



Scottish Natural Heritage  
Dualchas Nàdair na h-Alba

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RINNS OF ISLAY  
Site of Special Scientific Interest

## SITE MANAGEMENT STATEMENT

Site code: 1354

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### Purpose



This is a public statement prepared by SNH for owners and occupiers of the SSSI. It outlines the reasons it is designated as an SSSI and provides guidance on how its special natural features should be conserved or enhanced. This Statement does not affect or form part of the statutory notification and does not remove the need to apply for consent for operations requiring consent.

We welcome your views on this Statement.  
This Statement is available in Gaelic on request.

Natural features of Rinns of Islay SSSI	Condition of feature (date monitored)	Other relevant designations
Dalradian geology	Not yet assessed	
Coastal geomorphology of Scotland	Unfavourable, declining (June 2006)	
Blanket bog	Unfavourable, no change (November 2005)	RAMSAR
Machair	Unfavourable, no change (July 2009)	
Maritime cliff	Unfavourable, recovering (July 2009)	
Sand dune	Unfavourable, recovering (July 2009)	
Scrub	Favourable, maintained (July 2004)	
Breeding bird assemblage	Favourable, maintained (June 2008)	RAMSAR
Chough ( <i>Pyrrhocorax pyrrhocorax</i> ), breeding	Unfavourable, declining (May 2010)	SPA
Corncrake ( <i>Crex crex</i> ), breeding	Favourable, maintained (June 2007)	SPA
Greenland barnacle goose, ( <i>Branta leucopsis</i> ), non-breeding	Favourable, maintained (March 2003)	

table continued overleaf

Greenland white-fronted goose ( <i>Anser albifrons flavirostris</i> ), non-breeding	Favourable, maintained (March 2009)	SPA, RAMSAR
Hen harrier ( <i>Circus cyaneus</i> ), breeding	Favourable, maintained (July 2006)	SPA
Whooper swan ( <i>Cygnus cygnus</i> ), non-breeding	Favourable, maintained (March 2009)	SPA, RAMSAR
Beetle assemblage	Favourable, maintained (June 2010)	

<b>Features of overlapping Natura sites that are not notified as SSSI natural features</b>	<b>Condition of feature (date monitored)</b>	<b>Designation (SAC or SPA)</b>
Marsh fritillary butterfly ( <i>Euphydryas (Eurodryas, Hypodryas) aurinia</i> )	Favourable, maintained (September 2007)	SAC
Chough ( <i>Pyrrhocorax pyrrhocorax</i> ), non-breeding	Unfavourable, declining (October 2010)	SPA
Common scoter ( <i>Melanitta nigra</i> ), breeding	Unfavourable Declining (July 2008)	SPA

### **Description of the site**

The Rinns of Islay SSSI lies on the west coast of Scotland on the western peninsula of the island of Islay with much of the area exposed to the Atlantic Ocean.

The SSSI is characterised by a mosaic of intermixed moorland habitats incorporating a variety of peatlands, wetland, grasslands and coastal habitats. Many of these habitats have been created by man's activities throughout history, with traditional, extensive farming being the most important influence. The coast has a rugged, rocky shoreline occasionally interrupted by sandy embayments, often with dunes and machir.

The diversity and quality of habitats has contributed to the presence of breeding and wintering bird species. The site is contiguous with 3 other SSSIs and many of the habitats and species supported within the Rinns of Islay SSSI overlap with these sites. Significant areas of open water, such as Lochs Gorm and Corr add further interest.

### **Dalradian geology**

Coastal outcrops in the Rinns of Islay SSSI, between Bun na h-Aibhne (just south of Eilean Liath) and Eilean Nòstaig in the north, form the majority of the almost continuous exposure of Colonsay Group rocks on Islay.

In the southernmost end of the SSSI, south-west of Kilchiaran Bay, outcrops of igneous rocks which have been greatly altered by heat and pressure are separately assigned to the Rhinns Complex. These metagabbros and metasyenites have been interpreted as a unique fragment of the oldest basal rocks (or basement) in the area. Their complicated contact with the younger Colonsay Group has been interpreted as a major shear zone formed during continental collision.

