 2197		Sheepfold	Poor	Unknown	Survey

## Sites in the Hinterland

ID	Name	NMRS	Source	WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
20	Leacach Bhreac		Field walking		NR 9053 2423		Wall	Fair	Unknown	Nil
21	Leacach Bhreac		Field walking		NR 9058 2414		Wall	Poor	Unknown	Nil
22	Leacach Bhreac		Field walking		NR 9066 2408		Cairn	Poor	Unknown	Survey
23	Leacach Bhreac		OS 1st ed		NR 9067 2404		Sheepfold	Fair	Unknown	Nil
24	Rinn a' Chrubain		Field walking		NR 9111 2371		Bank	Poor	Unknown	Nil
27	Corriecravie	NR92SW 13	NMRS		NR 92 23		Battle Site (possible);	Unknown	Unknown	Nil
							Burials (possible)			
28	Corriecravie	NR92SW 16	NMRS		NR 92 23		Findspot	Unknown	Unknown	Nil



## MAP 3: PORT MOR TO TORR NAN UAIN

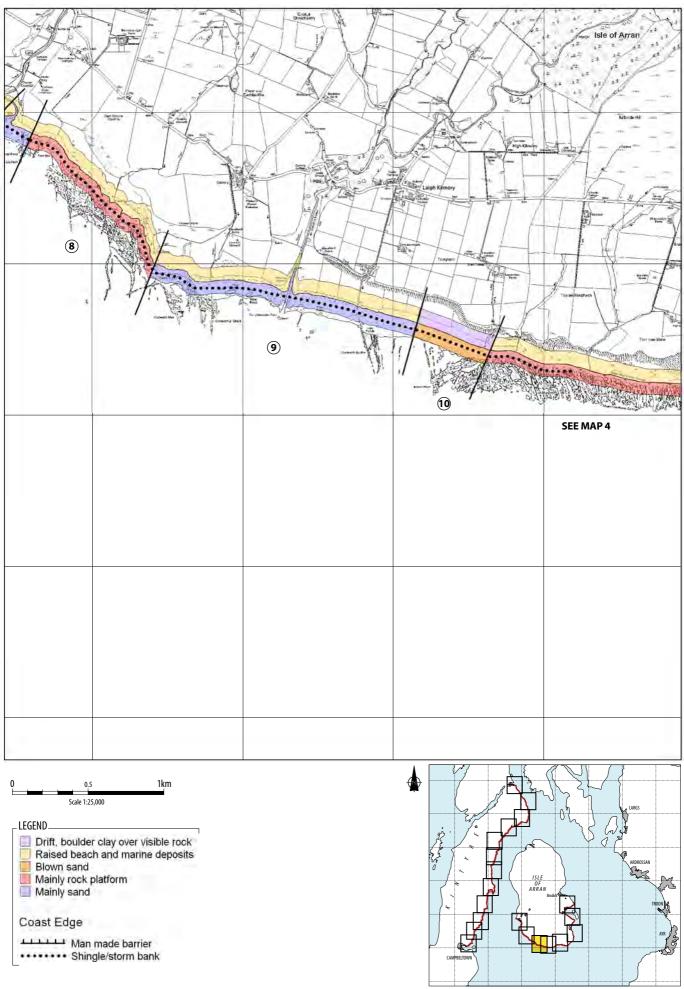
**Hinterland Geology and Coastal Geomorphology**: Triassic mudstones continue to be the main lithology with basalt dykes and sills extending well out into the sub-tidal zone. The hinterland is dominated by high rock platform that overlooks a very flat back shore area. The steepness of the cliff is lessened by large tallus slope formations and have been cut in parts by waterfalls. The dykes extend into the intertidal area and act as traps for boulders and sand. Large boulders are also present and are probably the result of glacial deposition.

**Erosion Class**: Along Cleats Shore, erosion is active between NR 9400 2160 and NR 9403 2156 with some accretion of sand in the vicinity of Torylinnwater Foot. The intertidal area is undergoing erosion and the multivalleted nature of the boulder storm beaches along this section of coastline demonstrate the power of the sea and exposure to SW gales. At Eilean Mairi (NR 9640 2050) active erosion is being exacerbated by cattle.

**Built Heritage & Archaeology**: The majority of sites identified on the coastal edge comprised of shipwrecks dating to between the 18<sup>th</sup> and 20<sup>th</sup> centuries. The exact locations of these wrecks, if they still exist, is unknown as is the nature of such sites. Other sites identified within this section mostly comprise elements of the farming landscape, such as walls and small buildings.

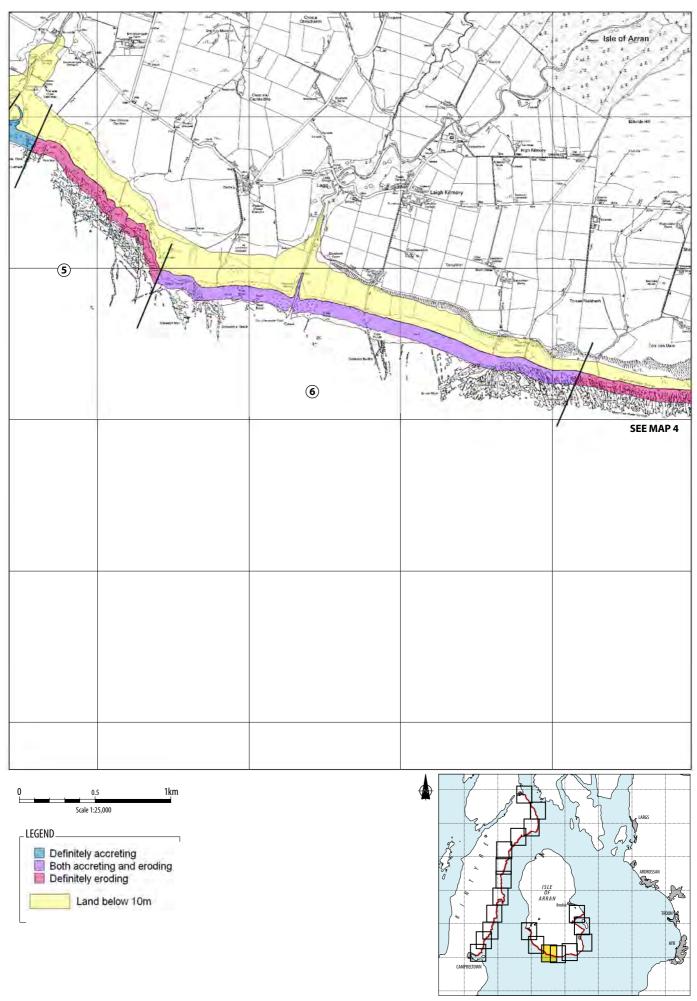
## ARRAN MAP 3: HINTERLAND GEOLOGY AND COASTAL GEOMORPHOLOGY

ID	Name of section	NGR	Length	Typical deposit type on the foreshore	Height of cliff	Hinterland geomorphology	Description
8	CLEATS SHORE	NR 936 219 to NR 944 210	1.2km	Marine deposits.		rock platform.	Marine deposits dominate the hinterland with sand and gravel overlying sandstone
							bed rock. Intertidal area dominated by exposed abrasion platforms with outcropping dykes.
9	TORRYLINNWATER FOOT	NR 944 210 to NR 961 206	1.8km	Freshwater alluvium.	Low edge (<10m)		Marine deposits dominate the hinterland with sand and gravel overlying sandstone bed rock. Intertidal area dominated by exposed abrasion platforms with outcropping dykes.
10	EILEAN MAIRI	NR 961 206 to NR 966 204	0.5km	Marine deposits.	Low edge (<10m)		Short stretch of windblown sand overlying marine sand and gravels. Area backed by low marine terrace. Shoreline sand and shingle.



## **ARRAN MAP 3: EROSION**

ID	Name of coastal section	NGR	Length of coastal section	Type of erosion present	Description
5	Slidderywater Foot to Cleats Shore	NR 936 218 to NR 944 210	1.2km	Definitely eroding	Wide intertidal area of abraison platforms and intervening dykes.
6	Cleats Shore to Eilean Mairi	NR 944 210 to NR 972 203	3km	Eroding and accreting	Active erosion from NR 9400 2160 to 9403 2156, erosion and accretion
					along sand beach from Torrylinnwater Foot. Large erosion face on E side
					of river continuing upstream to bridge.



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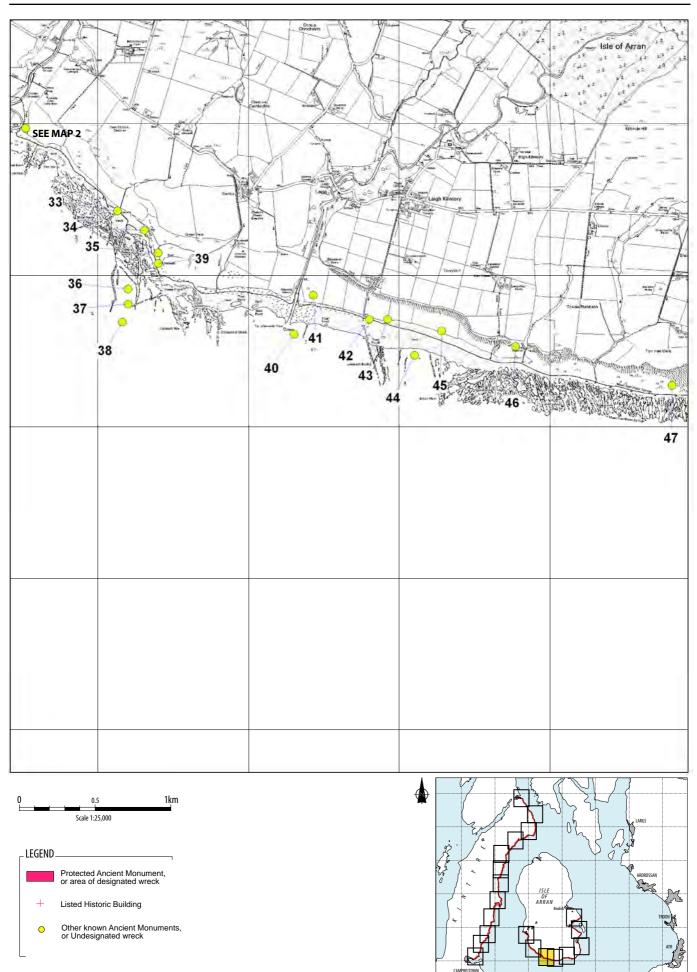
# ARRAN MAP 3: BUILT HERITAGE AND ARCHAEOLOGY

# Sites on the Coast Edge and Foreshore

ID	Name	NMRS	Source	WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
33	Cleiteadh		Field walking		NR 9413 2142		Wall	Fair	18th-20th C	Monitor
34	Clachaig		Field walking		NR 9431 2129		Slipway	Fair	18th-20th C	Nil
36	Unknown: Cleats Shore	NR92SW 8002	NMRS		NR 9420 2090		Shipwreck	Unknown	18th-20th C	Nil
37	Happy Return: Cleats Shore	NR92SW 8012	NMRS		NR 942 208		Shipwreck	Unknown	1896	Nil
38	Kyle Skye: Cleats Shore	NR92SW 8003	NMRS		NR 9416 2068		Shipwreck	Unknown	1940	Nil
40	Glen Arran: Torrylinnwater Foot	NR92SE 8011	NMRS		NR 953 206		Shipwreck	Unknown	18th-20th C	Nil
42	Torrylinnwater Foot		Field walking		NR 9580 2070		Building	Poor	Unknown	Survey
44	Glenann: Cleiteadh Buidhe	NR92SE 8008	NMRS		NR 9610 2046		Shipwreck	Unknown	1976	Nil

# Sites in the Hinterland

ID	Name	NMRS		WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
35	Cleiteadh		Field walking		NR 9440 2114		Enclosures	Fair	Unknown	Survey
39	Cleiteadh		OS 1st ed		NR 9440 2107		Building	Fair	18th-20th C	Nil
41	Torrylinnwater Foot		OS 1st ed		NR 9543 2086		Building; Enclosure	Poor	Unknown	Nil
43	Torrylinnwater Foot		OS 1st ed		NR 9592 2070		Building	Good	20th C	Nil
45	Cleiteadh Buidhe		OS 1st ed		NR 9628 2062		Sand pits	Unknown	Unknown	Nil
46	Cleiteadh Buidhe		OS 1st ed		NR 9677 2052		Cave	Good	Unknown	Nil
47	Torr nan Uain		Field walking		NR 9781 2026		Wall	Fair	Unknown	Nil



# MAP 4: TORR NAN UAIN TO PORT A' GHILLE GHLAIS

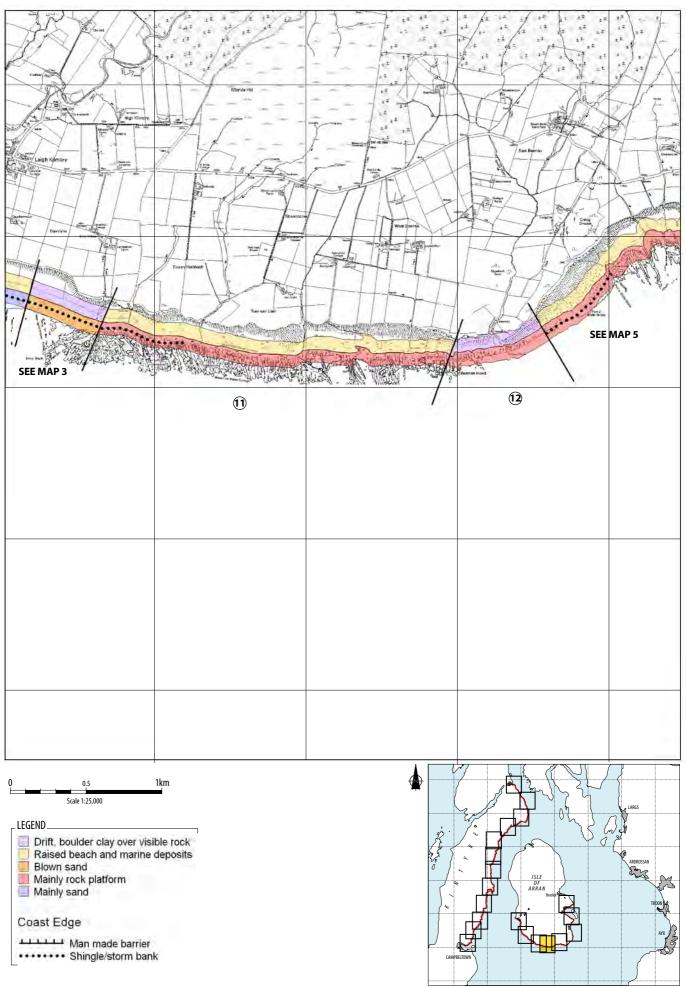
**Hinterland Geology and Coastal Geomorphology**: As in the previous section, Triassic mudstones continue to be the main lithology with basalt dykes and sills extending well out into the sub-tidal zone. The hinterland is dominated by high rock platforms that overlook a very flat back shore area. The steepness of the cliff is lessened by large tallus slope formations which have been cut in parts by waterfalls. The dykes extend into the intertidal area and act as traps for boulders and sand. Large boulders are also present and are probably the result of glacial deposition.

**Erosion Class**: At Auchenhew a 4.8km stretch of coastline is definitely eroding with animal grazing along the shore greatly effecting this particular area. Coastal saltmarsh grasslands are grazed and susceptible to erosion where cattle keep to regular routes.

**Built Heritage & Archaeology**: There are relatively few sites identified along this section. As before, there are several shipwrecks located off this section of coastline though the exact locations are unknown. A small harbour was noted which makes use of the natural surroundings. A small area of boulders had been cleared in order to construct a small inlet for small boats. Several of these features have been identified along the whole length of the survey area.

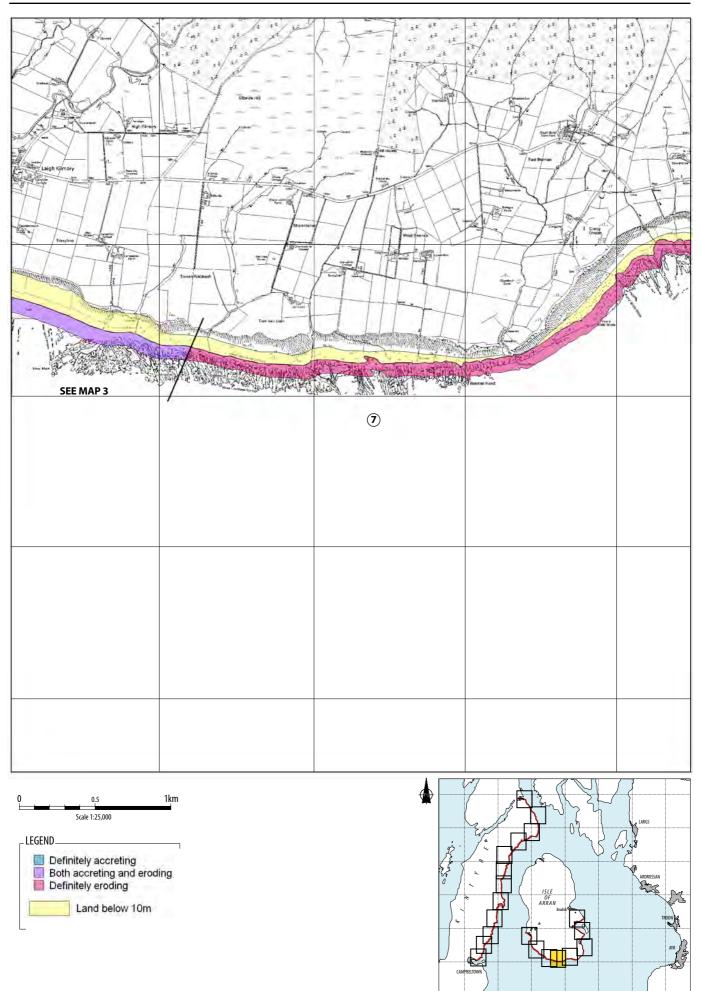
# ARRAN MAP 4: HINTERLAND GEOLOGY AND COASTAL GEOMORPHOLOGY

ID	Name of section	NGR	Length	Typical deposit type on the foreshore	Height of cliff	Hinterland geomorphology	Description
11	TORR NAN UAIN	NR 966 204 to	2.3km	Exposed rock with sand behind.	Cliff (>10m)	Marine deposits/Artificial	Low marine terrace below 10m OD
		NR 990 202				Ground.	backed by steep cliffs. Shoreline
							dominated by exposed abrasion
							platforms and skerries. Locally
							outcropping Tertiary dykes.
12	BENNAN HEAD	NR 990 202 to	0.6km	Exposed rock.	Cliff (>10m)		Exposed area of coastline dominated by
		NR 996 204					steep cliffs with sea cave/marine
							shoreline overlooking wave cut platform
							(lower marine terrace). The shoreline is
							dominated by abrasion platforms and
							Tertiary dykes with boulders and shingle
							at lower terrace margins.



