

# Department of Environment, Food and Agriculture



**Isle of Man**  
**Government**

*Reiltys Ellan Vannin*

## STAKEHOLDER CONSULTATION

On the introduction of new spatial management measures in the Western Irish Sea Mud-belt to deliver co-benefits in sustainable fisheries, blue carbon research, and marine conservation.

Consultation in fulfilment of Section 6 of the Memorandum of Understanding on Fisheries Management between the four Fisheries Policy Authorities of the United Kingdom and the Isle of Man (2023).

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## Contents

1. Summary.....	1
Why the WISMB? .....	2
Why is the Department consulting? .....	3
2. Background .....	4
The WISMB as a carbon sink.....	4
The WISMB as an area of importance for marine conservation.....	6
The WISMB as an area of sustainable fisheries development .....	10
3. DEFA's Aims and Objectives .....	12
4. Proposed Management Measures.....	12
5. Consultation Process.....	17
6. Consultation Questions.....	18
Section 1 - Consultee Information .....	18
Section 2 – Your views on DEFA's objectives for the WISMB .....	18
Section 3 – Your views on DEFA's proposed spatial management measures affecting bottom-towed fishing methods.....	19
Section 4 – Your views on developing a sustainable creel fishery for prawns ( <i>Nephrops</i> ) in Manx waters .....	19
List of Appendices .....	25
List of notified consultees .....	25
Appendix 1 – Manx Blue Carbon Project (Initial results summary).....	26
Executive summary .....	26
Introduction and context .....	26
Key findings .....	27
Recommendations.....	27
References.....	27
Appendix 2 - Assessment of current Dublin Bay prawn ( <i>Nephrops norvegicus</i> ) fishing activity within the Isle of Man territorial sea in the context of the proposed spatial management measures. ....	28
Appendix 3 – Coordinates of proposed areas .....	28

# 1. Summary

- 1.1. The Department of Environment, Food and Agriculture ('the Department') is seeking views from relevant stakeholders on the introduction of new spatial management measures in parts of the Island's territorial sea known as the Western Irish Sea Mud-Belt ('WISMB'). The consultation is directed primarily towards commercial fisheries stakeholders as the proposed measures will directly impact the conditions of the Isle of Man sea fishing licence; however, views from other stakeholders and the general public are also welcome.
- 1.2. The proposed management measures include the establishment of areas in which bottom-towed fishing methods would be prohibited. The measures would be implemented by way of licence condition in the Isle of Man sea fishing licence until at least December 2026.
- 1.3. The primary driver for the new measures is to facilitate scientific research that will develop our understanding of the importance of the WISMB and similar muddy habitats in capturing and storing carbon (otherwise known as 'blue carbon' research). **As a minimum response, the Department intends to establish small (c.15-30 km<sup>2</sup>) areas around selected sites to facilitate the Manx Blue Carbon Project research until 2026 (research site details are described in section 2).**
- 1.4. However, it is also envisaged that more comprehensive closed areas may deliver co-benefits for sustainable fisheries by also facilitating the development of a low-impact fishery for *Nephrops* (also known as Dublin Bay prawn, langoustine, or scampi) using creels, as well as enabling the improved understanding of the impact of trawl gear on muddy habitats and associated conservation features (i.e. fisheries and marine conservation research). For these purposes, the Department is consulting on proposals to implement larger closed areas, the rationale and justification of which is explained further in section 2.
- 1.5. The proposed areas in which the new management measures will be introduced are shown in Figure 1 below.

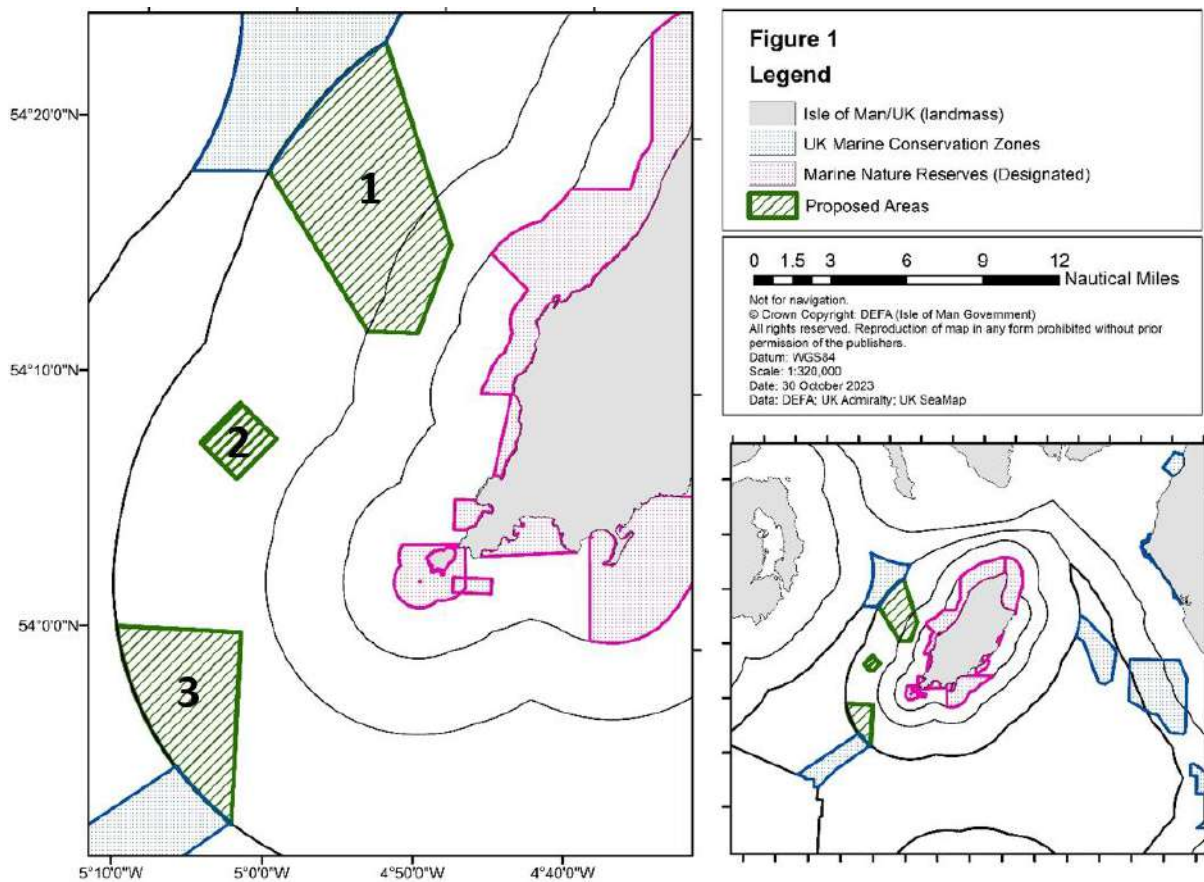


Figure 1 Proposed areas for new management measures to be introduced; 1) West of Targets Area, 2) Blue Carbon Experimental Zone, and 3) Southwest Area.

- 1.6. The aims of the proposal contained in this consultation are multi-faceted, meaning that they combine several policy objectives of the Isle of Man Government, namely sustainable fisheries management, marine ecosystem conservation, and research into the role of blue carbon as part of the Island's commitment to achieving net-zero emissions by 2050.
- 1.7. The measures will be reviewed in 2026 in light of the results of the scientific research (including blue carbon, fisheries, and marine conservation related research). Beyond 2026, both the areas and the management measures are also expected to be informed by the development of a Manx Marine Spatial Plan.

### ***Why the WISMB?***

- 1.8. The WISMB is one of the Isle of Man's most important marine carbon sinks where atmospheric carbon ('as CO<sub>2</sub>') is sequestered and stored; as such these habitats are known to aid mitigation against climate change.
- 1.9. In addition, the WISMB also contains important habitats for commercial shellfish species, namely Dublin Bay prawns (*Nephrops norvegicus*; also referred to as simply *Nephrops* or 'prawns') and edible crabs (*Cancer pagurus*), as well as Vulnerable Marine Ecosystems (VMEs)

of high conservation value, for example the sea pen (*Virgularia mirabilis*) and a range of burrowing animal species<sup>1</sup>.

***Why is the Department consulting?***

- 1.10. The Department is seeking views from relevant fisheries stakeholders on a proposal to introduce new spatial management measures in the WISMB. At this stage, the spatial management measures are being proposed as a temporary arrangement, pending the collection and review of further evidence relating to blue carbon, sustainable fisheries, and marine conservation benefits, in 2026.
- 1.11. The consultation takes the form of a series of questions where consultees may provide feedback. On completion of the consultation, results will be analysed, and a short report will be produced summarising the findings of the consultation and the Department response, which will detail the determination of the Department on whether/how measures will be introduced.
- 1.12. Consultation responses are advisory and will be used to inform the decision-making and implementation processes.

