

ASSESSMENT AGAINST THE MCZ SELECTION GUIDELINES

Rathlin Marine Conservation Zone (MCZ)

Black guillemot (*Cephus grylle*) ©jdoherty



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

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Summary

The assessment against the Marine Conservation Zones (MCZs) selection guidelines in Northern Ireland Inshore Region (hereafter referred to as the NI Guidance) is a document produced as part of the consultation evidence base, following the OSPAR design principles. This assessment helped to identify Areas of Search (AoS) and determine proposed boundaries and features for protection within them. This process supported the definition of final MCZ boundaries for designation. It also highlights where additional locations or features are required or whether a different size or shape is needed to develop the Marine Protected Area (MPA) network.

Following the NI Guidance the process includes five stages from the identification of the AoS (Stage 1) to the development of the pMCZs and finally as designation as MCZs (Stage 5). Only locations which have passed through all the stages of the assessment are considered for formal designation and inclusion in the MPA network.

This document provides details of the assessment of Rathlin MCZ against the selection criteria.

Additional information on Rathlin MCZ and the MCZ process includes:

- Guidance on selection and designation of Marine Conservation Zones (MCZs) in the Northern Ireland Inshore Region
- Justification report for selection of proposed Marine Conservation Zone (pMCZ) features
- Guidance on the development of Conservation Objectives and potential Management Options
- Conservation Objectives and potential Management Options for Rathlin MCZ
- Data Confidence Assessment for Rathlin MCZ

History of development

Rathlin Island has been designated as an MCZ for Deep-sea bed (DSB), the species Black guillemot (BG) and Geological/geomorphological (Geodiversity, GD) features indicating past changes in relative sea level (such as submerged lagoon, cliffs, gullies and sea-arches).

Predictive seabed habitat mapping (JNCC EU SeaMap; McBreen et al., 2011) identified the only known location of DSB (>200m) in Northern Irish coastal waters off the north coast of Rathlin Island. This data suggests the area of DSB habitat is composed of mixed sediment substrate with areas of sand and upper slope rock reef. Recent survey work completed by AFBI (June 2014 and February 2015) confirmed these findings. The northern boundary was drawn to ensure the integrity of the DSB feature was included.

The waters between Bull Island and Church Bay have been identified as an area that supports an important population of BG. The nesting site for BG is located on the cliffs of Rathlin Island and are afforded indirect protection through SAC (Annex I Habitat - Vegetated sea cliffs) and SPA (Annex II - Seabird assemblage breeding population which also nest on the cliffs) designations. The Rathlin coastline provides feeding hotspots for BG, with the Church Bay area used primarily for loafing and breeding display behaviour. Studies indicated that BG typically forage in depths up to 50m and often within 2km of nesting sites (Cairns, 1992; Marine Scotland & SNH, 2012; Madsen et al., 2013). Consequently, following discussions with RSPB and NIEA Ornithologists the seaward boundary of the MCZ was extended to encompass >84% of sheltered waters (<50m) that lie within 2km of the Island.

GD features were identified using archaeological applications to extract pre-historic landscape features from high resolution JIBS data (Quinn et al., 2008). Submerged cliffs and caves were recorded in dive surveys during 1984 and 1985 as part of the NI Sublittoral Survey (NISS, Erwin et al., 1986), while Seasearch Northern Ireland Surveys (2005, 2012 and 2013) also recorded the presence of cliffs and a submerged archway. Analysis of the JIBS data revealed a paleo-lagoon basin. Furthermore, analysis of JIBS data also provided a 3D bathymetric topography model of the seabed enabling visualisation of the seabed landscape features. These GD features provide us with an insight into the pre-historic landscape formed during lower sea levels.

Initially there were two Areas of Search (AoS), one to the north for DSB and one to the south for BG, however, the GD features were not captured by either of these so a new AoS was drawn to encompass all three.

Glossary of Terms and Acronyms

AoS – Area of Search used to underpin the proposed Marine Conservation Zone

AFBI – Agri-food and Biosciences Institute

Benthic – The ecological region at the lowest level of a body of water such as an ocean or a lake including the sediment surface and some sub-surface layers

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

BG - Black guillemot

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)

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)

Epifauna – Animals living on the surface of the seabed or a riverbed, or attached to submerged objects or aquatic animals or plants

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

GD – Geodiversity – a term to describe Geological and geomorphological features.

MCZ – Marine Conservation Zone designated under section 13 of the Marine Act (Northern Ireland) 2013 in the Northern Ireland inshore region and in section 116 of the Marine and Coastal Access Act 2009 in the Northern Ireland offshore region adjacent to Northern Ireland

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 an MCZ).

