SKERRIES AND CAUSEWAY SAC
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CONSERVATION OBJECTIVES

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Prepared By	*L. Pothanikat*
Approved By	*J. Breen*
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Contact	cdp@daera-ni.gov.uk

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1. INTRODUCTION

EU Member States have a clear responsibility under the Habitats and Birds Directives[1] to ensure that all habitats and species of Community Interest are maintained or restored to Favourable Conservation Status (FCS). Natura 2000 sites have a crucial role to play in achieving this overall objective since they are the most important core sites for these species and habitats. Each site must therefore be managed in a way that ensures it contributes as effectively as possible to helping the species and habitats for which it has been designated reach a favourable conservation status within the EU.

To ensure that each Natura 2000 site contributes fully to reaching this overall target of FCS, it is important to set clear conservation objectives for each individual site. These should define the desired state, within that particular site, of each of the species and habitat types for which the site was designated.

Once a site has been included in the Natura 2000 network, Member States are required to implement, on each site, the necessary conservation measures which correspond to the ecological requirements of the protected habitat types and species of Community Interest present, according to Article 6.1 of the Habitats Directive. They must also prevent any damaging activities that could significantly disturb those species and habitats (Article 6.2) and to protect the site from new potentially damaging plans and projects likely to have a significant effect on a Natura 2000 site (Article 6.3, 6.4).

Conservation measures can include both site-specific measures (i.e. management actions and/or management restrictions) and horizontal measures that apply to many Natura 2000 sites over a larger area (e.g. measures to reduce nitrate pollution or to regulate hunting or resource use).

In Northern Ireland, Natura 2000 sites are usually underpinned by the designation of an Area of Special Scientific Interest (ASSI) under the Environment (NI) Order 2002 (as amended). However, the Environment Order only extends to the Mean Low Water (jurisdictional limit of local authorities); therefore, some marine Natura 2000 sites are not underpinned by ASSI designations.

[1] 92/43/EEC and 2009/147/EC (codified version of Directive 79/409/EEC as amended)

2. ROLE OF CONSERVATION OBJECTIVES

Conservation Objectives have a role in

- Conservation Planning and Management – guide management of sites, to maintain or restore the habitats and species in favourable condition

- Assessing Plans and Projects, as required under Article 6(3) of the Habitats Directive - Habitats Regulations Assessments (HRA) are required to assess proposed plans and projects in light of the site's conservation objectives.

- Monitoring and Reporting – Provide the basis for assessing the condition of a feature, the factors that affect it and the actions required.

3. DEFINITION OF FAVOURABLE CONSERVATION STATUS

Favourable Conservation Status is defined in Articles 1(e) and 1(i) of the Habitats Directive:

The conservation status of a natural habitat is the sum of the influences acting on it and its typical species that may affect its long-term natural distribution, structure and functions as well as the long term survival of its typical species. The conservation status of a natural habitat will be taken as favourable when:

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

For species, favourable conservation status is defined in Article 1(i) as when:

- 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;
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and;
- there is, and will probably continue to be, a sufficiently large habitat to maintain its population on a long term basis.

3.1 DEFINITION OF FAVOURABLE CONDITION

Favourable Condition is defined as "**the target condition for an interest feature in terms of the abundance, distribution and/or quality of that feature within the site**".

The standards for favourable condition (Common Standards) have been developed by JNCC and are applied throughout the UK. Achieving Favourable Condition on individual sites will make an important contribution to achieving Favourable Conservation Status across the Natura 2000 network.

4. SITE INFORMATION

COUNTY: ANTRIM

REFERENCE COORDINATES: 55.2425 -6.5967

AREA: 10,862 ha

5. SUMMARY SITE DESCRIPTION

Skerries and Causeway proposed SAC is sited on the north coast of Northern Ireland. It is the eastern part of a 30km wide embayment that has the Inishowen peninsular to its west and Benbane Head to its east. The site is influenced oceanographically and biologically both by the warming gulf stream and by the strong tidal currents that flow through the North Channel to and from the Irish Sea. It is subject to considerable wave action being open to the Atlantic to the northwest, but is relatively sheltered from other prevailing swells and includes areas of relative shelter such as behind the Skerries islands. The site is predominantly marine although there are significant influxes of freshwater, from the River Bann to the west and the River Bush to the east, which can influence the immediate coastal areas.

The Skerries and Causeway site is located adjacent to the coastline of Portstewart, Portrush, Bushmills and the Giant's Causeway World Heritage Site (which lends part of its name to the SAC site; the other half of the SAC name comes from the Skerries islands and rocks off Portrush). The site contains the qualifying Features: Annex I *Reef*; Annex I *Sandbanks which are slightly covered by seawater at all times*; Annex I *Submerged or partially submerged sea caves;* and Annex II *Harbour porpoise.* It also contains non-qualifying Annex II species, *grey seal, common seal, and bottlenose dolphin*.

