Department of the
Environment
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December 2014

Guidance on selection and designation of Marine Conservation Zones (MCZs) in the Northern Ireland Inshore Region

Guidance on the selection and designation of Marine Conservation Zones under Part 3 (Marine Protection) of the Marine Act (Northern Ireland) 2013.

The document may be made available in alternative formats. Please contact,

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1.0 Introduction

1.1 Background

The sea around Northern Ireland is as environmentally important and diverse as the land, and as fundamental to our economic prosperity. It is important that it is managed sustainably and promoted as a valuable social and economic asset. The Department of the Environment (the Department) is committed to the vision of a clean, healthy, safe, productive and biologically diverse marine and coastal environment that meets the long term needs of people and nature. Marine nature conservation is an integral component of how this can be achieved.

The Department's 'Strategy for Marine Protected Areas in the Northern Ireland inshore region'[1] sets out the aims and key objectives to which marine conservation policy can contribute.

Site protection is an important element of marine and coastal conservation and until recently it has focused on species and habitats of European importance which are listed in the relevant annexes of the EC Wild Birds and Habitats Directives[2].

National, European and International commitments

There are a number of national, European and international commitments that Northern Ireland, together with the other UK Administrations, has agreed to for the protection of marine biodiversity. These include a number of commitments on establishing marine protected areas:

National

- Marine Policy Statement (MPS)[3]: in this the UK Government re-stated its vision for 'clean, healthy, safe, productive and biological diverse oceans and seas'. To help deliver this vision the UK Government with Devolved Administrations have committed to creating an ecologically coherent network of marine protected areas in the UK.

European

- Habitats Directive (92/43/EEC)[4] and Wild Birds Directive (2009/147/EC

1 http://www.doeni.gov.uk/marine-conservation-zones
2 http://ec.europa.eu/environment/nature/index_en.htm
3 http://www.defra.gov.uk/publications/files/pb3654-marine-policy-statement-110316.pdf
4 http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:1992:206:0007:0050:EN:PDF

formerly 79/409/EEC)[5]: these Directives provide for the establishment of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), respectively, which together form the Natura 2000 network. This is an EU-wide network of nature protection areas which aims to assure the long term survival of Europe's most valuable and threatened species and habitats.

- Marine Strategy Framework Directive (2008/56/EC)[6]: the UK Government has committed to contributing to the achievement of Good Environmental Status (GES) of Europe's seas by 2020. This involves protecting the marine environment, preventing deterioration and restoring where practical, while using marine resources sustainably. The Marine Strategy Framework Directive (MSFD) specifically requires spatial protection measures that contribute to a coherent and representative networks of marine protected areas to be established and for their management to be in place by 2016.

International

- The Oslo-Paris Convention for the Protection of the Marine Environment of the North East Atlantic (OSPAR)[7]: through this convention, the countries bordering the North East Atlantic, including the UK, have agreed to establish an ecologically coherent network of marine protected areas in the North-East Atlantic by 2012 and ensure it is well managed by 2016.
- The Convention on Biological Diversity (CBD)[8]: in 2010, parties to the convention made a commitment that 'by 2020 .....10% of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems for protected areas and other effective area-based conservation measure, and integrated into the wider landscape and seascape.'

5 http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:020:0007:0025:EN:PDF
6 http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:164:0019:0040:EN:PDF
7 http://www.ospar.org/content/content.asp?menu=01481200000000_000000_000000
8 http://www.cbd.int/convention/

1.2 New powers to designate MCZs

The Marine Act (Northern Ireland) 2013[9] (the Act) and the UK Marine and Coastal Access Act 2009[10] contain new powers to designate MCZs (in the Northern Ireland inshore and offshore regions respectively) as part of a range of measures to manage and protect our seas for current and future generations.

The Marine Act (Northern Ireland) 2013 is the final piece of the Marine Programme which has already delivered the Marine and Coastal Access Act 2009 and regulations transposing the MSFD.

The designation of MCZs will safeguard vulnerable or unique species and habitats of national importance in the Northern Ireland inshore region. These MCZs will help deliver national priorities on biodiversity and geodiversity, including Northern Ireland's contribution to European and international commitments on biodiversity e.g. under MSFD and OSPAR.

1.3 Scope

While nature conservation is a devolved matter, certain portions of the marine environment are reserved with legislative competence retained by the UK Government. These areas include the foreshore (the area between high and low water mark) and the seabed. The Act gives the Department power to designate areas as a MCZ with the agreement of the Secretary of State.

These guidelines apply to the Northern Ireland inshore region as defined in section 2 of the Act (**Figure 1**). The guidelines primarily apply below Mean High Water Spring (MHWS) tide, but may in some circumstances be applied above MHWS in line with sections 15(3) and (4) of the Act.

The Department and the other UK Administrations are working together to deliver, within the context of devolution, a coherent network of well managed MPAs. The Administrations have issued a 'Joint Administrations Statement'[11] in December 2012 outlining the UK contribution to an ecologically coherent MPA network in the North East Atlantic. This will deliver internationally agreed commitments on the protection of biodiversity in UK waters.

9 http://legislation.gov.uk/nia/2013/10/enacted/data.pdf

10 http://www.legislation.gov.uk/ukpga/2009/23/data.pdf

11 http://archive.defra.gov.uk/environment/marine/documents/protected/mpa-network-joint-admin-statement-201212.pdf

1.0 Introduction

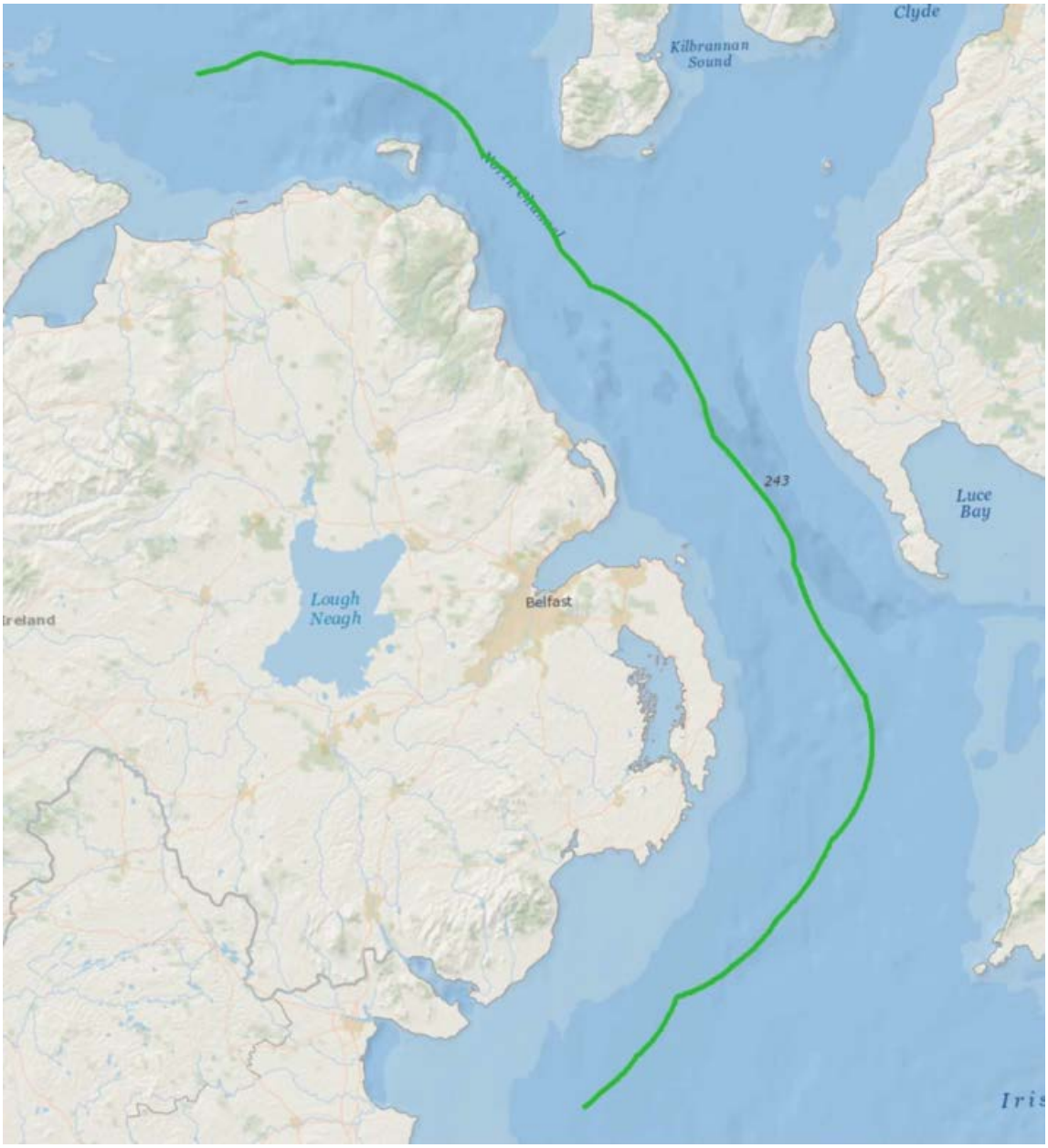

Figure 1: The Northern Ireland Inshore Region

SCALE	1:906,743
MAP DATE	29 August 2013

Km
0 10 20 40

Miles
0 5 10 20

Sources: Esri, GEBCO, NOAA, National Geographic, DeLorme, NAVTEQ, Geonames.org, OceanWise Ltd, UKHO.

1.4 About the guidance

The guidance document was issued for consultation in October 2013. The final version reflects feedback received from the stakeholders in using the draft guidance on the approach to selecting sites for designation. The guidance details how the Department intends to establish a Marine Protected Area (MPA) network in Northern Ireland's seas through the identification of possible MCZ locations. This will fulfil the obligations in the Act to contribute to an ecologically coherent UK network of MPAs as well as wider biodiversity commitments at European and global level.

1.5 The MPA network and ecological coherence

The Department's aim is to develop a network of well-managed MPAs that will contribute to an ecologically coherent network.

The network should be capable of delivering Northern Ireland's national and international commitments for marine nature conservation and the achievement of GES in our seas by 2020, as required by the MSFD.

The purpose of the network will be to deliver benefits for marine natural features and to support wider ecosystem function. The network should safeguard marine biological and geological features in Northern Ireland waters and through sound management, deliver their recovery where practicable.

The network will include features considered to be key and threatened and/or declining and/or representing the range of features within Northern Ireland's seas.

Ideally sites should contain both biological and geological features. However, sites with individual features will be considered (e.g. where a feature is rare). The ecological and/or geological processes critical to the functioning of the protected features will be taken into account in boundary setting and management.

The network will encompass a range of different types of protected areas, including European marine sites and MCZs designated under section 13 of the Act. An assessment of the contribution these areas make to the MPA network will be carried out as part of the process.

The concept of an ecologically coherent network of MPAs is still evolving, but is underpinned by the OSPAR Commission guidance (OSPAR 2006)[12].