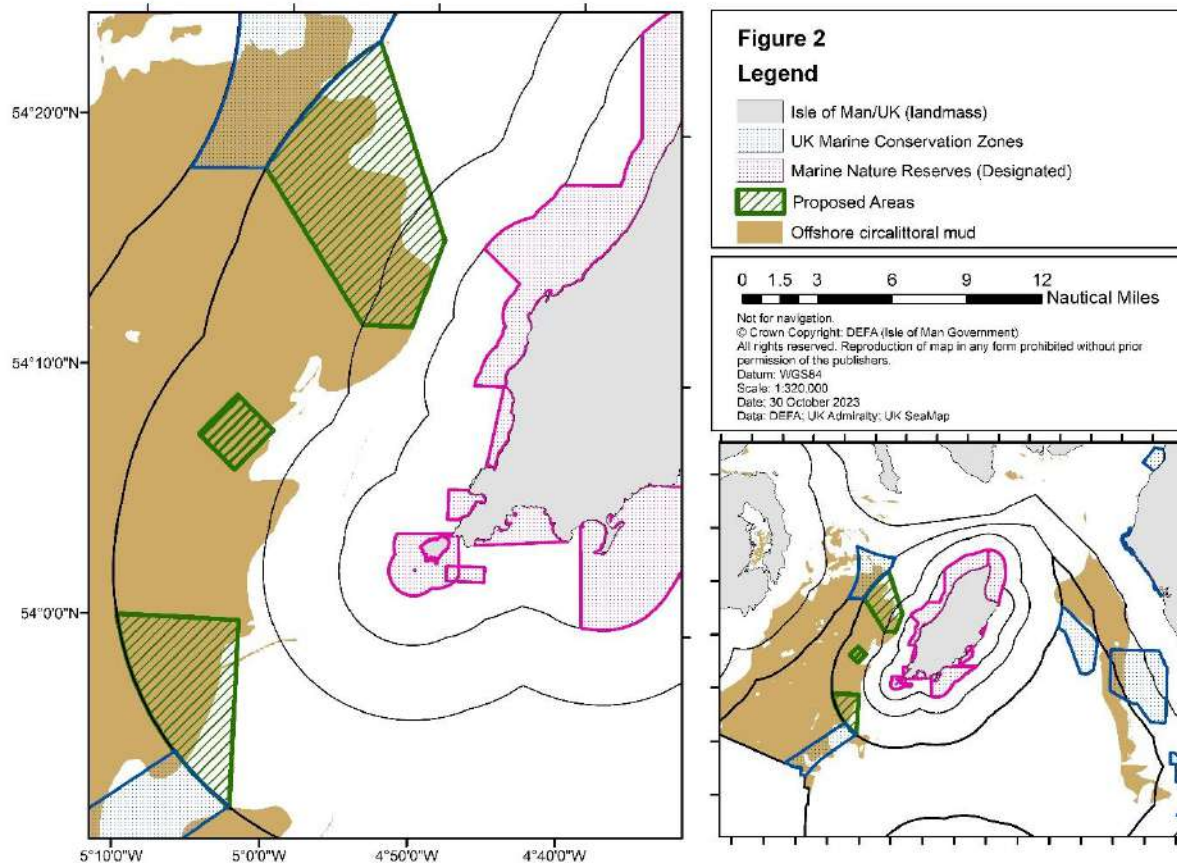
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<sup>1</sup> <https://www.ospar.org/work-areas/bdc/species-habitats/list-of-threatened-declining-species-habitats/habitats/sea-pen-burrowing-megafauna>

## 2. Background

### *The WISMB as a carbon sink*

- 2.1. Mud habitats, such as those found in the WISMB, have been shown to be important carbon sinks. This means that these sediments accumulate and store carbon for an indefinite period if left undisturbed, and thereby aid the removal of carbon dioxide (CO<sub>2</sub>) from the atmosphere. The distribution of these mud habitats in the Irish Sea, including within the WISMB, can be seen in **Figure 2** below.

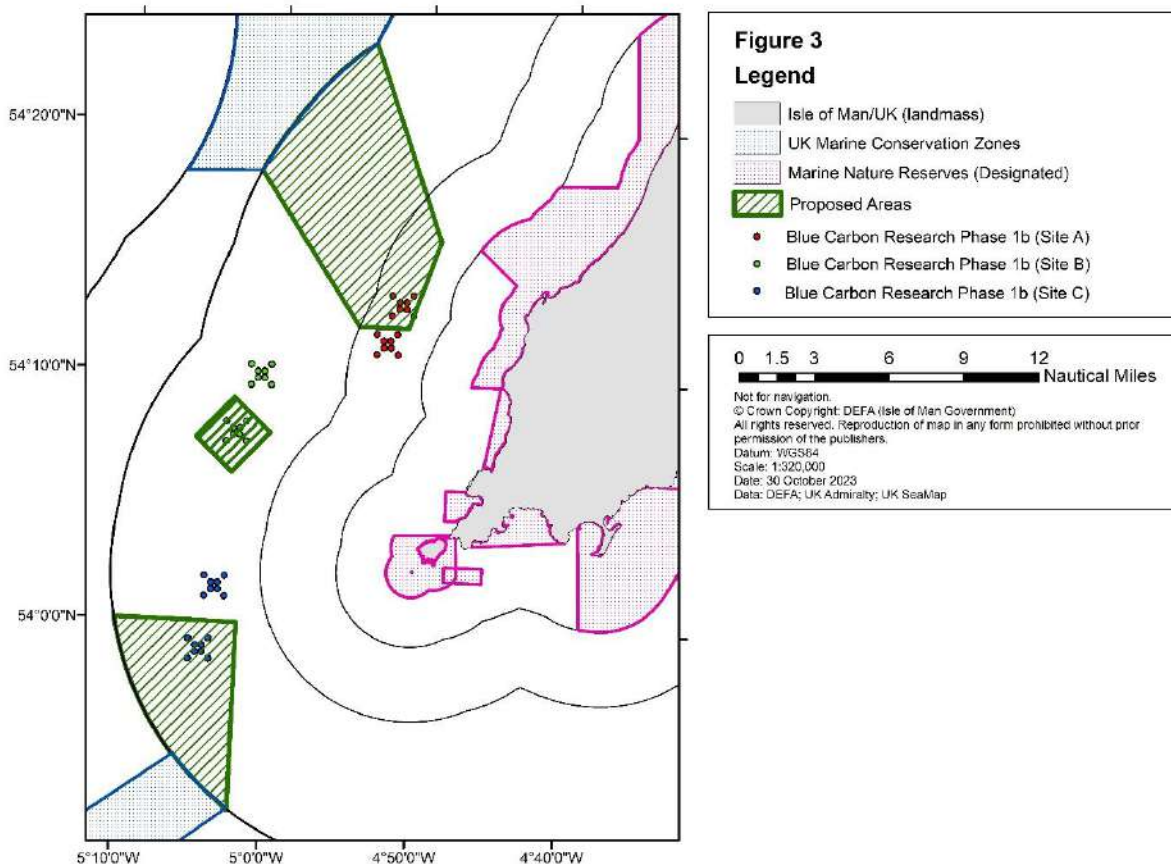


- 2.2. Recognising that our understanding of the role of blue carbon in climate change mitigation needs to improve, and that site-specific evidence and research is necessary, the Isle of Man Government committed to undertaking blue carbon research as part of the Climate Change Plan<sup>2</sup> and established the Manx Blue Carbon Project<sup>3</sup>.
- 2.3. The Manx Blue Carbon Project's research, with scientific partners at Bangor and Swansea Universities in collaboration with the National Oceanography Centre (NOC) in Southampton, is currently underway. The aim of this research includes a calculation of carbon burial (or sequestration) and storage in WISMB habitats, to inform the development of a Blue Carbon Management Strategy in the future. Protection and restoration of marine biodiversity and other ecosystem services are also components of the Manx Blue Carbon Project.

