Marine Conservation Zone Assessment

Commercial fishing within Marine Protected Areas (MPAs) in the Northern Ireland inshore region

November 2020

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Department of Agriculture, Environment and Rural Affairs
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Marine Conservation Zone Assessment

Section 23 of the Marine Act (Northern Ireland) 2013 places a duty on public authorities that have the function of determining an application for authorisation of doing an act, and if the act is capable of affecting (other than insignificantly) –

i. The protected features of a Marine Conservation Zone (MCZ);

ii. Any ecological or geomorphological process on which the conservation of any protected features of an MCZ is (wholly or in part) dependent.

This template sets out a process for public authorities (including Government Departments) to follow that will enable them to fulfil their duties under section 23 of the Marine Act.

Notes:

1. The onus will be on the applicant to supply the relevant information to the public authority and conservation advisers from the Department in order to progress an application through the assessment process.
2. Where another marine protected area overlaps an MCZ, the MCZ assessment process will not be replaced for other necessary tests (e.g. HRA), it will sit alongside those.
3. The Marine Act (Northern Ireland) 2013 does not provide any legislative requirement for explicit consideration of in combination or cumulative impact assessment to be undertaken when assessing the impacts of licensable activities upon an MCZ. However, in order for the public authority to fully discharge its duties under section 58 of the Marine and Coastal Access Act (2009), section 58 requires public authorities to take authorisation decisions in accordance with the appropriate marine policy documents. The UK Marine Policy Statement sets out high level principles for decision making (Section 2.3.2) and this includes the taking into account any multiple and cumulative impacts of proposals, in light of other projects and activities, when considering potential benefits and adverse effects. Consideration of cumulative impact is also a core policy in the draft Marine Plan for Northern Ireland (April 2018); according to section 139 & 145, public authorities should consider all cumulative impacts of a proposal through the decision making process.
4. The public authority must have regard to any advice or guidance given by the Department. If, in the opinion of the Department, the public authority fails to act in accordance with advice or guidance given by the Department, or to comply with its duties regarding MCZs (Section 22&23), the Department must request from the public authority an explanation for failure. The public authority must provide the Department with such an explanation in writing within the period of 28 days from the date of the request.

5. Information on MCZs in Northern Ireland can be found at the following link. This will provide information on location of sites, designated features, conservation objectives and potential management options.

https://www.daera-ni.gov.uk/articles/marine-conservation-zones

SCREENING All applications to be screened to determine whether section 23 of the Marine Act (Northern Ireland) 2013 should apply to the application.	
(i) Name of Project or Plan	**Commercial fishing (using mobile or static gear) within Marine Conservation Zones (MCZs) in the Northern Ireland inshore region (up to 12nm offshore).**
(ii) Application number/reference	• **HRAs for scallop and pot fishing within Rathlin SAC and SPA** • **HRAs for pot fishing in Strangford Lough SAC and SPA** • **Habitats Regulations Assessment on the Northern Area Plan 2016** https://www.planningni.gov.uk/index/policy/development_plans/devplans_az/nap2016-hra.pdf • **An Assessment of the Impact of Selected Fishing Activities on European Marine Sites and a Review of Mitigation Measures** https://www.marlin.ac.uk/assets/pdf/Fishing_EMS_Report_Final.pdf • Fisheries impact in European marine sites: Matrix **(Department for Environment, Food and Rural Affairs, Defra)** https://www.gov.uk/government/publications/fisheries-in-european-marine-sites-matrix • **Vulnerability and risk of damage assessments from commercial fishing within Marine Protected Areas in the Northern Ireland inshore region** https://www.daera-ni.gov.uk/publications/assessment-commercial-fishing-impacts-marine-protected-areas-mpas-northern-ireland-inshore-region • **A condition assessment of the seabed habitats and biodiversity around Rathlin Island (Stewart-Moore, S. 2019)** https://www.daera-ni.gov.uk/publications/rathlin-island-dive-expedition-2019-citizen-science-project • **AFBI fisheries impact assessment 2020** https://www.afbini.gov.uk/articles/inshore-fisheries

	• **Sarah C. Gall, Lynda D. Rodwell, Sarah Clark, Tim Robbins, Martin J. Attrill, Luke A. Holmes, Emma V. Sheehan. The impact of potting for crustaceans on temperate rocky reef habitats: Implications for management, Marine Environmental Research, Volume 162, 2020, 105134, ISSN 0141-1136.** https://doi.org/10.1016/j.marenvres.2020.105134.
(iii) Brief description of the plan/project	Commercial fishing activities occurring in the Northern Ireland inshore region (within 12 nautical miles) including pot fishing and mobile gear (dredging or trawling) taking place within MCZs.
(iv) Name and location of the MCZ site(s) potentially affected. **Information on MCZs can be found at:** **https://www.daera-ni.gov.uk/articles/marine-conservation-zones**	• **Rathlin MCZ** Area: 90.57km^2 Location (centroid): 55° 19.160' N 6° 12.684' W Link: https://www.daera-ni.gov.uk/publications/rathlin-marine-conservation-zone • **Waterfoot MCZ** Area: 0.811km^2 Location (centroid): 55° 3.630’ N 6° 2.750’ W Link: https://www.daera-ni.gov.uk/publications/waterfoot-marine-conservation-zone • **Outer Belfast Lough MCZ** Area: 2.507km^2 Location (centroid): 54° 42.368' N 5° 35.795' W Link: https://www.daera-ni.gov.uk/publications/outer-belfast-lough-marine-conservation-zone • **Strangford Lough MCZ** Area: 16.489km^2 Location (centroid): 54° 27.000' N 5° 36.000' Link: N/A • **Carlingford Lough MCZ** Area: 3.23km^2 Location (centroid): 54° 05.291’ N 6° 12.893’ W Link: https://www.daera-ni.gov.uk/publications/carlingford-lough-marine-conservation-zone

