

Rathlin Island European Marine Site Management Scheme



RATHLIN ISLAND

EUROPEAN MARINE SITE

MANAGEMENT SCHEME

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PREFACE

This management scheme for the Rathlin Island European Marine Site (EMS) aims to secure compliance with the objectives of the European Habitats and Birds Directives (**Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora and Directive 2009/147/EC on the conservation of wild birds**).

This document presents a range of issues that have been identified by the Department of the Environment (hereafter referred to as ‘the Department’) as potentially important in the context of the Rathlin Island European Marine Site Management Scheme. The Department consulted widely, and took the comments made by a number of competent authorities, non-governmental organisations, stakeholders and the local community into account before publishing this management scheme.

The Department for Regional Development (DRD) chairs both the Rathlin Island Forum and the Rathlin Island Environmental Forum. The Environmental Forum is a sub group of the Rathlin Island Forum, and comprises representatives from the Rathlin Development & Community Association (RDCA) and the island’s main landowners. The EMS Management Group will be established through the implementation of this management scheme.

Ultimately, the intention of the Rathlin Island EMS Management Scheme will be to provide the key management guidance that is applicable to the designated marine areas surrounding Rathlin Island plus areas of the Rathlin Island Special Protection Area (SPA) given the interaction between the birds that use the Rathlin SPA and the EMS.

The completed and formally agreed scheme will not be a statutory instrument but represents a voluntary agreement between those statutory agencies that will implement the scheme and the local communities who use and have a vested interest in the area. It will also assist Departments and Agencies (relevant/competent authorities of operations) in fulfilling their statutory responsibilities as set out by the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (these are better known as the Habitats Regulations) and other relevant documents. The

management scheme also includes a mechanism for monitoring and review which will enable the Department to follow the condition of the EMS and to reconvene a meeting of the key stakeholders if any changes to the EMS scheme are identified as being required in the future.

This document will assist all those presently working for the benefit of Rathlin Island to work together to ensure that the marine nature conservation interest which is an intrinsic part of the island's heritage is sustained for future generations and managed as far as possible in harmony with the socio-economic interests of the area.

The Department's intention is that activities will be managed if they are likely to damage the features for which the site was designated. However, it is preferable if damage can be prevented through voluntary measures such as codes of conduct; other methods of management such as byelaws will only be introduced when voluntary methods do not achieve the desired results.

What is the management scheme and why is it needed?

Rathlin Island is recognised world-wide for its remarkable wildlife and landscape. Its environment is also of immense value to the people who live and work here and who visit the Island for recreation.

Rathlin Island is part of the Europe-wide network of Natura 2000 sites. It has been designated as a Special Area of Conservation and a Special Protection Area under the EC Habitats and Birds Directives respectively. These designations are very significant as they bring with them statutory responsibilities for public bodies to safeguard the nature conservation interests of the site, including the application of the precautionary principle, which states that projects can only be permitted if it has been ascertained that there will be no adverse effect on the integrity of the site. The aim of these designations is to protect the internationally important features of Rathlin Island. This does not mean that we cannot continue to use and enjoy the island's natural resources. The purpose of the management scheme is to highlight how current and future activities might affect the conservation features and how these activities might be managed to minimise their impact.

Who is responsible for the island's management?

Conservation objectives have been identified by the Department and are at the core of the management scheme. Statutory authorities have a legal responsibility to ensure that these objectives are met.

This primarily applies to the Department's Marine Division, Northern Ireland Environment Agency and Planning Division and to Fisheries Division of the Department of Agriculture and Rural Development (DARD) and Moyle District Council.

The RSPB and National Trust have an important practical role in view of their conservation and wildlife monitoring work and their extensive ownership within Rathlin Island. We all have a part to play in this scheme, especially as voluntary codes and good practice can do so much to prevent damage to the island. For example, by keeping dogs on leads and avoiding seals and bird nesting/feeding areas, people can enjoy the Island and its surrounding waters without compromising its incredibly rich and varied birdlife.

The Department for Regional Development (DRD) has outlined its policy for Rathlin Island (http://www.drdni.gov.uk/index/rds2035/rathlin_island_policy.htm) and has developed the Rathlin Island Action Plan 2013-2015 to help deliver the strategic objectives of this policy. There are similarities between the strategic aims of DRD's Rathlin Island Policy and the objectives of the EMS Management Scheme, particularly enhancement of community involvement, improvement of the sustainability of the island community and conservation of the island's environmental heritage. These shared aims and objectives demonstrate the commitment of government Departments to work together to address the challenges faced by the Rathlin Island community.



Church Bay harbour, Rathlin Island
Image credit: Arthur Ward

INTRODUCTION

Rathlin Island lies six miles (10 km) off the north coast of County Antrim, Northern Ireland and 15 miles (25 km) from Scotland's Mull of Kintyre. The island is a very distinctive reverse L shape as it is 6 km (4 miles) from east to west and 4 km (2.5 miles) from north to south.

It is Northern Ireland's only inhabited offshore island with a permanent community of around 100 people. The number of people on the island can, however, rise considerably during the summer season.

Rathlin has been described by many visitors as a "special place"; this feeling of being special may come from its individuality and isolation or from its unique and long history of settlement with its associated diverse cultural landscape or possibly even from its rich and varied wildlife and geology.

Rathlin's wildlife is of both national and international importance. Nationally, the Island is home to important plant communities and species, such as the population of pyramidal bugle *Ajuga pyramidalis*. This is the only population in Northern Ireland and one of only a few in Ireland or the British Isles.

Kebble Area of Special Scientific Interest (ASSI), one of a number on the island, has been declared as an area of national interest due to its heathland, grassland and wetland vegetation. These habitats and associated species tend to occur only where traditional farming practices have been maintained and are therefore consequently rare within the rest of Northern Ireland.

Internationally, Rathlin is important for both its seabird communities and its marine life. In summer, the sea cliffs and sea stacks provide nesting sites for a variety of seabird species. There are three species of breeding seabird whose numbers reach internationally important numbers: guillemots *Uria aalge*, razorbills *Alca torda* and kittiwakes *Rissa tridactyla*.

The sea around Rathlin Island has also gained international recognition for its marine life. The island is surrounded by a wide range of rocky habitats, while strong tidal currents encircle the island and the water temperatures are relatively stable throughout most of the year.

The sea cliffs are made up of contrasting geology of chalk, limestone and basalt and are home to a wide range of maritime vegetation. Some species that occur on these cliffs are scarce in Northern Ireland and include common juniper *Juniperus communis*, Scots lovage *Ligusticum scoticum* and roseroot *Sedum rosea*.

Underwater, the cliffs and sea caves are home to a wide variety of sponges and hydroids. Those sea caves that are only partly submerged by incoming tides also provide secluded spots for grey seals *Halichoerus grypus* to have their pups.

Rathlin Island, along with the Glens of Antrim and the coastal area between Larne and Ballycastle, is also part of the Antrim Coast and Glens Area of Outstanding Natural Beauty (AONB), designated due to these landscapes having natural, built and cultural heritage of a national importance.

The legal framework for a European Marine Site (EMS)

The Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended) defines a European Marine Site (EMS) as a 'European site which consists of, or so far as it consists of, marine areas'.

These Regulations further define a 'marine area' as any land covered (continuously or intermittently) by tidal waters or any part of the sea in or adjacent to the United Kingdom up to the seaward limit of territorial waters (see also DETR, 1998). The precise landward boundary is not defined in detail but is often considered the limit of intermittent cover by tides at the extreme top of the shore.

In essence, therefore, 'European Marine Site' (EMS) is a descriptive term that refers to those marine areas of both Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), which are protected under the EC Habitats and Birds Directives. SACs and SPAs are designated to protect the most seriously threatened species and habitats across Europe. An EMS is not a statutory site designation; instead this is a management unit for those SACs and SPAs which extend beyond the boundary of the ASSI.

The Rathlin Island EMS will contribute to an ecologically coherent network of Marine Protected Areas at Northern Ireland, UK wide and bio-geographic scales.

On land, most SACs and SPAs are underpinned by designation as ASSIs under the Environment (Northern Ireland) Order 2002. These sites are designated for species, habitats and geological features important in a Northern Ireland context. However, legal powers to manage activities within ASSIs do not extend below the low water mark and therefore a different framework is required to protect these marine areas.

In particular, Regulation 28 (NI) of the Habitats Regulations and Regulation 18 of the Offshore Habitats Regulations require that the appropriate nature conservation body communicate the conservation objectives for the site to the relevant/competent authorities. They must also advise the relevant/competent authorities of possible operations or activities which may cause deterioration of the natural habitats, plus the habitats of species, or disturbance of species, for which the European marine site has been designated. In this instance, this responsibility falls to the Department.

The Department intends to use the proposed Northern Ireland Marine Bill to designate a new type of marine protected area, called a Marine Conservation Zone, in order to protect rare, threatened or nationally important marine habitats, species and geological features. This legislation differs from that used to designate ASSIs as it affords protection to the environment below the low water mark.

European Marine Sites in the UK

Throughout the United Kingdom European Marine Sites can range from the sub-tidal to exclusively intertidal areas, and can vary in size from large scale sites (such as Llyn Peninsula and the Sarnau SAC – Gwynedd, North Wales) to relatively small scale (such as Kenfig SAC – Vale of Glamorgan). An EMS can consist of an entire SAC or SPA, or only part of one (if the SAC/SPA also contains a substantial terrestrial element in addition to the tidal or intertidal area) Where there are a number of small adjacent European marine sites these may be grouped together for the purpose of management (e.g. the Essex Estuaries EMS).