The Colonsay Group outcrops show apparently continuous successions through rocks which originated as sea-floor muds and sands and were then altered by heat and pressure. They are assigned to many geological Formations of grit, phyllite and greywacke within two major successions. However, the outcrop pattern reflects deformation into large-scale upright folds trending northeast-southwest, meaning that repetition of rock types along the coast may have been mis-identified as separate Formations.

The Rhinns Complex appears to occur only on Islay, and in Britain the Colonsay Group outcrops only in western Islay and on Colonsay and Oronsay. However both have similarities in rock type and age to rocks of North America, Greenland and northern Europe dated at over 440 million years old. Ongoing research has been unable to establish their relationship with Dalradian Supergroup rocks, which represent the former Caledonian mountain belt elsewhere in south-west Scotland (including Islay outwith the Rinns). The combination of the Rhinns Complex, Colonsay Group and their contact zone makes the rocks of the site profoundly important in understanding how the Caledonian mountain belt was formed by complex continental collisions.

### **Coastal Geomorphology**

The coastal geomorphological interests at the Machir Bay Geological Conservation Review (GCR) site are of exceptional interest. This highly dynamic coastal dune system extends from the exposed Atlantic coast and extends inland to an altitude of 60m above sea level. The fully developed dune system contains a wide range of features including low embryo dunes, an active foredune ridge, multi-ridged mature sand dunes, redepositional sandhills and an extensive machair surface. The machair surface partially drapes a number of topographical features including a series of emerged marine beaches, glacial deposits, rock debris and a rock plateau. The complex machair and dune landforms reflect the interaction of windblown sands, subsurface geomorphology, hydrology and the dominance of north-westerly winds. The coastal habitats reflect these underlying processes and influence them through feedback mechanisms.

Although the beach is relatively robust many of the other landforms are sensitive to changes in sediment supply and also to operations that alter the vegetation cover. The current unfavourable condition of the geomorphology is partly due to previous damage and partly due to the livestock density necessary to benefit the Special Protection Area (SPA) chough feature. The balance between these two features is being monitored.

### **Blanket bog**

The peatland habitats are largely dependent on the water table being maintained close to the land surface by the high rainfall supplied by the island's oceanic climate and the input of few nutrients. A rich peatland flora has developed in which the bog-building *sphagnum* mosses form a key part.

Human activities such as drainage, peat cutting, grazing and uncontrolled burning can all lead to habitat degradation by drying out the peatlands' soils. However, extensive (rather than intensive) grazing can help to maintain the vegetation communities present as well as provide suitable hunting for a wide range of raptors.

Sample cores and pollen analysis from the peat at Cultoon Bog show which plants and trees had colonised after the last ice advances. This is therefore of significant value to environmental historical research.

The unfavourable condition of the bog is due in part to previous damage and also to the random location of survey sites in this large area not finding the best bog areas. Further monitoring will help inform us of the condition and location of the best bogs.

### **Machair**

These low-lying plains have been made more fertile by sand being blown over from the shore. Where mostly shell sand is blown over, this gives lime-rich sandy soils which provide a rich habitat. The extensive grasslands at Machir Bay which are on gently sloping calcareous fixed-dunes, are botanically rich as well as forming important feeding ground for birds. Lossit Bay grassland is steeper around a large area of bare windblown sand, and Smuill has machair grassland towards Gleann Deas.

The machair is in unfavourable condition as invasive species are present and the grazing levels are high. The presence of vegetation, uncharacteristic of Machair, is due in part to agricultural management and attempts to stabilise blow-outs. Cough favour the short sward height and the out-wintering of the cattle. Habitat for the corncrake is also provided, for example, in nettle patches. As old management agreements expire, any new management being discussed and put in place will take into account the coastal features as well as the priority species. As this occurs it is hoped that the condition of the coastal features shall improve.

### **Maritime cliff**

The maritime cliff feature includes a range of vegetation communities which vary with soil type, stability and water sources as well as with exposure to the sea.

The tall cliffs on exposed western shores, such as at Lossit Point, feel the influence of salt spray well inland, resulting in some short maritime grassland. On the cliff slopes, vegetated ledges are found with Scotch lovage *Ligusticum scoticum*, roseroot *Sedum rosea*. As the steeper cliffs can often be left un-grazed, they can be important botanical refuges as well as support small colonies of breeding sea birds.