Much of the reef in this area is sand scoured reef (which is an unusual type of reef in a Northern Ireland context). This produces a close relationship between the

reef and the adjacent sediments: as well as the sand scoured areas of reef and stony reef, there are also large areas of bedrock reef that have a thick veneer of sediment, but still support bedrock epifauna (attached to the bedrock but growing up through the sediment); and conversely, there are also areas of coarse and mixed sediments that support epifauna communities more reminiscent of the reef habitat.

The Annex I *Reef* is noted for its southern species, rare and priority species, and a number of species first described from the Skerries and Causeway area, including one nudibranch species that has not yet been found elsewhere. As well as the coarse and mixed sediments noted above, the Annex I *Sandbanks which are slightly covered by sea water all the time* also contains areas of subtidal eel grass *Zostera marina* (sheltered behind the Skerries) and varied and dramatic sand waves, some over 30m high. There are also many Annex I *Submerged and partially submerged sea caves* that can be found in a range of rock types including the basalts of the Giant's Causeway and the metamorphosed chalk of the Ulster White Limestone series.

Harbour porpoise (*Phocoena phocoena*) have been consistently recorded during more than 140 dedicated effort watches at six sites within the proposed boundary. These records span every month of the year, including months outside of the breeding and calving seasons and confirm the continuous presence of harbour porpoise within this area. Continuous or regular presence is graded A (excellent conservation).

Non-qualifying habitats and species

Up to 35 adult Grey Seal (*Halichoerus grypus*) and three adult Common seal (*Phoca vitulina*) have been recorded on surveys carried out by the Department (2006-2009). Both species have been graded as D, non-significant presence. Bottlenose dolphin (*Tursiops truncatus*) was recorded during two effort watches in 2009 but due to low numbers this species has been graded as D, non-significant presence.

Further details of the site are available on the DAERA website (https://www.daera-ni.gov.uk/publications/reasons-designation-special-area-conservation-skerries-and-causeway).