# ARRAN MAP 4: EROSION

ID	Name of coastal section	NGR	Length of coastal section	Type of erosion present	Description
7	Eilean Mairi to Auchenhew	NR 972 203 to NS 017 211	4.8km	Definitely eroding	Bennan Head - Erosion platforms and scoured areas. Animal erosion on
					immediate hinterland.
					Erosion along sandy beach accelerated by animal movement, sea defences
					at Auchenhew.



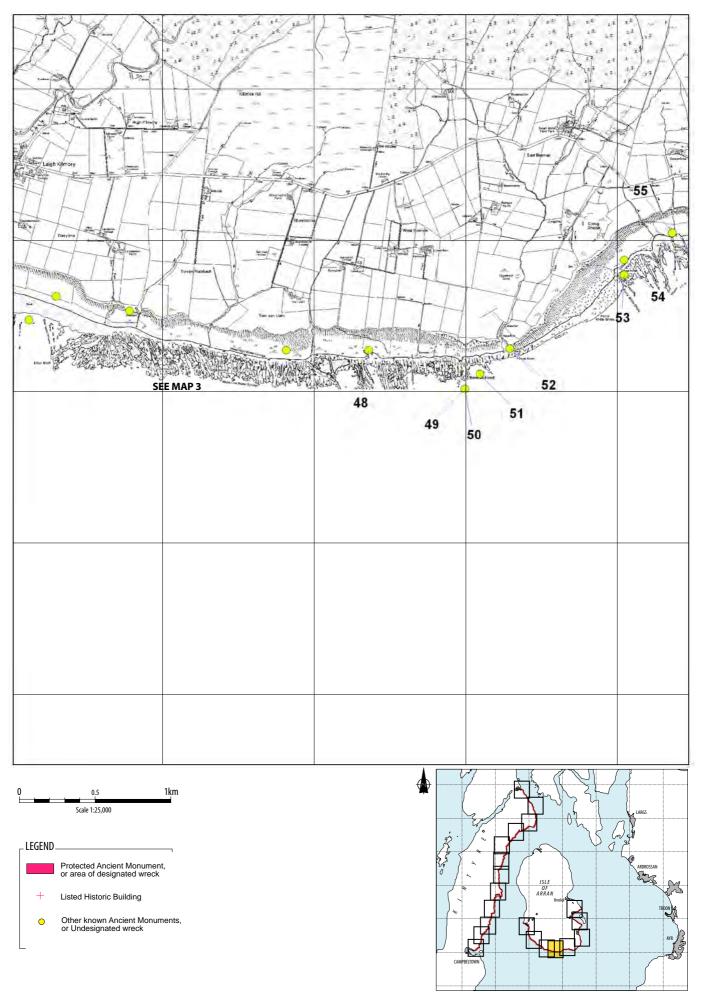
# ARRAN MAP 4: BUILT HERITAGE AND ARCHAEOLOGY

# Sites on the Coast Edge and Foreshore

ID	Name	NMRS	Source	WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
48	Bennan Head		Field walking		NR 9836 2026		Harbour	Fair	Unknown	Survey
49	Betsey: Bennan Head	NR92SE 8010	NMRS		NR 99 20		Shipwreck	Unknown	1892	Nil
50	Margaret McColl	NR92SE 8013	NMRS		NR 99 20		Shipwreck	Unknown	1876	Nil
51	Glenlivet: Bennan Head	NR92SE 8004	NMRS		NR 991 201		Shipwreck	Unknown	1891	Nil
52	Black Cave	NR92SE 9	NMRS	4251	NR 9930 2027		Cave; Flints	Fair	Unknown	Nil
53	Auchenhew		Field walking		NS 0006 2076		Harbour	Fair	Unknown	Survey
55	Auchenhew		Field walking		NS 0038 2104		Enclosure	Fair	Unknown	Survey

## Sites in the Hinterland

ID	Name	NMRS		WoSAS Pin	NGR	Status	Туре	Condition	Date	Recommendation
54	Auchenhew		Field walking		NS 0006 2086		Wall	Fair	18th-20th C	Nil



# MAP 5: PORT A' GHILLE GHLAIS TO KILDONAN

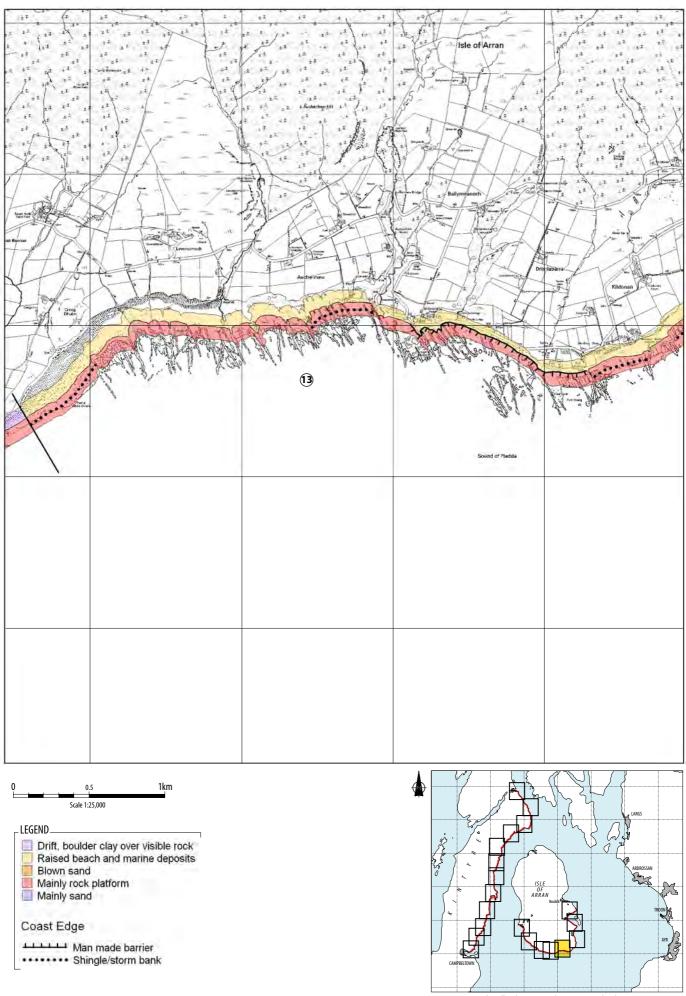
**Hinterland Geology and Coastal Geomorphology**: Triassic mudstones continue to be the main lithology with basalt dykes and sills extending well out into the sub-tidal zone. The hinterland is dominated by a raised marine shoreline. The foreshore is wide with dyke swarms visible well into the LWMST zone. Shingle beach and sea caves are evident.

**Erosion Class**: This area has been classed as eroding and accreting. The rock platforms allow the accretion of sand and shingle in natural pockets of the rock. The rock platforms act as natural sea defences to some extent.

**Built Heritage & Archaeology**: There are several designated sites within this relatively short stretch of coastline. They are mostly concentrated around Drimla and Kildonan. Kildonan Castle, a scheduled site dating to between the 11<sup>th</sup> to 15<sup>th</sup> centuries, takes a prominent position on top of the cliffs overlooking the sea. Two of the sites identified are currently being eroded and will require further work.

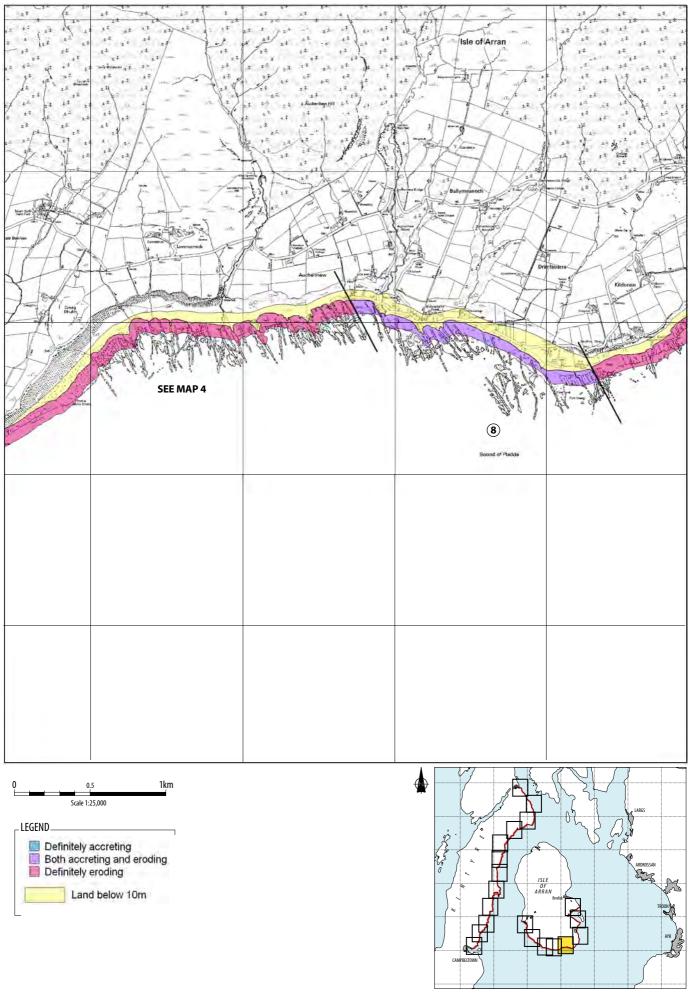
## ARRAN MAP 5: HINTERLAND GEOLOGY AND COASTAL GEOMORPHOLOGY

I	Name of section	NGR	Length	Typical deposit type on the foreshore	Height of cliff	Hinterland geomorphology	Description
1	3 STRUEY ROCKS TO PORTA LEACACH		-				Postglacial raised beach overlooks lower marine cut platform comprising shingle and gravel. Intertidal area dominated by abrasion platforms and locally outcropping Tertiary dykes that form deep gullies filled with boulder sized rock. Shingle beach and sea cave present towards Struey Rocks.



# ARRAN MAP 5: EROSION

ID	Name of coastal section	NGR	Length of coastal section	Type of erosion present	Description
8	Auchenhew to Port Dearg	NS 017 211 to NS 033 207	1.7km	0	Wide intertidal area with rocky outcrops, boulder and sand dominate with erosion platforms evident, boulders dominate with sand and shingle at the
					MHWM.



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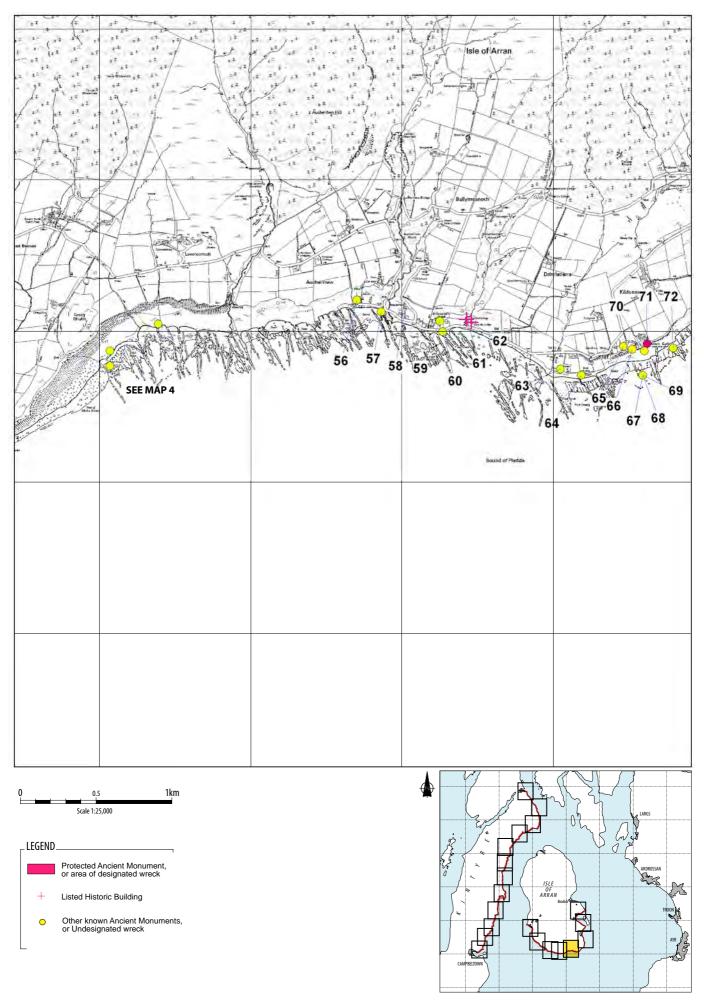
# ARRAN MAP 5: BUILT HERITAGE AND ARCHAEOLOGY

# Sites on the Coast Edge and Foreshore

ID	Name	NMRS	Source	WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
57	Auchenhew		OS 1st ed		NS 0186 2112		Building	Good	Unknown	Nil
60	Breadalbane		Field walking		NS 0227 2099		Platform	Eroding	Unknown	Monitor
64	Kildonan		OS 2nd ed		NS 0319 2070		Lifeboat station	Good	18th-20th C	Nil
66	Kildonan		Field walking		NS 0353 2087		Observation post	Eroding	20th C	SURVEY
67	Gloriana: Kildonan	NS02SW 8001	NMRS		NS 036 207		Shipwreck	Unknown	1882	Nil
68	Falco: Kildonan	NS02SW 8002	NMRS		NS 036 207		Shipwreck	Unknown	1887	Nil
69	Essex: Kildonan	NS02SW 8003	NMRS		NS 036 207		Shipwreck	Unknown	1893	Nil
72	Kildonan		OS 1st ed		NS 0380 2088		Boat House	Unknown	Unknown	Nil

# Sites in the Hinterland

ID	Name	NMRS	Source	WoSAS Pin	NGR	Status	Туре	Condition	Date	Recommendation
56	Auchenhew		OS 1st ed		NS 0170 2120		Building; Enclosure	Good	18th-20th C	Nil
58	Mansfield, Kildonan	NS02SW 46	NMRS		NS 0202 2114	Listed C(s) HBNum 13455	Residential	Good	19th C	Nil
59	Mansefield		OS 1st ed		NS 0225 2106		Building; Enclosures	Good	18th-20th C	Nil
61	Drimla Cottage	NS02SW 43	NMRS		NS 0243 2107	Listed C(s) HBNum 13453	Residential	Good	1896	Nil
62	Drimla Lodge	NS02SW 42	NMRS		NS 0246 2105	Listed B HBNum 13454	Residential/Lodge	Good	1896	Nil
63	Kildonan Hotel	NS02SW 41	NMRS		NS 0305 2074		Residential/Hotel	Good	18th-20th C	Nil
65	Kildonan	NS02SW 40	NMRS		NS 0347 2089		Village	Good	Unknown	Nil
70	Kildonan		Field walking		NS 0361 2086		Ponds	Good	20th C	Nil
71	Kildonan Castle	NS02SW 10	NMRS	4695	NS 0363 2091	Scheduled 5156	Castle	Good	11th-15th C	Nil



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# MAP 6: PORT LEACACH TO WHITING BAY

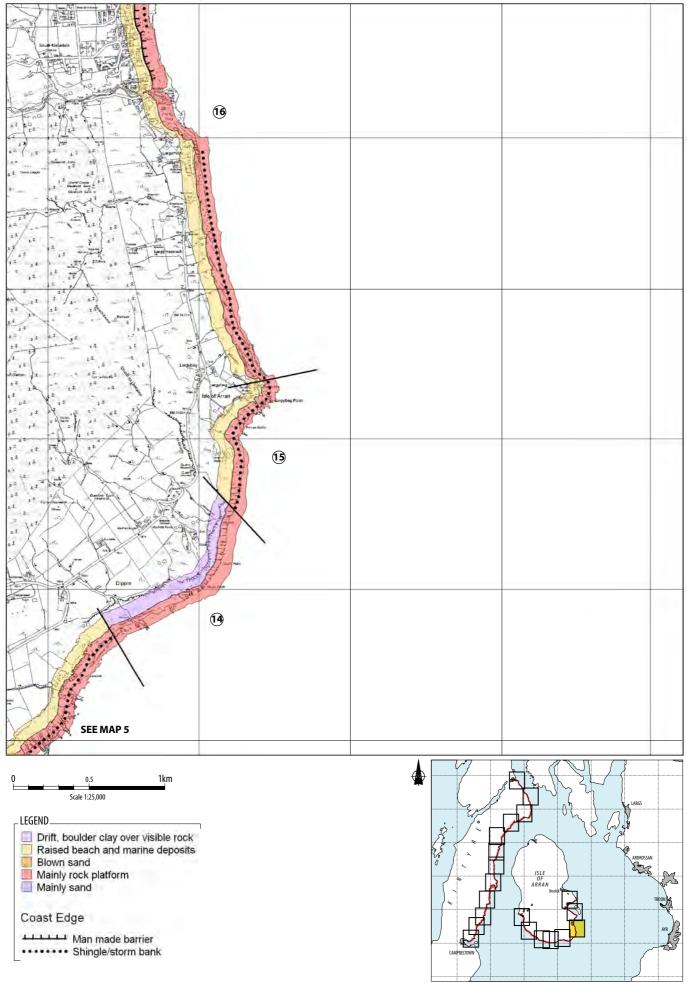
**Hinterland Geology and Coastal Geomorphology**: A large mass of olivine basalt dominates the Dippen Head area. The hinterland is dominated by a raised marine shoreline. The foreshore is wide with dyke swarms visible well into the LWMST zone. Sand, boulders and shingle are present for much of this sector. Towards Largybeg Point, there is a well pronounced promontory which is bounded by small stretches of sand. At Whiting Bay the coastal edge is defended by a promenade. The foreshore here is mainly sand and shingle with intertidal platforms and exposed Tertiary dyke outcrops on the beach.

**Erosion Class**: This is classed as definitely eroding especially around Largybeg and Trareoch where there are softer marine deposits. In the Largymeanoch area rock platforms mean this area is more prone to erosion and accretion within the natural pockets of the rock.

**Built Heritage & Archaeology**: Most of the sites within the coast edge area are shipwrecks with the exception of two walls and a building. Within the hinterland the majority of sites are associated with the town of Whiting Bay and are well protected by the urban sea defences.

