

# **Regulatory Impact Assessment**

## **Marine Conservation Zones in the Northern Ireland Inshore Region**

**November 2016**



Department of  
**Agriculture, Environment  
and Rural Affairs**

[www.daera-ni.gov.uk](http://www.daera-ni.gov.uk)



**INVESTORS  
IN PEOPLE**

## Contents

<b>Glossary of Terms and Acronyms</b> .....	<b>3</b>
<b>1. Introduction</b> .....	<b>5</b>
<b>2. Background</b> .....	<b>5</b>
<b>3. Rationale for Government Intervention &amp; Objective</b> .....	<b>7</b>
<b>4. Limitations &amp; Constraints</b> .....	<b>8</b>
<b>5. Rathlin Marine Conservation Zone</b> .....	<b>10</b>
5.1 Description of MCZ.....	10
5.2 Assessment of Management Options .....	13
<i>Table 1.1: Activities in and around Rathlin MCZ and Potential Management Options</i> .....	<b>15</b>
<i>Table 1.2: Assessment of Rathlin MCZ Management Options</i> .....	<b>23</b>
<b>6. Waterfoot MCZ</b> .....	<b>28</b>
6.1 Description of MCZ.....	28
6.2 Conservation Objectives.....	30
6.3 Assessment of Management Options .....	30
<i>Table 2.1: Activities in and around Waterfoot MCZ and Potential Management Options</i> .....	<b>32</b>
<i>Table 2.2: Assessment of Waterfoot MCZ Management Options</i> .....	<b>38</b>
<b>7. Outer Belfast Lough MCZ</b> .....	<b>42</b>
7.1 Description of MCZ.....	42
7.2 Conservation Objectives.....	44
7.3 Assessment of Management Options .....	45
<i>Table 3.1: Activities in and around Outer Belfast Lough MCZ and Potential Management Options</i> .....	<b>46</b>
<i>Table 3.2: Assessment of Outer Belfast Lough MCZ Management Options</i> .....	<b>51</b>
<b>8. Carlingford Lough MCZ</b> .....	<b>55</b>
8.1 Description of MCZ.....	55
8.2 Conservation Objectives.....	57
8.3 Assessment of Management Options .....	57
<i>Table 4.1: Activities in and around Carlingford Lough MCZ and Potential Management Options</i> .....	<b>59</b>
<i>Table 4.2: Assessment of Carlingford Lough MCZ Management Options</i> .....	<b>63</b>
<b>9. Summary impact table</b> .....	<b>67</b>
<i>Table 7.1: Summary of Impact</i> .....	<b>67</b>
<b>10. Public Sector Costs</b> .....	<b>68</b>
<b>11. Benefits</b> .....	<b>69</b>
<b>12. Enforcement</b> .....	<b>70</b>
<b>13. Monitoring</b> .....	<b>70</b>
<b>14. Small and Micro Business Impact</b> .....	<b>70</b>
<b>15. Recommendation</b> .....	<b>70</b>

## Glossary of Terms and Acronyms

**AFBI** – Agri-food and Biosciences Institute

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

**ASSI** – Area of Special Scientific Interest are notified under The Environment (Northern Ireland) Order 2002

**Biotope** – the region of habitat associated with a particular ecological community

**Circalittoral** - describes the zone from a depth where 1% light reaches the seabed down to 200m (JNCC)

**Conservation objective** – A statement of the desired ecological/geological state (quality) of a feature (habitat, species or geological) for which the MCZ is designated

[DAERA – Department of Agriculture, Environment and Rural Affairs](#) (also referred to as the Department in the text)

**DETI** – Department of Enterprise, Trade and Investment (now part of the Department for the Economy)

[DfC – Department for Communities](#)

[DfE – Department for the Economy](#)

[DfI – Department for Infrastructure](#)

**DOE** – Department of the Environment (now lies within DAERA)

**DSB** – Deep-sea bed is a term used to describe sublittoral habitats found at depths >200m with the EUNIS Broad scale habitat Deep-sea bed (EUNIS code: A6).

**EIA** – Environmental Impact Assessment

**EUNIS** – European Nature Information System, is a habitat classification system used throughout Europe and covers all types of natural and artificial habitats, both aquatic and terrestrial

**Infralittoral** - describes the zone from mean low water down to a depth where 1% of light can reach the seabed (JNCC). This zone is dominated by erect algae, typically Kelp species.

**JNCC** - Joint Nature Conservation Committee, the statutory nature conservation adviser to the Department and the UK Government in the marine environment

**MFSD** – Marine Strategy Framework Directive

**MCZ** - Marine Conservation Zone(s) 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

**MCZ Feature** – Marine Conservation Zone feature(s) that underpins the MCZ designation

**MPA** – As a generic term Marine Protected Areas are a clearly defined geographical space, recognised, dedicated and managed, through legal or other means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values. As a specific term it refers to a national designation in Scotland (equivalent to MCZ).

**NIW** – Northern Ireland Water

**OSPAR** - OSPAR is the mechanism by which fifteen Governments of the western coasts and catchments of Europe, together with the European Union, cooperate to protect the marine environment of the North-East Atlantic

**OSPAR T&D** - OSPAR List of Threatened and/or Declining Species and Habitats

**SAC** - Special Area of Conservation, designated under the EU Habitats Directive

**SPA** - Special Protection Area, designated under the EU Wild Birds Directive

**VMS** – vessel monitoring system

## **1. Introduction**

The Department of Agriculture, Environment and Rural Affairs (DAERA, referred to as the Department) has designated four MCZs (MCZs): Rathlin, Waterfoot, outer Belfast Lough and Carlingford Lough. This regulatory impact assessment (RIA) assesses the impact of the marine conservation zone (MCZ) designations on activities in the Northern Ireland Inshore Region.

The assessment includes an outline of the conservation objectives, possible management options for each feature and an impact assessment on activities should the proposed management options be implemented. The management options considered for each activity include 'no management required', 'reduce or limit pressures', or to 'remove or avoid pressures' altogether. Where management is required (based on the level of exposure to, and sensitivity of, the feature to that activity) the options recommended will be implemented as management measures with reporting structures.

## **2. 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 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'<sup>1</sup> 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<sup>2</sup>.

The Marine Act (Northern Ireland) 2013 (the Act) and the UK Marine and Coastal Access Act 2009 contain new powers to designate Marine Conservation Zones (MCZ) (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 Act is the final piece of the Marine Programme which has already delivered the Marine and Coastal Access Act 2009 and regulations transposing the Marine Strategy Framework Directive (MSFD).

The Act includes provisions for designating and managing MCZs and a system of marine planning. MCZs may be designated for various purposes including the conservation of marine species and habitats, taking fully into account any economic, cultural or social consequences of doing so. The Act also allows the Department to make byelaws to protect MCZs from damage caused by unregulated activities such as anchoring, kite surfing, jet skiing etc. It is an offence to intentionally, or recklessly, destroy, or damage, a protected feature of an MCZ or to contravene a byelaw.

The Act sets out a framework for Northern Ireland's seas based on: a system of marine planning that will balance conservation, energy (renewables, oil and gas) and resource needs, improved management for marine nature conservation and the streamlining of marine licensing for some electricity projects. The Act also

---

<sup>1</sup> <https://www.daera-ni.gov.uk/sites/default/files/publications/dae/marine-policy-mpa-strategy-inshore-2014.pdf>

<sup>2</sup> [http://ec.europa.eu/environment/nature/index\\_en.htm](http://ec.europa.eu/environment/nature/index_en.htm)

places emphasis on the modernisation of licensing and enforcement and contributes to the delivery of a UK network of Marine Protected Areas (MPAs).

The designation of MCZs will contribute to safeguarding vulnerable, or unique, species and habitats of national importance in the Northern Ireland inshore region while contributing to the wider MPA network. 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 (Oslo/Paris Convention for the Protection of the Marine Environment of the North-East Atlantic). However, the designation of an MCZ may have an impact on current and future activities which are undertaken in, or around, the MCZ, and this could result in adverse social or economic impacts on those activities. It should be noted that Strangford Lough was Northern Ireland's only Marine Nature Reserve (MNR) which was re-designated as Northern Ireland's first MCZ on the enactment of the Act.

### **3. Rationale for Government Intervention & Objective**

A biologically diverse marine environment is of high value to society through the services that it provides and as a basis for human health and livelihoods. In the marine environment, the main traded ecosystem services are fish landings, renewable energy, gas & oil exploration, commercial port activity and aquaculture, while non-traded services include education, flood control, climate mitigation, water quality, recreation and research. Aside from its economic value to society, the natural environment has intrinsic or 'non-use' value.

Human activities can have a detrimental effect on the extent and condition of many diverse habitats and their ecosystems. Fishing affects large areas of the sea bed and has large impacts on marine ecosystems. Other activities including coastal defence, shipping and energy generation (renewables, oil and gas) may have similar large impacts in the areas in which they take place.

The most threatened marine and coastal habitats in the UK, as identified in the UK Biodiversity Action Plan<sup>3</sup>, are continuing to decline while maintaining or increasing the extent and condition of priority habitats is more difficult in coastal and marine areas than in the terrestrial environment.

The objective of the intervention is to help achieve the vision of the draft NI Marine Plan of:

*‘A healthy marine area which is managed sustainably for the economic, environmental and social prosperity of present and future generations.’*

Each feature within an MCZ is given a conservation objective. This is a statement of the desired ecological quality of a feature (habitat, species or geological) for which an MCZ is designated. The conservation objective establishes whether the feature condition meets the desired state and should be maintained, or falls below the desired state and should be recovered to favourable condition.

## **4. Limitations & Constraints**

This RIA has been produced in an attempt to assess and quantify the impact of MCZ designation in NI and each of the MCZs has been considered in turn below. A large amount of research and a number of desk studies were undertaken to assess the possibility of quantifying the impacts and of placing a monetary value on these. Furthermore, the Department held workshops with internal and external stakeholders to gather information. The work completed by the other regions of the UK was also considered to understand the methodologies used and assess if the work could be transferable.

However, the lack of zone-specific data on the activities identified, and the lack of transferability from the other regions, has meant that it has not been possible

---

<sup>3</sup> <http://jncc.defra.gov.uk/ukbap>



to place a monetary value on the impacts at this time.

Following the public consultation on the proposed MCZs, some stakeholders provided additional information on fishing activities for Rathlin MCZ and Belfast Lough MCZ. This information was analysed by the Department and is summarised in the assessment of management options tables for the relevant MCZs.

Therefore this assessment is mainly qualitative, except for the cost to the public sector, and a judgement has been made on the impact based on the current known level of activity and the possibility that the activity could be displaced i.e. occur/move elsewhere if restricted.

Activities that are likely to impact the designated features are grouped together. The grouping of activities was initially based on the standardised UK pressures-activity matrix<sup>4</sup>, as developed by JNCC (2013) which classed similar activities that exerted similar pressures together, for example, anchoring by commercial and recreational vessels. Since the public consultation, a new Pressures-Activities Database (PAD) has been developed by Cefas and APBmer (2015). This database and the list of activities are currently under review by JNCC in conjunction with each country agency. The Department has used this database and the improved activities list along with a revised methodology (Marine Evidence based Sensitivity Assessment, MarESA, developed by JNCC and Natural England) to review the vulnerability assessments for the MCZs where applicable.

---

<sup>4</sup> Refer to Paper for HBDSEG Meeting 9-10 October 2013 – Progress towards the development of a standardised UK pressure-activities matrix [http://jncc.defra.gov.uk/pdf/Final\\_HBDSEG\\_P-A\\_Matrix\\_Paper\\_28b\\_Website\\_edit%5B1%5D.pdf](http://jncc.defra.gov.uk/pdf/Final_HBDSEG_P-A_Matrix_Paper_28b_Website_edit%5B1%5D.pdf)

## 5. Rathlin Marine Conservation Zone

### 5.1 Description of MCZ

Rathlin Island lies 9.6km off the north coast of County Antrim, Northern Ireland. The diverse coastal habitats that surround Rathlin have gained international recognition as they support a wide diversity of marine life ranging from seabirds to sponges.

The MCZ surrounds Rathlin Island (generally extending landward to the MHW mark excluding the harbour) with a large extension between the north of the Island and the North Channel. The MCZ encompasses an area of 90.57km<sup>2</sup> (see Figure 1 below). The MCZ boundary contains the only known location of the Deep-sea bed habitat (recorded depth of 260 metres) in Northern Ireland's inshore waters.

