Mona Offshore Windfarm 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 7 Benthic Subtidal and Intertidal 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***

Has IoM Government (Department of Infrastructure)(DoI) 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.

Tables 7.24, 7.25, 7.26, Fig 7.8 and elsewhere
As noted, recommend inclusion of Ørsted Isle of Man windfarm and, under the appropriate heading, Crogga gas exploration/production projects.

Noting reference to the current UK-IoM interconnector; 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 7.8**. And then assessed as appropriate in subsequent analysis?

Designated sites
Noting: 7.4.6.3 Of the identified designated sites in Table 7.8, only the Y Fenai a Bae Conwy/Menai Strait and Conwy Bay SAC has been taken forward for assessment within this chapter.

Noted with respect to Isle of Man Marine Nature Reserves.

Chapter 8 Fish and Shellfish Ecology

Technical Report

Table 1.1: Summary of key desktop reports
Suggest that the baseline characterisation is missing the following;
Bangor University (Reports, publications etc.)
http://sustainable-fisheries-iom.bangor.ac.uk/communications.php.en

In particular;
Isle of Man Government Reports
http://sustainable-fisheries-iom.bangor.ac.uk/government-reports.php.en
For example:
Scallop stock survey 2022

- http://sustainable-fisheries-iom.bangor.ac.uk/documents/government-reports/scallop/2022/SCESurveyReport2022_Final.pdf

Queen scallop stock survey 2022

- http://sustainable-fisheries-iom.bangor.ac.uk/documents/government-reports/scallop/2022/QSC_StockAdvice_Report_2022_Final.pdf

These surveys include stations in the eastern Irish Sea that are **co-surveyed by AFBI**, as part of their annual scallop surveys, and which are summarised in the ICES Working Group, ICES. 2021. Scallop Assessment Working Group (WGScallop). ICES Scientific Reports. 3:114. 106 pp. https://doi.org/10.17895/ices.pub.9561:

- https://archimer.ifremer.fr/doc/00743/85501/90612.pdf

AFBI may be able to provide additional details on their **Irish Sea scallop surveys**.

1.4.2.22 and **Figure 1.3** should include the Orsted Isle of Man wind farm project:
https://orsted.co.uk/insights/future-developments/isle-of-man

1.9.2.1 *Both king scallop and queen scallop show a preference for areas of clean firm sand, fine or sandy gravel and may occasionally be found on muddy sand, often in high densities (MarLIN, 2022). While king scallop are generally found in sandy, gravelly substrates, they can additionally be found in coarser sediments. King scallop achieve reproductive maturity between three to five years of age, live upwards of 15 years, and are evidenced to be most abundant in depths of 20m to 70m (Cappell et al., 2018; Howarth and Stewart, 2014; Salomonsen et al., 2015). Queen scallop are known to have particularly important commercial grounds located around the Isle of Man and can be found in depths of up to 100m and are specifically protected against unlicenced towed gear fishing under Isle of Man byelaws (SD 2018/0186, 2018).*

This is correct, but it seems odd to highlight only queen scallop, when both species are similarly protected, and, to highlight Marine Nature Reserves legislation, when there is a wide range of fisheries legislation and management measures in place for both species in Manx waters, including seasonal closures, closed areas and other technical-based conservation measures.

In addition, unlicensed fishing of any kind, regardless of species, is vigorously enforced in Manx waters.

See; https://www.gov.im/about-the-government/departments/environment-food-and-agriculture/environment-directorate/fisheries/sea-fisheries/legislation-policy-guidance/
for details.

Suggest a broader recognition of fishery conservation measures, and highlight the MNRs, which are primarily for to protect scallop and queen scallop spawning and nursery interests, as appropriate.

1.9.2.5 King scallop have historically been targeted commercially through dredge fisheries within the vicinity of the Mona Offshore Wind Project, with the majority of the activity concentrated along the western portions of the Mona Array Area and around the Isle of Man (**Figure 1.20**).

Agree with this general characterisation of the SCE fishery.

1.9.2.6 While the value of landings has fluctuated over the last 10 years, high intensity scallop dredging is present along the western-most corner and through the middle of the Mona Array Area (Figure 1.21). Other areas around and within the Mona Offshore Wind Project and Mona Array Area are rarely fished as they are considered important spawning grounds for the overall stock. Specifically, these areas are located within the western and easternmost portions of the Mona Array Area (**Figure 1.21**).