# ARRAN MAP 6: HINTERLAND GEOLOGY AND COASTAL GEOMORPHOLOGY

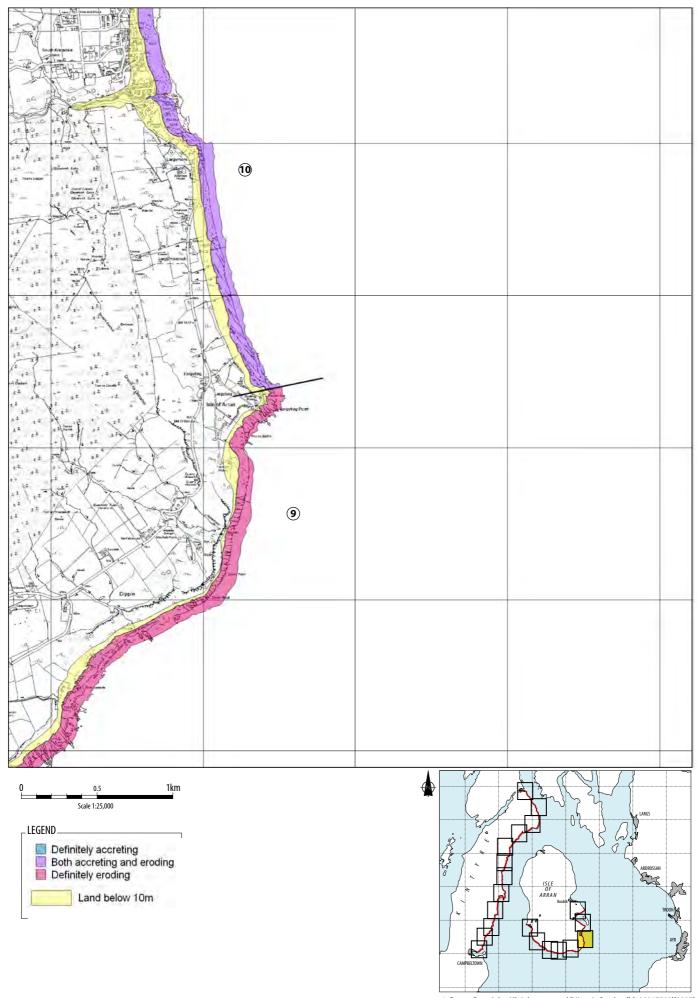
ID	Name of section	NGR	Length	Typical deposit type on the foreshore	Height of cliff	Hinterland geomorphology	Description
14	DIPPIN HEAD	NS 044 217 to	1.2km	Mainly exposed rock.	Cliff (>10m)	Mainly rock platform.	This area is dominated by Tertiary basalt
		NS 052 226					rock outcropping to near surface-
							overlain by superficial till. Marine
							influence absent. Coastal edge rocky
							with intertidal abrasion rock platforms,
							exposed Tertiary dykes.
15	LARGYBEG POINT	NS 052 226 to	0.7 km	Sands and gravel.	Low edge (<10m)	<b>1</b>	Exposed intertidal rock skerries at
		NS 054 234					Largybeg Point. Tertiary activity
							represented. Late and Post glacial
							activity is represented in the hinterland.
16	WHITING BAY	NS 054 234 to	4.8km	Mainly sand and gravel.	Low edge (<10m)	<b>1</b>	Low cliff comprising marine deposits
		NS 054 277					backed by higher Holocene marine
							terrace. Shoreline comprised exposed
							intertidal platforms and sandy beach.
							Locally exposed Tertiary dykes outcrop
							on the beach.



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# ARRAN MAP 6: EROSION

ID	Name of coastal section	NGR	Length of coastal section	Type of erosion present	Description
9	Port Dearg to Largybeg Point	NS 033 207 to NS 054 234	3.5km	Definitely eroding	Dippen Head - Boulders dominate the foreshore, forming banks at
					MHWM.
					Eroding sections of softer marine deposits at Largybeg and Trareoch.
10	Largybeg Point to Kingscross	NS 054 234 to NS 052 276	4.9km	Eroding and accreting	Largymeanoch - Shingle and boulders dominate the foreshore, scouring on
					abrasion platforms at MLWM.



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# ARRAN MAP 6: BUILT HERITAGE AND ARCHAEOLOGY

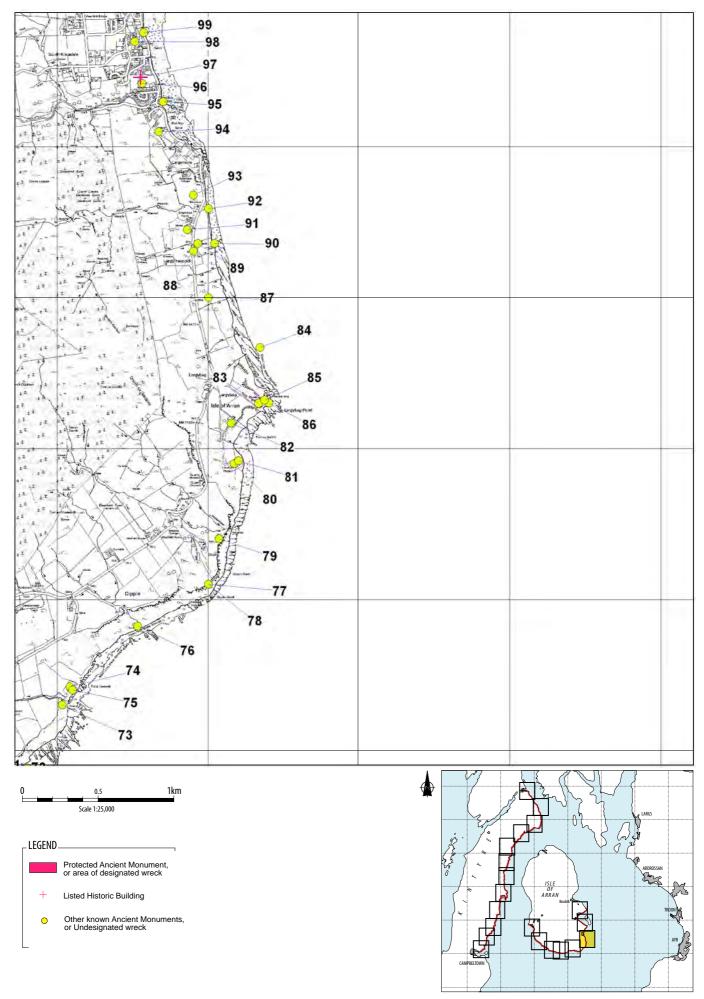
## Sites on the Coast Edge and Foreshore

ID	Name	NMRS	Source	WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
77	Princess Patricia: Dippin Head	NS02SE 8003	NMRS		NS 050 221		Shipwreck	Unknown	1911	Nil
78	Ellen Ann: Dippin Head	NS02SE 8004	NMRS		NS 050 221		Shipwreck	Unknown	18th-20th C	Nil
84	Largybeg		OS 1st ed		NS 0534 2367		Building	Eroding	18th-20th C	Monitor
86	Branch: Largybeg Point	NS02SE 8001	NMRS		NS 054 233		Shipwreck	Unknown	1878	Nil
87	Eliza Ann: Porta Leacach	NS02SE 8006	NMRS		NS 05 24		Shipwreck	Unknown	1883	Nil
90	Largymeanoch		Field walking		NS 0504 2436		Wall	Fair	18th-20th C	Nil
92	Largymeanoch		Field walking		NS 0500 2459		Wall	Good	18th-20th C	Nil

## Sites in the Hinterland

ID	Name	NMRS	Source		NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
73	Porta Leacach		OS 1st ed		NS 0403 2130		Building; Enclosures	Poor	Unknown	Nil
74	Kildonan	NS02SW 33	NMRS	41636	NS 0408 2142		Farmstead	Good	18th-20th C	Nil
75	Porta Leacach	NS02SW 24	NMRS	13951	NS 041 214		Mound; Flint Working Site	Unknown	Unknown	Nil
76	Dippin	NS02SW 34	NMRS	41635	NS 0453 2182		Enclosure	Fair	Unknown	Nil
79	Dippen	NS02SE 2	NMRS	4692	NS 0507 2240		Promontory Fort	Unknown	1st Mill BC-5th C AD	Nil
80	Trareoch		OS 1st ed		NS 0517 2290		Building; Enclosures	Good	18th-20th C	Nil
81	Trareoch		Field walking		NS 0520 2292		Banks	Poor	Unknown	Nil
82	Largybeg		OS 1st ed		NS 0515 2317		Building; Enclosure	Poor	18th-20th C	Nil
83	Largybeg	NS02SE 3	NMRS	4693	NS 0533 2330		Cairn (possible)	Fair	Unknown	Nil
85	Largybeg	NS02SE 1	NMRS	4691	NS 0537 2332		Stone Setting; Cists	Fair	Unknown	Nil
88	Largymeanoch		OS 1st ed		NS 0490 2431		Buildings; Enclosures	Good	18th-20th C	Nil
<b>89</b>	Largymeanoch		OS 1st ed		NS 0493 2436		Malt Kiln	Poor	Unknown	Survey
91	Largymeanoch		OS 1st ed		NS 0486 2445		Buildings; Enclosures	Good	18th-20th C	Nil
93	Largymeanoch		OS 2nd ed		NS 0490 2468		Quarry	Unknown	Unknown	Nil

94	Largymore		OS 1st ed		NS 0467 2510		Well	Unknown	Unknown	Nil
95	Glenashdale Burn	NS02NW 24	NMRS	12694	NS 047 253		Findspot	Unknown	Unknown	Nil
96	Whiting Bay	NS02NW 8	NMRS		NS 0456 2542		Findspot	Unknown	Unknown	Nil
97	Silverbank	NS02NW 50	NMRS		NS 0455 2546	Listed C(s)	Residential	Good	19th C	Nil
						HBNum 6791				
<b>98</b>	Watts Hotel	NS02NW 54	NMRS		NS 0451 2570		Residential	Good	18th-20th C	Nil
99	Whiting Bay		OS 2nd ed		NS 0457 2576		Milestone	Fair	18th-20th C	Nil



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## MAP 7: WHITING BAY TO GORTONALLISTER

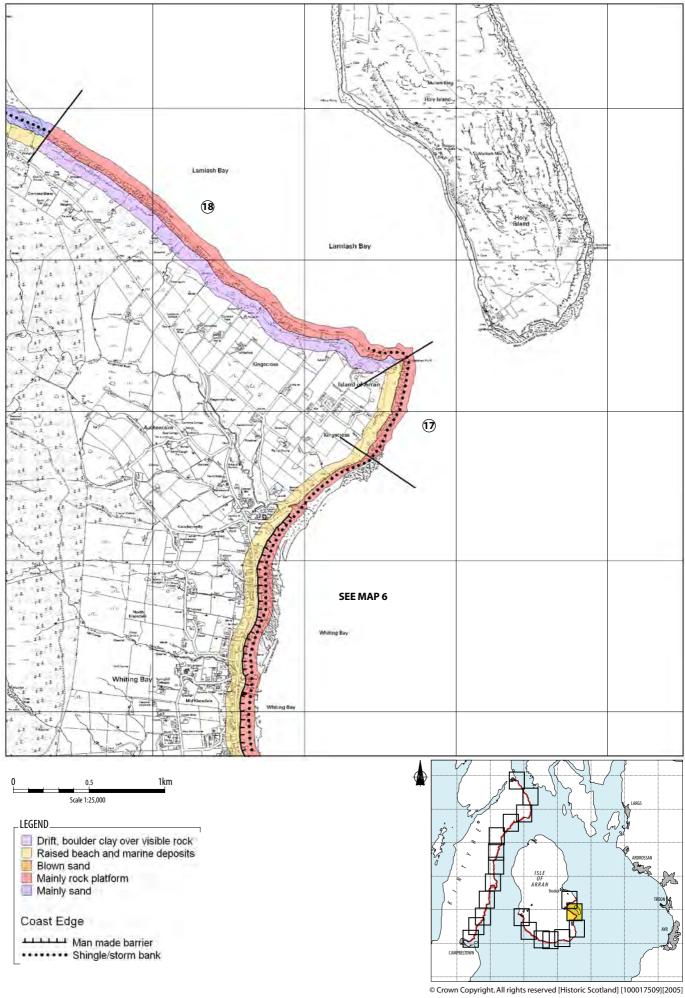
**Hinterland Geology and Coastal Geomorphology**: From Kingscross Point along to Lamlash Bay, a series of Tertiary Dykes, which are mainly dollerite and theolite, outcrop at the coastal edge. The basal lithology is dominated by Permian sandstone of the upper series (Lamlash Beds) consisting of breccia and dune-bedded sandstone. The shoreline comprises low cliffs which overlook intertidal abrasion platforms.

**Erosion Class**: Erosion is confined mainly along the Whiting Bay stretch with scouring of sand and shingle evident at the HWMST area. Some accretion of marine deposits is occurring but this is likely to be cyclical in nature and easily replenished according to the frequency of storm activity. Most of the shoreline is eroding and accreting along this section due to the abrasion platforms which are visible for the most part.

**Built Heritage & Archaeology**: Many shipwrecks have been allocated a location for Kingscross Point, suggesting that this was a particularly treacherous area to navigate. The majority of the sites along the shoreline are associated with seafaring and are relatively modern in date. There are many designated sites within this area also, but mostly confined to Whiting Bay where there are numerous listed buildings. There is a scheduled monument on Kingscross Point comprising a Dun, standing stone and Viking burial with associated features. This suggests that Kingscross Point has provided a focal point in the past as well as today, especially with the proximity to Holy Island.

## ARRAN MAP 7: HINTERLAND GEOLOGY AND COASTAL GEOMORPHOLOGY

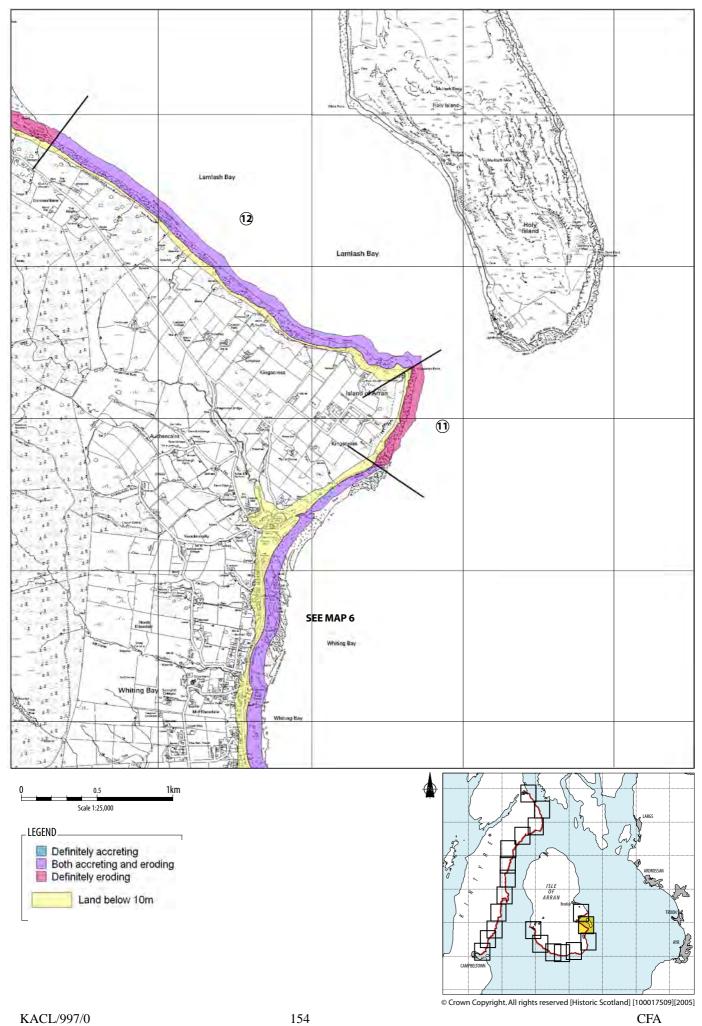
ID	Name of section	NGR	Length	Typical deposit type on the foreshore	Height of cliff	Hinterland geomorphology	Description
17	KINGSCROSS POINT	NS 054 277 to	0.7km	Mainly exposed Tertiary basalt rock.	Low edge (<10	Raised beach.	Mainly exposed Tertiary basalt rock on
		NS 057 283					an exposed headland. Raised marine
							beach formation in the hinterland with
							sand and gravel. The shoreline
							comprises low cliff overlooking exposed
							intertidal abrasion platforms.
18	GORTONALLISTER	NS 057 283 to	3km	Rock platform.	Low edge (<10m)	Rock exposed at surface.	Rocky coastal edge with superficial till
		NS 033 298					cover in hinterland. Coastal edge
							dominated by exposed rocky platforms
							with locally outcropping Tertiary dykes
							visible at LWM.



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## **ARRAN MAP 7: EROSION**

ID	Name of coastal section	NGR	Length of coastal section	Type of erosion present	Description
10	Largybeg Point to Kingscross	NS 054 234 to NS 052 276	4.9km		Largymeanoch - Shingle and boulders dominate the foreshore, scouring on abrasion platforms at MLWM. Whiting Bay - sandy beaches broken by rock outcrops. Substantial
					promenade sea defences along length of the town. Sand gives way to shingle to north of town were there is evidence of more accretion due to north-trending longshore drift.
11	Kingscross Point	NS 052 276 to NS 057 283	0.7km		Exposed area with rock and boulders on the foreshore, scouring at MHWM.
12	Kingscross Point to Lamlash Bay	NS 057 283 to NS 033 298	2.8km	Eroding and accreting	Exposed shoreline with boulder and rock abrasion platforms, some scouring at MHWM.