The headland at the south end of the Rinn of Islay has impressive geos (narrow coastal inlets bordered by steep cliffs) and much exposed rocky shore. Rubha na Faing is so exposed to westerly wind, wave and salt that vegetation is wave-cut well back from the shoreline. The more sheltered north facing slopes of the headland have coastal heath with a low carpet of ling heather *Calluna vulgaris*, sea plantain *Plantago maritima* and herbs. Where the cliff top is very wet, sedge-rich flushes may be found. Along the cliff edges, species such as sea milkwort *Glaux maritima*, sea arrowgrass *Triglochin maritimum* and slender spike-rush *Eleocharis uniglumis* indicate some perched saltmarsh (saltmarsh in a splash zone on the top of a cliff).

The shoreline near Wester Ellister is relatively sheltered. The cliff top habitat here is tall, lightly-grazed maritime grassland with herbs such as meadowsweet *Filipendula ulmaria* and wild angelica *Angelica sylvestris*. Patches of coastal heath are found on the rocky outcrops and some sea thrift *Armeria maritima* maritime grassland grows along the seaward margin.

The cliffs are in unfavourable condition, with some overgrazing and bracken encroachment. Short sward is necessary at the site and efforts are being made to balance the features' management. As agreements are modified, there should be further improvement in the cliff feature whilst still protecting the priority species.

### **Sand dunes**

Dunes are found at Claddach (not intact), Lossit Bay (very active), Machir Bay, Smaull and Sanaigmore. Sand dunes develop when windblown sand is trapped behind debris or deep-rooting marram grass *Ammophila arenaria*. The youngest dunes, most vulnerable to human disturbance, are found by the beach and the oldest, furthest inland. Dunes are naturally well-drained, so any moisture in the top meter of the sand is only held by the network of plant roots. In areas where the wind erodes the sand down to the water table, dune slacks form (damp hollows). These may only be apparent in the wetter winter months.

Plants that grow on the shell sand need to be able to tolerate the alkaline, calcareous soil. Hence, many of the plants on this habitat are rare in the rest of Britain. The oyster plant *Mertensia maritima* is in decline nationally, but can be found here on the beach. In the shifting sands of the smaller and more mobile dunes, specialist plants such as sea holly *Eryngium maritimum* and sea spurge *Euphorbia paralias* are found. Further inland, as the chemical and physical nature of the soil alters and conditions become less harsh, a flower-rich dune grassland forms.

The dunes are in unfavourable condition but recovering, and as management agreements are renewed they try to balance the dune feature against the priority species found there.

### **Scrub**

Examples of relict semi-natural woodlands occur on the Rinns of Islay include the ancient willow scrub woodlands which are a distinctive feature of Islay and Jura. Many of these patches have a long history and were shown on the 1<sup>st</sup> edition 1860 maps. The Rinns of Islay woods, unusually, contain the eared willow *Salix aurita*, whereas elsewhere in Argyll, a grey sallow *Salix cinerea* habitat is more common.

The scrub at Dun Bhar-a-chlaom is dominated by eared willow, with occasional birch *Betula pubescens* and rowan *Sorbus aucuparia*, and patches of blackthorn *Prunus spinosa* and hazel *Coryllus avellana*. The ground flora under the scrub is mainly grassy, with ferns and herbs and the wood is rich in bryophytes and lichens. The scrub has quite an oasis of species in contrast to the surrounding exposed and species-poor wet heath. Both birds and animals use the cover it provides.

### **Breeding bird assemblage**

Due to the diversity and mosaic of habitats, the site has a wide assemblage of birds, including common and arctic terns, raptors such as merlin, golden eagle and short-eared owl and wader species like curlew, redshank and dunlin.

### **Breeding chough**

The chough is a rare member of the crow family and Islay is the Scottish stronghold of this species. A mosaic of habitats created by low intensity agricultural practices, combined with the areas of dune grassland and machair, provides foraging sites close to

nest sites. The area is of importance for birds throughout the year. The non-breeding chough, which forage in the SSSI, roost and winter at Kilchoman and at nearby Ardnave. Although the chough population is in unfavourable condition, there are a number of management agreements in place to promote recovery.