As highlighted, intertidal EMS are often managed through underlying ASSI designations. This is because they lie above the low water mark and are within planning authority boundaries, therefore, they can be managed through the same protection systems as terrestrial European sites (DETR, 1998). However, most

subtidal EMS have limited protection under the Habitats Regulations or Offshore Habitats Regulations.

Establishing a management scheme is optional for both the relevant and competent authorities under the Habitats Regulations and Offshore Habitats Regulations. However, these Regulations do place a general duty of care on all statutory authorities exercising their legislative powers to perform the establishment of these schemes in accordance with the terms of the Habitats Directive.

An EMS management scheme is therefore the best and most productive means to achieve this protection through providing a framework for management and promoting cooperative working between all statutory authorities with a responsibility or interest in the site.



Aerial view of Bull Point, Rathlin Island
Image Credit: DOE (NIEA)

RATHLIN ISLAND EUROPEAN MARINE SITE

The Rathlin Island European Marine Site (EMS) comprises the Rathlin Island Special Area of Conservation (SAC) (which incorporates the Rathlin Island – Coast ASSI plus various features below the mean low water mark) and all lands forming part of the Special Protection Area (SPA), together with the adjoining open area fringe of coastal waters.

The marine SAC and SPA are part of a European wide network of sites - the European Marine Site network - which aims to protect a range of special habitats and species which are important in a European context. The EMS network aims to maintain the European Union's overall biodiversity, or its wealth of wildlife, by ensuring that any developments which take place within an EMS are environmentally sustainable.

While the EU Habitats Directive only allows scientific interests to be taken into account in selecting SACs and SPAs, Article 6 of the Directive recognises the need to take into account the economic, cultural, social and recreational needs of local communities when managing the site. This is particularly important in this instance because a significant proportion of the local population surrounding the SAC is economically reliant on the marine environment to some degree.

The Habitats Regulations require competent authorities to consider the impacts of plans and projects on areas both inside and outside the Rathlin Island SPA/SAC boundary.

Rathlin Island SAC and SPA boundaries



Key elements in the management of a European Marine Site

The Habitats Directive was enacted in Northern Ireland law by the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995, known as The Habitats Regulations. Together, the Regulations and Directive have a number of key elements that apply to this European Marine Site:

1. The site's natural habitats and species of interest will be maintained at **Favourable Conservation Status (FCS)** and steps will be taken as required to avoid any disturbance or deterioration to them. See Annex II.
2. The relevant authorities will **assess activities, plans or projects** in or adjacent to the site that may have a significant effect on the features for which the site was declared.
3. A **monitoring programme** will be established to assess the state of the site and the effectiveness of the management measures. This monitoring programme is carried out by the Department on a 6-yearly rolling cycle.
4. The relevant authorities and stakeholders may work together within a **management group or forum** to develop a management scheme.
5. The management scheme will be incorporated into statutory frameworks such as **local and regional plans**.
6. Spatial protection measures will be consistent with achieving **Good Environmental Status** under **Marine Strategy Framework Directive** for biodiversity of habitats, species and food webs.

The EMS Management Group

The Habitats Regulations maintain that the relevant authorities should work together, ideally within an EMS management group, to develop a single management scheme for any European Marine Site. At present, there is no such management group for Rathlin Island EMS. In order to ensure the implementation of the Rathlin Island EMS Management Scheme it is proposed that a Management Group is set up which will

comprise representatives from various interest groups (i.e. those involved in the development of the management scheme) and others as may be necessary to uphold the aims and objectives of the scheme. This is to ensure that a broad and balanced spectrum of interests would be involved and a reasonable consensus achieved.

The EMS Management Group will be chaired by the Department and will initially convene four times a year to maintain good communications between the authorities which have a statutory requirement to manage the site and the stakeholders who have an interest in the area.

If significant changes are required for the management of the site (e.g. in the light of new information or regulations), extra resources may be required. The EMS Management Group will then work to identify and procure the necessary funding to ensure that all objectives of the scheme are delivered.

Whilst it is the statutory responsibility of the relevant authorities to implement the Habitats Regulations, they will also work with other, non-statutory, members of the EMS Management Group to realise the maximum economic benefit the designation of the site may achieve for the local area and economy.

The EMS Management Group will address the Specific Management Objectives outlined on page 31.

Aims of the Management Scheme

The key aims of this Management Scheme are:

1. To protect the features of interest for which Rathlin Island SAC/SPA qualified as a Natura 2000 site.
2. To minimise disruption to other interests in the area.
3. To promote public awareness of the marine conservation interest of the area.
4. To promote sustainable development that is consistent with the maintenance of the European Marine Site.

It may be necessary to establish topic groups to discuss specific issues and to make recommendations to the EMS Management Group and ultimately the Department. These topic groups would be open to everyone but always have either a member of the Department or the EMS Management Group present and should be chaired independently.

The groups may potentially address issues such as Fishing, Aquaculture, Farming and Land Development, Diving, Tourism and Promotion, Moorings, Monitoring and Science, and Funding. The mechanisms for delivery of actions in relation to the EMS, along with SMART targets, will be devised under the guidance of the EMS Management Group.

The EMS Management Group will, if they consider it necessary, incorporate an ecosystem approach into the EMS-MS by taking activities such as recreation, conservation and economic development into account when considering how best to manage the EMS for the SAC and SPA designated features. Regional and local-scale recommendations can be based on spatial and temporal management tools including voluntary codes of practice, zoning and permits, which will be developed with local stakeholders as part of participatory management. However, a full ecosystem approach is likely to be difficult because global-scale threats such as climate change will need to be addressed at the national and international scale.

The possible projected membership of the EMS Management Group is set out in Annex IV.



Diving biologist preparing to survey the marine life of Rathlin Island
Image credit: DOE (NIEA)

EUROPEAN MARINE SITE CONSERVATION FEATURES

The EMS-MS aims to deliver the requirements of the Habitats Directive. Article 2.2 requires habitats and species of Community Interest to be maintained at or restored to Favourable Conservation Status (FCS). Habitats and species of Community Interest are the habitats listed on Annex I of the Directive and the species listed on Annexes II, IV and V of the Directive. See Annex II of this document for more information about FCS.

Special Area of Conservation (SAC) features

The following are descriptions of the features for which Rathlin Island qualified as an SAC.

SAC Annex I habitats present as a primary reason for selection of this site

Reefs

Rathlin Island is surrounded by a wide range of rocky habitats and is one of the best examples of reefs in Northern Ireland. Strong tidal streams prevail around most of the island, and there is little silt. As a result, turbidity is generally low, with the infralittoral extending below 20 m depth, and water temperatures are stable, not rising much above 13°C in the summer. A very wide range of species has been recorded around the island, including a high proportion of species of particular interest. Along the south-west coast there is a very steep slope of large, stable boulders extending below 50 m in places. The boulders support biotopes dominated by the hydroid *Tubularia indivisa* in deeper water and by a diverse assemblage of algae in the shallows. A number of species occur that are rare in Northern Ireland, especially those with south-western distributions, such as the sea-cucumber *Holothuria forskali*, the sponge *Axinella damicornis*, and the red alga *Drachiella spectabilis*. The north-west part of Rathlin Island consists of a shallow shelf 10-100 m wide along the base of the cliffs, followed by a vertical underwater cliff which starts at 20-30 m and descends to over 100 m. The cliffs are formed of both limestone and basalt, and support a rich assemblage of sponges and hydroids. Dominant species

include the sponge *Pachymatisma johnstonia*, the soft coral *Alcyonium digitatum*, the sea squirt *Dendrodoa grossularia* and the hydroid *Tubularia indivisa*. To the north-east, the slope offshore is shallower, with the seabed consisting of areas of bedrock interspersed with stable boulder slopes. Sponges are particularly diverse and abundant. In shallow water there are overhangs and surge gullies with characteristic assemblages of species. The circalittoral zone of the east coast is mostly dominated by rich hydroid and sponge-dominated biotopes on bedrock, boulders, and cobbles, amongst coarse gravel. Frequent components of these biotopes are the hydroids *Polysiphonia flabellata*, *Diphasia alata* and the sponge *Axinella infundibuliformis*.

The 2007 condition assessment survey indicated that this feature was in favourable condition status.

Vegetated sea cliffs of the Atlantic and Baltic coasts

Rathlin Island represents an extensive area of hard cliff along the exposed northern coastline of Northern Ireland. The site exhibits contrasting geology, with Cretaceous chalk overlain by Tertiary basalts. The site consists of very high vertical sea cliffs and sea stacks to the north and east, with more gentle slopes on the eastern coast. As a result of these variations in height and slope, in addition to the diversity of aspects, exposure and rock type, a wide range of maritime cliff vegetation communities is present. Red fescue *Festuca rubra* is often the dominant species in the grassland communities, while heath is also present in some places. Some species recorded for the site are scarce in Northern Ireland, including common juniper *Juniperus communis*, Scots lovage *Ligusticum scoticum* and roseroot *Sedum rosea*.

The cliff structure is critical in the context of the ornithological interest as this provides the necessary nesting habitat to support the breeding seabird populations.

The 2007 condition assessment survey indicated that this feature was in favourable condition status.