(v) Description of MCZ site(s)	**Rathlin MCZ** Rathlin Island is the northernmost point of Northern Ireland. The MCZ surrounds Rathlin Island with a large extension between the north of the Island and the North Channel. The site includes other Marine Protected Areas (MPAs): Rathlin Island Special Area of Conservation (SAC) and Rathlin Island Special Protection Area (SPA). Rathlin MCZ has been designated for deep-sea bed, black guillemot and geological/geomorphological features. The MCZ contains the only known location of the broad scale habitat, deep-sea bed, in Northern Irish waters. This habitat is particularly unique in Northern Ireland inshore waters due to the steep drop-off in depth (>200m), close proximity to land and a range of deep subtidal (sublittoral) sands, mixed sediments and rock. Rathlin Island also supports a large population of black guillemots (*Cepphus grylle*) that nest within the Island's cliffs. Although black guillemots have a widespread distribution throughout Northern Ireland there is a significant breeding and nesting population within Rathlin Island. Their reproductive success here may be related to the highly productive waters and rich feeding grounds within the MCZ. A range of subtidal (sublittoral) geological and geomorphological features have also been recorded along the north coast of the Island including a submerged coastline, underwater caves, sea arches and lagoons. These are important indicators of global sea-level change. **Waterfoot 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, Northern Ireland. The seabed in the MCZ encompasses mainly sand and gravel sediments. Waterfoot MCZ has been designated for seagrass bed (*Zostera marina*) on subtidal (sublittoral) sand. Although seagrass density is declining in UK waters, the subtidal (sublittoral) bed in the MCZ may be the largest example in Northern Ireland and is considered to be in good condition. **Outer Belfast Lough MCZ** Belfast Lough is a large sea inlet situated at the mouths of the Lagan, Farset and Blackstaff Rivers on the eastern coast of Northern Ireland. Outer Belfast Lough MCZ is an exposed area and is located within Northern Ireland's busiest sea-lough.

	Home to a variety of species, the Outer Lough encompasses a wide range of habitats such as subtidal (sublittoral) sand and subtidal (sublittoral) mixed sediments, sediment dominated bays and rocky shores. The MCZ has been designated due to the presence of a well-established population of ocean quahog that lives buried in the subtidal (sublittoral) sand habitat. Although distributed throughout Northern Ireland, ocean quahog is present in a dense aggregation in Outer Belfast Lough; it is thought that the species is well conserved here due to continuous recruitment and high population numbers. **Strangford Lough MCZ** Strangford Lough Marine Nature Conservation Reserve (MNCR) was re-designated as Northern Ireland's first MCZ on the introduction of the Marine Act (Northern Ireland) 2013.The MCZ boundary is larger than the SAC/SPA boundary extending to the outer area of Strangford Lough, with a difference of 16.51km^2. The Department is currently working in the development of proposed MCZ (pMCZ) features and will consult with stakeholders on these prior to designation in 2021. Three out of the four broad scale habitats present within the MCZ boundary but outside the Strangford Lough SAC boundary, were identified as gaps in the MPA network assessment in Northern Ireland[1]. These include sublittoral coarse sediment and small areas of moderate and low energy circalittoral rock. Although work to refine the list of pMCZ features is still ongoing, the proposed list will include PMFs present within this broad scale habitats, such as tide-swept channels and subtidal (sublittoral) gullies. Additionally, important blue carbon habitat features such as kelp forests and blue mussel beds present in this area, will be included in the revised NI PMF list, currently under development. **Carlingford Lough 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. The MCZ is located off the northern shore and lies north of the navigation channel in the inner part of the Lough. Carlingford Lough has an extensive intertidal area of sand and mudflats that provide key feeding grounds for overwintering birds.