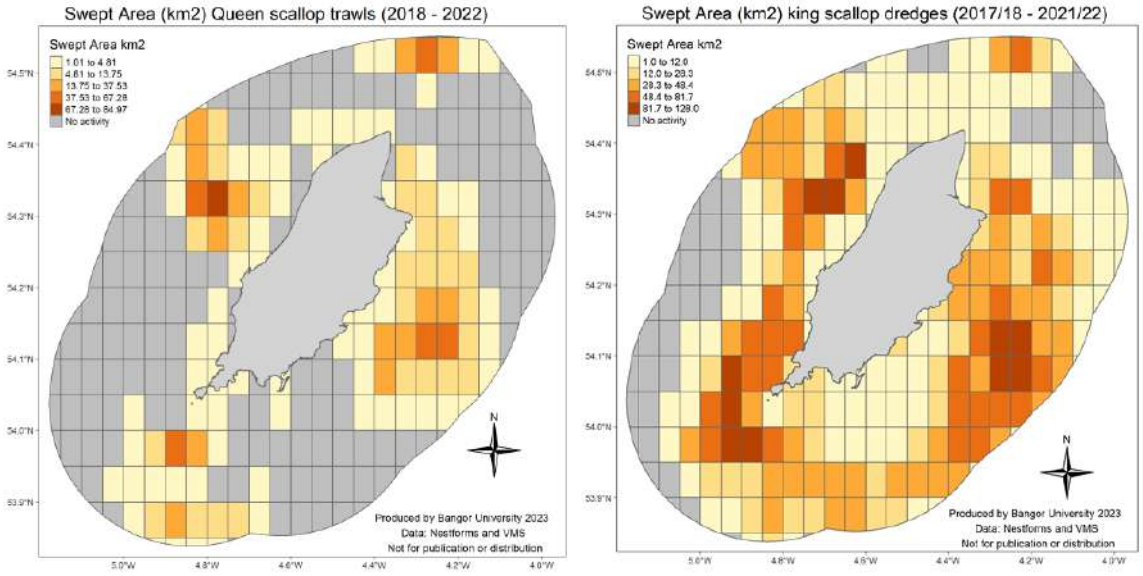
Strongly disagree with this highly-selective characterisation of the QSC fishery.

Why treat the species differently in a regional context?
As recognised in the report, queen scallops are a vital component of the Manx fishing industry between July and October- but comparison of Figures 1.20 and 1.21 might suggest that QSC only occurred in the array area, and was not important elsewhere. However, the baseline is assessed, it must present equivalent information to provide assurance that all species have been appropriately considered.

This is important as spawning and settlement connectivity of commercially-important scallop species within the Irish Sea is assumed, and so effect on queen scallop populations within the array area may affect settlement of larvae further north, and particularly around the Isle of Man. See Figures, 6c, 6d, 7c, 7d, 9c, 9d, 11c, 11d in Neill, S.P. & Kaiser, M.J. (2008) Sources and sinks of scallops (*Pecten maximus*) in the waters of the Isle of Man as predicted from particle tracking models. Fisheries & Conservation report No. 3, Bangor University. Pp. 25: http://sustainable-fisheries-iom.bangor.ac.uk/documents/government-reports/scallop/2008/BangorFisheriesReport_No3.pdf
Figure 1.21 requires a more regional presentation of queen scallop fishing activity, noting that fishing in Manx waters is by otter trawl and not dredge, and so the assessment must display and consider both gear types.

This point is also noted in the Commercial Fisheries chapter, queen scallop should be presented as an equivalent to **Figure 1.20**, and using the same data sources. Example maps comparing historic QSC and SCE fishing grounds in Manx waters from similarly-available VMS data sources are sown below, but regional UK waters should also be shown for QSC fishing activity.