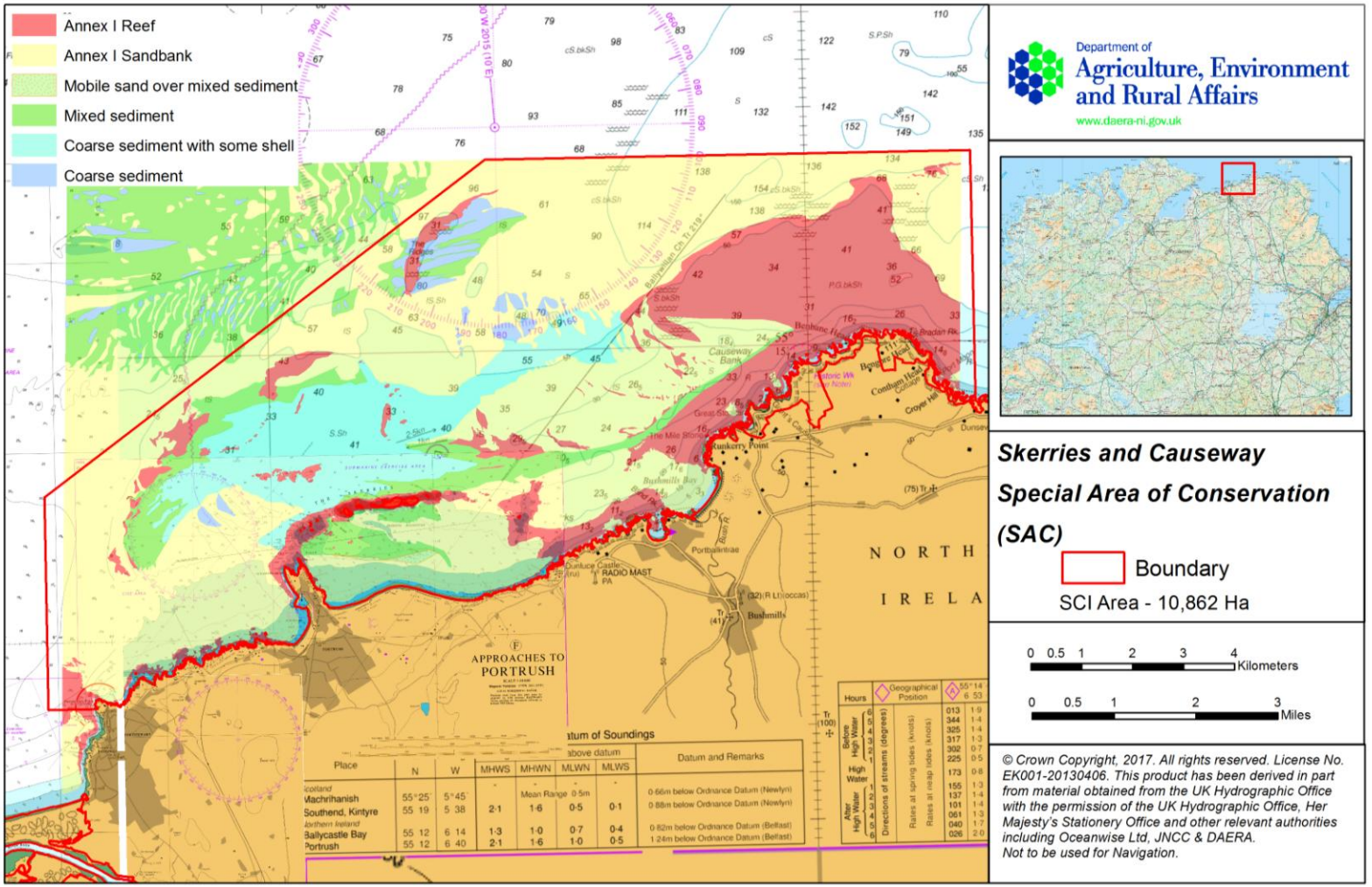
5.1 BOUNDARY RATIONALE

This area was first identified as being of marine conservation interest in the Northern Ireland Sub-littoral Survey (NISS), (Erwin *et al*. 1986). More recent dive surveys to determine the extent of its conservation interest (2006-2008 as part of the Sub-littoral Survey of Northern Ireland (SSNI) and 2009-2010 as part of the

Nationally Important Marine Features (NIMF) project) were completed by the Northern Ireland Environment Agency/National Museums Northern Ireland partnership (NIEA/NMNI) (Goodwin *et al.,* 2012; Goodwin *et al.*, 2011). The dive surveys of 2009-2010 also targeted the survey of reefs that had been identified for the first time from the multi-beam mapping of the Joint Irish Bathymetric Survey (JIBS, 2008). The JIBS work also allowed the first sight of the many sand waves and the dramatic submerged cliff of the Benbane Reef Complex. In 2010, the Department contracted the University of Ulster to provide a habitat map of the Causeway Coast (Clements *et al*., 2010). This habitat map was based on the bathymetric and backscatter data acquired as part of the JIBS work with ground-truthing provided by various surveys (NIEA dive and ROV surveys, AFBI surveys, NISS and any other relevant sources). Map 1 shows the results of this work, detailing the boundary of the SAC and seabed habitat map.

The boundary around the Skerries and Causeway site has been drawn using the guidance provided by the Joint Nature Conservation Committee (JNCC) (2004, amended by Aish *et al*. 2008), and was defined through GIS modelling using data from the mapping survey and considered against the guidelines. The key parts of this guidance are that the boundary should be restricted to only include Annex I habitat or that which is required for the maintenance of that habitat and the boundary line defined in whole degrees and minutes and seconds where possible. NIEA have used minutes to two decimal places as an equivalence of seconds as it is more commonly displayed on vessel Global Positioning System (GPS)/Chartplotter systems. The guidance also states that the boundary should include as little non-Annex I habitat as possible and should also be sufficient to allow for elimination of potential damage to the area from activities such as trawling and dredging.

The seaward boundary of the Skerries and Causeway site conforms to the guidance of JNCC in Aish *et al.* (2008) in being "drawn as straight lines to ensure ease of identification on charts and at sea" (Brown *et al*. 1997, McLeod *et al.* 2002). The northern limit of the site is therefore based on a line of latitude that allows inclusion of the Benbane Reef Scarp Complex and the reef marked on the Admiralty Charts as The Ridges. The eastern boundary is a line of longitude that allows the inclusion of the deep reef to the east of the Benbane Reef Scarp Complex. The western boundary is a line to allow the inclusion of a part of the Portstewart stony reef and the outlying reefs north-west of the Skerries. The southern boundary is the coastal Mean Low Water mark which permits a clearly defined 'real' boundary; while the rocks and islands of the Skerries have a boundary of Mean High Water to include seal haul-out areas, an area already designated in national legislation as an Area of Special Scientific Interest (ASSI).