NIEA – [Northern Ireland Environment Agency](#)

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

PMF – Priority Marine Feature – collective term for those features (habitats, species and

geological/geomorphological features) which are considered to be of conservation importance in the Northern Ireland inshore region

RIA – Regulatory Impact Assessment

TSS – Traffic Separation Scheme – defined as traffic-management route-system ruled by the [International Maritime Organization](#) or IMO. The traffic-lanes (or clearways) indicate the general direction of the ships in that zone.

VMS – Vessel Monitoring System

Rathlin MCZ – Application of the MCZ selection guidelines MCZ

Stage 1 - Identifying the Area of Search			
Summary of assessment	Initially there were two AoS proposed for Rathlin: <ul style="list-style-type: none"> • ‘Rathlin Deeps’ (to the north) which was identified as the only area in Northern Irish coastal waters with water deeper than 200m where DSB¹ is found. It is particularly unique given the steep drop off in depth, its close proximity to land and it contains a range of deep subtidal sands, mixed sediment and rock (AFBI, 2015). • ‘Rathlin – Church Bay’ (to the south) was identified as an important area for BG. RSPB have been recording this species on Rathlin Island as part of the Seabird Monitoring programme since 1999 (JNCC, SMP). <p>When the Geological/geomorphological (Geodiversity- GD) MCZ features were mapped it became clear that they did not fall within either AoS, so a new AoS was drawn to include all three features. Rathlin Island was identified as an area with excellent examples of submerged archways, gullies, cliffs and a paleo-lagoon which are all indicators of the prehistoric landscape (Quinn et al., 2008). A number of these features, such as the archway and gullies, have also been identified as important habitats for a diverse range of flora and fauna including the only recorded location of the cup coral (<i>Caryophyllia inornata</i>) in Northern Irish waters. <i>C. inornata</i> is a Priority Marine Feature (PMF) in Northern Ireland (Goodwin et al., 2011a,b).</p>		
	Guideline met.		
Detailed assessment			
Protected features	Guideline 1a Presence of key features	Guideline 1b Presence of features at threat and/or decline	Guideline 1c Presence of ecological resources/geological processes critical to functioning of the ecosystem
Biodiversity			
Deep-sea bed (DSB)	✓	<i>Representative feature</i>	

¹ Deep-sea bed is a term used to describe sublittoral habitats found at depths >200m and is not to be confused with the EUNIS Broad scale habitat Deep-sea bed (EUNIS code: A6).

Black guillemot (BG)	✓	✓ (IUCN Red List & Amber list of Birds of Conservation Concern in Ireland) ²	
Geodiversity (GD)			
Features indicating past change in relative sea level (such as submerged paleo-lagoon, cliffs, sea arches and gullies)	✓		✓ (Provide key habitat for a range of unique flora and fauna)

² BG is a currently listed on the IUCN (International Union Convention for the Conservation of Nature and Natural Resources) Red List but the population worldwide appears to be increasing so is listed as a species of least concern. However, the Northern Ireland population is decreasing (Leonard & Wolsey, 2014). They are also defined as a Priority Marine Feature (PMF) in Northern Ireland. Given the conservation importance of this species it is proposed as a representative feature.