[1] https://www.daera-ni.gov.uk/publications/assessing-progress-towards-ecologically-coherent-network-marine-protected-areas-northern-ireland

	The MCZ has been designated as it supports the habitat *Philine quadripartita*[2] (White lobe shell) and *Virgularia mirabilis* (sea-pen) in soft stable infralittoral mud. This habitat is only present in Carlingford Lough; individual records of *Philine quadripartita* and *Virgularia mirabilis* occur throughout Northern Ireland. *Philine quadripartita* and *Virgularia mirabilis* occur in high densities within the MCZ and this habitat is thought to be a temporal variant of other sublittoral cohesive mud and sandy mud communities.
(vi) Summary of activities from the plan or project that may potentially affect the MCZ	**Rathlin MCZ** The use of mobile fishing gears such as dredging and trawling within or in proximity to Rathlin MCZ may result in damaging physical changes to the deep-sea bed. There may be an associated risk of capture by bottom trawl fisheries to species such as Common skate (*Dipturus batis)* which are protected by the Wildlife (NI) Order 1985. Common skate may be present in the waters off Rathlin. MCZ feature black guillemot are also vulnerable to impacts from mobile/active fishing gears through visual disturbance and potential collision with boats (particularly when close to their nesting sites) and habitat structure changes. Geological/geomorphological features have similar sensitivities to reefs, depending on depth, location and exposure to mobile fishing activity. Fishing using traps may also impact the deep sea mud habitats through removal of non-target species, de-oxygenation, abrasion or disturbance. **Waterfoot MCZ** The MCZ feature of seagrass beds may be significantly impacted by dredging gears as they can cause physical changes to the seabed and the sediment type, surface and subsurface and uprooting plants or damaging leaves. They can also cause changes in suspended solids (water clarity), siltation rate changes (including smothering), introduction of light, and removal of target and non-target species. Fishing using traps can also impact seagrass beds through the removal of target and non-target species, introduction of light or shading, penetration or disturbance of the substratum subsurface, organic enrichment and abrasion with moderate to high vulnerability in the Waterfoot MCZ bed. **Outer Belfast Lough MCZ** The main threats to the ocean quahog MCZ feature are disturbances to its habitat associated with commercial fisheries. Dredging in the area is likely to remove a large

[2] *Philine quadripartita* was previously referred to *Philine aperta* in the Carlingford Lough designation documents. Details on the nomenclature can be found here http://www.marinespecies.org/aphia.php?p=taxdetails&id=574582

	proportion of the population and/or cause damage to the shells and body. The species has a low vulnerability to surface abrasion associated with deploying and recovering traps (creels and pots) from the seabed. The subtidal (sublittoral) sand habitat found here is moderately vulnerable to fishing pressures and is likely to sustain damage as a result of fishing activities. Subtidal (sublittoral) sand has been reported to be highly vulnerable to dredging through changes in seabed type or habitat structure changes. This habitat is also vulnerable to the removal of non-target species associated with the use of creels and pots. **Strangford Lough MCZ (outside SAC)** The use of mobile fishing gears such as dredging and trawling within or in proximity to Strangford Lough MCZ may result in damaging physical changes to important PMFs. Fishing using traps may also impact these habitats through removal of non-target species, de-oxygenation, abrasion or disturbance. Gullies and tide swept channels are pMCZ features for that area. **Carlingford Lough MCZ** The MCZ protected feature of *Philine quadripartita* and *Virgularia mirabilis* in soft stable infralittoral mud may potentially be vulnerable to mobile fishing or static gear in the future, should these activities occur within Carlingford Lough.
(vii) Is the activity capable of affecting (other than insignificantly) the protected features of the MCZ? If the answer is "no" proceed to next question; if "yes" detail the features and proceed to the next question.	**Rathlin MCZ - Yes** The Rathlin MCZ feature **deep-sea bed** is considered to have a moderate vulnerability to pressures from fishing using mobile gear such as physical change (to another seabed type or sediment type). The degree of vulnerability 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 (e.g. mud) but their associated species (e.g. hydroids or sponges) may be more sensitive to the effects of trawling and dredging. The common skate (*Dipturus batis* complex), a Northern Ireland priority marine species associated with deep sea habitat, which has been recorded off Rathlin Island MCZ, is a large, long-lived species with a low reproductive rate making it especially vulnerable to capture by bottom trawl fisheries (tolerance is moderate). The Rathlin MCZ feature **black guillemots** are moderately vulnerable to activities such as mobile/active fishing gear which cause visual disturbance (behaviour) and collision with boats while diving or emerging from feeding and potential habitat structure changes, among other related pressures, particularly when the activity occurs close to their nesting

	sites. Currently, black guillemot in Rathlin MCZ is not considered to be exposed to pressures associated with fishing using pots or creels unless these activities were to increase in intensity in the future. The Rathlin MCZ geological features may have similar sensitivities to mobile gear fishing as reef habitats, however, they are likely to be more tolerant due to the depth and location and therefore have a lower exposure to the level of fishing activity in this site. **Waterfoot MCZ - Yes** Regarding the Waterfoot MCZ feature, empirical evidence for the impact of dredge fishing on **seagrass** is extensive. Dredging gears have adverse impacts on seagrass beds as they can cause physical changes to the seabed and the sediment type, surface and subsurface as well as uprooting plants or damaging leaves. They can also cause changes in suspended solids (water clarity), siltation rate changes (including smothering), introduction of light, and removal of target and non-target species. The Marine Management Organisation (MMO) matrix of fisheries gear types and European marine site protected features also assess dredging as a high risk activity on seagrass. Fishing using pots or creels can also adversely impact seagrass beds through the removal of target and non-target species, introduction of light or shading, penetration or disturbance of the substratum subsurface, organic enrichment and abrasion. The seagrass bed in Waterfoot MCZ has a moderate to high vulnerability to the use of static gear. Damage can be caused in deploying and retrieving static gear, associated lines and anchors, as well as by their movement over the seabed during rough weather. Plants may be uprooted and leaves sheared or smothered. There is a strong correlation between the amount of damage caused, the number of pots and hauling frequency. **Outer Belfast Lough MCZ - Yes** Regarding the Outer Belfast Lough MCZ feature, **subtidal (sublittoral) sand** habitat is moderately vulnerable to fishing pressures and is likely to sustain damage as a result fishing activities. It is not currently known what the true fishing effort on the site is as the majority of vessels are under 12m and so are not included in VMS datasets. However, evidence from side-scan sonar shows that dredging has occurred on this site at high intensity within the MCZ boundary. Dredging and demersal trawling adversely impact the habitat through de-oxygenation, overall abrasion (surface and subsurface), siltation rate changes (including smothering) and removal of non-target species resulting in a degraded benthic community. In addition, impacts of fishing tend to be greater in areas of muddy sands and sand in deeper water, both of which are