Map 1 Skerries and Causeway SAC with Annex I habitats 'Reef' and 'Sandbanks which are slightly covered by seawater all the time' and other ground types as provided under contract by the University of Ulster (Clements *et al., 2010*)

SAC SELECTION FEATURES

Feature type	Feature	Global Status	Size/ extent/ pop~
Habitat	Reefs	B	2280 ha
Habitat	Sandbanks which are slightly covered by sea water all the time	B	1601 ha
Habitat	Submerged and partially submerged sea caves	B	Approximately 30
Species	Harbour porpoise *Phocoena phocoena*	C	
Species	Common Seal *Phoca vitulina*	D	
Species	Grey Seal *Halichoerus grypus*	D	
Species	Bottlenose Dolphin *Tursiops truncatus*	D	

Table 1. List of SAC selection features. Those with global status A-C will be referred to in ANNEX I.

The global status is an expert judgement of the overall value of the site for the conservation of the relevant Annex I habitat. Sites have been graded A, B or C - in the UK these gradings have been interpreted as follows:

A - Sites holding outstanding examples of the habitat in a European context.

B - Sites holding excellent stands of the habitat, significantly above the threshold for SSSI/ASSI notification but of somewhat lower value than grade A sites.

C - Examples of the habitat which are of at least national interest (i.e. usually above the threshold for SSSI/ASSI notification on terrestrial sites) but not significantly above this. These habitats are not the primary reason for SACs being selected.

D - Habitat present but not of sufficient extent or quality to merit listing as SAC feature.

There is therefore a distinction between the principal features for which sites have been selected (those graded A or B) and those which are only of secondary interest (those graded C). This is a useful distinction but it is important to note that all three grades are qualifying SAC interest features.

Click here to go to the Natura 2000 Standard Data Form for the Skerries and Causeway SAC.

6. *CONSERVATION OBJECTIVES*

The ***Conservation Objective*** for this site is:

To maintain (or restore where appropriate) the

- ***Reefs***
- ***Sandbanks which are slightly covered by sea water all the time, and***
- ***Submerged and partially submerged sea caves***
- ***Harbour porpoise (Phocoena phocoena)***

to favourable condition.

For each SAC feature, there are a number of component objectives which are outlined in the table below. These include a series of attributes, measures and targets which form the basis of *Condition Assessment*. The results of this will determine whether the feature is in favourable condition or not. The feature attributes and measures are found in the attached annex.

7. SAC SELECTION FEATURE OBJECTIVE REQUIREMENTS

Feature	Global Status	Component Objective
Reefs	B	Maintain and enhance, as appropriate the extent of the reefs.
		Allow the natural processes which determine the development, structure, function and distribution of the habitats associated with the reefs, to operate appropriately.
		Maintain and enhance, as appropriate, the viability, distribution and diversity of typical species within this habitat.
Sandbanks which are slightly covered by sea water	B	Maintain the extent and volume of sandbanks which are slightly covered by sea water all the time, subject to natural processes.
		Allow the natural processes which determine the development, structure and extent of sandbanks which are slightly covered by sea water all the time, to operate appropriately.
		Maintain and enhance, as appropriate, the viability, distribution and diversity of typical species within this habitat.

Submerged and partially submerged sea caves	B	Maintain and enhance, as appropriate the extent of the sea caves.
		Allow the natural processes which determine the development, structure, function and distribution of habitats associated with the sea caves, to operate appropriately.
		Maintain and enhance, as appropriate, the viability, distribution and diversity of typical species within this habitat.
Harbour Porpoise (*Phocoena phocoena*)	C	Ensure the species is a viable component of the site.
		Ensure there is no significant disturbance of the species.
		Ensure the supporting habitats and processes relevant to harbour porpoises and their prey are maintained.

8. MANAGEMENT CONSIDERATIONS

The Skerries is a fairly natural open coast SAC with few significant issues which are not currently being managed successfully. The exception to this the potential for impact on reef features by vessels without knowledge of the exact location of the sensitive low-lying reefs. The current voluntary measure has been shown to be ineffective and will be replaced with a fisheries regulation which manages what type of fishing gear can be used within specific zones in the SAC boundary. Enforcement of this activity will require the use of enhanced vessel tracking. The Department is currently developing a scheme of management for the site which will go out for consultation in 2017. The following issues relate to many marine sites and in certain circumstances may have some bearing on the management of the Skerries and Causeway SAC.

9. MAIN THREATS, PRESSURES AND ACTIVITIES WITH IMPACTS ON THE SITE

Both on-site and off-site activities can potentially affect SAC features. The list below is not exhaustive, but deals with the most <u>likely</u> factors that are either affecting the Skerries and Causeway SAC, or could affect it in the future.

