

Morgan Generation Assets PEIR:

Detailed analysis of PEIR with specific comments from respective Departments: (Highlighted sections identify particular areas of text which have been considered further). Should you require any further clarification on any of these sections, please do not hesitate to contact us.

Chapter 6 Physical Processes

The scope of the Physical Processes Study Area extends into the Manx territorial sea (Figure 1.1), but there is very limited reference to the Isle of Man within the technical report or PEIR.

This may be appropriate for the requirements of the project, but it is not clear whether this is oversight or that appropriate consideration of the island and data sources has been made.

As such, additional, potentially relevant information may be obtained in the Manx Marine Environmental Assessment reports, in particular;

<https://www.gov.im/media/1363392/ch-21-hydrology-climatology.pdf>

and more generally here;

<https://www.gov.im/about-the-government/departments/infrastructure/harbours-information/territorial-seas/manx-marine-environmental-assessment/>

6.4.14 Designated sites

Chapter 7 (Benthic Ecology) outlines consideration of all designated sites in the study area and then identifies two MCZ as being relevant, and confirms that others are not for further consideration. This is clear. However, in this Chapter (6)(Physical Processes) only the two MCZs are indicated, but not that other sites have been identified or assessed. For continuity and demonstrated consideration, it is recommended that a similar approach is taken for Chapter 6.

Table 6.14: List of other projects, plans and activities considered within the CEA.

Recommend the inclusion of Ørsted Isle of Man windfarm and, under the appropriate heading, the Crogga gas exploration/production projects.

Chapter 7 Benthic Subtidal Ecology

Table 7.24, 7.25 (throughout this chapter and elsewhere, including Fish and Shellfish Ecology)

For the Isle of Man projects listed below;

- *Douglas Harbour, Isle of Man*
- *Castletown Bay, Isle of Man – **not aware of this as a current operation***
- *Annual Maintenance Dredging Peel Harbour Isle of Man – **please check quantities (400,000m³ annually is not considered correct), and disposal at sea is not currently a viable option.***

Has IoM Government (Department of Infrastructure) been consulted on the details and assumptions related to the above projects? It is not clear whether these projects are active, or that the correct quantities or assumptions about waste disposal sites have been made. Recommend clarification with DoI.

As noted, recommend inclusion of Ørsted Isle of Man windfarm and, under the appropriate heading, Crogga gas exploration/production projects.

Has Manx Utilities been consulted over plans for a **second electricity interconnector** between UK and east coast Isle of Man? Likely within 10 years. See **Figure 7.6**. And then assessed as appropriate in subsequent analysis?

Designated sites

7.4.6.2 *All other designated sites, **including the MNRs around the Isle of Man**, are outside the ZOI and so will not be affected by the Morgan Generation Assets. These sites have, therefore, **not been considered further** in this chapter.*

Noted, and see comment above re. Chapter 6.

Chapter 8 Fish and Shellfish Ecology

Technical Report

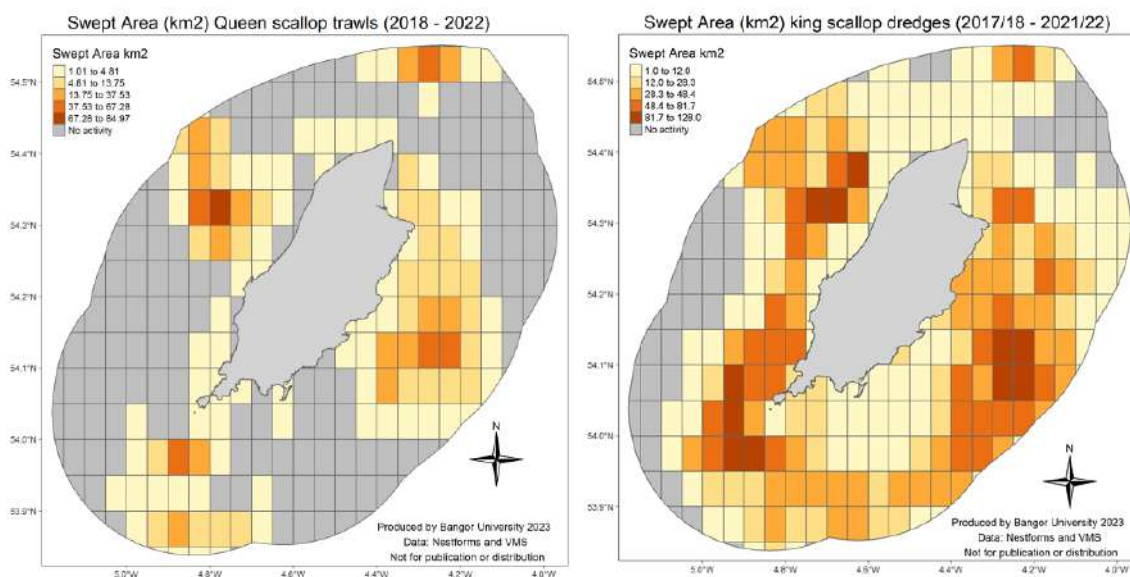
Agree that sandeel and herring are acknowledged as primary receptor species.

1.9.2.6 'While the value of landings has fluctuated over the last 10 years, the western-most portion of the Morgan Array Area has yielded some of the highest outputs of shellfish landings over the last five years. This is consistent with the consultation feedback showing higher intensity queen scallop fishing in the western-most corner of the Morgan Array Area (Figure 1.21). Other areas around the Morgan Generation Assets and within the Morgan Array Area are rarely fished as they are considered important spawning grounds for the overall queen scallop stock. Specifically, these areas are located within the eastern half of the Morgan Array Area (Figure 1.21) and extend more widely throughout the fish and shellfish ecology study area.'

Figure 1.21 is poorly presented and represents only a very specific queen scallop consideration (Scottish dredge fishing) and only WITHIN the Morgan generational area. It is not indicated as such on the figure, and does not represent a reasonable indication of queen scallop fishing grounds in the region, with no equivalence to the king scallop data presented in Figure 1.20, which might reasonably be inferred from the context.

As noted in comments on the Commercial Fisheries chapter, queen scallop should be presented as an equivalent to Figure 1.20, and using the same data sources.

Example map for historic QSC fishing grounds from similarly-available VMS data sources



Queen and king scallop: fishing activity maps based on EU VMS data (2018-2022) from Citrix (available from MMO) merged with NestForms data (held by DEFA, IoM Government). Alternatively, EU logbook data from Citrix (available from MMO) could be used in place of NestForm data

1.10 Designated sites

Table 1.8 Summary of Designated Sites within the fish and shellfish ecology study area and relevant qualifying interest features.

Refer to:

<https://www.gov.im/mnr>

<https://www.gov.im/media/1362728/mnr-designation-order-2018-300920.pdf>

<https://www.gov.im/media/1362727/manx-marine-nature-reserves-byelaws-2018-sd-2018-0186-300920.pdf>

<https://www.gov.im/media/1378920/designation-of-marine-nature-reserves-guidance-note.pdf>

It is not clear why the Table has included only 4 of the Manx MNRs, when all 10 are within the FSE Study area, and all feature at least one species of relevance, and are included in Figure 1.22.

Figure 1.22 also requires changing- the MNR names are in the wrong place in some cases. For example, *Baie ny Carrickey* is missing and Little Ness is on the wrong side of the island (see also text comment below).

See below for correct version.



1.10.12.1 Little Ness MNR is located on the **east** coast of the Isle of Man, in the Irish Sea.

Please amend accordingly.

Table is missing the following;

- Langness MNR: Modiolus and Iceland clam, European eel, cod spawning/nursery ground
- *Baie ny Carrickey* MNR: European eel, spiny lobster
- Calf of Man and Wart Bank MNR: sand eel, spiny lobster, flame shell
- Port Erin Bay - see features
- Niarbyl Bay - see features
- West Coast MNR - see features

Sand eel should also be included for Ramsey Bay MNR

Please amend and update/consider where relevant in the text e.g. Section 1.10.10, and associated PEIR Chapter 8 Fish and Shellfish Ecology.

1.11.2.2 Diadromous fish.

(Refer to: <https://www.gov.im/media/1378920/designation-of-marine-nature-reserves-guidance-note.pdf>) There are no Manx MNRs mentioned, despite having diadromous fish as designation features, although recognised as such in Table 1.10.

Chapter 8 FSE PEIR Report

8.4.1.2 Identification of designated sites

As noted above, and noting the process of identification outlined, please explain why only 4 of ten Manx MNRs were included?

As appropriate please amend both TR and PEIR to reflect more comprehensive inclusion

8.4.2 Baseline environment

Please note comment made on the Technical Report above in relation to consideration of Manx interests in the baseline and their subsequent application in Chapter 8.

8.4.2.12 King and Queen Scallop

As noted for Technical report, it's not clear why high levels of fishing for king scallop is acknowledged and presented, yet the equivalent for queen scallop is not? See graphics provided.

There is acknowledgement of high densities of scallop in Manx waters, but only a very small selected area within the array site is highlighted. This cannot be considered as equivalent presentation of species, although both are highly relevant to both IoM and UK fishers in the region. This should be addressed.

See provided maps above for example;

Data compiled recently for the Isle of Man Government to show fishing activity (using swept area as a proxy) clearly shows the distribution of these fisheries in Manx waters, and proximate to the Morgan array area. While the technical report and Chapter report's king scallop data is broadly indicative, **the queen scallop data is not.**

8.4.3 Designated sites

Table 8.8: Designated sites and relevant qualifying interests within the fish and shellfish ecology study area with distance from the Morgan Generation Assets.

As noted above, this table does not appear to adequately include Manx MNRs, only 4/10 are present, yet features are common and all are within the Study Area. Please amend accordingly or provide explanation for omissions.

See also:

Table 8.9: Defining criteria for IEFs (adapted from CIEEM, 2018). Value of IEF Defining Criteria

- **Nationally designated sites:** Manx MNRs are designated under the Wildlife Act 1990
- **Species protected under national law:** multiple designation features (species and habitats) of the Manx MNRs are protected under the Wildlife Act 1990.

So the rationale for exclusion of some MNRs is not apparent and should be clarified.

Table 8.10: IEF species and representative groups within the Morgan Generation Assets

- *'Herring is an important commercial species, but not in the immediate vicinity of the Morgan Generation Assets or in the wider east Irish Sea '*
- *Mackerel is an important commercial species, but not in the immediate vicinity of the Morgan Generation Assets or in the wider east Irish Sea.*

These statements are queried, and should ideally be supported by VMS data showing species fishing activity.

The herring statement also appears to contradict Chapter 11 Commercial Fisheries, where it indicates the presence of this fishery in the areas and an effect on receptor.

For example;

Herring vessels

- 11.8.2.21 Feedback from project-specific consultation has established that, at the time of writing, the herring fishery in the region is comprised of three pelagic trawlers from Northern Ireland and two from England. Landings statistics indicate that within the commercial fisheries study area, this receptor group almost exclusively operates within ICES Rectangle 37E5, in which a relatively small, northwest section of the Morgan Array Area is located. The Douglas Bank herring fishery, positioned within ICES Rectangle 37E5, overlaps with the northwest section of the Morgan Array Area; and is subject to annual closure between 21 September and 15 November. Landings statistics indicate that August and September are the most important months for the herring fishery.
- 11.8.2.22 This receptor group will be affected by construction works at the Morgan Array Area (duration of up to four years, including seabed preparation).

The Isle of Man maintains a herring closure under domestic fisheries legislation, despite revocation of the original Council Regulation ((EC) No 850/98, amended by EC 2723/1999) which includes the Morgan array site see; Pg 26 <https://www.gov.im/media/1363405/ch-41-fisheries.pdf>

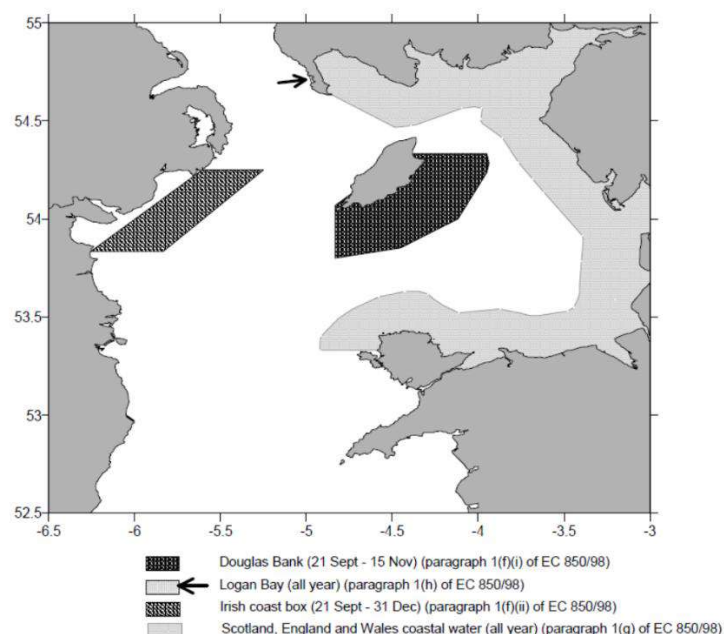


Figure 11.2.3 Position and geographical area of herring closures within the Irish Sea

This should be identified within the FSE report, and the related Commercial Fisheries chapter, and considered with respect to its ongoing function; ie. to protect spawning herring aggregations and in relation to the PEIR/EIA assessments.

For example:

- 8.8.2.33 Herring are deemed to be of high vulnerability, medium recoverability and of national importance, which would normally give a medium to high sensitivity. However, the sensitivity of herring to this impact is considered **low**, due to the limited suitable spawning sediments overlapping directly with the Morgan Array Area and the core herring spawning ground being located outside and to the northwest of the fish and shellfish ecology study area.

It seems unlikely that the area can be dismissed as indicated above, and appears to rely heavily on Coull *et al.*, 1998 as the main reference. Given the acknowledged variability in this species' spawning

patterns, further specific consultation on this conclusion with **AFBI**, as regional herring experts, is recommended.

8.8.4.13: This section raises a number of concerns about how data is presented assessed and concluded.

For example;

- *Many shellfish species, such as edible crab and king and queen scallop, have a high tolerance to SSC and are reported to be insensitive to increases in turbidity (Wilber and Clarke, 2001);*

This reference relates to a temperate/subtropical American species (*Agropecten irradians*) in estuarine conditions, and CANNOT be extrapolated to king and queen scallops.