In 2007, a highly specialised seabed survey (Joint Irish Bathymetric Survey) began providing information which led to the discovery of geological and geomorphological features including submerged cliffs, lagoons and sea arches<sup>5</sup>. These features indicate past change in relative sea level. Seabird surveys have shown that the cliffs and sea area between Bull Island and Church Bay are important breeding and feeding areas for the bird species Black Guillemot.

Rathlin MCZ includes a Rathlin Island Special Area of Conservation (SAC) and Rathlin Island Special Protection Area (SPA) and falls within the Antrim Coast and Glens Area of Outstanding Natural Beauty (AONB).

Further information on the MCZ can be found online in the site summary document.

---

<sup>5</sup> <http://www.science.ulster.ac.uk/cma/instar/landscapes.htm>

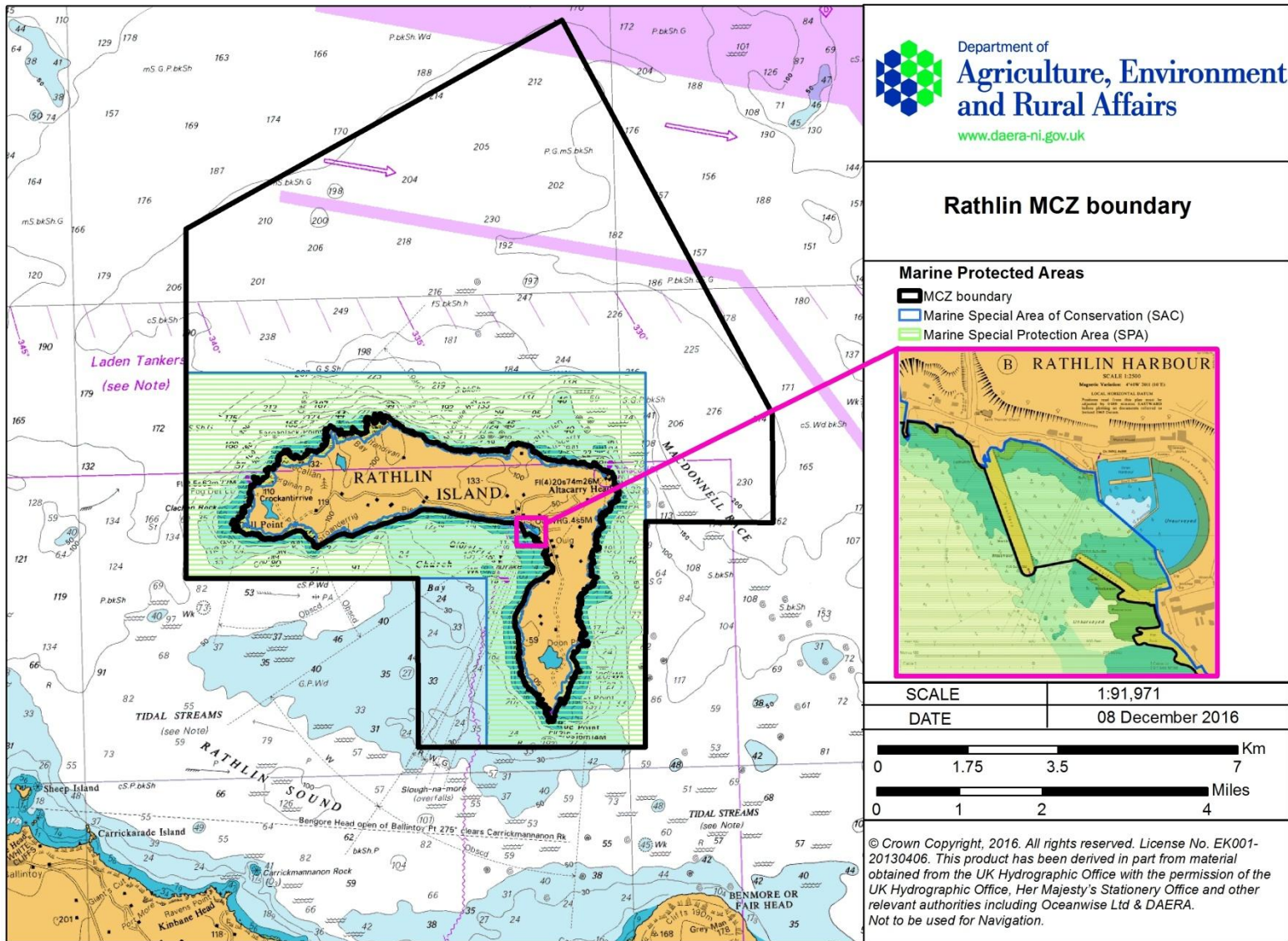


Figure 1: Location of the boundary of Rathlin MCZ

Rathlin MCZ has been designated to protect three key features as outlined below.

a) Habitats – Deep-sea bed

An area of the broad scale habitat, Deep-sea bed (recorded depths of 260m), extracted from predictive habitat mapping, located to the North of Rathlin, has been included within the boundary of this MCZ. This habitat is particularly unique in NI inshore waters due to the steep drop off in depth, close proximity to land and range of deep subtidal sands, mixed sediments and rock. Surveys carried out by the Agri-Food and Biosciences Institute (AFBI) in 2014 and 2015 indicate that the habitat is composed of deep mobile sediments, shell debris, coarse sands and cobbles with boulders.

*As the Deep-sea bed habitat in Rathlin MCZ is currently in favourable condition, the Department recommends that the conservation objectives aim to maintain this feature in favourable condition.*

b) Highly Mobile Species – Black guillemots

Black guillemots have long been associated with Rathlin. However, a recent report highlighted a significant decline in numbers of adult birds between 2000 and 2013, as indicated in the NI Seabird Report, 2013<sup>6</sup>. More survey work is needed to determine if this is a natural feature of the Rathlin population or something that can be mitigated against through management measures put in place as part of the MCZ process.

---

<sup>6</sup> <http://www.bto.org/sites/default/files/u41/NI%20Seabird%20Report%20Small%20File.pdf>

Until this can be determined, the conservation objective is set to recover the feature to favourable condition.

- c) Geological/geomorphological features - Features indicating past change in relative sea level (Submerged lagoons and sea arches).

The Act allows for MCZs to be designated for features of Geological and Geomorphological interest (hereafter referred to as Geodiversity features). This is a relatively new concept and as such information on the impacts of human activities on these features is still being investigated. Scottish Natural Heritage (SNH) and the Joint Nature Conservation Committee (JNCC) commissioned a report<sup>7</sup> in 2013 to assess the sensitivity of geodiversity features in Scottish Seas to pressures associated with human activities. The findings suggest that in the vast majority of cases, the designated features have low sensitivity to anthropogenic pressures.

As the Geodiversity features in Rathlin MCZ are currently in favourable condition, the Department recommends that the conservation objectives aim to maintain these features in favourable condition.

## **5.2 Assessment of Management Options**

A number of activities take place in, or adjacent to, Rathlin MCZ and the designation, which may entail implementing management, could have an impact on these.

The management options considered for each activity include no management required, reduce or limit pressures, or to remove or avoid pressures altogether. Where management is required the options recommended will be implemented

---

<sup>7</sup> [http://www.snh.org.uk/pdfs/publications/commissioned\\_reports/590.pdf](http://www.snh.org.uk/pdfs/publications/commissioned_reports/590.pdf)

as management measures with reporting structures. Guidance<sup>8</sup> has been produced by the Department which enabled conservation objectives and management options to be developed for the four MCZs.

The Department recognises the consequences any change in activity could have and has attempted to limit these where possible. The Department's aim is to achieve the conservation objectives with the least possible impact on the activities in the area. Therefore, the selection of management options and subsequent measures can be attributed to the achievement of these aims. In addition, where there is a low level of specific activity the impact of designation on that activity is assumed to be negligible.

Table 1.1 below outlines each activity, associated pressures and the possible management options. The subsequent table (1.2) shows the preferred management option for each activity and an indication of the possible impact/costs on that activity should the management options be implemented as planned.

---

<sup>8</sup> <https://www.daera-ni.gov.uk/sites/default/files/consultations/daera/mcz-guidelines-for-conservation-objectives-information-on-activities-and-management.PDF>

**Table 1.1: Activities in and around Rathlin MCZ and Potential Management Options**

Activity	Potential impact on conservation objectives	Level of activity within MCZ	Potential Management Options		
			No action advised	Reduce or Limit	Remove or Avoid
<p>Production of living resources:</p> <p><i>Aquaculture – macro-algae</i></p>	<p>Black guillemot have a low vulnerability to pressures such as water flow (tidal current changes), wave exposure changes, habitat structure changes and changes in suspended solids. They have a moderate vulnerability to underwater noise changes, death or injury by collision with vessels, visual disturbance (behaviour) and the introduction or spread of non-indigenous species. The size, speed and approach distance of boats associated with aquaculture operations has an impact on the flushing probability of Black guillemots.</p>	Low	No additional management required	Reduce or limit pressures associated with the kelp cultivation farm activities which could impact Black guillemots. The Department may propose a speed restriction zone within the area to minimise the likelihood of disturbance and death/injury from collision particularly during the breeding season (spring).	Revoke current kelp licence(s). Remove or avoid pressures associated with the expansion or relocation of existing aquaculture areas where they would be likely to impact the Black guillemot.
<p>Extraction of living resources:</p> <p><i>Fishing – dredging and demersal</i></p>	<p>Black guillemot have a moderate vulnerability to pressures such as visual disturbance, underwater noise changes, introduction</p>	Moderate	No additional management required	Reduce or limit pressures associated with dredging and demersal trawling in areas where they are	Remove or avoid pressures associated with dredging and demersal trawling

<p><i>trawling</i></p>	<p>or spread of non-indigenous species, removal of non-target species and collision with boats while diving or emerging from feeding. Black guillemots have a low vulnerability to pressures such as synthetic compound contamination, physical changes (to another seabed type), habitat structure changes and changes in suspended solids (water clarity).</p> <p>Deep-sea bed has a moderate vulnerability to physical changes (to another seabed type) and a low vulnerability to de-oxygenation, siltation rate changes (including smothering), species removal and surface and sub-surface abrasion.</p> <p>Geodiversity features are all located within the SAC and as such are protected by management measures put in place to protect the SAC features.</p>			<p>likely to impact the MCZ features.</p>	<p>(through prohibiting activities) in areas where they are likely to impact the MCZ features.</p>
------------------------	---	--	--	---	--



<p>Energy generation: <i>Tidal resource zone</i></p>	<p>At present, there are no tidal energy developments in the area (potential sites being investigated lie outside the MCZ boundary). As such, the features are not exposed to the pressures normally associated with this activity.</p> <p>The Strategic Environmental Assessment of Offshore Wind and Marine Renewable Energy 2009 (DETI) shows that the removal or disturbance of the substratum could have significant adverse effects on sensitive benthic habitats and/or species. However, with mitigating actions taken at the EIA/Projects stage these impacts would be reduced.</p>	<p>Negligible. Currently there is no energy generation in the area.</p>	<p>No management is required.</p>	<p>Should sites within the MCZ be considered in the future then the Deep-sea bed area should be avoided as a location due to the potential change in habitat associated with tidal resource structures. However, due to the depth of the Deep-sea bed it is unlikely that tidal developments would be able to locate here.</p> <p>Furthermore, areas used by Black guillemot should be avoided. Due to the proximity of Rathlin Island SAC/SPA a Habitats Regulations Assessment for any plan or project will need to be carried out.</p>	<p>Areas within the MCZ should not be considered for this activity in the future.</p>
<p>Energy generation: <i>Marine hydrocarbon extraction</i></p>	<p>At present, there are no oil and gas exploration licences in the area. A licence had been granted in 2011 but this has since been relinquished. The Oil and Gas Authority</p>	<p>Negligible. Currently there is no energy generation in the area.</p>	<p>No additional management is required.</p>	<p>Should sites within the MCZ be considered in the future then the Deep-sea bed area should be avoided as a location due to the</p>	<p>Areas within the MCZ should not be considered for this activity in the future.</p>