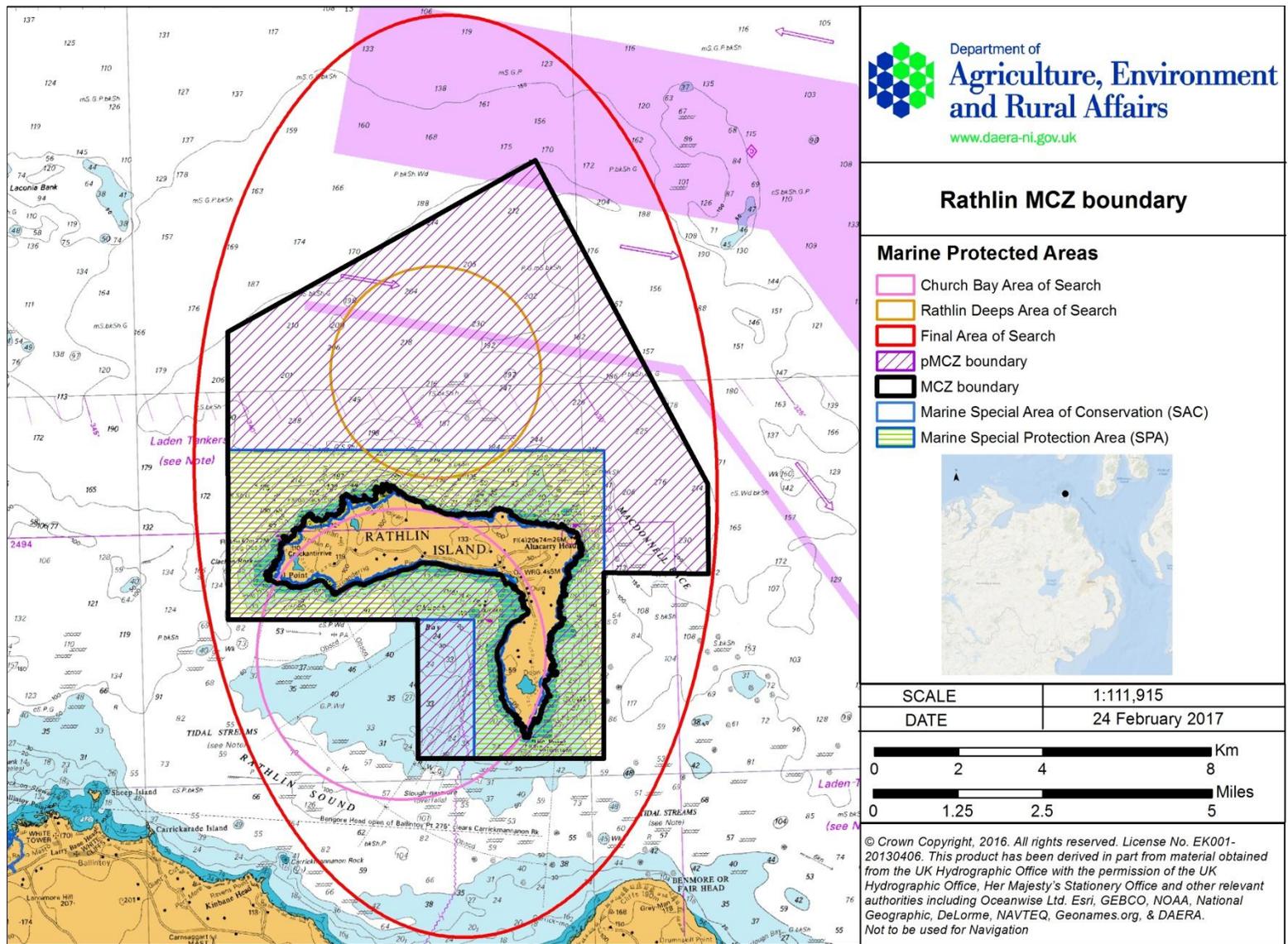


Figure 1 Location of Areas of Search initial proposed (p) boundary and the designated boundary of Rathlin MCZ