- *'In the case of possible burial during settlement of SSC, both king and queen scallop have the potential to be impacted negatively. However, it has been found that any potential burial of queen scallop does not negatively impact emergence from sediment and survival rates in the short term of up to two days, with the caveat that they do have the potential to be negatively impacted when buried under several centimetres of sediment over longer time periods, up to seven days (Hendrick et al., 2016).'*

The actual conclusion of this **laboratory** study was that 'the queen scallop (*Aequipecten opercularis*)' was 'highly intolerant to burial'. Why not also present the simple point also?

- *'The MDS modelling of sediment plume movement and deposition depths have shown this is unlikely to occur in this case. King and queen scallop both have high intensity spawning grounds mostly overlapping the Morgan Array Area and are both more mobile than many other shellfish species and are expected to avoid active events causing increases in SSC. This potential avoidance behaviour is less prevalent in juvenile king scallop, where burial from up to 5cm of SSC deposition can reduce growth rates, potentially having impacts on future spawning times (Szostek et al., 2013). However, the relatively low level of SSC and deposition, and the large area available alternatively for spawning, is unlikely to significantly impact king scallop populations in the short or long term.'*

While these species are relatively more mobile than other shellfish, *Szostek et al., 2013, also noted that 'A. opercularis frequently swim short distances (by repeated 'clapping' of the shells) to escape predators, while P. maximus exhibit this behaviour much less frequently and require a longer aerobic recovery time (Brand 2006).'*

The research also involved juvenile scallops (30mm) which are more active than adults – so the extrapolated effect to include adult (commercial size) animals cannot be reasonably concluded.

As such, this appears to represent rather selective data and over-generalised conclusions, and is of concern in the context of such assessments if this practice is common, given the scope and scale of the material presented.

Table 8.28 and Figure 8.8: List of other projects, plans and activities considered within the CEA.

- **Dredging activities and dredge disposal site**
- Douglas Harbour, Isle of Man
- Castletown Bay, Isle of Man – **not aware of this as a current operation**
- Annual Maintenance Dredging Peel Harbour Isle of Man – **please check quantities (400,000m3 annually is not considered correct), and disposal at sea is not currently a viable option.**

Has IoM Government (Department of Infrastructure) been consulted on the details and assumptions related to the above projects?

Tier 3: need to include Ørsted Isle of Man windfarm and, under the appropriate heading, Crogga gas exploration/production projects.

Has Manx Utilities been consulted over plans for a second electricity interconnector between UK and east coast Isle of Man? This is considered likely within 10 years.

And then assessed as appropriate in subsequent analysis.

Table 8.32: Summary of potential environmental effects, mitigation and monitoring

Underwater noise impacting fish and shellfish receptors

Further mitigation: '*..... further mitigation is currently being investigated to minimise risks of significant impacts if piling occurs during the **herring** spawning season.*'

Agree that this is appropriate, and recommend specific consultation with AFBI on herring spawning, and inclusion of Isle of Man Government (DEFA) due to developing interest in the fishery and relevant herring legislation covering the proposed array area.

Should there not be a monitoring component on the effects (e.g. landings, fishing activity patterns) on commercial fishery species (which are easier to collect data on) in order to determine the validity of the assumptions made about relevant species (e.g. scallops, queenies, crustaceans, herring etc.) and monitoring of assumed levels of effect, e.g. actually measuring the sediment loads and sound levels as predicted by modelling? Or monitoring of colonisation of potential INNS on structures? Without additional monitoring how can these EIA assessment methodologies be improved?

The TSC has concerns in that the work presented suggests there is no impact, no mitigation or no monitoring required as a result which seems somewhat odd given the extent of the project.

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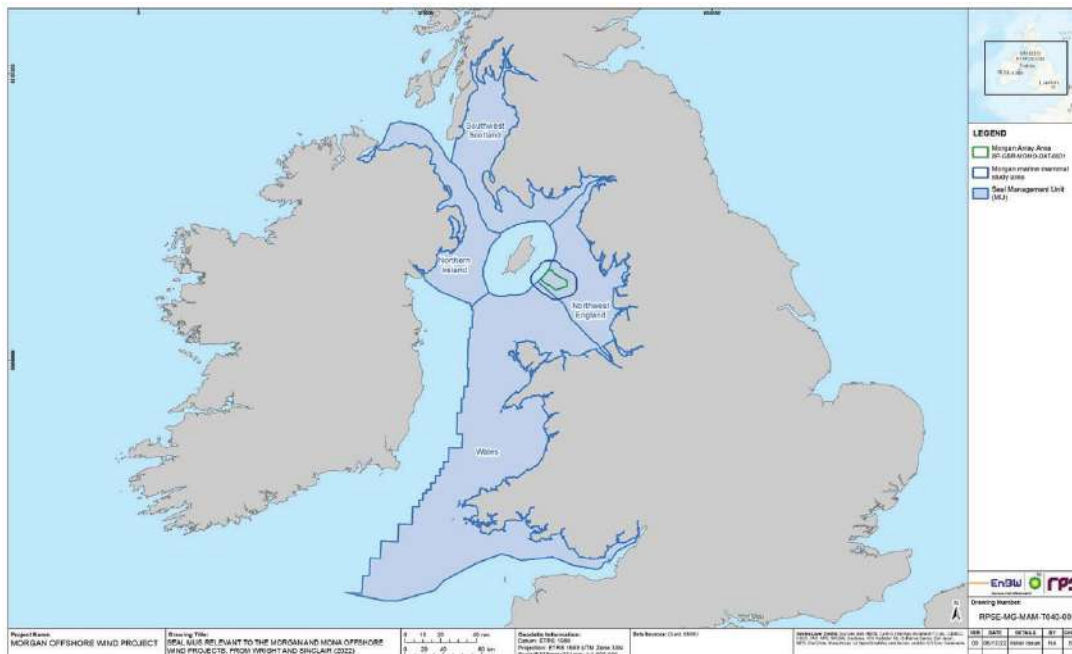
Chapter 9 Marine Mammals

Technical Report

1.7.13 SMRU Seal Surveys

'1.7.13.3 A SMRU report was commissioned to support the baseline assessment for the Morgan Generation Assets (Wright and Sinclair, 2022; Appendix B). The following sections provide a brief account of the surveys carried out for seals and the data is presented in Appendix B.'

Acknowledging the underlying data for this report, it is also a specifically commissioned component for the development, but appears to completely exclude Isle of Man, which is the closest seal population to the development – see below.



Acknowledging inclusion of MWT seal data at **1.7.17** (and Figures 1.8-1.10) in the Technical Report: (<https://www.mwt.im/terrestrial/calf-man-bird-observatory>); **how have the two data analyses SMRU and MWT data been compared?**

However, the Manx seal data set does not appear in **Table 9.6** of the PEIR – please clarify. Overall, please confirm the equivalent treatment of Manx and non-Manx seal populations as part of the PEIR assessment?

Amend as per highlights

1.8.1.5 For the Isle of Man, the 1990 **Wildlife** Act is the primary wildlife protection legislation and sets out schedules of Manx species of animal and plant that are legally protected from injury or disturbance. It also establishes the legal protection of Areas of Special Scientific Interest, **National Nature Reserves (NNRs) and Marine Nature Reserves (MNRs)**. This list of species was revised in 2004, and the Act itself received some amendment under the Agriculture (Miscellaneous Provisions) Act in 2008.

See also comments above on;

Appendix B: WRIGHT, P & SINCLAIR, RR (2022). SEAL HAUL-OUT AND TELEMETRY DATA IN RELATION TO THE MORGAN OFFSHORE WIND PROJECT GENERATION ASSETS.

REPORT NUMBER SMRUC-RPS-2022-004. SUBMITTED TO RPS, AUGUST 2022.

It is disappointing, given its title, that more effort was not made to include and consider the Isle of Man population and data in this analysis. The main PEIR report has clearly engaged with IoM data and organisations, but this **report appears to have been specifically commissioned** by the

Morgan development, and appears not to have included the Isle of Man, which is the closest seal colony to the development. As such it is difficult to understand how west coast of Scotland, mid Wales and the North Sea coast of England has more relevance to this development than the Isle of Man.

For example, there are 13 years of grey seal data available online, which may lend themselves to relevant, if not identical analysis: <https://www.mwt.im/terrestrial/calf-man-bird-observatory>
As such, it is difficult to be confident that the Manx populations have been adequately and equally included, and the Isle of Man Government seeks confirmation that this has occurred.
Acknowledging the remit of the report (pg. 132) and data sources used, there is relevant data available from MWT- as noted at 1.7.17.1 - 1.7.17.2; but there is no specific mention of the Isle of Man in this section, and so it is difficult to understand how the document actually achieves its objectives.

PEIR

Pg. 21: Grey seal is a qualifying interest of several SACs and **three MNRs (Isle of Man)** within the regional marine mammal study area (Table 9.9).

Agree with tables **9.15** and **9.16** Scoped Out and Measures adopted.

Pg. 40. 9.8.2.19

Use of seasonal density peaks for grey seal. Clarify that you have include the Manx populations in the secundary baseline report and which are closest populations to the development.

Clarify exclusion of Manx bottlenose dolphins due to temporal regime in Cardigan Bay if the population is the same and they occur in Manx waters in winter?

Pg. 42: 9.8.3.18: re. exclusion of Risso's dolphin due to inadequacy of model. Please **include additional comment about the expected relative impact on Risso's**. It is difficult to understand how the species' relevance can be acknowledged in Manx waters in the baseline and then be excluded due to model limitations **without commenting further**, or obtaining expert advice on the expected or estimated effect on Risso's **in relation to** the three species actually included.

In summary: IoM Government would like to see specific evidence of the consideration of Risso's dolphins, given their proximity to the development and the **0.8-1.1%** impact on the reference population (vs. minke (which is included) and has a **0.27-0.38%** of population impacted) – unless there is no intention or expectation of construction piling in summer months when Risso's occurrence is highest in Manx waters, which seems unlikely.

Pg. 50, **9.8.3.61 – 9.8.3.65** linked to above, provide evidence or clarifying that the Manx grey seal population has been appropriately considered.

Cetaceans

See MWDW: the text appears to present ambiguity of the seasonal data – '*Data obtained from MWDW (2022) also shows higher sightings of Risso's dolphin in summer months, with peaks in June and July however there is no control for survey effort.*'

In the Technical Report similar comments are made about survey effort for several species;

- Porpoise 1.9.2.9
- Bottlenose dolphin 1.9.3.29
- Common dolphin 1.9.4.15
- Risso's 1.9.5.18
- Minke 1.9.6.15

MWDW has been asked to comment on this and provided the following;

*The original data request was for sighting locations by species and was provided as shapefiles from pooled sightings from all sources. The **associated effort data** was not requested, and was **not provided**.*

The text appears to indicate that they can't confirm that there are no winter sightings because either the species is truly seasonal, or because MWDW has never surveyed in the winter; which is not an unreasonable conclusion. However, this could be confirmed either way by obtaining the effort data and reanalysing. Alternatively, MWDW can provide a 'pers. comm.' to say that we are confident the sightings data reflects a true seasonality for Manx waters.

MWDW has associated effort data from land and boat surveys, although the public sightings data has no associated effort. A large proportion of the sightings come from public reports (e.g. 1190 Risso's, 983 of which from public so with no associated effort).

MWDW has some survey effort from all months, but with least in winter (~3.5%), most in summer (~50-60%), and middling in spring and autumn. So we can say that though we have less effort in the winter, the data we have collected shows seasonality.

With the public data, although it can't be analysed in terms of effort we do receive sighting reports throughout the year and this again reflects that seasonality.

A request can be made for effort data, or request for clarifications or pers. comms. to include.

I would be fairer to change the wording to indicate that 'sightings data was not analysed in the context of effort', so it reflects RPS's choice rather than the data being absent.

*However, **IF the conclusion is that**; in the absence of seasonal effort data then the assumption for year-round presence is made, and the impact assessments are made on that basis, then the approach is more precautionary, and therefore welcomed.*

1.9.5.18 'Howe (2018) suggested Risso's dolphin show high seasonality to Manx waters, with marked spatial and temporal distribution, being present only between March and September and with 90% of sightings on the east coast of the Island.'

The MMEA report says: "The distribution of Risso's dolphins in Manx waters is also quite marked, with over 90% of all sightings on the east coast, around the Calf of Man or to the south west of the Calf."

So the 90% of sightings fall within those **three areas, rather than along the east coast in general**. Please amend accordingly.

Figure 9.8: Gives false impression of grey seal usage around IoM by using a single reference and excluding IoM from the SMRU report appendix. An example of consequence of using a restricted baseline.

Bottlenose Dolphin

9.8.3.51 the Cardigan Bay and Manx winter population of bottlenose dolphins on the east coast are believed to be the same group, based on data, including from photographic recognition of individuals. This should be acknowledged, and yet there is no specific assessment of the Manx population in this section.

Figure 9.9 shows the 145 db contour **all along the Manx east coast** which is where the winter bottlenose dolphin population are most commonly observed. However, **9.8.3.52** indicates maximum levels of 140 db. This is not what the Manx winter population will encounter, and so the conclusion of this section are questioned.

Pg 87. Table 9.41, 9.42, Figure 9.13 and throughout this section.

- Recommend inclusion of Ørsted Isle of Man development- pre-application phase: <https://orsted.co.uk/insights/future-developments/isle-of-man>
- and Crogga gas development: <https://www.crogga.im/>

Does this have an effect on the cumulative impacts assessment?

Table 9.54 – okay

Table 9.55 – Piling Impact Tier 1: Do comments made above about Manx bottlenose and Risso's dolphins make a difference to these conclusion?

Agree that mitigation needs discussion, including monitoring, and IoM government requests

Piling Impact Tier 1: ditto

Chapter 10 – Offshore Ornithology

DEFA has had the opportunity, in addition to this PEIR, of contributing to discussions at the offshore ornithology working group. It is noted that some matters raised cannot be taken into account within the PEIR due to the timing and that this may be picked up later, within the Environmental Statement.

Transboundary effects - The developer has stated verbally that they have considered the IoM bird populations and their conservation status and no significant impacts are predicted. The PEIR (section 10.11) lists the potential transboundary effects. The Manx Birds of Conservation Concern has also been quoted (section 10.4 and Table 10.9) in the PEIR. The Environmental Statement should include a statement on the consideration of/effects on Manx bird populations within the transboundary assessment. See also note below on Transboundary effects assessment.