# ARRAN MAP 7: BUILT HERITAGE AND ARCHAEOLOGY

## Sites on the Coast Edge and Foreshore

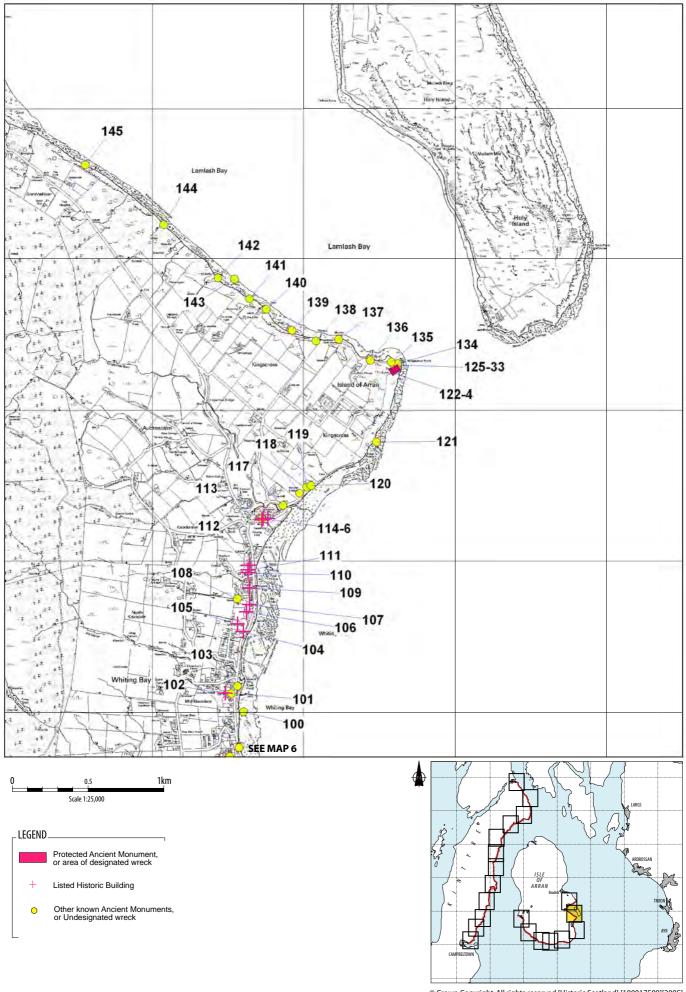
ID	Name	NMRS	Source V	VoSAS	NGR	Status	Туре	Condition	Date	Recommendation
			P	<b>'in</b>						
	Acorn: Kingscross Point	NS02NE 8006	NMRS		NS 056 283		Shipwreck	Unknown	1889	Nil
127	Kestrel: Kingscross Point	NS02NE 8010	NMRS		NS 056 283		Shipwreck	Unknown	1886	Nil
128	Lady Mary: Kingscross Point	NS02NE 8011	NMRS		NS 056 283		Shipwreck	Unknown	1880	Nil
129	Jean: Kingscross Point	NS02NE 8022	NMRS		NS 056 283		Shipwreck	Unknown	1887	Nil
130	Baltic: Kingscross Point	NS02NE 8030	NMRS		NS 056 283		Shipwreck	Unknown	1876	Nil
131	Lucy: Kingscross Point	NS02NW 8003	NMRS		NS 056 283		Shipwreck	Unknown	1891	Nil
132	William Hill: Kingscross Point	NS02NW 8005	NMRS		NS 056 283		Shipwreck	Unknown	1878	Nil
133	Dundyvan: Kingscross Point	NS02NW 8006	NMRS		NS 056 283		Shipwreck	Unknown	1873	Nil
134	William Hill: Kingscross Point	NS02NW 8005	NMRS		NS 056 283		Shipwreck	Unknown	1878	Nil
136	Kingscross Point		Field walking		NS 0544 2833		Boathouse	Fair	18th-20th C	Nil
137	Point House		Field walking		NS 0523 2847		Boathouse	Fair	18th-20th C	Nil
138	Kingscross		Field walking		NS 0508 2846		Jetty/slipway	Fair	18th-20th C	Nil
139	Kingscross		Field walking		NS 0492 2853		Slipway	Eroding	Unknown	Monitor
	Kingscross		OS 2nd ed		NS 0475 2867		Jetty	Fair	18th-20th C	Nil
141	Kingscross		Field walking		NS 0464 2874		Trackway	Eroding	Unknown	Monitor
	Kingscross		Field walking		NS 0443 2888		Slipway	Fair	Unknown	Nil
143	Unknown: Lamlash Bay	NS02NW 8001	NMRS		NS 0454 2887		Shipwreck	Unknown	18th-20th C	Nil
144	Gortonallister		Field walking		NS 0407 2923		Breakwater	Poor	Unknown	Nil
145	Gortonallister		Field walking		NS 0355 2963		Breakwater/ Quay	Fair	Unknown	Nil

# Sites in the Hinterland

ID	Name	NMRS		WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
101	Post Office, Whiting Bay	NS02NW 52	NMRS		NS 0452 2612		Commercial	Good	18th-20th C	Nil
102	Village Hall, Whiting Bay	NS02NW 51	NMRS		NS 0448 2612	Listed C(s)	Recreation	Good	20th C	Nil
						HBNum 6789				
103	Whiting Bay	NS02NW 41	NMRS		NS 0456 2617		Village	Good	Unknown	Nil

104	Arnhall Lodge	NS02NW 42.01	NMRS		NS 0460 2653	Listed C(s) HBNum 6772	Residential	Good	19th C	Nil
105	Arnhall	NS02NW 42.00	NMRS		NS 0456 2658	Listed B HBNum 12887	Residential	Good	19th C	Nil
106	St Columbas	NS02NW 49	NMRS		NS 0462 2666	Listed B HBNum 6790	Residential	Good	19th C	Nil
107	Former Parish Church, Whiting Bay	NS02NW 48	NMRS		NS 0464 2671	Listed C(s) HBNum 6787	Church	Good	1873	Nil
108	Magdala	NS02NW 58	NMRS		NS 0456 2675		Residential	Unknown	18th-20th C	Nil
109	Grange House Hotel	NS02NW 46	NMRS		NS 0464 2682	Listed B HBNum 6785	Residential	Good	1896	Nil
110	Cameronia Hotel	NS02NW 45	NMRS		NS 0463 2692	Listed C(s) HBNum 6784	Residential	Good	1900s	Nil
111	Burlington House	NS02NW 44	NMRS		NS 0463 2694	Listed C(s) HBNum 6774	Residential	Good	1900s	Nil
112	Invermay Hotel	NS02NW 47	NMRS		NS 0464 2697	Listed C(s) HBNum 6786	Residential	Good	1903	Nil
113	Knockankelly	NS02NW 6	NMRS		NS 0472 2728		Cist; Urn	Unknown	Unknown	Nil
114	War Memorial, Whiting Bay Church	NS02NW 57	NMRS		NS 0472 2727	Listed C(s) HBNum 6788	War Memorial	Good	1920s	Nil
115	Whiting Bay Church	NS02NW 56	NMRS		NS 0473 2728	Listed B HBNum 6792	Church	Good	20th C	Nil
116	Whiting Bay Church Manse	NS02NW 55	NMRS		NS 0476 2728	Listed C(s) HBNum 6793	Residential/Manse	Good	20th C	Nil
	Knockankelly		OS 1st ed		NS 0486 2737		Ford	Unknown	Unknown	Nil
118	Knockankelly		OS 1st ed		NS 0497 2745		Building; Enclosure	Unknown	Unknown	Nil
119	Knockankelly		OS 1st ed		NS 0502 2749		Well	Unknown	Unknown	Nil
120	Knockankelly		OS 1st ed		NS 0505 2750		Building; Enclosure	Unknown	Unknown	Nil
122	Kingscross	NS02NE 1	NMRS	4658	NS 0560 2827	Scheduled 3379	Dun	Fair	1st Mill BC-5th C AD	Nil
123	Kingscross Point	NS02NE 2	NMRS	4660	NS 0561 2828	Scheduled 3379 (with above)	Standing Stone	Fair	4th-3rd Mill BC	Nil
124	Kingscross Point	NS02NE 3	NMRS	4661	NS 0559 2825	Scheduled 3379 (with above)	Cairn; Viking Burial; Coin	Fair	800s	Nil

125 Kingscross Point	Field walking	NS 0562 2830	(	Observation post	Poor	20th C	Nil
134 Kingscross Point	Field walking	NS 0562 2831	1	Defences	Good	20th C	Survey
135 Kingscross Point	Field walking	NS 0558 2832	,	Wall	Fair	Unknown	Nil



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## MAP 8: LAMLASH BAY TO CLAUCHLANDS POINT

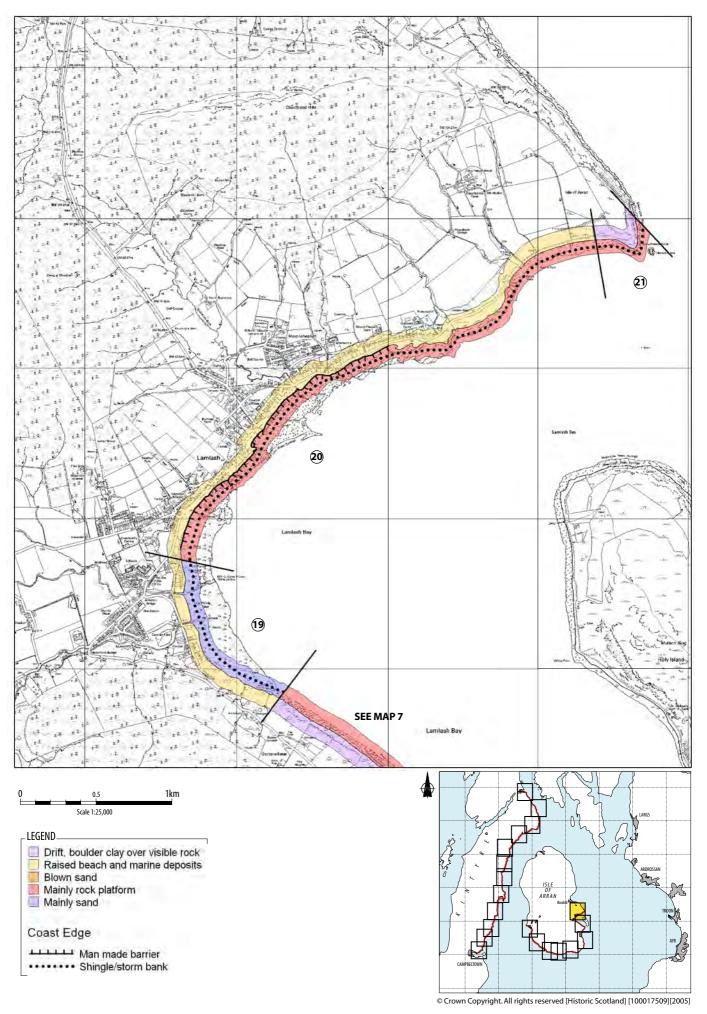
**Hinterland Geology and Coastal Geomorphology**: The shoreline is dominated by sand within Lamlash Bay but becomes increasingly rockier towards Clauchlands Point. At Kerr's Point, the boulder beach has larger boulders in excess of 1m high and these were, in all probability, deposited by the last major ice sheet that covered this region (circa 18000 BP).

**Erosion Class**: Coastal erosion within this unit is mainly confined to the area towards Clauchlands Point. The track leading to the point is very close to a track, the edge of which is being cut by wave action. The coastline to the south of this area is dominated by sand and shingle which appears to be well nourished by long-shore drift from a northerly direction (Firth and Collins 2002, Fig 6.2).

**Built Heritage & Archaeology**: By far the main focus for this section is the large group of Listed Buildings within Lamlash. These are all located within the hinterland and are therefore well protected from any erosion that could be caused by the sea. At Clauchlands Point there are several Observation Posts which date to the 20<sup>th</sup> century which indicate that this area is potentially a good strategic location and not necessarily just in recent times.

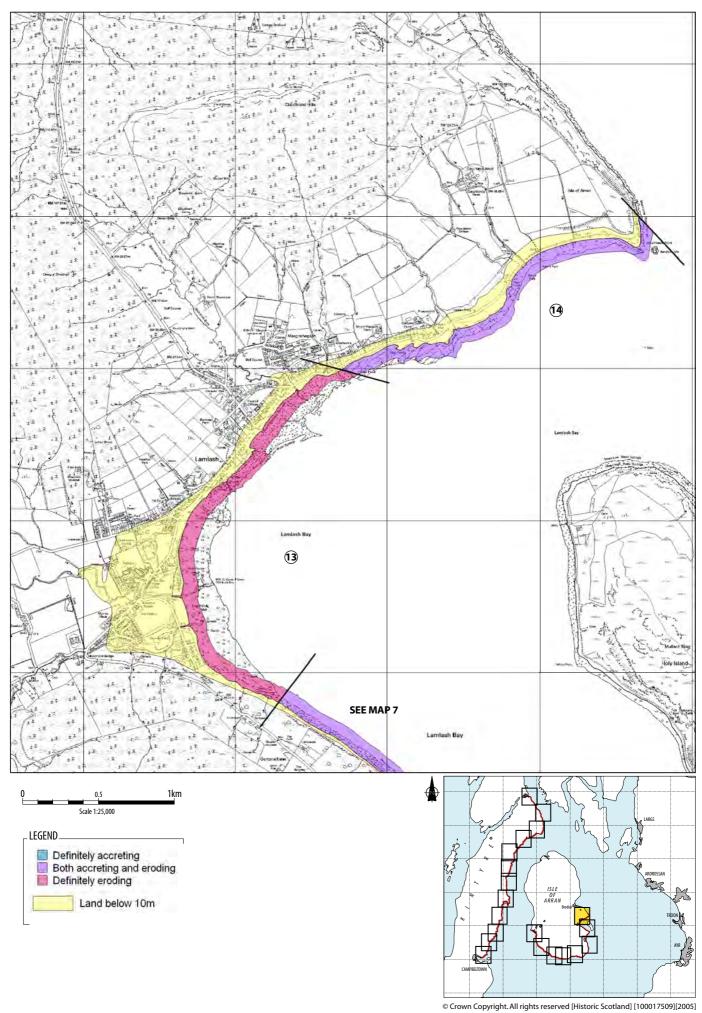
# ARRAN MAP 8: HINTERLAND GEOLOGY AND COASTAL GEOMORPHOLOGY

ID	Name of section	NGR	Length	Typical deposit type on the foreshore	Height of cliff	Hinterland geomorphology	Description
19	LAMLASH BAY	NS 033 298 to	0.8km	Sand, gravel and freshwater alluvium.	Low edge (<5m)	Mainly alluvium.	Raised beach marine terrace of sand and
		NS 026 307					gravel fronted by a wide sandy bay.
							Locally exposed freshwater alluvium
							alongside Benlister Burn. Sheltered low
							coastal edge with sand and shingle beach.
							Marine deposits in the hinterland.
20	MARGNAHEGLISH	NS 026 307 to	3.8km	Mainly sand and shingle.	Low edge (<10m)	Marine deposits.	Post glacial marine sand and gravel
		NS 054 328					overlying sandstone. Locally exposed
							rock platform and sand exposed in the
							intertidal area.
21	CLAUCHLANDS POINT	NS 054 328 to	0.2 km	Exposed rock platform.	Low edge (<5m)	Bedrock at or near surface.	Exposed headland with outcropping
		NS 056 330					Devonian dollerite and intertidal rock
							platform. Locally exposed Tertiary
							dykes exposed at LWST. Large drop-
							stone boulders present on the beach.



# ARRAN MAP 8: EROSION

ID	Name of coastal section	NGR	Length of coastal section	Type of erosion present	Description
13	Lamlash Bay	NS 033 298 to NS 037 320	2.9km		Erosion evident around the mouth of the Benlister Burn, though sea defences protect much of this coastal cell. The hinterland is low at the
					head of the bay.
14	Lamlash Bay to Clauchlands Point	NS 037 320 to NS 057 330	2.2km		Boulders dominate the foreshore leading to wave hammer action at the MHWM where sand and shingle forms a low berm along the length of coast which is mostly protected by sea defences. A lot of construction work was being carried out along this stretch at the time of this survey, apparently for a new water treatment system.



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# ARRAN MAP 8: BUILT HERITAGE AND ARCHAEOLOGY

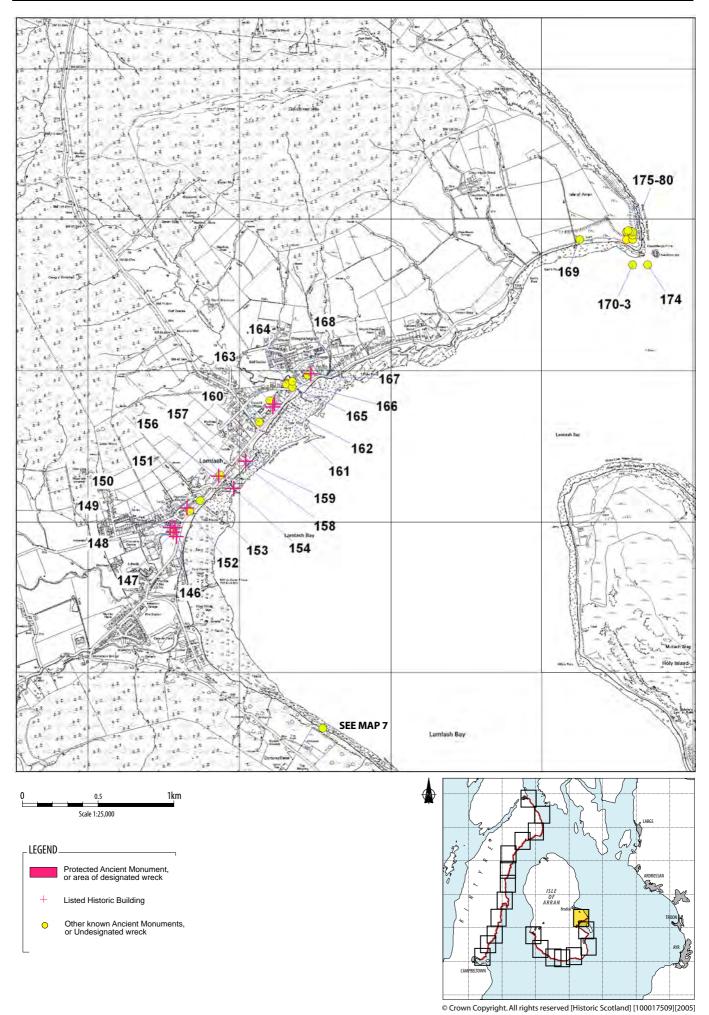
## Sites on the Coast Edge and Foreshore

ID	Name	NMRS	Source	WoSAS	NGR	Status	Туре	Condition	Date	Recommendation
				Pin						
154	Lamlash Pier	NS03SW 61	NMRS	42921	NS 0296 3122		Pier	Good	19th C	Nil
						HBNum				
						13449				
170	Harriet Julia: Clauchlands Point	NS03SE 8011	NMRS		NS 056 327		Shipwreck	Unknown	1891	Nil
171	Choice: Clauchlands Point	NS03SE 8023	NMRS		NS 056 327		Shipwreck	Unknown	1889	Nil
172	Elizabeth: Hamilton Isle	NS03SE 8025	NMRS		NS 056 327		Shipwreck	Unknown	18th-20th C	Nil
173	Oimara: Clauchlands Point	NS03SE 8026	NMRS		NS 056 327		Shipwreck	Unknown	18th-20th C	Nil
174	Elizabeth McClure: Hamilton Isle	NS03SE 8008	NMRS		NS 057 327		Shipwreck	Unknown	1891	Nil

## Sites in the Hinterland

ID	Name	NMRS	Source	WoSAS Pin	NGR	Status	Туре	Condition	Date	Recommendation
146	Whitehouse Lodge	NS03SW 74	NMRS		NS 0258 3090	Listed C(s) HBNum 13451	Residential	Good	19th C	Nil
147	Lamlash	NS03SW 41	NMRS		NS 0256 3093		Cross	Fair	Unknown	Nil
148	Lamlash and Kilbride Parish Church	NS03SW 50	NMRS		NS 0256 3093	Listed A HBNum 13441	Church	Good	1886	Nil
149	Lamlash and Kilbride Parish Church Hall	NS03SW 75	NMRS		NS 0254 3096	Listed B HBNum 13447	Hall	Good	1880s	Nil
150	Bellhaven	NS03SW 77	NMRS		NS 0257 3096	Listed C(s) HBNum 12885	Residential	Good	1808	Nil
151	1-27 Hamilton Terrace	NS03SW 51 NS03SW 103- 128	NMRS		NS 0265 3109	Listed A HBNum 13234	Residential	Good	19th C	Nil
152	Clearances Monument	NS03SW 62	NMRS		NS 0267 3107		Monument	Good	18th-20th C	Nil
153	Lilybank	NS03SW 70	NMRS		NS 0274 3114		Commercial	Good	18th-20th C	Nil