12 http://www.ospar.org/documents/DBASE/DECRECS/Agreements/06-03e_Guidance%20ecol%20coherence%20MPA%20network.doc

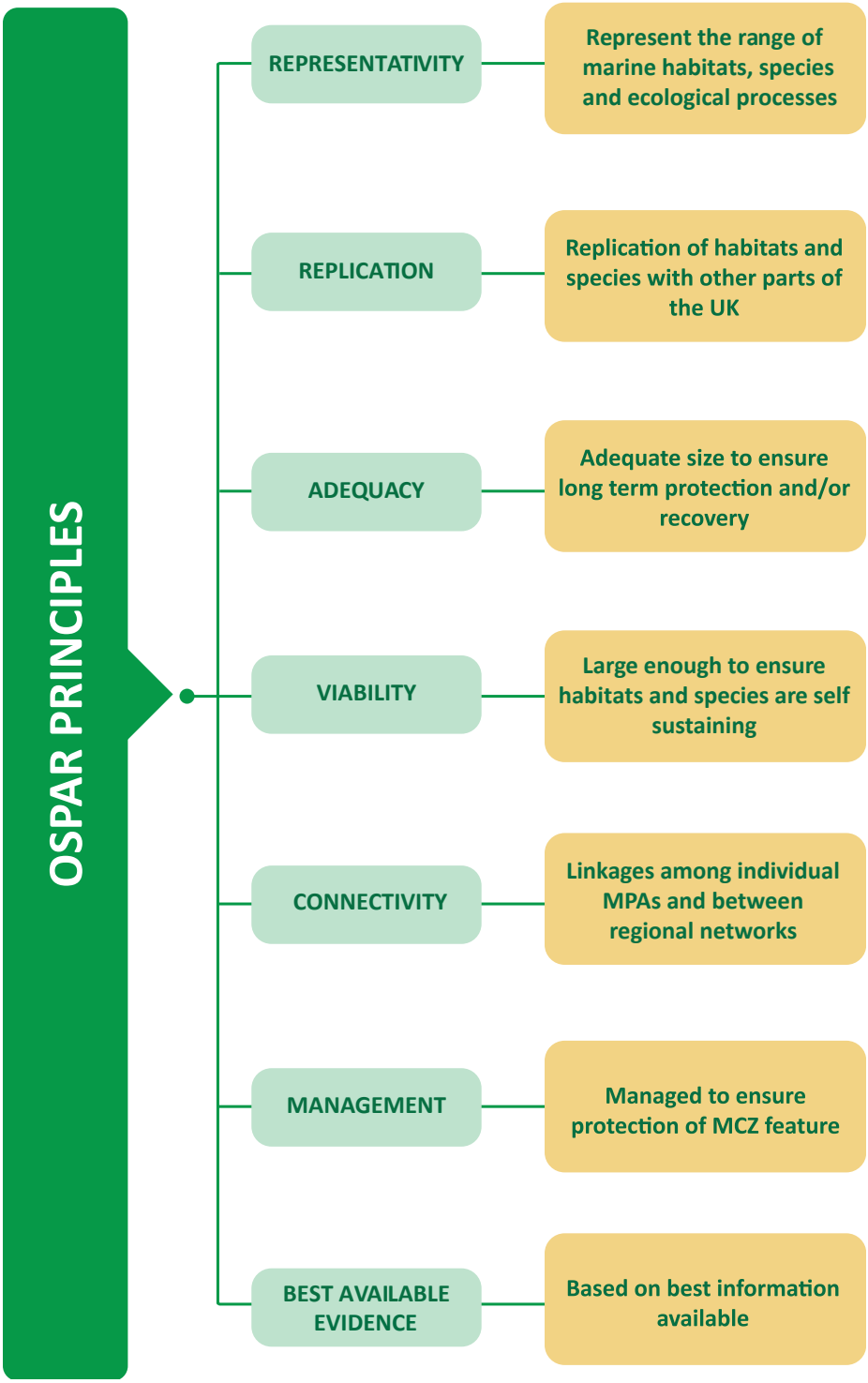

Figure 2: The seven OSPAR network design principles which will be used for the selection of Marine Conservation Zones (MCZs) in the Northern Ireland inshore region.

The Department has adopted seven MPA network design principles (**Figure 2**) from the OSPAR Commission guidance. These design principles will be used as the basis for MCZ selection.

1.6 Timescales

It is intended that an ecologically coherent and well-managed network of MPAs will be substantially complete by the end of 2020. This will make a major contribution to achieving GES in our seas as required under MSFD (**Figure 3**). The ecological coherence and condition of the network will be kept under review, which may give rise to a need for further orders to be made to designate additional MCZs.

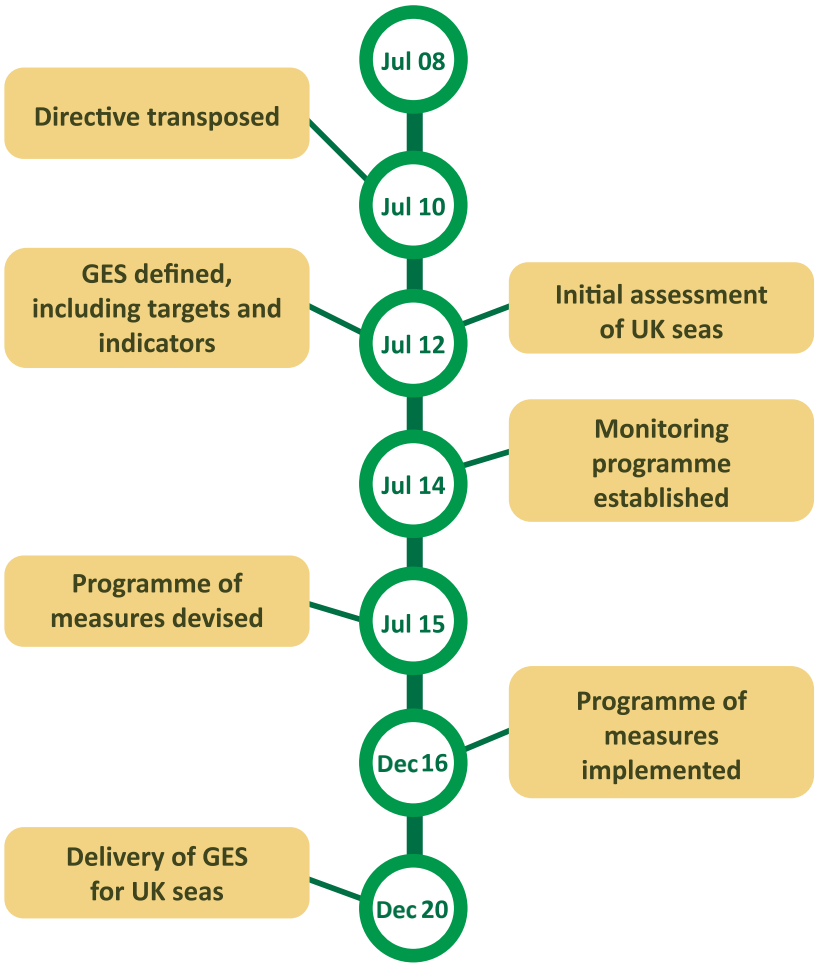

Figure 3: The MSFD milestones and key deliverables in the Department's commitment to a clean, healthy, safe , productive and biologically diverse marine and coastal environment.

Other relevant target timescales for Northern Ireland include:

2015: Public consultation on draft Marine Plan for Northern Ireland

2016: Establishment of a well-managed network of MPAs

2018: Report to Northern Ireland Assembly on MPA network progress

2.0 Marine Conservation Zones (MCZs)

2.1 Marine Conservation Zones and an ecologically coherent network

The UK Administrations have committed to achieving an ecologically coherent network of MPAs in UK waters through a number of international agreements (OSPAR Convention, World Summit on Sustainable Development[13] and Convention on Biological Diversity). There are also links to European Directives such as the Marine Strategy Framework Directive and the EC Habitats and Wild Birds Directives.

MCZs designated under the new powers of the Act will complement the marine components of sites designated under the EC Wild Birds and Habitats Directives, the coastal ASSIs and Ramsar sites. MCZs will form the main elements of the network and will contribute to our international and national commitments by protecting those features in Northern Ireland that cannot be protected under the existing designations.

Linking marine protected areas together into an ecologically coherent network, supported by wider environmental management measures will achieve benefits more effectively than individual MPAs can alone. A well-managed network to protect biodiversity will contain MPAs of different sizes containing a range of habitats and species.

Each of the UK Administrations has the responsibility for designating MCZs (called nature conservation Marine Protected Areas in Scotland) in their territorial waters (out to 12 nautical miles). The OSPAR design principles are being used by the UK Administrations as the basis for network design but each administration is taking a different approach in the selection and designation process.

2.2 Taking account of economic, cultural and social factors in site selection

The designation of MCZs will help to conserve ecosystems and biodiversity whilst recognising the need to maintain sustainable economic, cultural and social uses of the areas. Unlike other marine protected areas, MCZs

13 http://www.unmillenniumproject.org/documents/131302_wssd_report_reissued.pdf

will take economic, cultural and social activities into account when identifying potential sites, although their presence will not prevent the consideration of an area for designation as a MCZ. Section 14(7) of the Act specifically makes provision for the economic, cultural and social impacts of designating a MCZ to be taken into account when deciding upon which sites to designate.

The Department will, where possible, avoid designating MCZs that would conflict with ongoing/planned economic, cultural or social activities and will consider suitable alternative sites. Where this is not possible, for example due to the rarity of a feature, the aim would be to reduce any conflict between the activity and the conservation objectives to a minimum whilst ensuring that the site makes its contribution to an ecologically coherent network.

The Department will assess the suitability of sites for MCZ designation in areas where activities such as commercial fishing, offshore renewables, or recreational activities already take place. This assessment will also apply to areas where activities do not yet take place but are planned or licensed for the future. Consideration will be given to the potential of co-locating MCZs within licensed and/or planned activities. To date, there is limited knowledge of this concept in practice, but its success and extent will be site specific. The scope and likelihood of co-location of marine activities will be assessed as part of the designation process.

The Department recognises that the designation of MCZs may have an impact as some activities could be displaced to other areas. Clearly, the size, scope and nature of an activity within any proposed MCZ will determine the possible impacts, if any, of the displacement issue. In many cases the effects may be minimal and in others may be more significant.

During the development of MCZ proposals the issue of displacement of activities will be considered by assessing stakeholders' level of dependency on the proposed MCZ. For each proposed MCZ the Department will carry out an assessment of the activity to determine the impact that this is likely to have on the proposed features of the site taking into consideration any information provided by the relevant stakeholder.

An example of the type of information required for these assessments is given in **Box 1**.

Box 1: What is required to carry out an assessment of fishing activities?

The Department will require information on the current fishing intensity, location of target areas, number of users, frequency of activity, purpose and justification (e.g. research or commercial), type of gear used, species caught and landed and duration of activity. This information can be used to determine whether the activity has an adverse impact on the proposed features of the site.

As part of this assessment, fishermen will be asked to provide locations of where they are likely to go should they be displaced as a result of restrictions on fishing activity in the proposed MCZ. These new sites will be assessed in a similar manner to the initial assessment to determine the carrying capacity and potential impacts from increased/new fishing pressure.

All assessments will be dependent on the fishing community providing accurate information and the Department will work closely with the Department of Agriculture and Rural Development (DARD), the Agri-Food Biosciences Institute (AFBI) and industry representatives when carrying this out. Licence holders likely to be affected by MCZ proposals will be assessed on a case by case basis and the Department will take account of the degree of dependency of the stakeholder in relation to their activities historically carried out in that area.

2.3 Impact Assessments

All MCZ designations will be subject to an economic impact assessment setting out the anticipated costs and benefits of the proposed designation, including the identified nature conservation, environmental, economic, cultural and social implications.

The impact assessments will include:

- identification of current or potential future environmental, economic, cultural and social status of the proposed area in the absence of designation (i.e. the status quo or baseline);
- identification of anticipated range of environmental, economic, cultural and social impacts of designating the preferred sites, relative to the baseline;
- the options for an alternative MCZ (location, conservation objectives, management measures) and the range of associated potential costs and benefits (assessed qualitatively or quantitatively as appropriate).