A range of conservation management measures are recommended in The population ecology and conservation of red-billed choughs in Scotland, Reid J. *et al.* (Aug 2009). Given the importance of the Islay chough populations, and the potential for population decline if low survival rates continue, it is recommended that these management recommendations form the basis of a management review.

### **Breeding corncrake**

Habitat for the corncrake is found on agricultural land, such as tall pasture and arable fields. Iris, nettle and cow parsley provide some early cover for them before they move into hay and silage fields to nest. This species is also an SPA feature.

### **Greenland barnacle goose**

The site is of national importance for over-wintering barnacle geese population from Greenland. The geese winter on grassland pastures, with the areas of arable land on the Rinns of Islay provide feeding for all species of geese throughout the winter.

### **Greenland white-fronted goose**

The site is also of international importance for the over-wintering Greenland sub-species of the white-fronted goose. They feed on grasses and sedges and the Rinns of Islay provides a feeding and roosting site for them. This species is an SPA feature.

### **Breeding hen harrier**

Of all the birds for which the overlapping SPA is designated, hen harriers are the only raptor species (or bird of prey). They hunt mostly small creatures such as voles and pipits on moorland and rough grazing land, and usually nest in deep, old heather.

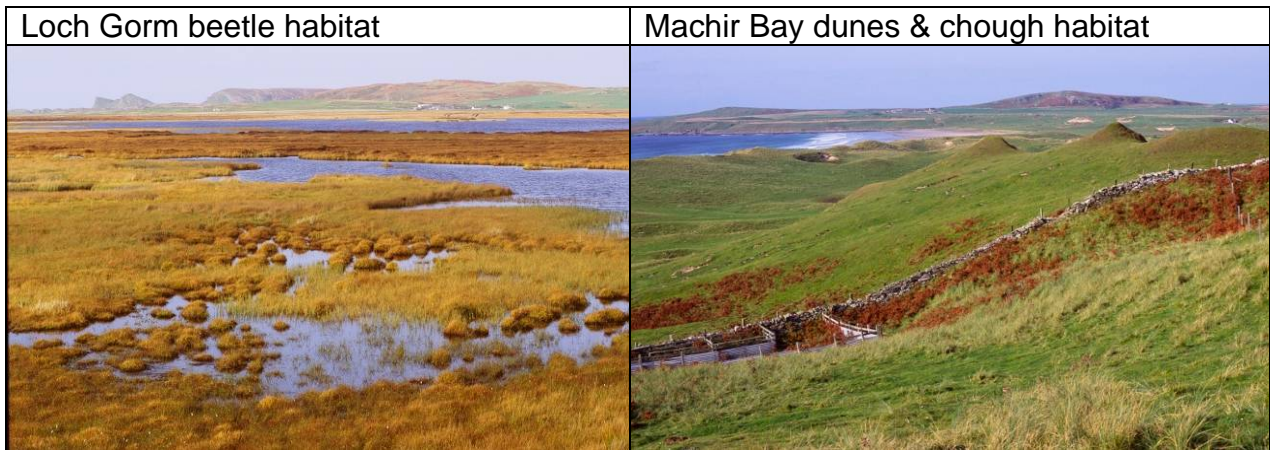
### **Whooper swan**

These birds are winter visitors to the UK from Iceland using estuaries and wetlands on their migration and as roost sites. The migrant population and small breeding numbers contribute to it being an SPA feature. The average peak count was 59 birds, 2005-9.

Outside the breeding season, the species is highly sociable and congregates into winter flocks, roosting on areas of open water near their feeding areas. Low-lying coastal agricultural land and wet pasture is now also used. The birds are mostly herbivorous but young birds will take insects and adults may supplement their diet by eating mussels.

### **Beetle assemblage**

Significant areas of open water, such as Lochs Gorm and Corr, have large numbers of invertebrate species, including several species of whirligig beetles and the yellow-legged reed beetle, *Donacia clavipes*. The assemblage of 27 water beetles or *Coleoptera* in Loch Còrr is very special and peculiar to extreme western "Atlantic" lakes, similar to those in Ireland. Some of the best habitat is in the fens and swamp vegetation on the western loch edge. Current management is providing appropriate water quality and conditions.