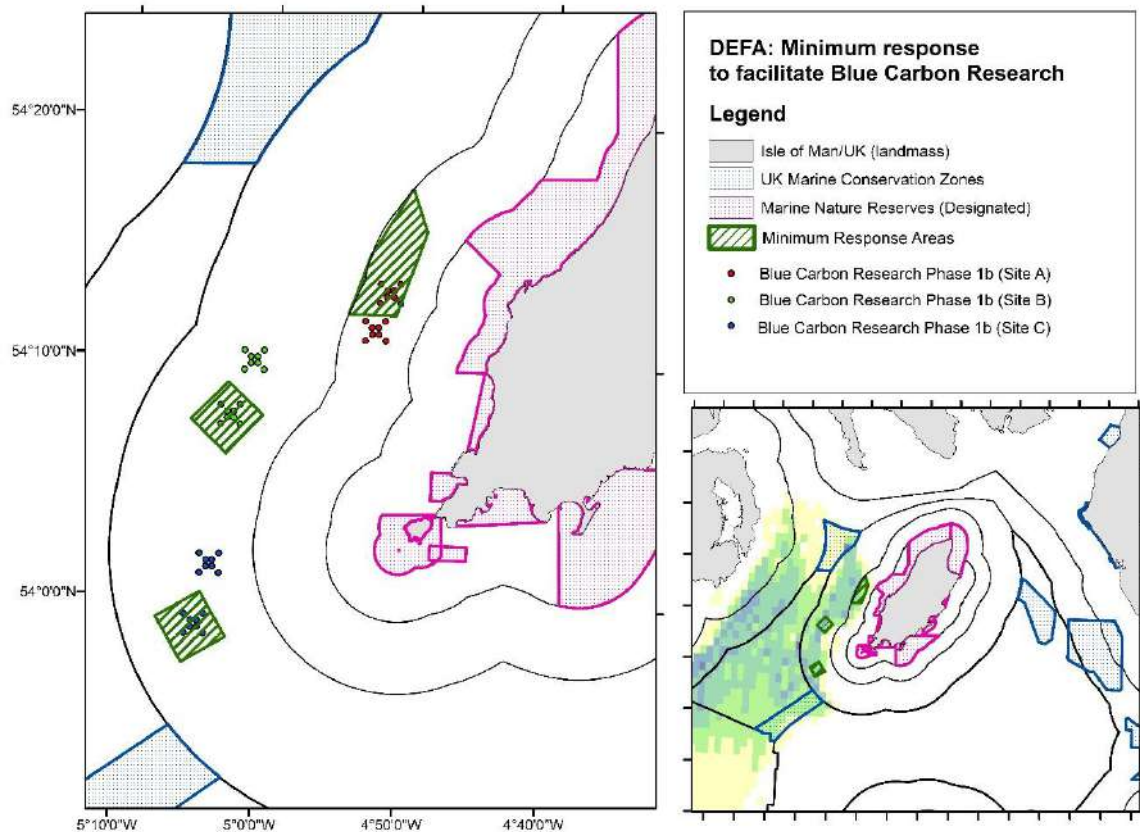
<sup>2</sup> <https://www.tynwald.org.im/spfile?file=/business/opqp/sittings/20212026/2022-SD-0065.pdf>

<sup>3</sup> <https://netzero.im/latest/the-isle-of-man-s-blue-carbon-project-leading-the-way-in-marine-carbon-exploration/>

- 2.4. Preliminary findings of Phase 1 of the Manx Blue Carbon Project provided by Swansea University/NOC is provided in **Appendix 1**, and these have helped inform this current consultation.
- 2.5. To summarise, initial results from Phase 1 indicate that several marine habitats within the WISMB are indeed important carbon sinks, and are likely to be the most significant in terms of opportunity for management of blue carbon. The results suggest that protecting such habitats from disturbance may maximise the potential to store carbon and help the Isle of Man mitigate against climate change by reaching net-zero emissions by 2050.
- 2.6. Further research under the Manx Blue Carbon Project involves Bangor University undertaking a comparative survey of carbon sequestration between trawled (open) and non-trawled (closed/control) areas, to gain a greater understanding of the effects of bottom-towed fishing gear on such processes.
- 2.7. For this research to be conducted it is a fundamental requirement to temporarily close certain areas of the WISMB to bottom-towed fishing gear, including trawls, dredges etc., for the duration of the research (expected to be until 2026).
- 2.8. Building upon the data already collected by Swansea University/NOC, Bangor University has selected three pairs of open/closed experimental sites – see **Figure 3** below.



- 2.9. These sites have been selected because the initial results of the blue carbon research indicates they are the most similar (in terms of depth, sediment type, and carbon content), and therefore provide the most appropriate 'baseline' sites for further investigation and comparison.
- 2.10. As a minimum response, the Department intends to establish smaller areas around these experimental sites (**Blue Carbon Experimental Areas**) to enable open/closed conditions as soon as practically possible. This would be implemented by way of condition within the Isle of Man sea fishing licence, to facilitate the ongoing research. These areas would be c.15-30 km<sup>2</sup> boxes located in each of the experimental areas to create open/closed conditions in each of the pairs of sampling locations, for example as shown below.



- 2.11. In the longer term, results from the Manx Blue Carbon Project will inform the Department, and the wider Isle of Man Government, on the most important locations within the Isle of Man territorial sea that warrant protection as part of a Blue Carbon Management Strategy, and as required by the Isle of Man Government Climate Change Plan. It is expected that blue carbon habitats will also be considered important features within a future Manx Marine Spatial Plan.

***The WISMB as an area of importance for marine conservation***

- 2.12. The Isle of Man Government is, via extension from the United Kingdom, signatory to several international multilateral agreements to the Island (e.g. the UN Convention on Biological Diversity (CBD) and the OSPAR Convention), whose aims are to conserve and protect marine species and habitats and, where possible, restore and/or minimise human interference of habitats and ecosystems. Additionally, the Isle of Man has UNESCO Biosphere status which encourages people to work sustainably with the natural environment, rather than simply exploiting it, and to undertake research, develop innovative approaches, and showcase improvements with respect to those objectives.



- 2.13. A report by the OSPAR commission<sup>4</sup> has recently been published, including analysis of the extent of physical disturbance to benthic habitats such as those contained in the WISMB, and states that;

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*In all assessment units where sea-pen and burrowing megafauna communities were found, 'High' disturbance was the predominant disturbance category for the habitat and was recorded as over 95% of habitat extent in the Central and Southern North Sea, and Southern Celtic Sea. In the Southern North Sea, Southern Celtic Sea, and Gulf of Cadiz all of the reported habitat area experienced disturbance in the 2009 to 2020 assessment period. Only 3% and less than 1% of the habitat area in the Northern Celtic Sea [which includes the Isle of Man territorial sea] and Central North Sea respectively had 'Zero' disturbance.*

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The report clearly articulates the risk to these habitats throughout the OSPAR region, including the Isle of Man territorial sea, under existing management measures.

- 2.14. The OSPAR report also highlights that habitats and conservation features within the WISMB, namely mud habitats and sea pen and burrowing megafauna, were subject to consistent 'high' or 'very high' pressure resulting in subsurface abrasion, caused primarily by bottom-towed fishing methods.
- 2.15. In the wider context of the OSPAR region, the WISMB within the Isle of Man territorial sea is an area of international importance for conservation. Overall, the report highlighted that offshore circalittoral mud, a common type of habitat in the WISMB, had the largest proportion of area under 'High' disturbance.

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<sup>4</sup> Matear, L., Vina-Herbon, C., Woodcock, K.A., Duncombe-Smith, S.W., Smith, A.P., Schmitt, P., Kreutle, A., Marra, S., Curtis, E.J., and Baigent, H.N. 2023. *Extent of Physical Disturbance to Benthic Habitats: Fisheries*. In: OSPAR, 2023: The 2023 Quality Status Report for the Northeast Atlantic. OSPAR Commission, London. Available at: <https://oap.ospar.org/en/ospar-assessments/quality-status-reports/qsr-2023/indicator-assessments/phys-dist-habs-fisheries/>

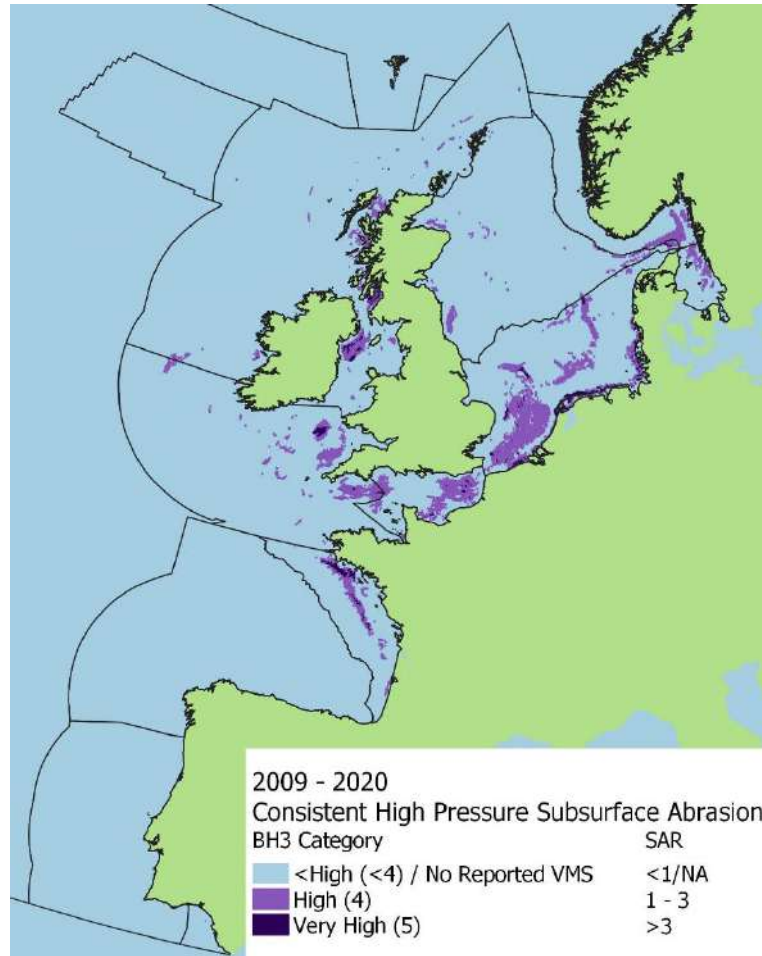


Figure 4 Showing areas of consistent high pressure surface abrasion caused by trawling (note: the 'high' and 'very high' disturbance within the WISMB to the west of the Isle of Man). Taken from the OSPAR Report.