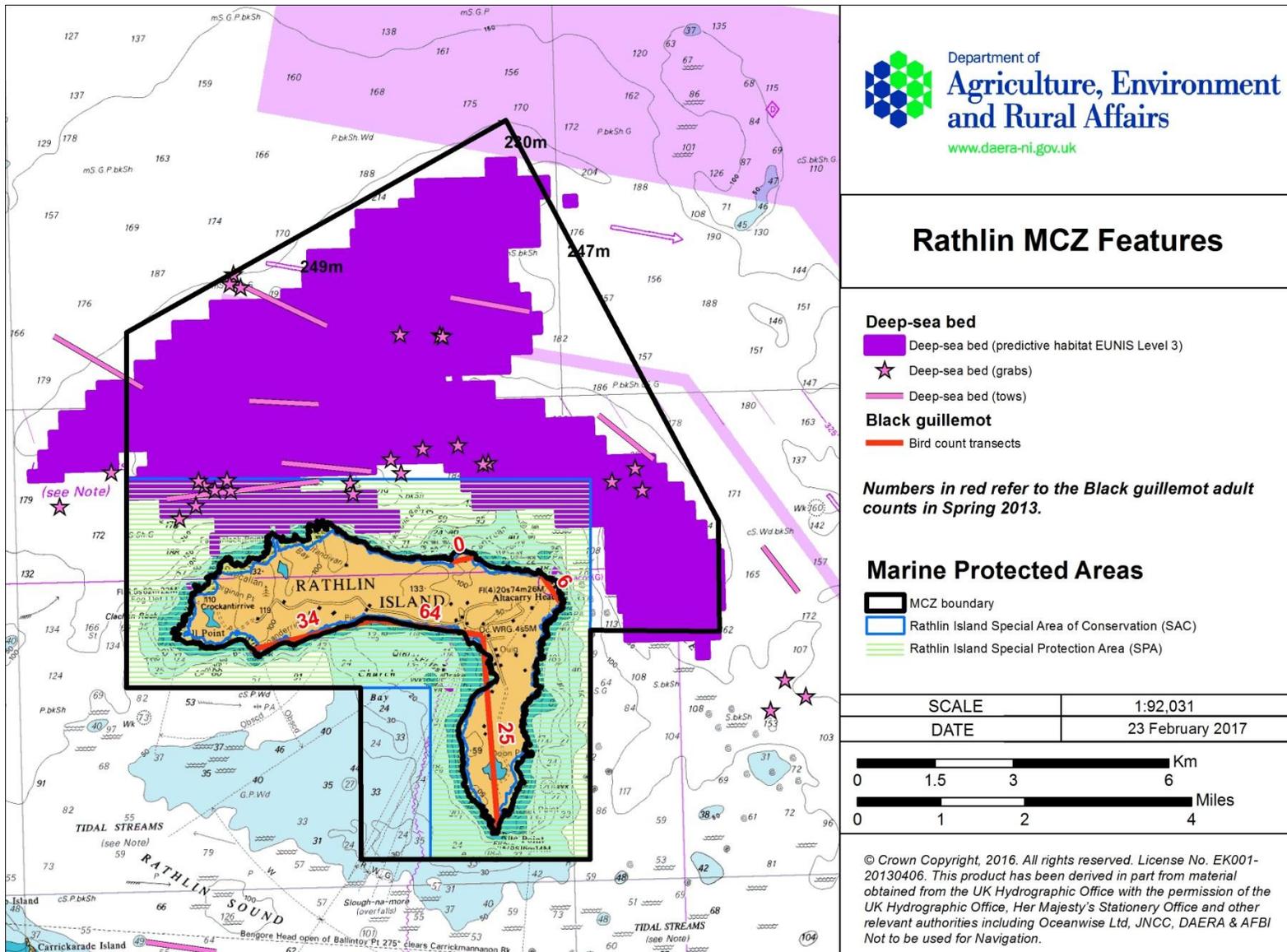


Figure 2 Distribution of the features in Rathlin MCZ

Stage 2 - Prioritise the Area of Search based on quality of MCZ features contained

Summary of assessment

Rathlin MCZ is designated for three MCZ features: DSB, BG and GD. DSB could, combined with the strong tidal flow and complex bathymetry unique currents in this area, contribute to the rich biodiversity in the waters that surround Rathlin Island including providing prey for BG. The GD features that are found along Rathlin's coastline also provide a habitat for a wide variety of flora and fauna, some unique to this area. The proximity of these features close to Rathlin's coastline and the rocky nature of the seabed in this area afford the GD features a degree of protection from damaging activities such as fishing with mobile gear. The GD features are considered to be in natural condition.

Evidence indicates that the DSB (due to its location and depth) has not been extensively fished and is therefore in a near natural state. The DSB located to the north of the MCZ extends into a traffic separation scheme (TSS, which is a busy shipping area), however, this has little or no impact as the marine traffic is transiting the area. In addition, the depth and exposure of the DSB means anchoring is highly unlikely to occur.

The BG population in Northern Ireland has fluctuated over time, but is showing an overall decline and the counts on Rathlin reflect this trend. The BG population on Rathlin are considered at risk which is reflected in the conservation objective for this MCZ feature which is set to 'recover' to favourable condition.

Rathlin is not heavily impacted by the range of activities presently occurring in the area. The GD and DSB features are deemed to be in a natural and relatively undisturbed state. The features are vulnerable to a range of pressures (such as trawling and energy installations) but the current level of pressure is such that the risk is considered low. However, future changes in pressure intensity may increase the risk.

BG are vulnerable to a range of human activities currently occurring within the MCZ. This species is currently considered at moderate risk, if the activity level increases or new developments occur in this area the risks would be significantly higher.

Five of the six Stage 2 Guidelines have been met (2a-2e)

Detailed assessment

Guideline 2a - The Area of Search contains a combination of features especially those that are functionally linked

The DSB to the North of Rathlin is unique to Northern Ireland's coastal waters. It is located in area where the Atlantic Ocean and Irish Sea water masses mix, and this is thought to have contributed to the biological diversity found around Rathlin Island (Strong, 2010). This possibly influences the availability of prey species for BG in the shallower,

more sheltered waters of Church Bay.