### Non notified features

The area is also in an SPA for common scoter. The common scoter is a nationally-threatened UK diving duck (the only species of waterfowl to be red-listed) because of its small and declining breeding population. The whole British population of ~50 females is in Scotland, breeding on freshwater lochs. They feed on insect larvae, fish eggs and the seeds of water plants.

The ducks are in unfavourable condition, still in decline, with more information needed on their limiting factors. There can be limited food available, such as at fish-stocked lochs and, as the population is so low, predation can take a huge toll.

The marsh fritillary butterfly has strong colonies in damp grasslands in several parts of the site. The Rinns of Islay is a Special Area of Protection (SAC) because of the importance of the site for the butterfly within Europe. Grazing plans with low intensity or winter grazing can assist the butterflies.

The Rinns of Islay is further listed on the Convention on Wetlands of International Importance as a Ramsar site for its blanket bog, breeding bird assemblage, Greenland white-fronted goose and whooper swan features.

### Past and present management

Agriculture has always been the main land use on the Rinns of Islay. In the past, farming was more crofting based and used more labour than the current systems. Cattle were the main livestock and haymaking for their winter keep was a common practise. There were also cropping areas for oats and potatoes. Considerable areas of blanket bog were drained to increase the area of land available for grazing. Peat was the main source of domestic fuel and areas of bog were cut for this purpose.

At present parts of the Rinns of Islay SSSI are subject to a number of management agreements with SNH and SRDP contracts. The size and complexity of the site and the diversity of conservation interests on the site, make defining a concise management policy difficult. The individual management requirements of the habitats and species of interest interact and work at a range of spatial scales. The key will be to maintain a holistic perspective as individual decisions affecting the overall management are made.

## **Agriculture**

Pastoral and dairy farming is currently the main land use on the Rinns of Islay. Agriculture is increasingly capital intensive here and silage fields have become much more prominent in the more fertile areas. A number of the smaller crofts are now integrated into larger farm units. The current trend in livestock market prices is having a heavy impact on farm profitability and may lead to a possible reduction in stock (cattle). Many farms in the area have branched into non-agricultural activities to supplement falling incomes. This diversification includes providing bed and breakfast and other tourist accommodation or organising various recreational activities. The site is included within the Islay Local Goose Management Scheme.

## **Forestry**

Much of the forestry planted since the 1980s has been stunted by exposure and a lack of management. This has had some beneficial side effects for raptors such as hen harrier and short-eared owl which use the areas of open conifer as hunting grounds.

## **Mineral extraction**

A number of small scale operations are extracting sand, gravel and peat from a few locations on the Rinns of Islay.

## **Power generation**

The western coast of the Rinns of Islay has been used for some experimental research into generating electricity from wave power. This has taken the form of wave turbines near Portnahaven. Other offshore wind and tidal power projects are also being developed.

## **Recreation**

There is a considerable amount of recreational use of the Rinns of Islay, although much of this is concentrated on the coast, particularly at the beaches such as Machir Bay. Walkers and birdwatchers make use of many areas, but this is at a fairly low intensity and predominantly in the summer months. Lochs Gorm and Gearach are used for recreational fishing during May - September. There are no large estates on the Rinns of Islay, but a number of managed shoots occur and clay pigeon shoots are held occasionally.

## **Dune, machir and geomorphology management**

Management agreements have been used on a geomorphologically important area where there are several competing interests and damage occurring to some features.

After large dune blow-outs occurred due to high stocking levels, a dune stabilisation scheme was instigated and monitoring also began. Sand-dune and dune-slack vegetation benefited most from a seasonal cattle grazing regime, with a cessation of grazing during the summer months.

## **Objectives for Management**

We wish to work with the owners and occupiers to protect the site and to maintain and where necessary enhance its features of special interest. SNH aims to carry out site survey, monitoring and research as appropriate, to increase our knowledge and understanding of the site and its natural features and to monitor the effectiveness of management agreements.