	considered to have a high sensitivity to some mobile bottom gear. Subtidal (sublittoral) sand has been reported to be highly vulnerable to dredging through changes in seabed type or habitat structure changes. This habitat is also vulnerable to the removal of non-target species associated with the use of pots and creels. The main threats to the **ocean quahog** MCZ feature in Outer Belfast Lough MCZ associated with commercial fisheries are disturbances to its habitat. This species has moderate to high vulnerability to physical change (to another seabed type), habitat structure changes, overall abrasion (surface and subsurface) and siltation rate changes (including smothering) and removal of non-target species. The species has a low vulnerability to surface abrasion associated with deploying and recovering traps (creels and pots) from the seabed (due to burrowing habit). The physical effects of dredging on seabed sediments are detrimental. Although ocean quahog burrows into the sediment, certain types of fishing have the potential to displace or damage individuals. Dredging in the area is likely to remove a large proportion of the population and/or cause damage to the shells and body of individuals. **Strangford Lough MCZ (outside SAC)- Yes** At present, the biotope evidence available for the area of the MCZ outside the SAC doesn't provide enough resolution to carry out a full risk assessment associated with demersal mobile and static gear. However, the precautionary approach is recommended based on the known occurrence of important features (i.e. **gullies** and **tide swept channels**) and their sensitivities. **Carlingford Lough MCZ - Yes** Within Carlingford Lough, the MCZ protected features of ***Philine quadripartita* and *Virgularia mirabilis* in soft stable infralittoral mud** have been assessed as moderately vulnerable to any future dredging and trawling in relation to removal of non-target species, abrasion or disturbance of the surface of the substratum or seabed, penetration or disturbance of the substratum subsurface, physical changes to the seabed and deoxygenation. The designated features have also been assessed as moderately vulnerable to any future pot fishing via removal of non-target species, abrasion/disturbance of the surface of the substratum or seabed and penetration or disturbance of the substratum subsurface.
(viii) Is the activity capable of affecting (other than	**Yes** Commercial fishing activities, with mobile gear (trawling and dredging) and static gear (creels/pots) can exert a range of

insignificantly) any ecological or geomorphological process on which the conservation of any protected feature of an MCZ is (wholly or in part) dependent? If the answer is "no" to vii and viii, no further assessment is required. If the answer is "yes", detail the processes. If the answer is "yes" to either vii or viii proceed to Stage 1 assessment.	biological, chemical and physical pressures on the marine habitats and species. Dredging is seen as the most environmentally damaging form of fishing and therefore, is considered to have the potential to have a significant effect on the key relationships, ecological and geomorphological processes that define the function of designated MCZs. Both dredge and trawl fishing can seriously impact marine habitats and communities (particularly habitats like seagrass) through direct contact with the dredge/trawl gear, and sedimentation when dredging/trawling occurs in close proximity. Loss of key species through targeted catch or by-catch has also the potential to cause deterioration of important species, communities and habitats. Although pot fishing is not considered as damaging, the use of creels and/or pots in a localised area has the potential to cause deterioration of marine habitats and associated communities through direct contact, particularly during their deployment and/or recovery. Loss of certain species through targeted catch or by-catch has the potential to cause deterioration of important species, habitats and associated communities. Furthermore, a recent scientific study (Gall, S. C *et al*., 2020[3]) has shown that potting is more destructive than previously thought and highlights the importance of balancing ecology with social and economic considerations to determine what level of impact is acceptable. Varying levels of sensitivities to different fishing pressures have been developed by the Marine Evidence based Sensitivity[4] Assessment (MarESA) (Tyler-Walters et al., 2018) and the Features, Activities, Sensitivities and Pressures tool (FEAST, available on the Marine Scotland website which covers some seabird species). The Department has reviewed the sensitivity of all designated features within the MCZ sites to fishing pressures using the MarESA approach. This approach takes the degree of sensitivity of each habitat and species and applies an exposure level based on the current level of fishing pressure. This assigns a level of vulnerability to each species/habitat based on the current fishing pressure. Risk of damage to the features was also assessed by following the DAERA guidance for developing management options for MPAs.