Non-seabird migrants – we note that no effects have been found for any species in this assessment and we are content with the assurance that Manx data has been included within the assessment, noting our interest in species such as hen harrier and whooper swan.

Collision risk, great black-backed gull – although the risk in this PEIR has been assessed as low for this species, it is nevertheless a comparatively high potential effect on the regional population, when compared with the expected effects on other species (breeding period increase in baseline mortality 0.0631% to 0.5581%). We request that the Isle of Man population is looked at specifically in this respect, as the Island has long held a significant population of this species, though reduced recently, which is itself a concern. The JNCC Seabirds Monitoring Partnership data (or local Seabirds Count report) can be used.

Species Value and Recoverability in assessments – It is noted that razorbill is on the Isle of Man Birds of Conservation Concern red list, and though showing long term population stability it shows a severe recent reduction in population <http://manxbirdlife.im/wp-content/uploads/2021/08/BoCCIoM-2021-TABLES-vWEB04-2021-07-30.pdf>, and herring gull, great black-backed gull and lesser black-backed gull all show severe breeding declines on the IoM. We suggest that in relation to Value and Recoverability, it would be better to reflect the trends and status found in the regional population assessed rather than the overall UK trends which have been quoted, where data allows. These may or may not differ for a particular species but we note some pronounced declines in the Manx data, in comparison to national trends, in the recent JNCC 'Seabirds Count' survey, which may have significance in relation to any Irish Sea assessments.

Table 10.17 of the Offshore Ornithology PEIR relates Conservation Value, in terms of the sensitivity of a receptor, to its connection to a specific SPA and notes a receptor as of low sensitivity where no SPA has been designated. We point out that there has been no European level assessment for the designation of sites on the IoM, at this stage, and some key seabird sites have not yet been designated nationally as ASSI, though having byelaw and species protections. There is therefore potential for linking effects to a particular site, which is not an SPA and thereby considered to be a low value receptor, where this may not be the case. However, bearing in mind the 'Negligable' to 'low' predicted impacts, this may not affect the results. If an assessment of Isle of Man site implications is provided under transboundary effects, within the Environmental Statement, then this may pick up any issues that might otherwise be missed due to this issue.

Cumulative Assessment – It is noted that the Isle of Man wind farm proposal has not been included in the cumulative assessment, as no data has been published yet, but it is possible that details may be in the public domain before an Environmental Assessment is produced, and this should be kept in mind, to update the assessment if data becomes available. Two years of ornithological surveys will be completed in June 2023.

Annex 10.1: Offshore ornithology baseline characterisation – Isle of Man Marine Nature Reserves are shown on the map, and Ballaugh Curragh Ramsar site, but none of the Areas of Special Scientific Interest, though the Central Ayres is designated for little tern and Maughold Head for its

coastal cliff birds, and there are key sites in Manx National Heritage ownership which are of national importance.

Non-SPA colonies: section 1.3.1.7 states '*Additional non-SPA colonies located within individual foraging ranges from the Morgan Array Area are listed in Appendix A*' – The IoM colonies will be the closest colonies for many species but none of these is mentioned in Appendix A. Although not all have been assessed and designated with national ASSI status, the colonies are well known and on protected MNH land, including the Calf of Man, Spanish Head and Sugarloaf colonies containing a recovering Manx shearwater colony and kittiwakes, guillemots and razorbills. Unfortunately puffins are now extremely rare but a few are thought to still nest at Maughold Head, Peel Head or Spanish Head and they are red listed on the IoM BoCC.

Volume 4, annex 10.5: Offshore ornithology apportioning assessment – It is noted that apportionment of effects on seabirds, to sites has been made with respect to SPAs specifically, but it is pointed out that the Isle of Man does not have a system of SPAs and there has, as yet, been no assessment for sites of European interest (Emerald Sites) under the Bern Convention. The Isle of Man holds, nevertheless, the closest breeding seabird colonies to the development site. Our interest lies in seeking assurance that Isle of Man populations are not placed at risk, but an assessment based on SPAs only, takes no account of Manx sites, whether nationally designated ASSIs, such as Maughold Coast and Brooghs ASSI, or other protected areas that do not hold a Wildlife Act designation currently, such as the Manx National Heritage protected sites at the Sugarloaf, Spanish Head and Calf of Man which hold important seabird colonies for the Island, including common guillemot, razorbill and kittiwake, and colonies of herring gull and great black-backed gull, which are more widely scattered. All of these species were apportioned to SPAs, but interaction with Manx breeding populations is very likely and is not reported (though apportionment to non-SPA sites has been taken into account in the assessment of SPA effects). An assessment of whether the Manx populations of these assessed species, could be affected would provide assurance of their consideration.

Chapter 11: Commercial Fisheries

The Isle of Man territorial sea lies almost entirely within the Morgan Commercial Fisheries Area (Figure 11.1) and, as such, Manx commercial fisheries should be comprehensively considered in the PEIR and future EIA assessments using the best available data.

As the Isle of Man is not part of the UK, the assessment must be considered in the context of a separate/neighbouring jurisdiction, with its own legislative system, and in terms of transboundary effects.

The importance of commercial fishing in the Manx territorial sea, within the Morgan Commercial Fisheries Area is illustrated in several Figures in the Technical Report, eg. 1.44, 1.51 and 1.52. However, Figure 1.44 appears to cover all-vessel landings, whereas Figures 1.51 and 1.52 indicate use of >12m data only. How then are all landings ascribed to vessel classes for the purpose of identifying fleet impact, when a sector is excluded?

As noted elsewhere, ALL IoM VESSELS are fitted with VMS and so data is available for this fleet and should be included somehow, otherwise it could be assumed that these collective data may tend to underestimate the activity of <12m fleet sector, and potentially disproportionately the Manx fleet, due to its relatively closer proximity to the array site.

Technical Report

The PEIR provides a technical report on commercial fisheries in the [Annexe 11.1](#) to Volume 4.

The objective of the technical report is to “provide a baseline of commercial fishing activity in relation to the Morgan Generation Assets, and the wider east Irish Sea region, through a review of official datasets; additional information and knowledge obtained through consultation with fisheries groups; and site-specific surveys”.

The Methodology notes that data over at least a four year time period has been assessed, with up to 10-year assessment where possible. The IoM Government view is that a four year baseline dataset is not sufficient to assess fisheries given the disruption to activity between 2019-2022 resulting from Brexit, Covid-19, and the fuel/energy crisis. The cyclical nature of scallop fisheries is noted, but the recent *permacrisis* has affected all fisheries.

The value of landings at first-sale is presented, though the report notes that additional value (up to 60% of landed value) is generated from commercial fishing activity. I would suggest that the downstream economic multipliers (Type I and Type II) are incorporated into the assessment of impacts on fishing activity, using peer-reviewed economic multiplier analysis where possible, in order to capture to full economic impact. Seafish has done work in this area.

The data source used for landings, 2010-2020, notes that resolution is only available at ICES Rectangle and only for vessels over-10 m. The MMO may also hold higher-resolution under-10 m vessel data for some species within their [Monthly Shellfish Activity Return dataset](#). The Isle of Man collects comparable data in the Monthly Shellfish Log dataset. Both of these data sources are now replaced by the Under-10m MMO Catch App. There is under-10 m data available. The Morecambe Windfarm assessment includes this data.

It is not clear why under-15 m data is not included in the VMS dataset. All vessels over-12 m have been required to carry VMS during the reports study period. In the Isle of Man, vessels targeting scallops have been required to carry VMS since 2015, irrespective of size.

I think para 1.4.2.9 is a fair and accurate representation of Manx interest (directly) in the Morgan area, though historically more vessels may have fished outside the 12nm.

In relation to para 1.4.2.22 – I would add that the UK Government has recently apportioned quota to the Isle of Man for herring, and that the number of vessels based in the Isle of Man targeting this stock is anticipated to increase in the coming years. This could be included in section 1.5.

In relation to para 1.4.5.6 – I would add that within the Isle of Man territorial sea, the majority of landings of queen scallop is through the use of the 'queenie bottom trawl' gear. Although there has been historic dredge-caught queens in Manx waters, most dredge activity now occurs outside the Isle of Man territorial sea. This is mentioned later in 1.4.6.25.

In relation to para 1.4.5.13 – it would be useful to have consideration of gear types in relation to Nephrops (the proportion of creel vs trawl, which will be impacted differently by the development).

In relation to para 1.4.6.23 – the penetration depth seems high. There is peer reviewed literature on this, which should be used in addition to the questionnaire data.

Table 1.4: Seasonal closures of the scallop fisheries by administration

Isle of Man 01 June to 31 October **Five closed areas**

The closure period is correct, but **the whole territorial sea is closed, not 5 areas**. Please correct accordingly.

1.4.2.9 '...33 scallop vessels registered in IoM...'

This is not correct.

At 2023 there are 29 and 25 Manx-registered vessels licenced for scallops and queen scallops respectively. However, that doesn't scope the fishery in Manx waters, since a total of 55 vessels are licenced to fish for scallops (*Pecten maximus*) and 36 vessels that can fish for queen scallops (*Aequipecten opercularis*) in Manx waters. The difference being UK-registered vessels

1.4.3 Overview of landings

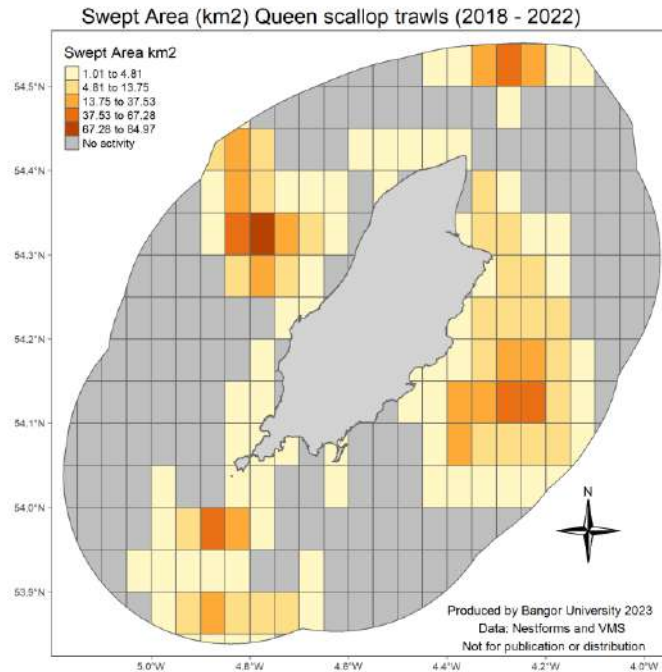
Please clarify in the text whether 'UK vessels' includes Isle of Man vessels, given that IoM is not part of the UK. For example, Figure 1.53 differentiates Northern Irish (which is part of the UK) vessels from 'UK vessels', but Manx vessels (which are not part of the UK) are not separated.

Similarly, Paragraph **1.4.8.11**:

- *'VMS data and feedback from fisheries stakeholders indicates that the west part of the Morgan Array Area is **the most important area for vessels targeting queen scallop**; these areas are displayed in Figure 1.54 which has been produced through close liaison with Scottish fisheries stakeholders and is presented as a guide to inform this technical report. Other parts of the Morgan Array Area are of lesser importance for commercial queen scallop fishing but are recognised as important spawning areas.'*

As noted elsewhere, the Manx fleet predominantly uses otter trawl to target queen scallops, and so the area displayed in Figure 1.54 is **only the most important to the Scottish vessels which use dredge**. By contrast, the **most important area for queen scallops for the Manx fleet lies further west, inside Manx territorial waters**, as shown (and underestimated) in **Figure 1.52**. As such, **Figure 1.54** cannot be considered as being representative.

For example (see below): data compiled recently for the Isle of Man Government to show queen scallop fishing activity (using swept area as a proxy) clearly shows the distribution of these fisheries in Manx waters, and proximate to the Morgan array area. While the technical report and Chapter report's king scallop data is broadly indicative, **the queen scallop data is not**.



Map based on EU VMS data from Citrix (available from MMO) merged with NestForms data (held by DEFA, IoM Government). Alternatively, EU logbook data from Citrix (available from MMO) could be used in place of NestForm data.

These types of inconsistency makes it challenging to determine the comprehensiveness of the data, and therefore the conclusions drawn, particularly in relation to impact on the Isle of Man fleet.

The Isle of Man Government would welcome further consideration of this matter, and further discussion as appropriate.

Table 1.5: *Aquapecten* = *Aequipecten*

1.4.7.1: 'Figure 1.44 shows fishing effort (kW/days) in relation to key ports in the region, between 2009 and 2020 (MMO, 2021b). Within the commercial fisheries study area, Fleetwood had the highest fishing effort in England between 2009 and 2020; landings into other English ports fluctuated across the time period; landings into the Isle of Man were also high, notably for Douglas, Peel, Port St Mary and Ramsey'.

This seems like an odd data presentation. How does fishing effort (kW days) relate to a port? Should it be simply landings (tonnes)?

It does not look like port of registry, nor port of landing, since all Manx ports appear broadly similar landings which would be surprising. Please clarify data presentation.

Also, please note that there has been a 221 kW power limit for QSC and SCE since 2010 in IoM and some de-rating has occurred as a result, so it may artificially give an impression of lower activity versus UK waters where no equivalent restriction applies.