Aggregate extraction/Maerl extraction

Extraction of aggregates or extraction of maerl, either within or adjacent to the SAC, have the potential to cause direct loss or deterioration of qualifying habitats

and communities; including the deterioration of qualifying habitats and communities by smothering and increased turbidity from re-suspended material.

Agriculture and Forestry

Diffuse run-off from agriculture and forestry practices has the potential to cause deterioration of qualifying habitats and communities, primarily through the deterioration of water quality due to organic or inorganic pollutants. Changes in agricultural or forestry practices or changes of land use have the potential to cause deterioration of qualifying habitats and communities through changes in the nature and loading of sediments in rivers that discharge to coastal areas.

Aquaculture – finfish farming

Finfish farming has the potential to cause deterioration of qualifying habitats and communities through changes in water quality, smothering from waste material and physical disturbance from mooring systems. There is potential for accidental introduction of new non-native species and increasing the spread of existing non-native plants and animals which are already widely distributed in the UK. Invasive species have the potential to cause deterioration of the qualifying interests by altering community structure and quality.

Aquaculture – shellfish farming

Shellfish farming has the potential to cause deterioration of the qualifying habitats and communities through physical damage (e.g. installation of mooring blocks and continued scouring by riser chains) and changes in community structure caused by smothering from pseudo-faeces (undigested waste products) and debris (including dead shells) falling from the farm. There is also potential for accidental introduction of new non-native species and increasing the spread of existing non-native plants and animals through importation or translocation of shellfish stocks. Invasive species have the potential to cause deterioration of the qualifying interests by altering community structure and quality.

Diving

The study of the seabed by divers is in harmony with conservation interests provided no damage is done. Over collection of marine life could, however, prove damaging to the populations of certain species.

Coastal and Marine Development

The construction and maintenance of structures, both within and adjacent to the sea, have the potential to cause direct loss or deterioration of qualifying habitats and communities. An example is coastal defence or harbour/marina structures that may change local patterns of sediment suspension or deposition. Other examples include: renewable and other energy installations (including offshore wind, tide and wave energy and oil and gas installations); pipelines and cables; and marina and harbour developments and maintenance including the dredging of harbours, marinas and navigation channels. In many of these cases

disturbance of the seabed may cause increased turbidity and smothering in adjacent areas as well as the direct impact in the area of operation.

Discharge of commercial effluent or sewage
Commercial effluent has the potential to cause deterioration of qualifying habitats and communities, through pollution or nutrient enrichment, which may cause subsequent changes in community structure. Pollution is considered a significant threat to harbour porpoises and may result in suppression immune function and reduction in breeding success.

Disposal of dredge spoil
The disposal of either capital or maintenance dredge spoil, either within or adjacent to the SAC, has the potential to cause deterioration of qualifying habitats and communities, through smothering, increased turbidity, or re-suspension of pollutants.

Marine litter
Discarded inorganic debris such as plastic bags, bottles and fishing gear may become ingested, resulting in death through starvation or internal injury. Accidental entanglement in package wrap and fishing debris may result in external injury and asphyxiation. Sources of marine litter include commercial and recreational vessels, land-based sources, and offshore installations.

Commercial Fishing – Mobile gear (dredging and bottom trawling)
Benthic dredging and bottom trawling have the potential to cause deterioration and damage to qualifying habitats and communities (particularly maerl, Hall-Spencer, 2000) through direct contact with the dredge/trawl gear, and sedimentation when dredging/trawling occurs close to the qualifying interest. Loss of certain species through targeted catch or by-catch has the potential to cause deterioration of qualifying habitats and communities. The Department is currently engaging with the fishing community and other stakeholders to gather detailed evidence and to identify the areas which are sensitive to specific types of fishing gear in order to introduce fisheries regulations to ensure the long term protection of those features. This includes full analysis of all known fishing activities gathered over recent years.

Commercial Fishing – Mobile gear (pelagic mid-water trawling)
Pelagic mid-water trawling has minimal potential to cause deterioration of qualifying habitats and communities through direct contact, as the trawl gear is mostly well above the seabed (except occasionally for vessel turning in shallow water). However loss of certain species through targeted catch or by-catch has the potential to cause deterioration of qualifying habitats and communities.

Commercial Fishing – Static gear (creel/pot fishing)
The use of creels and / or pots in a localised area has the potential to cause deterioration of qualifying habitats and communities through direct contact,

particularly during their deployment and / or recovery. Loss of certain species through targeted catch or by-catch has the potential to cause deterioration of qualifying habitats and communities.

Marine Traffic – Boat anchorages and moorings

Anchors and moorings have the potential to cause deterioration of qualifying habitats and communities through the direct impact of riser chains. The Department is currently working with the Harbour Authority to identify a specific mooring site for visiting cruise ships. The management scheme will also inform boat users of the exact location of sensitive habitats such as seagrass beds in which mooring and anchoring will be managed.