Submerged or partially submerged sea caves

Rathlin, situated off the north coast of Northern Ireland, includes well-developed examples of both partially submerged and submerged caves and overhangs in limestone and basalt in a strong tidal stream. Submerged caves occur mainly at depths ranging from 20 m to over 100 m. The site has a rich assemblage of sponges

and hydroids. Species found include the sponges *Stryphnus ponderosus* and *Dercitus bucklandi*, and the anemones *Sagartia elegans*, *Parazoanthus axinellae* and *P. anguicomus*, which are frequent. The site is used by cave-breeding Grey seal *Halichoerus grypus*.

The 2007 condition assessment survey indicated that this feature was in favourable condition status.

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site

Sandbanks which are slightly covered by sea water all the time

Sandbanks which are slightly covered by sea water all the time consist of sandy sediments that are permanently covered by shallow sea water, typically at depths of less than 20 m below chart datum (but sometimes including channels or other areas greater than 20 m deep). The habitat comprises distinct banks (i.e. elongated, rounded or irregular 'mound' shapes) which may arise from horizontal or sloping plains of sandy sediment. The diversity and types of community associated with this habitat are determined particularly by the type of sediment that makes up the bank together with a variety of other physical, chemical and hydrographic factors. These include geographical location (influencing water temperature), the relative exposure of the coast (from wave-exposed open coasts to tide-swept coasts or sheltered inlets and estuaries), the topographical structure of the habitat, and differences in the depth, turbidity and salinity of the surrounding water.

Shallow sandy sediments are typically colonised by a burrowing fauna of worms, crustaceans, bivalve molluscs and echinoderms. Mobile epifauna at the surface of the sandbank may include shrimps, gastropod molluscs, crabs and fish. Sand-eels *Ammodytes* spp., an important food for birds, live in sandy sediments. Where coarse stable material, such as shells, stones or maerl is present on the sediment surface, species of foliose seaweeds, hydroids, bryozoans and ascidians may form distinctive communities. Shallow sandy sediments are often important nursery areas for fish, and feeding grounds for seabirds (especially puffins *Fratercula arctica*, guillemots

Uria aalge and razorbills *Alca torda*) and sea-ducks (e.g. common scoter *Melanitta nigra*).

The 2007 condition assessment survey indicated that this feature was in favourable condition status.

Annual vegetation of drift lines

This habitat type occurs on deposits of shingle lying at or above mean high-water spring tides. These shingle deposits occur as fringing beaches that are subject to periodic displacement or overtopping by high tides and storms. The distinctive vegetation, which may form only sparse cover, is therefore ephemeral and by nature variable from year to year and composed of annual or short-lived perennial species.

The 2007 condition assessment survey indicated that this feature was in favourable condition status.

Special Protection Area (SPA) features

The Rathlin Island Special Protection Area (SPA) is classified as an extension to, and renaming of, the previously classified Rathlin Island Cliffs SPA.

The new site includes the area of coast previously covered by Rathlin Island Cliffs SPA plus an area of sea around the island. The new site boundary is now entirely coincident with the boundary of Rathlin Island SAC. The length of the coastline is approximately 30 km.

The extension includes an area of sea around the island which is used by many of the seabirds which breed around the island's coast. This marine area is used by the seabirds for purposes of display, loafing and preening as well as some feeding although the seabirds breeding at Rathlin can travel considerable distances for the purpose of feeding. Rathlin Island SPA also supports internationally important numbers of the Annex I species peregrine falcon *Falco peregrinus*. In addition, a pair of red-billed chough *Pyrrhocorax pyrrhocorax* (also an Annex I species) regularly breeds within the site. While this is clearly a small population it still contributes to the maintenance of the chough's range in the UK.

Rathlin Island SPA also regularly supports over 20,000 breeding seabirds of national and international importance (the latter including the migratory species razorbill *Alca torda*, common guillemot *Uria aalgei* and black-legged kittiwake *Rissa tridactyla*). In addition to the species named above, other contributing species, in descending numerical order, are Atlantic puffin *Fratercula artica*, northern fulmar *Fulmarus glacialis*, herring gull *Larus argentatus*, lesser black-backed gull *Larus fuscus*, and common gull *Larus canus*.

Annex VII provides further summary information and recent trends for the above species, determined from both national surveys that included Rathlin Island and targeted surveys of the island's seabird communities funded by the Department (NIEA). Further information on these surveys as well as regional and national trends can be found at <http://jncc.defra.gov.uk/page-1550>.

The 2007 condition assessment survey indicated that breeding populations of guillemots, peregrines, razorbills and seabird assemblage were in favourable condition status.

Extension of Rathlin Island SPA

The JNCC SPA extension guidance relevant to Rathlin was for a 1km seaward extension to cover maintenance areas for sites where Razorbill or Guillemot are features, and a 2km extension for sites where Fulmar is a feature. Fulmar is not a selection feature in its own right at Rathlin, but is part of the SPA breeding seabird assemblage feature.

The existing SPA boundary matches the 1km Razorbill and Guillemot extension fairly well, and it exceeds it in places. For Fulmar, although the practice in Scotland and England is to apply the 2km extension even where this species is only a component in a breeding seabird assemblage, on Rathlin 66% of Fulmar nests occur along sections of the coast where the existing SPA boundary approaches or exceeds the 2km boundary.

NIEA has therefore decided to retain the current SPA boundary, but will keep this issue under review. NIEA have informed both the UK SPA and Ramsar Scientific Working Group and the Marine Protected Areas Technical Group of their position.

ISLAND LIFE AND CURRENT ACTIVITIES

Rathlin presently supports a small permanent population of around 100 people. The island experiences a significant seasonal fluctuation of spring and summer visitors between April and October. Rathlin has, however, been settled for the last four thousand years and its population has waxed and waned during this time, rising at one point in the early 18th Century to over 1,200 people.

These generations of islanders have undoubtedly had an effect on both the various terrestrial and marine habitats of the Island over that time. The present population and its summer influx of visitors will continue to be a significant influence on the future of the area.

Coastal development on the island has been limited in recent years to around the harbour and Church Bay area. No major new developments are presently anticipated for the immediate coastal area of Rathlin. However, Providence Resources P.I.c., has recently been offered a frontier exploration licence over six blocks in the Rathlin Basin by the UK Government's Department of Energy & Climate Change (DECC). This licence includes an area of the European Marine Site.

The Crown Estate is presently in negotiation with a number of potential developers for sea bed leases for tidal stream renewable energy devices up to 200 MW in an area off the north east coast of Rathlin Island.



Curled octopus, Church Bay, Rathlin Island
Image credit: National Museums Northern Ireland

NORTH COAST MARINE RANGER

A new DOE Marine Division post, the North Coast Marine Ranger, has been created to cover and raise awareness of the four North Coast SACs – Rathlin Island, Red Bay, Skerries and Causeway and The Maidens. For Rathlin Island, the ranger will be able to provide continuity between the early phase of preparing the management scheme and the implementation phase. He/she will be able to act on behalf of the EMS Management Group as necessary. The role of the marine ranger in relation to Rathlin Island is set out below:

1. To collate relevant information on the working of the management scheme and supply this as an annual report to The Department as lead agency;
2. To observe and report on effectiveness of zoning operations;
3. To ensure birds and seals are protected from disturbance by raising awareness to members of the public, and to gather evidence and preparation of cases for any infringements of the Wildlife (Northern Ireland) Order 1985;
4. To co-ordinate regular wildlife monitoring programmes;
5. To co-ordinate marine mammal strandings with regard to re-flotation or carcass removal for autopsy;
6. To report on any pollution occurrences;
7. To publically engage with visitors to raise environmental awareness;
8. To liaise closely with DARD Fisheries Inspectorate;
9. To help disseminate relevant information from the authorities to local interested parties;
10. To continue to promote Rathlin Island EMS to all interested parties;
11. To liaise with other government and non-governmental conservation bodies, and
12. To deal with issues of non-compliance and enforcement of existing legislation and byelaws.

OBJECTIVES FOR THE EUROPEAN MARINE SITE

There are three sets of objectives for the European Marine Site:

1. The **Conservation Objectives** for the SAC and SPA designations which were drafted by the Department as part of the designation process.
2. The **Economic and Social Objectives** that aim to ensure that the economic, cultural and social integrity of the area is maintained or enhanced by the EMS Management Scheme.
3. The **Specific Management Objectives** which are relevant to the specific conservation issues related to Rathlin Island.

Conservation Objectives

The Conservation Objectives relate to the Department's responsibilities under the Habitats Regulations. They set out the features of the SAC/SPA that need to be maintained in a favourable condition.

Areas of Rathlin Island were selected as a marine SAC and an SPA because they are an outstanding example in a European context of the various qualifying habitat types and the species found there.

It is these habitat types, the species within them and associated processes, which the Conservation Objectives, as summarized below, aim to protect. Subject to natural change, the Department will ensure that the Rathlin Island EMS remains in a favourable condition, such that:

1. The natural environmental and ecological processes are maintained.
2. There is no significant decrease in the population of breeding birds against national trends, caused by on-site factors.
3. The area of natural and semi-natural habitats used by or potentially usable by feature bird species is maintained or enhanced subject to natural processes.

4. The marine area is managed in a sustainable manner that is beneficial to the birds using it.
5. The extent, diversity and species richness of the sub-tidal habitats and their associated communities are maintained.
6. The structure, extent, diversity, species richness and distribution of the reefs and sandbanks and their associated communities are maintained.
7. The extent, diversity and species richness of the vegetated sea cliffs and annual vegetation of drift lines and their associated communities are maintained.