The GD features are located primarily along the North shore but, while they provide habitat for a wide range of species (some only found in this area) they are unlikely to provide a clear functional link to either BG or DSB.

The Department has followed the Scottish approach³ in enhancing the contribution of current protected areas by ensuring that the pMCZ overlays existing SPA/SAC boundary. BG nests are located in areas that lie within the SPA/SAC boundary and are therefore offered a degree of protection under these designations. It is worth noting that BG does not appear on the EC Birds Directive and are therefore not currently protected as a species on Rathlin Island. Rocky reef, currently protected under the existing SAC designation, provides habitat for butterflyfish and blennies (prey species of BG - Leonard and Wolsey, 2014) which are often found in the kelp forest growing on the reef around Rathlin's shoreline.

2a Result	Guideline partially met
Guideline 2b - The Area of Search contains features with naturally high biodiversity (for habitats only)	
GD	<p>The Nationally Important Marine Features survey (Goodwin et al., 2011a) indicated that 60% (n=530) of the species listed for Northern Ireland's coastal waters were recorded in Rathlin's subtidal waters. Over 80 Priority Marine Features (PMFs) are located within the Rathlin AoS. Many of these species are found on GD features such as the cup coral <i>Caryophyllia inornata</i> (this is only recorded on the Rucallan submerged archway).</p> <p>Other PMFs found on GD features include: the soft coral <i>Alcyonium hibernicum</i>, cup coral <i>Caryophyllia smithii</i> and anemones including <i>Parazoanthus axinellae</i> and <i>Parazoanthus anguicomus</i>. PMFs within the AoS include Maerl beds and Seagrass beds within Church Bay, the area identified as important for BGs.</p>
2b Result	Guideline met.
Guideline 2c - The Area of Search contains coherent features not smaller fragmented ones	
DSB	<p>As previously mentioned the AoS encompasses the only known location of this broad scale habitat within NI coastal waters. Predictive seabed habitat mapping⁴ (McBreen et al., 2011) identified the area of DSB and this was confirmed by camera and grab surveys, combined with JIBS data (2008) which covered part of the AoS (AFBI, 2015). Some of the biotopes recorded within this habitat are: <i>Urticina felina</i> and sand-tolerant fauna on sand-scoured or covered circalittoral rock (CR.MCR.EcCr.UrtScr), <i>Flustra foliacea</i> and <i>Hydrallmania falcata</i> on tide-swept circalittoral mixed sediment (CR.HCR.FaT.CTub.Adig), <i>Alcyonium digitatum</i> with dense <i>Tubularia indivisa</i> and anemones on strongly tide-swept circalittoral rock (CR.HCR.FaT.CTub.Adig),</p>

³ <http://www.gov.scot/Topics/marine/marine-environment/mpanetwork/engagement/140312>

⁴ [EMODnet. EUSeaMap: A broad-scale physical habitat map for European Seas.](#)

	Faunal and algal crusts with Pomatoceros triqueter and sparse Alcyonium digitatum on exposed to moderately wave-exposed circalittoral rock (CR.MCR.EcCr.FaAlCr.Pom)
GD	The AoS also encompasses the known locations of GD features proposed for protection. Many of the GD features were identified as part of dive surveys tasked with recording biodiversity since the mid 1980s (Erwin et al., 1986; Goodwin et al., 2011b). More recently, these features have been identified and mapped from high resolution bathymetric data ⁵ and verified where depth allowed by dive survey (Goodwin et al., 2011a,b). These features are generally found close to shore along the north coast of Rathlin Island.
2c Result	Guidelines met
Guideline 2d - The Area of Search contains features considered least damaged/more natural	
DSB	VMS (Vessel Monitoring System) data from fishing vessels (primarily scallop dredging and demersal trawling) during 2006 – 2014 showed 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 ² (refer to Rathlin Conservation Objectives and Potential Management Options for further details). Until recently VMS was only required on vessels over 15m; this now applies to vessels over 12m. However, the location, depth and exposed prevailing conditions are unlikely to attract smaller vessels to fish here. There was no evidence of damage to the seabed in the video footage recorded by AFBI in 2014 or 2015. The presence of species, such as the peacock worm (Sabella pavonina) and the Dahlia anemone (Urticina species) found at every site indicates that these areas have not been recently impacted by demersal fishing gear. Although the DSB falls within a busy shipping area, it is unlikely to be affected as these vessels are transiting through and, due to the depth and exposure, are unlikely to anchor in this area. The most recent survey showed no evidence of damage from human activity suggesting it is likely to be in near natural condition. This is most likely due to its location, depth and exposure to strong tidal conditions.
GD	The components of the GD features, that is, features indicating past change in relative sea level, were formed during multiple ice age events. The current presence, longevity, size and location of these features where they are unlikely to be impacted/damaged by anthropogenic activity suggest a natural state within the AoS.