155	Craft Shop	NS03SW 80	NMRS		NS 0289 3129 (0283 3122?)	Listed B HBNum 13310	Commercial	Good	19th C	Nil
156	The Lookout	NS03SW 63	NMRS		NS 0286 3130	Listed C(s) HBNum 49200	Residential; Commercial	Good	19th C	Nil
157	Lamlash	NS03SW 57	NMRS	42924	NS 0287 3131		Village	Good	Unknown	Nil
158	Sea Gate	NS03SW 73	NMRS		NS 0304 3137	Listed C(s) HBNum 13450	Residential	Good	1902	Nil
159	Former Pier House and Clock Tower	NS03SW 76	NMRS		NS 0304 3140	Listed B HBNum 13439	Residential	Good	1885	Nil
160	Marine House Hotel	NS03SW 60	NMRS		NS 0313 3166		Residential; Commercial	Good	18th-20th C	Nil
161	Arts Centre	NS03SW 78	NMRS		NS 0322 3176	Listed B HBNum 12994	Recreation/Church	Fair	1885	Nil
162	Manse	NS03SW 71	NMRS		NS 0323 3178	Listed B HBNum 13438	Residential	Good	1898	Nil
163	Lamlash	NS03SW 43	NMRS		NS 032 318		Findspot	Unknown	Unknown	Nil
164	Lamlash		OS 1st ed		NS 0331 3191		Well	Unknown	Unknown	Nil
165	Lamlash	NS03SW 6	NMRS		NS 0335 3189		Viking Burial	Unknown	8th C	Nil
166	Lamlash		OS 1st ed		NS 0335 3193		Footbridge	Unknown	Unknown	Nil
167	St Brides	NS03SW 66	NMRS		NS 0345 3197		Residential	Good	18th-20th C	Nil
168	Seafield	NS03SW 52	NMRS		NS 0347 3198	Listed B HBNum 12886	Residential	Good	18th-20th C	Nil
169	Clauchlands Point		Field walking		NS 0525 3287		Enclosure	Fair	18th-20th C	Survey
175	Clauchlands Point		Field walking		NS 0556 3287		Observation Post	Good	20th C	Survey
176	Clauchlands Point		Field walking		NS 0560 3287		Plinth	Fair	18th-20th C	Survey
177	Clauchlands Point	NS03SE 4	NMRS	4745	NS 056 329		Fort (possible)	Unknown	Unknown	Nil
178			Field walking		NS 0560 3292		<b>Observation Post</b>	Good	20th C	Survey
179	Clauchlands Point		Field walking		NS 0556 3292		Quarry	Good	20th C	Nil
180	Clauchlands Point	NS03SE 10	NMRS	50760	NS 0557 3293		<b>Observation Post</b>	Unknown	20th C	Nil



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#### 7. SURVEY RESULTS FOR KINTYRE

- 7.1 Based on the results of the field survey this section examines the findings relating to the erosion record of the east coast of Kintyre.
- 7.2 The total length of the coastline is based on the digital measurement of each coastal unit mapped on each of the coloured 1:25000 map sheets (Kintyre Maps 1-12 above). The combined length of all units is 65.3km. This figure was used to establish the percentage frequency of each erosion class.

*Erosion Classifications (Fig 2 & 3)* 

7.3 Erosion classes used are as defined in the Historic Scotland procedure document. Analysis of the results are shown in a series of histograms and summarised in Table 2 below.

Erosion Class	Number of units	Total length (km)	Total length (%)
Definitely Eroding	7	10.1	15.5
Eroding and Accreting	9	40.0	61.3
Accreting or Stable	3	1.7	2.6
Unknown	2	13.5	20.7

Table 2: Summary statistics of the erosion class lengths of Kintyre

7.4 The *Eroding and Accreting* classification attained a combined length of 40km representing 61.3% of the survey area. The *Definitely Eroding* class attained a combined length of 10.1km, representing 15.5% of the survey area. The *Accreting or Stable* classification has the shortest combined distance at 1.7km, representing 2.6% of the survey area. The *Unknown* classification has a combined distance of 13.5km, representing 20.7% of the survey area.

*Period categories of archaeological sites and monuments (Figs 4 & 5)* 

7.5 The results for the period categories for all the 191 sites and monuments examined show that the majority of sites identified date to between the 18<sup>th</sup> and 20<sup>th</sup> centuries with 90 sites assigned to this period (47%). Typical sites which were assigned to this category include buildings, both listed and undesignated, and shipwrecks. Seventy-one sites (37%) were assigned to the unknown category which covers a wide range of sites over the whole of the survey area. A findspot of several flint implements is the only site dated to between the 9<sup>th</sup> and 4<sup>th</sup> millennium BC. Four sites representing 2% of the total number of sites are dated to the 4<sup>th</sup>-3<sup>rd</sup> millennium BC, including cairns and cists with a significant concentration at Trench Point where several such sites were uncovered during building works. There are nine sites which are dated to the period from the 1st millennium BC to 5th C AD which are all scheduled and include several duns, forts and cairns. Seven sites, representing approximately 4% of the total number of sites, were identified dating to the medieval period (11<sup>th</sup>-15<sup>th</sup> centuries), which include the burgh at Tarbert, Tarbert Castle, Airds Castle, the tower house at Island Muller, Skipness Chapel and two bloomerv mounds.

7.6 There are no sites dating to between 5<sup>th</sup> and 11<sup>th</sup> centuries within the study area. The survey recorded only four World War II sites and these are represented by two observation posts, an anti-aircraft battery at Ballymenach and a target at Baraskomill. All of these sites appear to be in good condition except the target as nothing could be found of it.

#### Condition classifications of all sites and monuments (Figs 6 & 7)

7.5 The classifications *Good*, *Fair*, *Poor* and *Eroding* have been assigned to the general condition of all sites and monuments seen within the study area. The data shows that 48 sites and monuments were observed as good (25%). An equal number of sites were found to be in a fair condition. The other two condition classes attained 14% and 6% of the total number of archaeological sites recorded respectively. The remainder were unknown as their condition could not be ascertained.

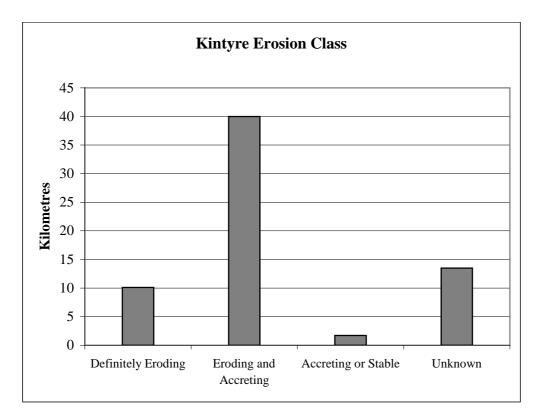


Figure 2: Kintyre distance versus erosion/stability classification

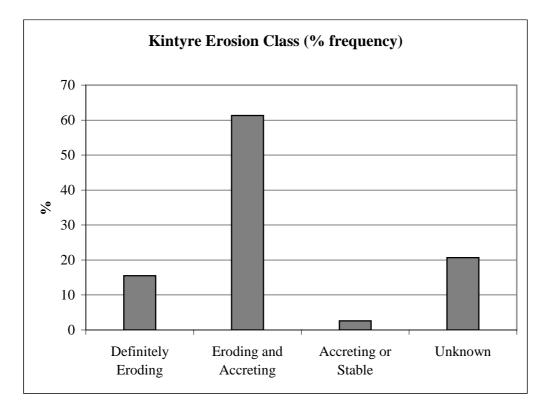


Figure 3: Kintyre percentage frequency of distance versus erosion/stability classification

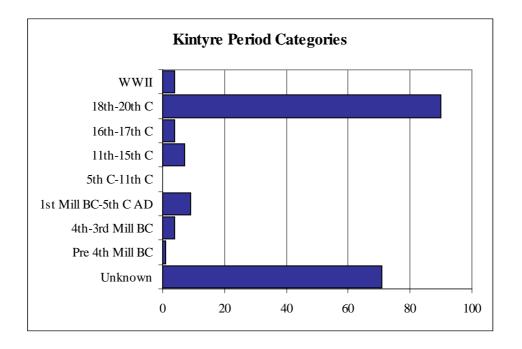


Figure 4: Kintyre period categories of all sites and monuments

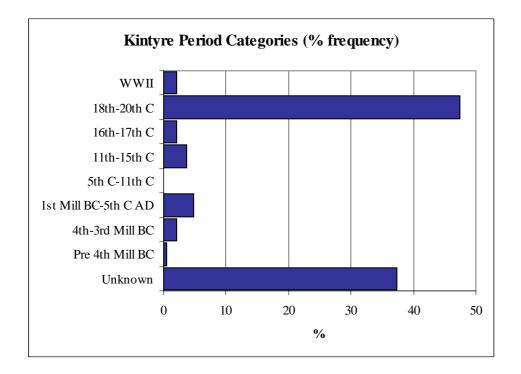


Figure 5: Kintyre percentage frequency period categories of all sites and monuments

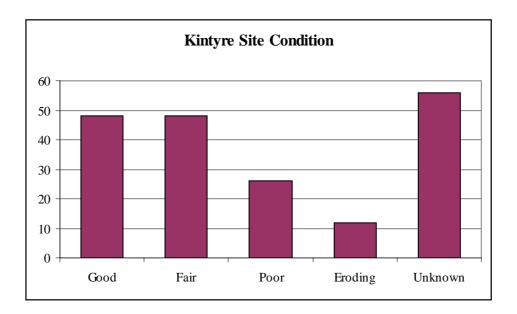


Figure 6: Kintyre frequency and condition of all archaeological sites

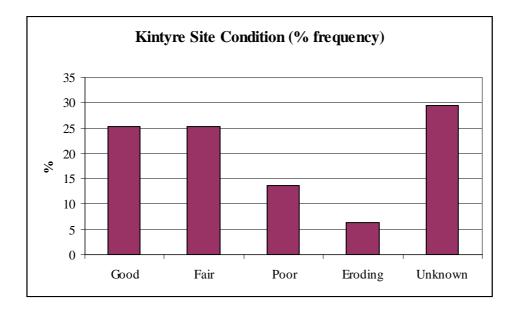


Figure 7: Kintyre percentage frequency and condition of all archaeological sites

#### 8. SURVEY RESULTS FOR THE ISLE OF ARRAN

- 8.1 Based on the results of the field survey this section examines the findings relating to the erosion record of the southern coast of Arran.
- 8.2 The total length of the coastline is based on the digital measurement of each coastal unit mapped on each of the coloured 1:25000 map sheets (Arran Maps 1-8 above). The combined length of all units is 37.6km. This figure was used to establish the percentage frequency of each erosion class.

Erosion Classes for the Clyde (Figs 8 & 9)

8.3 The River Clyde survey area has produced three types of erosion class. These are *Eroding and Accreting, Definitely Eroding* and *Definitely Accreting*. Those areas classed as *Definitely Eroding* cover 18.2km of the coastline, 48.4% of the total length. The *Eroding and Accreting* class represents 19km or 50.5% of the survey area. The *Definitely Accreting* category is by far the smallest covering only 0.4km or 1.1%.

Erosion Class	Number of units	Total length (km)	Total length (%)
Definitely eroding	7	18.2	48.4
Eroding and accreting	6	19	50.5
Definitely accreting	1	0.4	1.1

Table 3: Summary statistics of the erosion class lengths of Arran

8.4 The results demonstrate that there is an almost equal split between areas that are definitely eroding and those that are eroding and accreting. Most of the active erosion appears to be confined to the bay areas and only a very small proportion of the coastline is actively accreting.

Period categories of archaeological sites and monuments (Figs 10 & 11)

- 8.5 The results for the period categories for all the 180 sites and monuments examined shows that the majority of sites identified date to between the 18<sup>th</sup> and 20<sup>th</sup> centuries with 101 sites assigned to this period (56%). Typically sites which were assigned to this category include buildings, both listed and undesignated, and shipwrecks. Sixty-four sites (35%) were assigned to the unknown category which covers a wide range of sites over the whole of the survey area. Two sites representing 1% of the total number of sites are dated to the 4<sup>th</sup>-3<sup>rd</sup> millennium BC, including the standing stone at Kingscross Point and a cist at Broombrae. There are also two sites dating to the period from the 1st millennium BC to 5th C AD, which include the promontory fort at Dippen and the Dun at Kingscross Point. Two Viking burials, one at Kingscross Point with associated finds, and the other at Lamlash, date to between the 5<sup>th</sup> and 11<sup>th</sup> centuries. Only two sites were identified dating to the medieval period (11<sup>th</sup>-15<sup>th</sup> centuries), which comprised a bloomery at Kilpatrick and Kildonan Castle.
- 8.6 There are no pre-4<sup>th</sup> millennium BC sites within the study area. The survey recorded seven World War II sites and these are represented by observation posts, a plinth at Clauchlands Point and the remains of what appears to be a barrier which would have extended between Kingscross Point and Holy Island.

The remains of the majority of these are very poor, with at least one of the observation posts apparently destroyed by a quarry. It is possible that the original number of World War II sites may have been greater, especially given the strategic importance of the Firth of Clyde during this.

Condition classifications of all sites and monuments (Figs 12 & 13)

8.7 The results for the condition category of sites and monuments show that the majority of the sites (37%) recorded are in a good condition. Approximately 19% of sites were in a fair condition, 7% were in a poor condition and 4% were actively eroding. The consideration of the condition of the sites has potentially been skewed by the number of sites whose condition was unknown which constituted about 33% on the total number of sites.

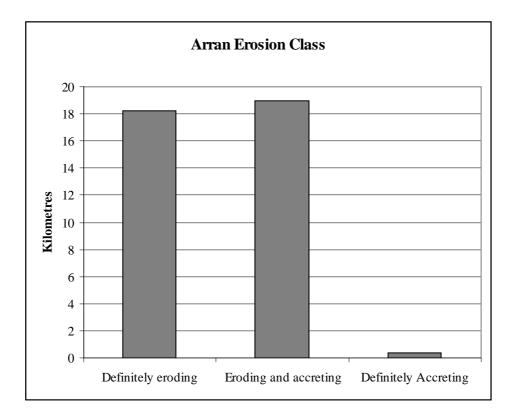


Figure 8: Arran distance versus erosion/stability classification.

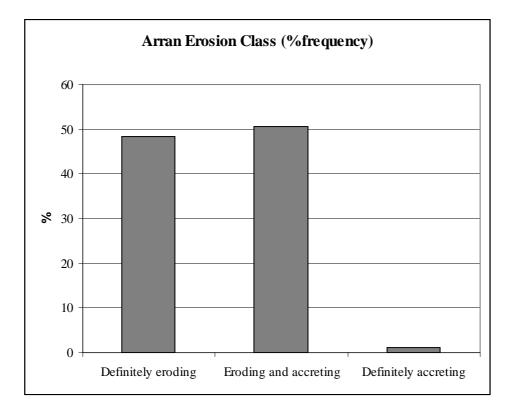


Figure 9: Arran percentage frequency of distance versus erosion/stability classification.

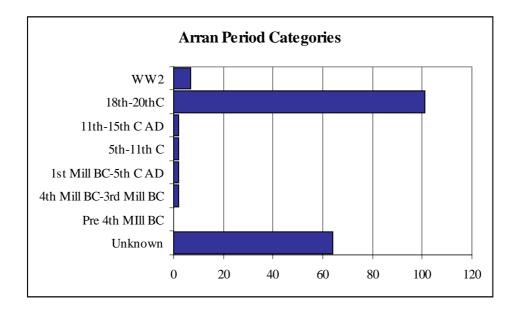


Figure 10: Arran period categories of all sites and monuments.

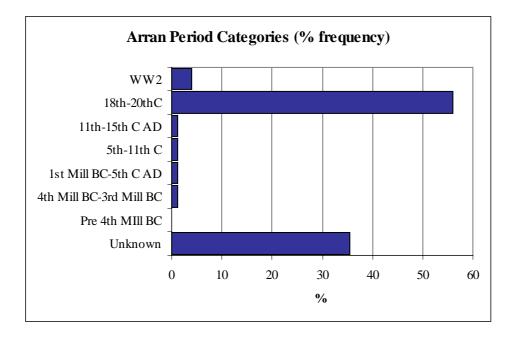


Figure 11: Arran percentage frequency period categories of all sites and monuments.

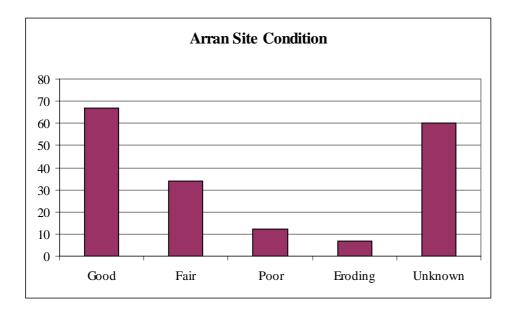


Figure 12: Arran condition of all archaeological sites.

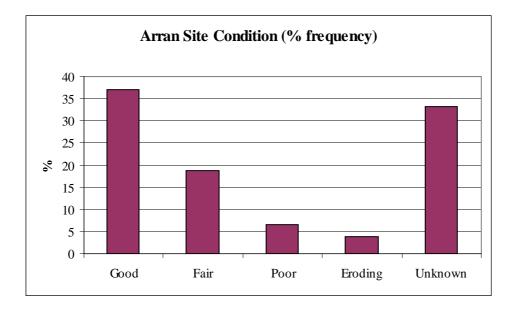


Figure 13: Arran percentage frequency and condition of all archaeological sites.

### 9. SUMMARY AND RECOMMENDATIONS

#### 9.1 Summary

- 9.1.1 Three hundred and seventy-one sites and monuments have been subjected to analyses during the rapid coastal assessment on the east coast of Kintyre and the southern coast of Arran. Of these, 121 were newly discovered sites. It has been demonstrated that a range of archaeological sites within the intertidal areas are being affected by various coastal erosion processes. The impact of this can be seen generally to correspond to different groups of chronologically distinct archaeological sites and monuments and remains, within varying topographical locations. Briefly the results have revealed that on the east coast of Kintyre, 14% of all the sites examined are in a poor state. On the southern coast of Arran, a slightly different picture emerges with only 7% of the sites classified as in a poor state of preservation.
- 9.1.2 This survey represents a snapshot of the condition of the archaeological remains that were visible in late 2004. It is clear, that in addition to the rapid nature of the survey, there are a number of other biases inherent in the results. Chief amongst these is the large number of listed buildings and shipwrecks, which tend to fall within the 18<sup>th</sup>-20<sup>th</sup> centuries.