Economic and Social Objectives

Maintenance and development of the economic and social integrity of the island is vital to successful implementation of the Conservation Objectives. The relevant authorities have a legal responsibility to meet the requirements of the Habitats Directive but the management approach should ideally be based on voluntary action and compliance. It is important that a reasonable degree of consensus is achieved amongst all users of the EMS to ensure that this voluntary approach works.

Whilst ensuring that the conservation objectives of the Rathlin Island SAC/SPA are achieved, the economic and social integrity of the adjacent communities should be maintained or enhanced in that:

1. Sustainability will underpin all development and use of the EMS site and the wider ecosystem as required by the Duty for Sustainable Development, provided that it is consistent with the conservation objectives of the site.
2. The promotion and development of local businesses, which can benefit from the SPA and SAC designation, will be encouraged. This will be supported by the North Coast Marine Ranger.
3. Statutory authorities and local stakeholders will work together as much as possible within the structure of an EMS Management Group to achieve the objectives of the management scheme.

4. Statutory authorities and local stakeholders, within the structure of an EMS Management Group, will work to raise awareness of the EMS and the benefits of general marine conservation, and to attract funding as appropriate for future sustainable development of the site.

Specific Management Objectives

The following are a list of management objectives specific to Rathlin Island EMS that the EMS Management Group may wish to consider implementing. This list is not exhaustive and it is important that discussion on the relevant activities and management objectives is fully informed by input from the various stakeholders. The objectives that have associated activities with the potential to damage the EMS are discussed in greater detail in the next section.

1. Control and removal of alien (non-native) mammalian predators, particularly land-based predators, where impact on breeding seabirds may be evident.
2. Zoning/control of recreational boat activity in areas adjoining main seabird colonies during breeding season to limit risk of actual impact and disturbance to seabird rafts.
3. Prevention of dumping of materials in all areas supporting breeding seabirds and peregrine falcon (due to the adverse impact on breeding sites).
4. Control of potentially disturbing activities above nesting locations of feature species during the breeding season (this may require assessment of relevant recreational activities around cliff edge).
5. Signposting of Mill Bay and Rue Point to manage disturbance to seals by unleashed dogs, people throwing stones and sightseeing boats.
6. Establish a highly protected non-disturbance zone off Beirne Point/Damicornis Bay (Stroandergan). The biodiversity of this site is unique because the physical conditions of this area provide a favourable environment for many rare species.

7. The introduction of a ban on mobile fishing gear in specific areas to protect the reef feature (DARD Fisheries Division have already held a public consultation on this).
8. The prevention of the continued systematic destruction of the wrecks of HMS Drake and MV Loch Gary by divers unaware of the historic importance of these wrecks.
9. The potential development of a commercial artisanal hand gathered scallop fishery through seeding an allocated area.
10. Increased promotion of Rathlin Island as a wildlife/ecotourism destination with particular emphasis on the populations of seabird and birds of prey.
11. The development of the Kelp House as a field centre to promote awareness and understanding of Rathlin's important ornithological communities and unique marine biodiversity. This will be carried out in conjunction with the RDCA and the National Trust.
12. The introduction of designated mooring zones for visiting cruise ships and renewable survey vessels.

Current operations that have the potential to be damaging to features of the EMS

In tandem with the conservation objectives, the Department is required to list current operations in the designated area that may need special consideration by the relevant/competent authorities. No management action may be required from statutory authorities or through the voluntary approach unless the features of interest are at risk of damage through this activity.

The list of current potentially damaging operations must take into account any natural fluctuations that may occur and must consider that negative changes to the condition of the features of interest may be subtle and difficult to attribute to any particular activity.

This list consists of operations that have been identified by the Department and that need to be discussed further. It is envisaged that when a Rathlin Island EMS Management Group is established it would take the lead in the discussion surrounding such operations and potential resolution or management of the issues.

In each case a description of the activity or operation has been given, along with the vulnerability and sensitivity of the features of interest to that practice. The Department has put forward an approach that may need to be adopted for each practice, taking into account possible alterations to the features of interest through natural change. It is important that this list is again considered and discussed by each of the various stakeholders or more fully by the Rathlin Island EMS Management Group once established.

Each section contains a table which lists the authorities with roles and responsibilities relevant to that particular area.

Commercial shellfish harvesting by diving

Shellfish harvesting by diving may lead to the deterioration of feature habitats or communities where the target species forms a key component of that community or if destructive methods of collection are used. However, this could be regulated by the designation of a seeded area where permits would be issued for harvesting of scallops by divers. This activity would be managed by the North Coast Marine Ranger, who will also provide advice on best practice.

The Department will encourage recreational divers to abide by the British Sub Aqua Club's Divers Code of Conduct (Annex VIII).

Competent/Relevant Authority	Responsibilities
Department of the Environment (Marine Division)	Provide advice concerning nature conservation interest of marine and coastal areas.
	Responsible for identifying and designating ASSIs, SACs, SPAs and MCZs (under new Marine Bill).
	Responsible for monitoring and assessment of Northern Ireland's classified shellfish waters.

Competent/Relevant Authority	Responsibilities
Department of Agriculture and Rural Development (DARD)	Responsible for agriculture, inshore fisheries management, policy and regulation.
Food Standards Agency NI	Responsible for classification and monitoring of shellfish harvesting areas.
The Crown Estate	Management, stewardship and leasing of foreshore and seabed areas.

Benthic dredging and trawling

Dredge and trawl gear have the potential to cause damage to and deterioration of feature habitats of communities through direct contact as well as sedimentation of adjacent habitats and communities.

DARD proposes to introduce a general prohibition on commercial fishing within the Rathlin Island EMS except by special permit. This would provide protection from the most damaging activities whilst those assessed as not causing a significant impact could continue under the conditions specified in the permit. It is not expected that the EMS Management Group will be required to take further action in relation to this activity.

Competent/Relevant Authority	Responsibilities
Department of the Environment (Marine Division)	Responsible for marine licensing activities under Marine and Coastal Access Act 2009.
	Provide advice concerning nature conservation interest of marine and coastal areas.
	Consulted on trawling applications during public consultation.
Department of Agriculture and Rural Development (DARD)	Responsible for agriculture, inshore fisheries management, policy and regulation.
	Proposing regulations on the restriction of all mobile fishing gear within SAC/SPA due summer 2013.
The Crown Estate	Management, stewardship and leasing of foreshore and seabed areas.

Introduction of non-native species

Non-native species, especially where these are invasive, can alter community structures leading to the deterioration in qualifying feature habitats and communities.

While non-native species such as ferrets and rats have been introduced to the terrestrial area of the SPA, no known non-native species have been introduced to the marine element of the SPA or SAC. The vulnerability and sensitivity of the features of interest need to be assessed on an individual basis where advance knowledge is available. Introduction of non native mammals or other predators is recognised as one of the greatest threats to the maintenance and sustainability of seabird colonies world-wide. Previous methods of ferret and rat control on Rathlin Island have been unsuccessful. The EMS Management Group may choose to recommend methods of control to the Department, who, if necessary, may develop a policy to implement this.

In accordance with Article 15 of the Wildlife (Northern Ireland) Order 1985 (as amended) there will be a presumption against the introduction of locally non-native species.

Competent/Relevant Authority	Responsibilities
Department of the Environment (Marine Division)	Provide advice concerning nature conservation interest of marine and coastal areas.
	Provide advice on marine invasive/non-native species.
Department of the Environment (NIEA)	Provide advice concerning nature conservation interest of terrestrial areas.
	Provide advice on terrestrial invasive/non-native species.
Department of Agriculture and Rural Development (DARD)	Responsible for agriculture, inshore fisheries management, policy and regulation.

Marine and land-based discharges

Untreated sewage or trade effluent run-off may lead to eutrophication of adjacent water bodies or sedimentation of benthic habitats and communities. Marine litter, from sources such as domestic, recreational and commercial activities and passing

marine traffic can be hazardous to marine animals and seabirds as well as being unsightly. The relevant authorities will continue to regulate marine and land-based discharges into the site. A monitoring plan will be determined by the Department to build understanding on the possible effects of land-based and sea-based discharges on the benthic communities and their possible impact on the bird populations. These can be monitored through the Water Order discharge consent process. In addition, the Department has developed the Northern Ireland Marine Litter Strategy (due for publication in 2013) which contains the strategic goals of reducing the levels of additional litter entering the marine environment and the removal of litter currently present on the coast.

Competent/Relevant Authority	Responsibilities
Department of the Environment (NIEA Water Management Unit)	Regulates discharges through Water (Northern Ireland) Order 1999 by issuing consents and monitoring discharges.
	Responsible for implementing the EC Nitrates Directive which aims to reduce or prevent the pollution of waters caused by the use of inorganic fertiliser or manure on farmland.
	Responsible for the delivery and regulation of waste activities under the Waste Management Licensing Regulations (Northern Ireland) 2003.
	Responsible for pollution prevention and pollution response under Water (Northern Ireland) Order 1999.
Department of the Environment (NIEA Natural Heritage)	Statutory consultee on water consent discharges and planning permissions.
Department of the Environment (Marine Division)	Responsible for issuing licenses for construction works within the UK marine licensing area under the Marine and Coastal Access Act 2009.
	Responsible for the development of the Northern Ireland Marine Litter Strategy.
Department of the Environment (Planning Division)	Responsible for planning permissions down to MLWS under Planning (Northern Ireland) Order 1991.
Moyle District Council	Consulted on water consent discharges and planning permissions during public consultation stage.
The Crown Estate	Management, stewardship and leasing of foreshore and seabed areas.