	<p>may release this block for licence in a future licensing round. As such, the features are not exposed to the pressures normally associated with this activity.</p>			<p>potential change in habitat associated with tidal resource structures. However, due to the depth of the Deep-sea bed it is unlikely that tidal developments would be able to locate here.</p> <p>Furthermore, areas used by Black guillemot should be avoided. Due to the proximity of Rathlin Island SAC/SPA a Habitats Regulations Assessment for any plan or project will need to be carried out.</p>	
<p>Coastal infrastructure:</p> <p><i>Coastal docks, ports &amp; marinas</i></p>	<p>Black guillemot have a low vulnerability to visual disturbance, death/injury from collision with vessels, physical change (to another seabed type), habitat structure changes, nutrient enrichment, synthetic compound contamination, changes in suspended solids, water flow changes, wave exposure changes,</p>	<p>Low</p>	<p>No additional management required.</p>	<p>Reduce or limit pressures associated with any proposed expansion of the existing marina or other coastal infrastructure works where or when it may impact the breeding Black guillemots. This may include scheduling maintenance works</p>	<p>Remove or avoid pressures (through prohibiting works) associated with the existing marina or other coastal infrastructure works where it impacts the MCZ.</p>

	<p>underwater noise changes and introduction/spread of non-indigenous species.</p> <p>Deep-sea bed and Geodiversity features are not sensitive to this activity.</p>			when they are least likely to affect breeding birds or introducing a speed restriction zone.	
<p>Waste management:</p> <p><i>Sewage disposal and dredge disposal</i></p>	<p>Black guillemot is vulnerable to the following pressures associated with waste management: synthetic compound contamination, nutrient enrichment, changes in suspended solids, underwater noise changes, death or injury by collision, visual disturbance (behaviour), introduction or spread of non-indigenous species, habitat structure changes and removal of non-target species.</p> <p>Deep-sea bed and Geodiversity features are not sensitive to this activity.</p>	Low	No additional management is required.	Reduce or limit pressures associated with new sewage or dredge disposal sites as well as the expansion or relocation of the existing dredge disposal site where they are likely to impact the Black guillemot.	Remove or avoid pressures associated with new sewage or dredge disposal sites as well as the expansion or relocation of the existing dredge disposal site where they are likely to impact the Black guillemot.
<p>Transport:</p> <p><i>Shipping (general at sea)</i></p> <p><i>Shipping (port</i></p>	<p>Black guillemots are vulnerable to synthetic compound contamination, changes in suspended solids (water clarity), underwater noise changes, introduction</p>	Moderate	No additional management is required.	Reduce or limit pressures associated with the ferry route inside the MCZ boundary where they are likely to impact	Remove or avoid pressures associated with transport (prohibit these activities) where they are likely

<p><i>operations within Harbour Authority limits)</i></p>	<p>or spread of non-indigenous species, wave exposure changes, visual disturbance (behaviour) or death/injury from collision associated with shipping activities.</p> <p>Deep-sea bed is vulnerable to overall abrasion and siltation rate changes.</p> <p>Geodiversity features are not sensitive to this activity.</p>			<p>foraging Black guillemot.</p> <p>Reduce or limit pressures where they are likely to impact the Deep-sea bed feature.</p> <p>Anchoring in emergency situations will not be restricted.</p>	<p>to impact Black guillemot.</p> <p>Anchoring in emergency situations will not be restricted.</p>
<p>Recreation and leisure:</p> <p><i>Recreational activities – SCUBA diving, sailing, windsurfing, kayaking/canoeing, bird watching, recreational sea angling, recreational fishing</i></p>	<p>Black guillemots are vulnerable to underwater noise changes, death or injury by collision, visual disturbance (behaviour), removal of non-target species and changes in suspended solids.</p> <p>Deep-sea bed is vulnerable to overall abrasion and removal of target species though given the depth of this feature the risk is low.</p> <p>Geodiversity features are not sensitive to this activity.</p>	<p>Moderate to High</p>	<p>No additional management is required.</p>	<p>Reduce or limit pressures associated with tourism and recreational activities where they are likely to impact the MCZ features.</p> <p>The Department may propose a speed restriction zone within the area to minimise the likelihood of disturbance and death/injury from collision with seabirds particularly during the breeding season (spring).</p>	<p>Remove or avoid pressures associated with recreation and leisure activities (prohibit these activities) where they are likely to impact Black guillemot.</p> <p>Anchoring in emergency situations will not be restricted.</p>

<p>Marine research: <i>Scientific and Archaeological</i></p>	<p>Black guillemots have a low vulnerability to pressures such as habitat structure changes, changes in suspended solids (water clarity), underwater noise changes, visual disturbance (behaviour) when foraging, death /injury from collision with marine vessels and introduction or spread of non-native species.</p> <p>Deep-sea bed is vulnerable to overall abrasion (surface and subsurface) and siltation rate changes (including smothering).</p> <p>Geodiversity features are not sensitive to this activity.</p>	<p>Low</p>	<p>No additional management is required.</p>	<p>Reduce or limit pressures associated with marine research where they are likely to impact the MCZ features.</p>	<p>Remove or avoid pressures associated with marine research where they are likely to impact the MCZ features.</p>
<p>Other man-made structures: <i>Submarine power cable &amp; pipeline operations</i></p>	<p>Black guillemot are vulnerable to physical change (to another seabed type), habitat structure changes, changes in suspended solids (water clarity), underwater noise changes, death or injury by collision, visual disturbance and introduction or spread of non-indigenous</p>	<p>Low</p>	<p>No additional management is required.</p>	<p>Reduce or limit pressures associated with maintenance work on the submarine cable where it is likely to impact the breeding Black guillemots.</p> <p>This may include scheduling</p>	<p>Remove or avoid pressures associated with construction or maintenance activities for the submarine cable where they are likely to impact the MCZ features.</p>

	<p>species associated with the activity.</p> <p>Deep-sea bed and Geodiversity features are unlikely to be affected by this activity due to their location.</p>			<p>maintenance works when they are least likely to affect breeding birds or introducing a speed restriction zone.</p>	
--	--	--	--	---	--

**Table 1.2: Assessment of Rathlin MCZ Management Options**

Activity	Preferred Management Option	Impact of designation on activity	Explanation
<p>Production of living resources:</p> <p><i>Aquaculture – macro-algae</i></p>	<p>No additional management is required.</p>	<p>None</p>	<p>The development of new aquaculture operations will require a licence from the Department which will assess potential impacts of the proposal on the conservation objectives for the MCZ features. The site currently holds a licence from the Department. As no additional management is required there is no impact to the activity.</p>
<p>Extraction of living resources:</p> <p><i>Fishing – dredging and demersal trawling</i></p>	<p>Management measures are recommended to remove or avoid pressures associated with dredging and demersal trawling in areas where they are likely to impact the MCZ features.</p> <p>The Department may propose a speed restriction zone within the area to minimise the likelihood of disturbance and death/injury of seabirds from collision with vessels particularly during the breeding season (spring).</p>	<p>Low</p>	<p>Reducing or limiting the pressure will not meet the conservation objective, therefore removing or avoiding is the only option.</p> <p>A quantitative analysis of data from Vessel Monitoring Systems (VMS) from 2006-2014 shows that average fishing effort within the MCZ is only 1.36% of the total effort within ICES rectangle 39E3. The average fishing effort is 50.85 hours per annum which equates to 0.55hrs/km<sup>2</sup>.</p> <p>An economic assessment was undertaken by relating VMS data to Landings data. The annual average landings value for Northern Ireland registered vessels in ICES rectangle 39E3 is £1,009,905, with £626,256 associated with dredging or towed demersal gear. On the basis of fishing effort estimated to be 1.36% of total effort in the ICES rectangle, it is estimated that</p>

			<p>the impact of prohibiting the use of dredges or towed demersal gear to be £8,517 per annum. The Department acknowledges that this is only an indicative value as VMS is limited to vessels larger than 12m.</p> <p>In addition, the Rathlin Island (Prohibition of Fishing Methods) Regulations (NI) 2016 will come into effect on 1 January 2017. This will protect European designated features, and will cover part of the MCZ.</p>
<p>Energy generation: <i>Tidal resource zone</i></p>	<p>No additional management is required.</p>	<p>Negligible/Low</p>	<p>At present, with no exploratory licence in place there is no risk to the achievement of the conservation objectives for the designated features.</p> <p>Any new development for renewable energy production will require a licence from the Department who will consider any potential impacts on the MCZ.</p>
<p>Energy generation: <i>Marine hydrocarbon extraction</i></p>	<p>No additional management is required.</p>	<p>Negligible/Low</p>	<p>At present, with no exploratory licence in place there is no risk to the achievement of the conservation objectives for the designated features.</p> <p>Any new development for renewable energy production will require a licence from the Department who will consider any potential impacts on the MCZ.</p>



<p>Coastal infrastructure:</p> <p><i>Coastal docks, ports &amp; marinas</i></p>	<p>No additional management is required.</p>	<p>None</p>	<p>The Department will continue discussions with those involved with Infrastructure activities and operations within the MCZ to help us to understand more about the interactions with the MCZ features. As no additional management is required there is no impact to the activity. Applications for expansion or work in this area would be subject to a Habitats Regulations Assessment if it is capable of affecting the Rathlin Island SAC/SPA. Such works may also be subject to the marine licence and planning process.</p>
<p>Waste management:</p> <p><i>Sewage disposal and dredge disposal</i></p>	<p>No additional management is required.</p>	<p>None</p>	<p>At present management is in place in the form of consents or licences. There is only one wastewater treatment works on Rathlin Island which was upgraded in March 2013, thus future expansion is likely to be unnecessary. The current dredge disposal site to the south of Rathlin Island does not fall within the MCZ boundary. As no additional management is required there is no impact to the activity.</p>

<p>Transport:</p> <p><i>Shipping (general at sea)</i></p> <p><i>Shipping (port operations within Harbour Authority limits)</i></p>	<p>Management measures are recommended to remove or avoid pressures associated with transport (anchoring and mooring) where they are likely to impact Black guillemot.</p> <p>No additional management is required for the shipping - port operations (mooring, beaching, launching, ferry route etc.) within Harbour Authority limits.</p> <p>Anchoring in emergency situations will not be restricted.</p>	<p>Low</p>	<p>The Department will continue to engage with those stakeholders involved in marine traffic within the MCZ to develop appropriate management measures. The Department may propose a speed limit zone within the area to minimise the likelihood of disturbance and death/injury of seabirds from collision with vessels particularly during the breeding season (spring).</p> <p>The ferries already follow a narrow navigation route in the area where these birds are found minimising the likely impact of these pressures and ensuring that the conservation objective can be achieved. A speed restriction is likely to have a low impact (other than increased time spent in transit).</p> <p>No additional management is required for shipping – port operations (mooring, beaching, launching, ferry route etc.) as these occur within the confines of the harbour area.</p>
<p>Recreation and leisure:</p> <p><i>Recreational activities – SCUBA diving, sailing, windsurfing, kayaking/canoeing, bird watching, recreational sea angling, recreational fishing</i></p>	<p>Management measures are recommended to remove or avoid pressures associated with recreation and leisure (anchoring and mooring) where they are likely to impact Black guillemot.</p> <p>Anchoring in emergency situations will not be restricted.</p>	<p>Low</p>	<p>The Department will continue to engage with those stakeholders involved in recreation and leisure within the MCZ to develop appropriate management measures.</p> <p>The Department may propose a speed restriction zone within the area to minimise the likelihood of disturbance and death/injury from collision with seabirds particularly during the breeding season (spring).</p>
<p>Marine research:</p>	<p>No additional management is required.</p>	<p>None</p>	<p>Marine research activities are performed by trained, qualified staff using non-invasive</p>

<i>Scientific and Archaeological</i>			techniques (where possible) such as acoustic and video methodologies. The Department will require the provision of detailed methodologies for all Marine research activities prior to these being carried out to assess if any impacts to the MCZ features are likely to occur. As no additional management is required there is no impact to the activity.
Infrastructure: <i>Submarine power cable &amp; pipeline operations</i>	No additional management is required.  Emergency operations will not be restricted.	None	All current activities associated with the submarine cable and pipeline operations are already licensed. Any future construction or maintenance activities associated with the submarine cable or pipeline may require a marine licence. As no additional management is required there is no impact to the activity.

## 6. Waterfoot MCZ

### 6.1 Description of MCZ

Waterfoot MCZ is located in a small embayment offshore from the village of Waterfoot (within the wider Red Bay area) on the east coast of County Antrim. The seabed in the area is comprised mainly of sand and gravel sediments.