Marine Traffic – Boat maintenance and antifoulant use

Most antifoulant products are designed to kill or discourage naturally occurring organisms and, as such, cause damage to the water environment if used carelessly. Under such circumstances use of antifoulant has the potential to cause deterioration of qualifying habitats and communities within this site.

Marine Traffic – Commercial and recreational vessels

The majority of large commercial shipping passes well to the North of The Skerries and Causeway SAC. However, smaller coastal vessels on-route to The River Bann and/or Lough Foyle pass through the SAC boundary. It should also be noted that the area inshore of The Skerries is a designated anchorage for ships sheltering from adverse weather. The pumping of bilges, discharge of ballast water, accidental grounding, or accidental oil (or other chemical) spillage from commercial vessels could therefore all occur close to the SAC. Such incidents have the potential to cause deterioration of qualifying habitats and communities through direct or indirect impacts. Emergency and oil spillage contingency plans should take into account specific qualifying interests and recognise the importance of marine SACs should such incidents occur. Smaller recreational and fishing vessels also have the potential to cause deterioration of qualifying habitats and communities through fuel spillage and grounding.

There is also potential for accidental introduction of new non-native species and increasing the spread of existing non-native plants and animals through bilge or ballast water, sea chests, and bio-fouling on hulls (identified as a particular risk on vessels for sale that are in the water for some time before being moved to a new location). Invasive species have the potential to cause deterioration of the qualifying interests by altering community structure and quality.

Physical disturbance from recreational activity and vessel strikes can also be an issue in coastal areas where high densities of porpoises coincide with high densities of boat traffic, particularly during the summer season.

Marine Renewables

The Strategic Environmental Assessment (SEA) of Offshore Wind and Marine Renewable Energy by the Department of Energy, Trade and Investment (DETI, 2009) assessed the potential for commercial and test/demonstration sites in NI waters. This assessment identified potential impacts of such developments and related mitigating actions to be considered at the project developments stage. A possible commercial scale Tidal Resource Zone was identified off the North Coast within which the Crown Estate as managers of the seabed has offered development rights to two consortia, Tidal Ventures Ltd and Fair Head Tidal. However there are no tidal energy developments in this area at present and the Department is engaging with the developers in considering their respective marine licence applications.

The UK's Department of Business, Energy and Industrial Strategy (UK BEIS) administers marine environmental regulations associated with oil and gas exploration and production and the decommissioning of marine installations, wells, pipelines and associated infrastructure in the UK marine area (excluding internal waters). At present there is no oil or gas exploration licence for the 5 offshore blocks in the Antrim Coast (the Skerries and Causeway SAC lies partly within this area).

The development of marine renewables has the potential to cause deterioration of qualifying habitats and communities through direct alteration, removal or manipulation of these qualifying interests and their associated species. Furthermore, deterioration of qualifying habitats and disturbance of species may occur through the use of pile driving or powerful sonar required for surveys or construction phases as these may directly harm cetaceans or act as a barrier to cetaceans using the area.

Scientific Research, Geological surveys and Military exercises

Research activities, Geological surveys and Military exercises have the potential to cause deterioration of qualifying habitats and communities through direct alteration, removal or manipulation of these qualifying interests and their associated species. Furthermore, deterioration of qualifying habitats and disturbance of species may occur through the use of seismic surveys or powerful sonar that may directly harm cetaceans or act as a barrier to cetaceans using the area. These activities should be communicated to the Department for specific advice about the potential of impact and subsequent mitigation.

Wildlife watching trips

Wildlife watching trips (boat and land based) have the potential to cause disturbance to species if operators are not appropriately trained in how to approach species while minimising potential disturbance. In addition, damage to sensitive habitats may occur through lack of knowledge of their location. Various wildlife training courses are available which teach best practice when dealing with wildlife.

Climate Change
Northern Ireland faces changes to its climate over the next century. Indications are that we will face hotter, drier summers, warmer winters and more frequent extreme weather events. The Northern Ireland Climate Change Adaptation Programme was published in January 2014. This contains the Northern Ireland Executive's response to the risks and opportunities identified in the Climate Change Risk Assessment for Northern Ireland (published January 2012) as part of the overall UK Climate Change Risk Assessment. The Adaptation Programme provides the strategic objectives in relation to adaptation to climate change, the proposals and policies by which each department will meet these objectives and the timescales associated with the proposals and policies identified in the period up to 2019.