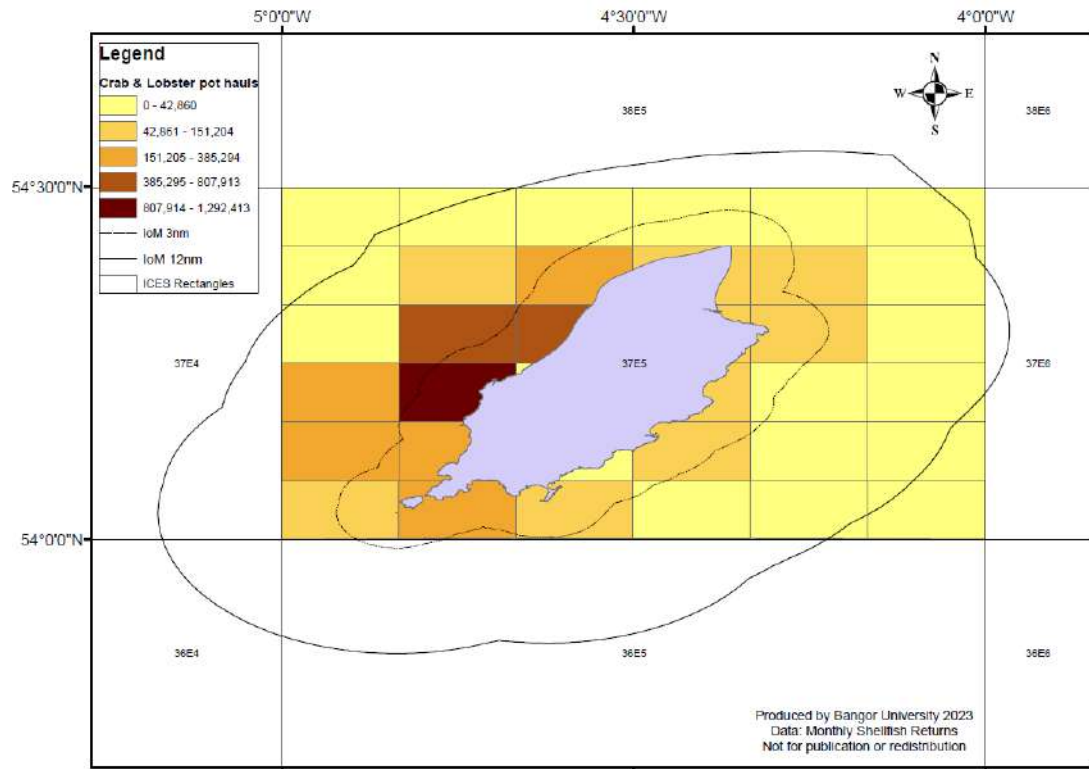
How does this affect the consideration of relative spatial fishing effort in the assessment?

1.4.8.13 – 1.4.8.15: acknowledging that this section, and **Figures 1.55 and 1.56** are indicative, and undertaken as part of a specific study by CEFAS, they **clearly do not include any significant activity** within Manx waters. As such, how have smaller Manx vessels been considered in this analysis?

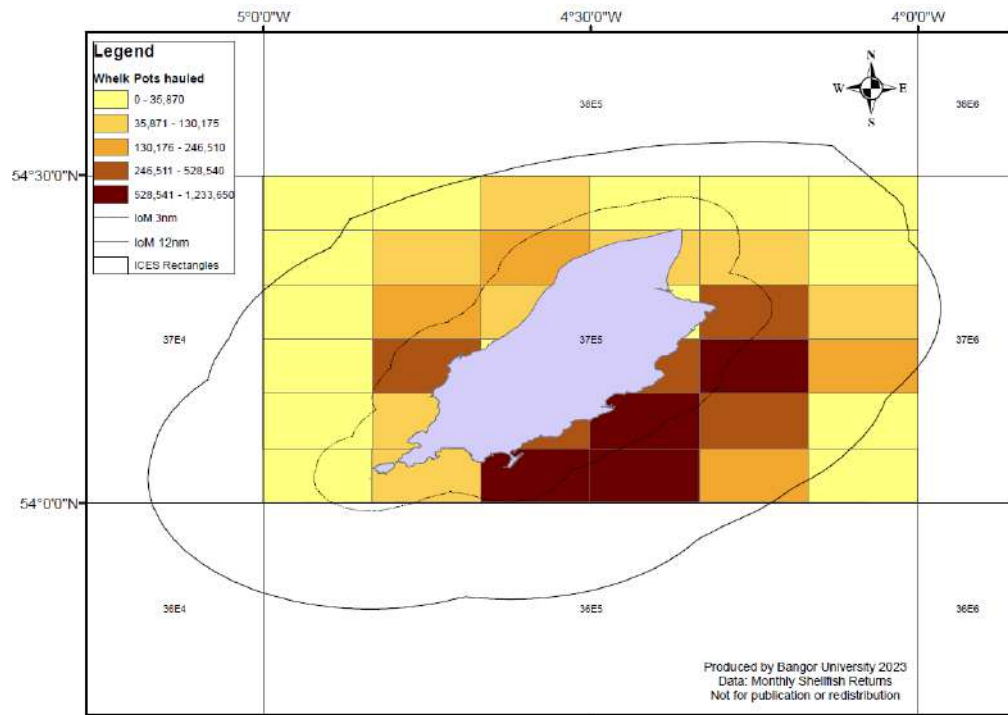
As noted previously, ALL mobile gear Manx vessels have VMS fitted and report data, and so could be similarly considered and presented for Fig 1.56.

Data on smaller Manx static gear vessels could be obtained from various sources, including Isle of Man Government, MFPO or Manx fishermen directly.

See below for comparative **commercial fishing activity maps** recently compiled for Isle of Man Government and for the Manx territorial sea area.



Crab and lobster commercial fishery activity data (2010 to 2021) (static gear) based on pot hauls (as a proxy for fishing effort/activity)). Data is obtained from monthly shellfish activity forms, but which does not contain EU logbook data from larger U.K. vessels (I.e. U.K. vessels fishing in 38E5), and so is not comprehensive. It is not known whether these data is available on Citrix (i.e. from MMO), or whether only DEFA holds it.



Whelk commercial fishery activity map (2010 to 2021)(static gear) based on pot hauls (as a proxy for fishing effort/activity)). Data is obtained from monthly shellfish activity forms, but which does not contain EU logbook data from larger U.K. vessels (I.e. U.K. vessels fishing in 38E5), and so is not comprehensive. It is not known whether these data is available on Citrix (i.e. from MMO), or whether only DEFA holds it.

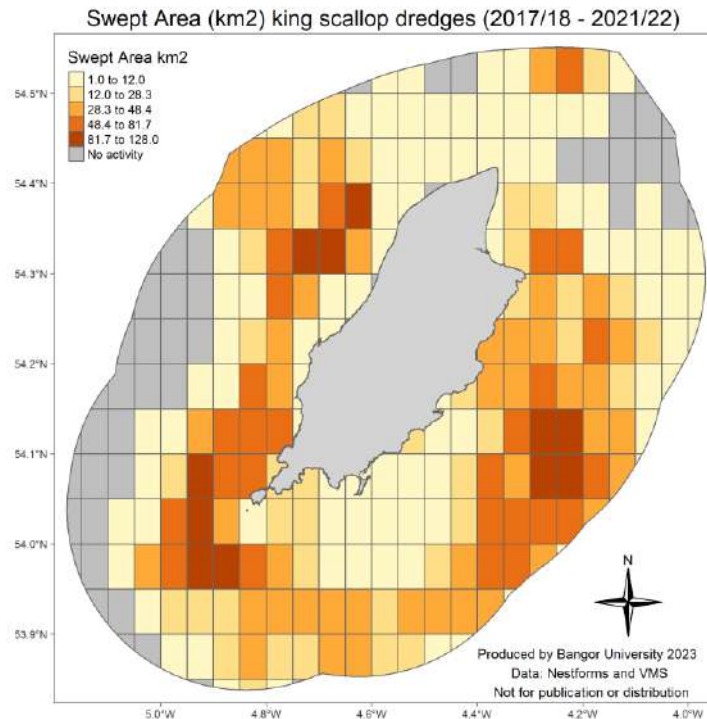
As such, and without equivalent presentation of Manx data in the report, the conclusion at **1.4.8.14** '*Figure 1.55 indicates that static gear activity (<15m vessels) was relatively low within the inshore parts of the commercial fisheries study area. This generally aligns with feedback from project-specific consultation and information collected through site specific surveys (section 1.4.9).*' is questioned.

Inshore fishing activity does not only relate to the UK coast, but also from the Manx coast. Indicative data can be presented, but wider conclusions cannot necessarily be draw from them.

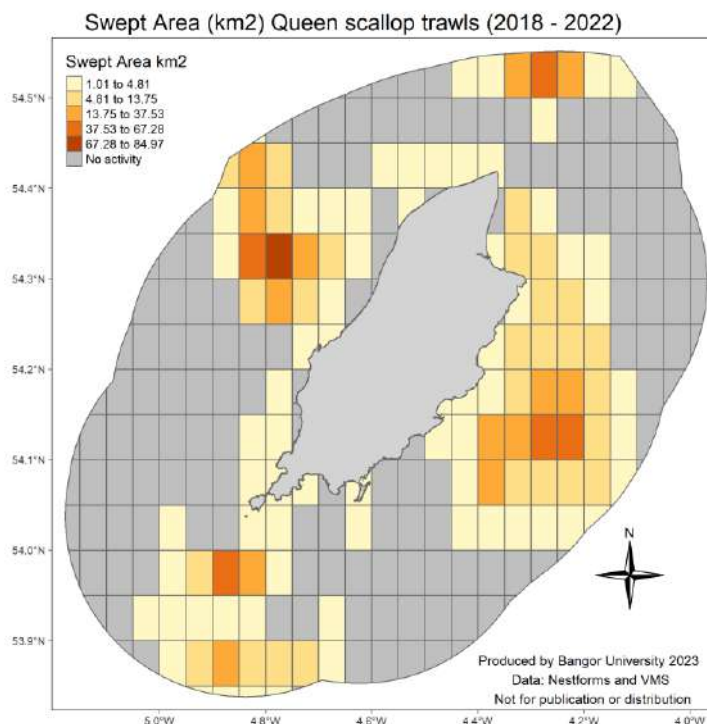
How has this conclusion been used in the subsequent analysis for the PEIR?

Does it affect those conclusions?

The Isle of Man Government requests consideration of these points and further engagement as appropriate.



King scallop: fishing activity map (dredge) based on EU VMS data (2017/18-2021/22) from Citrix (available from MMO) merged with NestForms data (held by DEFA, IoM Government). Alternatively, EU logbook data from Citrix (available from MMO) could be used in place of NestForm data.



Queen scallop: fishing activity map (otter trawl) based on EU VMS data (2018-2022) from Citrix (available from MMO) merged with NestForms data (held by DEFA, IoM Government). Alternatively, EU logbook data from Citrix (available from MMO) could be used in place of NestForm data. As such, and without equivalent presentation of Manx data in the report, the conclusion at **1.4.8.15** *'Figure 1.56 indicates that mobile gear activity (<15m vessels) within the inshore areas was highest off the Cumbrian coast and the Welsh coast, which is also evident within the VMS data.'*

cannot be considered valid. Indicative data can be presented, but wider conclusions cannot necessarily be drawn from them.

How has this conclusion been used in the subsequent analysis for the PEIR?

Does it invalidate those conclusions?

The Isle of Man Government requests consideration of these points and further engagement as appropriate.

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MFPO Consultations in June 2021, Nov 2022 – seems limited considering the proximity to Manx waters. MFPO does not significantly represent the smaller static gear vessels.

Consultation has not occurred with the Isle of Man Scallop Management Board, nor with DEFA Fisheries Division directly on the Isle of Man. These are considered to be a potentially significant omissions in achieving comprehensive coverage of Manx fisheries, especially given the relatively limited engagement with the MFPO and queries regarding appropriately representative VMS data and observational survey data (see other comments).

11.2 Policy context

Please note the following for the Isle of Man:

The Isle of Man Seafisheries Strategy is now superseded (by the Fisheries Statement) to some extent, but remains indicative of current policy;

<https://www.gov.im/media/1349731/sea-fisheries-strategy.pdf>

The Isle of Man Fisheries Statement has recently been through public consultation and is currently going through council of Ministers for final approval. It is substantially similar to the draft version;

https://consult.gov.im/environment-food-and-agriculture/the-draft-isle-of-man-fisheries-statement/supporting_documents/DRAFT%20Isle%20of%20Man%20Fisheries%20Statement%20131222.pdf

The final version, along with other relevant Manx fisheries policy, will be available here:

<https://www.gov.im/about-the-government/departments/environment-food-and-agriculture/environment-directorate/fisheries/sea-fisheries/legislation-policy-guidance/#accordion>

The Long Term Management Plan for king scallops has been approved and is available here;

<https://www.gov.im/media/1376550/ltmp-10-260522.pdf>

Table 11.5: Summary of key desktop data sources/reports

As noted elsewhere, 'VMS data for UK and Isle of Man vessels ($\geq 15m$)' does not adequately reflect Manx fishing fleet. MMO data is available for $>12m$, and for **ALL** mobile gear vessels fishing Manx waters, regardless of size.

Noting ICES data for $>12m$ was utilised, but the term 'VMS data for European mobile bottom contacting gear vessels ($>12m$)' is ambiguous – does it include UK and Manx vessels?

Given these queries, it is not apparent that the best and most comprehensive data has been used to inform the receptor, particularly in relation to the Manx fleet.

Please confirm that the following includes Manx landings:

11.4.2.2 *'Species landing data is recorded by ICES Rectangle and collected via the EU logbook scheme. Landings data has been collated **for the UK and EU Member states** for all ICES Rectangles that overlap the Morgan commercial fisheries study area, as illustrated in Figure 11.1.'*

Vessel monitoring system data 11.4.2.4

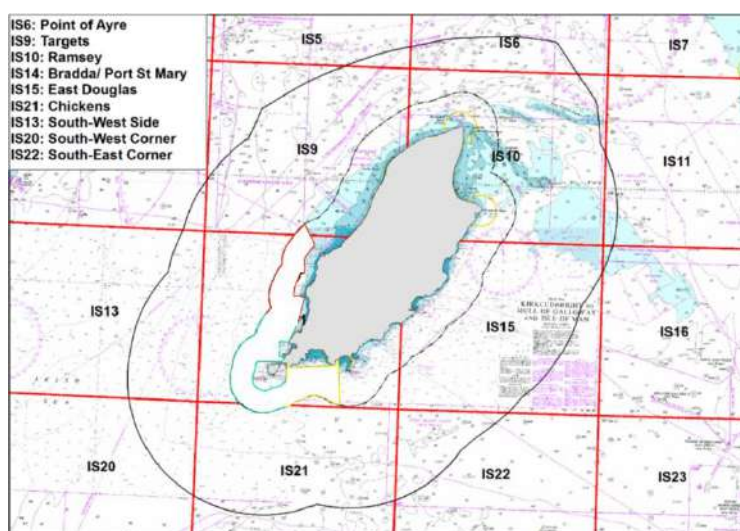
As noted, requires clarification on the ICES data set (does it include Manx vessels?) and more generally, that approximately 8/28 (around 28%) of Manx mobile gear vessels are under 12m, and their VMS data is available via MMO.

Otherwise, how have these Manx vessels been considered within the fisheries assessment process?