The boundary, located at the inner part of the bay, is a small area of 0.811km<sup>2</sup> (see Figure 2). The MCZ contains a large Subtidal seagrass bed (*Zostera marina*), that may be the largest example in Northern Ireland and is considered to be in good condition.

The waters around the Red Bay area are important for finfish aquaculture (organic Atlantic salmon, *Salmo salar*). Fisheries in the area include scallop dredging and potting for Edible crab (*Cancer pagurus*) and European lobster (*Homarus gammarus*). Although there is no industrial activity in the Red Bay area, the increasing popularity for leisure and recreational activities may be a threat for the sustainability of Subtidal seagrass beds.

An area to the north of the MCZ has been designated as Red Bay SAC while the MCZ lies within the wider Antrim Coast and Glens Area AONB. Further information on the MCZ can be found in the site summary document.

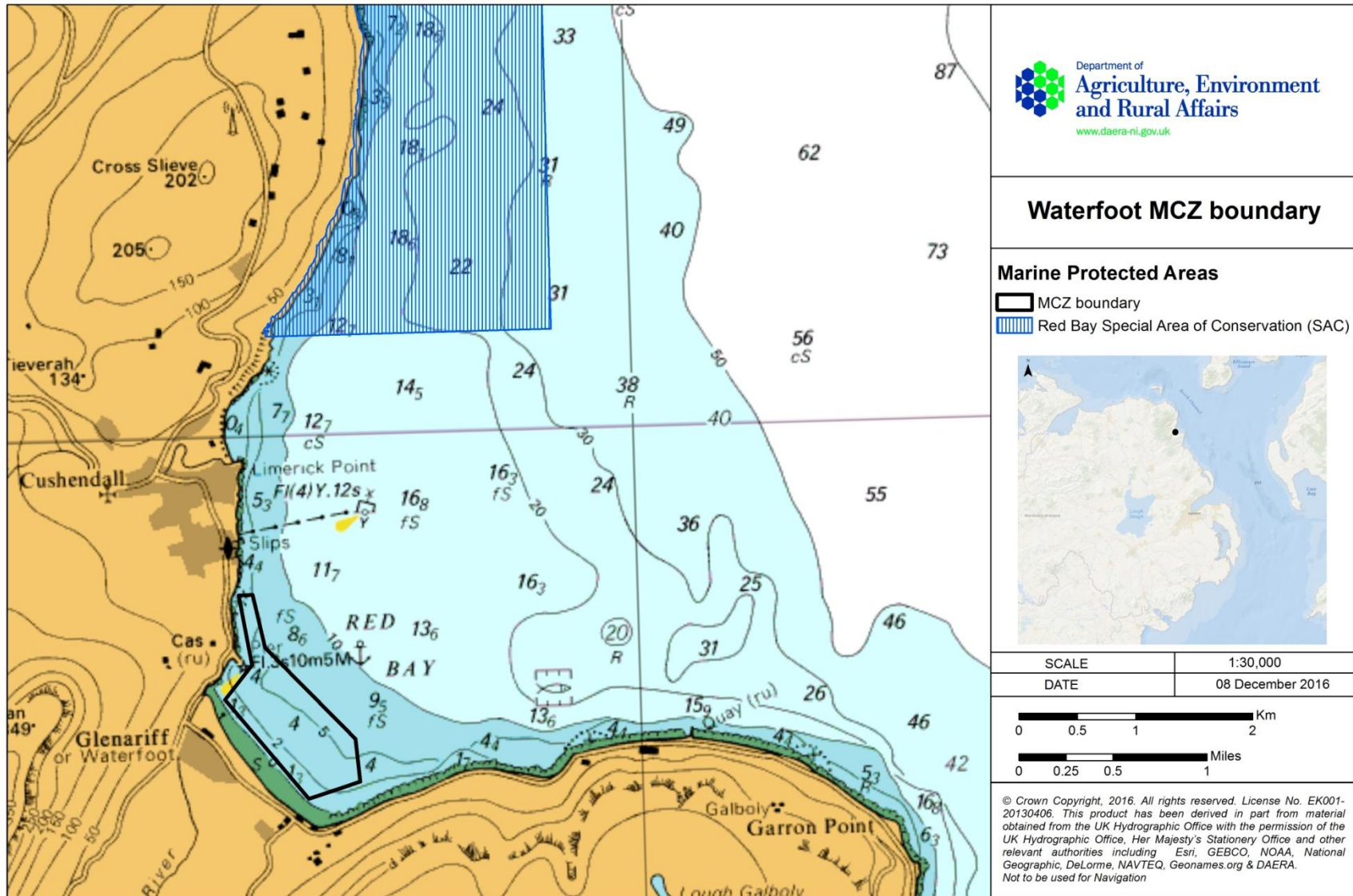


Figure 2: Location of the boundary of Waterfoot MCZ

## 6.2 Conservation Objectives

Waterfoot has been designated as a MCZ for the habitat Subtidal (sublittoral) sands with subtidal Seagrass beds (*Zostera marina*). The habitat is currently listed as Priority Habitat by the UK Biodiversity Habitat Action Plan (BAP) and is listed on the OSPAR List of Threatened and/or Declining Species and Habitats (declining in Region II – North Sea and Region III – Celtic Sea, and threatened in Region V – Wider Atlantic, OSPAR agreement 2008-6).

*As the designated habitat in Waterfoot MCZ is currently in favourable condition, the Department recommends that the conservation objectives aim to maintain this feature in favourable condition.*

## 6.3 Assessment of Management Options

A number of activities take place in or around Waterfoot MCZ and the designation, which may entail implementing management measures, could have an impact on these.

The management options considered for each activity include no management required, reduce or limit pressures, or to remove or avoid pressures altogether. Where management is required the options recommended will be implemented as management measures with reporting structures. Guidance<sup>9</sup> has been produced by the Department which enabled conservation objectives and management options to be developed for the four MCZs.

The Department recognises the consequences any change in activity could have and has attempted to limit these where possible. The Department's aim is to achieve the conservation objectives with the least possible impact on the activities in the area. Therefore, the selection of management options and

---

<sup>9</sup> <https://www.daera-ni.gov.uk/sites/default/files/consultations/daera/mcz-guidelines-for-conservation-objectives-information-on-activities-and-management.PDF>

subsequent measures can be attributed to the achievement of these aims. In addition, where there is a low level of specific activity the impact on that activity is assumed to be negligible.

Table 2.1 below outlines each activity, associated pressures and the possible management options. The subsequent table (2.2) shows the preferred management option for each activity and an indication of the possible impact/costs on that activity should the management options be implemented as planned.

**Table 2.1: Activities in and around Waterfoot MCZ and Potential Management Options**

Activity	Potential impact on conservation objectives	Level of activity within MCZ	Potential Management Options		
			No action advised	Reduce or Limit	Remove or Avoid
Production of living resources:  <i>Aquaculture – finfish</i>	Seagrass beds are vulnerable to the following pressures associated with aquaculture: water flow changes, nutrient and organic enrichment, overall abrasion (surface and subsurface), habitat structure changes, changes in suspended solids, siltation rate changes, introduction of light, introduction or spread of non-indigenous species, introduction of microbial pathogens and removal of non-target species.	None	No additional management required	Reduce or limit pressures associated with new finfish farms and the expansion of existing aquaculture areas where they are likely to impact the MCZ feature.	Remove or avoid pressures associated with finfish farms where these are likely to impact the MCZ feature.
Extraction of living resources:  <i>Fishing – dredging (scallops)</i>	Seagrass beds are vulnerable to the following pressures associated with dredging: physical changes, overall abrasion (surface and subsurface), changes in suspended solids, siltation rate changes, introduction of light and removal of target and non-target species.	Moderate	No additional management is required.	Reduce or limit pressures associated with scallop dredging where these are likely to impact the MCZ feature.	Remove or avoid pressures associated with scallop dredging where these are likely to impact the MCZ feature
<i>Fishing – traps</i>	Seagrass beds are	Moderate		Reduce or limit	Remove or avoid



<i>(potting/creeling)</i>	vulnerable to the following pressure associated with fishing with traps: removal of species (both target and non-target).			pressures associated with fishing with traps (creels and pots) where these are likely to impact the MCZ feature.	pressures associated with fishing with traps (creels and pots) where these are likely to impact the MCZ feature.
Energy generation: <i>Tidal resource zone</i>	<p>At present, there are no tidal energy developments in the area (potential sites being investigated lie outside the MCZ boundary). As such, the features are not exposed to the pressures normally associated with this activity.</p> <p>The Strategic Environmental Assessment of Offshore Wind and Marine Renewable Energy 2009 (DETI) shows that the removal or disturbance of the substratum could have significant adverse effects on sensitive benthic habitats and/or species. However, with mitigating actions taken at the EIA/Projects stage these impacts would be reduced.</p>	Negligible. Currently there is no energy generation in the area.	No management is required.	Reduce or limit pressures associated with energy generation where these are likely to impact the MCZ feature.	Areas within the MCZ should not be considered for this activity in the future.
Energy generation:	At present, there are no oil	Negligible.	No additional	Reduce or limit	Areas within the MCZ

<i>Marine hydrocarbon extraction</i>	and gas exploration licences in the area. A licence had been granted in 2011 but this has since been relinquished. The Oil and Gas Authority may release this block for licence in a future licensing round. As such, the features are not exposed to the pressures normally associated with this activity.	Currently there is no energy generation in the area.	management is required.	pressures associated with energy generation where these are likely to impact the MCZ feature.	should not be considered for this activity in the future.
Coastal infrastructure:  <i>Coastal docks, ports &amp; marinas</i>  <i>Coastal defence &amp; land claim</i>	Seagrass beds are vulnerable to the following pressures associated with coastal infrastructure: water flow changes, emergence regime changes, exposure changes, nutrient and organic enrichment, physical loss, physical change, habitat structure changes, overall abrasion (surface and subsurface), changes in suspended solids, siltation rate changes, introduction of light, introduction or spread of non-indigenous species and introduction of microbial pathogens.	Low	No additional management required.	Reduce or limit pressures associated with coastal infrastructure where these are likely to impact the MCZ feature.	Remove or avoid pressures associated with coastal infrastructure where these are likely to impact the MCZ feature.
Extraction of non-living resources:	Seagrass beds are vulnerable to the following	Low	No additional management	Reduce or limit pressures	Remove or avoid pressures associated

<i>Navigational dredging (capital &amp; maintenance)</i>	pressures associated with navigational dredging: removal of non-target species, introduction of microbial pathogens, introduction or spread of non-indigenous species, overall abrasion (surface and subsurface), habitat structure changes, nutrient and organic enrichment, water flow changes, changes in suspended solids and siltation rate changes.		is required.	associated with navigational dredging where these are likely to impact the MCZ feature.	with navigational dredging where these are likely to impact the MCZ feature.
Waste management: <i>Sewage disposal</i>	Seagrass beds are vulnerable to the following pressures associated with sewage disposal: temperature and salinity changes, organic and nutrient enrichment, changes in suspended solids, siltation changes, introduction of light, introduction or spread of non-indigenous species and introduction of microbial pathogens.	Low	No additional management is required.	Reduce or limit pressures associated with waste management where these are likely to impact the MCZ feature.	Remove or avoid pressures associated with waste management where these are likely to impact the MCZ feature.
Transport: <i>Shipping (general)</i>	Seagrass beds are vulnerable to the following pressures associated with	Moderate-High	No additional management is required.	Reduce or limit pressures associated with	Remove or avoid pressures associated with transport

<p><i>at sea)</i></p> <p><i>Shipping (port operations within Harbour Authority limits)</i></p>	<p>transport: physical abrasion, surface and sub-surface abrasion/penetration, changes in suspended solids, siltation rate changes, introduction of light, introduction or spread of non-indigenous species or introduction of microbial pathogens and wave exposure changes.</p>			<p>transport (anchoring and mooring) where these are likely to impact the MCZ feature.</p>	<p>(anchoring and mooring) where these are likely to impact the MCZ feature.</p>
<p>Recreation and leisure:</p> <p><i>Recreational activities – SCUBA diving, sailing, windsurfing, kayaking/canoeing, bird watching, recreational fishing</i></p> <p><i>Coastal tourist sites (public beaches &amp; resorts)</i></p>	<p>Seagrass beds are vulnerable to the following pressures associated with recreation and leisure: overall abrasion (surface and subsurface), changes in suspended solids, siltation rate changes, introduction of light, introduction of non-indigenous species and microbial pathogens and removal of target and non-target species.</p>	<p>Moderate-High</p>	<p>No additional management is required.</p>	<p>Reduce or limit pressures associated with recreational activities where these are likely to impact the MCZ feature.</p>	<p>Remove or avoid pressures associated with recreational activities where these are likely to impact the MCZ feature.</p>
<p>Marine research:</p> <p><i>Scientific and Archaeological</i></p>	<p>Seagrass beds are vulnerable to the following pressures associated with marine research: habitat structure changes, overall abrasion (surface and subsurface), changes in</p>	<p>Low</p>	<p>No additional management is required.</p>	<p>Reduce or limit pressures associated with marine research where these are likely to impact the MCZ feature.</p>	<p>Remove or avoid pressures associated with marine research where these are likely to impact the MCZ feature.</p>

	suspended solids, siltation rate changes, introduction of light, introduction or spread of non-indigenous species and introduction of microbial pathogens.				
Infrastructure: <i>Submarine power cable &amp; pipeline operations</i>	Seagrass beds are vulnerable to the following pressures associated with infrastructure: temperature changes, physical changes, habitat structure changes, overall abrasion (surface and subsurface), changes in suspended solids, siltation rate changes, introduction of light, introduction or spread of non-indigenous species and introduction of microbial pathogens.	Low	No additional management is required.	Reduce or limit pressures associated with infrastructure where these are likely to impact the MCZ feature.	Remove or avoid pressures associated with infrastructure where these are likely to impact the MCZ feature.