10. MONITORING

The SACs are surveyed using two forms of monitoring:

Site Integrity Monitoring (SIM) is carried out to ensure compliance with the SAC conservation objectives. Potentially damaging activities may be picked up through the active marine ranger programme or by members of the public raising concerns with the Department. These reports are followed up through consultation with the relevant competent authorities.

Site Condition Assessment of the designated features is carried out on a rolling 6 year basis to pick up subtle changes in the condition of the feature and to ensure that the conservation objectives are being met.

Site condition assessments include a variety of techniques such as diving, remote cameras, sediment sampling and acoustic seabed mapping. Marine mammal monitoring programmes also contribute.

10.1 MONITORING SUMMARY

1. Monitor the integrity of the site (SIM or Compliance Monitoring)
This SIM should be carried out at least once every year.

2. Monitor the condition of the site (Condition Assessment)
Monitor the key attributes for each of the SAC selection features. This will detect if the features are in favourable condition or not. Refer to Annex I.

The favourable condition table provided in Annex I is intended to supplement the conservation objectives only in relation to management of established and ongoing activities and future reporting requirements on monitoring condition of the site and its features. It does not by itself provide a comprehensive basis on

which to assess plans and projects, but it does provide a basis to inform the scope and nature of any Habitats Regulations Assessment (HRA) that may be needed. It should be noted that completion of a HRA is a separate activity to condition monitoring, requiring consideration of issues specific to individual plans or projects.

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ANNEX I

The marine Annex I habitats are very broadly defined habitats that are often represented by large and complex sites. To effectively describe, monitor and manage such complex features, it has been necessary to divide some of them into smaller units called *sub-features*. Sub-features are distinctive biological communities (e.g. eelgrass beds, maerl beds, horse-mussel reefs), or particular structural or geographical elements of the feature. Due to the broad nature of marine Annex I features, it has often proved helpful, both in the development of conservation objectives, and of monitoring programs, to separate the feature into a number of constituent sub-features, and then to identify attributes and targets for the sub-features. The use of sub-features has been found to be particularly helpful for those marine Annex I features that represent whole physiographic units and permits a level of flexibility in the application of the UK's Common Standards Monitoring which has been found necessary when applying the standards at the site level.

Feature 1 (SAC) - Sandbanks which are slightly covered by sea water all the time (status B)

*=primary attribute. One failure among primary attribute = unfavourable condition

Feature	Sub-feature	Attribute	Measure	Target	Comments
Subtidal sandbanks		* Extent	Area (ha) of the subtidal sandbanks to be measured periodically (frequency to be determined).	Ensure that quality and extent of sandbank are not threatened by aggregate removal.	Currently there is no licensed aggregate removal activity within or near to this SAC.

Feature	Sub-feature	Attribute	Measure	Target	Comments
		* Sediment character	Particle size analysis (PSA). Parameters include percentage sand/silt/gravel, mean and median grain size, and sorting coefficient, used to characterise sediment type. Sediment character to be measured once during the reporting cycle.	Average PSA parameters should not deviate significantly from an established baseline subject to natural change.	Sediment character defined by PSA is key to the structure of the feature, and reflects all of the physical processes acting on it. Particle size composition varies across the feature and can be used to indicate spatial distribution of sediment types thus reflecting the stability of the feature and the processes supporting it. This is currently addressed through WFD monitoring programme.

Feature	Sub-feature	Attribute	Measure	Target	Comments
		* Topography	Depth distribution of sandbanks from selected sites, measured periodically (frequency to be determined).	Depth distribution should not deviate significantly from an established baseline, subject to natural change.	Depth and distribution of the sandbank reflects the energy conditions and stability of the sediment, which is key to the structure of the feature. Depth of the feature is a major influence on the distribution of communities throughout. The baseline for this feature was delivered through the JIBS programme. It is not envisaged that this will be repeated in the near future, however, marine license requirements for site specific projects may result in local bathymetric charts being produced for comparison against baseline data.

Feature	Sub-feature	Attribute	Measure	Target	Comments
		Water density	Average temperature/salinity in the subtidal measured periodically throughout the reporting cycle (frequency to be determined).	Average temperature/salinity should not deviate significantly from an established baseline, subject to natural change.	Temperature and salinity are characteristic of the overall hydrography of the area. Changes in temperature and salinity influence the presence and distribution of species (along with recruitment processes and spawning behaviour) including those at the edge of their geographic ranges and non-natives. This is delivered through the AFBI coastal buoy monitoring network.
	Eelgrass bed communities (*Zostera marina*)	Extent	Area (ha) of eelgrass beds, measured during peak growth period twice during the reporting cycle.	No decrease in extent from an established baseline subject to natural change.	The extent and distribution eelgrass beds provide a long-term integrated measure of environmental conditions. Location of a single seagrass bed is known but the exact extent and boundary has not yet been accurately mapped. This is due to be carried out as part of the ongoing monitoring programme.