#### 9.2 Recommendations

- 9.2.1 The following recommendations are proposed and all should involve the Shorewatch teams. Tables 4 and 5 list the sites and monuments that should be investigated as a matter of urgency owing to the nature of the erosion processes that have been identified at the respective sites. These sites have can be classified according to the severity scale of *High*, *Medium* and *Low*:
  - *High* Important archaeological and/or palaeoenvironmental material is being lost. Severely affected during spring tide cycle and recent winter storms.
  - *Medium* Archaeological loss is caused by other factors such as quarrying, visitor and cattle erosion and/or natural weathering processes other than wave action.
  - *Low* Archaeological information is exposed but not at serious risk of loss in the short term.

Name	Gazetteer No	NGR No	Site Type	Severity of erosion
Kildonald Bay	135	NR 7812 2719	Shell midden	High
Island Muller	172	NR 7525 2234	Tower house	High
Carradale bay	97	NR 8020 3722	Wooden pier	High
Springwell Cottage	100	NR 7980 3616	Pier and house platform	High
Carradale Point	93	NR 8151 3649	Vitrified fort and causeway	Medium

Table 4: Kintyre - suggested sites for immediate examination by Shorewatch

Name	Gazetteer No	NGR No	Site Type	Severity of erosion
Clachaig	34	NR 9440 2114	Enclosures	Low
Auchenhew	55	NS 0038 2104	Enclosure	High
Kildonan	66	NS 0353 2087	Observation post	High
Kingscross	122	NS 0560 2827	Dun	Medium
Clauchlands Point	178	NS 0560 3292	WWII Lookout	Medium

Table 5: Arran - suggested sites for immediate examination by Shorewatch

9.2.2 In consultation with Historic Scotland A programme of archaeological survey is recommended for the above sites. This would involve measuring and photographing the monuments with the help of the shorewatch teams, at this stage.

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Shennan, I. 1989 Holocene crustal movements and sea-level changes in Great Britain. *Journal of Quaternary Science*, Vol. 4, 77-89.

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### **10.2** Cartographic sources

British Geological Survey 1971 Rothsay Sheet 29 Solid and Drift Geology. 1" Series. British Geological Survey 1987 Arran. Solid Edition 1:50 000

British Geological Survey (BGS) 1996a Campbeltown, Scotland Sheet 12 Solid and Drift Geology. 1:50 000

British Geological Survey 1996b Sound of Gigha. Scotland. Sheet 20 and part of 21W. Solid and Drift Geology. 1:50 000

1866 First Edition Ordnance Survey *Argyllshire* Sheet 192, 6" to 1 mile 1866 First Edition Ordnance Survey *Argyllshire* Sheet 202, 6" to 1 mile 1866 First Edition Ordnance Survey *Argyllshire* Sheet 213, 6" to 1 mile 1866 First Edition Ordnance Survey *Argyllshire* Sheet 224, 6" to 1 mile 1866 First Edition Ordnance Survey *Argyllshire* Sheet 225, 6" to 1 mile 1866 First Edition Ordnance Survey *Argyllshire* Sheet 236, 6" to 1 mile 1866 First Edition Ordnance Survey *Argyllshire* Sheet 242, 6" to 1 mile 1866 First Edition Ordnance Survey *Argyllshire* Sheet 242, 6" to 1 mile 1866 First Edition Ordnance Survey *Argyllshire* Sheet 242, 6" to 1 mile 1866 First Edition Ordnance Survey *Argyllshire* Sheet 247, 6" to 1 mile 1866 First Edition Ordnance Survey *Argyllshire* Sheet 252, 6" to 1 mile 1866 First Edition Ordnance Survey *Argyllshire* Sheet 252, 6" to 1 mile

1864 First Edition Ordnance Survey *Buteshire (Island of Arran)* Sheet 250, 6" to 1 mile 1864 First Edition Ordnance Survey *Buteshire (Island of Arran)* Sheet 253, 6" to 1 mile 1864 First Edition Ordnance Survey *Buteshire (Island of Arran)* Sheet 255, 6" to 1 mile 1864 First Edition Ordnance Survey *Buteshire (Island of Arran)* Sheet 259, 6" to 1 mile

#### **10.3** Historical maps

Admiralty Chart 1886 Scotland; West Coast: Hydrographic Office London

Admiralty Chart 1856 Loch Gilp; Sketch of Millport; East Loch Tarbert: Hydrographic Office London

Admiralty Chart 1856 The Clyde and Loch Fyne: Hydrographic Office London

Admiralty Chart 1848 Campbelltown Harbour: Hydrographic Office London

Blaeu, J. 1654 Knapdalia - Knapdale

Blaeu, J. 1654 Cantyra - Kintyre

Cowley, J. 1734 A map of such parts of His Grace the Duke of Argyle's heritable dukedom...

Gordon ca. 1636-1652 39: Cantyre

Langland, G. 1801 This map of Argyllshire

Thomson, J. 1824 Northern Part of Argyll Shire. Southern Part

# **10.4** Aerial Photographic Record

### Kintyre

Sortie	Frames	Date	Scale
106G/Scot/UK46	3007-3008	04/05/46	1:10000
106G/Scot/UK46	3017-3021	04/05/46	1:10000
106G/Scot/UK46	3032-3036	04/05/46	1:10000
106G/Scot/UK46	3050-3065	04/05/46	1:10000
106G/Scot/UK46	3105-3108	04/05/46	1:10000
106G/Scot/UK46	4035-4040	04/05/46	1:10000
106G/Scot/UK46	4143-4158	04/05/46	1:10000
106G/Scot/UK46	4177-4196	04/05/46	1:10000
106G/Scot/UK46	3202-3204	04/05/46	1:10000
106G/Scot/UK46	3267-3269	04/05/46	1:10000
106G/Scot/UK46	4001-4015	04/05/46	1:10000
106G/Scot/UK46	4017-4020	04/05/46	1:10000
106G/Scot/UK46	4022-4024	04/05/46	1:10000
106G/Scot/UK46	4056-4104	04/05/46	1:10000
106G/Scot/UK46	4168-4171	04/05/46	1:10000
106G/Scot/UK46	4220-4222	04/05/46	1:10000

# Isle of Arran

Sortie	Frames	Date	Scale
106G/Scot/UK47	3058-3062	04/05/1946	1:10000
106G/Scot/UK47	3019-3021	04/05/1946	1:10000
106G/Scot/UK47	3023-3036	04/05/1946	1:10000
106G/Scot/UK47	3040-3042	04/05/1946	1:10000
106G/Scot/UK47	3045-3047	04/05/1946	1:10000
106G/Scot/UK47	3058-3062	04/05/1946	1:10000
106G/Scot/UK47	3139-3141	04/05/1946	1:10000
106G/Scot/UK47	3144	04/05/1946	1:10000
106G/Scot/UK47	4022-4027	04/05/1946	1:10000
106G/Scot/UK47	4030-4033	04/05/1946	1:10000
106G/Scot/UK47	4035-4038	04/05/1946	1:10000
106G/Scot/UK47	4045-4047	04/05/1946	1:10000
106G/Scot/UK47	4052-4068	04/05/1946	1:10000
106G/Scot/UK47	4142-4143	04/05/1946	1:10000
106G/Scot/UK47	4237-4240	04/05/1946	1:10000
106G/Scot/UK47	4318-4329	04/05/1946	1:10000
58/980	3013-3016	17/11/1952	1:10000
58/980	3037-3045	17/11/1952	1:10000
58/980	3120-3121	17/11/1952	1:10000

## APPENDIX 1 - KINTYRE: BUILT HERITAGE AND ARCHAEOLOGY

ID	Name	NMRS	Source	WoSAS Pin	NGR	Status	Туре	Condition	Date	Recommendation
1	Shop, Main Street	NR86NE 51	NMRS		NR 8635 6864		Commercial	Good	18th-20th C	Nil
2	Tarbert	NR86NE 14	NMRS	3911	NR 864 686	Scheduled 3410	Burgh; Village	Unknown	14th C	Nil
3	Tarbert Hotel	NR86NE 47	NMRS		NR 8644 6861	Listed C(s) HBNum 12030	Residential; Commercial	Good	19th C	Nil
4	Harbour Walls	NR86NE 18.02	NMRS		NR 8643 6864	Listed B HBNum 48935	Wall	Good	19th C	Nil
5	Cottage	NR86NE 43	NMRS		NR 8651 6858		Residential	Unknown	18th-20th C AD	Nil
6	Harbour Street	NR86NE 57	NMRS		NR 8659 6868		Street	Good	18th-20th C AD	Nil
7	Tarbert Harbour	NR86NE 18.0	NMRS	3915	NR 866 687		Harbour	Good	18th-20th C AD	Nil
8	Ice Factory	NR86NE 18.1	NMRS	46009	NR 8671 6879		Commercial	Good	18th-20th C AD	Nil
9	Tarbert Castle	NR86NE 1	NMRS	3906	NR 8677 6873	Listed B HBNum 12031 Scheduled 276	Defence	Poor	11th-15th C AD	Nil
10	Queen's Gate	NR86NE 54	NMRS		NR 8696 6877	Listed C(s) HBNum 12032	Residential	Good	19th C	Nil
11	House and Gear Store	NR86NE 56	NMRS	43849	NR 871 688		Residential; Store	Unknown	18th-20th C AD	Nil
12	Columba Hotel	NR86NE 45	NMRS		NR 8736 6880	Listed C(s) HBNum 12033	Residential; Commercial	Good	19th C	Nil
13	Pier House	NR86NE 53	NMRS		NR 8748 6880	Listed C(s) HBNum 12034	Residential	Good	19th C	Nil
14	Pier	NR86NE 52	NMRS	45765	NR 8752 6881		Pier	Good	18th-20th C AD	Nil
15	Old Pier		OS 2nd ed		NR 8793 6861		Pier	Eroding	18th-20th C AD	Survey
16	Tobar A'Ghail	NR96SW 4	NMRS	4441	NR 919 605		Platforms	Unknown	Unknown	Nil
17	Tobar A'Ghail	NR96SW 6	NMRS		NR 919 602		Platform	Unknown	Unknown	Nil
18	Allt Na L'Uinnisinn	NR95NW 13	NMRS	4376	NR 9210 5994		Whisky Still	Unknown	Unknown	Nil

19	Skipness Pier		OS 2nd ed		NR 9223 5981		Pier	Fair	18th-20th C AD	Nil
20	Port a' Chruidh		Fieldwalking		NR 9211 5921		Building/ enclosure	Fair	Unknown	Nil
21	Port a' Chruidh		OS 2nd ed		NR 9200 5895		Building; Enclosure	Good	18th-20th C AD	Nil
22	Old Pier	NR95NW 15	NMRS	4378	NR 920 589		Pier	Eroding	18th-20th C AD	Monitor
23			Fieldwalking		NR 9207 5865		Cairn	Fair	Unknown	Monitor
24	Port A' Chruidh	NR95NW 16	NMRS	4379	NR 9208 5858		Landing-place	Fair	Unknown	Monitor
25	Port a' Chruidh		Fieldwalking		NR 9193 5826		Enclosure	Poor	Unknown	Nil
26	Brann A' Phuirt	NR95NW 17	NMRS	4380	NR 914 574		Landing-place	Fair	Unknown	Nil
27	Bee Orchis: Skipness Point	NR95NW 8004	NMRS		NR 912 572		Shipwreck	Unknown	18th-20th C AD	Nil
28	Port Ban		Fieldwalking		NR 9114 5743		Boat mooring	Poor	Unknown	Nil
29	Skipness		Fieldwalking		NR 9109 5743		Structure	Fair	Unknown	Nil
30	Skipness Chapel	NR95NW 6	NMRS	4386	NR 9103 5752	Listed A HBNum 18409 Scheduled 90279	Ground	Good	11th-15th C AD	Nil
31	Skipness		OS 2nd ed		NR 9075 5757		Boat House	Fair	19th C AD	Nil
32	Tigh na Craoibhe		OS 1st ed		NR 8979 5752		Buildings; Enclosures	Unknown	Unknown	Nil
33	Creag Aoranaigh		OS 2nd ed		NR 8975 5737		Quarry	Unknown	18th-20th C AD	Nil
34	Creag Aoranaigh		OS 2nd ed		NR 8975 5731		Mile post	Unknown	18th-20th C AD	Nil
35	Araneigh	NR85NE 70	NMRS	50383	NR 8974 5731		Observation post	Good	20th C AD	Nil
36	Creag Aoranaigh		Fieldwalking		NR 8957 5712		Cave	Good	Unknown	Nil
37	Auchameanach Farm		OS 2nd ed		NR 8849 5650		Mile post	Fair	18th-20th C AD	Monitor
38	Rockfield		OS 1st ed		NR 8700 5598		Structure	Fair	Unknown	Nil
39	Cnocan Biorach	NR85NE 44	NMRS		NR 866 557		Bloomery Mound	Unknown	11th-15th C AD	Nil
40	Rubha na h-Airde Baine		Fieldwalking		NR 8596 5456		Enclosure; field system	Poor	Unknown	Nil
41	Rubha na h-Airde Baine		Fieldwalking		NR 8590 5446		Clearance Cairn	Good	Unknown	Nil
42	Rubha na h-Airde Baine		Fieldwalking		NR 8584 5441		Clearance Cairns	Good	Unknown	Nil
43	Port Fada		Fieldwalking		NR 8574 5429		Wall	Poor	Unknown	Nil
44	Brian Phort		Fieldwalking		NR 8497 5372		Walls	Poor	Unknown	Nil
45	Brian Phort		Fieldwalking		NR 8494 5366		Structure	Poor	Unknown	Nil
46	Eascairt	NR85SW 1	NMRS	3902	NR 8487 5366		Dun	Fair	1st mill BC-5th C AD	Nil
47	Allt Romain		Fieldwalking		NR 8462 5316		Wall	Poor	Unknown	Nil

48	Allt Romain		Fieldwalking		NR 8440 5301		Possible kiln	Poor	Unknown	Nil
49	Allt Romain		Fieldwalking		NR 8435 5289		Walls	Fair	Unknown	Nil
50	Sgeir na h-Inghinn		Fieldwalking		NR 8420 5253		Wall	Good	Unknown	Nil
51	Eascairt		Fieldwalking		NR 8377 5215		Observation post	Good	18th-20th C AD	Nil
52	Port Alasdair Ruaidh		Fieldwalking		NR 8382 5203		Walls	Fair	Unknown	Nil
53	Ravens Bay		Fieldwalking		NR 8373 5189		Wall	Fair	Unknown	Nil
54	Ravens Bay		Fieldwalking		NR 8366 5188		Wall	Poor	Unknown	Nil
55	Crossaig		Fieldwalking		NR 8366 5184		Bridge	Good	Unknown	Monitor
56	Crossaig		Fieldwalking		NR 8332 5132		Possible Old Jetty	Eroding	Unknown	Monitor
57	Crossaig		Fieldwalking		NR 8319 5137		Wall; possible cairn	Eroding	Unknown	Monitor
58	Crossaig		OS 1st ed		NR 8331 5122		Well	Unknown		Nil
59	Crossaig		OS 1st ed		NR 8334 5117		Building	Poor		Nil
60	Port na Crossaig		Fieldwalking		NR 8337 5107		Boathouse; shed	Fair		Nil
61	Port na Crossaig		Fieldwalking		NR 8349 5095		Building	Poor	18th-20th C AD	Nil
62	South Crossaig		Fieldwalking		NR 8345 5078		Boathouse; slipway	Good	18th-20th C AD	Nil
63	South Crossaig	NR85SW 13	NMRS	44952	NR 8337 5076		Farmstead	Poor	Unknown	Nil
64	Cour Bay		Fieldwalking		NR 8264 4879		Buildings	Poor	Unknown	Nil
65	Cour Bay		Fieldwalking		NR 8265 4844		Landing place	Eroding	Unknown	Survey
66	Boathouse	NR84NW 7.01	NMRS	42826	NR 8264 4843		Boathouse	Good	18th-20th C AD	Nil
67	Cour		Fieldwalking		NR 8269 4819		Promontory	Fair	Unknown	Survey
68	Cour		Fieldwalking		NR 8247 4780		Stone wall	Fair		Nil
69	Sunadale	NR84NW 2	NMRS	3855	NR 8144 4502	Scheduled 3643	Dun	Unknown	1st mill BC-5th C AD	Nil
70	Sunadale Inn		OS 1st ed		NR 8122 4487		Public House	Good	18th-20th C AD	Nil
71	Sunadale		OS 1st ed		NR 8116 4473		Well	Unknown		Nil
72	Acra		OS 1st ed		NR 8100 4459		Building	Fair		Nil
73	Grogport		OS 1st ed		NR 8095 4448		Milestone	Unknown		Nil
74	Grogport		Fieldwalking		NR 8128 4393		Stone wall	Fair	18th-20th C AD	Nil
75	Grogport		Fieldwalking		NR 8108 4359		Stone wall	Fair	18th-20th C AD	Nil
76	Grogport		Fieldwalking		NR 8109 4352		Boathouse	Fair		Nil
77	Grogport		Fieldwalking		NR 8115 4349		Stone wall	Fair		Nil
	Grogport		Fieldwalking		NR 8118 4343		Stone wall	Fair		Nil
79	Grogport Old Manse	NR84SW 4	NMRS	3865	NR 8118 4344	Scheduled 3649	Dun	Poor	1st mill BC-5th C AD	Nil