[3] Sarah C. Gall, Lynda D. Rodwell, Sarah Clark, Tim Robbins, Martin J. Attrill, Luke A. Holmes, Emma V. Sheehan. The impact of potting for crustaceans on temperate rocky reef habitats: Implications for management, Marine Environmental Research, 62, 2020. https://doi.org/10.1016/j.marenvres.2020.105134

[4]Sensitivity definition: "a measure of tolerance (or intolerance) of a species or habitat to damage from an external factor and the time taken for its subsequent recovery".

	The following fishing activities and conservation issues have been identified as those likely to give rise to impacts on all MCZ sites: • All aspects of benthic fishing (scallop dredging, trawling and potting). • All aspects of bird disturbance at sea caused by fishing vessels and associated activities. • All aspects of competition for food resources between fisheries and seabirds.

STAGE 1 MCZ ASSESSMENT

In the Stage 1 assessment the public authority must satisfy the two tests detailed below. If unable to satisfy these two tests then a Stage 2 MCZ assessment will be required.

At the start of the Stage 1 assessment the public authority must notify the Marine Conservation and Reporting team. Consultation advice received from the Department, information supplied by the applicant and any other relevant information should be used to inform the Stage 1 assessment.

Further information on the formal notification to Department can be found in the guidance document.

TEST 1 **Based on the evidence received, is the public authority satisfied that there is no significant risk of the activity hindering the achievement of the conservation objectives stated for the MCZ? and** **Can the public authority exercise its functions to further the conservation objectives of the MCZ site?** If the answer is "yes" to this test, a Stage 2 assessment is not	**Rathlin MCZ - No** The Department is not satisfied that there is no significant risk of mobile fishing gear or static fishing gear hindering the achievement of conservation objectives stated for Rathlin MCZ. The Department cannot exercise its functions to further the conservation objectives of Rathlin MCZ site without introducing fisheries management measures. As the deep-sea bed feature in Rathlin MCZ is currently in favourable condition, the Department recommends that the conservation objectives are set to maintain this feature in favourable condition. The black guillemot breeding surveys showed a decline in numbers between 2000 (212 adults) and 2013 (129 adults). More survey work is needed to determine if this is a natural feature of the Rathlin population or whether management measures as part of the MCZ process are required to mitigate against the decline. Therefore as the black guillemot feature in Rathlin MCZ is currently in unfavourable condition, the Department recommends that the conservation objective is set to recover this feature to favourable condition. As the geodiversity features in Rathlin MCZ are currently in favourable condition, the Department recommends that the

required and the authorisation process may proceed. Provide detail. If the answer is "no" to this test, provide detail and proceed to Test 2.	conservation objectives are set to maintain these features in favourable condition. **Waterfoot MCZ - No** The Department is not satisfied that there is no significant risk of mobile fishing gear or static fishing gear hindering the achievement of conservation objectives stated for Waterfoot MCZ. The Department cannot exercise its functions to further the conservation objectives of Waterfoot MCZ site without introducing fisheries management measures. As the subtidal (sublittoral) seagrass bed in Waterfoot MCZ is currently in favourable condition, the Department recommends that the conservation objectives are set to maintain this feature in favourable condition. **Outer Belfast Lough MCZ - No** The Department is not satisfied that there is no significant risk of mobile fishing gear or static fishing gear hindering the achievement of conservation objectives stated for Outer Belfast Lough MCZ. The Department cannot exercise its functions to further the conservation objectives of Outer Belfast Lough MCZ site without introducing fisheries management measures. As subtidal (sublittoral) sand 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. **Strangford Lough MCZ (outside SAC) – No** The Department is not satisfied that there is no significant risk of mobile fishing gear or static fishing gear hindering the achievement of conservation objectives for the area of Strangford Lough MCZ outside the SAC. The Department cannot exercise its functions to further the conservation objectives of Strangford Lough MCZ site without introducing fisheries management measures. As currently known pMCZ and PMF features are currently in favourable condition, the Department recommends that the conservation objectives are set to maintain these features in favourable condition. **Carlingford Lough MCZ - No** The Department is not satisfied that there is no significant risk of mobile fishing gear or static fishing gear hindering the achievement of conservation objectives stated for Carlingford Lough MCZ.

	The Department cannot exercise its functions to further the conservation objectives of Carlingford Lough MCZ site without introducing fisheries management measures. As subtidal (sublittoral) mud containing *Philine quadripartita* and *Virgularia mirabilis* communities in Carlingford Lough MCZ are currently in favourable condition, the Department recommends that the conservation objectives are set to maintain this feature in favourable condition.
TEST 2 **Although the person seeking an authorisation is unable to satisfy the public authority that the activity will not hinder the achievement of the conservation objectives stated for the MCZ, is there an alternative way of proceeding with the proposal which would create a substantially lower risk of hindering the achievement of the conservation objectives stated for the MCZ? This would include proceeding with it:** • **in another manner or** • **at another location.** If the answer is "no" to test 2, a Stage 2 assessment is required.	**Static gear alternative proposal** **The pot fishing activities within the listed MCZs can be undertaken in another manner in order to create a substantially lower risk of hindering the achievement of the conservation objectives.** A summary of the pot fishing activities that potentially affect the designated MCZ features is listed in the Screening section above. The proposed management measures listed for each individual MCZ feature below are based on the evidence obtained from the MarESA undertaken by the Department (https://www.daera-ni.gov.uk/publications/assessment-commercial-fishing-impacts-marine-protected-areas-mpas-northern-ireland-inshore-region) and advice from AFBI in its 2020 impact assessment report on fisheries management proposals (https://www.afbini.gov.uk/articles/inshore-fisheries). These proposed measures aim to reduce/limit or remove/avoid the pot fishing activities which have been identified as having a detrimental effect on sensitive seabed habitats. **Rathlin MCZ features** **Caves:** • Following best practice guidance on biosecurity to prevent the spread of disease and accidental introduction of invasive species from the transfer of static gear fishing from other areas; • Mandatory vessel position monitoring for all vessels operating in the MPA; • Introduction of a pot tagging scheme to enable quantification of effort, with different colours for commercial and recreational pots. The number of tags issued to each recreational fisherman will reflect the current 5 pot limit, as