**Table 2.2: Assessment of Waterfoot MCZ Management Options**

Activity	Preferred Management Option	Impact of designation on activity	Explanation
Production of living resources:  <i>Aquaculture – finfish</i>	No additional management is required.	None	The development of new aquaculture operations will require a licence from the Department which will assess potential impacts of the proposal on the conservation objectives for the MCZ features. The site currently holds a licence from the Department. In addition, the Department is responsible, through regulations, for the development of fisheries management measures to protect the MCZ features.
Extraction of living resources:  <i>Fishing – dredging (scallops)</i>  <i>Fishing – traps (potting/creeling)</i>	Management measures are recommended to remove or avoid pressures associated with dredging in areas where they are likely to impact the MCZ features.  Management measures are recommended to remove or avoid pressures associated with fishing with traps (creels and pots) within the MCZ.	Negligible/Low  Low	Reducing or limiting the pressure will not meet the conservation objective, therefore removing or avoiding is the only option. The impact is assumed to be negligible/low given that, at present, this activity occurs at low levels within the MCZ.  Reducing or limiting the pressure will not meet the conservation objective, therefore removing or avoiding is the only option. The impact is assumed to be low given that at present there is little evidence of this activity occurring within the MCZ. Fishing with traps (pots and creels) does occur within the wider Red Bay area but the designation is unlikely to affect this.
Energy generation:  <i>Tidal resource zone</i>	No additional management is required.	Negligible/Low	At present, with no exploratory licence in place there is no risk to the achievement of the conservation objectives for the designated

			<p>features.</p> <p>Any new development for renewable energy production will require a licence from the Department who will consider any potential impacts on the MCZ.</p>
<p>Energy generation:</p> <p><i>Marine hydrocarbon extraction</i></p>	<p>No additional management is required.</p>	<p>Negligible/Low</p>	<p>At present, with no exploratory licence in place there is no risk to the achievement of the conservation objectives for the designated features.</p> <p>Any new development for renewable energy production will require a licence from the Department who will consider any potential impacts on the MCZ.</p>
<p>Coastal infrastructure:</p> <p><i>Coastal docks, ports &amp; marinas</i></p> <p><i>Coastal defence &amp; land claim</i></p>	<p>No additional management is required.</p>	<p>None</p>	<p>Any developments of the marina or coastal defence will be subject to the marine licensing and planning processes which will take into consideration any impacts to the MCZ feature.</p> <p>Any works should be designed where their impact on the hydrology will not be to the detriment of the seagrass beds, i.e. changing the regime to increase sedimentation/turbidity or freshwater influence.</p>
<p>Extraction of non-living resources:</p> <p><i>Navigational dredging (capital &amp; maintenance)</i></p>	<p>No additional management is required.</p>	<p>None</p>	<p>At present there are no dredging activities taking place. Any dredging works will require a licence from the Department which will consider impacts to the MCZ feature during the assessment process.</p>
<p>Waste management:</p> <p><i>Sewage disposal and Dredge disposal</i></p>	<p>No additional management is required.</p>	<p>None</p>	<p>At present, management is in place in the form of consents or licences. There are no dredge disposal sites within the vicinity of the MCZ. Water discharges are governed by requirements under</p>

			<p>various European directives. New applications for sewage or dredge disposal will be subject to the marine licensing and Water Order discharge consent processes which will take the MCZ feature into consideration.</p> <p>In addition, Waterfoot beach is a Bathing Water beach and attained a classification of Good water quality status for 2016.</p>
<p>Transport:</p> <p><i>Shipping (general at sea)</i></p> <p><i>Shipping (port operations within Harbour Authority limits)</i></p>	<p>Management measures are recommended to remove or avoid pressures associated with transport (anchoring and mooring) within the MCZ.</p> <p>No additional management is required for the shipping - port operations (mooring, beaching, launching, ferry route etc.) within Harbour Authority limits.</p> <p>Anchoring in emergency situations will not be restricted.</p>	Low-Moderate	<p>This is the only available option to ensure the conservation objective is met. Some marine vessels may cause abrasive damage to vegetation/rhizomes and increase turbidity reducing light penetration. The damage caused by anchoring and mooring may result in the bed becoming fragmented and lead to losses of density and extent through physical damage. The impact is deemed to be low because of the likelihood of displacement to the wider Red Bay area.</p>
<p>Recreation and leisure:</p> <p><i>Recreational activities – SCUBA diving, sailing, windsurfing, kayaking/canoeing, bird watching, recreational fishing Coastal tourist sites –</i></p>	<p>Management measures are recommended to remove or avoid pressures associated with recreation and leisure (anchoring and mooring) within the MCZ.</p> <p>Anchoring in emergency situations will not be restricted.</p>	Low-Moderate	<p>This is the only available option to ensure the conservation objective is met. Some recreational vessels may cause abrasive damage to vegetation/rhizomes and increase turbidity reducing light penetration. The damage caused by anchoring and mooring may result in the bed becoming fragmented and lead to losses of density and extent through physical damage. The impact is deemed to be low because of the</p>



<i>public beaches &amp; resorts</i>			likelihood of displacement to the wider Red Bay area.
Marine research:  <i>Scientific and Archaeological</i>	No additional management is required.	None	Marine research activities are performed by trained, qualified staff using non-invasive techniques (where possible) such as acoustic and video methodologies. The Department will require the provision of detailed methodologies for all Marine research activities prior to these being carried out to assess if any impacts to the MCZ feature is likely to occur.
Infrastructure:  <i>Submarine power cable &amp; pipeline operations</i>	No additional management is required.  Emergency operations will not be restricted.	None	All current activities associated with the submarine cable and pipeline operations are already licensed. Any future construction or maintenance activities associated with the submarine cable or pipeline may require a marine licence.

## 7. Outer Belfast Lough MCZ

### 7.1 Description of MCZ

Belfast Lough is large sea inlet situated at the mouths of the Lagan, Farsett and Blackstaff Rivers on the eastern coast of Northern Ireland. Outer Belfast Lough is an exposed area as it opens into the North Channel and connects Belfast to the Irish Sea. Home to a variety of species, the Outer Lough encompasses a wide range of habitats including subtidal mixed sediment types, sediment dominated bays and rocky shores.

The MCZ, located at the mouth of the Lough, is a small area (2.51km<sup>2</sup>) positioned close to the southern shore of Belfast Lough (north of Groomsport) (see Figure 3). The MCZ contains a dense aggregation of the Ocean quahog (*Arctica islandica*); it is thought that the species is well conserved here due to continuous recruitment and high population numbers. The Subtidal (sublittoral) sand in the area provides an ideal substrate for the long-lived Ocean quahog that lives buried in the sediment.

Outer Belfast Lough is heavily impacted by human activity with a rapidly growing commercial sector and booming leisure activities. Belfast Harbour is Northern Ireland's largest port with significant passenger and freight traffic. Fisheries in the area include bottom culture of mussels, scallop dredging, whelk creels and crab/lobster potting. Popular for sailing, the Outer Lough has several yacht clubs, marinas and mooring areas, in addition to unrestricted anchoring of commercial shipping close to the MCZ. Both sporting and nature enthusiasts use the area for cruising, recreational fishing, SCUBA diving, kayaking, windsurfing, wildfowling and bird watching activities.

Nearby, areas of Outer Belfast Lough are designated as an Area of Special Scientific Interest (ASSI), SPA and RAMSAR<sup>10</sup> site.

Further information on the MCZ can be found in the site summary document.

---

<sup>10</sup> <http://jncc.defra.gov.uk/page-161>

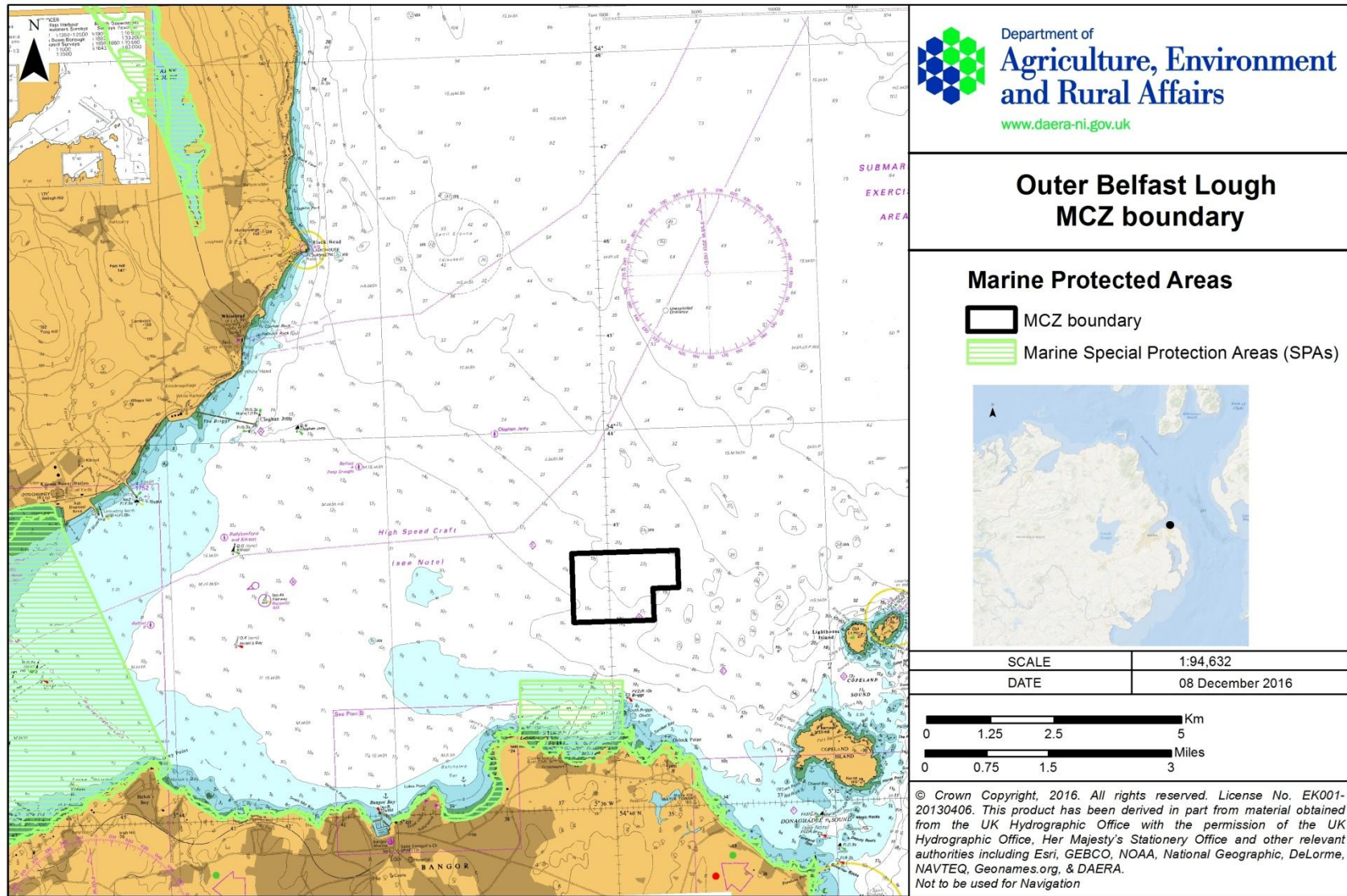


Figure 3: Location of the boundary of Outer Belfast Lough MCZ

## 7.2 Conservation Objectives

The Outer Belfast Lough has been designated as an MCZ to protect the habitat and the low mobility species described below.