3.0 The MPA network in the seas around Northern Ireland

3.1 The makeup of the MPA network

The Northern Ireland MPA network will include European marine sites that are Special Protection Areas (SPAs)[14], and Special Areas of Conservation (SACs)[15] together with Marine Conservation Zones (MCZs), and marine parts of Ramsar sites[16] and Areas of Special Scientific Interest (ASSIs)[17] (**Figure 5**).

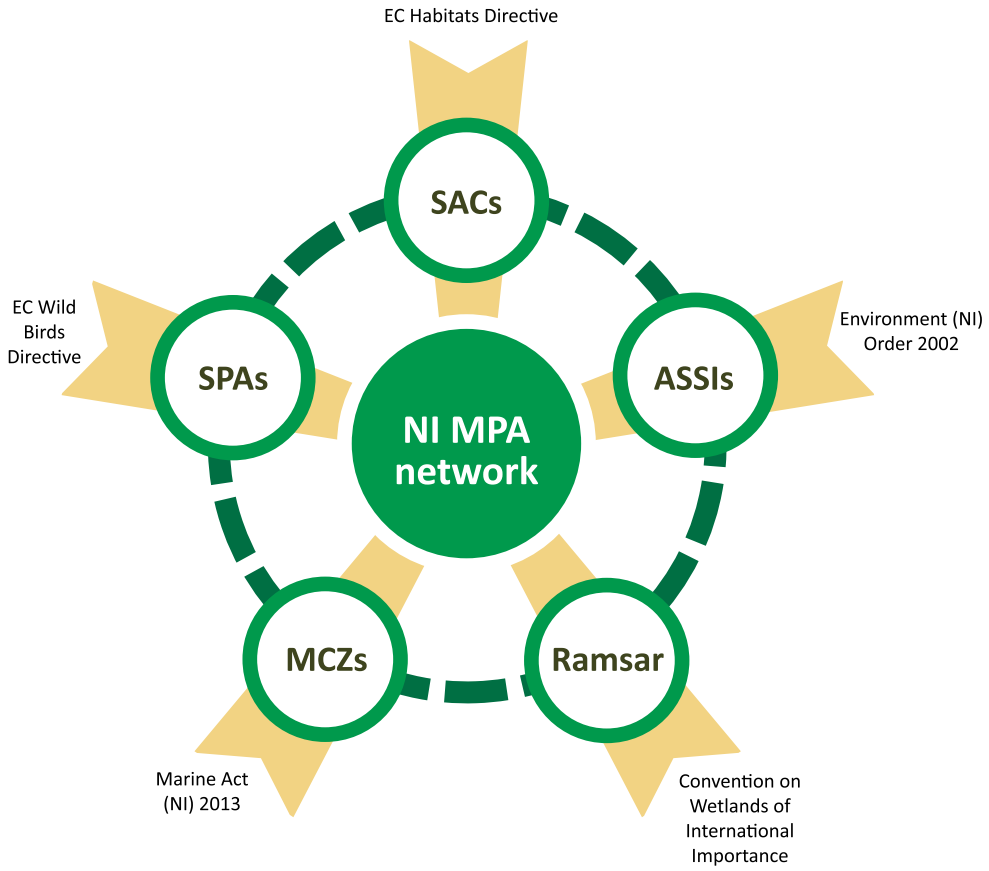

Figure 5: The contribution of nature conservation legislation governing the marine area to Northern Ireland's Marine Protected Area (MPA) network.

14 http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:020:0007:0025:EN:PDF
15 http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31992L0043:EN:NOT
16 http://www.ramsar.org/about/the-ramsar-convention-and-its-mission
17 http://www.legislation.gov.uk/nisi/2002/3153/contents

The Wildlife (Northern Ireland) Order 1985[18] as amended by the Wildlife and Natural Environment Act (Northern Ireland) 2011[19] contains powers for the protection of wild animals and plants within Northern Ireland. Schedules of listed species contain reference to coastal and marine birds and also to seals and cetaceans.

The Act allows for overlap of sites designated under different legislation, but the Department intends MCZs to complement the existing site designation and protection measures for European marine sites.

There may be circumstances where MCZ and European designations fully or partially overlap to protect different features. This may offer a higher level of protection to part of a site than the existing designation allows or be done for practical purposes to extend an existing boundary (e.g. to include geomorphological processes). Examples include but are not limited to:

- designation of a MCZ for a feature within a European marine site that does not qualify under the Habitat or Wild Birds Directives criteria;
- designation of a MCZ for marine features covering areas (usually intertidal) that have been notified as ASSIs for terrestrial features only.

The UK MPA network will comprise the sites as described in **Figure 5** as well as English and Welsh MCZs, Scottish MPAs and SSSIs (**Figure 6**).

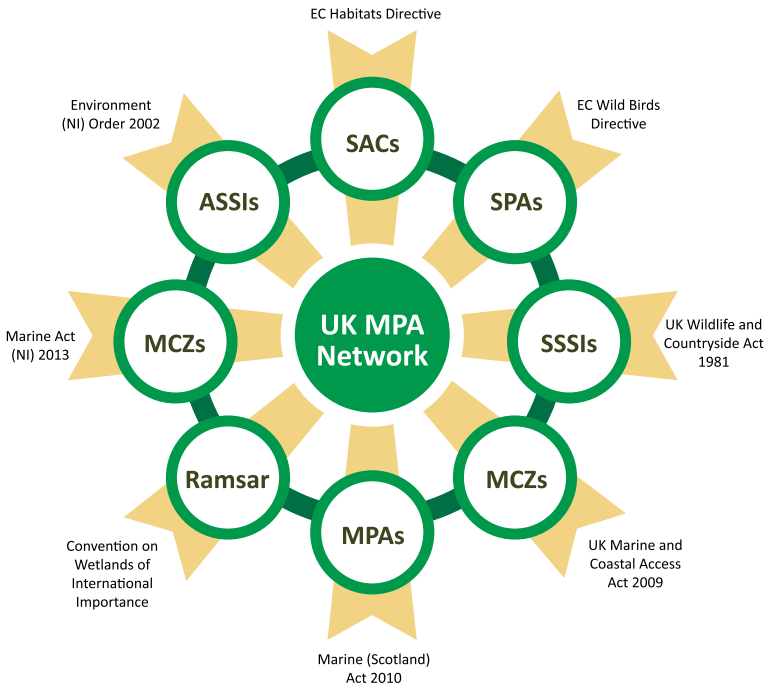

Figure 6: The contribution of nature conservation legislation governing the marine area to the UK Marine Protected Area (MPA) network.

18 http://www.legislation.gov.uk/nisi/1985/171/data.pdf

19 http://www.legislation.gov.uk/nia/2011/15/data.pdf

4.0 Features to be included in MCZ development

4.1 What features are being considered?

Our marine environment contains a wide variety of habitats and species. The focus will be on protecting a range of representative and threatened, rare or declining species and habitats – referred collectively as Priority Marine Features (PMF). Some of these species and habitats may be more sensitive or vulnerable to pressures and will need targeted protection and/or urgent action to prevent further damage. Those PMFs identified as benefiting from spatial protection in the Northern Ireland inshore region are referred to as proposed MCZ (pMCZ) features which will underpin the initial identification of Areas of Search.

These will form the basis of MCZ designation and include marine species, habitats and geological (including geomorphological) features. Habitat features should comprise both the species assemblage (that is typical of the habitat in its location and are key to its ecological functioning) and the physical habitat supporting it. A pelagic species may be part of the species assemblage where there is a direct functional link between it and the habitat feature.

Preference will be given to the selection of MCZs with multiple features, including those of interest for both biodiversity and geodiversity, as these are of high intrinsic value. However, the site selection process will also consider sites with single features to ensure adequate representation of all features particularly those that are important in a Northern Ireland context.

Features will be described in adequate detail in order to make conservation objectives and management advice as meaningful and achievable as possible. Some habitat descriptions may also include detail on associated features.

The site selection process is adaptive to allow for the incorporation of new data on the location, condition and effects of pressures on the features to be protected. The assessment of whether sites are important in terms of any of these factors will be based on the best available evidence, expert advice and stakeholder knowledge.

4.2 Development of the Priority Marine Features (PMF) list

There are a number of conservation mechanisms that apply to Northern Ireland's seas, some of which list features of importance to marine conservation and the functioning of marine ecosystems. Amongst these are the OSPAR Biological Diversity and Ecosystems Strategy; Biodiversity Action Plans; the Northern Ireland Biodiversity Strategy (1992)[20]; and the EC Habitats and Wild Birds Directives.

In Northern Ireland, marine conservation is focusing on habitats and species that are important in a local context.

The existing conservation lists (outlined below) were amalgamated to identify marine features of nature conservation importance in the Northern Ireland inshore region. This is to ensure the range of representative, threatened, rare or declining species and habitats are protected. From this list the PMF Habitats, PMF Limited/low mobility species and PMF Highly mobile species lists were developed.

- OSPAR List of Threatened and/or Declining Species and Habitats (**OSPAR T&D**);
- The UK Biodiversity Action Plan List (**UK BAP**);
- Northern Ireland List of Priority Habitats and Species (**NI Priority**);
- The Wildlife (Northern Ireland) Order 1985 (**WO**) as amended by the Wildlife and Natural Environment Act (Northern Ireland) 2011(**WANE**);
- Northern Ireland Species of Conservation Concern (**SOCC**), and
- Nationally Important Marine Features (**NIMF**).

20 http://www.doeni.gov.uk/nibs_2002.pdf

4.3 Development of proposed Marine Conservation Zone (pMCZ) feature lists

The Department carried out a comprehensive criterion based review of all habitats and species on the PMF lists to identify the pMCZ features , following the process described in Box 2.

The Department has published a 'Justification Report for the selection of proposed Marine Conservation Zone (pMCZ) features' and is available on the Department's website:

http://www.doeni.gov.uk/mcz_justification_report_for_selection_of_pmczs_features-version1.1.pdf

Box 2. The steps taken to develop the feature lists

Priority Marine Features	Priority Marine Features (PMFs) in the Northern Ireland inshore region identified and developed from the existing conservation lists (OSPAR T&D, UK BAP, NI Priority, WO, SOCC and NIMF). Some Priority Marine Features may not be considered further if they are already represented within the existing MPA network.
↓	
Proposed MCZ Features	Comprising mostly of Priority Marine Features (PMFs) identified as benefiting from spatial protection in the Northern Ireland inshore region and which will underpin the initial identification of Areas of Search.
↓	
MCZ Features	Features formally protected by a Marine Conservation Zone designation order. These include (primarily in relation to habitats and associated species) Priority Marine Features and features which would benefit from spatial protection measures and are necessary for to achieve an ecologically coherent network.

4.4 Proposed Marine Conservation Zones (pMCZ) feature lists

The Department recommends that six broad-scale habitat types should be protected as features within MCZs in the Northern Ireland inshore region. These broad-scale habitats (based on the EUNIS Level 2 and 3 classifications) will ensure a wider range of habitats and species are protected and will represent the diversity of the marine environment. These will be referred to as pMCZ Habitats **(Table 1)**.

The Department recommends that two Limited/low mobility species and two Highly mobile species should be protected as features within MCZs in the Northern Ireland inshore region to conserve and aid the recovery of rare, threatened and/or declining species. These are now referred to as pMCZ Low/limited mobility species **(Table 2)** and pMCZ Highly mobile species **(Table 3).**

Even though an MCZ is identified from the reduced list of pMCZ features all additional PMFs contained within the boundary will be afforded protection and identified in the citation for the site.