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

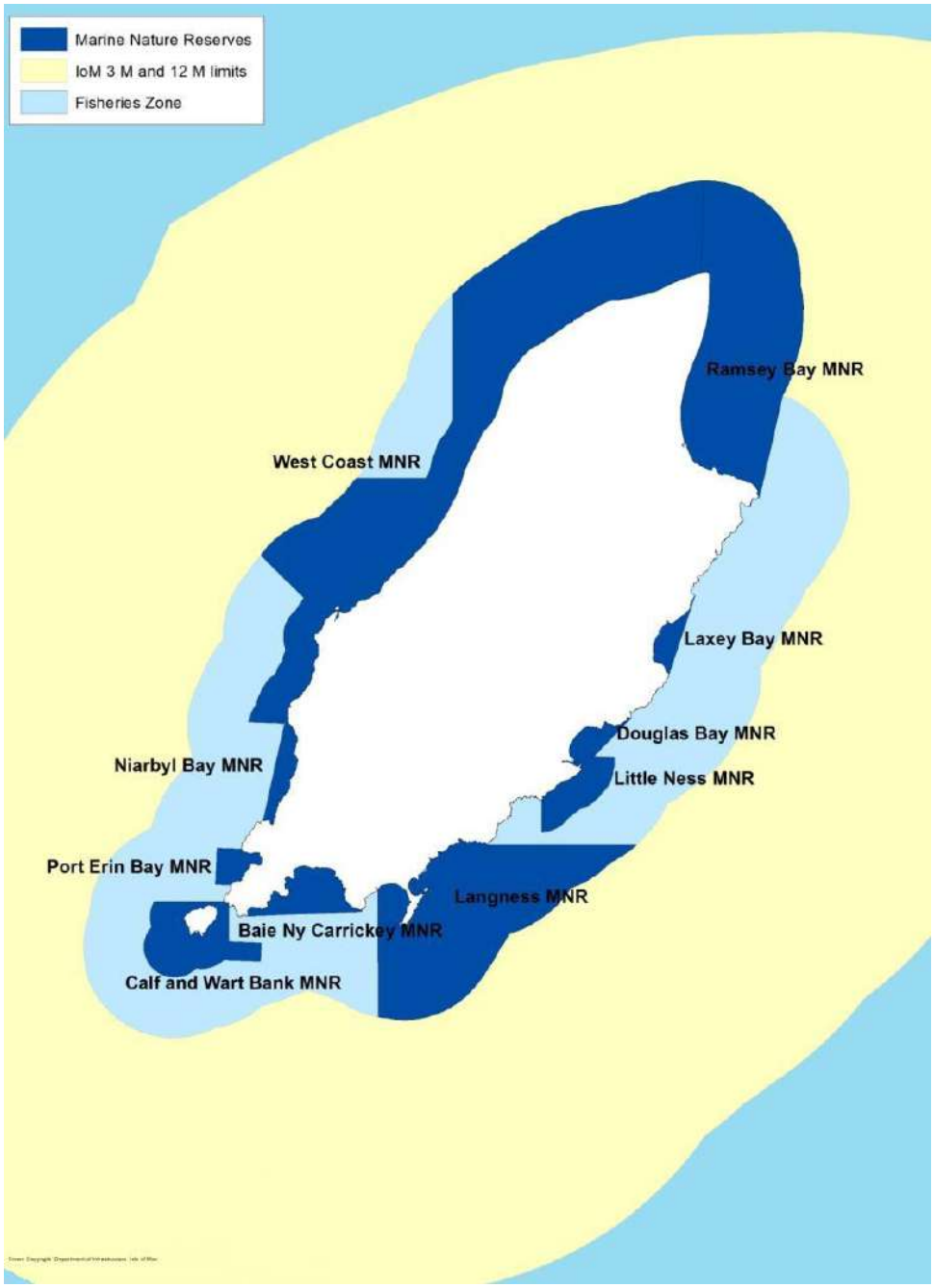
Table 1.8 Summary of Designated Sites within the fish and shellfish ecology study area and relevant qualifying interest features.

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.

1.11.1.2 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

Table 8.5 Consultation

- *June 2022*
- *Isle of Man Government, Department of Infrastructure – Scoping Opinion*
- *Ensure that appropriate consideration is given to designated marine protected sites and their associated species, particularly those protected under Manx law or identified and threatened or declining by the OSPAR Convention. Included within this are king and queen scallop, which are protected in most Marine Nature Reserves (MNRs) around the IoM.*
- ***Designated sites within IoM territorial waters, and their associated habitats and species of principal importance, have been identified in volume 6: annex 8.1: Fish and shellfish ecology technical report of the PEIR and are listed in section 8.5.3**, with the identified IEFs listed in section 8.4.7.*

As noted above in the Technical Report comments, and at 8.4.6 of the PEIR report – only 4/10 Manx MNRs have been included. As such it's not apparent that the consultation commitment noted in Table 8.5 has been achieved.

Table 8.6: Summary of key desktop reports.
See related comments in Technical Report comments above.

8.4.3 Identification of designated sites
As noted above, and noting the process of identification outlined, 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.

8.4.5.12 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. An equivalent presentation of queen scallop fishing activity and important areas in adjacent UK waters also seems appropriate, not only for the very limited area of the array. While the technical report and Chapter report's king scallop data is broadly indicative, **the queen scallop data is not.**

8.4.6 Designated sites

Table 8.9: Designated sites and relevant qualifying interests for the fish and shellfish ecology chapter.

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 8.10: 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 Mona Array Area or in the **wider east Irish Sea**.