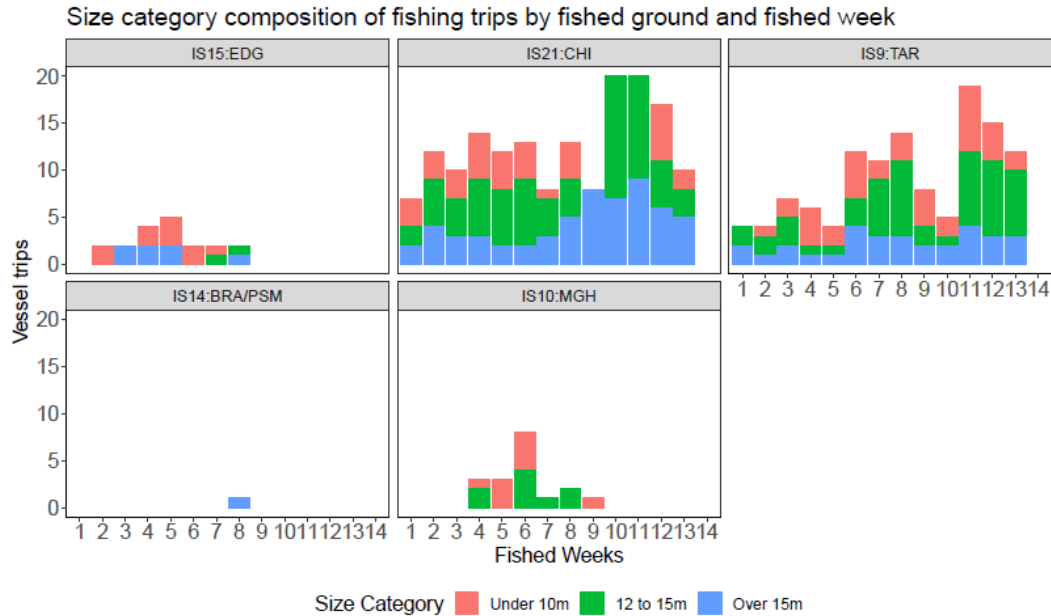
11.4.3 Site-specific surveys, Table 11.6, (and Section 1.4.8.13 of the Technical Report), and noting: 11.4.7.2 (**Data Limitations**):

'It should be noted that although smaller vessels are not captured within the MMO (<15m vessels) and ICES (<12m vessels) VMS data, information on their activity has been reviewed through feedback from stakeholder consultation and other supplementary data sources, such as information gathered via site specific surveys undertaken in 2021 and 2022.'

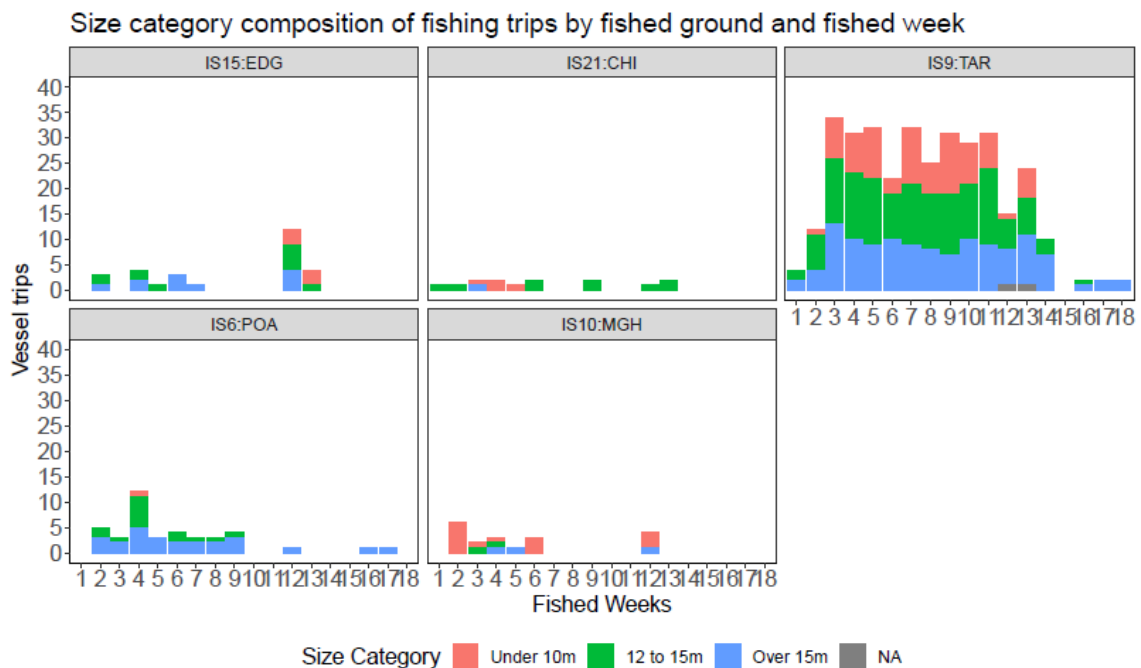
For example, Figure 1.59 of the Technical Report shows observations of fishing vessels between 30 June and 18 September 2021, and between April and September 2022- 10th July November 2022. By comparison, data available to the Isle of Man Government on the Manx queen scallop fishery during 2021 and 2022 shows, in relation to the following grounds;



1 July- 24th September 2021: high levels of fishing on Chickens and Targets, not reflected in Figures 1.56 or 1.59.



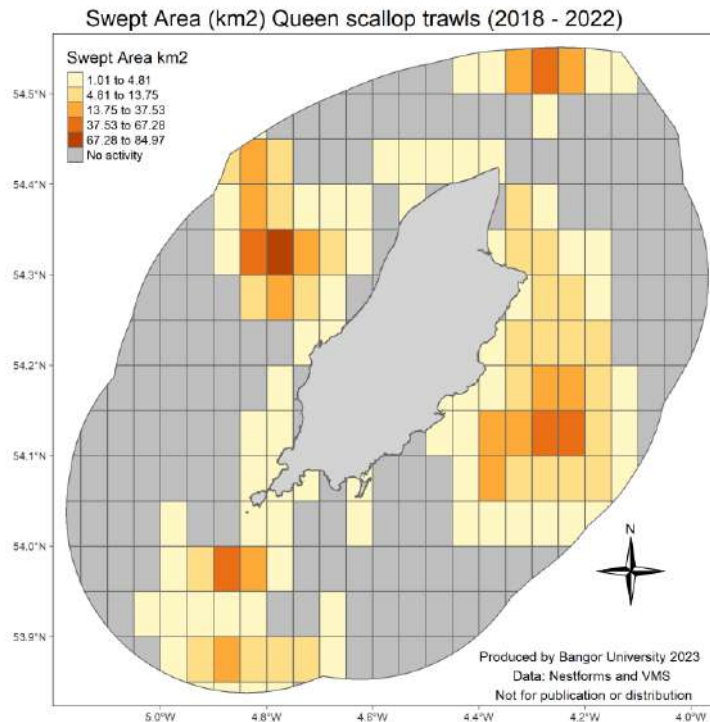
1st July and 30th October 2022: high levels of otter trawl fishing on Targets ground, not reflected in Figures 1.56 or 1.59.



- As such, the Isle of Man Government does not consider that these sources and information presented in Figures 1.55, 1.56 and 1.59 adequately represent the small vessel activity within Manx waters, and seeks confirmation that the fishing activity extent of the Manx fleet, in Manx waters, has been adequately presented and considered within the PEIR.
- Figures 11.2- 11.4:** please clarify whether Manx fishing vessels are included in UK vessels or not, and amend figure legends accordingly.

Static gear **11.4.4.13 - 11.4.4.15** presumably relates to **Figures 1.49, 1.55, 1.56** and **1.59** and therefore only to >15m vessels.

- **How have smaller potting vessels been included to any extent within this assessment, or have they not?**
- **Specifically, since the Isle of Man has no >15m static gear vessels, how has the Manx static sector been considered within this assessment?**
- If they have not, how can there be confidence in the conclusion of the PEIR in relation to fisheries impacts?
- **11.4.4.16** '..... *This is supported by feedback from project-specific consultation which highlighted that the west corner of the Morgan Array Area is an **important queen scallop fishing ground**, whereas the east part of the Morgan Array Area is of lesser importance to the scallop fisheries.*'
- As noted elsewhere, this conclusion only applies to dredge-caught queen scallops, which is the primary method used by UK (esp. Scottish) vessels. The Manx fleet predominantly uses otter trawl for queen scallops (as recognised in **11.4.4.20** and **Figure 1.27** (Technical Report)), and so this area is not particularly relevant to this sector, nor is an equivalent 'important queen scallop fishing ground' identified for otter trawl vessels.
- This is important, and should be considered for Section **11.4.4.20-21** otherwise the sector appears to be dominated by Nephrops activity (in the west and north east), which is not accurate.
- **Figure 1.52** clearly indicates the East Douglas Ground queen scallop ground, to the north west of the array area, as a high fishing effort area for queen scallops (**see below**).
- Otter trawl landings of queen scallop in Manx waters in 2021 and 2022 were 820 and 890 t respectively.
- 11.4.4.21: Otter Trawl 'Activity within the Morgan Array Area was generally limited to the west part, which is likely due to vessels targeting scallop.' This statement is confusing, as scallops (*Pecten maximus*) are not caught using otter trawl.
- This section in general need more clarity and recognition of the otter trawl dominance for Manx queen scallop fishing.



Queen scallop: fishing activity map (otter trawl) based on EU VMS data (2018-2022) from Citrix (available from MMO) merged with NestForms data (held by DEFA, IoM Government). Alternatively, EU logbook data from Citrix (available from MMO) could be used in place of NestForm data.

Table 11.7 (Receptor Groups) appears broadly correct.

Table 11.13: Impacts scoped out of the assessment for commercial fisheries

Agree.

Offshore static gear vessels

11.8.2.6 'Offshore static gear vessels are active across the commercial fisheries study area, including the area where the Morgan Generation Assets are located (the Morgan Array Area). Project-specific consultation has established that these are predominantly English vessels targeting crab and whelk. VMS data indicates that there is a large spatial extent of fishing effort by offshore static gear vessels (>15m vessels) within the commercial fisheries study area. VMS data also indicates that within the Morgan Array Area, static gear activity (>15m vessels) was concentrated within the southeast part, between 2016 to 2020, with higher densities observed between 2018 to 2020. The magnitude of impact for this receptor is therefore considered to be **low**.'

See Static gear activity maps in Manx waters above.

Displacement into Manx waters? How many of these vessels have a Manx licence and therefore access to the Manx fishery?

Scallop vessels – Scottish west coast

11.8.2.12 'Landing statistics indicate that the commercial fisheries study area was important to Scottish west coast scallopers during the period 2010 to 2020, with 11 scallop vessels based in Annan, Ballantrae and Kirkcudbright active.'

Displacement into Manx waters? How many of these vessels have a Manx licence?

Scallop vessels – Isle of Man

11.8.2.30: *'The Isle of Man Government administers a robust Scallop long-term management plan (LTMP) within its territorial waters; access to the fishery is predominantly restricted to vessels registered to the Isle of Man.'*

This statement is potentially misleading in terms of restrictions. Manx fisheries are managed as inshore fisheries, using an ecosystem-based approach and informed by best-available science. As such, access to the fishery is based on a variety of factors such as track record (and therefore regional fishing trends) and vessel characteristics, but not on place of registration. Data for 2023 indicates that, of the 55 vessels licenced king scallops, 29 are registered in the Isle of Man, while 26 are registered in the UK.

Suggested amendment:

11.8.2.30: The Isle of Man Government administers a robust long-term management plan (LTMP) for king scallops within its territorial waters. The fishery is highly regulated and, whilst access is non-discriminatory by way of nationality or home port, eligibility to participate is determined on the basis of a number of factors including historic track record and vessel characteristics.

Magnitude of impact

11.8.2.38 'Existing UK legislation does not prohibit commercial fishing within operational offshore wind farms..'

The examples provided include towed demersal and static gear. Given the inter-array minimum burial depth of 0.5m and potential for seabed cable protection – how likely is it that benthic dredging will practically continue in the array?

Will monitoring of fishing patterns during and post-construction be undertaken to confirm these conclusions?

This may be important to the Isle of Man, particularly if displaced vessels also held Manx licences.

11.8.7 Potential impacts on commercially important fish and shellfish resources

'11.8.7.6 The fish and shellfish ecology assessment concluded that for all impacts during the construction phase of the Morgan Generation Assets, the effect will be of minor adverse significance for king and queen scallops, which is not significant in EIA terms. Therefore, no significant impact is predicted for the Scottish west coast, Isle of Man and other scallop vessels receptor groups.'

11.8.7.7 The fish and shellfish ecology assessment concluded that for all impacts during the construction phase of the Morgan Generation Assets, the effect will be of minor adverse significance for European lobster and Nephrops, which is not significant in EIA terms. Therefore, no significant impact is predicted for offshore static gear vessels.'

11.8.7.8 The fish and shellfish ecology assessment concluded that for all impacts during the construction phase of the Morgan Generation Assets, the effect will be of minor adverse significance for herring, which is not significant in EIA terms. Therefore, no significant impact is predicted for herring vessels. However, the assessment concluded that there is potential for residual risk of significant effects on herring spawning if piling occurs during the spawning season, due to the close proximity of the Morgan Generation Assets to the nearby herring spawning grounds. Measures to minimise the risk of significant effects on herring spawning are currently being investigated and will be discussed with relevant stakeholders and included in the Environmental Statement.'

The Isle of Man Government requests inclusion in future discussions, in part due to changes in herring quota allocations and also due to Manx legislation related to herring spawning.

Table 11.31: Monitoring commitments. Environmental effect

Potential snagging risk.

Effects of the operational phase on fishing activity and subsequent value.

Monitoring commitment

Monitoring of the cables and their burial status to reduce snagging risk.

Annual reviews for the first five years of the operational phase, to review VMS data and landings data to identify whether there are any changes to fishing activity within the Morgan Array Area.

Means of implementation

Expected to be a condition of the deemed Marine Licence (dML) within the DCO.

Commitment to undertake this to be included within the outline Fisheries Liaison and Co-existence Plan, which will be submitted as part of the DCO application

What is the expected outcome if monitoring shows a change?

11.9 Cumulative effect assessment methodology and Figure 11.7

- Need to include the Ørsted and Crogga areas in Manx waters.