Competent/Relevant Authority	Responsibilities
Department of Agriculture and Rural Development (DARD)	Responsible for agriculture, inshore fisheries management, policy and regulation.
	Responsible for implementing the EC Nitrates Directive which aims to reduce or prevent the pollution of waters caused by the use of inorganic fertilise or manure on farmland.
Northern Ireland Water (NIW)	Responsible for management actions required to protect waterways from domestic sewage, industrial water and surface run-off under Urban Waste Water Treatment Regulations (Northern Ireland) 2007.
Maritime and Coastguard Agency (MCA)	Management of pollution at sea. Responsibility for controls over disposal of vessel bilge water and sewage outside harbour order area.

Ballast water and accidental discharges

Ballast water discharges/exchanges from visiting cruise ships should be discouraged due to the potential for spreading marine non-native species. Accidental discharges at sea may arise due to collision or grounding events where the potential spillage of fuel oil or cargo can occur, with significant spills having an impact on intertidal and marine wildlife. It should be noted that, whilst sea-based discharges should be avoided, accidental sea-based discharges that may require the use of dispersants (oil spill treatment products) within the EMS will need authorisation from the Department (NIEA). The treatment process could cause harm to marine communities within the site, so consultation with the Department (NIEA) should be undertaken at the earliest opportunity. Ballast water discharges/exchanges from visiting cruise ships should be discouraged.

Competent/Relevant Authority	Responsibilities
Department of the Environment (Marine Division)	Responsible for issuing sea disposal licence for disposal of dredge material under Marine and Coastal Access Act 2009 and ensuring the status of water bodies remains good under the Water Framework Directive.
	Provide advice concerning nature conservation interest of marine and coastal areas.

Competent/Relevant Authority	Responsibilities
Department of the Environment (NIEA Water Management Unit)	Responsible for pollution prevention and pollution response under Water (Northern Ireland) Order 1999.
Department of the Environment (NIEA Natural Heritage)	Provide advice concerning nature conservation interest of adjacent terrestrial or protected areas.
	Consulted on disposal applications during public consultation.
Department of Agriculture and Rural Development (DARD)	Responsible for agriculture, inshore fisheries management, policy and regulation.
	Required to prevent further deterioration to the status water bodies and to restore these to good status under the Water Framework Directive.
Maritime and Coastguard Agency (MCA)	Management of pollution at sea. Responsibility for controls over disposal of vessel bilge water and sewage outside harbour order area.

Land use that may lead to sediment run-off

Land based actions such as agricultural practices or large scale drainage schemes should be conducted in such a manner as to ensure that the sediment burden of land run-off does not become a threat to the features of interest. This will be achieved via the consents process on adjacent ASSIs and by putting in place appropriate mitigation measures.

Competent/Relevant Authority	Responsibilities
Department of the Environment (NIEA Natural Heritage)	Issue consents to landowners for works within and adjacent to ASSIs.
Department of the Environment (Marine Division)	Provide advice concerning nature conservation interest of marine and coastal areas.
Department of the Environment (NIEA Water Management Unit)	Responsible for all aspects of silage, slurry and agricultural fuel oil stores under the Control of Pollution (Silage, Slurry and Agriculture Fuel Oil) Regulations (NI) 2003.
	Responsible for preventing water pollution under EC Nitrates Directive.
	Responsible for reducing current groundwater pollution and preventing future groundwater pollution under EC Groundwater Directive.

Competent/Relevant Authority	Responsibilities
Department of Agriculture and Rural Development (DARD)	Responsible for agriculture, inshore fisheries management, policy and regulation.

Coastal development

Development within or near to the seabird colonies and sites used by peregrine falcon *Falco peregrinus* has the potential to lead to disturbance and must be considered very carefully. This is monitored through the planning and consent process on all land within and adjacent to the Natura 2000 sites.

Some of the subtidal sandbanks are sensitive to changes in the hydrographic regime; any coastal developments that affect the way the currents flow will affect the features of interest. Rathlin Island does not have a particularly large or increasing population. Therefore, any coastal developments, such as piers, are well established and have been built in such a way as to be sympathetic to the local topography. Existing coastal developments are not thought to have a detrimental effect on the sandbanks. Any new coastal developments such as the potential marine renewable projects will undergo an environmental impact assessment and Habitats Regulations Assessment as part of the licensing process and will be monitored for any adverse effects on the sandbank features.

The potential for coastal development to impact the EMS will be taken into account in regional and local plans.

Planning applications will be assessed against the SPA and SAC Conservation Objectives and may require a Habitats Regulations Assessment.

Competent/Relevant Authority	Responsibilities
Department of the Environment (Marine Division)	Responsible for issuing marine construction license for works below MHWS tide mark under Marine and Coastal Access Act 2009.
Department of the Environment (NIEA Natural Heritage)	Statutory consultee on planning applications.

Competent/Relevant Authority	Responsibilities
Department of the Environment (Planning Division)	Responsible for planning permissions down to MLWS under Planning (Northern Ireland) Order 1991.
Department of Agriculture and Rural Development (DARD)	Statutory consultee on planning applications.
Department for Regional Development (DRD)	Responsible for ports, harbours, shipping and sea defences.
The Crown Estate	Management, stewardship and leasing of the foreshore and seabed areas.
Department of Enterprise, Trade and Investment (DETI)	Formulates and delivers economic development policy in terms of Enterprise, Social Economy, Innovation, Energy, Telecoms and Tourism in Northern Ireland.
	Responsible for overarching energy policy

Renewable Energy Generation

The NI Executive has set a target of 40% of electricity consumption from renewable sources by 2020. In 2011 The Crown Estate launched two parallel leasing rounds for offshore wind (south east coast of County Down) and tidal (Rathlin Island and Torr Head) developments. Given the current development status of the tidal sector, there is a demand for both commercial scale and demonstration schemes such as small scale arrays, and with this in mind, the Rathlin Island and Torr Head Strategic Area with up to 200MW generating capacity will be leased to developers for the delivery of multiple projects. Applications have been invited for projects for commercial demonstration leases (up to and including 10MW) and full commercial leases (over 10MW and up to 100MW). Tidal resources off the North West coast of Northern Ireland are located in deeper waters than offshore technology is currently operating.

Projects will be required to undergo project level Habitats Regulations Assessments and Appropriate Assessments wherever the possibility of likely significant effect on a European (SAC or SPA) cannot be excluded. Therefore, each individual project will be required to undertake work in a manner which does not have an adverse effect on the site integrity.

Competent/Relevant Authority	Responsibilities
Department of the Environment (Marine Division)	Responsible for marine licensing activities under Marine and Coastal Access Act 2009.
	Provide advice concerning nature conservation interest of marine and coastal areas.
Department of the Environment (NIEA Natural Heritage)	Statutory consultee on marine renewable applications.
Department of Agriculture and Rural Development (DARD)	Statutory consultee on marine renewable applications.
Department for Regional Development (DRD)	Statutory consultee on marine renewable applications.
Department of Trade, Enterprise and Investment (DETI)	Formulates and delivers economic development policy in terms of Enterprise, Social Economy, Innovation, Energy, Telecoms and Tourism in Northern Ireland.
	Responsible for overarching energy policy.
The Crown Estate	Management, stewardship and leasing of foreshore and seabed areas.

Oil and Gas

Providence Resources PLC, an Irish-based oil and gas exploration company holds an interest in six offshore oil exploration blocks in the Rathlin Basin and one onshore licence on Rathlin. Providence Resources UK Ltd, the UK subsidiary of Providence Resources PLC was awarded an onshore exploration licence (PL5/10) by the Department of Enterprise, Trade and Investment (DETI) on 22 February 2011. The license covers nearly 16 km² within the area of Rathlin Island. The licence requires Providence Resources UK to carry out a five year work programme of desk studies which will assist Providence Resources UK to determine the hydrocarbon potential of the basin within a five year term.

Competent/Relevant Authority	Responsibilities
Department of the Environment (Marine Division)	Responsible for marine licensing activities under Marine and Coastal Access Act 2009.
	Provide advice concerning nature conservation interest of marine and coastal areas.

Competent/Relevant Authority	Responsibilities
Department of the Environment (NIEA Natural Heritage)	Statutory consultee on marine renewable applications.
Department of Agriculture and Rural Development (DARD)	Statutory consultee on marine renewable applications.
Department for Regional Development (DRD)	Statutory consultee on marine renewable applications.
Department of Trade, Enterprise and Investment (DETI)	Formulates and delivers economic development policy in terms of Enterprise, Social Economy, Innovation, Energy, Telecoms and Tourism in Northern Ireland.
	Responsible for overarching energy policy.
The Crown Estate	Management, stewardship and leasing of foreshore and seabed areas.
Department of Energy and Climate Change (DECC)	Responsible for issuing licenses for oil and gas exploration onshore and on the UK Continental shelf.

Recreational diving and marine archaeology

The area is not heavily dived at present. Dive locations within the site are primarily on the numerous wrecks and reef systems in the open coastal area. The only parts of the site that are particularly sensitive to divers are the wrecks of HMS Drake and MV Loch Garry which have been subject to continued damage through the removal of artefacts for personal collections. These wrecks increase biodiversity in the area by providing a good habitat for marine organisms which in turn attract divers. When anchoring, there may be localised damage to sessile benthic organisms, so diving boat operators need to observe best practice as stated in the moorings management section.