2.16. With respect to fisheries, the effect of the Island's international obligations under these conventions is set out in the Memorandum of Understanding between the fisheries administrations of the United Kingdom and the Isle of Man<sup>5</sup>:

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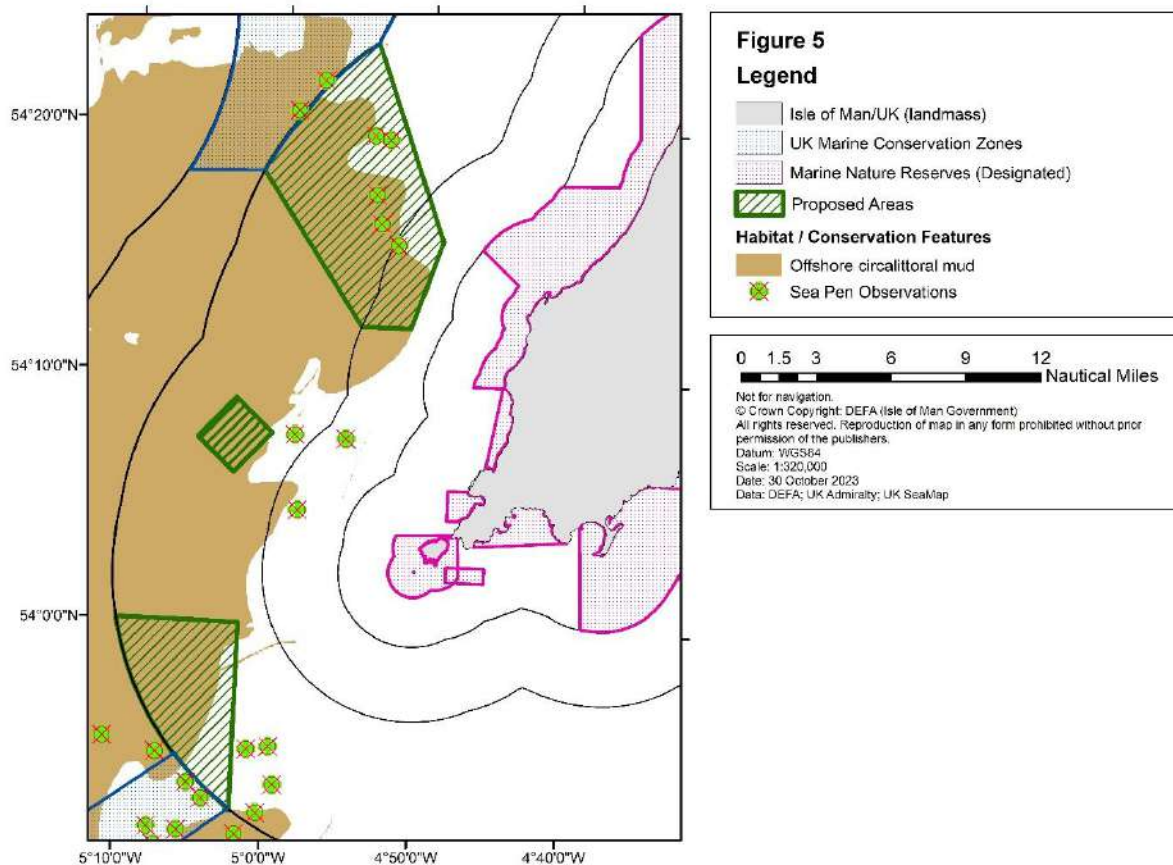
*The United Kingdom is responsible for the international relations and defence of the Isle of Man and for relevant obligations binding on them in international law.*

*However, the Isle of Man, being a self-governing dependency of the Crown, exercises jurisdiction over the internal waters of and territorial sea adjacent to it and are responsible for complying with relevant international obligations within their jurisdiction.*

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<sup>5</sup><https://www.gov.im/about-the-government/departments/environment-food-and-agriculture/environment-directorate/fisheries/sea-fisheries/iom-uk-fisheries-management-memorandum-of-understanding-mou/>

- 2.17. Offshore muddy habitats such as the WISMB are of high conservation value and contain several Vulnerable Marine Ecosystems (VME). Understanding and managing human impacts upon such habitats is recognised as a high priority under various international conventions.
- 2.18. A key indicator species for this habitat type is the sea pen (*Virgularia mirabilis*), recognised by the OSPAR Convention as a priority species, and is recognised as a VME. Further information on these conservation features can be found on the OSPAR website<sup>6</sup>.
- 2.19. The United Kingdom has already designated two sites in the Irish Sea as Marine Conservation Zones (MCZs) to afford protection to these habitats based on JNCC advice<sup>7,8</sup>. However, at present, no management measures have been implemented at these areas. Survey data shows that these species and habitats (conservation features) are present within areas of the WISMB within the Isle of Man territorial sea, as shown in Figure 5 below.



- 2.20. By introducing spatial management measures in the WISMB in which bottom-towed fishing methods are prohibited, the Department aims to build a greater understanding of the potential marine biodiversity and conservation benefits of closed areas in this type of habitat. Further

<sup>6</sup> <https://www.ospar.org/work-areas/bdc/species-habitats/list-of-threatened-declining-species-habitats/habitats/sea-pen-burrowing-megafauna>

<sup>7</sup> <https://jncc.gov.uk/our-work/queenie-corner-mpa/>

<sup>8</sup> <https://jncc.gov.uk/our-work/south-rigg-mpa/>

data collection, which will build upon data already available from various independent datasets, will inform the future management of the WISMB beyond 2026.

### *The WISMB as an area of sustainable fisheries development*

- 2.21. The WISMB contains the so-called *Nephrops* "Functional Unit 15" (FU15) which provides a lucrative fishery for prawns and is the most densely populated of such stock units in British waters.
- 2.22. Fishing for prawns in British waters is subject to catch quota determined by the Secretary of State following bilateral negotiations with the EU. The prawn quotas applicable to Functional Unit 15 are applied at a broad geographical scale for the whole of ICES Area 7.
- 2.23. The latest ICES assessment and advice for the *Nephrops* Functional Unit 15 is available online and shows that fishing pressure is below  $F_{MSY}$ <sup>9</sup> and stock size is above  $B_{MSY}$ <sup>10</sup>. In other words, from a single-species perspective, the scientific evidence indicates that the prawn fishery is biologically sustainable.
- 2.24. Prawns fished within the ICES subarea 7a (i.e. the western Irish Sea including areas in Isle of Man, UK and EU waters) have an estimated annual first-sale value of £12m. Historically, landings of prawns from within the Isle of Man territorial sea have been dominated by UK-registered vessels using otter trawl gear, including twin-rig and multi-rig trawl gear arrangements. Whilst this method is efficient at catching prawns, it is also responsible for multiple negative impacts upon the benthic marine environment and non-target species ('bycatch').
- 2.25. Further, some stocks which are caught as bycatch in the *Nephrops* trawl fishery are assessed by the International Council for the Exploration of the Seas (ICES) as being in a highly depleted or critical condition, such as Irish Sea cod and Irish Sea whiting. Demersal trawling for prawns contributes significantly towards fishing mortality in both these stocks, resulting from both landings and discards; however, increasingly, the role of environmental change (including warming sea temperatures as a result of climate change) is thought to be inhibiting the recovery of these stocks.
- 2.26. Following the UK's departure from the EU, the Secretary of State has determined how fishing opportunities (catch quota), gained as a result of the EU-UK Trade and Cooperation Agreement, i.e. 'additional quota', is to be shared among and used by the British fishing fleet.
- 2.27. Under the UK Quota Management Rules, the Isle of Man has been afforded an exemption so that the island benefits from additional quota for stocks of fish and shellfish that are present/transient within the Isle of Man territorial sea, including prawns. By 2026, the amount of prawn quota available to Manx fishing boats will be approximately 300 tonnes (including existing quota holdings in the Isle of Man).

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<sup>9</sup>  $F_{MSY}$  is a biological reference point for fisheries management. It is the fishing pressure that gives the maximum sustainable yield in the long term.