'11.10.2.1 For loss or restricted access to fishing grounds, the potential significant effect for the Morgan Generation Assets alone, across all phases, is assessed as negligible for all receptor groups other than the Scottish west coast scallop vessels. Therefore, only the Scottish west coast scallop vessels have been considered within the CEA for this impact, as there is not considered to be a potential for cumulative effects with other plans, projects or activities for the other receptor groups.

The total area from the three array areas alone is approximately 897km². This cumulative loss of area could affect an area from which a moderate proportion (20-50%) of this commercial fisheries receptor's annual value of landings is caught.' + **Table 11.35**

As above: Need to include the Ørsted and Crogga areas.

Cumulative + displacement effects could affect Manx vessels.

Table 11.40: Monitoring commitments. Environmental effect

Effects of the operational phase on fishing activity and subsequent value.

Monitoring commitment

Annual reviews for the first five years of the operational phase, to review VMS data and landings data to identify whether there are any changes to fishing activity within the Morgan Array Area.

Means of implementation

Commitment to undertake this to be included within the outline Fisheries Liaison and Co-existence Plan, which will be submitted as part of the DCO application

What is the expected outcome if monitoring shows a change?

11.11 Transboundary effects

11.11.1.1 A screening of transboundary impacts has been carried out and any potential for significant transboundary effects with regard to commercial fisheries from the Morgan Generation Assets upon the interests of other states has been assessed as part of this PEIR.

- 'Displacement of fishing vessels could occur into non-UK waters, such as the Isle of Man waters. However, it is not anticipated that there would be a significant displacement of fishing vessels into these EEZs, based on the established fishing grounds of the receptor groups within this assessment. For example, scallop vessels may be displaced into Isle of Man waters from the Morgan Generation Assets, but due to the extensive king scallop grounds within the Irish Sea and the current management measures in place for this fishery in the Isle of Man, this impact is concluded as not significant.

The Manx territorial sea is not an EEZ.

As noted elsewhere, the comprehensive Long Term Management Plan¹ for scallops has been developed around a bio-economic model that has attempted to match available resource with economic return (based on access for vessels which have a track record and economic link to the fishery). As such, any displacement of vessels into Manx waters, especially to grounds with higher scallop densities (such as Manx grounds) may jeopardize the objectives of this LTMP.

The Isle of Man Government therefore requests further consideration of the Scallop LTMP, and the spatial fishing effort data provided above, in the context of this development and the conclusions drawn here.

- *Queen scallop grounds are more discrete, however there are strict management measures in place which also control this fishery in Isle of Man waters, which would limit the displacement of scallop vessels targeting queen scallops into Isle of Man waters. Therefore, the potential transboundary impact of effects on displacement of fishing vessels is concluded to be not significant in EIA terms. '*

See also spatial fishing activity map provided and the related comments above.

There is an assumption of no long term effect on the important queen scallop area to the SW of the array area, but without monitoring how will this be confirmed?

¹ <https://www.gov.im/media/1376550/ltmp-10-260522.pdf>

Chapter 12 Shipping and Navigation

There is much concern in respect of the potential impact that the proposed project could have on shipping and navigation, particularly in respect of the Island's lifeline services via the Isle of Man Steam Packet Company. As an island nation, any significant risk of interference with marine navigation is of concern to the TSC with regard to transport to and from the island, and the shipping lanes in our Territorial waters which are used to connect the UK and Ireland. The TSC is particularly concerned about the cumulative impacts from all of the proposed windfarms awarded as part of The Crown Estate's Round 4 project, and would want to see this fully taken into account as part of the subsequent EIA to be submitted as part of the Development Consent Order application.

The TSC appreciates that the Isle of Man Steam Packet Company (IOMSPC) has until now been kept involved in this process including early project consultation meetings, and involvement in the navigational bridge simulations. It is essential that the Island's shipping companies, the Isle of Man Steam Packet Company and other shipping companies are continuously engaged throughout this process.

Representatives from the TSC have been involved in the Maritime Navigation Engagement Forum encompassing all the neighbouring Round 4 offshore windfarm sites, and will continue throughout the duration of this process. Issues were raised in that forum as to the underlying assumption for some of the navigational simulations undertaken for the ferry operators that the proposed offshore windfarm in Manx waters was not being progressed. This has been clarified and corrected, and is understood that progress is being made by Ørsted on the offshore windfarm. In addition, there are further ambitions to develop offshore windfarms in Manx waters in the future. However, the TSC notes with disappointment that this offshore windfarm site has not been included within any of the PEIR Shipping and Navigation maps, nor forming part of the overall cumulative impact assessment, something which the TSC strongly disagrees with. This is further discussed below.

The TSC notes that as part of site selection process, consideration had to have been given to shipping and navigation routes (para 4.6.3.2). The TSC requests that continued consideration is given to these issues as concerns raised to date in terms of safety for shipping and navigation have not yet been fully explored or addressed as part of this PEIR. The TSC is pleased however to see that the waters on the east of the Isle of Man have been included within paragraph 12.1.3.2 outlining that they have been considered in terms of shipping routes and their interaction with the Morgan Generation Assets and existing and planned offshore wind projects within this area for the cumulative effects assessment.

In terms of the data used for shipping, it should be noted in paragraph 12.4.4.17 where there is an acknowledgement that there are seasonal variations to the vessel numbers travelling through the Morgan area, it should also clearly identify that it also includes a different vessel for which there will be additional limitations, namely that it is a fast craft, one that the TSC believes had limited testing as part of the bridge simulations, where the focus was mainly on that of the conventional ferry, the Ben my Chree. The TSC trusts that the IOMSPC is satisfied with the conclusions from the bridge simulations for its respective vessels.

It should also be clarified that in respect of paragraph 12.4.4.26, summarising the current baseline conditions that the Douglas to Heysham route transects the northern section of the proposed Morgan site as shown in Figure 12.3 for both winter and summer surveys, and this is a two-daily movement trip for the Isle of Man Steam Packet (taken within a 24hr period). It also clearly shows the IOMSPC as part of the annualised vessel traffic routes with more than 640 transits per year in Figure 12.4, further acknowledged in 12.8.3.5 as having over 1300 movements per year passing through the northeast boundary of the Morgan array area.

Further clarification is sought on the period over which the non-typical ferry routes which include the IOMSPC have been taken as part of the 2019 AIS dataset (Figure 12.5). Whilst there is mention in para 12.4.4.26 of Analysis of vessel tracks during MetOffice named storm events did not identify any repeatable adverse weather routing by commercial shipping, there are clearly occasions whereby the IOMSPC deviate off the 90th percentile corridor, still within the proposed Morgan Array Area. It should

however be noted that in terms of future IOMSPC traffic, number of return trips will remain similar to recent years. An additional vessel will enter service, the Manxman, another conventional ferry, and this will continue to support the seasonal fast craft service. The TSC suggests that if further clarification is required in respect of vessel movements, that the IOMSPC should be consulted for confirmation.

Of greatest concern to the TSC in respect of shipping and navigation is in respect of the impacts relating to the following impacts noting that these are impacts, as per the maximum design scenario over the duration of construction, operation and decommissioning equating to potentially 43 years disruption for the Isle of Man:

Impact to commercial operators including strategic routes and lifeline ferries (NPS EN-3 2.6.162/163) (under normal sailing conditions):

Paragraph 12.8.3.3 sets out that vessel traffic will be expected to deviate around the construction site, and to include at least 1nm from navigational hazards (for up to 4 years during the construction period) – specific to the Douglas – Heysham route. This would require a deviation of 1.0nm / 3.5 minutes of steaming time per trip to the northeast, through the centre of the corridor between the Morgan Array Area and Walney Offshore Wind Farm – clarification is sought on whether this deviation has taken into account the proposed Ørsted offshore windfarm which might not provide the opportunity for the IOMSPC to deviate off its well established route to achieve the required position between Morgan and Walney. This statement also assumes that there is no other vessel traffic transiting along this route at the same time, noting the required 1nm clearance of navigational hazards, also taking into account any impact there could be from turbine interference from Walney. Has this also factored in the proposed mitigation for the Stena Line route where it is proposed that their vessel will also pass through the Walney Morgan gap (as shown in Figure 12.6)? Clarification is also sought on proposed mitigation measures, as were expected to be included within PEIR.

In addition to the proposed deviation for the Douglas – Heysham route, the IOMSPC route between Douglas and Liverpool with approximately 625 movements per year passes across the southwest boundary of the Morgan Array Area would require a deviation of 0.3nm / 0.6 minutes of steaming time per trip.

The TSC does not agree with the statements made in paragraphs 12.8.3.6 “None of the major commercial routes with more than one movement per day would be directly impacted by the Morgan Array Area” and 12.8.3.7 “Six routes were identified which would be deviated around the Morgan Array Area, including routes into Douglas, Heysham and Barrow. The majority of these minor routes have less than one vessel transit per week”. It has already been acknowledged earlier in the chapter that there are up to 1300 vessel movements per year for the IOMSPC Douglas – Heysham route, which runs across the northeast section of the Morgan array so how can it be concluded that none of the major commercial routes with more than one movement per day would be directly impacted by the Morgan array yet in paragraph 12.8.3.9 it is noted that as daily services across several operators will be impacted, the magnitude is therefore, considered to be high. Further clarification is required as to the categorisation of “commercial” and “ferry services” as it is noted that earlier in the chapter, there are references to commercial ferry services, which the TSC believes the IOMSPC is one. If the reference in respect of the “none of the commercial routes with more than one movement per day” is in respect of cargo or tankers, and not commercial ferry operators, the TSC requests that this is made explicitly clear in the subsequent EIA.

In terms of the assessment of the significance of the effect, further confirmation is required as to whether this has taken into account the cumulative impact of all proposed offshore windfarms within the Morgan Array area, including the proposed Ørsted offshore windfarm in Manx waters which has the potential to further impact on the proposed deviation distances and times.

Impact to adverse weather routeing (NPS EN-3 2.6.162/163/165).

The TSC appreciates the acknowledgement for the construction phase in para 12.8.4.4 that "During adverse weather, some sailings are delayed or inevitably cancelled irrespective of the presence of the Morgan Array Area. However, with the presence of the Morgan Array Area, where sailings are safe to take place, they may be required to route a greater distance and duration. Over the course of a day, the aggregation of these delays would result in the potential for additional sailings to be cancelled where constraints such as hours of rest are exceeded. Such effects are already experienced by operators but the presence of the Morgan Generation Assets may exacerbate this". This would be unacceptable for an Island nation entirely dependent on its well established sea links and lifeline ferry services. The TSC believes these well established sea links and routes should be given appropriate weight as part of this assessment, and subsequent examination.

Noting that it was estimated that the IOMSPC service between Heysham and Douglas would be impacted at a significant wave height (Hs) of 2.0m and cancelled at 3m Hs; the frequency for which these conditions would be exceeded within a year are given as Heysham to Douglas - between 3.7% and 18.3% of sailings would require some weather routeing (average of 9.6%) whilst between 0.3% and 3.7% of sailings could be cancelled due to adverse weather (average of 1.5%). This has then been further estimated to equate to a basecase estimate of 23 sailings cancelled would increase to 30 sailings cancelled with the Morgan Generation Assets. This analysis suggests that there would only be an additional 7 sailing per annum that would be affected during the construction phase (which estimated to take approx. 4 years, is 28 additional cancelled sailings). Again, further clarification is sought as to whether this estimate takes into account the impact the proposed windfarm could have in conjunction with the cumulative impact of the other Round 4 sites within close proximity to the Morgan Array. The TSC requests confirmation that this has been discussed with the IOMSPC and that these estimates are taken to be as accurate as possible.

In terms of additional travel and comfort time to passengers, a required deviation in adverse weather already takes approx. 10-23minutes, and with an additional 17minutes, as estimated, could result in journey times of up to 40minutes in some cases. Further noting that "the presence of the Morgan Array Area reduces the optionality of vessels to maintain a safe and comfortable heading to the adverse conditions. A passage between the Morgan Array Area and Walney Offshore Wind Farm would require vessels to navigate beam on to the prevailing conditions, which is not considered seamanlike in adverse weather and could result in cargo shift. The navigation simulations noted excessive roll was experienced during adverse weather for ferries if routed to the east of Morgan, without the capability to turn west into the prevailing conditions". This is also not acceptable to assume that the IOMSPC will feel it appropriate and responsible to sail between the Morgan Array Area and Walney Offshore Wind Farm in those adverse weather conditions knowing that it will not make a passenger journey comfortable. Should the IOMSPC Master make a decision not to follow the proposed deviation during those weather conditions, what other options are available for their crossing?

It is further noted that the same conclusions have been reached with regards both the operational and decommissioning phases of the Morgan Array Area, therefore, the additional time for adverse weather conditions and subsequent rerouting for the IOMSPC, and the possibility of reduced levels of passenger comfort will apply for at least the next 43 years.

The TSC acknowledges that the magnitude of the impact is deemed to be medium and the sensitivity of the receptor is considered to be medium. The effect will, therefore, be of moderate adverse significance, which is significant in EIA terms. The TSC understands that this will be further explored as part of the subsequent EIA which will accompany the application.

Impact on emergency response capability due to increased incident rates and reduced access for SAR responders (NPS EN-3 2.6.164).

The TSC has concern over the statement that "adequate Closest Point of Approach (CPA) was not maintained between vessels during some specific situations. This typically occurred during adverse weather runs with relatively high traffic density, including other commercial ships and small craft such as fishing boats" in respect of safe passage of vessels between the Morgan Array Area and the Walney

Offshore Wind Farm during the construction period as highlighted during the navigational simulations. This is worrying given that there will be occasions whereby adverse weather will force the ships to a specific route, acknowledging that the Morgan Array Area is essentially out of bounds for certain ships, namely those of passenger ferries which is what the IOMSPC operates as lifeline services to and from the Isle of Man. There is also concern that whilst the text highlights that there will be increased vessel movements in this area during this period, there is also the risk of further increases in vessels owing to the cumulative impact of the neighbouring proposed offshore windfarms should all be built.

The TSC notes with concern the estimated increases in potential for vessel encounters as a result of the proposed deviation around the Morgan Array Area during the operations and maintenance phases, particularly in respect of a ferry – small craft collision which exhibited a 75% increase. This is particularly concerning given that the increase in encounters as a result of the Morgan Array Area is concentrated within the corridor created between the Morgan Array Area and Walney Offshore Wind Farm, the area vessels are proposed to be deviated to instead of passing through the Morgan Array Area.