Table 1 (EUNIS Levels 2 and 3 classification system) and examples of their corresponding finer sub-scale habitats contained for which marine protected areas are considered an appropriate conservation measure. These pMCZ Habitats will be used in the early stages of the MCZ development, underpinning the initial selection of search locations.

pMCZ Habitat	Examples of component (sub-scale) habitats
Deep sea bed	• Cold water coral reefs
Low energy circalittoral (subtidal) rock	• Estuarine rocky habitats
Sublittoral (subtidal) biogenic reefs	• Horse mussel beds (*Modiolus modiolus*) • Blue mussel beds (*Mytilus edulis*) • Brittlestar beds
Sublittoral (subtidal) muds	• Mud habitats in deep water • Sea-pen and burrowing megafauna communities • Brittlestar beds • Blue mussel beds (*Mytilus edulis*)

pMCZ Habitat	Examples of component (sub-scale) habitats
Sublittoral (subtidal) sand	• Circalittoral sand and gravel communities • Tide-swept channels • Native oyster (*Ostrea edulis)* beds • Brittlestar beds • Blue mussel beds (*Mytilus edulis*)
Sublittoral (subtidal) mixed sediments	• Brittlestar beds

Table 2 pMCZ Low/limited mobility species list. This list describes the species for which marine protected areas are considered an appropriate conservation measure. These pMCZ species will be used in the early stages of the MCZ development, underpinning the initial selection of search locations.

pMCZ Limited/low mobility species
Ocean quahog (*Arctica islandica)*
Fan mussel (*Atrina fragilis)*

Table 3 pMCZ Highly mobile species list. This list describes the species for which marine protected areas are considered an appropriate conservation measure. These pMCZ species will be used in the early stages of the MCZ development, underpinning the initial selection of search locations.

pMCZ Highly mobile species
Common skate (*Dipturus batis)*
Black guillemot (*Cepphus grylle)*

4.5 Geological and/or geomorphological features

Geological and geomorphological features refer to the physical structures (landforms, rocks, sediments) and the processes that shape them. Sites containing these features will be selected where they represent Northern Ireland's geological history and are of international geological importance or contain exceptional geological features or are threatened and/or rare.

The list of features considered for protection was adapted from guidance produced by the Joint Nature Conservation Committee (JNCC) and Scottish Natural Heritage (SNH) and is detailed in **Table 4**. In most cases sites identified for geological and/or geomorphological features will be multi-feature sites where they occur alongside PMF habitats or species. There are unlikely to be any standalone geological and/or geomorphological sites.

Table 4 Geological/geomorphological features

Geological/geomorphological feature
Glacial process features*
Marine process features*
Mass movement features*
Features indicating past change in relative sea level*
Geological process features*
Seaward extension features**

* Adopted from 'The Marine Conservation Zone Project: Ecological Network Guidance' JNCC and Natural England. 2010[21]

** Adopted from 'Marine Protected Areas in Scotland's Seas: Guidelines on the selection of MPAs and development of the MPA network' Marine Scotland, Scottish Government, SNH and JNCC. 2011[22]

21 http://jncc.defra.gov.uk/pdf/100705_ENG_v10.pdf

22 http://www.scotland.gov.uk/Resource/Doc/295194/0114024.pdf

5.0 Selection guidelines

5.1 Information requirements

A robust evidence base will support and help inform development at each stage of the process. The information required to inform the selection process is likely to vary according to the stage in the process.

MCZs will be identified using best available evidence. Potential sites for MCZs will be selected for formal designation following discussion and consultation with stakeholders.

Ecologically and geomorphologically functional units and the processes which underpin these will be taken into account through boundary setting and in subsequent management.

The application of the OSPAR design principles (**Figure 2**) will deliver a MPA network that contributes to the resilience of the marine ecosystem. This is an ecosystem which can absorb disturbances from some natural and human activities, recover from damage, and continue to provide ecosystem services.

The size of a MCZ will depend on the rationale for identifying it, the feature(s) it is designed to protect and the requirements for management of any activities that may prevent the feature(s) attaining their conservation objectives. MCZs are only one of the measures available to help deliver management of Northern Ireland's seas. They will be used where they are the most appropriate mechanism to deliver effective management of the designated features.

The economic impact assessments carried out for each MCZ will provide valuable information towards management of an area designated as a MCZ. Stakeholders will be consulted as part of the process and the economic impact assessments and management options papers will be published along with the MCZ proposals during the public consultation.

As our understanding improves, and/or environment changes, there may be a need to select further MCZs, alter boundaries, and/or deselect existing ones. MCZs will be subject to a range of protection levels, depending on the conservation objectives and management requirements of the marine features for which they are designated.

5.2 The five stage selection process

In order to identify and select potential sites for designation as a MCZ a five stage approach will be applied as outlined in **Figure 7**. Further information for each stage is given in **Annex B**.

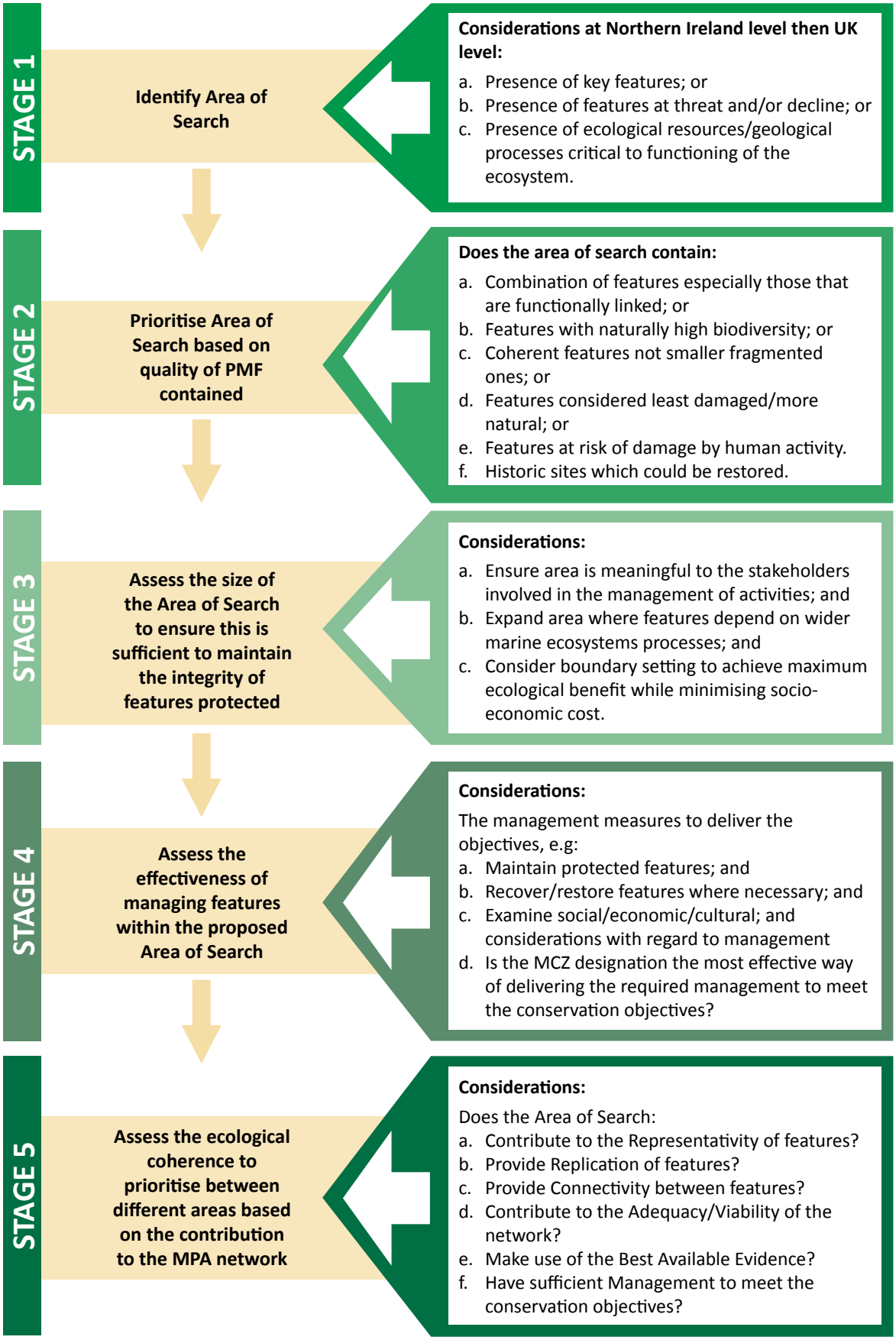

Figure 7: The five stage process that will be used in the selection and designation of MCZs in the Northern Ireland inshore region

6.0 Stakeholder engagement

The development of MCZs and the MPA network in the seas around Northern Ireland will be done in collaboration with stakeholders. The Department is committed to engaging with stakeholders throughout the designation process, particularly those who have an interest in or may be affected by MCZ proposals. JNCC will support the Department during the designation process using its experience from the various MPA projects in other parts of the UK.

Best available evidence will be the primary consideration in the selection of MCZs although economic, cultural and social information will be taken into account throughout the designation process. Furthermore, this may be used to select between sites where two or more alternative search locations meet the scientific guidelines equally.

Effective engagement with stakeholders is fundamental. In the early stages of network development, work will focus on data collection and identification of conservation features and locations. A series of workshops is planned to give an opportunity for stakeholders to submit scientific evidence to support the proposals on the location of potential MCZs or to propose alternative site locations (**Figure 8**). Existing fora, sectoral meetings and various media will also be used to reach stakeholders and to encourage feedback. The Department welcomes any additional evidence that stakeholders wish to submit. This information should be robust, accurate and corroborated in order to be used to inform the designation process. Any stakeholder proposals need to be considered in the context of Northern Ireland's network of MPAs to ensure they meet the OSPAR design principles.

As the process continues, the level of engagement with stakeholders will increasingly reflect direct interest in specific proposals, for example, from those working or having an interest in areas identified as potential site locations. Involvement of stakeholders is also likely to become formalised as the proposed elements of the network are developed and, if relevant, highlighting options for potential management measures for any MCZs which may affect their activities.

Through working with stakeholders the Department can ensure that there is a shared understanding of the protected features, their conservation objectives and the likely impacts from any relevant activities. The level of engagement for each MCZ will depend on the complexity of the issues that need to be resolved.

All proposed MCZs will be subject to a 12 week consultation. The evidence used to identify and develop these proposals will be available. This will allow transparency of decision making and an opportunity for comment by a range of stakeholders. Wherever possible, stakeholder engagement will be joined with the other relevant work streams such as MSFD and the Marine Plan to ensure a join up in thinking across these interlinked work areas and in particular, to ensure data and information are shared across the policy streams.