<sup>10</sup>  $B_{MSY}$  is the biomass that enables a fish stock to deliver the maximum sustainable yield. In theory,  $B_{MSY}$  is the population size at the point of maximum growth rate.

- 2.28. Under section 25 of the Fisheries Act 2020 (of the UK Parliament), the UK Fisheries Authorities have a statutory responsibility to ensure that when distributing quota for use by fishing boats, they must incentivise the use of selective fishing gear, and the use of fishing techniques that have a reduced impact on the environment (i.e. methods that use less energy, or cause less damage to habitats).
- 2.29. Although the Fisheries Act 2020 (of the UK Parliament) does not apply directly to the Isle of Man, the Department recognises that fishing boats must be incentivised to utilise fishing opportunities in an environmentally-responsible way, considering that fish stocks and the wider marine environment are a public good. This is acknowledged within the Memorandum of Understanding between the Fisheries Administrations of the United Kingdom and the Isle of Man (2023), which states:

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*DEFA will encourage the use of selective fishing gear and the use of fishing techniques that have a reduced impact on the environment in respect of fishing opportunities allocated within the territorial sea adjacent to the Isle of Man.*

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- 2.30. Whilst the Isle of Man has been allocated quota for prawns, it does not have sufficient quota to account for the capture of non-target species if the full 300 tonnes were targeted using trawls, in particular cod and whiting, which must be accounted for under the Landings Obligation.
- 2.31. Therefore, for the Manx fleet to effectively utilise the additional prawn quota allocation, alternative fishing methods must be employed that result in less bycatch of quota species. The Department therefore intends to incentivise the use of creels as a method of targeting the prawn fishery in the Isle of Man territorial sea.
- 2.32. The Department recognises the efforts made by the UK fishing industry to increase the selectivity of traditional otter trawls in the *Nephrops* fishery; however, fishing for prawns using creels has multiple environmental benefits over contemporary trawl-fishing methods, including minimising disturbance to the sea floor (in particular, subsurface abrasion to the seabed) and significantly less bycatch of non-target species. Further, non-target species that are captured in creels are assessed to have high-survivability and are not subject to the Landings Obligation, meaning they may be legally discarded and do not need to be counted against quota, therefore avoiding any potential 'choke' scenarios. Finally, the quality of prawns caught by creels usually results in a higher price per kg compared to trawl-caught prawns, therefore maximising the value of the resource.
- 2.33. By establishing areas within the WISMB with associated fisheries management measures that prohibit bottom-towed fishing methods, the Department aims to encourage the development of a selective and environmentally-friendly creel fishery for prawns.
- 2.34. The areas of the WISMB that are not subject to the proposed management measures would continue to allow for access by boats using bottom-towed fishing methods; however, it is the Department's intention to improve the management of the trawl fishery within Manx waters, for example by taking account of the actions, recommendations, and measures arising from

the UK 'Irish Sea Demersal' Fisheries Management Plan and the ongoing Marine Stewardship Council *Nephrops* Fisheries Improvement Project. Future management of fisheries within the WISMB may also be shaped by the results of the scientific research that is currently underway, and the development of a Manx Marine Spatial Plan.

- 2.35. The Department recognises that an 'unmanaged' creel fishery could also have negative impacts on the environment and could lead to localised overfishing of prawn populations as well as gear-saturation of certain areas. The Department therefore proposes to establish a management framework for the prawn creel fishery using a similar approach to other static-gear fisheries in the Isle of Man territorial sea (e.g., as with crab and lobster, and whelk) by creating a requirement for vessels to hold a Specific Fishery Authorisation, each of which will have a limited pot allocation.
- 2.36. Survey data also shows that the WISMB may be an important nursery ground for other commercial species, in particular female edible crabs, which migrate to soft/mud habitats in autumn to extrude and develop their eggs, following mating in inshore grounds during spring/summer. The proposed measures in the WISMB are therefore also expected to benefit other commercial fisheries by delivering an 'ecosystem-based approach' to management. The Department aims to collect further data on the wider fisheries conservation benefits from the proposed spatial management measures in order to inform future management of the WISMB.

### 3. DEFA's Aims and Objectives

The aims and objectives of the proposal to introduce spatial management measures in the WISMB are as follows:

- Objective 1.** To enable Phase 1b research of the Manx Blue Carbon Project, as part of the Island's Climate Change Plan, to inform future policy and blue carbon management.
- Objective 2.** To enable further research into the sustainable fisheries and marine conservation benefits of spatial management measures, in particular for commercial fish stocks and conservation features that are assessed as being highly depleted or in a critical status, as well as other species that are known to rely upon the WISMB for nursery grounds.
- Objective 3.** Encourage the establishment and development of an environmentally-sustainable prawn creel fishery, to allow for the Isle of Man's additional quota to be utilised in line with the Memorandum of Understanding between the Fisheries Administrations of the United Kingdom and the Isle of Man.

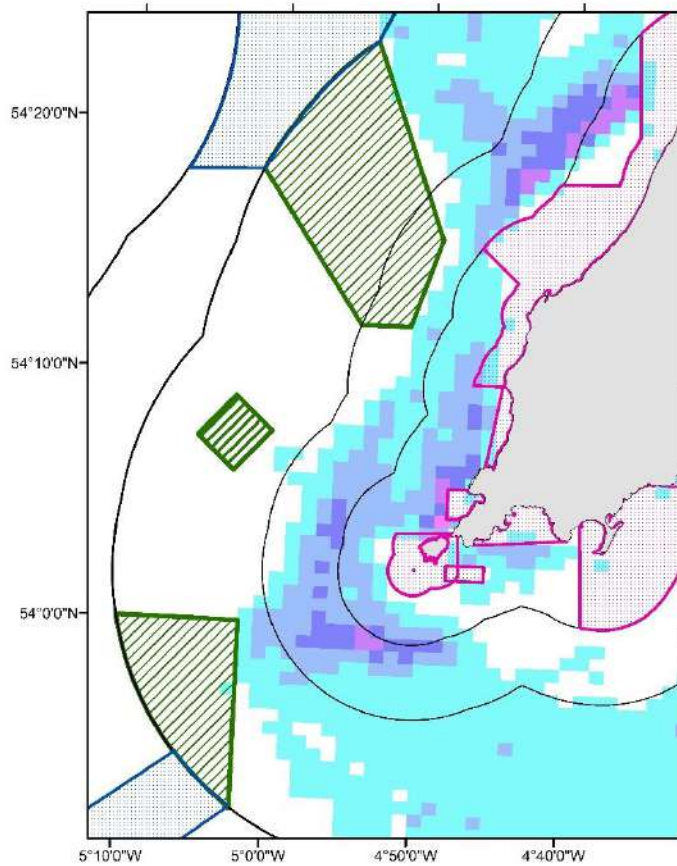
### 4. Proposed Management Measures

#### Areas in which bottom-towed fishing methods will be prohibited

- 4.1. The Department has prepared the following (proposed) areas in which bottom-towed fishing gear will be prohibited, for consideration by relevant fisheries stakeholders (note that the use of pelagic trawl gear will not be impacted by the proposed management measures).

- 4.2. The measures have been developed with consideration and analysis of bathymetric and habitat spatial data (UK SeaMap, JNCC), independent fisheries conservation survey data (various datasets including Underwater Television data, drop-down camera data, independent stock survey data), and Vessel Monitoring System (VMS) and logbook data submitted by fishing boats. The areas have also been selected to coincide with the blue carbon research requirements for closed areas as shown in **Figure 3**.
- 4.3. The Department proposes to implement three separate areas in which bottom-towed fishing methods will be prohibited (see **Figure 1**).
- 4.4. One site to the north-west of the Isle of Man (the proposed '**West of Targets Area**') would be directly adjacent to a UK Marine Conservation Zone ('South Rigg MCZ') that has already been designated by the UK Government. Independent fisheries and conservation survey data shows the proposed West of Targets Area has an abundant population of prawns as well as several species of conservation interest, including sea pens, recorded from this area. The area would also contain one of three **Blue Carbon Experimental Zones**.
- 4.5. The second area, which is approximately 5 miles west of Bradda Head, would be established as a Blue Carbon Experimental Zone, as required by Phase 1b of the Manx Blue Carbon Project. Subject to the outcome of the blue carbon research and the development of a Blue Carbon Management Strategy, the Department envisages this area would be re-opened following the conclusion of the research.
- 4.6. The third area is in the south-west of the Isle of Man territorial sea (the proposed '**Southwest Area**') and would be directly adjacent to a UK Marine Conservation Zone ('Queenie Corner MCZ'). Whilst the abundance of prawns in this area is typically lower than the proposed West of Targets MNR, this option provides a good area to establish a prawn creel fishery. Further, there is evidence that the area may be an important nursery grounds for other commercial stocks such as edible crab. The area would also contain one of three Blue Carbon Experimental Zones.
- 4.7. The combined area of these 3 locations (242 km<sup>2</sup>) represents approximately:
  - a) 6% of the Isle of Man territorial sea;
  - b) 40% of the FU15 fishing area that is within the Isle of Man territorial sea; and
  - c) 5% of the total FU15 fishing area in the Irish Sea.