If the answer is "yes" to test 2, apply the changes and repeat test 1. If the outcome is "yes" a Stage 2 assessment is not required and the authorisation process may proceed. If the answer is still "no" a Stage 2 assessment is required. Please document the steps taken in the stage 1 assessment in chronological order, detailing changes applied if test repeated.	described in Regulation 4 of The Unlicensed Fishing for Crabs and Lobster Regulations (Northern Ireland) 2008; • Mandatory recording of protected species that are accidentally caught and any entanglement issues; and • The Department will continue to encourage and support the development and trialling of fishing gear that reduces unintended catch. **Deep sea bed and black guillemot habitat:** • Following best practice guidance on biosecurity to prevent the spread of disease and accidental introduction of invasive species from the transfer of static gear fishing from other areas; • Mandatory vessel position monitoring for all vessels operating in the MPA; • Introduction of a pot tagging scheme to enable quantification of effort, with different colours for commercial and recreational pots. The number of tags issued to each recreational fisherman will reflect the current 5 pot limit, as described in Regulation 4 of The Unlicensed Fishing for Crabs and Lobster Regulations (Northern Ireland) 2008; • Mandatory recording of protected species that are accidentally caught and any entanglement issues; and • The Department will continue to encourage and support the development and trialling of fishing gear that reduces unintended catch. **<u>Waterfoot MCZ features</u>** **Sandbank: seagrass:** • Prohibition of potting in seagrass zone **<u>Outer Belfast Lough MCZ features</u>** **Ocean quahog (*Arctica islandica*) in subtidal (sublittoral) sand:**

	• Following best practice guidance on biosecurity to prevent the spread of disease and accidental introduction of invasive species from the transfer of static gear fishing from other areas; • Mandatory vessel position monitoring for all vessels operating in the MPA; • Introduction of a pot tagging scheme to enable quantification of effort, with different colours for commercial and recreational pots. The number of tags issued to each recreational fisherman will reflect the current 5 pot limit, as described in Regulation 4 of The Unlicensed Fishing for Crabs and Lobster Regulations (Northern Ireland) 2008; • Mandatory recording of protected species that are accidentally caught and any entanglement issues; and • The Department will continue to encourage and support the development and trialling of fishing gear that reduces unintended catch. **<u>Strangford Lough MCZ features (outside SAC)</u>** • Following best practice guidance on biosecurity to prevent the spread of disease and accidental introduction of invasive species from the transfer of static gear fishing from other areas; • Mandatory vessel position monitoring for all vessels operating in the MPA; • Introduction of a pot tagging scheme to enable quantification of effort, with different colours for commercial and recreational pots. The number of tags issued to each recreational fisherman will reflect the current 5 pot limit, as described in Regulation 4 of The Unlicensed Fishing for Crabs and Lobster Regulations (Northern Ireland) 2008;

	• Mandatory recording of protected species that are accidentally caught and any entanglement issues; and • The Department will continue to encourage and support the development and trialling of fishing gear that reduces unintended catch. **<u>Carlingford Lough MCZ features</u>** ***Philine quadripartita* and *Virgularia mirabilis* in soft stable infralittoral mud:** • Following best practice guidance on biosecurity to prevent the spread of disease and accidental introduction of invasive species from the transfer of static gear fishing from other areas; • Mandatory vessel position monitoring for all vessels operating in the MPA; • Introduction of a pot tagging scheme to enable quantification of effort, with different colours for commercial and recreational pots. The number of tags issued to each recreational fisherman will reflect the current 5 pot limit, as described in Regulation 4 of The Unlicensed Fishing for Crabs and Lobster Regulations (Northern Ireland) 2008; • Mandatory recording of protected species that are accidentally caught and any entanglement issues; and • The Department will continue to encourage and support the development and trialling of fishing gear that reduces unintended catch. **<u>Mobile gear alternative proposal</u>** **The mobile fishing activities within the listed MCZs cannot be undertaken in another manner in order to create a substantially lower risk of hindering the achievement of the conservation objectives. The only alternative to reduce the risk to designated features is mobile gear fishing at a different location other than within the MCZs. The benefits to the public do not outweigh the costs to the environment.**