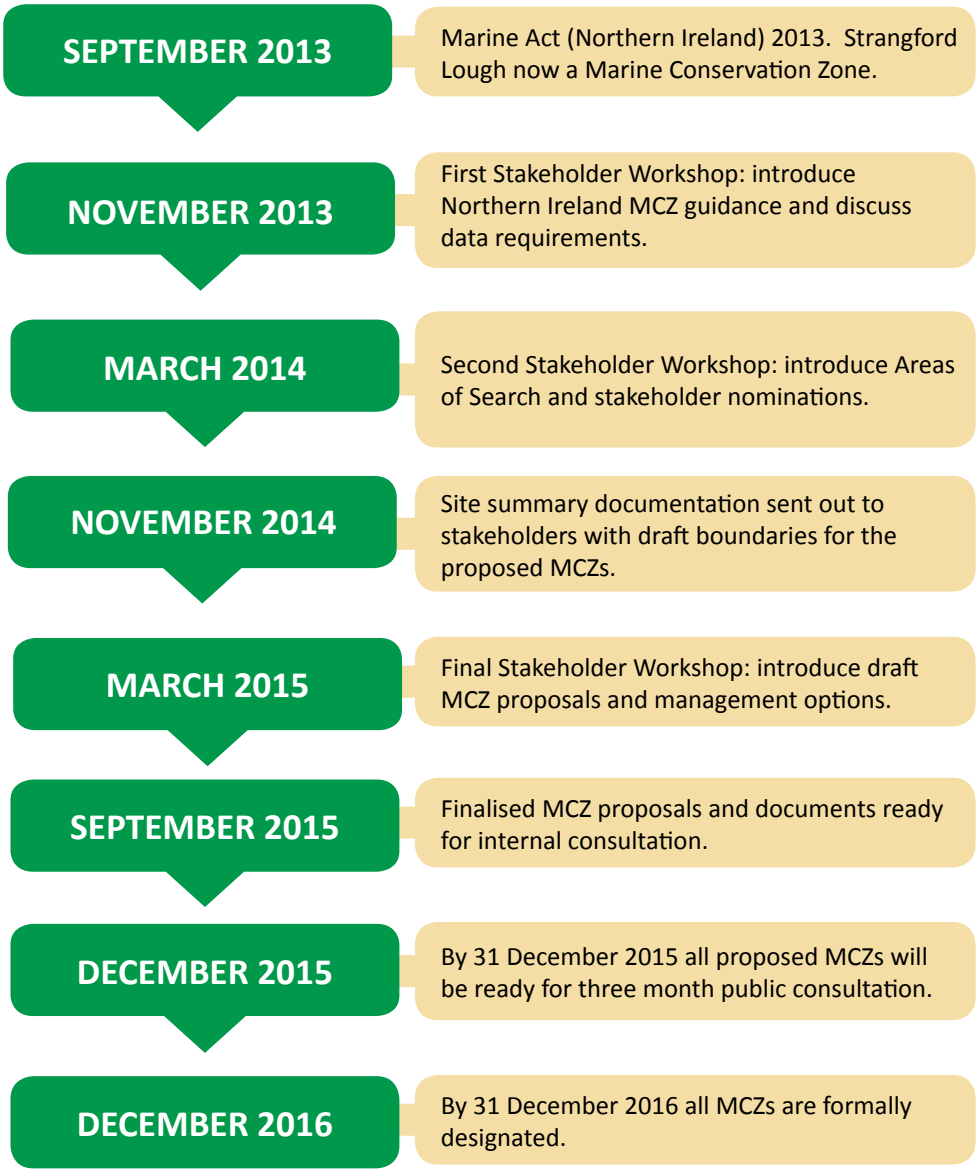

Figure 8: Proposed timeline for MCZ identification and designation outlining key stakeholder workshop events

7.0 Development of individual MCZs

7.1 Use of best available evidence

MCZ designation will be based upon the use of best available evidence. This could include information from a variety of national or local sources such as conservation organisations, recreational bodies, industry, academic studies or individuals. The provision of data must be verifiable and must meet data standards. At a UK level research has been undertaken to develop ecological and socio-economic information to inform site designation. Within Northern Ireland similar work is underway and is being supplemented by analysis of further data sets, collation of additional data and marine surveys.

The principle of using best available evidence without entailing excessive additional costs will be followed. By analysing existing datasets the Department can identify gaps in knowledge of Priority Marine Features locations and the robustness of the data and plan marine surveys to address any clear gaps where judged necessary.

7.2 Boundary setting

When setting boundaries for a MCZ the location of the features of interest will be identified and mapped. Boundaries should encompass as much area as is necessary to protect the feature(s) of interest at the site (as summarised in Stage 3 of the selection process; see **Figure 7**). The ability to enforce management measures for the site should also be a consideration in boundary determination. The boundary setting process will be determined on a site specific basis (to allow for different types of data, different features, etc.) and will be based upon the following principles:

- Boundaries should be drawn as closely as possible around the feature(s) to support the MCZ acting as a functional whole for the conservation of the feature(s) concerned. Consideration should be given as to whether to combine adjacent features into a single MCZ (this will depend on the distance between features). Boundaries should be as simple as possible using a minimum number of straight lines and vertices to aid management (**Figure 9**).

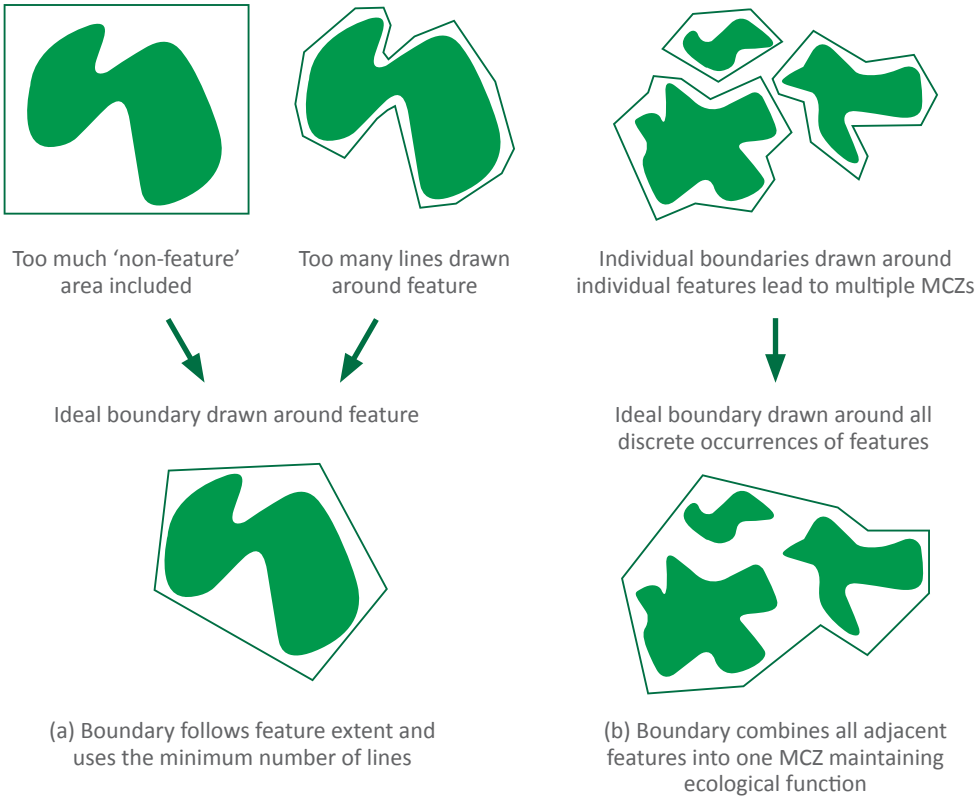

Figure 9: Boundary setting for MCZ features.

- For mobile species, consideration should be given to areas of regular or predicted use within their natural range which provide the physical and biological factors essential to their life and reproduction (e.g. spawning/ breeding, established habitat or nursery grounds).
- Activities occurring near sites should not compromise site integrity and where necessary an activity may be restricted to an appropriate distance from the site boundary (e.g. where features are sensitive to certain physical or biological pressures generated by the activities).
- Identify key stakeholders and management issues and ensure that the boundary is relevant to the issues identified as well as to the features itself.
- Use the best available scientific methodology. This is likely to involve the use of statistical analysis and potentially also modelling techniques, particularly for mobile species.

Boundaries should be considered fixed at the time of designation. There may be circumstances when it is appropriate to review them, e.g. the distribution of habitats and species may alter in response to changing climate. The boundary of a MCZ should reflect current knowledge on the distribution of a feature so that it is relevant to planning, management and use of a specific area.

In general MCZs will be designated below Mean High Water Spring tide. However, provided one or more of the conditions set out in section 15(4) of the Act are satisfied, a MCZ may extend landward of this line. Examples of circumstances when this might be appropriate include, but are not limited to:

- inclusion of a whole intertidal biological community including the splash zone, and
- extensions to species MCZs.

7.3 Conservation objectives

A conservation objective is a statement describing the desired ecological/ geological state (quality) of a feature (habitat, species or geological) for which a MCZ is designated. The conservation objective establishes whether the feature meets the desired state and should be *maintained*, or falls below it and should be *recovered to favourable condition*. Favourable condition is the overall aim of the conservation objective. Conservation objectives should be realistic and achievable.

The conservation objectives will reflect the purpose of the MCZ, namely to protect, prevent deterioration or contribute to the recovery of the feature(s) and will be specific to each feature within each MCZ. They will set out any maintenance or recovery measures that will be required to achieve favourable condition and will provide a description of what should be achieved, for example, stating that a habitat or species population should be restored. Conservation objectives will act as a starting point for developing management and monitoring progress.

If the feature requires recovery to favourable condition this does not automatically mean that any activity will be restricted; it acts to highlight that a feature may be subject to a pressure which needs further investigation and management by the appropriate authority. It will only be the activities adversely affecting the condition of a feature that will be managed to ensure the conservation objectives are met. Activities that are currently not thought to affect the feature condition will not require any restrictive management.

Similarly, if the feature is required to be maintained in favourable condition this does not mean that active management is not needed; instead management measures may be necessary to prevent any increase in pressure on the feature.

Conservation objectives should specify, where possible, the timeframe by which they will be achieved. The timeframe will be based on a number of factors including:

- the feature's condition;
- the pressures to which it is sensitive;
- economic, cultural and social considerations, and
- the contribution of the feature to the status of the MPA network.

7.4 Conservation objectives for geological and geomorphological sites/ features

The setting of conservation objectives for geological and geomorphological features will follow the same principles as for ecological features. The features will be described in the designating order, and the conservation objectives formulated so as to maintain these features. As with ecological features, the Impact Assessments will contain detailed advice on the level of protection required and the management implications for each site.

7.5 Achievement of conservation objectives

The Department will monitor the condition of each MCZ to determine whether the conservation objectives for the designated features are being achieved. This monitoring will also enable an assessment of the overall condition of the Northern Ireland MPA network to determine whether improvement/recovery in ecosystems and populations is occurring. It should be possible to assess the achievement of MCZ conservation objectives through ecological monitoring, and the assessment of the effectiveness of control measures on disturbing or harmful practices. The Northern Ireland information will feed into the assessment of the wider UK MPA network, and its contribution to meeting international obligations.

7.6 Management of MCZs

The Department will work with stakeholders including public authorities when developing recommendations about any management actions and options to introduce specific measures deemed necessary to deliver the conservation objectives for MCZ features. Developing these recommendations will also take into account how the site features will contribute to an ecologically coherent network. Management of activities in or affecting MCZs will be determined on a site-by-site basis to account

for local factors influencing feature condition; factors to be considered will include the ecological composition/state of the protected feature(s), the type and extent of any human activity and the overall conservation objectives for the site. The objectives and the feature's sensitivity to human-derived pressures will inform the need (or otherwise) for management action, including management measures. There will be a presumption of sustainable use within a MCZ so long as the conservation objectives of a site can be furthered or least hindered. However, specific activities which pose a significant risk to a protected feature may have to be managed. For example, it might be appropriate to have seasonal restrictions on activities rather than a complete ban, or to modify activities in a way which mitigates the pressures but allows them to continue.