The proposed measures (i.e. the prohibition of bottom-towed fishing methods in the three areas) will have implications on existing prawn trawl fisheries, in particular the proposed West of Targets Area and the Southwest Area, which are assessed and described in further detail in **Appendix 3**. The closed areas are not expected to have a significant impact upon either the king scallop dredge or queen scallop trawl fisheries, as can be seen in **Figure 6** and **Figure 7** (below). The main impacts of the spatial management measures will be on the *Nephrops*-directed trawl fishery (**Figure 8**, below).



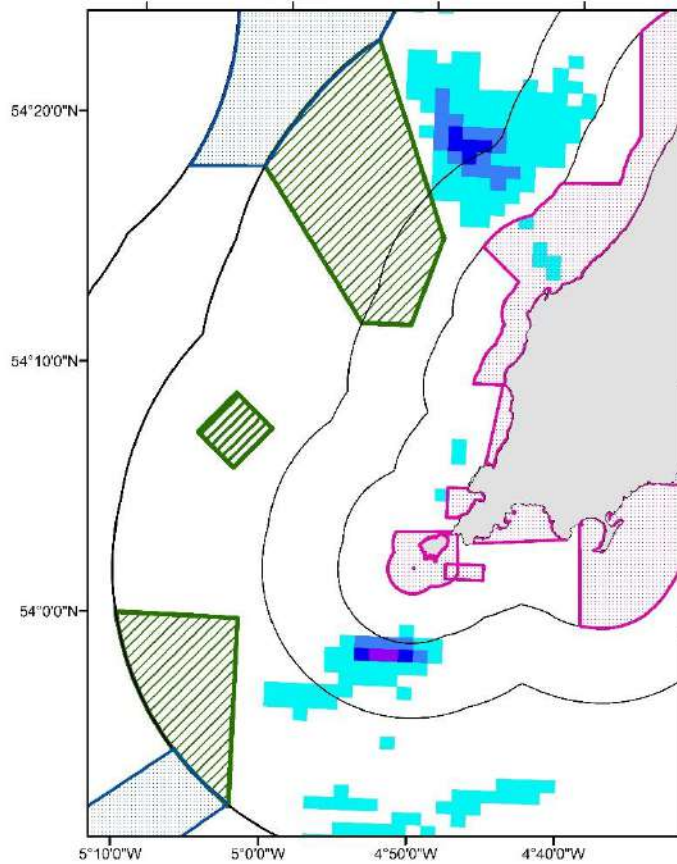
**Figure 6**

**Legend**

- Isle of Man/UK (landmass)
  - UK Marine Conservation Zones
  - Marine Nature Reserves (Designated)
  - Proposed Areas
- Fishing Activity: King Scallop Dredge  
(Hours Fished 2017/18 - 2022/23)**
- 0.000000 - 100.000000
  - 100.000001 - 200.000000
  - 200.000001 - 300.000000
  - 300.000001 - 400.000000
  - 400.000001 - 500.000000

0 1.5 3 6 9 12 Nautical Miles

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 Datum: WGS84  
 Scale: 1:320,000  
 Date: 30 October 2023  
 Data: DEFA; UK Admiralty; UK SeaMap



**Figure 7**

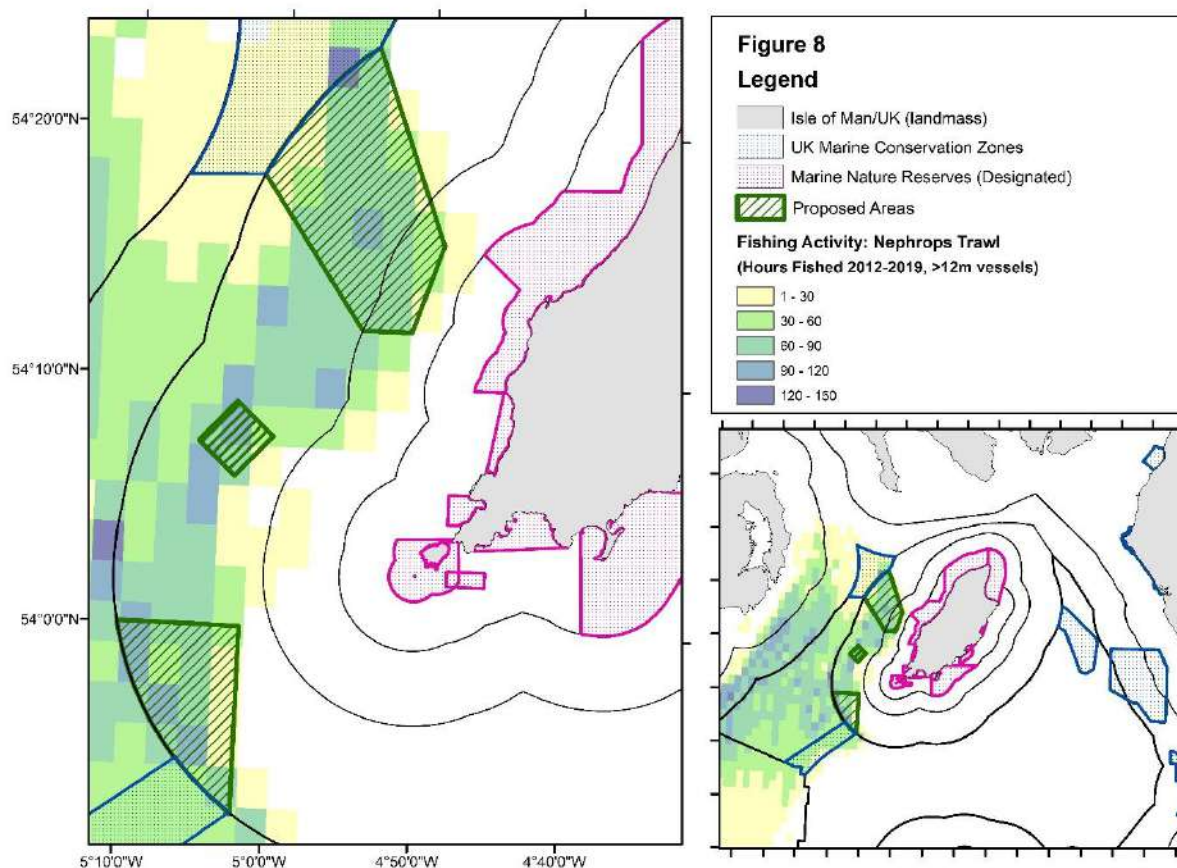
**Legend**

- Isle of Man/UK (landmass)
  - UK Marine Conservation Zones
  - Marine Nature Reserves (Designated)
  - Proposed Areas
- Fishing Activity: Queen Scallop Trawl  
(Hours Fished 2017-2023)**
- 0.000000 - 60.000000
  - 60.000001 - 120.000000
  - 120.000001 - 180.000000
  - 180.000001 - 240.000000
  - 240.000001 - 300.000000

0 1.5 3 6 9 12 Nautical Miles

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 Scale: 1:320,000  
 Date: 30 October 2023  
 Data: DEFA; UK Admiralty; UK SeaMap





- 4.8. The proposed measures (including the prohibition of bottom-towed fishing gear, and the areas in which the prohibition applies) will be reviewed in 2026. Further decisions on the management of fisheries within the WISMB will be made in the context of the data collected during the Manx Blue Carbon Project, as well as the relative success in establishing a sustainable *Nephrops* creel fishery, marine conservation considerations, and a Manx Marine Spatial Plan. However, the Department recognises that the development of a new fishery, including domestic and export supply chains, may take several years to fully develop.

#### Sustainable management of a *Nephrops* creel fishery

- 4.9. The Department has prepared the following proposals having gained experience of managing similar static-gear fisheries (e.g. crab & lobster, and whelk) in the Isle of Man territorial sea.
- 4.10. It is proposed that access to a *Nephrops* creel fishery will be restricted and limited. This will be achieved by imposing a prohibition on fishing for *Nephrops* using creels by way of licence condition *unless* a vessel is specifically authorised in Section C of the Isle of Man sea fishing licence (i.e. unless they have a Specific Fishery Authorisation to fish for *Nephrops* using creels). The current Specific Fishery Authorisation condition, which applies to crab & lobster, whelk, queen scallop and king scallop, in paragraph (1) of Part II of the Isle of Man sea fishing licence Schedule<sup>11</sup>.