### a) Habitat - Subtidal (sublittoral) sands

The MCZ habitat feature is a broad and complex habitat. This is sand dominated with occasional small patches of gravelly muddy sand (confirmed by particle size analysis, PSA). The biotopes [A5.354](#) (*Virgularia mirabilis* and *Ophiura* spp with *Pecten maximus* on circalittoral sandy or shelly mud) and [A5.262](#) (*Amphiura brachiata* with *Astropecten irregularis* and other echinoderms in circalittoral muddy sand) are present. In addition, other biotopes have been recorded within the MCZ ([A5.444](#): *Flustra foliacea* and *Hydrallmania falcata* on tide-swept circalittoral mixed sediment, and [A5.361](#): Seapens and burrowing megafauna in circalittoral fine mud) indicating the existence of both muddy sand and sandy mud.

*As the habitat in Outer Belfast Lough MCZ is currently in unfavourable condition, the Department recommends that the conservation objective is set to recover this feature to favourable condition.*

### b) Low Mobility Species - Ocean Quahog (*A. islandica*)

Ocean quahog is a large, slow growing bivalve mollusc that lives buried in muddy and sandy sediments. The oldest recorded Ocean quahog from Outer Belfast was approximately 200 years old.

*As the species in Outer Belfast Lough MCZ is currently in unfavourable condition, the Department recommends that the*

conservation objective is set to recover this feature to favourable condition.

### **7.3 Assessment of Management Options**

A number of activities take place within or adjacent to Outer Belfast Lough MCZ and designation, which may entail implementing management measures, could have an impact on these.

The management options considered for each activity include no management required, reduce or limit pressures, or to remove or avoid pressures altogether. Where management is required the options recommended will be implemented as management measures with reporting structures. Guidance<sup>11</sup> has been produced by the Department which enabled conservation objectives and management options to be developed for the four MCZs.

The Department recognises the consequences any change in activity could have and has attempted to limit these where possible. The Department's aim is to achieve the conservation objectives with the least possible impact on the activities in the area. Therefore, the selection of management options and subsequent measures can be attributed to the achievement of these aims. In addition, where there is a low level of specific activity the impact on that activity is assumed to be negligible.

Table 3.1 below outlines each activity, associated pressures and the possible management options. The subsequent table (3.2) shows the preferred management option for each activity and an indication of the possible impact/costs on that activity should the management options be implemented as planned.

---

<sup>11</sup> <https://www.daera-ni.gov.uk/sites/default/files/consultations/daera/mcz-guidelines-for-conservation-objectives-information-on-activities-and-management.PDF>

**Table 3.1: Activities in and around Outer Belfast Lough MCZ and Potential Management Options**

Activity	Potential impact on conservation objectives	Level of activity within MCZ	Potential Management Options		
			No action advised	Reduce or Limit	Remove or Avoid
<p>Extraction of living resources:</p> <p><i>Fishing – dredging (scallops and potential clam dredging)</i></p> <p><i>Fishing – demersal trawling (mussels)</i></p>	<p>Subtidal sand is vulnerable to the following pressures associated with dredging and trawling: de-oxygenation, overall abrasion (surface and subsurface), siltation rate changes, removal of non-target species, changes in seabed type and habitat structure changes.</p> <p>Ocean quahog is vulnerable to the following pressures associated with dredging and trawling: physical changes, habitat structure changes, overall abrasion (surface and subsurface), siltation rate changes, removal of non-target species.</p>	Moderate	No additional management is required.	Reduce or limit pressures associated with dredging and demersal trawling where these are likely to impact the MCZ features.	Remove or avoid pressures associated with dredging and demersal trawling where these are likely to impact the MCZ features.
<p><i>Fishing – traps (potting/creeling)</i></p>	<p>Ocean quahog is also vulnerable to removal of non-target species associated with fishing with traps.</p>	Moderate		Reduce or limit pressures associated with fishing with traps (creels and pots)	Remove or avoid pressures associated with fishing with traps (creels and pots) where these are likely

				where these are likely to impact the MCZ features.	to impact the MCZ features.
<p>Energy generation:</p> <p><i>Tidal resource zone</i></p>	<p>At present, there are no tidal energy developments in the area (potential sites being investigated lie outside the MCZ boundary). As such, the features are not exposed to the pressures normally associated with this activity.</p> <p>The Strategic Environmental Assessment of Offshore Wind and Marine Renewable Energy 2009 (DETI) shows that the removal or disturbance of the substratum could have significant adverse effects on sensitive benthic habitats and/or species. However, with mitigating actions taken at the EIA/Projects stage these impacts would be reduced.</p>	<p>Negligible. Currently there is no energy generation in the area.</p>	<p>No management is required.</p>	<p>Reduce or limit pressures associated with energy generation where these are likely to impact the MCZ features.</p>	<p>Areas within the MCZ should not be considered for this activity in the future.</p>
<p>Coastal infrastructure:</p> <p><i>Coastal docks, ports &amp; marinas</i></p> <p><i>Coastal defence &amp;</i></p>	<p>Ocean quahog and Subtidal sand are vulnerable to the following pressures associated with coastal infrastructure: water flow changes, wave exposure changes, physical loss,</p>	<p>Low</p>	<p>No additional management required.</p>	<p>Reduce or limit pressures associated with coastal infrastructure where these are likely to impact the MCZ</p>	<p>Remove or avoid pressures associated with navigational coastal infrastructure where these are likely to impact the MCZ features.</p>





	changes and removal of non-target species.				
<p>Transport:</p> <p><i>Shipping (general at sea)</i></p> <p><i>Shipping (port operations within Harbour Authority limits)</i></p>	Ocean quahog and Subtidal sand are vulnerable to the following pressures associated with transport are: overall abrasion (surface and subsurface) and siltation rate changes.	Moderate-High	No additional management is required.	Reduce or limit pressures associated with transport (anchoring and mooring) where these are likely to impact the MCZ features.	Remove or avoid pressures associated with transport (anchoring and mooring) where these are likely to impact the MCZ features.
<p>Recreation and leisure:</p> <p><i>Recreational activities – SCUBA diving, sailing, windsurfing, kayaking/canoeing, bird watching, recreational fishing</i></p>	Ocean quahog and Subtidal sand are vulnerable to the following pressures associated with recreation and leisure: overall abrasion (surface and subsurface), siltation rate changes and removal of non-target species.	Moderate-High	No additional management is required.	Reduce or limit pressures associated with recreational activities where these are likely to impact the MCZ features.	Remove or avoid pressures associated with recreational activities where these are likely to impact the MCZ features.
<p>Marine research:</p> <p><i>Scientific and Archaeological</i></p>	Ocean quahog and Subtidal sand are vulnerable to the following pressures associated with marine research: habitat structure changes, overall abrasion (surface and subsurface) and siltation rate changes.	Low	No additional management is required.	Reduce or limit pressures associated with marine research where these are likely to impact the MCZ features.	Remove or avoid pressures associated with marine research where these are likely to impact the MCZ features.
Other man-made structures:	Ocean quahog and Subtidal sand are vulnerable to the	Low	No additional management	Reduce or limit pressures	Remove or avoid pressures associated

<p><i>Submarine power cable &amp; pipeline operations</i></p>	<p>following pressures associated with other man-made structures: temperature changes, physical changes habitat structure changes, overall abrasion (surface and subsurface) and siltation rate changes.</p>		<p>is required.</p>	<p>associated with infrastructure where these are likely to impact the MCZ features.</p>	<p>with infrastructure where these are likely to impact the MCZ features.</p>
---	--	--	---------------------	--	---

**Table 3.2: Assessment of Outer Belfast Lough MCZ Management Options**

Activity	Preferred Management Option	Impact of designation on activity	Explanation
<p>Extraction of living resources:</p> <p><i>Fishing – dredging and demersal trawling</i></p>	<p>Management measures are recommended to remove or avoid pressures associated with dredging and demersal trawling where these are likely to impact the MCZ features.</p>	<p>Low</p>	<p>Reducing or limiting the pressure will not meet the conservation objective, therefore removing or avoiding is the only option.</p> <p>A quantitative analysis of data from Vessel Monitoring Systems (VMS) from 2006-2014 shows that average fishing effort within the MCZ is 0.11% of the total effort within ICES rectangle 38E4. The annual average fishing effort in the Outer Belfast Lough MCZ is 7.49hours per annum, which equates to 2.99hours/km<sup>2</sup>.</p> <p>An economic assessment was undertaken by relating VMS data to Landings data. The annual average landings value for Northern Ireland registered vessels in ICES rectangle 38E4 is £1,242,643, with £325,079 associated with dredging or towed demersal gear. On the basis of fishing effort estimated to be 0.11% of total effort in the ICES rectangle, it is estimated that the impact of prohibiting the use of dredges or towed demersal gear to be £357 per annum.</p> <p>The Department acknowledges that this is only an indicative value as VMS is limited to vessels larger than 12m. It is believed that local vessels smaller than 12m also prosecute a fishery within Belfast</p>

<p><i>Fishing – traps (potting/creeling)</i></p>	<p>Management measures are recommended to reduce or limit pressures associated with fishing with traps (creels and pots) where they are likely to impact the MCZ features.</p>	<p>Negligible/Low</p>	<p>Lough although locational and catch data is not available.</p> <p>The impact is assumed to be low given that, at present, fishing activity occurs at low levels within the MCZ.</p> <p>Reducing or limiting the pressure will be sufficient for the conservation objectives to be achieved. The impact is estimated to be low given there is currently a low level of activity within the pMCZ and that static gears do not create the type of pressure to which this species is sensitive.</p>
<p>Energy generation: <i>Tidal resource zone</i></p>	<p>No additional management is required.</p>	<p>Negligible/Low</p>	<p>At present, with no exploratory licence in place there is no risk to the achievement of the conservation objectives for the designated features.</p> <p>Any new development for renewable energy production will require a licence from the Department who will consider any potential impacts on the MCZ.</p>
<p>Coastal infrastructure: <i>Coastal docks, ports &amp; marinas</i>  <i>Coastal defence &amp; land claim</i></p>	<p>No additional management is required.</p>	<p>None</p>	<p>No impact on activity is expected due to the distance of the MCZ from the nearest marina and the coast. As no additional management is required there is no impact to the activity.</p>
<p>Waste management: <i>Sewage disposal and</i></p>	<p>No additional management is required.</p>	<p>None</p>	<p>At present, management is in place in the form of consents or licences. There are no sewage or dredge disposal sites within the vicinity of the MCZ.</p>

<i>Dredge disposal</i>			Water discharges are governed by requirements under various European directives. New applications for sewage or dredge disposal will be subject to the marine licensing and Water Order discharge consent processes which will take the MCZ features into consideration. As no additional management is required there is no impact to the activity.
<p>Transport:</p> <p><i>Shipping (general at sea)</i></p> <p><i>Shipping (port operations within Harbour Authority limits)</i></p>	<p>Management measures are recommended to remove or avoid pressures associated with transport (anchoring and mooring) where these are likely to impact the MCZ features.</p> <p>No additional management is required for the shipping - port operations (mooring, beaching, launching, ferry route etc.) within Harbour Authority limits.</p> <p>Anchoring in emergency situations will not be restricted.</p>	Low-Moderate	<p>This is the only available option to ensure the conservation objective is met. Although Ocean quahog burrows into the sands, the siphon used for feeding and respiration sits on the surface. Despite having a solid shell their large body size makes them more vulnerable to physical damage than smaller species. Damage may be caused by anchors or moorings. The impact on activity is estimated as low-moderate as vessels will be required to anchor outside the MCZ.</p> <p>The majority of large commercial shipping and recreational boats from Bangor Marina pass through the MCZ as well as the cross channel ferry operators. Although there is overlap of navigation with the MCZ it is considered that the risk of damage to the MCZ features from transiting vessels is low. No additional management is required for the shipping – port operations (mooring, beaching, launching, ferry route etc.).</p>
<p>Recreation and leisure:</p> <p><i>Recreational activities – SCUBA diving, sailing, windsurfing, kayaking/canoeing, bird</i></p>	<p>Management measures are recommended to remove or avoid pressures associated with recreation and leisure (anchoring and mooring) where these are likely to</p>	Low-Moderate	<p>This is the only available option to ensure the conservation objective is met. Although Ocean quahog burrows into the sands, the siphon used for feeding and respiration sits on the surface. Despite having a solid shell their large body size makes them more vulnerable to physical damage than smaller</p>