	A summary of the mobile fishing activities that potentially affect the designated MCZ features is listed in the Screening section above. The proposed management measures listed for each individual MCZ below are based on the evidence obtained from the MarESA undertaken by the Department (https://www.daera-ni.gov.uk/publications/assessment-commercial-fishing-impacts-marine-protected-areas-mpas-northern-ireland-inshore-region) and advice from AFBI in its 2020 impact assessment report on fisheries management proposals (insert link). These proposed measures aim to remove/avoid the mobile fishing activities which have been identified as having a detrimental effect on sensitive seabed habitats. **Rathlin MCZ** • Prohibition of demersal mobile gear use throughout the full extent of the MCZ. **Waterfoot MCZ** • Prohibition of demersal mobile gear use throughout the full extent of the MCZ. **Outer Belfast Lough MCZ** • Prohibition of demersal mobile gear use throughout the full extent of the MCZ. **Strangford Lough MCZ (outside SAC)** • Prohibition of demersal mobile gear use throughout the full extent of the MCZ. **Carlingford Lough MCZ** • Prohibition of demersal mobile gear use throughout the full extent of the MCZ.
STAGE 2 MCZ ASSESSMENT **The Stage 2 assessment will consider whether the conditions in section 23(7) (b) and (c) can be met. In doing so the public authority should use all information supplied by the applicant, advice from the conservation advisers from the Department and any other relevant information. Wider consultation with other advisers may also be undertaken at this stage, in particular to provide additional and specific advice on socio-economic matters.**	
Does the benefit to the public of proceeding with the act clearly outweigh the risk of damage to the environment that	**No, the benefit to the public from permitting the use of mobile fishing gear in MCZs does not clearly outweigh the risk of damage to the MCZ protected features.** **Rathlin MCZ** The Rathlin Island (Prohibited Methods of Fishing) Regulations (Northern Ireland) 2016 came into operation on

will be created by proceeding with it? (See guidance for further information.) If the answer is "no" reject application. If the answer is "yes" provide information and proceed to the next question.	31st December 2016, making it an offence to fish for sea-fish using demersal mobile gear in the Rathlin Zone. Contravention of the Regulations is an offence under section 124(3) of the Fisheries Act (Northern Ireland) 1966. Link: http://www.legislation.gov.uk/nisr/2016/408/made Rathlin MCZ extends beyond the boundary of Rathlin Island Special Area of Conservation (SAC)/Special Protection Area (SPA), with a large extension between the north of the island and the North Channel. The MCZ was designated after the introduction of the 2016 fisheries regulations so although part of the site is already subject to a prohibition of mobile gear the area outside the SAC/SPA boundary is not and is therefore considered here. Prior the 2016 prohibition, VMS data for dredge and trawl vessels between 2012 and 2016 recorded that annually, an average of 0.9% of the activity within ICES rectangle 39E3 was within the Rathlin MCZ boundary (AFBI fisheries impact assessment 2020). Of the two forms of fishing, both of which took place each year between 2012 and 2016, dredging was the more prominent with an average of 28.04 fishing hours whilst bottom trawl averaged at 18.20 fishing hours. A small value of the king scallop landings (average at 0.07 tonnes) was taken from the reef feature of the MPA. No scallop landings were taken from the sandbank feature. With regards to queen scallops, a small amount (average of 0.15 tonnes) was taken from the reef feature, with no queenie landings from the sandbank feature. Over the period 2012-2016, the average value of landings, using mobile gear, was £2190. However, this value will have decreased significantly since the introduction of the prohibition on 31st December 2016. **Waterfoot MCZ** No VMS data was recorded within Waterfoot MCZ between 2012-2016 (AFBI fisheries impact assessment 2020). With limitations of VMS it cannot be concluded that mobile fishing does not occur within the area. **Outer Belfast Lough MCZ** Annually, an average of 0.9% of the activity within ICES rectangle 38E4 is within the Outer Belfast Lough MPA boundary This represents low effort within the boundary. Of the different types of mobile fishing within the MPA boundary, dredging is the more prominent with an average of 30.1 fishing hours, followed by bottom trawl averaging at 2.3 fishing hours. Other mobile gear averaged at 4.6 fishing hours (AFBI fisheries impact assessment 2020).

	Over the five year period analysed, total landings from mobile gear within the MPA boundary were 7.6 tonnes of scallops, 0.3 tonnes of *Nephrops*, and 0.02 tonnes of haddock. The average landings figures for scallops from within the MCZ boundary over the 2012-2016 period was 0.44 % of those fished within ICES rectangle 38E4 amounting to a value of £3371. **Strangford Lough MCZ** A mobile fishing gear ban was introduced in Strangford Lough SAC/SPA in 2003 and remains in place (The Inshore Fishing (Prohibition of Fishing and Fishing Methods) (Amendment) Regulations (Northern Ireland) 2003). A pot fishing scheme was introduced in 2014 in the remainder of the SAC. There is also a Fishing Licence Scheme in place for pot fishing since 2014, with a restriction on the boat size and depths greater than 10m. The Department is also supporting the installation of new Inshore Vessel Monitoring System (iVMS) in all 28 vessels fishing in Strangford Lough, including small vessels under 12m. A three year pilot scheme is already in place for all licence holders within Strangford Lough SAC. Link: http://www.legislation.gov.uk/nisr/2003/499/regulation/2/made Strangford Lough MCZ extends beyond the boundary of Strangford MCZ Special Area of Conservation (SAC)/Special Protection Area (SPA), outside the mouth of the Lough. The MCZ was re-designated after the introduction of the Marine act (NI) 2013) and although part of the site is already subject to a prohibition of mobile gear the area outside the SAC/SPA boundary is not and is therefore considered here. The Outer Strangford Lough MCZ falls within ICES rectangle 37E4. VMS analysis is based on the proportion of fishing within the MPA boundary in relation to the fishing within 37E4. During this time an average of 44% of dredge vessels fishing for scallops within ICES rectangle 37E4 were under 12m in length and therefore are not recorded through the VMS analysis. Within the MPA boundary, dredging, which took place in 2012, 2015 and 2016 within the MPA boundary, had an average of 1.6 fishing hours. The average annual value of landings from within the MCZ boundary between 2012 and 2016 was £208.