It is not anticipated that any special management will be required, provided that awareness for the site is developed for divers and dive boat handlers. The regulations already in place should be adequate for the interests of the site with additional advice provided by the North Coast Marine Ranger. Sensitive development of this activity may well enhance the local economy.

Recreational divers will also be expected to act responsibly within the EMS to adhere to any sign-posted bye-laws and generally abide by the BSAC Divers' Code of Conduct (Annex VIII).

Competent/Relevant Authority	Responsibilities
Department of the Environment (Marine Division)	Provide advice concerning nature conservation interest of marine and coastal areas. Collate information on wreck sites in Northern Irish waters.
Department of Agriculture and Rural Development (DARD)	Responsible for inshore fisheries management, policy and regulation.
British Sub Aqua Club (BSAC)	Produce Safe Diving practice guidelines and Diver's Code of Conduct.
Receiver of Wreck	Wreck sites in Northern Irish waters must be reported to Receiver of Wreck (023 8032 9474, row@mcga.gov.uk) and NIEA Historic Monuments (028 9054 3035).

Recreational other

Tourism to Rathlin Island has important economic implications for the area. A range of recreational activities take place such as boating activity, bird watching, walking, camping etc. and it is suggested that an informal monitoring programme of these activities should be set up through the EMS Management Group. There is a need to provide on-site interpretation and educational material for the various user groups. These activities may need to be reassessed if disturbance or damage is seen to affect the features of interest (e.g. breeding birds or seals).

The seabird colonies are an important tourist attraction and are regarded as a 'must see' during the bird breeding season. Much infrastructure is already in place relating to this feature of interest including services provided by island initiatives and the RSPB's visitor facilities at the West Light. Wider information on the seabird colonies away from the West Light together with additional information on the other areas of importance for bird life may be appropriate. This may include guidance on the features of interest and on potentially disturbing activities. The latter especially may have to be altered in response to changes in bird distributions or the arrival of new species breeding within the designated site or wider area of the island.

Competent/Relevant Authority	Responsibilities
Department of Enterprise, Trade and Investment (DETI)	Formulates and delivers economic development policy in terms of Enterprise, Social Economy, Innovation, Energy, Telecoms and Tourism in Northern Ireland.
	Responsible for overarching energy policy.
Moyle District Council	Responsible for marketing in the N. East region of Ireland (along with Coleraine Borough Council).
Department of the Environment (Marine Division)	Provide advice concerning nature conservation interest of marine and coastal areas.
Department of Agriculture and Rural Development (DARD)	Responsible for inshore fisheries management, policy and regulation.
The Crown Estate	Responsible for approximately half the UK foreshore therefore provide leases for specific activities/operations in this area.
Invest NI	Responsible for the delivery of DETI's policies and strategies in relation to business support in Northern Ireland.
NI Tourist Board	Responsible for the development, promotion and marketing of NI, both in the Irish Republic and Northern Ireland, as a tourist destination.
RSPB	Responsible for Seabird Centre and landowner on Rathlin.
The National Trust	Landowner on Rathlin Island.

Boat anchorages and moorings

Moorings and anchorages easily damage benthic communities, although damage is usually very localised. Present anchorages and moorings have been long established within the EMS, especially within sheltered coastal inlets. These are well publicised on Admiralty Charts and in yachting manuals.

Existing moorings and anchorages should remain in place but the Crown Estate and the Department (Marine Division) will consider the interests of the EMS when reviewing any new mooring applications. Any future developments will be subject to a Habitats Regulations Assessment taking into account the distribution of the features of interest within the EMS and their conservation objectives. Visiting boats, whilst being encouraged to sail within the SAC, will be directed to use properly maintained moorings.

Relevant boating organisations will be informed of the EMS Management Group's decisions.

Visiting cruise ships have been observed anchoring in a variety of locations within Church Bay. Recently, a high quality maerl bed was discovered close to the harbour entrance and would be at risk to ad hoc anchoring. It is proposed that the local harbour master and MCA establish a designated anchoring zone, in consultation with Rathlin Development Community Association. The North Coast Marine Ranger can provide guidance on this through liaison with the Department's Marine Division.

Competent/Relevant Authority	Responsibilities
Department of the Environment (Marine Division)	Statutory consultee on mooring applications at public consultation stage.
Department of the Environment (NIEA Natural Heritage)	Statutory consultee on mooring applications at public consultation stage.
Department of Agriculture and Rural Development (DARD)	Responsible for inshore fisheries management, policy and regulation.
Maritime and Coastguard Agency (MCA)	Statutory consultee on mooring applications at public consultation stage.
The Crown Estate	Management, stewardship and leasing of the foreshore and seabed areas.
Department for Regional Development (DRD)	Responsible for ports, harbours, shipping and sea defences.

Boat zoning

Increasing recreational boating (including jet skis) pressure is evident around Rathlin Island. This has resulted in a range of threats to rafts of seabirds present on the adjoining waters including ongoing disturbance of birds preening or displaying close to their breeding sites, and the risk of actual impact. While this is a particular problem during the seabird breeding season, it may be an issue all year round. Consideration will be given to development of a boat zoning policy to minimise any disturbance of seabirds and seals. This will not prohibit access to an area but will introduce speed restrictions in order to reduce disturbance to an acceptable level and provide wildlife with a chance to avoid collisions. The EMS Management Group will provide recommendations on zoning areas to the Department's Marine Division, which can be further developed.

Competent/Relevant Authority	Responsibilities
Department of the Environment (Marine Division)	Provide advice concerning nature conservation interest of marine and coastal areas.
Department of Agriculture and Rural Development (DARD)	Responsible for inshore fisheries management, policy and regulation.
Department for Regional Development (DRD)	Responsible for ports, harbours, shipping and sea defences.
The Crown Estate	Management, stewardship and leasing of the foreshore and seabed areas.

Disturbance to seals

Common seals *Phoca vitulina* and grey seals *Halichoerus grypus* are protected under both the Habitats Directive (Annexes II and V) and the Wildlife and Natural Environment (Northern Ireland) Act (2011). They frequently haul out on rocks around the coast of Rathlin Island. The haul out areas and breeding colonies are important for the conservation of the species. Seals are susceptible to disturbance which can lead to pups being separated from or abandoned by their mothers, so access by recreational users, shellfish or seaweed gatherers and boats near haul outs during the breeding, pupping and moulting seasons should be restricted, where possible. The pupping season takes place between June and July for the common seal and between September and November for the grey seal. The development of signage detailing issues surrounding disturbance is one method of raising awareness amongst the public, and can be taken forward by the EMS Management Group.

Reports of dead seals should be made to the Department (NIEA Quoile Countryside Centre) on 028 44615520. The Quoile staff will liaise with NIEA Regional Operations or Marine Division staff to arrange removal and/or post mortem of the carcass.

Competent/Relevant Authority	Responsibilities
Department of the Environment (NIEA Quoile Countryside Centre)	Provides advice on seals including injuries, mortalities and pup abandonment
Department of the Environment (Marine Division)	Provide advice concerning nature conservation interest of marine and coastal areas.

A summary table of activities and associated level of risk is at Annex III.



Edible crabs caught for restaurant trade
Image credit: DOE (Marine Division)

MONITORING AND IMPLEMENTATION

If the special marine nature conservation interests of Rathlin Island are to be safeguarded it is important that the objectives of the management scheme are sustained over the longer term. This requires both individual and collective action by the users of the area, their representatives and the relevant authorities with statutory responsibilities.

This section describes the reporting structures and monitoring arrangements which may be used to achieve this.

Reporting structures

All the relevant authorities will gather and submit to the Department any formal and voluntary monitoring data gathered in the course of their duties in a summary report with supporting advice on an annual basis. Guidance will be provided by the North Coast Marine Ranger.

The Department will continue to update and revise the Rathlin Island EMS Management Scheme as directed by the EMS Management Group. The Department will also facilitate the implementation of management actions as identified in the Rathlin Island EMS Management Scheme.

Monitoring programme

The Habitats Directive requires that the site be monitored to assess its condition and that a report be submitted to Europe every six years. This work is coordinated by the Department (both NIEA and Marine Division) and the next report is due in 2014.

A monitoring plan will be produced by the relevant authorities according to their statutory requirements, such as MSFD, the Birds and Habitats Directives and WFD, and in line with the aims and objectives of the management scheme. This will be incorporated into the scheme at such time as it is completed.

1. Water quality monitoring will be undertaken by NIEA as per its statutory responsibilities.
2. Biological monitoring will be undertaken by NIEA and Marine Division as per their statutory responsibilities. The relevant statutory bodies will undertake monitoring of activities on the site where they have a responsibility to do so.
3. Monitoring of ornithological populations will continue with the established 'mix' of statutory and non-statutory bodies. An appropriate programme will be established, informed by local and regional trends, together with national priorities.
4. Individuals and non-statutory bodies may wish to set up a voluntarily reporting and monitoring structure. However, if they wish the findings of this to be incorporated into the summary report, their approach and methods must be acceptable to a consensus of the relevant authorities.
5. NIEA and Marine Division will compile all their statutory monitoring into a summary report along with recommendations to ensure the conservation objectives of the SAC/SPA will be met. The reporting frequency will be arranged between the relevant authorities concerned.
6. NIEA and Marine Division will report on the condition of the site to the EU every six years via the JNCC (Joint Nature Conservation Committee).