<p><i>watching, recreational fishing</i></p> <p><i>Coastal tourist sites – public beaches &amp; resorts</i></p>	<p>impact the MCZ features.</p> <p>Anchoring in emergency situations will not be restricted.</p>		<p>species. Damage may be caused by anchors or moorings. The impact on activity is estimated as low-moderate as vessels will be required to anchor outside the MCZ.</p>
<p>Marine research:</p> <p><i>Scientific and Archaeological</i></p>	<p>No additional management is required.</p>	<p>None</p>	<p>Marine research activities are performed by trained, qualified staff using non-invasive techniques (where possible) such as acoustic and video methodologies. The Department will require the provision of detailed methodologies for all Marine research activities prior to these being carried out to assess if any impacts to the MCZ feature is likely to occur. As no additional management is required there is no impact to the activity.</p>
<p>Other man-made structures:</p> <p><i>Submarine power cable &amp; pipeline operations</i></p>	<p>No additional management is required.</p> <p>Emergency operations will not be restricted.</p>	<p>None</p>	<p>All current activities associated with the submarine cable and pipeline operations are already licensed. Any future construction or maintenance activities associated with the submarine cable or pipeline may require a marine licence. As no additional management is required there is no impact to the activity.</p>

## 8. Carlingford Lough MCZ

### 8.1 Description of MCZ

Carlingford Lough is a narrow and shallow sea-lough that lies on the east coast of Ireland, located at the border of Northern Ireland and the Republic of Ireland (RoI). The MCZ is located off the northern shore and north of the navigation channel in the inner part of the Lough. It extends from Warrenpoint to Rostrevor Quay and encompasses an area of 3.23km<sup>2</sup> (see Figure 4). The MCZ is an area of shallow Subtidal mud that contains high densities of *Philine aperta* and *Virgularia mirabilis*.

Carlingford Lough waters are also very important for shellfish aquaculture and pot fishing. Cultivation of Blue (Edible) mussel (*Mytilus edulis*) and the Pacific oyster (*Crassostrea gigas*) is an ever expanding industry and, along with Edible crab (*Cancer pagurus*) and European lobster (*Homarus gammarus*) potting, these products are exported primarily to the European market. Although industrial activity is minimal along the Lough, Greenore and Warrenpoint are significant commercial ports with considerable shipping traffic. The sheltered waters of the Lough are popular for recreational boating and sailing with three marinas, several anchorage areas, visitors mooring and two sailing clubs. Water sports are popular in the Lough and include windsurfing schools, kayaking, canoeing and scuba diving. Bird watching and recreational fishing also take place at various points. A navigational dredge channel maintained by dredging forms a natural mid-line through the centre of the Lough.

Carlingford Lough MCZ lies adjacent to an Area of Outstanding Natural Beauty (AONB). Areas of the Lough adjacent to the MCZ have been designated as a RAMSAR site, Area of Special Scientific Interest (ASSI), Special Protection Area (SPA) and Special Area of Conservation (SAC). To the south of the MCZ the RoI has proposed a Natural Heritage Area (NHA). Carlingford Lough MCZ lies entirely within Carlingford Lough Shellfish Water Protected Area.

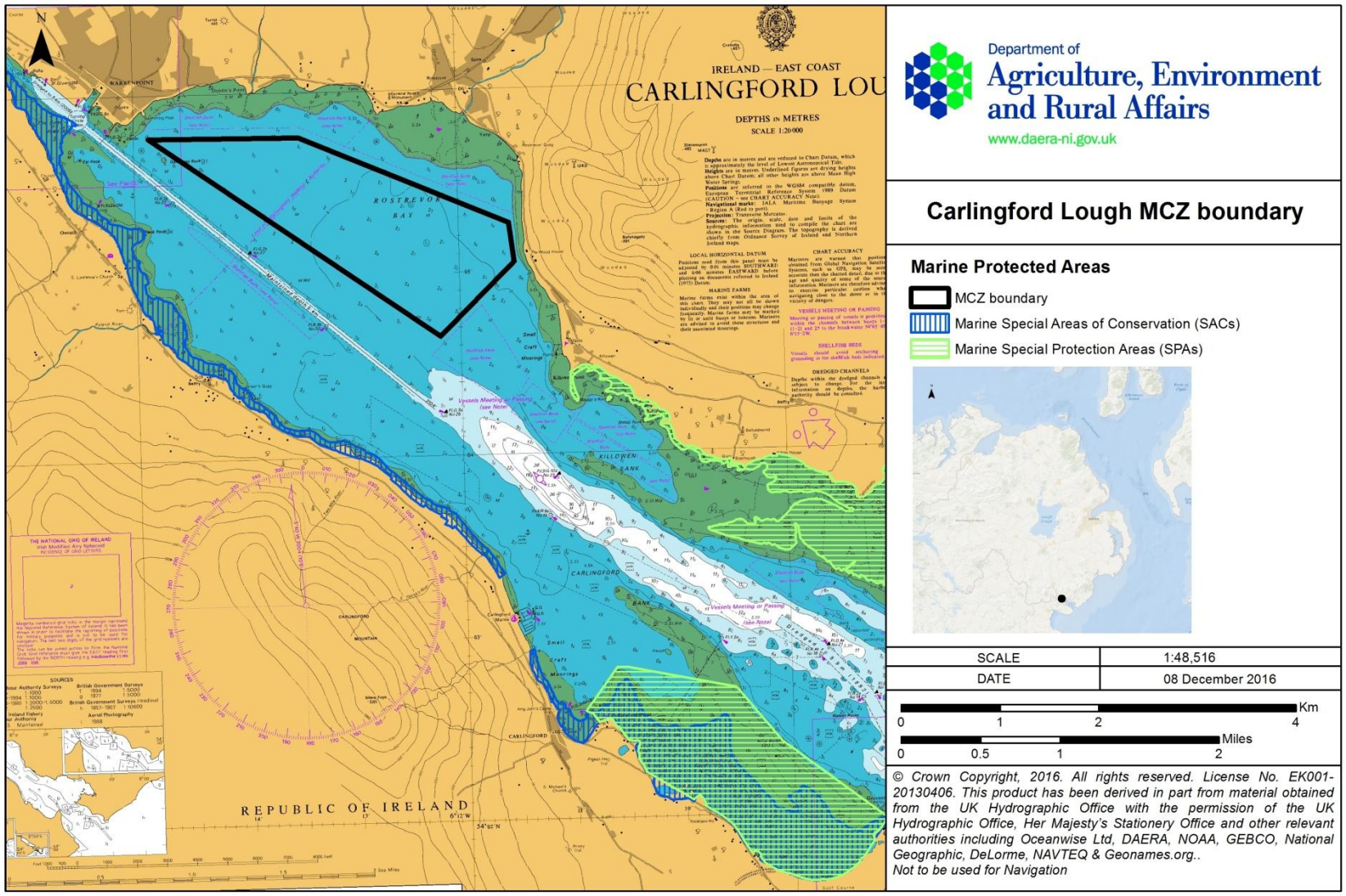


Figure 4: Location of the boundary of Carlingford Lough MCZ



## 8.2 Conservation Objectives

Carlingford Lough MCZ has been designated as it supports the habitat *Philine aperta* and *Virgularia mirabilis* in soft stable infralittoral mud. This habitat will be referred to as Subtidal (sublittoral) mud containing *Philine aperta* and *Virgularia mirabilis* communities.

Subtidal (sublittoral) mud habitats generally occur in water depths greater than 20-30m but may occur in shallower sea lough waters such as Carlingford Lough. As this site is sheltered from wave action, these soft mud communities are present in shallow depths (<15m). High densities of the White lobe shell (*Philine aperta*) usually characterise this habitat, however, in the Carlingford Lough the MCZ also contains one of the densest beds of Sea-pens (*Virgularia mirabilis*) recorded in Northern Ireland.

This MCZ feature is thought to be a temporal variant of other sublittoral cohesive mud and sandy mud communities (SS.SMu). At present, this feature is not on any conservation lists; however, it is rare in terms of the shortened height of the individual *Virgularia* and overall density of the population in the MCZ.

*As the habitat in Carlingford Lough MCZ is currently in favourable condition, the Department recommends that the conservation objectives aim to maintain this feature in favourable condition.*

## 8.3 Assessment of Management Options

A number of activities take place in or around Carlingford Lough MCZ and designation, which may entail implementing management measures, could have an impact on these.

The management options considered for each activity include no management required, reduce or limit pressures, or to remove or avoid pressures altogether. Where management is required the options recommended will be implemented as management measures with reporting structures. Guidance<sup>12</sup> has been produced by the Department which enabled conservation objectives and management options to be developed for the four MCZs.

The Department recognises the consequences any change in activity could have and has attempted to limit these where possible. The Department's aim is to achieve the conservation objectives with the least possible impact on the activities in the area. Therefore, the selection of management options and subsequent measures can be attributed to the achievement of these aims. In addition, where there is a low level of specific activity the impact on that activity is assumed to be negligible.

Table 4.1 below outlines each activity, associated pressures and the possible management options. The subsequent table (4.2) shows the preferred management option for each activity and an indication of the possible impact/costs on that activity should the management options be implemented as planned.

---

<sup>12</sup> <https://www.daera-ni.gov.uk/sites/default/files/consultations/daera/mcz-guidelines-for-conservation-objectives-information-on-activities-and-management.PDF>



				fishing with traps (creels and pots) where these are likely to impact the MCZ features.	(creels and pots) where these are likely to impact the MCZ features.
Coastal infrastructure:  <i>Coastal docks, ports &amp; marinas</i>  <i>Coastal defence &amp; land claim</i>	<i>Philine aperta</i> and <i>Virgularia mirabilis</i> communities are vulnerable to the following pressures associated with coastal infrastructure: water flow changes, physical loss, de-oxygenation, physical changes, habitat structure changes, organic enrichment, overall abrasion (surface and subsurface) and siltation rate changes.	Low	No additional management required.	Reduce or limit pressures associated with coastal infrastructure where these are likely to impact the MCZ features.	Remove or avoid pressures associated with navigational coastal infrastructure where these are likely to impact the MCZ features.
Extraction of non-living resources:  <i>Navigational dredging (capital &amp; maintenance)</i>	<i>Philine aperta</i> and <i>Virgularia mirabilis</i> communities are vulnerable to the following pressures associated with navigational dredging: water flow, organic enrichment, de-oxygenation, habitat structure changes, overall abrasion (surface and subsurface), siltation rate changes and removal of non-target species.	High	No additional management required.	Reduce or limit pressures associated with coastal infrastructure where these are likely to impact the MCZ features.	Remove or avoid pressures associated with navigational coastal infrastructure where these are likely to impact the MCZ features.

<p>Waste management:</p> <p><i>Sewage disposal</i></p> <p><i>Dredge disposal</i></p>	<p><i>Philine aperta</i> and <i>Virgularia mirabilis</i> communities are vulnerable to the following pressures associated with waste management: salinity changes, de-oxygenation, organic enrichment, siltation rate changes, removal of non-target species, overall abrasion (surface and subsurface), physical loss and habitat structure changes.</p>	Low	No additional management is required.	Reduce or limit pressures associated with sewage and dredge disposal where these are likely to impact the MCZ features.	Remove or avoid pressures associated with sewage and dredge disposal where these are likely to impact the MCZ features.
<p>Transport:</p> <p><i>Shipping (general at sea)</i></p> <p><i>Shipping (port operations within Harbour Authority limits)</i></p>	<p><i>Philine aperta</i> and <i>Virgularia mirabilis</i> communities are vulnerable to the following pressures associated with transport: overall abrasion (surface and subsurface) and siltation rate changes.</p>	Moderate	No additional management is required.	Reduce or limit pressures associated with transport (anchoring and mooring) where these are likely to impact the MCZ features.	Remove or avoid pressures associated with transport (anchoring and mooring) where these are likely to impact the MCZ features.
<p>Recreation and leisure:</p> <p><i>Recreational activities – SCUBA diving, sailing, windsurfing, kayaking/canoeing, bird watching,</i></p>	<p><i>Philine aperta</i> and <i>Virgularia mirabilis</i> communities are vulnerable to the following pressures associated with recreation and leisure: overall abrasion (surface and subsurface), siltation changes and removal of non-target species.</p>	Moderate	No additional management is required.	Reduce or limit pressures associated with recreational activities where these are likely to impact the MCZ features.	Remove or avoid pressures associated with recreational activities where these are likely to impact the MCZ features.