The Department recognises that in some sites extraction, deposition and activities that cause significant disturbance or adverse impacts to support the achievement of conservation objectives may have to be prohibited. An example of this would be to conserve a rare or vulnerable species. It should be noted that management measures may extend outside the boundary of a MCZ in order to deliver the conservation objectives of its feature.

The Department will decide how far activities need to be regulated on the basis of the best available evidence at the time. This information will be used in the Impact Assessment. However, if new evidence comes to light that supports a different set of management conditions then these can be introduced later through the revision of statutory advice and byelaws (which will require public consultation).

Stakeholders will have an important role in influencing site management. A range of management actions, including the use of voluntary options, may be investigated. These actions can be explored with stakeholders and consulted upon prior to decisions being made. Economic, cultural and social factors will be considered and Impact Assessments will be used as a mechanism to help inform the decision-making process.

Once a site has been formally designated as a MCZ by the Department with the agreement of the Secretary of State, the Act places statutory duties on public authorities (including Departments) to exercise their functions to further or least hinder the conservation objectives of a MCZ as set out in sections 22 and 23. These duties must be exercised in accordance with the requirements of public law and so any failure to do so will leave the offending public authority vulnerable to challenge by way of judicial review.

Further protection for MCZs is given in the Act through the provisions for byelaws and interim byelaws. These provisions will be used to control or

prohibit those activities which are potentially harmful to features in a MCZ and which would otherwise be unregulated.

The Act also provides for a general offence of deliberately or recklessly damaging a MCZ (section 33). This provides additional protection in cases where byelaws – and penalties for breaching them – may not be adequate to control activities that risk serious damage to, or complete loss of a feature.

7.7 Content of proposed MCZs

Proposals for MCZs will be developed by the Department following discussion with stakeholders. Stakeholders will include Government departments, local authorities, industry, environmental NGOs, recreational users and others who have an interest in the Northern Ireland marine environment.

Consultation on the MCZ proposals will include information to enable stakeholders to understand the importance of each feature and what the implications of designation might be on their activities.

Any proposals will therefore include:

- Background information on the development of the Northern Ireland MPA network.
- A general introduction to the proposed MCZ and the area within which it is located.
- The expected contribution of the MCZ to an ecologically coherent network, its conservation objectives and how these are expected to be achieved.
- A list of the information sources that have been used in developing the proposal.
- A summary of the assessment of the MCZ proposal against the selection guidelines (**Figure 7** & **Annex B**).
- A summary of the current understanding of the ecological/geological state of the features being included in the MCZ proposal. This should include information on threats to the features (present or future), including damaging activities where known, and an assessment of the potential for maintenance and/or recovery of the features concerned.
- Expected arrangements for management of the proposed MCZ where available including management of activities inside the site and outside where relevant.
- Possible arrangements for monitoring and reporting against objectives.

- A map of the proposed boundary, which will include information on the distribution and /or extent of relevant feature(s).
- Annexes with background information on the ecology, geology or geomorphology of the features for which the MCZ is proposed.

Information on the formal consultation and designation processes will also be provided with any proposals, so that the opportunity to comment is clear to all relevant stakeholders.

All potential MCZs are ecologically important but some may be especially so depending on the types of features present. Giving priority to these latter sites will have greater conservation benefit. In addition, priority may be given to sites that have a low level of human use and are thought to be less impacted and hence more natural since these are more likely to be healthy and resilient.

7.8 Review of MCZs

MCZs will be reviewed by the Department as part of a 6 year monitoring and reporting programme to ensure that they are meeting (or at least progressing towards) their conservation objectives and to determine if any additional management action is required.

In addition, a MCZ could be reviewed:

- if the results of monitoring work show that the conservation objectives for a MCZ are unlikely to be met; and/or
- if new data become available which indicates that there may a change in the MCZ feature distribution or additional areas outside the existing MPA network which could contribute more in terms of protection of a relevant feature.

Following review of individual MCZs, a decision may need to be taken on whether to de-select a specific MCZ. Consequently one or more additional MCZs may need to be selected to replace the deselected features to ensure the ecological coherence of the network is maintained. The review of data will be led by the Department and follow the same process of stakeholder engagement outlined in the designation of MCZs.

Section 21 of the Act requires the Department to report to the Assembly on the extent to which the network aims as described in section 20(2) have been achieved and any further steps required in order to realise these aims. Section 21 also sets out detailed reporting requirements for any designated MCZs. This includes the number of MCZs designated within the reporting period; their size and the conservation objectives of

these MCZs; any changes made to existing MCZ designation orders; the extent to which conservation objectives for MCZs have been achieved; and any further steps required in order to achieve the conservation objectives stated for the MCZs.

The report to the Assembly covers the area of sea falling within the Northern Ireland inshore region. The other Administrations have similar reporting requirements, which will collectively present the UK picture for the network of marine protected areas. The first report is due by December 2018 and every 6 years thereafter.

7.9 Availability of new data and revision of the MPA network

It is likely that the MPA network will evolve over time as our knowledge and understanding of the marine environment improves and as new data becomes available. In some cases this may mean that our assessment of the qualities of potential Priority Marine Features in a particular location may change. This could lead to new MCZs being selected for inclusion in the network in the light of improved understanding of the marine environment.

7.10 Hearings

Section 18 of the Act enables the Department to hold hearings before deciding whether to make an order to designate a MCZ. The Department has the discretion to give any person the opportunity of being heard by an appointed person, either orally or in writing to gather further information. The Department will appoint a person to chair each hearing. This person will submit recommendations to the Department. When necessary a specialist adviser with appropriate scientific or technical expertise will be appointed to assist the chair of the hearing.

Hearings will not be an appeal, nor will they form any kind of judgement – their purpose will be limited to gathering of further information required by the Department. As such, if stakeholders want to ensure that their views are taken into consideration before the Department make their final decision they should respond to the public consultation and should not regard hearings as a substitute for effective stakeholder engagement with the MCZ process.

Glossary of Terms & Acronyms

ASSI **A**reas of **S**pecial **S**cientific **I**nterest are notified under The Environment (Northern Ireland) Order 2002.

Biodiversity the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they form part; this includes diversity within species, between species and of ecosystems.

Biogeographic area an area of the Earth determined by distribution of flora and fauna

Ecological coherence refers to the representation and replication of biodiversity features and the linkages between those features. It also refers to the resilience of the network as a whole and how well the range and geographic variation of the biodiversity features is covered within the network. It is a topic of much scientific debate and no clear definition is yet agreed. However, guidance has been developed under the OSPAR Convention on the key design features associated with establishing an ecologically coherent network.

EUNIS The European Nature Information System, EUNIS, is part of the Biodiversity data centre (BDC). EUNIS data are collected and maintained to be used as a reference tool or dataset.

European Marine Site is used to refer jointly to SACs and SPAs in the marine environment.

Geodiversity is the variety of rocks, minerals, fossils, landforms, sediments and soils, together with the natural processes which form and alter them.

Geomorphology the study of landforms and the processes that shape them.

GES **G**ood **E**nvironmental **S**tatus -"The environmental status of marine waters where these provide ecologically diverse and dynamic oceans and seas which are clean, healthy and productive" (Article 3, Marine Strategy Framework Directive.)

IUCN Red List International Union for the Conservation of Nature Red List of Threatened Species

JNCC **J**oint **N**ature **C**onservation **C**ommittee, the statutory nature conservation adviser to the Department and the UK Government in the marine environment.

Landforms a feature on the surface of the land or seabed. Marine and coastal examples include sand-dunes, firths and offshore banks.

Least damaged/more natural area a marine area in which there has historically been little human activity and which may therefore be in a relatively natural state.

MCZ **M**arine **C**onservation **Z**one used to refer to MCZs designated under section 13 of the Marine Act (Northern Ireland) 2013 in the Northern Ireland inshore region and in section 116 of the Marine and Coastal Access Act 2009 in

the Northern Ireland offshore region adjacent to Northern Ireland.

Mean High Water Springs the mean high water spring is the highest level to which spring tides reach on average over a period.

MPA **M**arine **P**rotected **A**rea is used specifically to refer to the provisions in the Marine Act (Northern Ireland) 2013, Marine (Scotland) Act 2010 and the Marine and Coastal Access Act 2009. It may also be used in the generic sense as 'marine protected areas' to refer to any area that contributes to the UK MPA network in Northern Ireland's seas.

MPA Network the network of MPAs includes European marine sites (SACs and SPAs), the marine components of ASSIs and Ramsar sites, MCZs (English and Welsh waters), Nature Conservation MPAs (Scottish waters) and MCZs in the Northern Ireland inshore region.

MPA protected features features which are formally protected by the designation order for a MCZ.

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

NIMF Nationally Important Marine Features.

NI Priority Northern Ireland List of of Habitats and Species.

Nm Nautical mile

Northern Ireland inshore region
Defined under section 2 of the Marine (Northern Ireland) Act 2013 as the area of sea within the seaward limits of the territorial sea of the United Kingdom adjacent to Northern Ireland, including the bed and subsoil of the sea within that area. The territorial sea is defined under the Territorial Sea Act 1987 as the waters stretching from baseline out to a maximum of 12nm, or the median line between adjacent countries.

Northern Ireland offshore region
Defined under section 322 of the Marine and Coastal Access Act 2009 as so much of the Northern Ireland zone as lies beyond the seaward limits of the territorial sea. This is an area of the Irish Sea west and south of the Isle of Man beyond the 12nm limit of the Northern Irish territorial waters.

OSPAR used to refer to the Oslo-Paris Convention for the Protection of the Marine Environment of the North-East Atlantic. It is an agreement by relevant governments and the European Community, to co-operate to protect the marine environment of the North-East Atlantic. ***See http://www.ospar.org/***

OSPAR Region Northern Ireland's seas fall within Region III (Celtic Seas) of the North-East Atlantic.

OSPAR T&D is OSPAR List of Threatened and/or declining Species and Habitats.

Precautionary Principle "In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation." (Principle 15 of the Rio Declaration 1992)[23]

Priority Marine Features (PMF) a collective term for those features (habitats and species) which are considered to be of conservation importance in the Northern Ireland inshore region and will form the basis of MCZ designation.

proposed Marine Conservation Zones (pMCZ) Features features that will underpin the designation of MCZs

Ramsar sites designated as internationally important wetlands following the adoption of the Convention of Wetlands of International Importance in 1971.

SAC **S**pecial **A**reas of **C**onservation established under the provisions of the EC Habitats Directive, (92/43/EEC) on the conservation of natural habitats and species of European importance.

SOCC Northern Ireland Species of Conservation Concern.

SPA **S**pecial **P**rotection **A**reas established under the provisions of the EC Wild Birds Directive (2009/147/EC formerly 79/409/EEC) to select sites for those bird species included in Annex 1 of the Directive and also for regularly occurring migratory species.

UK BAP UK Biodiveristy Action Plan List.

WANE Wildlife and Natural Environment Act (Northern Ireland) 2011.

WO Wildlife (Northern Ireland) Order 1985.