The Manor House adjacent to Church Bay harbour, Rathlin Island
Image credit: Arthur Ward

ANNEXES

Annex I — Bibliography (coloured underlined text is hyper-linked to website)

A number of legislative drivers and strategies that guide government policy relate to the EMS-MS:

1. [The Conservation \(Natural Habitats, &c.\) Regulations 1994 \(Statutory Instrument 1994 No. 2716\)](#)
2. [The Conservation \(Natural Habitats, etc.\) Regulations \(Northern Ireland\) 1995 \(Statutory Rule 1995 No. 380\)](#)
3. [The Offshore Marine Conservation \(Natural Habitats, &c.\) Regulations 2007 \(Statutory Instrument 2007 No. 1842\)](#)
4. Marine Strategy Framework Directive : Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy
5. DETR (1998) *European Marine Sites in England & Wales: A guide to the Conservation (Natural Habitats &c.) Regulations 1994 and to the Preparation and Application of Management Schemes*. Department of the Environment, Transport and the Regions: UK
6. [Antrim Coast and Glens Area of Outstanding Natural Beauty \(AONB\)](#)
7. [Directive 2009/147/EC of the European Parliament and of the Council on the Conservation of Wild Birds](#)
8. [Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora](#)
9. [The Environment \(Northern Ireland\) Order 2002](#)
10. Introduction of non-native species: An Invasive Alien Species Strategy for Northern Ireland Draft Strategy: A Consultation Document. DOENI 2001.

11. Marine and land-based discharges: Marine and Coastal Access Act 2009 (Part 4) and the Water (Northern Ireland) Order 1999.
12. Land use that may lead to sediment run-off: Code of Good Agricultural Practice
13. Coastal development: Regional Development Strategy, Planning Strategy for Rural Northern Ireland, Ballycastle Development Strategy, Marine and Coastal Access Act 2009

Annex II — Favourable Conservation Status

The EMS-MS aims to deliver against the Habitats Directive. Article 2.2 requires habitats and species of Community Interest to be maintained at or restored to Favourable Conservation Status. Habitats and species of Community interest are the habitats listed on Annex I and the species listed on Annexes II, IV and V of the Directive.

The conservation status of natural habitats will be taken as 'favourable' when:

1. its natural range and areas it covers within that range are stable or increasing, and
2. the species structure and functions which are necessary for its long term maintenance exist and are likely to continue to exist for the foreseeable future, and
3. the conservation status of its typical species is favourable as defined in Article 1(i).

The conservation status of species will be taken as 'favourable' when:

1. population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
2. the natural range of the species is neither being reduced for the foreseeable future, and
3. there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Annex III — Activities which could pose a risk to the features of the EMS

1. Activities which could pose a high risk

Feature(s)	Activity	Risk
Reefs Sandbanks	Benthic dredging/trawling	High
SPA bird species Reefs	Introduction of non-native species	High

2. Activities posing a medium or low risk

Feature(s)	Activity	Risk
SPA bird species Reefs Sandbanks Annual vegetation of drift lines	Marine and land-based discharges	Medium
SPA bird species Reefs Sandbanks	Sea-based discharges	Medium
SPA bird species Reefs Sandbanks Annual vegetation of drift lines	Land use leading to sediment run-off	Medium
SPA bird species Reefs Sandbanks Annual vegetation of drift lines	Coastal development	Medium
Reefs Sandbanks	Pot fishing	Medium
SPA Birds	Other recreational activities	Medium
Reefs Sandbanks	Commercial shellfish harvesting by diving	Medium
Reefs Sandbanks	Boat anchorages and moorings	Medium
SPA Birds Vegetated sea cliffs of Atlantic and Baltic coasts Annual vegetation of drift lines	Tourism	Low
Reefs Sandbanks Submerged or partially submerged sea caves	Recreational diving	Low

Annex IV — Potential membership of the EMS Management Group

Rathlin Development & Community Association

Moyle District Council

Causeway Coast and Glens Heritage Trust

Rathlin Island Ferry Limited

The Crown Estate

Northern Ireland Tourist Board

Anglo-North Irish Fish Producers Organisation (UK) (ANIFPO)

Northern Ireland Fish Producers' Organisation Limited (NIFPO)

North Coast Lobster Fishermen's Association

Rathlin Fishermen

Royal Society for the Protection of Birds (RSPB)

Irish Federation of Sea Anglers

Marine Conservation Northern Ireland

The National Trust (NT)

Northern Ireland Marine Task Force (NIMTF)

Representation from the Rathlin Forum

Relevant Government Departments

The Department also welcomes expressions of interest for membership from organisations not included on the list above.

Annex V — Background to legal provisions

Rio Earth Summit

On 21st May 1992 the twelve member states of the European Union accepted Council Directive 92/43/EEC on the conservation of the natural habitats and of wild fauna and flora. This piece of legislation, commonly known as the 'Habitats Directive', is a major contribution to the Biodiversity Convention signed at the Rio Earth Summit in 1992.

Habitats Directive

A central aim of the Directive is the establishment of a European wide network of sites that protect the biodiversity of a range of habitats and their associated species. The task is made more manageable by concentrating on already rare and threatened habitats and species across Europe. These sites, combining both habitats and species listed in Annexes I & II of the Directive, are known as Special Areas of Conservation (SAC). Marine SACs, along with Special Protection Areas (SPA) (from the 'Birds Directive' and the mechanism under which birds are protected), combine to form the European Marine Site network. Importantly, Annex I of the Habitats Directive has included the marine habitats. Rathlin Island was designated in 1995 along with other areas, as a European marine site by the Secretary of State for Northern Ireland as part of the UK obligation to the Directive.

Whilst the Directive came into force to address the need to protect endangered environments it should do so taking into account of economic, cultural, social and regional needs thus the Directive makes a contribution to the general objective of sustainable development. This is of fundamental importance in the development of this management scheme because of the fragile state of the local economy and the importance of this marine area to many of the local people.

UK Legislation

The Council Directive 92/43 EEC or the 'Habitats Directive' transposed into Northern Ireland law as the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995. This is more commonly known as the 'Habitats Regulations'. These regulations translate the requirements of the Directive into a working

framework Northern Ireland law. They also describe the mechanisms that need to be in place in order to implement and then manage the SAC as stated in the Directive.

Annex VI — Citation for Rathlin Island Coast ASSI

DEPARTMENT OF THE ENVIRONMENT FOR NORTHERN IRELAND

DECLARATION OF AREA OF SPECIAL SCIENTIFIC INTEREST AT RATHLIN ISLAND-COAST, COUNTY ANTRIM. ARTICLE 24 OF THE NATURE CONSERVATION AND AMENITY LANDS (NORTHERN IRELAND) ORDER 1985

The Department of the Environment for Northern Ireland (the Department), having consulted the Council for Nature Conservation and the Countryside and being satisfied that the area delineated by the solid black line on the attached map and accordingly needs to be specifically protected, hereby declares the area to be an area of special scientific interest to be known as the 'Rathlin Island-Coast area of special scientific interest.'

The area is of special scientific interest because of the wide variety of habitats and associated flora and fauna it contains. These habitats include very high sea cliffs, sea stacks, maritime grassland, saltmarsh and an equally wide range of inter-tidal conditions e.g. vertical cliff, boulder and shingle shores and wave cut platforms on both chalk and basalt. The geological exposures and rock formations associated with such coastal conditions are also of importance.

Some uncommon and rare plant species occur in this coastal strip e.g. Scots lovage *Ligusticum scoticum*, juniper *Juniperus communis*, roseroot *Rhodolia rosea* and oyster plant *Mertensia maritime*. Towards the south and east the coastline is gentler giving rise to areas of maritime grassland and flushes. Small developing saltmarshes are widespread. The uncommon saltmarsh flat-sedge *Blasmus rufus* is found in this area.

In summer, the sea cliffs and sea stacks provide nesting sites for a variety of seabirds including nationally important colonies of guillemot *Uria aalga*, razorbill *Alca torda*, and kittiwake *Rissa tridactyla*. Northern Ireland's largest populations of puffin *Fratercula artica* breed among the grassy slopes of the cliff ledges. There is also a small colony of Manx Shearwater *Puffinus puffinus*. An unusually high density of raptors use the cliffs as nesting sites e.g. peregrine falcon *Falco*

peregrinus and buzzard *Buteo buteo*. The very rare chough *Pyrrhocorax pyrrhocorax* also breeds on the cliffs around Rathlin Island.

The caves and rocks around the shore are used by grey seals *Halichoerus grypus* for calving and hauling-out.

SCHEDULE

The following operations and activities appear to the Department to be likely to damage the flora, fauna or geological features of the area:

Any activity which involves the damage or disturbance, by mechanical means or otherwise, of the surface or sub-surface of the land, or of any wild vegetation growing on that land.

Any change in the grazing regime, including any change in stock feeding practice.

Any application to the surface, sub-surface, or vegetation, of any manure, fertiliser, lime, pesticide, herbicide, fungicide, or other chemical.

Any change in the practice of burning.

Dumping, spreading or discharge of any materials or objects.

Killing, destruction, damage, displacement or removal of any wild animal or wild plant, save for:-

any birds which are listed in Schedule 2 Part II of the Wildlife (Northern Ireland) Order 1985;

any mammals not listed in Schedule 5 of the same Order; and

plants listed as noxious weeds in the Noxious Weeds (Northern Ireland) Order 1987.

The introduction or release into the area of any wild, feral or domestic animal (other than in connection with normal grazing practice and control of grazing animals), plant or seed.