- Mackerel is an important commercial species, but not in the immediate vicinity of the Mona Array Area 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 TR, where it indicates the presence of this fishery in the areas.
For example;

1.4.1.1 Commercial fishing in the east Irish Sea region has a wide spatial distribution and targets a number of valuable fisheries for demersal, pelagic and shellfish species. Key shellfish species include; king scallop, and queen scallop which are targeted by dredges; and whelk, lobster and crab, which are targeted by pots. The most important demersal target species include bass, sole, thornback ray and plaice, which are typically caught by beam and otter trawlers. Pelagic fish landings from this area are mainly of herring and mackerel, which are predominantly caught by pelagic trawls.

Noting **Figures 1.14 - 1.17 in the FSE Technical Report**– where is the actual commercial fishery located within the study area? It's important to understand the interaction between spawning grounds, larval areas and fishing areas in order to determine potential effects. **Figures 1.51-1.54 of the Commercial Fisheries Technical Report** do not include pelagic trawls, so how do we know where the fishery occurs in relation to the array site?
How can an assessment of impact be made if the spatial interaction isn't apparent?

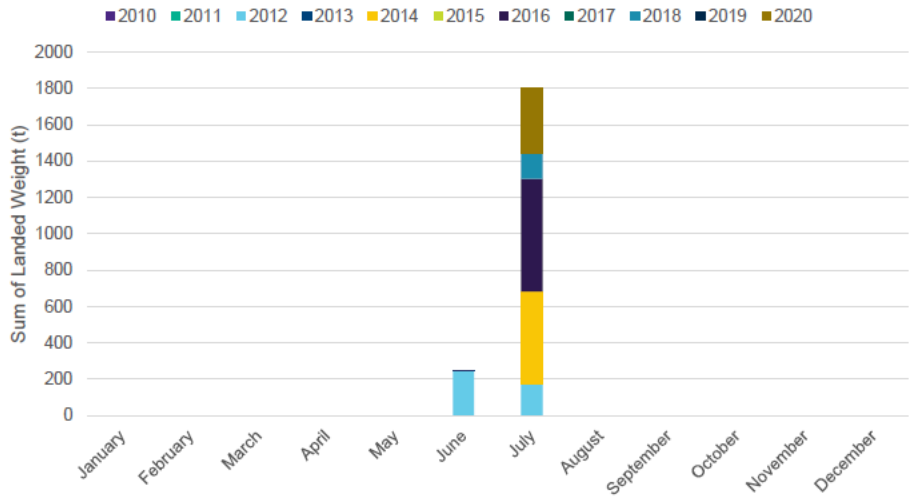


Figure 1.17: Seasonality of landed weight (t) of herring (2010 to2020) within the Mona commercial fisheries study area (UK vessels)[16].

The adjacent Morgan array proposal identified herring fishing within the array area, so given seasonal variability in this stock, it seems unlikely that the surrounding (Mona) 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.

8.8.4.16: 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 almost fully overlapping the Mona 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 8.29 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***

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

Noting figures 8.4-8.7 and the significant overlap of the array and sound generation area on the spawning and nursery grounds of herring, sandeel and cod (and given their sensitivity to noise ('8.8.3.33 Herring are known to be particularly sensitive to underwater noise (i.e. Group 4 species).'

And that the adjacent Morgan PEIR identified that *'….. further mitigation is currently being investigated to minimise risks of significant impacts if piling occurs during the* ***herring*** *spawning season.'*

The Isle of Man Government considers that a similar assessment is likely appropriate for the Mona development, and seeks reassurance that expert stakeholders, including AFBI, have specifically indicated that the Mona proposal are appropriate.

It is recommended that specific consultation with AFBI on herring spawning and nursery areas is undertaken with regard to effects, mitigation and monitoring is undertaken, and with inclusion of Isle of Man Government (DEFA) due to developing interest in the fishery and relevant herring legislation in the region.

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

It is also noted that there is **no intention to undertake any monitoring** of any fish and shellfish receptor for the Mona proposal.

The Isle of Man Government is concerned that the lack of any monitoring will make it impossible to determine whether the PREDICTED effects are insignificant (as indicated), or incorrect- and do have an unpredictable effect on important receptors.

Further, the absence of monitoring ensures that no additional data or increased understanding of windfarm impacts is obtained, which may be ultimately detrimental to the future credibility of sustainable offshore energy generation.

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?

In summary, it seems appropriate to be able to demonstrate (with evidence) the assumed lack of impact in at least some receptors. This requires some monitoring.

For all the assessments undertaken the conclusion of no significant impact, no mitigation and no monitoring appears to be unlikely to be valid.