The TSC acknowledges that no amendments to the site boundaries have been confirmed as part of the PEIR, however, it is pleased to see that there is a commitment to reconsider as set out in the Shipping and Navigation Chapter. The TSC expects continued involvement as the boundaries of the Morgan Array Area is further explored and considered, and will expect that along with the IOMSPC, the issues raised as concerns of the Isle of Man will be fully taken into account as part of any future amendments.

Cumulative effect assessment methodology

The TSC is concerned that the proposed offshore windfarm in Isle of Man territorial waters (currently with an Agreement for Lease with Ørsted) does not appear to have been taken into account as part of the shipping and navigation cumulative effect assessment. In previous correspondence to the Planning Inspectorate, in respect of all scoping opinions submitted for consideration for the Round 4 offshore windfarm sites, the Territorial Sea Committee made it clear that there was an Agreement for Lease with Ørsted for an offshore windfarm development including in the response in respect of Mona (31st May 2022), Morgan (11th August 2022), Morecambe Bay (11th August 2022) and more recently, Morgan and Morecambe Bay Transmission Assets (25th November 2022). Despite repeated statements from the TSC in respect of the Agreement for Lease for an offshore windfarm in Manx waters including supplying the data to adequately map it, based on the assessment criteria for Tier 2 and 3, there appears to be no consideration for a project which has had a scoping opinion submitted but not in the public domain, albeit it historically. An update in respect of this project could have been provided by the TSC at any stage had contact been made by the project teams requesting this information. The TSC is also concerned that this site is also not included on Figure 12.9 showing the key projects in respect of the assessment. The TSC is of the opinion that given the close proximity of the Agreement for Lease site to all Round 4 offshore windfarm sites (at approximately 2.1kms from the Morgan Array Area) and the cumulative impact that all the sites could have on shipping and navigation, it must be taken into account as part of this assessment.

Impact to commercial operators including strategic routes and lifeline ferries

The TSC notes that there is the potential for impact to both IOMSPC routes in terms of additional time in minutes per journey which will, from a commercial perspective add additional costs to the company in terms of fuel to be burned, and any requirements to additional emissions being offset.

Clarification is sought in respect of para 12.10.3.8 which states that the most impacted route is between Douglas and Liverpool TSS with an additional 5.9nm of steaming above 51.7nm. However, less than one vessel per week utilises this route. If this is in reference to the fast craft service using Manannan, there are occasions where there are two return daily trips during the spring / summer period. Any impacts to this service would not be acceptable as the timetable is designed on the crafts ability to undertake two return trips taking into account both passenger and staff welfare. This is essential for the Isle of Man's tourism industry, upon which the Island is heavily dependent. If it is, as has been previously been noted, a reference to a cargo or tanker, this should be made explicitly clear.

Without the Ørsted site being clearly marked on Figure 12.10, it is not possible to fully appreciate whether the proposed deviation to the IOMSPC Douglas to Heysham route around the Morgan Array

Area will take the IOMSPC boats through this site. If it doesn't take them into the site, it proposes that the ships route very close to the boundary of the Ørsted site, and it may be too close to safely navigate noting that there is, in general, the accepted distance from obstructions for safe passage (proposed at 1.5nm in para 12.10.3.3). The same can be said for the Stena route, whilst it is deviated around the Morgan Array and joins back onto its existing route, this may too be through the Ørsted site. Further clarification is sought on this, and until such times as the Ørsted site has been identified as part of this assessment, the TSC does not accept this conclusion.

The TSC also seeks further clarification on the statement within para 12.10.3.8 which sets out that whilst it is acknowledged the most impacted route in terms of the cumulative impact is the Douglas Liverpool TSS route, it appears to imply that this is a one vessel per week trip. Clarification is sought in respect of Figure 12.11 specifically with regards to the commercial vessels which are travelling to and from the Isle of Man – the routes plotted are going to both Liverpool and Heysham. If this reference is in respect of the IOMSPC sailings, it requires further explanation because there are already acknowledged more than 1 trips daily on all these routes (noting that the fast craft are seasonal).

Impact on adverse weather routing

The TSC appreciates the acknowledgement for the construction phase in para 12.10.4.4 that "During adverse weather, some sailings are delayed or inevitably cancelled irrespective of the presence of the Morgan Array Area. However, with the presence of the Morgan Array Area, where sailings are safe to take place, they may be required to route a greater distance and duration. Over the course of a day, the aggregation of these delays would result in the potential for additional sailings to be cancelled where constraints such as hours of rest are exceeded. Such effects are already experienced by operators but the presence of the Morgan Generation Assets may exacerbate this". Again, as before, the TSC finds that this would be unacceptable for an Island nation entirely dependent on its well established sea links and life line ferry services.

Noting that it was estimated that the IOMSPC service between Heysham and Douglas would be impacted at a significant wave height (Hs) of 2.0m and cancelled at 3m Hs; the frequency for which these conditions would be exceeded within a year are given as Isle of Man Steam Packet Company route between Liverpool to Douglas: Between 4.8% and 18.3% of sailings would require some weather routing (average of 9.6%); Between 1.5% and 7.3% of sailings could be cancelled due to adverse weather (average of 4%). In addition, the Isle of Man Steam Packet route between Heysham to Douglas, Between 3.7% and 13.4% of sailings would require some weather routing (average of 9.6%); and between 0.3% and 3.7% of sailings could be cancelled due to adverse weather (average of 1.5%). This analysis suggests that a basecase estimate (for the Liverpool Douglas route) of 26 sailings cancelled would increase to 35 sailings cancelled with the cumulative projects whilst the basecase estimate (for Heysham to Douglas route) of 23 sailings cancelled would increase to 30 sailings cancelled with the cumulative projects. The TSC requests confirmation that this has been discussed with the IOMSPC and that these estimates are taken to be as accurate as possible.

The TSC notes, as per Table 12.25, with regards to additional travel and comfort time to passengers, a required deviation (on the Douglas to Liverpool) in adverse weather already takes approx. 10-33 minutes, and with an additional 27minutes, as estimated, which could result in journey times of up to 60 minutes in some cases. With regards the Douglas to Heysham route, a required deviation in adverse weather already takes approx. 10-23 minutes, and with an additional 17 minutes, as estimated, which could result in journey times of up to 40 minutes. The potential for these additional minutes to the journey times are not considered acceptable by the TSC for a number of reasons; the IOMSPC timetable and its vessels have been carefully selected and planned to ensure the maximum number of trips to be undertaken safely, and with the highest level of passenger comfort possible. The IOMSPC Douglas to Heysham route provides many of the Island's businesses with their fresh supplies, all of which are designed to be distributed within a very short period of time after the boat docks as part of a just in time economy. Any deviations from this timetable will not be accepted by these businesses and by the TSC and those it represents. In addition, the extra time that could be added to the fast craft sailing will not be acceptable, either to the Island's residents or to its visitors who are using that service for its speed. Again, the timetable has been carefully planned around the fast crafts ability and reliability on this route, and to add up to an additional hour (from worst case at 33 minutes currently) will not be

accepted. It is further acknowledged that owing to the nature of the fast craft, Manannan, it will likely be impacted more during periods of adverse weather than other ferries operating in the area.

Further noting "the presence of the Morgan Array Area reduces the optionality of vessels to maintain a safe and comfortable heading to the adverse conditions. A passage between the Morgan Array Area and Walney Offshore Wind Farm would require vessels to navigate beam on to the prevailing conditions, which is not considered seamanlike in adverse weather and could result in cargo shift. The navigation simulations noted excessive roll was experienced during adverse weather for ferries if routed to the east of Morgan, without the capability to turn west into the prevailing conditions". This is also not acceptable to assume that the IOMSPC will feel it appropriate and responsible to sail between the Morgan Array Area and Walney Offshore Wind Farm in those adverse weather conditions knowing that it will not make a passenger journey comfortable.

It is further noted that the same conclusions have been reached with regards both the operational and decommissioning phases of the Morgan Array Area, therefore, the additional time for adverse weather conditions and subsequent rerouting for the IOMSPC, and the possibility of reduced levels of passenger comfort will apply for at least the next 43 years.

The TSC acknowledges that the magnitude of the impact is deemed to be medium and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of moderate adverse significance, which is significant in EIA terms. The TSC understands that this will be further explored as part of the subsequent EIA which will accompany the application.

In the absence of the Agreement for Lease site for offshore wind development in Manx waters being included as part of this cumulative impact assessment, and its notable absence from maps, it is difficult for the TSC to support the proposed deviated route for Stena in Figure 12.12 which would appear to transit directly through this site. As acknowledged throughout this Chapter, there is an accepted clearance distance that is taken into account for obstructions such as the Morgan Array, taken to be 1.5nm – the deviation shown in this figure rather proposes that the Stena route would be deviated, to clear Morgan, but sends it through the Ørsted site in Manx waters. The TSC seeks further clarification as to whether this proposed deviation has taken account of the Agreement for Lease, and if it has, how can this deviation be proposed knowing that it will not be possible in future years?

The TSC awaits continued engagement to explore the further mitigation measures and residual effects to be considered and proposed by the project teams, particularly in respect of shipping and navigation. The TSC is deeply concerned about the cumulative impact all of these offshore windfarms could have on its lifeline services and any deviations to well established routes will not be accepted. The TSC awaits further confirmation on the revisions to the Morgan Array Area boundary as outlined in paragraph 12.14.1.2.

The Navigational Risk Assessment

The Navigational Risk Assessment includes a summary of a number of main, overarching concerns that the TSC wishes to repeat here as all are applicable in respect of shipping and navigation for the Isle of Man, including, but not limited to:

Existing IOMSPC schedules have been developed to accommodate the maximum number of journeys within a 24hr period, taking into account the length of journey, weather conditions, comforts of passengers as well as the demands upon the service and the just in time nature of Manx requirements. In addition, there are requirements on the IOMSPC in respect of its staff from the Maritime Labour Convention so appropriate rest times are scheduled and taken into account as part of the scheduling of services. Turnaround times in ports are limited on both sides owing to a number of conditions, and again, the operators are working within those. Any undue delay to arrivals and departures could result in financial penalties, and who would be responsible for covering those if the delays were due to deviations from well established routes as a result of the Morgan Array, or indeed, the cumulative impact of all the shipping? In addition Heysham presents additional restrictions in terms of tide times, and access / manoeuvrability within the harbour. All of this must be taken into account by the Masters as part of their preparation.

In addition, the TSC will repeat a point it has made on a number occasions in respect of the cumulative impact, and that is the Agreement for Lease site for an offshore windfarm in Manx territorial waters has not been included as part of the baseline data in the Navigational Risk Assessment, the cumulative impact assessment nor the maps that have been used to depict other infrastructure constraints in the vicinity of the proposed Morgan Array Area.

In terms of specific timings in respect of both journey times and turnaround times, the TSC requests that further discussions are held with the IOMSPC to ensure that they have been accurately recorded as part of the baseline data, and have been applied accurately as part of the assessment, both for the normal and the adverse weather conditions as well as for Morgan and the wider, cumulative impact assessment (as per 8.4.2 and 8.4.3 of the Navigational Risk Assessment).

In addition, any deviations or additional travelling time will result in additional fuel being used, and again, who is covering that cost? Who is also taking into account the increased emissions levels that could result from this additional travelling time, and extra fuel? Who would then be required to offset these? It shouldn't be the operator as the deviation is not their choice, nor should it be the IOMSPC passengers, who again, aren't going to benefit from Morgan or any of the other UK offshore windfarm projects.

Chapter 14 Other Sea Users

The TSC notes that the Agreement for Lease site in Isle of Man territorial waters is mentioned within this Chapter, included on the map, in Figure 14.4 and included in Table 14.6 which highlights the close proximity to the proposed Morgan Array Area to it, at 2.6kms. The TSC requests clarification as to why this was not included within the Shipping and Navigation Chapter, and as part of the Cumulative Impact Assessment as part of that Chapter?

In addition, and in respect of the inclusion of oil and gas platforms, the TSC has in all of its correspondence to the Planning Inspectorate in relation to all the Round 4 offshore windfarm sites highlighted that there is a hydrocarbon licence in Manx waters. There is no mention of this site or licence within this Chapter, and the TSC seeks to ensure that consideration is given to this site also as part of this assessment. The TSC suggests the project team engages with the Licensee, Crogga Limited to understand their proposed work programme and consider how to ensure there are no detrimental impacts to that as part of this project.

Manx Utilities

The TSC appreciates that there is mention, and inclusion of the Isle of Man interconnector between the Island and England as part of this chapter as it transects through the proposed Morgan array areas.

The comments and feedback outlined below have been drawn up following a review of the information made available to the Manx Electricity Authority for the purpose of stakeholder consultation regarding project proposals relating to the above Wind Farm development.

The comments, views and feedback outlined in this document relate to those of the Manx Cable Company and Manx Electricity Authority, as stakeholders, considering the proximity of the proposed wind farms to our existing assets in the Eastern Irish Sea as well as significant stakeholders in the social-economic success of the Isle of Man.

Background Information:

The Manx Cable Company (MCC) own and operates, on behalf of the Manx Electricity Authority, a submarine power cable, referred to as the interconnector, which runs between Douglas Head in the Isle of Man and Bispham, Blackpool. With an undersea section of approximately 104km (65 mi), it is one of the longest AC undersea cables in the world and is an essential means of maintaining secure supplies of electricity to the residents of the Isle of Man.

Sub-sea cables are vulnerable to third-party damage from marine activities and these risks are constantly being monitored and assessed, as the impact from third-party damage can result in significant repair and business interruption costs to the Authority.

In addition to third-party damage the introduction of fixed structures and associated export, collector and/or array cables on or buried in the seabed, can through their proximity present an ongoing operational risk to maintenance and repair works over the life of the asset.

Considering the interconnector's asset value and strategic importance to our business and the wider Manx economy the MCC welcomed the opportunity to engage in the project consultation process regarding developments in the Eastern Irish Sea

Interpretation of Wind Farm Proximity to the Interconnector:

The majority of the proposed wind farm is sited south of the interconnector; however a section, approximately 20km, of the MCC interconnector runs through the northern most part of the licenced area.

The wind farm export cables will be positioned within the indicative cable corridor, which runs predominately from the eastern boundary towards northwest coast of England narrowing to a point north of the Ribble Estuary.

The asset runs along the northern boundary of the proposed export cable corridor where it terminates north of Blackpool.

Comments and Feedback:

The comments and feedback, relate to concerns, which have been identified following an Impact/Risk Assessment regarding the potential increase in risk to the interconnector, through the construction and operational phases of the proposed Wind Farm.