[23] http://www.jus.uio.no/lm/environmental.development.rio.declaration.1992/portrait.a4.pdf

Annex A

Priority Marine Feature (PMF) Habitats

Habitat	Conservation Status
Coastal saltmarsh	UK BAP NI Priority
Fragile sponge and anthozoan communities on subtidal rocky habitats	UK BAP NI Priority
Blue mussel beds (intertidal)	OSPAR T&D UK BAP NI Priority
Intertidal mudflats	OSPAR T&D UK BAP NI Priority
Intertidal under-boulder communities	UK BAP NI Priority
Littoral chalk communities	OSPAR T&D UK BAP NI Priority
Maerl beds	OSPAR T&D UK BAP NI Priority
***Sabellaria alveolata* reefs**	UK BAP, NI Priority Saline lagoons UK BAP NI Priority
Seagrass (*Zostera)* beds	OSPAR T&D UK BAP NI Priority
Sheltered muddy gravels	UK BAP NI Priority
Subtidal chalk	OSPAR T&D UK BAP NI Priority
Tide-swept channels	UK BAP NI Priority

Priority Marine Feature (PMF) Low/limited mobility species

Species	Common name	Taxon group	Conservation Status
Ahnfeltiopsis devoniensis	Red	Alga	NI Priority
Ascophyllum nodosum ecad mackayi (mackaii)	A brown sea-weed	Alga	NI Priority
Atractophora hypenoides	Red seaweed	Alga	SOCC
Carpomitra costata	A brown seaweed	Alga	SOCC
Cruoria cruoriaeformis	A red seaweed	Alga	UK BAP NI Priority NIMF
Desmarestia dresnayi	A brown sea-weed	Alga	NI Priority NIMF
Gelidiella calcicola	Red	Alga	NIMF SOCC
Schmitzia hiscockiana	A red seaweed	Alga	SOCC NIMF
Schmitzia neapolitana	A red seaweed	Alga	SOCC
Stenogramme interrupta	A red seaweed	Alga	SOCC
Sabellaria alveolata	Honeycomb worm	Annelida	SOCC NIMF
Bugula turbinata	A erect bryozoan	Bryozoa	SOCC
Pentapora foliacea	Ross coral/ Potato crisp bryozoan	Bryozoa	NI Priority
Alcyonium hibernicum	Soft coral	Cnidaria	SOCC NIMF
Anemonactis mazeli	Anemone	Cnidaria	NIMF SOCC

Species	Common name	Taxon group	Conservation Status
Arachnanthus sarsi	Anemone	Cnidaria	NI Priority UK BAP NIMF
Aureliania heterocera	Emperor/ Imperial anemone	Cnidaria	SOCC
Caryophyllia inornata	Cup coral	Cnidaria	NI Priority NIMF
Caryophyllia smithii	Cup coral	Cnidaria	NIMF
Diphasia alata	Hydroid	Cnidaria	NI Priority NIMF
Diphasia nigra	Hydroid	Cnidaria	NI Priority NIMF
Edwardsia timida	Anemone	Cnidaria	NI Priority UK BAP NIMF
Halecium plumosum	Hydroid	Cnidaria	SOCC
Haliclystus auricula	Stalked jellyfish	Cnidaria	UK BAP NI Priority NIMF
Lucernariopsis campanulata	Stalked jellyfish	Cnidaria	UK BAP NI Priority NIMF
Lytocarpia myriophyllum	Hydroid	Cnidaria	NI Priority
Parazoanthus anguicomus	Anemone	Cnidaria	SOCC NIMF
Parazoanthus axinellae	Yellow trumpet anemone	Cnidaria	NI Priority
Polyplumaria flabellata	Hydroid	Cnidaria	NI Priority NIMF
Stomphia coccinea	Anemone	Cnidaria	NI Priority
Tamarisca tamarisca	Hydroid	Cnidaria	SOCC

Species	Common name	Taxon group	Conservation Status
Arrhis phyllonyx	Amphipod	Crustacea	UK BAP NI Priority NIMF
Atelecyclus rotundatus	Circular crab	Crustacea	NI Priority
Cestopagurus timidus	Hermit crab	Crustacea	NI Priority
Corystes cassivelaunus	Masked crab	Crustacea	SOCC
Homarus gammarus	European lobster	Crustacea	SOCC
Inachus leptochirus	Spider crab	Crustacea	NI Priority
Munida rugosa	Squat lobster	Crustacea	NI Priority
Palinurus elephas	Spiny lobster	Crustacea	NI Priority, UK BAP, NIMF, WO (amended by WANE, Schedule 1)
Amphiura securigera	Brittle star	Echinodermata	SOCC
Anseropoda placenta	Goosefoot starfish	Echinodermata	NI Priority
Antedon petasus	Feather star	Echinodermata	NIMF
Asterina phylactica	Cushion star	Echinodermata	NIMF, SOCC
Asteropecten opercularis	Starfish	Echinodermata	NI Priority
Labidoplax media	Sea cucumber	Echinodermata	NI Priority
Leptasterias muelleri	Starfish	Echinodermata	SOCC
Leptosynapta bergensis	Sea cucumber	Echinodermata	NI Priority
Paracucumaria hyndmani	Hyndman's sea cucumber	Echinodermata	NI Priority

Species	Common name	Taxon group	Conservation Status
Porania pulvillus	Cushion star	Echinodermata	SOCC
Solaster endeca	Sunstar	Echinodermata	NI Priority
Thyonidium drummondi	Sea cucumber	Echinodermata	NI Priority
Hippocampus guttulatus	Spiny seahorse	Fish	UK BAP NI Priority OSPAR WO Schedule 5, 6 & 7
Hippocampus hippocampus	Short snouted seahorse	Fish	UK BAP NIMF OSPAR T&D WO Schedule 5, 6 & 7
Glossobalanus sarniensis	Acorn worm	Hemichordata	NI Priority
Cerastoderma glaucum	Brackish cockle	Mollusca	SOCC
Crenella decussata	Bivalve mussel	Mollusca	SOCC
Aequipecten opercularis	Queen scallop	Mollusca	None
Chlamys varia	Variegated scallop	Mollusca	NI Priority
Cumanotus beaumonti	Nudibranch	Mollusca	NI Priority
Cuthona concinna	Nudibranch	Mollusca	SOCC
Embletonia pulchra	Nudibranch	Mollusca	SOCC
Erato voluta	Egg cowrie	Mollusca	NI Priority
Eubranchus doriae	Nudibranch	Mollusca	SOCC
Hero formosa	Nudibranch	Mollusca	SOCC
Palio dubia	Nudibranch	Mollusca	NI Priority
Pecten maximus	King scallop	Mollusca	SOCC
Philinoglossa helgolandica	Opisthobranch	Mollusca	SOCC
Thecacera pennigera	Nudibranch	Mollusca	SOCC

Species	Common name	Taxon group	Conservation Status
Tonicella marmorea	Chiton	Mollusca	NI Priority
Amphilectus ovulum	Sponge	Porifera	NI Priority
Antho brattegardi	Sponge	Porifera	NI Priority
Axinella damicornis	Sponge	Porifera	SOCC NIMF
Axinella dissimilis	Sponge	Porifera	SOCC
Biemna variantia	Sponge	Porifera	SOCC
Clathria barleei	Sponge	Porifera	NI Priority NIMF
Eurypon coronula	Sponge	Porifera	NI Priority
Hymedesmia cohesibacilla	Sponge	Porifera	NI Priority
Hymedesmia rathlinia	Sponge	Porifera	NI Priority
Hymerhabdia typica	Sponge	Porifera	NI Priority
Iophon hyndmani	Sponge	Porifera	SOCC
Lissodendoryx jenjonesae	Sponge	Porifera	NI Priority
Microciona ellipticheła	Sponge	Porifera	NI Priority
Mycale cf. contarenii	Sponge	Porifera	NI Priority
Mycale lingua	Sponge	Porifera	SOCC
Mycale similaris	Sponge	Porifera	SOCC NIMF
Myxilla cf. rosacea	Sponge	Porifera	SOCC
Phakellia rugosa	Sponge	Porifera	SOCC
Plocamiancora arndti	Sponge	Porifera	SOCC
Pyura microcosmus	Sponge	Porifera	NI Priority NIMF SOCC
Spanioplon armaturum	Sponge	Porifera	NI Priority

Spongionella pulchella	Sponge	Porifera	SOCC NIMF
Stelletta grubii	Sponge	Porifera	SOCC
Stryphnus ponderosus	Sponge	Porifera	SOCC
Tethya hibernica	Sponge	Porifera	NI Priority
Archidistoma aggregatum	Sea squirt	Tunicata	SOCC
Boltenia echinata	Sea squirt	Tunicata	SOCC
Diazona violacea	Football sea squirt	Tunicata	NIMF
Pycnoclavella stolonialis	Sea squirt	Tunicata	NI Priority
Synoicum incrustatum	Sea squirt	Tunicata	SOCC NIMF

Priority Marine Feature (PMF) Highly mobile species

Species	Common name	Taxon group	Conservation Status
Balaenoptera borealis	Sei whale	Cetacea	UK BAP NI Priority Habitats Directive Annex IV Habitats Regulations Schedule 2 NIMF
Globicephala melas	Pilot whale	Cetacea	Habitats Directive Annex IV Habitats Regulations Schedule 2
Grampus griseus	Risso's dolphin	Cetacea	UK BAP NI Priority Habitats Directive Annex IV Habitats Regulations Schedule 2 WO Schedule 5

Species	Common name	Taxon group	Conservation Status
Lagenorhynchus albirostris	White-beaked dolphin	Cetacea	UK BAP Habitats Directive Annex IV Habitats Regulations Schedule 2 WO Schedule 5 NIMF
Mesoplodon bidens	Soweby's beaked whale	Cetacea	UK BAP Habitats Directive Annex IV Habitats Regulations Schedule 2 NIMF
Mesoplodon mirus	True's beaked whale	Cetacea	UK BAP Habitats Directive Annex IV Habitats Regulations Schedule 2 NIMF
Physeter macrocephalus	Sperm whale	Cetacea	UK BAP Habitats Directive Annex IV Habitats Regulations Schedule 2
Stenella coeruleoalba	Striped dolphin	Cetacea	UK BAP Habitats Directive Annex IV Habitats Regulations Schedule 2 NIMF
Balaenoptera acutorostrata	Minke whale	Cetacea	UK BAP NI Priority Habitats Directive Annex IV Habitats Regulations Schedule 2 NIMF

Species	Common name	Taxon group	Conservation Status
Balaenoptera musculus	Blue whale	Cetacea	UK BAP NIMF Habitats Directive Annex IV Habitats Regulations Schedule 2
Balaenoptera physalus	Fin whale	Cetacea	UK BAP Habitats Directive Annex IV Habitats Regulations Schedule 2
Delphinus delphis	Common dolphin	Cetacea	UK BAP NI Priority NIMF Habitats Directive Annex IV Habitats Regulations Schedule 2 WO Schedule 5
Eubalaena glacialis	Northern right whale	Cetacea	UK BAP OSPAR T&D Habitats Directive Annex IV Habitats Regulations Schedule 2
Hyperoodon ampullatus	Northern bottlenose whale	Cetacea	UK BAP Habitats Directive Annex IV Habitats Regulations Schedule 2 NIMF
Lagenorhynchus acutus	Atlantic white-sided dolphin	Cetacea	UK BAP NIMF WO Schedule 5 Habitats Directive Annex IV Habitats Regulations Schedule 2
Megaptera novaeangliae	Humpback whale	Cetacea	UK BAP Habitats Directive Annex IV Habitats Regulations Schedule 2