Chapter 9 Marine Mammals

Technical Report

Table 1.1. Indicates the following:
IoM government submission: Refer to the Manx Marine Environmental Assessment (MMEA) which provides a useful overview of the Island's marine environment and should be taken into account as part of both the transboundary and possibly also the cumulative impacts assessment as part of this application.
Response: MMEA included in the baseline desktop review.

Table 1.2: Summary of key desktop sources: MMEA is not listed as a reference source.

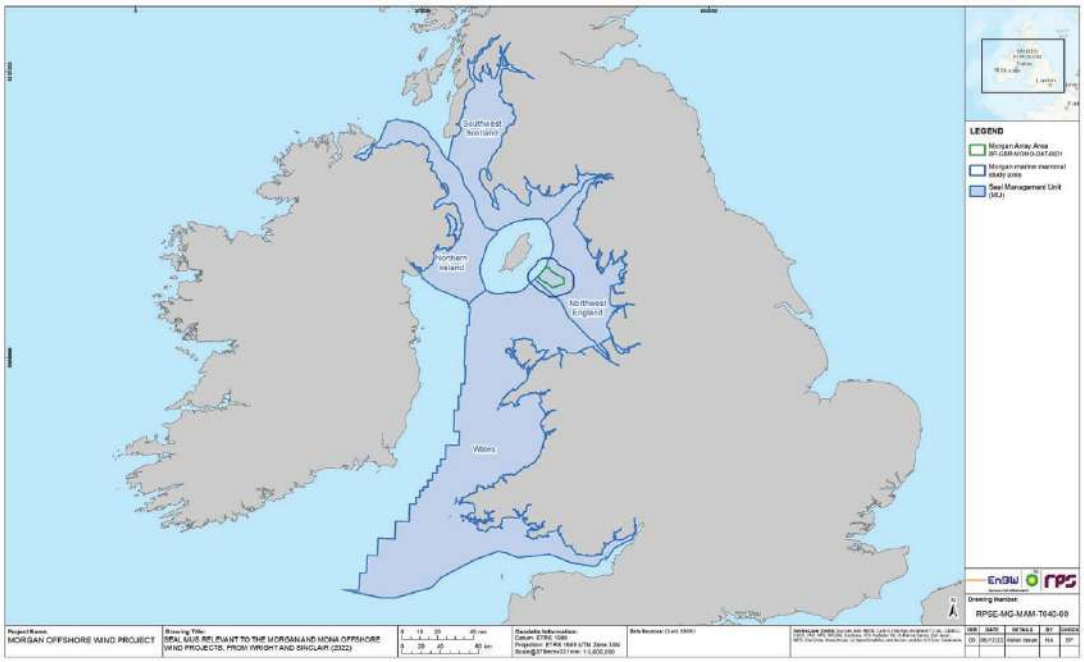
1.5.13 SMRU Seal Surveys

'1.5.13.3.'A SMRU report was commissioned to support the baseline assessment for the Mona Offshore Wind Project (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.'

Note: While this report is indicated as Appendix B `*SMRU seal haul-out and telemetry data in relation to the **Mona** Array Area*', the actual report title is `*Seal haul-out and telemetry data in relation to the **Morgan** Offshore Wind Project Generation Assets*'.

It appears to be the same report as for that project, and so comments on it, from an Isle of Man government perspective, are the same.

However, 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 **1.5.17** (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 combined/compared for equivalent analysis?**

However, the Manx Wildlife Trust seal data set does not appear in **Table 9.7** 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
1.6.1.5 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 the following, and;
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 (or integrate) 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 Mona/Morgan development(s), 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/these development than the Isle of Man.
For example, as the Technical Report acknowledges, 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. 139) and data sources used, there is relevant data available from MWT- as noted at 1.5.17.1 - 1.5.17.2; but there is no specific mention of the Isle of Man in this report, and so it is difficult to understand how the document actually achieves its objectives.

1.6.1.7 Conservation Designations
Noting **Table 1.4**, and acknowledging that the designation features of each MNR (see: https://www.gov.im/media/1378920/designation-of-marine-nature-reserves-guidance-note.pdf), Little Ness MNR is actually an important cetacean area and corresponds to a permanent site for MWDW land-based surveys (see Figure 1.7). It is noted for minke whale, harbour porpoise, bottlenose and Risso's dolphin. All cetacean species are protected in Manx waters.
As such, it would be appropriate to include it in Table 1.4, Figure 1.3 and Section 1.6.1.24- 32.