Item	Risk Category	Potential Increase in Risk	Level of Concern	Comments
1	Third Party Damage	Vessels engaged in the construction and maintenance utilise Douglas Harbour increasing the potential for vessels anchoring in the vicinity of Douglas Bay.	Medium	Request developer ensures robust protocols are in place to highlight the existence and positioning of the interconnector to all vessel engaged in the supply chain.
2	Third Party Damage	Displacement of fishing activity increases fishing interaction, from present levels, over the cable route.	Low	The impact of displaced fishing activity may present an unacceptable increase in risk considering the collective impact of Eastern Irish Sea in the future.
3	Third-Party Damage	Survey works [Geotechnical] which are invasive and interacts with the sea bed in close proximity to the IOM interconnector	High	Request developer engages as soon as it is practicable with MCC to review any survey with 1NM and assess the risk presented by the proposed survey works due to it nature and proximity.
4	Third-Party Damage [1]	Cable installation [export and inter-array cables]	High	Request developer engages as soon as it is practicable with MCC to review any cable installation activities with 1NM and assess the risk presented by the proposed works due to it nature and proximity.
5	Third-Party Damage [1]	Fixed Structure installation [wind turbines and offshore sub-stations]	High	Request developer engages as soon as it is practicable with MCC to review any offshore construction activities with 1NM and assess the risk presented by the proposed works due to it nature and proximity.
6	Operational Risk [1]	Close proximity of fixed structures such	Medium	Request developer engages as soon as it is practicable with MCC to

		as turbines and offshore substations		open dialogue on determining a suitable proximity limit where the planned proximity of any fixed structure is within 1NM of the IOM interconnector
7	Operational Risk [1]	Third-party cable crossings	Medium	Request developer avoids, wherever possible, multiple crossings of the IOM interconnector by export, collector and/or array cables. Where multiple cable crossings are necessary, the crossing of cables should be spaced and agreed so that, timely and economical repairs to both the crossing and crossed cables can be undertaken.
8	Potential Design/Construction Conflict	Several options for future interconnection, via a second sub-sea interconnector cable, between IOM & UK are currently being considered with one potential off-shore cable route/corridor running to the south of the proposed Morgan Windfarm and landing south of Blackpool.	Low	At present these plans and options are still in the high level feasibility stage but it is considered appropriate to highlight and share our plans for information purposes at this time. As more information becomes available Manx Utilities will be able provide more information as appropriate.
[1] MCC considered it appropriate for the developer to engage as soon as reasonably practicable with MCC to commence discussions on the potential requirements for crossing and proximity agreements to minimise issues/delays as the project progresses.				

Chapter 15 Seascape, Landscape and Visual Resources (SLIVA)

The exact layout of each Project's infrastructure is still being developed and will not be finalised until the Project has been granted consent by the Planning Inspectorate and Secretary of State for the Department for Energy Security and Net Zero. Due to the complexity of the Project, many details will likely remain unknown to us at the time of submitting our application, including the:

- Precise number, location and configuration of the wind turbine generators (WTGs), offshore substation platforms (OSPs) and any associated development.
- Type of foundation to install the turbines and any associated development.
- Exact height of the tip of the turbine rotors and the diameter of the rotors

The work has been undertaken in accordance with accepted industry guidance (SLIVA). Whilst there are some points of detail that may merit further scrutiny/debate, which is often the case when judgement is involved, generally the findings are concurred with. They are all based on worst case scenarios.

The preliminary SLIVA's establish that there will be no significant effects on seascape, landscape or visual receptors. Due to long distance, the large scale of the associated seascape and the presence of existing operational offshore windfarms. While they will be visible on the eastern horizon it is in the context of an expansive seascape with the presence of existing operational offshore windfarms.

Chapter 16 Aviation and Radar (Ronaldsway Airport)

As an airport, we take the safety and security of our passengers, employees, and aircraft very seriously, and we understand that the development of offshore wind farm can potentially impact aviation safety.

To ensure the safety of aircraft operating in the vicinity of offshore wind farms, it is essential that appropriate mitigation measures are put in place to ensure that any potential impacts on aviation safety are identified and addressed. This includes conducting thorough impact assessments, technical safeguarding assessments of aerodrome navigation systems, developing appropriate mitigation measures, and regularly monitoring the wind farm's impact on aviation safety to ensure that these measures remain effective.

We are committed to working collaboratively with all stakeholders to ensure that any development of offshore wind farms does not compromise the safety of air travel and welcome any opportunities for further engagement with the project teams.

Chapter 17 Climate Change

- The PEIR report is comprehensive and ties in to UK National Planning policy, plus energy and climate policy
- The GHG emissions are clearly stated across each stage, construction, operation and decommissioning
- The whole-life avoided-emissions are clearly stated and show that the developments, despite being emitters, are positive for overall global emissions when comparing them to fossil fuels
- Adaptation risks have been considered.
- The PEIR report is a fair and reasonable assessment.
- In addition, noting the concerns regarding the potential effects on shipping and navigation route as a result of this proposed development; from a climate change point of view the shipping and navigation section seems to be well assessed, and since ferries are by far the lowest emitting way to travel to and from the Island, it is very important that these routes are not significantly affected by this development proposal.

Chapter 18 Socio-economics

The TSC notes the specific reference to the Isle of Man as part of the Next Steps in the Socio Economic Assessment, and it welcomes the opportunity for continued engagement as part of this process. The TSC is keen to be involved as the commitments outlined by the applicant will be further developed, and to understand whether any of these commitments will alleviate any of the potential negative impacts that have been identified as being possible as part of the cumulative assessment for the shipping and navigation work.

The following commentary has been compiled by Department for Enterprise and Treasury, with review of draft IOMSPC comments.

General Observations

- Of the three windfarms (Mona, Morgan, Morecambe), the Mona and Morgan arrays seem to represent the biggest economic risk to the Island. This is particularly the case when the multiple windfarm developments are looked at as a whole. This also includes existing windfarms (such as West of Duddon Sands) and the potential for developments within Isle of Man waters.
- There would appear to be limited commentary in the consultation documents on the economic impacts on the Island. It is noted that the Morgan document PEIR 2.20 only covers the potential impacts of views of the windfarm from the Isle of Man, not the much more substantial economic effects on lifeline services.

Economic Impacts – Lifeline Services

- **It is noted that SPCO have highlighted a number of apparently material inaccuracies in the consultation documents in relation to the frequency, importance, and expected impact of the developments on SPCO operations (and therefore the impact on the Island).**
- As a small Island nation, the Isle of Man is largely dependent on the import of goods. This includes time-critical deliveries such as food, medical supplies, chemicals, as well as construction supplies, durable goods, and many others.
- Any disruption of time-critical lifeline goods can have wider social impacts on the Island. The most obvious impact from a resident's perspective is in instances where there are multiple disrupted days' sailings, which can lead to shortages in shops and panic buying in some instances. This effect is likely materially different and proportionally much larger compared to a UK-Ireland service, for example.
- Wider impacts include general costs to businesses in terms of delayed imports/exports. The Island is at a competitive disadvantage in terms of transit times for goods and these issues would be exacerbated by an increase in delays/cancellations. This is particularly relevant in relation to seafood / agricultural export, manufacturing, and engineering sectors of the economy.
- There is only one other sea freight provider supplying the Island (Mezeron) and this operates at a substantially smaller scale than the SPCO. As a result and disruption to SPCO would be of proportionally much greater magnitude to the Isle of Man's economic and social wellbeing compared to routes where alternatives are available.
- As noted by SPCO, the ferry service runs on a tight schedule with limited ability to make up time. For this reason, even fairly small increases in transit time would be expected to lead to a general increase in cancellations.

Economic Impacts – Resident Travel

- It is noted that the developments (especially in combination) will adversely affect journey times. This would have an economic cost to Island residents travelling via sea. In situations

where longer delays or cancellations occur due to the impact of the developments, these would be exacerbated.

- Additional economic costs imposed on residents harms the Island's attractiveness as a place to live and work, though quantifying this effect is not possible.

Economic Impacts – Non-Resident Travel & Tourism

- It is noted from SPCO's comments that the Liverpool services are particularly vulnerable to disruption in the Spring and Autumn due to weather and the need to avoid the developments.
- If cancellations occurred during 'peak' travel periods, this could lead to significant impact with a lack of capacity on alternative sailings;
 - During super peak periods (i.e. TT / MGP), this could lead to passengers being delayed by extended periods (potentially days as other sailings are full);
 - If visiting passengers travelling from the IoM were impacted, again during peak periods this could lead to a logistical challenge to accommodate people on Island, with accommodation providers potentially already being at capacity. There is precedent here when air and sea services have been disrupted and a civil contingency plan has been required to provide emergency overnight accommodation.
- The Consultation documents appear to speak in general terms with sailings averaged across the year, which does not reflect the very large peaks in traffic at particular points in the year, which would be severely impacted by any disruption. For example, while there are limited winter Liverpool sailings, the summer/TT sailings can be extremely busy.
- As with residents, additional economic costs (quantity unknown) would be borne by visitors to the Island, which would ultimately make the Island a less attractive place to visit to some degree.

Transboundary impacts screening (Volume 5, annex 5.2)

Physical Processes

1.6.1.3 No transboundary impacts upon physical processes are anticipated. It is proposed that transboundary impacts upon physical processes are screened out of the EIA process.

NOTED.

Subtidal and intertidal ecology

1.6.1.5 No potential transboundary impacts upon benthic subtidal and intertidal ecology are anticipated. It is proposed that transboundary impacts on benthic subtidal and intertidal ecology are screened out of the EIA process.

NOTED.

Fish and shellfish ecology

1.6.1.10 *It is proposed that potential transboundary impacts on fish and shellfish ecology and their nature conservation interests are screened into the EIA process. A transboundary assessment has been completed and is included in volume 2, chapter 8: Fish and shellfish ecology of the PEIR. Potential impacts upon European Sites with fish as a qualifying feature are assessed within the Information to Support the Appropriate Assessment (ISAA).*

NOTED, but the Isle of Man Government requests that the potential impacts IS NOT LIMITED to European Sites, as this assumes current or prior EU member status and designation. By definition, transboundary effects cannot assume that designations or an equivalent assessment are the same either side of the boundary, and therefore Isle of Man marine conservation designations, for example Marine Nature Reserves (under the wildlife Act 1990) need to be treated as equivalent, or clearly justified as to why they are not. The Isle of Man is a signatory to various international treaties and conventions, via the UK and, as such, has its own jurisdictional responsibilities.

This comment is also relevant to those made in respect of the Fish and Shellfish Ecology chapters.

Marine Mammals

1.6.1.14 *It is proposed that potential transboundary impacts to marine mammals and their nature conservation interests are screened into the EIA process. A transboundary assessment has been completed and is included in volume 2, chapter 9: Marine mammals of the PEIR. Potential impacts to European Sites with marine mammals as a qualifying feature will be assessed within the draft HRA.*

NOTED, but the Isle of Man Government requests that the potential impacts IS NOT LIMITED to European Sites, as this assumes current or prior EU member status and designation. By definition, transboundary effects cannot assume that designations are the same either side of the boundary, and therefore Isle of Man marine conservation designations, for example Marine Nature Reserves (under the wildlife Act 1990) need to be treated as equivalent, or clearly justified as to why they are not. The Isle of Man is a signatory to various international treaties and conventions, via the UK and, as such, has its own jurisdictional responsibilities.

This comment is also relevant to those made in respect of the Marine Mammals chapters.

Offshore Ornithology

1.6.1.18 *It is proposed that potential transboundary impacts related to offshore ornithology and their nature conservation interests are screened into the EIA process. A transboundary assessment has been completed and is included in volume 2, chapter 10: Offshore ornithology of the PEIR. Potential impacts upon European Sites with birds as a qualifying feature have been assessed within the draft HRA.*

NOTED, but the Isle of Man Government requests that the potential impacts IS NOT LIMITED to European Sites, as this assumes current or prior EU member status and designation, or an equivalent assessment, but no European level assessment has been made for the Isle of Man (for potential Bern

Convention Emerald Sites, equivalent to SPA). By definition, transboundary effects cannot assume that designations, or the status of assessments, are the same either side of the boundary, and therefore Isle of Man marine conservation designations, for example Marine Nature Reserves, National Nature Reserves (under the wildlife Act 1990), and other designations as appropriate, need to be accounted for, or clearly justified as to why they are not. The Isle of Man is a signatory to various international treaties and conventions, via the UK and, as such, has its own jurisdictional responsibilities.

This comment is also relevant to those made in respect of the Offshore Ornithology chapters.

Commercial Fisheries

1.6.2.4 It is proposed that transboundary impacts to commercial fisheries are screened into the EIA process.

NOTED. This comment is also relevant to those made in respect of the Commercial Fisheries chapters.

Climate Change

1.8.5.3 It is proposed that transboundary impacts on climate change are screened into the EIA process.

NOTED. This comment is also relevant to those made in respect of the Commercial Fisheries chapters.

General comments from Manx National Heritage (MNH):

MNH would expect that the forthcoming EIA would consider the following issues:

Visual impact of proposals on the setting of protected monuments on the east side of the watershed of the Island, given the proximity of the western edge of the study area, this could involve approximately 25 monuments. The impact could be considered limited, but there are some flagship sites such as Castle Rushen and Laxey Wheel which are major tourist assets of national and economic significance to the Island where the impact should be considered more holistically.

The potential direct impact on historical shipwrecks would also need to be assessed. MNH has recently acquired some shipwreck data and whilst this is still being evaluated and integrating it into MNH data system, it is already clear that there are several sites in the area. None of them are formally protected so as to cause a significant problem, but nevertheless MNH would expect an EIA to exercise due diligence in this respect.

MNH can provide the developer with access to this data upon request.

In addition, MNH provides the following general comments:

- The need for protection of the seabed with particular reference to areas of high conservation or carbon sequestration value, such as sea grass beds, *Zostera marina*, as highlighted in the Manx Marine Nature Reserves.
- Protection of sensitive coastal areas such as Dhoon, Laxey and Maughold headlands which are noted for their nesting sea bird communities.
- Protection of the seabed from scour and silt during the positioning of rock berms and trench digging and removing boulders.
- Limiting noise pollution as cetaceans are regularly recorded between Ramsey and Laxey Bays.
- Limiting disturbance of marine species and coastal sea birds during any boat trips from the Island to the arrays, as and where necessary.