⁵ Archaeological applications of the Joint Irish Bathymetric Survey (JIBS) data. http://www.heritagecouncil.ie/fileadmin/user_upload/INSTAR_Database/Archaeological_Applications_of_JIBS_Data_Progress_Report_08.pdf

BG	BG numbers on Rathlin have fluctuated over the years since standard methods of counts were first introduced in 1999. The population rose from 203 (individuals) in 1999 to 227 in 2003, but then went into decline falling to a low of 28 in 2011. Since then the population increased to 129 in 2013 but recent counts show that the population is now in decline with the count for 2015 at 98 ⁶ (Figure 1). It is uncertain what is causing this fluctuation in population however a recent report on NI seabirds (Leonard & Wolsey, 2014) noted that the BG population has decreased in northern sites, while southern sites have shown a significant rise suggesting a redistribution of population within NI waters. Further investigation is needed to confirm this and to determine if this is the case for Rathlin.
2d Result	Guidelines partially met. BG is not considered natural/least damaged.
Guideline 2e - The Area of Search contains features at risk⁷ of damage by human activity	
DSB	On the basis of the risk assessment (Annex A), undertaken at a local level of the Rathlin AoS, DSB is considered to be at moderate risk of significant damage associated with anthropogenic activities. This feature is sensitive to pressures such as physical change, species removal and sub-surface abrasion from demersal fishing using mobile gear (e.g. trawling and dredging). The degree of sensitivity will depend on the seabed substrate and the associated species. This relationship can be complicated as some habitats (e.g. bedrock) may be less sensitive than others (mud) but their

⁶ RSPB from JNCC Seabird Monitoring Programme (SMP) database

⁷ Risk of damage to the feature(s) is based on the sensitivity of the feature to activities and their associated pressures. The information is organised by the type of activity, and briefly describes potential impacts on the features and potential management options. The grouping of activities was based on the standardised UK pressures-activity matrix (http://jncc.defra.gov.uk/pdf/Final_HBDSEG_P_A_Matrix_Paper_28b_Website_edit%5B1%5D.pdf), as developed by JNCC (2013), which classed similar activities that exerted similar pressures together. 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). The degree to which a feature is exposed to activities associated with pressures to which it is sensitive in each MCZ region was assessed to provide a qualitative measure of risk. Risk assessments for the various activities were examined to produce an overall qualitative risk assessment for each MCZ. The management options will only consider those activities assessed as capable of affecting the features of the MCZ, based on the risk of damage assessment. More detailed information on the process can be found on the papers: Guidance on the development of Conservation Objectives and potential Management Options and Rathlin Conservation Objectives and potential Management Options (the latter contains the risk assessment for Rathlin MCZ).

	<p>associated species (cold water corals) may be more sensitive to the effects of trawling and dredging.</p> <p>This feature is considered to be at low to moderate risk of significant damage associated with anthropogenic activities. This is a result of potential exposure to pressures associated with fishing activity, specifically the use of mobile gear which can cause physical changes, species removal and surface and sub-surface abrasion of the DSB. Mooring and anchoring, tourism and recreation are all thought to pose a low risk due to the depth of the feature and distance from land.</p>
GD	GD features are considered to be at low risk of damage associated with current activities occurring in the area.
BG	This feature is considered moderate to high risk of damage associated with anthropogenic activities occurring in the area.
2e Result	Guidelines met
Guideline 2f -The Area of Search contains historic sites which could be restored	
2f Result	Guideline not met as this is not applicable