<i>recreational fishing</i>					
Marine research:  <i>Scientific and Archaeological</i>	<i>Philine aperta</i> and <i>Virgularia mirabilis</i> communities are vulnerable to the following pressures associated with marine research: habitat structure changes, overall abrasion (surface and subsurface) and siltation rate changes.	Low	No additional management is required.	Reduce or limit pressures associated with marine research where these are likely to impact the MCZ features.	Remove or avoid pressures associated with marine research where these are likely to impact the MCZ features.
Other man-made structures:  <i>Submarine power cable &amp; pipeline operations</i>	<i>Philine aperta</i> and <i>Virgularia mirabilis</i> communities are vulnerable to the following pressures associated with other man-made structures: physical change, habitat structure changes, Overall abrasion (surface and subsurface), siltation rate changes and abrasion/disturbance of the surface of the substratum or seabed.	Low	No additional management is required.	Reduce or limit pressures associated with infrastructure where these are likely to impact the MCZ features.	Remove or avoid pressures associated with infrastructure where these are likely to impact the MCZ features.

**Table 4.2: Assessment of Carlingford Lough MCZ Management Options**

Activity	Preferred Management Option	Impact of designation on activity	Explanation
<p>Production of living resources:</p> <p><i>Aquaculture - shellfish</i></p>	<p>No additional management is required.</p>	<p>None</p>	<p>At present no additional a management is required as this activity is licensed. A buffer zone of 100m from aquaculture sites (north to south-east borders) was incorporated into the MCZ boundary following pre-consultation discussion and advice with industry representatives. This buffer will reduce the potential effects of sedimentation and organic enrichment. In addition this will not have an impact on the farms as it lies outside the licensed area for shellfish cultivation and still enables normal operations associated with the farms to continue. As no additional management is required there is no impact to the activity.</p>
<p>Extraction of living resources:</p> <p><i>Fishing – dredging and demersal trawling</i></p> <p><i>Fishing – traps (potting/creeling)</i></p>	<p>Management measures are recommended to remove or avoid pressures associated with dredging and demersal trawling where these are likely to impact the MCZ features.</p> <p>Management measures are recommended to reduce or limit pressures associated with fishing with traps (creels and pots) where they are likely to impact the MCZ features.</p>	<p>Low</p> <p>Negligible/Low</p>	<p>Reducing or limiting the pressure will not meet the conservation objective, therefore removing or avoiding is the only option. The impact is assumed to be low given that, at present, this activity occurs at low levels within the MCZ.</p> <p>Reducing or limiting the pressure will be sufficient for the conservation objectives to be achieved. The impact is estimated to be low given there is currently a low level of activity within the pMCZ and that static gears do not create the type of pressure to which these species are sensitive.</p>

<p>Coastal infrastructure:</p> <p><i>Coastal docks, ports &amp; marinas</i></p> <p><i>Coastal defence &amp; land claim</i></p>	<p>No additional management is required.</p>	<p>None</p>	<p>Applications for coastal infrastructure works will be subject to the marine licensing and planning processes which will take into consideration any impacts to the MCZ feature. As no additional management is required there is no impact to the activity.</p>
<p>Extraction of non-living resources:</p> <p><i>Navigational dredging (capital &amp; maintenance)</i></p>	<p>No additional management is required.</p>	<p>None</p>	<p>On-going maintenance dredging can continue within the existing licensed area. Capital dredging will be subject to the marine licensing process. The assessment will take into consideration any impacts to the MCZ feature. As no additional management is required there is no impact to the activity.</p>
<p>Waste management:</p> <p><i>Sewage disposal and Dredge disposal</i></p>	<p>No additional management is required.</p>	<p>None</p>	<p>At present, management is in place in the form of consents or licences. There are no sewage or dredge disposal sites within the vicinity of the MCZ. Water discharges are governed by requirements under various European directives. New applications for sewage or dredge disposal will be subject to the marine licensing and Water Order discharge consent processes which will take the MCZ features into consideration. As no additional management is required there is no impact to the activity.</p>
<p>Transport:</p> <p><i>Shipping (general at sea)</i></p>	<p>Management measures are recommended to remove or avoid pressures associated with transport (anchoring and</p>	<p>Low-Moderate</p>	<p>This is the only available option to ensure the conservation objective is met. The MCZ features are susceptible to physical damage by anchoring and mooring which may lead to an overall loss of the</p>



<p><i>Shipping (port operations within Harbour Authority limits)</i></p>	<p>mooring) where these are likely to impact the MCZ features.</p> <p>No additional management is required for the shipping - port operations (mooring, beaching, launching, ferry route etc.) within Harbour Authority limits.</p> <p>Anchoring in emergency situations will not be restricted.</p>		<p>feature. As the main shipping route lies outside the MCZ it is considered that the risk of damage to the MCZ features from transiting vessels is low. The impact on activity is estimated as low-moderate as vessels will be required to anchor outside the MCZ (unless in an emergency).</p> <p>No additional management is required for shipping – port operations (mooring, beaching, launching, ferry route etc.) as these occur within the confines of the harbour area. The Department will liaise with the Harbour Authority where any proposed works are likely to impact the MCZ features.</p>
<p>Recreation and leisure:</p> <p><i>Recreational activities – SCUBA diving, sailing, windsurfing, kayaking/canoeing, bird watching, recreational fishing</i></p> <p><i>Coastal tourist sites – public beaches &amp; resorts</i></p>	<p>Management measures are recommended to remove or avoid pressures associated with recreation and leisure (anchoring and mooring) where these are likely to impact the MCZ features.</p> <p>Anchoring in emergency situations will not be restricted.</p>	<p>Low-Moderate</p>	<p>This is the only available option to ensure the conservation objective is met. The MCZ features are susceptible to physical damage by anchoring and mooring which may lead to an overall loss of the feature. The transiting of recreational and leisure vessels over the MCZ is unlikely to impact the feature due to the small scale of the activity and the depth of the feature. The impact on activity is estimated as low-moderate as vessels will be required to anchor outside the MCZ (unless in an emergency).</p>
<p>Marine research:</p> <p><i>Scientific and Archaeological</i></p>	<p>No additional management is required.</p>	<p>None</p>	<p>Marine research activities are performed by trained, qualified staff using non-invasive techniques (where possible) such as acoustic and video methodologies. The Department will require the provision of detailed methodologies for all Marine research activities prior to these being carried out to assess if any impacts to the MCZ feature is likely to occur. As no additional</p>

			management is required there is no impact to the activity.
Other man-made structures:  <i>Submarine power cable &amp; pipeline operations</i>	No additional management is required.  Emergency operations will not be restricted.	None	All current activities associated with the submarine cable and pipeline operations are already licensed. Any future construction or maintenance activities associated with the submarine cable or pipeline may require a marine licence. As no additional management is required there is no impact to the activity.

## 9. Summary impact table

*Table 7.1: Summary of Impact*

Activity	Impact on Activity Due to Designation of MCZ			
	Rathlin	Waterfoot	Belfast	Carlingford
Production of living resources: <i>Aquaculture</i>	None	None	N/A	None
Extraction of living resources: <i>Fishing – dredging and demersal trawling</i>	Low	Negligible/ Low	Low	Negligible- Low
Energy generation: <i>Tidal</i>	Negligible/ Low	Negligible/ Low	Negligible/ Low	N/A
Energy generation: <i>Marine hydrocarbon extraction</i>	Negligible/ Low	Negligible/ Low	N/A	N/A
Coastal infrastructure	None	None	None	None
Extraction of non-living resources: <i>Navigational dredging</i>	N/A	None	N/A	None
Waste management: <i>Sewage and dredge disposal</i>	None	None	None	None
Transport: <i>Shipping</i>	Low	Low- Moderate	Low- Moderate	Low- Moderate
Recreation and leisure	Low	Low- Moderate	Low- Moderate	Low- Moderate
Marine research	None	None	None	None
Infrastructure: <i>Submarine cables &amp; pipelines</i>	None	None	None	None

As shown in Table 7.1, generally the impact on activities which take place

within the MCZ is deemed to be low. However, in three of the MCZs the impact of designation in relation to transport and recreation/leisure activities is deemed as low-moderate; this is related to the removal of anchoring and mooring within the MCZ. The removal of fishing (dredging and trawling) in Rathlin MCZ is deemed to have a low impact on the activity; this is due to the overall low level of fishing within the MCZ and the current voluntary ban on mobile fishing gear within Rathlin Island SAC/SPA. The removal of fishing (dredging and demersal trawling) in Belfast Lough MCZ is deemed to have a low impact on the activity; again, this is due to the overall low level of fishing within the MCZ.

## 10. Public Sector Costs

Designation of the MCZs is likely to result in costs to the public sector including:

- Preparation of designation and management documents;
- Development of management measures;
- Site monitoring;
- Compliance and Enforcement;
- Promotion and Marketing; and
- Regulatory & advisory costs associated with licensing decisions.

To provide an indication of possible scale, figures have been taken from the impact assessment for designating MCZs in England and Wales<sup>13</sup>.

The English impact assessment estimated a cost to the public sector of £0.591m per annum (2010 prices) for licence application costs and managing the MCZs; this covered designation of 28 sites (although only 27 were designated in the first tranche). Using this as a simple proxy, and updating to 2016 prices, the cost to the public sector in NI is estimated to be £93,000 per annum based on number of sites<sup>14</sup> or £8,000 based on total area<sup>15</sup>. Therefore, costs are estimated to range from £0.008m - £0.093m per annum which is considered relatively

---

<sup>13</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/82721/m\\_cz-designate-ia-20121213.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/82721/m_cz-designate-ia-20121213.pdf)

<sup>14</sup> Uplifted costs estimated for 4 sites instead of 28

<sup>15</sup> NI's total area of MCZs is 99.171km<sup>2</sup>; England & Wales is 10,100km<sup>2</sup>

low/negligible and should allow NI to achieve the conservation objectives linked to each MCZ.

## **11. Benefits**

Designation of these MCZs will help to conserve the range of biodiversity and geodiversity in NI waters. It will complement other types of designation and provide an essential contribution to establishing an ecologically coherent network of marine protected areas throughout the UK. In the absence of MCZs, there would be areas of NI's marine environment, and a high number of species and habitats, that would continue to be unprotected. It is worth noting that coastal waters contain over 50% of the region's biodiversity.

On designation, appropriate management will reduce the risk that the extent, population, structure, natural environmental quality and processes of features protected will decrease or degrade over time. The risk that the features will be adversely affected by human activities is greater if not protected by an MCZ. In addition, beyond a certain point of degradation, changes to ecosystems may be large and irreversible, resulting in a significant societal cost. Avoiding such a reduction in ecosystem services is thus a key benefit of designation.

While it may not be possible with current levels of research to monetise benefits, note that none of the other regions have been able to quantify benefits either, it is clear that many of the benefits relate to aspects of our lives that we take for granted and for which it is good practice and common sense to maintain through protection measures such as MCZs.

Designating sites and implementing the management options should help to achieve the conservation objectives for each site. This should result in other benefits accruing linked to biodiversity, tourism, fishing and aquaculture which, in turn, can have a positive impact on the economy.

## **12. Enforcement**

The regulation, policy and enforcement of marine activities remain the responsibility of the relevant public authority.

## **13. Monitoring**

It is recommended that an evaluation of the MCZs should be completed within 6 years of designation. Therefore, a monitoring and evaluation plan should be completed.

## **14. Small and Micro Business Impact**

As set out above, the overall impact is likely to be low and there is unlikely to be a disproportionate impact on small or micro businesses.

## **15. Recommendation**

It is recommended that the MCZs are designated and managed as outlined in the tables of this report.