80	Grianain	NR84SW 7	NMRS	44961	NR 8107 4165		Building	Unknown	Unknown	Nil
81	Grianan		OS 1st ed		NR 8118 4128		Building	Unknown	Unknown	Nil
82	Allt An Torra	NR84SW 5	NMRS	3866	NR 8111 4052		Platform	Unknown	Unknown	Nil
83	Carradale	NR83NW 4	NMRS	3815	NR 8115 3993		Platforms	Unknown	18th-20th C AD	Nil
84	Sgeir a' Bhogha		Fieldwalking		NR 8151 3905		Pier	Eroding	18th-20th C AD	Monitor
85	Mary McColl: Carradale Pier	NR83NW 8009	NMRS		NR 818 387		Shipwreck	Unknown	1882	Nil
86	Port Crannaich	NR83NW 6	NMRS	3817	NR 819 386		Bloomery Mound	Unknown	11th-15th C AD	Nil
87	Carradale		OS 1st ed		NR 8190 3858		Milestone	Good	18th-20th C AD	Nil
88	Aird's Castle	NR83NW 2	NMRS	3813	NR 8203 3831	Scheduled 3177	Defence; Residential	Poor	11th-15th C AD	Nil
89	Aird's Castle		Fieldwalking		NR 8206 3809		Wall	Fair	Unknown	Nil
90	Port Righ		Fieldwalking		NR 8186 3803		Platform	Good	Unknown	Nil
91	Port Righ		Fieldwalking		NR 8201 3749		Possible Boathouse	Poor	18th-20th C AD	Nil
92	Carradale Point	NR83NW 1	NMRS	3812	NR 8151 3649	Scheduled 2180	Fort	Fair	1st Mill BC-5th C AD	Monitor
93	Carradale Point		Fieldwalking		NR 8150 3670		Causeway	Fair	Unknown	Survey
94	Carradale		Fieldwalking		NR 8152 3676		Building	Good	18th-20th C AD	Nil
95	Carradale		Fieldwalking		NR 8148 3715		Enclosure	Fair	Unknown	Nil
96	Carradale Bay		Fieldwalking		NR 8143 3737		Building; Wall	Fair	18th-20th C AD	Survey
97	Carradale Bay		OS 2nd ed		NR 8020 3722		Jetty	Eroding	18th-20th C AD	Survey
<b>98</b>	Dippen Bay		Fieldwalking		NR 8016 3655		Stone wall	Good	18th-20th C AD	Nil
99	Dippen Bay	NR83NW 8	NMRS		NR 801 364		Stone	Good	20th C AD	Nil
	Springwell Cottage		Fieldwalking		NR 7980 3616		Cottage	Eroding	18th-20th C AD	Survey
101	Torrisdale Bay		Fieldwalking		NR 7979 3602		Pier	Eroding	18th-20th C AD	Survey
102	Torrisdale Bridge	NR73NE 23	NMRS		NR 7968 3585	Listed B HBNum 18401	Road Bridge	Good	1840	Nil
103	Gate Lodge	NR73NE 8.01	NMRS		NR 7965 3582	Listed B HBNum 18400	Residential	Good	19th C	Nil
	Torrisdale Bay		OS 1st ed		NR 7977 3578		Building	Good	18th-20th C AD	Nil
105	Priscilla: Torrisdale Bay	NR83SW 8001	NMRS		NR 801 358		Shipwreck	Unknown	18th-20th C AD	Nil
	Jane Taylor: Torrisdale Bay	NR83SW 8004	NMRS		NR 801 358		Shipwreck	Unknown	18th-20th C AD	Nil
	Torrisdale Bay		Fieldwalking		NR 7982 3580		Rock shelter	Good	Unknown	Monitor
108	Torrisdale Bay		Fieldwalking		NR 7990 3571		Boathouse	Fair	18th-20th C AD	Monitor

109	Torrisdale Bay		Fieldwalking		NR 7996 3568		Jetty	Fair	18th-20th C AD	Monitor
110	Greenhill		Fieldwalking		NR 7981 3467		Rock shelter; Potato House	Good	Unknown	Monitor
111	Greenhill		Fieldwalking		NR 7974 3452		Rock shelter; Potato House	Good	Unknown	Monitor
112	Rubha Nan Sgarbh	NR73SE 4	NMRS		NR 7975 3402	Scheduled 3100	Dun	Fair	1st mill BC-5th C AD	Nil
113	Pluck		OS 1st ed		NR 7968 3330		Building	Fair	18th-20th C AD	Survey
114	Leo: Pluck Point	NR73SE 8001	NMRS		NR 797 316		Shipwreck	Unknown	1890	Nil
115	Golden Fleece: Pluck Point	NR73SE 8003	NMRS		NR 797 316		Shipwreck	Unknown	18th-20th C AD	Nil
116	Victoria: Pluck Point	NR73SE 8004	NMRS		NR 797 316		Shipwreck	Unknown	1894	Nil
117	Saddell Castle	NR73SE 2	NMRS	3459	NR 7890 3154	Listed A HBNum 18403	Defence	Good	1500s	Nil
118	Jane: Saddell castle	NR73SE 8005	NMRS		NR 789 315		Shipwreck	Unknown	18th-20th C AD	Nil
119	Lady Mary's Well	NR73SE 3	NMRS	3460	NR 7890 3117		Well	Good	16th C AD	Nil
120	High Ugadale		Fieldwalking		NR 7869 2995		Trackway	Good	18th-20th C AD	Nil
121	High Ugadale		Fieldwalking		NR 7857 2958		Wall	Poor	Unknown	Nil
122	High Ugadale		Fieldwalking		NR 7835 2902		Wall	Eroding	Unknown	Nil
123	Brucefield	NR72NE 35	NMRS	46521	NR 784 287		Findspot	Unknown	Unknown	Nil
124	Brucefield		Fieldwalking		NR 7844 2875		Sheds	Good	18th-20th C AD	Nil
125	Ugadale Point	NR72NE 9	NMRS	3352	NR 7851 2851	Scheduled 3225	Dun	Fair	1st Mill BC-5th C AD	Nil
126	Ugadale Point		Fieldwalking		NR 7842 2849		Wall	Poor	Unknown	Nil
127	Ugadale	NR72NE 30	NMRS	45063	NR 7835 2848		Building	Fair	18th-20th C AD	Survey
128	Ugadale		Fieldwalking		NR 7832 2846		Possible Kiln	Poor	Unknown	Survey
129	Ugadale		Fieldwalking		NR 7811 2825		Wall	Good	18th-20th C AD	Nil
130	Kildonan		Fieldwalking		NR 7811 2793		Wall	Good	Unknown	Nil
131	Kildonald Bay	NR72NE 5	NMRS	3348	NR 7806 2778	Scheduled 243	Dun	Good	1st Mill BC-5th C AD	Nil
132	Kildonald Bay		OS 1st ed		NR 7796 2777		Milestone	Good	18th-20th C AD	Nil
133	Kildonald Bay		Fieldwalking		NR 7807 2770		Wall	Fair	Unknown	Nil
134	Kildonald Bay		Fieldwalking		NR 7804 2727		Structure	Fair	18th-20th C AD	Nil
135	Kildonald Point		Fieldwalking		NR 7822 2722		Shell midden	Poor	Unknown	SURVEY
136	Robert and Christian: Island Ross	NR72NE 8003	NMRS		NR 785 273		Shipwreck	Unknown	1820	Nil

137	Kildonald Bay		Fieldwalking		NR 7812 2719		Quarry scoops	Good	Unknown	Nil
138	Kildonan Point	NR72NE 12	NMRS	3332	NR 7824 2715	Scheduled 3110	Fort	Fair	1st Mill BC-5th C AD	Survey
139	Kildonald Point		Fieldwalking		NR 7817 2713		Banks	Poor	Unknown	Nil
140	Kildonald Point		Fieldwalking		NR 7813 2713		Enclosure	Poor	Unknown	Nil
141	Kildonald Point		Fieldwalking		NR 7814 2712		Kiln	Good	Unknown	Nil
142	Kildonald Point	NR72NE 11	NMRS	3331	NR 7812 2714	Scheduled 3110 (with above)	Cairns	Fair	1st Mill BC-5th C AD	Survey
143	Kildonald Point		Fieldwalking		NR 7795 2714		Wall	Fair	Unknown	Survey
144	Kildonald Point	NR72NE 20	NMRS	3341	NR 7801 2712		'Dyke'	Fair	18th-20th C AD	Nil
	Kildonald Point		Fieldwalking		NR 7790 2700		Wall	Fair	Unknown	Nil
	Glenhead Pier	NR72NE 36	NMRS		NR 7781 2680		Shipwreck; pier	Poor	20th C AD	Survey
147	Colonial: Black Bay	NR72NE 8001	NMRS		NR 7781 2680		Shipwreck	Unknown	18th-20th C AD	Nil
	Black Bay		Fieldwalking		NR 7759 2679		Gravel pit	Good	18th-20th C AD	Monitor
	Black Bay		Fieldwalking		NR 7753 2677		Bank	Poor	Unknown	Nil
	Bisco 9: Black Bay	NR72NE 8002	NMRS		NR 7776 2674		Shipwreck	Unknown		Nil
	Black Bay		OS 2nd ed		NR 7745 2664		Cave	Fair	Unknown	Nil
152	Ardnacross Bay	NR72NE 6	NMRS		NR 7680 2598	Scheduled 3646	Chambered Cairn; Cairn	Unknown	Unknown	Nil
	Shore Cottage	NR72NE 32	NMRS	45115	NR 7676 2589		Farmstead (possible)	Good	18th-20th C AD	Nil
154	Shore cottage		Fieldwalking		NR 7675 2573		Stone wall	Fair	18th-20th C AD	Nil
155	Ardnacross Bay	NR72NE 23	NMRS		NR 766 256		Enclosure	Unknown	Unknown	Nil
	Peninver Beach	NR72NE 25	NMRS	15555	NR 763 252		Findspot	Unknown		Nil
	Peninver	NR72SE 11	NMRS		NR 7590 2474		U	Unknown	18th-20th C AD	Nil
	Peninver		Fieldwalking		NR 7595 2452		Harbour	Fair	18th-20th C AD	Monitor
159	Peninver		OS 2nd ed		NR 7595 2456		Jetty	Unknown		Nil
	Greenrigs		OS 1st ed		NR 7585 2415		Buildings	Good		Nil
	Peninver		Fieldwalking		NR 7599 2411		Slipway	Poor		Nil
	Ben My Chree: Peninver	NR72SE 8032	NMRS		NR 76 24		Shipwreck	Unknown	1883	Nil
	Peninver	NR72SE 7	NMRS	12923	NR 759 239		Pit	Unknown	Unknown	Nil
164	Smerby Rocks		Fieldwalking		NR 7590 2353		Cave	Fair		Nil
165	Grace Wallace: Smerby Rocks	NR72SE 8025	NMRS		NR 762 233		Shipwreck	Unknown		Nil
166	Victor: Smerby	NR72SE 8029	NMRS		NR 762 233		Shipwreck	Unknown		Nil
167	Reserve: Smerby Rocks	NR72SE 8030	NMRS		NR 762 233		Shipwreck	Unknown	18th-20th C AD	Nil

168	Low Smerby		Fieldwalking		NR 7584 2306		Quay/jetty	Eroding	18th-20th C AD	Survey
169	Helena: Smerby Rocks	NR72SE 8005	NMRS		NR 76 23		Shipwreck	Unknown	1877	Nil
170	Lower Smerby	NR72SE 5	NMRS	3380	NR 7568 2266	Scheduled 3637	Cairn; Field Clearance Cairn	Good	Prehistoric	Nil
171	Low Smerby	NR72SE 8	NMRS		NR 755 226		Findspot	Unknown	Unknown	Nil
172	Island Muller		Fieldwalking		NR 7553 2250		Wall	Fair	Unknown	Nil
173	Island Muller	NR72SE 4	NMRS	3379	NR 7564 2244	Scheduled 3222	Tower-house	Fair	11th-15th C AD	Monitor
174	Ballymenach	NR72SE 15	NMRS		NR 7525 2234		Anti-Aircraft Battery	Good	18th-20th C AD	Monitor
175	Kilchousland		Fieldwalking		NR 7527 2222		Wall	Fair	Unknown	Nil
176	Kilchousland	NR72SE 1	NMRS	3376	NR 7517 2204		Church; Burial- Ground	Fair	11th-15th C AD	Nil
177	Kilchousland		OS 1st ed		NR 7511 2202		Well	Unknown	Unknown	Nil
178	Catherine: Macringan's Point	NR72SE 8031	NMRS		NR 755 213		Shipwreck	Unknown	18th-20th C AD	Nil
179	Glenbeg	NR72SW 69	NMRS	43373	NR 749 214		Mound	Unknown	Unknown	Nil
180	Glenbeg	NR72SW 70	NMRS	43372	NR 748 213		Quarry Scoop	Unknown	Unknown	Nil
181	Slaty Farlan		Fieldwalking		NR 7416 2064		Stone structure	Eroding	18th-20th C AD	Survey
182	Baraskomill		OS 1st ed		NR 7408 2066		Target	Unknown	18th-20th C AD	Nil
183	Baraskomill	NR72SW 72	NMRS	43370	NR 739 206		Structure	Unknown	Post-medieval	Nil
	Fort Argyll	NR72SW 73	NMRS	43369	NR 737 206		Mound	Unknown	Unknown	Nil
	Trench Point	NR72SW 19	NMRS	3392	NR 7354 2047		Cairn; Cists	Unknown	Prehistoric	Nil
186	Warehouses	NR72SW 161	NMRS	44003	NR 7351 2044		Industrial	Unknown	18th-20th C AD	Nil
	The Trench	NR72SW 20	NMRS	3394	NR 7353 2041		Civil War Battery	Unknown	18th-20th C AD	Nil
	Trench Point	NR72SW 21	NMRS	3395	NR 735 204		Cist	Unknown	Prehistoric	Nil
	Trench Point	NR72SW 23	NMRS	3397	NR 735 204		Cist	Unknown	Prehistoric	Nil
	Trench Point	NR72SW 40	NMRS	3416	NR 734 204		Findspot	Unknown	9th-4th Mill BC	Nil
191	Campbeltown Shipyard	NR72SW 166	NMRS	44239	NR 7350 2045		Boatyard	Unknown	18th-20th C AD	Nil

## APPENDIX 2 - ARRAN: BUILT HERITAGE AND ARCHAEOLOGY

ID	Name	NMRS	Source	WoSAS Pin	NGR	Status	Туре	Condition	Date	Recommendation
1	Annie: Drumadoon Point	NR82NE 8001	NMRS	1 111	NR 882 288		Shipwreck	Unknown	1877	Nil
2	Drumadoon Point		Field walking		NR 8835 2880		Anchor	Fair	18th-20th C	Monitor
3	Blackwaterfoot, Club House	NR82NE 18	NMRS		NR 8919 2854		Club House	Good	18th-20th C	Nil
4	Blackwaterfoot		OS 1st ed		NR 8922 2834		Building	Good	18th-20th C	Nil
5	Blackwaterfoot		OS 1st ed		NR 8933 2832		Building; Enclosure	Unknown	Unknown	Nil
6	Blackwaterfoot		OS 2nd ed		NR 8945 2843		Milestone	Good	18th-20th C	Nil
7	Blackwaterfoot		OS 1st ed		NR 8960 2818		Footbridge	Unknown	Unknown	Nil
8	Mary: Blackwaterfoot	NR82NE 8003	NMRS		NR 895 282		Shipwreck	Unknown	1897	Nil
9	Blackwaterfoot	NR82NE 16	NMRS		NR 8968 2816		Village	Good	Unknown	Nil
10	Blackwaterfoot		OS 1st ed		NR 9002 2757		Building	Good	18th-20th C	Nil
11	Blackwaterfoot		OS 1st ed		NR 9013 2730		Well	Unknown	Unknown	Nil
12	Broombrae	NR92NW 7	NMRS		NR 9015 2731		Cist	Unknown	Prehistoric	Nil
13	Kilpatrick Moor	NR92NW 14	NMRS		NR 90 27		Findspot	Unknown	Unknown	Nil
14	Kilpatrick	NR92NW 15	NMRS		NR 90 27		Bloomery	Unknown	11th-15th C AD	Nil
15	Kilpatrick Point		OS 1st ed		NR 8998 2659		Preaching Cave	Good	Unknown	Nil
16	Brown Head		Field walking		NR 9003 2577		Stones	Good	Unknown	Survey
17	Leacach Bhreac		OS 2nd ed		NR 9053 2455		Milestone	Good	18th-20th C	Nil
18	Leacach Bhreac	NR92SW 1	NMRS		NR 9057 2448		Cairn	Good	Unknown	Nil
19	Leacach Bhreac		OS 1st ed		NR 9047 2445		Enclosures	Good	Unknown	Survey
20	Leacach Bhreac		Field walking		NR 9053 2423		Wall	Fair	Unknown	Nil
21	Leacach Bhreac		Field walking		NR 9058 2414			Poor	Unknown	Nil
22	Leacach Bhreac		Field walking		NR 9066 2408		Cairn	Poor	Unknown	Survey
23	Leacach Bhreac		OS 1st ed		NR 9067 2404		Sheepfold	Fair	Unknown	Nil
24	Rinn a' Chrubain		Field walking		NR 9111 2371		Bank	Poor	Unknown	Nil
25	Rinn a' Chrubain		Field walking		NR 9130 2358		Barrier	Good	20th C	Nil
26	Port na Feannaiche		Field walking		NR 9164 2317		Breakwater/slipway	Fair	Unknown	Nil
27	Corriecravie	NR92SW 13	NMRS		NR 92 23		Battle Site (possible); Burials (possible)		Unknown	Nil
28	Corriecravie	NR92SW 16	NMRS		NR 92 23		Findspot	Unknown	Unknown	Nil
29	Port na Feannaiche		Field walking		NR 9201 2291		Harbour	Good	Unknown	Survey

30	Port na Feannaiche		Field walking		NR 9206 2273		Wall	Eroding	18th-20th C	Nil
31	Cleiteadh Dubh		Field walking		NR 9303 2218		Wall	Eroding	Unknown	Monitor
32	Cnocan Ceusaidh		OS 1st ed		NR 9352 2197		Sheepfold	Poor	Unknown	Survey
33	Cleiteadh		Field walking		NR 9413 2142		Wall	Fair	18th-20th C	Monitor
34	Clachaig		Field walking		NR 9431 2129		Slipway	Fair	18th-20th C	Nil
35	Cleiteadh		Field walking		NR 9440 2114		Enclosures	Fair	Unknown	Survey
36	Unknown: Cleats Shore	NR92SW 8002	NMRS		NR 9420 2090		Shipwreck	Unknown	18th-20th C	Nil
	Happy Return: Cleats Shore	NR92SW 8012	NMRS		NR 942 208		Shipwreck	Unknown	1896	Nil
38	Kyle Skye: Cleats Shore	NR92SW 8003	NMRS		NR 9416 2068		Shipwreck	Unknown	1940	Nil
39	Cleiteadh		OS 1st ed		NR 9440 2107		Building	Fair	18th-20th C	Nil
40	Glen Arran: Torrylinnwater Foot	NR92SE 8011	NMRS		NR 953 206		Shipwreck	Unknown	18th-20th C	Nil
41	Torrylinnwater Foot		OS 1st ed		NR 9543 2086		Building; Enclosure	Poor	Unknown	Nil
42	Torrylinnwater Foot		Field walking		NR 9580 2070		Building	Poor	Unknown	Survey
43	Torrylinnwater Foot		OS 1st ed		NR 9592 2070		Building	Good	20th C	Nil
44	Glenann: Cleiteadh Buidhe	NR92SE 8008	NMRS		NR 9610 2046		Shipwreck	Unknown	1976	Nil
45	Cleiteadh Buidhe		OS 1st ed		NR 9628 2062		Sand pits	Unknown	Unknown	Nil
46	Cleiteadh Buidhe		OS 1st ed		NR 9677 2052		Cave	Good	Unknown	Nil
47	Torr nan Uain		Field walking		NR 9781 2026		Wall	Fair	Unknown	Nil
48	Bennan Head		Field walking		NR 9836 2026		Harbour	Fair	Unknown	Survey
49	Betsey: Bennan Head	NR92SE 8010	NMRS		NR 99 20		Shipwreck	Unknown	1892	Nil
50	Margaret McColl	NR92SE 8013	NMRS		NR 99 20		Shipwreck	Unknown	1876	Nil
51	Glenlivet: Bennan Head	NR92SE 8004	NMRS		NR 991 201		Shipwreck	Unknown	1891	Nil
52	Black Cave	NR92SE 9	NMRS	4251	NR 9930 2027		Cave; Flints	Fair	Unknown	Nil
53	Auchenhew		Field walking		NS 0006 2076		Harbour	Fair	Unknown	Survey
54	Auchenhew		Field walking		NS 0006 2086		Wall	Fair	18th-20th C	Nil
55	Auchenhew		Field walking		NS 0038 2104		Enclosure	Fair	Unknown	Survey
56	Auchenhew		OS 1st ed		NS 0170 2120		Building; Enclosure	Good	18th-20th C	Nil
57	Auchenhew		OS 1st ed		NS 0186 2112		Building	Good	Unknown	Nil
58	Mansfield, Kildonan	NS02SW 46	NMRS		NS 0202 2114	Listed C(s) HBNum 13455	Residential	Good	19th C	Nil
59	Mansefield		OS 1st ed		NS 0225 2106		Building; Enclosures	Good	18th-20th C	Nil
60	Breadalbane		Field walking		NS 0227 2099		Platform	Eroding	Unknown	Monitor
61	Drimla Cottage	NS02SW 43	NMRS		NS 0243 2107	Listed C(s) HBNum	Residential	Good	1896	Nil