The EU Habitats and Birds Directives oblige Government to avoid, in SACs and SPAs, the deterioration of natural habitats and the habitats of species, as well as disturbance of the species for which the areas have been designated, where such disturbance could be significant in relation to the objectives of these Directives. The objectives below have been assessed against these requirements. All authorities proposing to carry out or permit to be carried out operations likely to have a significant effect on the European interests of this SSSI must assess those operations against the relevant Natura conservation objectives (which are listed on our website through the SNHi – SiteLink facility).

### **1. Maintain the extent and visibility of the Dalradian rock exposures through continued exposure to waves and weather.**

There are no current management operations adversely affecting this feature (during NCA review).

### **2. The geomorphological and coastland habitat interest are linked. Allow natural evolution of the systems wherever possible.**

Maintain the range and quality of beach, sand-dune, dune-slack and machair communities and the links between them all. While occasional blow-outs are part of the natural process, management should be reviewed if the machair-dune complex enters into a phase of widespread instability.

Maintain the visual integrity of the geomorphology landforms as the landscape shapes are part of the protected feature. Any visible dumped material should be cleaned up (if this can be achieved without significant further damage to the landforms).

Within the Machir Bay GCR site there should be no unconsented tipping, tree-planting, excavations, construction of structures; or other changes which might adversely affect the feature now or in the future. The natural coastal processes should be unimpeded, so there should be no extraction or movement of beach or off-shore sediment. Land managers should ensure that agricultural or recreational use of vehicles such as quad bikes is restricted to areas that are not susceptible to erosion.

Management of the area for chough, while the current priority, should not unnecessarily damage the dunes or other interest. The cattle provide short grass and cow pats with invertebrate food for the choughs but the coastal geomorphological interest is vulnerable to trampling. Any supplementary feeding of the cattle necessary may increase local erosion or fertilise the ground and should be confined to agreed sacrifice areas, to leave other areas unaffected.

**3. On the bog habitat, continue the current extensive grazing to maintain the vegetation communities present as well as providing habitat for other species.**

Where possible, avoid activities such as drainage, peat cutting, grazing and uncontrolled burning as these can all lead to habitat degradation by drying out the peatlands' soils. Continue to monitor the condition of the bogs and locate the areas of the best bog habitat within the SSSI.

**4. Manage the Rinns of Islay SSSI for a sustainable mix of scrub and open habitats.**

Remnant semi-natural woodlands often have a rich flora and provide shelter for many species and should be at least maintained at their current extent. Grazing levels are a factor which should be managed to ensure that the woodland structure is maintained.

**5. Maintain suitable habitat for all of the notified, wintering and breeding, bird species within the SSSI.**

Protect nesting and roosting sites. Minimise disturbance of nesting and roosting birds by low-key management of recreation and by giving due consideration to any disturbance effects in management decisions.

Maintain the populations of Greenland white-fronted and Greenland barnacle geese at current levels within limits of acceptable change. These geese are currently managed through the Islay Local Goose Management Scheme.

Promote suitable habitat for whooper swans. Current positive management includes livestock grazing management, water management and active removal of bracken. The low levels of disturbance also aid wintering wildfowl.

Promote the enhancement and extension of existing foraging grounds and nesting sites for chough, particularly by encouraging a range of suitable foraging habitats at a landscape scale. Ideally, each breeding pair should have access to a broad selection of feeding habitats at all times of year. Grazing by cattle at appropriate levels for a short sward and nest site availability are also factors.

Encourage the adoption and continued use of 'corncrake friendly' farming practices on appropriate parts of the site. These include providing early cover, the late cutting of grass crops, providing refuge areas and adjusting crop-cutting patterns.

Manage the heather on higher ground and moors, if required, to regenerate and sustain a varied vegetation structure which benefits birds of prey. The present balance of habitat cover on the Rinns of Islay is generally in favour of the bird species of special interest on the site.

**6. Maintain the condition of the Rinns of Islay lochs for the associated beetle fauna.**

Actions such as new drainage or tree planting could affect the water quality of the lochs' catchments. Continue with the current management, as both Loch Corr and the other Rinns of Islay lochs remain in excellent condition and provide a variety of high-quality water beetle habitat types.

The lochs will also be important for birds, especially common scoter and whooper swan, other invertebrates and plants of open water bodies. Liaison with landowners, local anglers and other users will help minimise potential habitat disturbance.

Date last reviewed: 24 March 2011