Stage 3 - Assess the size of the Area of Search to ensure this is sufficient to maintain the integrity of features protected	
Summary of assessment	<p>The AoS size is considered sufficient for maintaining the integrity of the three MCZ features to be protected. The MCZ boundary contains over 94% of the DSB habitat located in NI coastal waters. The GD features identified around Rathlin all fall within the proposed boundary. The boundary was extended to the south to ensure that the BG had sufficient depth (>50m) and range (2 km from nests) for breeding birds to forage and feed.</p>
	Guideline met
Detailed assessment	
The size of the area of search should be adapted where necessary to ensure it is suitable for maintaining the integrity of the features for which the MCZ is being considered. Account should also be taken where relevant, of the need for effective management of relevant activities	
DSB	<p>The AoS has been extended to cover all three features (DSB, GD and BG; refer to Stage 1). The extent of the DSB was initially identified from predictive habitat mapping (McBreen et al., 2011). AFBI, on behalf of the Department, carried out a survey (2014 and 2015) which provided a detailed description of the benthic community, confirming the presence of subtidal sands, mixed sediment and rock. Further work is needed to describe the seabed to the north of the boundary. The proposed boundary currently encompasses approximately 94% of the DSB in this area and was drawn following the Guidance on selection and designation of MCZs in the Northern Ireland inshore region. The boundary was drawn with the minimum number of lines to be meaningful to stakeholders involved in managing activities in this area.</p>
GD	<p>The pMCZ boundary encompasses a number of Rathlin's GD features, most occurring within 300m of the Rathlin Island coastline. The paleo-lagoon, discovered and mapped as part of a high resolution bathymetric survey carried out along the North coast⁸, is the furthest GD feature from the shore, approximately 1.2km from the north east corner of Rathlin, and is still well within the proposed boundary. It is thought that these features would have marked the outer extent of Rathlin before the ice age. The GD features all fall within the SAC which has in place a ban on mobile fishing gear. The Rathlin (Prohibition of Fishing Methods) Regulations (NI) 2016 came into effect on 1 January 2017.</p> <p>is subject to a ban on the use of mobile fishing gear removing any likely pressures likely to pose a risk to this pMCZ feature.</p>

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http://www.heritagecouncil.ie/fileadmin/user_upload/INSTAR_Database/Archaeological_Applications_of_JIBS_Data_Progress_Report_08.pdf

BG	The southern boundary follows the existing SAC and was extended to ensure that the depth and range recommended for feeding and foraging BG in Church Bay were accommodated within the pMCZ boundary.
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Stage 4 - Assess the effectiveness of managing features within the proposed Area of Search	
Summary of assessment	There is potential for management measures to be implemented successfully to achieve the conservation objectives of the pMCZ features.
	Guideline met. As a result the original AoS and subsequent pMCZ progresses as potential area for MCZ designation to Stage 5.
Detailed assessment	
There is a high probability that management measures, and the ability to implement them, will deliver the objectives of the MCZ	
<p>The conservation objectives for two of Rathlin’s MCZ features, DSB and GD, are to ‘maintain the features in favourable condition’. The evidence gathered to date suggests that both features are considered to be in favourable condition with no evidence of impact from anthropogenic activities in the area. However these features could potentially be adversely affected by current or future activities which need to be considered when deciding whether additional management is needed to meet the conservation objective.</p> <p>There has been a notable decline in the BG population on Rathlin Island and as such the Department has set the conservation objective to ‘recover the feature to favourable condition’. Further work is necessary to investigate the decline in numbers of BG. Management measures may be put into place to mitigate against pressures which impact this species during breeding season.</p> <p>A range of management options have been suggested in the Conservation Objectives and Potential Management Options for Rathlin MCZ paper, to address likely pressures from anthropogenic activities on the MCZ features.</p>	

Stage 5 - Assess the ecological coherence to prioritise between different areas based on the contribution to the MPA network

Summary of assessment

This is the only MCZ put forward for Northern Ireland for DSB, GD and BG so the site contributes significantly to the MPA network.

Guideline met

Detailed assessment

The potential area contributes significantly to the coherence of the MPA network in the seas around Northern Ireland

Feature	Representation	Replication	Adequacy
DSB	The MCZ contains the only known location of DSB in Northern Ireland coastal waters. This broadscale habitat contains offshore mixed sediment interspersed with deep circalittoral rock/reef. The depth and location of this broad scale habitat, where the Atlantic meets the Irish Sea, means the area is exposed to strong tidal currents and is relatively undisturbed by human activity .	While there is no replication of this feature within NI coastal waters, offshore mixed sediment which was identified as a component of the DSB is also present and protected in the Clyde Sea Sill within the Scottish Nature Conservation Marine Protected Areas (NC MPAs).	The total area of DSB, calculated from predicted habitat maps ⁴ within NI coastal waters, is 47km ² . Over 94% of this will be protected within the MCZ boundary.
	Viability	Connectivity	Management
	The precautionary approach has been applied as there is no information for the size of area required to protect this habitat and the features associated with it. In addition it was	The species associated with this feature have a degree of connectivity at the UK MPA network level with similar habitats in offshore areas located to the west and north of	There is potential for management measures to be implemented successfully to achieve the conservation objectives of the MCZ feature such as fisheries measures, licensing activities and through bye-laws.