Species	Common name	Taxon group	Conservation Status
Orcinus orca	Orca/ Killer whale	Cetacea	UK BAP NI Priority Habitats Directive Annex IV Habitats Regulations Schedule 2 WO Schedule 5 NIMF
Phocoena phocoena	Harbour porpoise	Cetacea	NI Priority UK BAP NIMF OSPAR T&D WO (amended by WANE) Habitats Directive.
Tursiops truncatus	Bottle-nosed dolphin	Cetacea	UK BAP NI Priority NIMF Habitats Directive Annex IV Habitats Regulations Schedule 2 WO Schedule 5
Ziphius cavirostris	Cuvier's beaked whale	Cetacea	UK BAP NIMF Habitats Directive Annex IV Habitats Regulations Schedule 2
Amblyraja hyperborea	Arctic skate	Elasmobranch	IUCN Red List: Least Concern
Amblyraja radiata	Thorny/ starry ray	Elasmobranch	SOCC IUNC Red List: Vulnerable
Cetorhinus maximus	Basking shark	Elasmobranch	UK BAP NI Priority OSPAR T&D WO Schedule 5 IUCN Red List: Vulnerable

Species	Common name	Taxon group	Conservation Status
Dalatias licha	Kitefin shark	Elasmobranch	UK BAP IUCN Red List: Near Threatened
Dasyatis pastinaca	Common stingray	Elasmobranch	IUCN Red List: Near Threatened (NE Atlantic)
Galeorhinus galeus	Tope	Elasmobranch	UK BAP NI Priority
Isurus oxyrinchus	Shortfin mako	Elasmobranch	UK BAP NI Priority IUCN Red List: Vulnerable
Lamna nasus	Porbeagle shark	Elasmobranch	UK BAP NI Priority OSPAR T&D IUCN Red List: Vulnerable
Leucoraja fullonica	Shagreen ray	Elasmobranch	IUCN Red List: Near Threatened
Leucoraja naevus	Cuckoo ray	Elasmobranch	IUCN Red List
Mustelus asterias Mustelus mustelus	Smooth-hound (Starry and Common)	Elasmobranch	IUCN Red List: Least Concern
Prionace glauca	Blue shark	Elasmobranch	UK BAP IUCN Red List: Near Threatened
Raja brachyura	Blonde ray	Elasmobranch	IUCN Red List: Near Threatened
Raja circularis	Sandy ray	Elasmobranch	UK BAP IUCN Red List: Vulnerable
Raja clavata	Thornback ray	Elasmobranch	IUCN Red List
Raja microocellata	Smalleyed ray	Elasmobranch	IUCN Red List: Near Threatened

Species	Common name	Taxon group	Conservation Status
Raja montagui	Spotted ray	Elasmobranch	IUCN Red List
Raja undulata	Undulate ray	Elasmobranch	UK BAP NI Priority IUCN Red List: Endangered
Rostroraja alba	White/ Bottlenose skate	Elasmobranch	UK BAP OSPAR T&D IUCN Red List: Near Threatened
Scyliorhinus canicula	Lesser spotted dogfish/ Small spotted catshark	Elasmobranch	IUCN Red List: Least Concern
Scyliorhinus stellaris	Nurse-hound	Elasmobranch	IUCN Red List: Near Threatened
Squalus acanthias	Spurdog, spiny dogfish	Elasmobranch	UK BAP NI Priority OSPAR T&D IUCN Red List: Critically Endangered
Squatina squatina	Angel shark	Elasmobranch	UK BAP NI Priority OSPAR T&D WO (amended by WANE Schedule 1) IUCN Red List: Critically Endangered
Torpedo marmorata	Marbled/ Electric ray	Elasmobranch	IUCN Red List: Data Deficient
Torpedo nobiliana	Atlantic torpedo Ray or Dark Electric ray	Elasmobranch	IUCN – Data deficient

Species	Common name	Taxon group	Conservation Status
Alosa alosa	Allis shad	Fish	SOCC NIMF Habitats Directive Annex II OSPAR T&D
Alosa fallax	Twaite shad	Fish	SOCC NIMF Habitats Directive Annex II
Ammodytes marinus	Lesser sandeel	Fish	UK BAP NI Priority NIMF
Anguilla anguilla	Common eel	Fish	NI Priority NIMF OSPAR T&D
Aphanopus carbo	Black scabbard-fish	Fish	UK BAP NIMF
Clupea harengus	Herring	Fish	UK BAP NI Priority NIMF
Coryphaenoides rupestris	Roundnose grenadier	Fish	UK BAP NIMF
Gadus morhua	Cod	Fish	UK BAP NI Priority OSPAR T&D NIMF
Hippoglossus hippoglossus	Atlantic halibut	Fish	UK BAP IUCN Red List: Endangered
Lophius piscatorius	Angler fish	Fish	UK BAP NI Priority NIMF
Merlangius merlangus	Whiting	Fish	UK BAP NI Priority NIMF
Merluccius merluccius	European hake	Fish	UK BAP NI Priority NIMF

Species	Common name	Taxon group	Conservation Status
Micromesistius poutassou	Blue whiting	Fish	UK BAP NIMF
Molva dypterygia	Blue ling	Fish	UK BAP NIMF
Molva molva	Ling	Fish	UK BAP NI Priority NIMF
Osmerus eperlanus	Smelt	Fish	NI Priority NIMF
Pleuronectes platessa	Plaice	Fish	NI Priority UKBAP IUCN Red List
Reinhardtius hippoglossoides	Greenland halibut	Fish	UK BAP NIMF
Salmo salar	Salmon	Fish	NI Priority OSPAR T&D NIMF Habitats Directive Annex II
Salmo trutta	Brown/Sea trout	Fish	NI Priority
Scomber scombrus	Atlantic mackerel	Fish	UK BAP NI Priority NIMF
Solea solea	Sole	Fish	NI Priority UK BAP NIMF
Thunnus thynnus	Atlantic Blue-fin tuna	Fish	UK BAP OSPAR T&D NIMF
Trachurus Trachurus	Horse mackerel	Fish	UK BAP NI Priority NIMF
Gavia stellata	Red throated diver	Birds	Birds Directive, IUCN Red List
Melanitta nigra	Common scoter	Birds	IUCN Red List

Species	Common name	Taxon group	Conservation Status
Phalacrocorax aristotelis	European shag	Birds	IUCN Red List
Podiceps auritus	Slavonian grebe	Birds	Birds Directive, IUCN Red List
Somateria mollissima	Common eider	Birds	IUCN Red List
Puffinus puffinus	Manx shearwater	Birds	IUCN Red List
Halichoerus grypus	Grey seal	Pinnipedia	NIMF Habitats Directive Annex II & V Habitats Regulations Schedule 3 WO Schedule 5
Phoca vitulina	Common/ Harbour seal	Pinnipedia	UK BAP NI Priority Habitats Directive Annex II & V Habitats Regulations Schedule 3 WO Schedule 5
Caretta caretta	Loggerhead turtle	Reptile	UK BAP NI Priority NIMF Habitats Directive Annex II and IV OSPAR T&D
Chelonia mydas	Green turtle	Reptile	NIMF Habitats Directive Annex II and IV
Dermochelys coriacea	Leather-back turtle	Reptile	UK BAP NI Priority NIMF Habitats Directive Annex IV OSPAR T&D

Annex B

The five stage selection process for Marine Conservation Zones

The following provides further detail on the five stages to be used in the selection and designation of MCZs in the Northern Ireland inshore region.

Stage 1

The OSPAR design principles of Representivity and Connectivity

The identification of Areas of Search is based on the presence of one or more:

(1) Key features (Northern Ireland is a stronghold; exceptional scientific importance; representative of the Northern Ireland marine environment),

(2) Features considered under threat and/or decline (those on various conservation lists; those sensitive and/or vulnerable to anthropogenic pressures; geological/geomorphological features under threat), and

(3) Ecological/geological processes critical to the functioning of the ecosystem (proposed area provides resources/processes such as nursery, spawning, feeding grounds; features or locations underpinning key human activities or use of the marine environment).

Stage 2

The OSPAR design principles of Representivity, Connectivity and Replication

This stage considers areas where there are known functional linkages between features as well as sites containing multiple or unique/rare features, which will increase the overall biodiversity. Areas that are least damaged or more natural will be considered here as well as those containing features that are under threat of damage from anthropogenic activities. This stage will use an assessment of the likely feature condition to identify whether maintain or recover conservation objectives are appropriate. Where recovery or restoration of features is not realistic then these areas should not be considered further.

Stage 3

The OSPAR design principles of Adequacy, Connectivity and Viability

This stage considers the size of the area of search and whether it is considered sufficient to maintain the integrity of the proposed features.

The feature extent and dependence on wider ecosystems, including processes (which may be taking place outside of the area of search), should be taken into account. This information is important for boundary definition. This stage should also start to consider what activities are taking place that are likely to adversely impact the proposed feature(s). Knowledge of where an activity is taking place in relation to the feature location is important as this will determine how or whether the feature is being adversely impacted and will drive the setting of the conservation objectives. During this stage information in relation to economic, cultural and social issues will need to be collated to initiate the Impact Assessment.

Stage 4

The OSPAR design principles of Management

This stage considers what management actions are required to ensure the conservation objectives for the proposed features are met including identifying any potential measures to control activities thought to adversely impact the features. This evaluation uses information gathered from the previous stages on feature extent, condition and likely conservation objectives along with information on relevant activities. The potential of any necessary management measures to be implemented successfully, whether features are to be maintained or recovered, is central. Not all features within MCZs will require active management. The aim is to ensure that sufficient and appropriate management actions are in place to achieve the conservation objectives while taking into account any economic, cultural or social considerations. In some cases MCZ designation may not be the most effective mechanism to ensure protection of the feature; other mechanisms may need to be employed to achieve the relevant conservation objectives. Under such circumstances, the area will not be progressed further in the MCZ process.

Stage 5

Additional considerations such as geological variation, resilience and economic, cultural and social issues

This stage examines whether each proposed area of search meets the OSPAR design principles and fulfils the requirement to make a contribution to an ecologically coherent network. Ideally, the more design principles considered to be met then the higher the probability that proposed area will go forward as an MCZ. Where two or more proposed areas make equal contributions to the network then socio-economic considerations will be used to determine which site will go forward. However, it is important to note that all proposed areas will consider the economic, cultural and social consequences of designation.

Does the area of search contribute to the **Representivity** of features?

The area of search should have examples which represent the range of marine habitats and species present in the Northern Ireland inshore region.

Does the area of search provide **Replication** of features?

Ideally there should be at least two areas of search that contain the same feature but replication can be met at the wider UK level if sufficient examples are not present in the Northern Ireland inshore region.

Does the area of search provide **Connectivity** between features?

Ideally areas of search should be situated sufficiently close to one another (or existing marine protected areas) to enable the unimpeded exchange of species, non-living organic matter and ecological processes. Connections with MPAs at the wider UK level or Republic of Ireland will also be considered.

Does the area of search contribute to the **Adequacy** of the network?

The area of search should be of an adequate size and should include a large enough proportion of features to ensure long-term protection and recovery (if necessary). The adequacy design principle applies both at the individual MCZ and overall MPA network levels.

Does the area of search meet the **Viability** design principle?

The area of search should be large enough to ensure that the habitats and species are self-sustaining. This will ensure that any natural cycles of variation will not result in loss of habitat condition/extent or populations of species.

Does the area of search make use of **Best Available Evidence/Science**?

All proposed areas of search should be identified using the best available evidence or science. Gaps and uncertainties in knowledge are expected but should not result in postponing decisions on site selection as delays may lead to degradation of key features. This evidence will also be used to determine appropriate management of activities if necessary.

Does the area of search have sufficient **Management** to ensure the conservation objectives are met?

Conservation objectives will be developed from knowledge of feature sensitivity, condition and extent. When this is considered with information on all activities taking place within the area of search, in particular those deemed to adversely impact the proposed features, appropriate management actions can be set. Impact assessments may provide additional information.