	Carlingford Lough MCZ There is no VMS data recorded for Carlingford Lough (AFBI fisheries impact assessment 2020). In summary, the benefits to the public from mobile gear fishing within MCZs are considered to be low based on the VMS, landings and observer data. This data has shown there to be a low intensity of fishing and therefore a low value attributed to the mobile gear fishery within the MCZs. The potential environmental benefits from prohibition of the fishery within MCZs are therefore deemed to be greater than the benefits to the public of maintaining the Status Quo. **The application for the use of mobile fishing gear within MCZs is rejected.**
Can the applicant satisfy the public authority that they will undertake, or make arrangements for the undertaking of, measures of equivalent environmental benefit to the damage which the act will or is likely to have in or on the MCZ? (See guidance for further information.) If the answer is "yes" continue with the authorisation process. Measures given by the applicant in this section must be conditioned on the authorisation, if issued. If the answer is "no" reject application.	**No**, the Department is not satisfied that measures of equivalent environmental benefit to the damage which the act will or is likely to have in or on the MCZ can be undertaken. **The application for the use of mobile fishing gear within MCZs is rejected.**

SUMMARY TABLE	
Provide details of any likely in-combination effects and quantify their significance	N/A
List of Agencies / Organisations consulted: Provide contact name and telephone or email address	• Inshore Fisheries Partnership • Agri-Food and Biosciences Institute • DAERA Marine and Fisheries Division. Marine Conservation Advice, Marine Conservation and Reporting Team • DAERA Sea Fisheries Inspectorate • DAERA NIEA Natural Environment Division
MCZ Assessment Summary	Fishing activities detailed above have been found to have a significant effect on the site features of MCZs, therefore a full assessment was carried out. It is recommended that: Pot fishing activities within the listed MCZs **can** be undertaken in another manner in order to create a substantially lower risk of hindering the achievement of the conservation objectives. Mobile fishing activities within the listed MCZs **cannot** be undertaken in another manner in order to create a substantially lower risk of hindering the achievement of the conservation objectives. The benefits to the public do not outweigh the costs to the environment.
If applicable, list the condition(s) detailed in the stage 2 assessment which should be enforced through the applicable licence	N/A

Data collected to carry out the MCZ assessment

Who carried out the assessment? If you are an agent or consultant on behalf of a public authority please give your details. Also detail the responsible person in the public authority who commissioned the assessment	DAERA Marine and Fisheries Division. Marine conservation and reporting team: MPA management team.
Sources of data used Use hyperlinks, references or include as annex	• DAERA MCZs conservation objectives • DAERA MCZs management options • DAERA MCZs evidence base • DAERA risk assessment matrix of fishing activities and protected features (TRIM: Maidens - AE1/19/646862 & AE1/19/646855) • Fishing activity data for the NI inshore region (VMS and Fleet observers) • AFBI fisheries impact assessment 2020 • DAERA and AFBI Fisheries landing data • Local information provided by users through the Inshore Fisheries Partnership group • DAERA MFD approaches document for North East coastal region (TRIM AE1/19/874685) • MARLIN • Feature Activity Sensitivity Tool (FEAST). The Scottish Government. 2019. https://www.marine.scotland.gov.uk/FEAST/Index.aspx • An Assessment of the Impact of Selected Fishing Activities on European Marine Sites and a Review of Mitigation Measures • Tyler-Walters, H., Tillin, H.M., d'Avack, E.A.S., Perry, F., Stamp, T., 2018. Marine Evidence-based Sensitivity Assessment (MarESA) – A Guide. Marine Life Information Network (MarLIN). Marine Biological Association of the UK, Plymouth, pp.91.

	• Fisheries in European marine sites: Matrix (Defra) • DAERA and JNCC habitat map layers and physical damage to the seabed pressure from fishing layer • Peer-reviewed literature
Level of assessment completed	Stage 1 MCZ assessment for static fishing and mobile fishing activities. Stage 2 MCZ assessment for mobile fishing activities.
Where can the full results of the assessment be accessed and viewed? Must be an official address of the public authority	Marine Conservation and Reporting Team DAERA Marine and Fisheries Division First Floor Klondyke Building Cromac Avenue, Gasworks Business Park Belfast Antrim BT7 2JA

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