						13453				
62	Drimla Lodge	NS02SW 42	NMRS		NS 0246 2105	Listed B HBNum 13454		Good	1896	Nil
63	Kildonan Hotel	NS02SW 41	NMRS		NS 0305 2074		Residential/Hotel	Good	18th-20th C	Nil
64	Kildonan		OS 2nd ed		NS 0319 2070		Lifeboat station	Good	18th-20th C	Nil
65	Kildonan	NS02SW 40	NMRS		NS 0347 2089		Village	Good	Unknown	Nil
66	Kildonan		Field walking		NS 0353 2087		Observation post	Eroding	20th C	SURVEY
67	Gloriana: Kildonan	NS02SW 8001	NMRS		NS 036 207		Shipwreck	Unknown	1882	Nil
68	Falco: Kildonan	NS02SW 8002	NMRS		NS 036 207		Shipwreck	Unknown	1887	Nil
69	Essex: Kildonan	NS02SW 8003	NMRS		NS 036 207		Shipwreck	Unknown	1893	Nil
70	Kildonan		Field walking		NS 0361 2086		Ponds	Good	20th C	Nil
71	Kildonan Castle	NS02SW 10	NMRS	4695	NS 0363 2091	Scheduled 5156	Castle	Good	11th-15th C AD	Nil
72	Kildonan		OS 1st ed		NS 0380 2088		Boat House	Unknown	Unknown	Nil
73	Porta Leacach		OS 1st ed		NS 0403 2130		Building; Enclosures	Poor	Unknown	Nil
74	Kildonan	NS02SW 33	NMRS	41636	NS 0408 2142		Farmstead	Good	18th-20th C	Nil
75	Porta Leacach	NS02SW 24	NMRS	13951	NS 041 214		Mound; Flint Working Site	Unknown	Unknown	Nil
76	Dippin	NS02SW 34	NMRS	41635	NS 0453 2182		Enclosure	Fair	Unknown	Nil
77	Princess Patricia: Dippin Head	NS02SE 8003	NMRS		NS 050 221		Shipwreck	Unknown	1911	Nil
78	Ellen Ann: Dippin Head	NS02SE 8004	NMRS		NS 050 221		Shipwreck	Unknown	18th-20th C	Nil
79	Dippen	NS02SE 2	NMRS	4692	NS 0507 2240		Promontory Fort	Unknown	1st Mill BC-5th C AD	Nil
80	Trareoch		OS 1st ed		NS 0517 2290		Building; Enclosures	Good	18th-20th C	Nil
81	Trareoch		Field walking		NS 0520 2292		Banks	Poor	Unknown	Nil
82	Largybeg		OS 1st ed		NS 0515 2317		Building; Enclosure	Poor	18th-20th C	Nil
83	Largybeg	NS02SE 3	NMRS	4693	NS 0533 2330		Cairn (possible)	Fair	Unknown	Nil
84	Largybeg		OS 1st ed		NS 0534 2367		Building	Eroding	18th-20th C	Monitor
85	Largybeg	NS02SE 1	NMRS	4691	NS 0537 2332		Stone Setting; Cists	Fair	Unknown	Nil
86	Branch: Largybeg Point	NS02SE 8001	NMRS		NS 054 233		Shipwreck	Unknown	1878	Nil
87	Eliza Ann: Porta Leacach	NS02SE 8006	NMRS		NS 05 24		1	Unknown	1883	Nil
88	Largymeanoch		OS 1st ed		NS 0490 2431		Buildings; Enclosures	Good	18th-20th C	Nil
89	Largymeanoch		OS 1st ed		NS 0493 2436		Malt Kiln	Poor	Unknown	Survey
90	Largymeanoch		Field walking		NS 0504 2436		Wall	Fair	18th-20th C	Nil

91	Largymeanoch		OS 1st ed		NS 0486 2445		Buildings; Enclosures	Good	18th-20th C	Nil
92	Largymeanoch		Field walking		NS 0500 2459		Wall	Good	18th-20th C	Nil
93	Largymeanoch		OS 2nd ed		NS 0490 2468		Quarry	Unknown	Unknown	Nil
94	Largymore		OS 1st ed		NS 0467 2510		Well	Unknown	Unknown	Nil
95	Glenashdale Burn	NS02NW 24	NMRS	12694	NS 047 253		Findspot	Unknown	Unknown	Nil
96	Whiting Bay	NS02NW 8	NMRS		NS 0456 2542		Findspot	Unknown	Unknown	Nil
97	Silverbank	NS02NW 50	NMRS		NS 0455 2546	Listed C(s) HBNum 6791	Residential	Good	19th C	Nil
<b>98</b>	Watts Hotel	NS02NW 54	NMRS		NS 0451 2570		Residential	Good	18th-20th C	Nil
99	Whiting Bay		OS 2nd ed		NS 0457 2576		Milestone	Fair	18th-20th C	Nil
100	8.,	NS02NW 8004	NMRS		NS 046 260		Shipwreck	Unknown	18th-20th C	Nil
101	Post Office, Whiting Bay	NS02NW 52	NMRS		NS 0452 2612		Commercial	Good	18th-20th C	Nil
102		NS02NW 51	NMRS		NS 0448 2612	Listed C(s) HBNum 6789	Recreation	Good	20th C	Nil
	Whiting Bay	NS02NW 41	NMRS		NS 0456 2617		Village	Good	Unknown	Nil
104	Arnhall Lodge	NS02NW 42.01	NMRS		NS 0460 2653	Listed C(s) HBNum 6772	Residential	Good	19th C	Nil
105	Arnhall	NS02NW 42.00	NMRS		NS 0456 2658	Listed B HBNum 12887	Residential	Good	19th C	Nil
106	St Columbas	NS02NW 49	NMRS		NS 0462 2666	Listed B HBNum 6790	Residential	Good	19th C	Nil
107	Former Parish Church, Whiting Bay	NS02NW 48	NMRS		NS 0464 2671	Listed C(s) HBNum 6787	Church	Good	1873	Nil
108	Magdala	NS02NW 58	NMRS		NS 0456 2675		Residential	Unknown	18th-20th C	Nil
109	Grange House Hotel	NS02NW 46	NMRS		NS 0464 2682	Listed B HBNum 6785	Residential	Good	1896	Nil
110	Cameronia Hotel	NS02NW 45	NMRS		NS 0463 2692	Listed C(s) HBNum 6784	Residential	Good	1900s	Nil
111	Burlington House	NS02NW 44	NMRS		NS 0463 2694		Residential	Good	1900s	Nil
112	Invermay Hotel	NS02NW 47	NMRS		NS 0464 2697		Residential	Good	1903	Nil
113	Knockankelly	NS02NW 6	NMRS		NS 0472 2728		Cist; Urn	Unknown	Unknown	Nil
114	War Memorial, Whiting Bay Church	NS02NW 57	NMRS		NS 0472 2727	Listed C(s) HBNum 6788	War Memorial	Good	1920s	Nil

115	Whiting Bay Church	NS02NW 56	NMRS		NS 0473 2728	Listed B HBNum 6792	Church	Good	20th C	Nil
	Whiting Bay Church Manse	NS02NW 55	NMRS			Listed C(s) HBNum 6793	Residential/Manse	Good	20th C	Nil
	Knockankelly		OS 1st ed		NS 0486 2737		Ford	Unknown	Unknown	Nil
	Knockankelly		OS 1st ed		NS 0497 2745		Building; Enclosure	Unknown	Unknown	Nil
	Knockankelly		OS 1st ed		NS 0502 2749		Well	Unknown	Unknown	Nil
	Knockankelly		OS 1st ed		NS 0505 2750		Building; Enclosure	Unknown	Unknown	Nil
	Kingscross		Field walking		NS 0548 2779		Wall	Fair	Unknown	Monitor
122	Kingscross	NS02NE 1	NMRS	4658		Scheduled 3379	Dun	Fair	1st Mill BC-5th C AD	Nil
123	Kingscross Point	NS02NE 2	NMRS	4660		Scheduled 3379 (with above)	Standing Stone	Fair	4th-3rd Mill BC	Nil
124	Kingscross Point	NS02NE 3	NMRS	4661		Scheduled 3379 (with above)	Cairn; Viking Burial; Coin	Fair	800s	Nil
125	Kingscross Point		Field walking		NS 0562 2830		Observation post	Poor	20th C	Nil
	Acorn: Kingscross Point	NS02NE 8006	NMRS		NS 056 283		Shipwreck	Unknown	1889	Nil
127	Kestrel: Kingscross Point	NS02NE 8010	NMRS		NS 056 283		Shipwreck	Unknown	1886	Nil
	Lady Mary: Kingscross Point	NS02NE 8011	NMRS		NS 056 283		Shipwreck	Unknown	1880	Nil
	Jean: Kingscross Point	NS02NE 8022	NMRS		NS 056 283		Shipwreck	Unknown	1887	Nil
	Baltic: Kingscross Point	NS02NE 8030	NMRS		NS 056 283		Shipwreck	Unknown	1876	Nil
	Lucy: Kingscross Point	NS02NW 8003	NMRS		NS 056 283		Shipwreck	Unknown	1891	Nil
	William Hill: Kingscross Point	NS02NW 8005	NMRS		NS 056 283		Shipwreck	Unknown	1878	Nil
	Dundyvan: Kingscross Point	NS02NW 8006	NMRS		NS 056 283		Shipwreck	Unknown	1873	Nil
	Kingscross Point		Field walking		NS 0562 2831		Defences	Good	20th C	Survey
	Kingscross Point		Field walking		NS 0558 2832		Wall	Fair	Unknown	Nil
	Kingscross Point		Field walking		NS 0544 2833		Boathouse	Fair	18th-20th C	Nil
	Point House		Field walking		NS 0523 2847		Boathouse	Fair	18th-20th C	Nil
	Kingscross		Field walking		NS 0508 2846		Jetty/slipway	Fair	18th-20th C	Nil
	Kingscross		Field walking		NS 0492 2853		· ·	Eroding	Unknown	Monitor
	Kingscross		OS 2nd ed		NS 0475 2867		Jetty	Fair	18th-20th C	Nil
	Kingscross		Field walking		NS 0464 2874		Trackway	Eroding	Unknown	Monitor
142	Kingscross		Field walking		NS 0443 2888		Slipway	Fair	Unknown	Nil

143	Unknown: Lamlash Bay	NS02NW 8001	NMRS		NS 0454 2887		Shipwreck	Unknown	18th-20th C	Nil
144	Gortonallister		Field walking		NS 0407 2923		Breakwater	Poor	Unknown	Nil
145	Gortonallister		Field walking		NS 0355 2963		Breakwater/ Quay	Fair	Unknown	Nil
146	Whitehouse Lodge	NS03SW 74	NMRS		NS 0258 3090	Listed C(s) HBNum 13451	Residential	Good	19th C	Nil
147	Lamlash	NS03SW 41	NMRS		NS 0256 3093		Cross	Fair	Unknown	Nil
148	Lamlash and Kilbride Parish Church	NS03SW 50	NMRS		NS 0256 3093	Listed A HBNum 13441	Church	Good	1886	Nil
149	Lamlash and Kilbride Parish Church Hall	NS03SW 75	NMRS		NS 0254 3096	Listed B HBNum 13447	Hall	Good	1880s	Nil
150	Bellhaven	NS03SW 77	NMRS		NS 0257 3096	Listed C(s) HBNum 12885	Residential	Good	1808	Nil
151	1-27 Hamilton Terrace	NS03SW 51 NS03SW 103- 128	NMRS		NS 0265 3109	Listed A HBNum 13234	Residential	Good	19th C	Nil
152	Clearances Monument	NS03SW 62	NMRS		NS 0267 3107		Monument	Good	18th-20th C	Nil
153	Lilybank	NS03SW 70	NMRS		NS 0274 3114		Commercial	Good	18th-20th C	Nil
154	Lamlash Pier	NS03SW 61	NMRS	42921	NS 0296 3122	Listed B HBNum 13449	Pier	Good	19th C	Nil
155	Craft Shop	NS03SW 80	NMRS		NS 0289 3129 (0283 3122?)	Listed B HBNum 13310	Commercial	Good	19th C	Nil
156	The Lookout	NS03SW 63	NMRS				Residential; Commercial	Good	19th C	Nil
157	Lamlash	NS03SW 57	NMRS	42924	NS 0287 3131		Village	Good	Unknown	Nil
158	Sea Gate	NS03SW 73	NMRS		NS 0304 3137	Listed C(s) HBNum 13450	Residential	Good	1902	Nil
159	Former Pier House and Clock Tower	NS03SW 76	NMRS		NS 0304 3140	Listed B HBNum 13439	Residential	Good	1885	Nil

160	Marine House Hotel	NS03SW 60	NMRS		NS 0313 3166		Residential; Commercial	Good	18th-20th C	Nil
161	Arts Centre	NS03SW 78	NMRS		NS 0322 3176	Listed B HBNum 12994	Recreation/Church	Fair	1885	Nil
162	Manse	NS03SW 71	NMRS		NS 0323 3178	Listed B HBNum 13438	Residential	Good	1898	Nil
163	Lamlash	NS03SW 43	NMRS		NS 032 318		Findspot	Unknown	Unknown	Nil
164	Lamlash		OS 1st ed		NS 0331 3191		Well	Unknown	Unknown	Nil
165	Lamlash	NS03SW 6	NMRS		NS 0335 3189		Viking Burial	Unknown	8th C	Nil
166	Lamlash		OS 1st ed		NS 0335 3193		Footbridge	Unknown	Unknown	Nil
167	St Brides	NS03SW 66	NMRS		NS 0345 3197		Residential	Good	18th-20th C	Nil
168	Seafield	NS03SW 52	NMRS		NS 0347 3198	Listed B HBNum 12886	Residential	Good	18th-20th C	Nil
169	Clauchlands Point		Field walking		NS 0525 3287		Enclosure	Fair	18th-20th C	Survey
170	Harriet Julia: Clauchlands Point	NS03SE 8011	NMRS		NS 056 327		Shipwreck	Unknown	1891	Nil
171	Choice: Clauchlands Point	NS03SE 8023	NMRS		NS 056 327		Shipwreck	Unknown	1889	Nil
172	Elizabeth: Hamilton Isle	NS03SE 8025	NMRS		NS 056 327		Shipwreck	Unknown	18th-20th C	Nil
173	Oimara: Clauchlands Point	NS03SE 8026	NMRS		NS 056 327		Shipwreck	Unknown	18th-20th C	Nil
174	Elizabeth McClure: Hamilton Isle	NS03SE 8008	NMRS		NS 057 327		Shipwreck	Unknown	1891	Nil
175	Clauchlands Point		Field walking		NS 0556 3287		Observation Post	Good	20th C	Survey
176	Clauchlands Point		Field walking		NS 0560 3287		Plinth	Fair	18th-20th C	Survey
	Clauchlands Point	NS03SE 4	NMRS	4745	NS 056 329		Fort (possible)	Unknown	Unknown	Nil
178	Clauchlands Point		Field walking		NS 0560 3292		<b>Observation Post</b>	Good	20th C	Survey
179	Clauchlands Point		Field walking		NS 0556 3292		Quarry	Good	20th C	Nil
180	Clauchlands Point	NS03SE 10	NMRS	50760	NS 0557 3293		<b>Observation Post</b>	Unknown	20th C	Nil



Plate 1 - General view of Kintyre coastline from Sgier na h-Ighiam.



Plate 2 - View of Saddell Castle from Saddell Bay, Kintyre. (Site 117, Map 9)



Plate 3 - View of Island Muller with causeway visible to right of picture, Kintyre. (*Site 173, Map 11*)



Plate 4 - Stone Jetty in Ardnacross Bay, Peninver, Kintyre. (Site 159, Map 11)

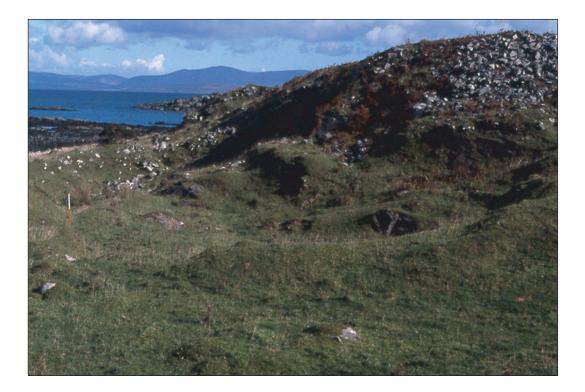


Plate 5 - Quarries or structures below the fort at Kildonald Point, Kintyre. (*Site 137, Map 10*)



Plate 6 - Anti Aircraft Battery, Kintyre. (Site 174, Map 11)



Plate 7 - View of the Arran coastline around Kingscross Point.



Plate 8 - Erosion section at mouth of Slidderywater Foot, Arran.



Plate 9 - Close up of watch tower at Kildonan, Arran (*Site 66, Map 5*) .



Plate 10 - The Dun at Kingscross Point, Arran. (Site 122, Map 7)



Plate 11 - Possible remains of an anchor on Drumadoon Bay, Arran. (Site 2, Map 1)  $\therefore$ 



Plate 12 - Drilled stones along coastline, Arran. (*Site 16, Map 1*)