<sup>11</sup> [https://www.gov.im/media/1381516/iom-sfl-schedule-cat-a\\_h8.pdf](https://www.gov.im/media/1381516/iom-sfl-schedule-cat-a_h8.pdf)

- 4.11. It is proposed that the number of Specific Fishery Authorisations (SFAs) to fish for *Nephrops* using creels will be restricted. The total number of SFAs that will be made available by the Department will be determined following the analysis of responses to this consultation, and other information sources. The Department aims to issue an appropriate number of SFAs to fish for *Nephrops* using creels that safeguards against overcapacity and potential gear-saturation of the proposed areas where management measures would be implemented. It is possible that the Department will adopt a precautionary approach in determining the number SFAs that are made available, which could increase (or decrease) over time as the dynamics of the fishery become better understood.
- 4.12. It is proposed that eligibility for a SFA to fish for *Nephrops* using creels will require that the applicant holds a current Isle of Man sea fishing licence.
- 4.13. It is proposed that licence holders will be invited to apply for a SFA to fish for *Nephrops* using creels, using an application form supplied by the Department.
- 4.14. It is proposed that SFA applications will be assessed, and ultimately allocated, based on the following criteria –
- track-record of fishing for *Nephrops* using creels;
  - diversification from current fishing activity and quota availability;
  - safeguards against commercial speculation on Specific Fishery Authorisations (i.e. demonstration of a genuine intention to utilise the fishery);
  - risks to the stock;
  - national benefit (in the form of landings made into the Isle of Man, local employment, etc.); and
  - any other relevant details presented within a fishing plan.
- 4.15. It is proposed that each SFA to fish for *Nephrops* using creels will be restricted by imposing pot-limits which will be allocated to licences.
- 4.16. The maximum pot allocation that each individual vessel may fish will be determined following the analysis of responses to this consultation, and other information sources. The Department aims to apply pot-limit allocations to ensure that the *Nephrops* creel fishery is economically viable for individual vessels, but also to ensure that fishing effort is capped at an appropriate level as the fishery develops. It is possible that the Department will adopt a precautionary approach in determining pot allocations, which may vary (either to increase or decrease) over time as the dynamics of the fishery become better understood.
- 4.17. Specific Fishery Authorisations to fish for *Nephrops* using creels will be managed in-line with existing policy on the Administration of Specific Fishery Authorisations associated with the Isle of Man sea fishing licence<sup>12</sup>.
- 4.18. In addition, the Department is seeking views on technical measures relating to fishing for *Nephrops* using creels (e.g. gear marking requirements, minimum landing size).

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<sup>12</sup> <https://www.gov.im/media/1358247/specific-fishery-authorisations-policy-sf032022.pdf>

## 5. Consultation Process

- 5.1. **Comments** - All comments received will be collated and considered in the subsequent post-consultation report. Any published comments will be anonymised and will be compliant with Isle of Man GDPR guidelines.
- 5.2. **Submissions** – 6-week consultation starting 6th February 2024
- 5.3. **Closing Date** – 18<sup>th</sup> March 2024
- 5.4. **Accessibility** – This consultation will be hosted on the Isle of Man Government’s consultation Hub; it will not be publicly available but will be accessible via link shared directly with relevant stakeholders. Additionally, copies of this document are available from the Department by emailing [fisheries@gov.im](mailto:fisheries@gov.im) or at:  
Environment Directorate (WISMB Consultation)  
*Thie Slieau Whallian*  
Foxdale Road  
St John's  
Isle of Man  
IM4 3AS
- 5.5. Please respond to the consultation by answering the questions below. You are welcome to include additional pages as necessary to provide your comments.
- 5.6. For collation purposes, it would be helpful if comments are submitted on the online consultation hub, or otherwise sent by email to the Department in Microsoft Word format.
- 5.7. Your personal information will not be published or made available. All responses will be anonymised and aggregated before summarising consultation responses. Anonymous responses will not be considered or included in the summary of comments.
- 5.8. Please note you do not have to answer all questions if you feel it is not relevant to you.

## 6. Consultation Questions

### *Section 1 - Consultee Information*

*Your name*

Please tell us your name, or the name of the organisation you are responding on behalf of.	
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*Where do you normally reside, or where is your organisation based?*

Please tell us the first 3 digits of your postcode (e.g., IM2, IM9)	
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*Which of the following are you? (Please tick)*

Fisheries related (individual)	
Fisheries related (company)	
Fisheries related (association or representative organisation)	
Public Body	
Other (please state)	

### *Section 2 – Your views on DEFA’s objectives for the WISMB*

The Department outlined three separate aims/objectives for developing spatial management proposals for the WISMB (see [section 3 DEFA’s Aims and Objectives](#) of the consultation document):

- Objective 1.** To enable Phase 1b research of the Manx Blue Carbon Project, as part of the Island’s Climate Change Plan, to inform future policy and Blue Carbon Management.
- Objective 2.** To enable further research into the sustainable fisheries and marine conservation benefits of spatial management measures, in particular for commercial fish stocks and conservation features that are assessed as being highly depleted or in a critical status, as well as other species that are known to rely upon the WISMB for nursery grounds.
- Objective 3.** Encourage the establishment and development of an environmentally-sustainable prawn creel fishery, to allow for the Isle of Man’s additional quota to be utilised in line with the Memorandum of Understanding between the Fisheries Administrations of the United Kingdom and the Isle of Man.

*2.1 What are your views on DEFA’s three objectives?*

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**Section 3 – Your views on DEFA’s proposed spatial management measures affecting bottom-towed fishing methods**

The Department has developed a proposal for introducing spatial management measures in the WISMB, which would prohibit the use of bottom-towed fishing gear in three separate areas (see Figure 1 in the [Summary](#) of the consultation document).

*3.1 Having considered the three areas, do you agree that any or all of them should be implemented, bearing in mind that each of the areas contains experimental sites for blue carbon research?*

<i>Area 1 (West of Targets Area)</i>	Yes/No
<i>Area 2 (Blue Carbon Experimental Zone)</i>	Yes/No
<i>Area 3 (Southwest Area)</i>	Yes/No

*Please explain your answer.*

*3.2 Considering the three areas, if they were to be implemented are there any aspect of the areas that you would change? (e.g., the shape).*

**Section 4 – Your views on developing a sustainable creel fishery for prawns (Nephrops) in Manx waters**

DEFA proposes to introduce a requirement for a Specific Fishery Authorisation (SFA) to fish for *Nephrops* using creels under the Isle of Man Sea Fishing Licence. A specific authorisation to fish for *Nephrops* using trawls is not being considered at this time.

Under this approach, fishing for *Nephrops* using creels will be prohibited unless it is specifically authorised in Section C of an Isle of Man Sea Fishing Licence. This reflects the current management framework for other fisheries in the Isle of Man territorial sea (e.g., for scallops, queen scallop, crab, lobster, and whelk), and ensures that access to the *Nephrops* creel fishery can be controlled and responsibly managed.

*4.1 Do you agree with DEFA’s proposal and access mechanism to create a Nephrops creel SFA?*

Yes	
No	

*Explain your answer.*

DEFA proposes to limit each Nephrops Specific Fishery Authorisation (SFA) by applying a limit on the number of prawn creels associated with each authorisation (i.e., a pot-allocation limit) to avoid a) gear-saturation in the fishery, and b) localised depletion of *Nephrops* populations.

This approach replicates the current management framework for other static-gear fisheries in the Isle of Man territorial sea (e.g., crab, lobster, and whelk) and would allow the Department to control effort in the creel fishery.

*4.2 Do you support this approach?*

Yes	
No	

*Explain your answer.*

DEFA proposes to limit the number of creels on each SFA at an appropriate level, such that it, a) ensures economic viability, and b) safeguards against proliferation of fishing gear.

Informal discussions with existing pot-fishery stakeholders have suggested a creel-limit of 500 creels per vessel would be an appropriate initial allocation from an economic perspective.

*4.3 What would you suggest is the minimum number of prawn creels that would be needed (per vessel) to ensure economic viability? Does this vary by vessel-type (e.g., size of vessel)?*

*4.4 What area of seabed would be needed to sustainably fish a certain number of creels (e.g., 500 creels)? Do you have any comments on the total number of creels that should be allocated to the fishery, noting that the proposed closure area available for creel fishing is 242 km<sup>2</sup>?*

In the past, DEFA has over-allocated SFAs for certain fisheries, which has created challenges in successfully managing the fishery for economic, environmental, and social outcomes because the fishing capacity of fleets was such that economic needs led to an overexploitation of marine stocks.

DEFA intends to avoid this situation in the prawn creel fishery by limiting the number of authorisations on a precautionary basis. There is potential for DEFA to create more authorisations in the future, if there is evidence that this could be sustainably achieved.

*4.5 Do you support this approach?*

Yes	
No	

*Explain your answer.*

DEFA proposes to limit the number of SFAs by a) considering the total area of the WISMB in which bottom-towed fishing gear is prohibited following this consultation, b) estimating the optimum number of creels that could be fished in that area, and c) estimating the optimum number of creels required per vessel to ensure economic viability. The Department will also consider the distribution and abundance of Nephrops as recorded in Under-water TV survey data.