PEIR
As relevant to the **PEIR**, see also comments above in relation to the **Technical Report**; there are significant areas of overlap.

Table 9.10 See comment above in relation to Little Ness MNR and inclusion in designated sites. All MNRs contribute to the protection and conservation of marine mammals.

Agree with tables **9.16** and **9.17** Scoped Out and Measures adopted.

Pg. 41. 9.8.2.19
Use of seasonal density peaks for grey seal. Clarify that you have include the Manx populations in the seconadry 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. 43: 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.

9.8.3.60-64 Noting:

9.8.3.60 For Risso's dolphin, the most conservative estimate of disturbance led to up to 190 animals predicted to experience potential disturbance from concurrent piling of monopiles (Figure 9.5) at a maximum hammer energy of 5,500kJ. This equates 1.54% of the CGNS MU population. However, of these, up to 39 animals are predicted to experience strong disturbance (above 160 dBrms), whist up to 145 animals are likely to experience mild disturbance (between 140 and 160 dBrms).

'The area of effect is however small in relation to the ***extensive distribution of the population*** *for this species (CGNS MU) and there is predicted* ***to be no population consequences of the impact****. The magnitude is therefore considered to be low.'*

But the impact on the **local Manx population appears to be much more significant**, and therefore of primary concern to the Isle of Man Government, which has an interest and responsibility for protecting its local population relative to the species' wider population distribution.

9.8.3.111 '*Risso's dolphin are mostly common in Manx territorial waters and there is a potential for these species to be present in the vicinity of the Mona marine mammal study area in summer months (for more details see volume 6, annex 9.1: Marine mammal technical report of the PEIR). Therefore, due to their distribution and seasonality these species are unlikely to be disturbed as a result of piling throughout the year. Additionally, these is no indication that waters within the Mona marine mammal study area are important for foraging or breeding for these species*.'

It is difficult to follow the logic in this conclusion. Since Risso's dolphin are present in summer months (predominantly around the south of the Isle of Man) then they will be disturbed during that period – so how will this effect be mitigated? There is perhaps no need for winter piling mitigation, but there is for summer piling.

In addition, there is evidence that the waters around the south of the Isle of Man **is important for foraging and breeding for this species** – the closest land fall to the array area, and Figure 9.5 shows a Db level of 135-140dB in known areas of seasonal presence off the south and east coasts of the island.

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 estimated density of 0.0313 per km2 (Table 9.11) and impact on the reference population (Table 9.24) (vs. minke (which is included) and has a density of only 0.0173 per km2 and lower proportion 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. 52, **9.8.3.70 – 9.8.3.80** linked to above, provide evidence or clarifying that the Manx grey seal population has been appropriately considered, as it is not apparent from this section and, s noted elsewhere, there are apparent omissions of Manx data in the baseline.

Cetaceans
In several places, in relation to multiple species around the Isle of Man, the text appears to present ambiguity of the seasonal data provided by MWDW – '*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;

- Risso's 1.7.5.19
- Porpoise 1.7.2.36
- Bottlenose dolphin 1.7.3.29
- Minke 1.7.6.15

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.*

1.7.5.19 '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. Please include Manx grey seal accordingly.

Bottlenose Dolphin
9.8.3.50 etc. 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.

Pg 86. Table 9.42, Figure 9.12 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 9.56 – Piling Impact Tier 1: Do comments made above about Manx bottlenose and Risso's dolphins make a difference to these conclusion?

Agree that further mitigation needs discussion, including monitoring, and IoM government requests inclusion in relation to Manx marine mammal interests.

Appendix B**: SMRU seal haul-out and telemetry data in relation to the Mona Array Area is actually:**
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
Same comments apply as noted for TR.

Chapter 10 Offshore Ornithology

Manx breeding seabirds, Manx seabirds outside of the nesting seasons, and Manx birds that are not seabirds but may migrate through the Mona generation site, may all be shared between the Isle of Man and the Mona site, so there is a recognised shared interest in offshore ornithology, though we are aware that the Mona site is further from the Isle of Man than Morgan, and closest to Wales, though may receive birds from a number of different jurisdictions, within and outside of the UK. The Department of Environment, Food and Agriculture has been included within recent meetings of the Offshore Ornithology Expert Working Group, but note that due to timing, it has not been possible to take account of those recent comments within this PEIR but the applicant has stated that they will be accounted for within the Environmental Statement.

10.4.2.10 Site specific survey findings – Regarding the statement, '*The presence of Manx shearwater in July suggested that these birds might be associated with the Welsh colonies and thus forage within the Mona Offshore Ornithology Array Area study area'* (and the same comment in the Offshore Ornithology Baseline report, 1.3.5.3) it is pointed out that one of the closest breeding colonies is the Calf of Man so a link there is also very likely and should therefore be noted. However, no significant effects were predicted for this species.