Use of vehicles or craft (but excluding farm vehicles and machinery being used in normal farming practices) in a manner likely to damage the vegetation.

Recreational, educational or research activities other than those which have been regularly undertaken in the past.

Collection of shellfish or seaweed other than on a small scale for non-commercial purposes.

Sealed with the Official Seal of
The Department of the Environment for
Northern Ireland 16 September 1991

R W ROGERS

ASSISTANT SECRETARY

Annex VII — Seabird survey history and results

Rathlin Island hosts the largest coastal cliff seabird colony in Northern Ireland. The seabird populations have been monitored through both national census' (UK and Ireland) and site specific surveys over the past 40 years or so.

Site summary data is provided below for the main seabird species (SPA feature species and main additional species forming part of the assemblage)

	Populations at time of SPA designation	Seabird 2000 (1999)	2007	2011
Common Guillemot	41887	95567	81303	130445
Razorbill	8922	20860	10684	22975
Black-legged Kittiwake	6822	9917	9896	7922
Atlantic Puffin	2398	1579	731	695
Northern Fulmar	1482	2032	1072	1518
Herring Gull	4037	14	5	28
Lesser Black-backed Gull	155	127	36	143
Common Gull	64	64	64	94

The highly variable nature of these populations can be appreciated from this summary data. Declines in a number of species have not been sustained and indeed some of the 2011 survey results are the highest populations ever recorded for common guillemot and razorbill. These increases are of particular interest at a time when these species are undergoing declines at breeding colonies elsewhere in Ireland and the UK. The decline in black-legged kittiwake reflects a widespread decline in this species although the population still exceeds that at time of the SPA designation. Unfortunately the decline in Atlantic puffin numbers recorded since SPA designation has continued. The reasons for this are not presently known but elsewhere, burrow nesting species, have been shown to be vulnerable to predation by certain introduced predatory mammals such as rats and ferrets. Population size

for the 3 larger species of gulls (herring, lesser black-backed and common) has increased, but is still considerably lower for Herring Gull than at time of designation of the SPA. This decline may relate to prevalence of botulism amongst gull species. Better management of landfill sites has reduced this and gull populations elsewhere are beginning to recover.

Annex VIII — The Divers' Code of Conduct

This Divers Code of Conduct was developed by BSAC.

Contact the nearest BSAC Branch or the dive operator local to the dive site for their advice. Seek advice from them about the local conditions and regulations. If appropriate, have the correct chart and tide tables for the area to be dived.

On the beach, river bank or lakeside

1. Obtain permission before diving in a harbour or estuary or in private water. Thank those responsible before you leave. Pay harbour dues.
2. Try to avoid overcrowding one site, consider other people on the beach.
3. Park sensibly. Avoid obstructing narrow approach roads. Keep off verges. Pay parking fees and use proper car parks.
4. Don't spread yourselves and your equipment since you may upset other people. Keep launching ramps and slipways clear.
5. Please keep the peace. Don't operate a compressor within earshot of other people - or late at night.
6. Pick up litter. Close gates. Be careful about fires. Avoid any damage to land or crops.
7. Obey special instructions such as National Trust rules, local bye-laws and regulations about camping and caravanning.
8. Remember divers in wet or drysuits are conspicuous and bad behaviour could ban us from beaches.

In and on the water

1. Mark your dive boats so that your Club can be identified easily.
2. Ask the harbour-master or local officials where to launch your boat - and do as they say. Tell the Coastguard, or a responsible person, where you are going and tell them when you are back.

3. Stay away from buoys, pots, and pot markers. Ask local fishermen where not to dive. Avoid driving through rafts of seabirds or seal colonies etc.
4. Remember ships have not got brakes, so avoid diving in fairways or areas of heavy surface traffic and observe the 'International Regulations for the Prevention of Collisions at Sea'.
5. Always fly the diving flag when diving, but not when on the way to, or from, the dive site. Never leave a boat unattended.
6. Do not come in to bathing beaches under power. Use any special approach lanes. Do not disturb any seal or bird colonies with your boats. Watch your boat's wash in crowded anchorages.
7. Whenever possible, divers should use a surface marker buoy.

On conservation

1. Never use a spear gun.
2. Shellfish, such as crabs and lobsters, take several years to grow to maturity; over collecting in an area soon depletes stocks. Observe local Byelaws and restrictions on the collection of animal and plant specimens. However BSAC recommends that you do not collect shellfish, but if you must collect, only take mature fish or shellfish and then only what you need for yourself. Never take a berried female (a female with eggs); this is stock for future years. Never sell your catch or clean it in public or on the beach and do not display your trophies.
3. Ascertain and comply with seasonal access restrictions established to protect seabirds and seals from disturbance. During the seabird breeding season (1st March-1st August) reduce noise and speed near seabird breeding sites. Do not approach seal breeding or haul-out sites. Do not approach dolphins or porpoises in the water
4. Be conservation conscious. Avoid damage to weeds and the sea bed. Do not bring up sea-fans, corals, starfish or sea urchins - in one moment you can destroy years of growth.
5. Take photographs and notes - not specimens.

On wrecks

1. Do not dive on a designated wreck site without a licence. Protected wrecks are indicated on Admiralty charts and marked by buoys, or warning notices on the shore nearby.
2. Military wrecks should not be disturbed or items removed from them. This includes the debris field. The debris field is the trail of wreckage that comes away from the main body of the wreck during the sinking process. This trail can consist of parts of the ship, the cargo and the personal possessions of the crew.
3. Do not lift anything that may be of archaeological importance.
4. If you do discover what might be an historic wreck do not talk about it, but contact the Receiver of Wreck (023 8032 9474), who will advise you about your next steps. If your find is important you may apply for it to be designated a protected wreck site. You can then build up a well-qualified team with the right qualifications to investigate your site with the assistance of a qualified archaeologist.
5. If you do lift any material from the sea-bed, it is a legal requirement to report it to the Receiver of Wreck as soon as reasonably possible; even if you own the wreck that the material has come from.
6. Avoid the temptation to take souvenirs. Go wreck diving to enjoy the scenery and life, or get involved in projects. If you must take something, try photographs or measurements, and records of marine life.
7. Know and understand wreck law. If you remove material from wreck, which you then sell for profit, you are diving for reward, which is outside the scope of sport diving and you must conduct your dives in strict accordance with HSE regulations. A sound knowledge of wreck law will prevent you breaking the law, perhaps even ending up with a criminal record where no crime was intended. Members are reminded that in the light of this policy following any conviction of any BSAC member for an offence in relation to wreck the member will be liable to have his or her membership withdrawn for bringing BSAC into disrepute.

Don't let divers down - keep to the diver's code

Annex IX — Glossary

AONB – Area of Outstanding Natural Beauty designated under the Nature Conservation and Amenity Lands (Northern Ireland) Order 1985

ASSI – Area of Special Scientific Interest (ASSIs) designated under The Environment (Northern Ireland) Order 2002.

Ballast – this is material used to provide stability to a structure of a vehicle. In the case of vessels, ballast may be in the form of water, often taken in from coastal waters following the discharge of wastewater or unloading cargo and discharged in another coastal region if new cargo is loaded. The water typically contains a range of biological material including plants, animals, viruses and bacteria which can include non-native or exotic species.

Benthic – this refers to the ecological region at the lowest level of a body of water (e.g. an ocean) including the sediment surface and some sub-surface layers.

Biotope – refers to the habitat (i.e. the environment's physical and chemical characteristics) together with its recurring associated community of species operating together at a particular scale.

Circalittoral – this zone occurs just below the Infralittoral zone and the depth at which this begins is directly dependent on the intensity of light reaching the seabed. This zone is usually dominated by animal communities.

Ephemeral – ephemeral species are those which exist for a short period of time.

Epifauna – aquatic animals that live on the surface of a substrate, such as rocks, marine vegetation or the sea bed.

European Marine Sites (EMS) – is the term used to describe Natura 2000 sites which are in the marine environment.

Eutrophication – is the ecosystem response to the addition of artificial or natural substances, such as nitrates and phosphates, through fertilisers or sewage, to an aquatic system. This may result in the increased growth of phytoplankton leading to the depletion of oxygen in the water and subsequent negative impacts on other species.

Joint Nature Conservation Committee (JNCC) – this is the public body that advises UK Government and devolved administrations on UK-wide and international nature conservation.

Infralittoral – shallowest zone in the subtidal area, dominated by algae and is dependent on the depth of light penetration.

Maerl – a collective term for several species of red algae, with hard chalky skeletons. It grows as unattached rounded nodules or short, branched segments on the seabed. Maerl beds are composed of living or dead unattached material forming large accumulations. It requires sunlight to grow.

Natura sites – EU wide network of nature conservation sites (SACs and SPAs) established under the EC Habitats and Birds Directives.

SAC – Special Area of Conservation established under the provisions of EC Directive 92/43/EEC on the conservation of natural habitats and of wild flora and fauna.

SMART – an acronym used to set objectives. SMART stands for Specific, Measurable, Attainable, Relevant and Time-bound.

SPA – Special Protection Area established under the provisions of EC Directive 79/409/EEC (now codified in Directive 2009/147/EC) on the conservation of wild birds.

Topographical – relates to the arrangement of the physical features of an area.

Turbidity – the cloudiness or haziness of a fluid caused by particles (suspended solids) in the water. High turbidity levels can reduce the amount of light reaching lower depths affecting aquatic plant growth.



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