Feature	Sub-feature	Attribute	Measure	Target	Comments
	Subtidal Sand and Gravel Communities Subtidal Fine Sand and Mud Communities	*Characteristic biotopes at sites chosen so as to provide some indication of the distribution and extent of the Sub-Feature.	Presence of the selected biotopes as identified by the NI Sublittoral survey at selected sites measured once during the reporting cycle. This was further refined by the University of Ulster in the production of a broadscale habitat map for the designation of the SAC (http://www.tandfonline.com/doi/pdf/10.1080/17445647.2012.661957).	Results should not deviate significantly from the established baseline, subject to natural change.	Changes in extent and distribution may indicate long term changes in the physical conditions at the site.
		* Species composition of selected biotopes at monitoring sites.	Species composition of the selected biotopes as identified by the NI Sublittoral survey measured once during the reporting cycle.	Composite species of selected biotopes should not deviate significantly from the established baseline, subject to natural change.	Species composition will be used to determine the biotope classification. The species composition of some biotopes may provide further information on changes/trends in these communities. A list of selected indicator species identified by field surveys will be utilised to determine the achievement of the conservation objectives through presence/absence at monitoring sites.

Feature 2 (SAC) Reefs (status B)

*=primary attribute. One failure among primary attribute = unfavourable condition

Feature	Sub-feature	Attribute	Measure	Targets	Comments
Reef	Subtidal Rock and Boulder Communities Subtidal Rocky Reef Communities	* Characteristic biotopes at sites chosen so as to provide some indication of the distribution and extent of the Sub-feature.	Presence of the selected biotopes at selected sites measured once sure the reporting cycle. This was further refined by the University of Ulster in the production of a broadscale habitat map for the designation of the SAC (http://www.tandfonline.com/doi/pdf/10.1080/17445647.2012.661957).	Results should not deviate significantly from the established baseline, subject to natural change.	Changes in extent and distribution may indicate long term changes in the physical conditions at the site. Some of the reefs in the SAC are unique in that they are sand scoured and low profile in nature and may be subject to natural burial. This will present problems in monitoring due to the fact the temporary absence of the reef through burial may be entirely natural cyclical process.
		* Species composition of selected biotopes at monitoring sites.	Species composition of the selected biotopes measured once during the reporting cycle.	Composite species of selected biotopes should not deviate significantly from the established baseline, subject to natural change.	Species composition will be used to determine the biotope classification. The species composition of some biotopes may provide further information on changes/trends in these communities. A list of selected indicator species identified by field surveys will be utilised to determine the achievement of the conservation objectives through presence/absence at monitoring sites.

Feature 3 (SAC) Submerged and partially submerged sea caves (status B)

*=primary attribute. One failure among primary attribute = unfavourable condition

Feature	Sub-feature	Attribute	Measure	Targets	Comments
Sea caves		* Extent	Number and location, measured once during the reporting cycle.	No decrease in extent from a baseline to be established, subject to natural change.	Extent is an attribute on which reporting is required by the Habitats Directive. The extent may alter as a result of natural erosion and collapses as well as a result of human activity, hence the need for periodic measurement.
		* Distribution of characteristic sea cave communities	Distribution of intertidal cave biotopes. Measured during summer, once during reporting cycle. This will only be delivered for a representative number of the caves. Access to these caves given their exposed Atlantic location is problematic and subject to comprehensive risk assessment.	Baseline yet to be established. Distribution should not deviate significantly from a baseline to be established, subject to natural change.	Distributions of certain biotopes are an important structural component of the sea caves of the Skerries and Causeway. Changes in extent and distribution may indicate long term changes in physical conditions at the site

Feature 4 (SAC) Harbour Porpoise (status C)

*=primary attribute. One failure among primary attribute = unfavourable condition

Attribute	Measure	Targets	Comments
Mean abundance of adults within the SAC	* Maintain and enhance the population as appropriate.	Sightings rate from land based watches not less than 0.314 harbour porpoise per hour (based at Ramore Head).	Data generated by ongoing DAERA Marine and Fisheries Division survey. A recent report (Nykanen *et al*., 2017) examining the land based Harbour porpoise watch data for Northern Ireland suggested that an effort watch of 11 watches per month (130/year) is required to detect a 57% change in the HP population.
Presence/absence of young	* Maintain and enhance the population as appropriate.		At the time of designation approximately 30.6% of the total numbers counted were young (all ages i.e. young, juveniles and calves).