10.4.3 Designated Sites – SPAs have been identified but there is no account of Manx sites in this section – designated MNRs and ASSIs and key seabird sites in Manx National Heritage ownership. The TSC requests a consideration of Manx sites of importance to seabirds. See also comments regarding apportioning, and transboundary effects.

10.4.4 Important Ecological Features – Table 10.10 – there appears to be an anomaly between this section, which scopes out great back-backed gull, and the section on collision risk, which includes it (correctly in our view). This species is of interest to the Isle of Man, as the Manx population has, for a long time, been important in terms of the numbers found here, but there has been a severe decline, which is a concern.

10.5.2.5 conservation value of ornithological receptors – the TSC questions the process of assigning value based on whether populations are connected with SPAs or not, from the perspective of a nation which has not been an EU Member and therefore has no SPAs, nor has the Isle of Man, at this time, made an assessment of European-level interest for our seabird sites. There is concern to ensure that where connections to Manx sites are concerned, that this is not taken as devaluing the level of the receptor and thereby skewing the process of assessment.

Effects of concern – It is noted that common guillemot displacement may be quite significant in relation to background mortality (for instance during the breeding period) and also great black-backed gull collision risk in relation ot background mortality, but that both are expected to be below 1% of background mortality but they are of more concern than others. From a Manx perspective, the great black-backed gull is of greater concern, because the guillemot, as elsewhere has a healthy status and a decent recoverability, as noted in the PEIR, whereas on the Isle of Man the great black-backed gull is in severe decline.

10.8.4.31 (page 49) states, '*The abundance of breeding great black-backed gull in the UK has changed relatively little between census (JNCC, 2020). The species is deemed to have a medium recoverability due to a low reproductive success and the stable trend in breeding abundance*.' Reference is made to UK stability in population trend. It is pointed out that the Manx Birds of Conservation Concern shows a severe decline in the breeding population of GBB. It came out of this as having 'Medium' sensitivity. If the population comparison is regional then regional trends are more relevant than UK trends and could be ereferenced, rather than national. However, it is noted from the PVA that the South-West and Channel regional population (the smaller of the two regional populations assessed) is increasing and that the predicted effect merely slightly reduced the increase in population. Our concern is that there is a major difference between referenced regional trend and the published local trend on the Isle of Man (see comments under PVA, below), which relate more closely to the Mona site. Working this through, if we took a more local perception and accepted 'low'

recoverability, this could produce a High sensitivity (with Low magnitude), which would move it to the 'Minor or Moderate' significance of impact box (page 48).

Cumulative Effects Assessment - As has been noted at the EWG, the IoM wind farm has not been included in the cumulative assessment, as no survey details have been published to date, however the site should be kept in mind as data may be available before the Environmental Statement is completed.

10.11 Transboundary effects – it is noted that no effects are predicted. We note also, the Transboundary impacts screening (Volume 5, annex 5.2) 1.6.1.18 which states, *'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.*
It is requested that the potential impacts is not limited to SPAs, 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.

Volume 6, annex 10.1: Offshore ornithology baseline characterisation - 1.3.1.8 states, '*Additional non-SPA colonies located within individual foraging ranges from the Mona Array Area are listed in Appendix A.*' Note, no Manx sites have been included here. Note also, that there are no SPAs on the Isle of Man and there has to date been no assessment for European level interest, but the IoM is within the foraging range of some species and we look to the EIA for assurance that Manx seabird populations are not predicted to be significantly affected. The Manx data is available from the JNCC Seabird Monitoring Partnership Programme or the Manx report from Manx BirdLife.

Volume 6, annex 10.6: Offshore ornithology cumulative effects assessment population viability assessment technical report - 1.3.2.4 states, '*Generation Assets and with the impacts from other cumulative wind farms would reduce the growth rate of the smallest BDMPS population (UK South-West and English Channel BDMPS) by no more than 0.410% when using the largest collision risk estimate (60.8 individuals per annum). The model also predicts a positive rate of growth for the population based on growth rate of 1.026 per annum at that level of impact, compared to 1.028 within the unimpacted population*.'

1.3.2.5 states, '*For the purposes of this assessment, it is assumed therefore that despite any additional mortality, the population is still expected to continue to grow and will be larger after 35 years than that what is currently recorded*.'