This approach aims to ensure that the total number of creels that are allocated will be proportionate to the area available to the creel fishery, and by considering the number of creels required by a single vessel to make it economically viable to participate in the fishery.

*4.6 Do you support this approach?*

Yes	
No	

*Explain your answer.*

DEFA proposes to make authorisations available for application by vessels that currently hold an Isle of Man Sea Fishing Licence. Applications will be assessed against specific criteria (see below) and authorisations will be allocated based on the relative merit of applications that are received.

The application process will be administered in-line with the existing SFA policy, which allows the Department to take the following relevant factors into consideration when administering newly created SFAs: 1) operational continuity, 2) track-records, 3) diversification and quota availability, 4) safeguards against speculating on SFAs, 5) risks to the stock, 6) national benefit to the Isle of Man, and 7) fishing plans.

Note that quota availability depends upon whether a vessel is non-sector or part of a sectoral group (i.e., a Producer Organisation).

*4.7 Do you have any suggestions for how the Department should assess applications for prawn fishery authorisations?*

DEFA proposes to introduce conditions that require *Nephrops* creel gear to be marked and set in the same way as whelk gear currently is. See condition number 26 and 27 in Part II of the Isle of Man Sea Fishing Licence Conditions<sup>13</sup> for further details.

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<sup>13</sup> [https://www.gov.im/media/1379075/iom-sfl-conditions-cat-a\\_g5-071223.pdf](https://www.gov.im/media/1379075/iom-sfl-conditions-cat-a_g5-071223.pdf)



4.8 Do you support this approach?

Yes	
No	

Explain your answer.

There are no technical or conservation measures relating to the design of prawn creels other than the requirement to have an 80mm hard-eye entrance, which only applies in the three-mile area. The minimum landing size for prawns is 70mm (total length) and 20mm (tails).

Other pot fisheries require escape panels and pot-tags issued by the Department. The Department has also increased the minimum landing size for other crustacean fisheries to improve fishery sustainability.

4.9 Do you have any suggestions for additional technical / conservation measures to either increase selectivity, or reduce the environmental impact of fishing for prawns using creels?

4.10 Do you think the minimum landing size for prawns caught by creels should be increased, or changed to be based on carapace length only (as is the case with other crustacea species)?

The establishment of areas that prohibit bottom-trawl fishing gear may result in increased fishing effort using other types of permitted fishing gears, such as crab and lobster pots (which are different to *Nephrops* creels).

*4.11 Do you have any thoughts on whether, in addition to bottom-towed fishing gear restrictions, any other methods of fishing should be limited, restricted or prohibited in the proposed areas?*

The establishment of creel-only fishing areas will likely have displacement effects on the existing trawl fishery for prawns. Displacement can result in unintended consequences, including increased fishing pressure on adjacent areas that remain open to fishing using trawls. The net-result of spatial management measures can sometimes be negative if fishing effort is not effectively managed.

*4.12 Do you have any thoughts or suggestions on the displacement effect that may result from DEFAs proposals? How could displacement impacts be mitigated or reduced, in particular within areas that remain open to trawling?*

## List of Appendices

*Appendix 1 – Blue Carbon Research Project - Phase 1a results summary*

*Appendix 2 – Assessment of current Dublin Bay prawn (*Nephrops norvegicus*) fishing activity within the Isle of Man territorial sea*

*Appendix 3 – Coordinates of proposed areas*

## List of notified consultees

AFBI

CEFAS

Northern Ireland Executive Department of Agriculture, Environment and Rural Affairs

UK Government Department for Environment, Food and Rural Affairs

JNCC

Manx Fish Producers Organisation

Natural England

Northern Irish Fisherman's Federation

Scottish Government Marine Directorate

United Kingdom Association of Fish Producer Organisations

Welsh Government Climate Change and Rural Affairs Group

## Appendix 1 – Manx Blue Carbon Project (Initial results summary)

Initial findings from research conducted by the National Oceanographic Centre and Swansea University on the sedimentary carbon storage in the Western Irish Sea Mud Belt

### *Executive summary*

- Shelf sea sediments are natural carbon stores and cover vast areas of seabed globally (Graves *et al.*, 2022).
- Disturbance of sediments from anthropogenic activities, such as demersal fishing, has been found to impact carbon storage within sediments (Epstein *et al.*, 2022).
- Initial findings from the Manx Blue Carbon Project show that shelf sea sedimentary carbon content around the Isle of Man aligns with values predicted for the Isle of Man and surrounding jurisdictions (Smeaton *et al.*, 2021).
- Initial findings indicate that there is a correlation between sedimentary carbon content and sediment disturbance from demersal fishing pressure (Unpublished).
- Further research is recommended to investigate the correlation between sediment carbon content and fishing pressure. Research could include investigating carbon content across a gradient of fishing pressure and investigating carbon content in the absence of demersal fishing activities via closure of currently fished areas.

### *Introduction and context*

- Shelf sea sediments are widely recognised for their ability to accumulate and store carbon for long periods of time (Lovelock and Duarte, 2019). Ecosystems can be protected, enhanced, or restored to promote carbon accumulation and storage, which could help mitigate the effects of climate change by supporting the capacity for the ocean to absorb atmospheric greenhouse gases.
- Shelf sea ecosystems including carbon-rich sediments are vulnerable to widespread habitat disturbance from anthropogenic activities, such as mobile demersal fishing. Seabed disturbance from fishing pressure can negatively impact benthic community structure and function, as well as lead to sediment resuspension, which can reduce the capacity of the sediment to store and accumulate carbon (Luisetti *et al.*, 2019).
- The Western Irish Sea Mud Belt (WISMB) is a region of mud, approximately 5 to 12 nautical miles west of the Isle of Man, which experiences elevated disturbance from mobile demersal fishing activity. The impact of disturbance on carbon stocks and accumulation in the WISMB is currently unknown, but recent research by the Manx Blue Carbon Project indicates that fishing pressure correlates with decreased sedimentary carbon stocks.
- This policy brief presents initial findings for carbon stocks and accumulation in the WISMB and addresses existing knowledge gaps by suggesting recommendations for further research.

## ***Key findings***

- Sediment cores were collected from the WISMB in June 2022 (33 cores) and in August 2023 (28 cores) by the Manx Blue Carbon Project research team.
- Sediments were chilled and shipped to the National Oceanography Centre Southampton, where they were sub-sampled at different depths to investigate carbon content within the sediment. Advanced analytical methods were used to analyse sediment carbon content and sediment accumulation rates.
- Initial findings from the Manx Blue Carbon Project show that shelf sea sedimentary carbon content around the Isle of Man aligns with values predicted for the Isle of Man and surrounding jurisdictions (Smeaton *et al.*, 2021).
- Initial findings indicate that there is a correlation between sedimentary carbon content and sediment disturbance from demersal fishing pressure (Unpublished).

## ***Recommendations***

- Further research is recommended to investigate the correlation between sediment carbon content and fishing pressure.
- Research could include investigating carbon content across a gradient of fishing pressure and investigating carbon content in the absence of demersal fishing activities via closure of currently fished areas.

## ***References***

Epstein, G., Middelburg, J. J., Hawkins, J. P., Norris, C. R. and Roberts, C. M. (2022). The impact of mobile demersal fishing on carbon storage in seabed sediments, *Global Change Biology*. 28(9), pp. 2875-2894.

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## Appendix 2 - Assessment of current Dublin Bay prawn (*Nephrops norvegicus*) fishing activity within the Isle of Man territorial sea in the context of the proposed spatial management measures.

(please see separate pdf document)

## Appendix 3 – Coordinates of proposed areas

<p><b>West of Targets Area</b> 161.5 km<sup>2</sup></p>	<p>The area of the territorial sea internal of a line drawn from: (A) 54° 23.35 N, 004° 53.98 W; to (B) 54° 15.50 N, 004° 49.00 W; to (C) 54° 12.00 N, 004° 51.00 W; to (D) 54° 12.00 N, 004° 54.37 W; to (E) 54° 18.12 N, 005° 01.43 W; clockwise along the territorial sea limit to (A).</p>
<p><b>Blue Carbon Experimental Area (Central)</b> 15.4 km<sup>2</sup></p>	<p>The area of the territorial sea internal of a line drawn from: (A) 54° 07.65 N, 005° 00.17 W; to (B) 54° 06.00 N, 005° 02.70 W; to (C) 54° 07.40 N, 005° 05.25 W; to (D) 54° 09.00 N, 005° 02.70 W; returning to (A)</p>
<p><b>Southwest Area</b> 80.7 km<sup>2</sup></p>	<p>The area of the territorial sea: (A) south of a line of latitude 54° 00.00 N; and (B) west of a line at longitude 005° 02.00 W.</p>