	not possible to survey the entire area and there may be features such as cold water coral yet to be discovered. It was therefore deemed appropriate to include a significant proportion of the habitat.	Scottish inshore and offshore waters.	
	Best available evidence	Economic, cultural and social issues	
	Best available evidence has been used to arrive at the decision regarding the feature and boundary development. Refer to Data confidence assessment for Rathlin MCZ for further details.	For further details refer to Conservation Objectives and potential Management Options for Rathlin MCZ paper and Regulatory Impact Assessment (RIA).	
BG	Representation	Replication	Adequacy
	The Rathlin population of BG had over 14% (129) of the total numbers for Northern Ireland recorded in 2013. Runkerry, the nearest site (approx 13km away) reported only 30 birds for the same period. The cliffs along Rathlin's coast and the man-made structures at the sheltered harbour in Church Bay, are thought to provide	There are no other sites proposed for BG in NI but there are 6 Nature Conservation Marine Protected Areas which list BG as a protected feature in Scotland where the species dominates. The closest of these NC MPAs is the Clyde Sea Sill which lies less than 25km away from Rathlin.	The Scottish report (Marine Scotland & SNH, 2012) recommended that the seaward boundary for BG is at least 1km to encompass most birds foraging along the coastline while 2km would encompass >95% of the population. Depth of water was also considered as BG do not tend to forage in waters deeper than 50m. With this in mind, the seaward boundary was extended to

	important nesting sites.		include waters up to 50m out to 2km from the nesting sites.
	Viability	Connectivity	Management
	<p>Scotland carried out an extensive review when designating NC MPAs for BG and suggested that the AoS should contain at least 1% of the GB population. The all Ireland population (including NI) reported counts of 4,541 (2004). Based on this count, Rathlin's population (2013) was almost 3% of the all Ireland population so falls well within the recommended viability parameters suggested in Scottish report (Marine Scotland & SNH, 2012).</p>	<p>The BG is a circumpolar species which in the UK has historically been a predominantly Scottish species (88% of the British and Irish population) with NI accounting for approximately 3% (Mitchell et al., 2004). While Rathlin is the only MCZ designated for BG in Northern Ireland, the close proximity to Scottish NC MPAs protecting BG colonies such as the Clyde Sea Sill. The Clyde Sea Sill, (>25km) ensures that there is connectivity between BG colonies (Marine Scotland & SNH, 2012).</p>	<p>There is potential for management measures to be implemented successfully to achieve the conservation objectives of the MCZ features such as fisheries measures, licensing activities and though bye-laws.</p>
	Best available evidence	Economic, cultural and social issues	
	<p>Best available evidence has been used at the time. Refer to Data confidence assessment for Rathlin MCZ for further details.</p>	<p>For further details refer to Rathlin Conservation Objectives and potential Management Options paper and RIA.</p>	

Geodiversity Features (GD)	Representation	Replication	Adequacy
Features indicating past change in relative sea level, including submerged sea cliff, archway and gullies.	The GD features proposed for Rathlin are excellent examples of features resulting from the retreat of ice sheets during multiple ice age events.	While there is no replication of these features within NI at present they are thought to occur in other MPAs. Further work is needed to identify and map the location, condition and extent of similar GD features in existing MPAs.	The GD features identified around Rathlin all fall well within the MCZ boundary to the North which was set to accommodate the DSB feature.
	Viability	Connectivity	Management
	The features appear intact and relatively undisturbed, as indicated by the diverse flora and fauna which cover the features.	Not applicable.	There is potential for management measures to be implemented successfully to achieve the conservation objectives of the MCZ feature such as fisheries measures, licensing activities and through bye- laws.
	Best available evidence	Economic, cultural and social issues	
	Best available evidence has been used to arrive at the decision regarding the feature and boundary development. Refer to Data confidence assessment for Rathlin MCZ for further details.	For further details refer to Conservation Objectives and potential Management Options for Rathlin MCZ paper and RIA.	

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DAERA Marine and Fisheries Division

2nd Floor,
Klondyke Building
Cromac Avenue
Malone Lower
Belfast
BT7 2AJ

Telephone: 028 90569262

Email: Marine.InfoRequests@daera-ni.gov.uk

Web: www.daera-ni.gov.uk/topics/marine

Photos represent Priority Marine Features found throughout the Northern Ireland Inshore Region

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