The TSC believe that this follows accepted practice with respect to great black-backed gull. There are known problems defining the regional population here but it makes a comparison with both west coast regional populations, as it lies between the two. Of concern here is that the result of the methodology is that there is a slight reduction in the positive growth of the (smaller) SW population, but the Isle of Man data shows, not a positive growth, but a very severe decline in the breeding population (breeding population reduction 78.5% in 15 years and reduction 70.6% in 30 years) which begs a question as to whether the accepted regional population comparisons provide appropriate data as background, when there are clearly very different effects occurring in areas within that population, and much of it lies far from the study site, whereas the Isle of Man is close. At the EWG, it was noted that Horsewill and Robinson had been referenced and we ask whether the latest JNCC-held SMP data can be used, which the applicant has stated they will look at (the guidance apparently just recommends a 'custom approach'). Assurances are sought that the Manx population of great

black-backed gulls will not be affected significantly, noting the threat that this population is already under, on the Isle of Man.

Volume 6, annex 10.5: Offshore ornithology apportioning assessment – It is noted that Manx sites (all non-SPA of course as we do not have European SPAs in the jurisdiction) have been taken into account, in the apportioning, though as non-SPAs they are aggregated to a single non-SPA total. For the species of most interest to us in this discussion, the great black-backed gull, and another of local significance in regional terms, the herring gull, this is a significant proportion of the non-SPA total, but it is noted that this does not produce an expected adverse effect for that category (non-SPA).

Chapter 11: Commercial Fisheries

A portion of the Isle of Man territorial sea, corresponding with ICES area 36E5 lies within the Mona Commercial Fisheries Study Area (Figure 11.1) and, as such, Manx commercial fisheries should be fully 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 Mona Commercial Fisheries Study 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
General points:
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 Isle of Man government's view is 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. It is suggested 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 PEIR 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.

Figure 1.53 shows that the site is routinely fished using dredge gear, with high levels of landings. Figure 1.55 shows the site to be within the ICES working groups preliminary delineation of scallop grounds in the eastern Irish Sea. Figure 1.56 shows a large section of the site is considered an important queen scallop fishing ground, whilst the site as a whole is considered important spawning ground for queen scallop.

The displacement effects, particularly in relation to dredge activity targeting king scallop and queen scallop, could have significant impacts upon important grounds elsewhere in the regional study area. The EIA should consider the displacement effects, and the potential for increased fishing area in adjacent grounds within the eastern Irish Sea if the EIA determines that existing activity is indeed likely to be displaced.

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 adequately 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

1.4.6.7 Queen scallops are fished almost exclusively (and in recent years actually so) with otter trawl in Manx waters, not dredge.

1.4.8 Spatial distribution of fishing activity
Please clarify in the text whether the term 'UK vessels' includes Isle of Man vessels, given that IoM is not part of the UK. For example, Figure 1.55 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.

How have Manx vessels been considered in this analysis?

1.4.6.18 '*Queen Scallop are also caught by otter trawl vessels, as discussed below*.'

1.4.6.21 Generally, queen scallop, outside Manx waters, are targeted using skid dredges …

Table 1.5: *Aquapecten = Aequipecten*

Figure 1.44 This seems like an odd data presentation. How does fishing effort (kW days) relate to a port? Should it be simply landings (tonnes)?

1.4.8.11 – 12 while this is presenting a specific piece of information, it does seem overly selective, and provides no context for the wider queen scallop fishery areas, which may be indirectly affected by this development eg. by displacement, or recruitment effects. This has been done for scallops (Fig 1.55), why not for queen scallop?

For example; Manx waters

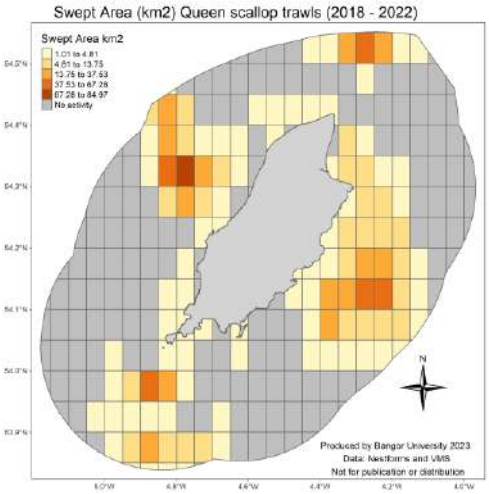


Figure 1.51 if only using >15m data, how have smaller vessels been considered within the analysis. For example, Isle of Man has no >15m static gear vessels, does this mean that no Manx vessels have been included?
It is no apparent that Manx data is presented in Fig 1.57 either – why does the data stop at the Territorial Sea boundary?

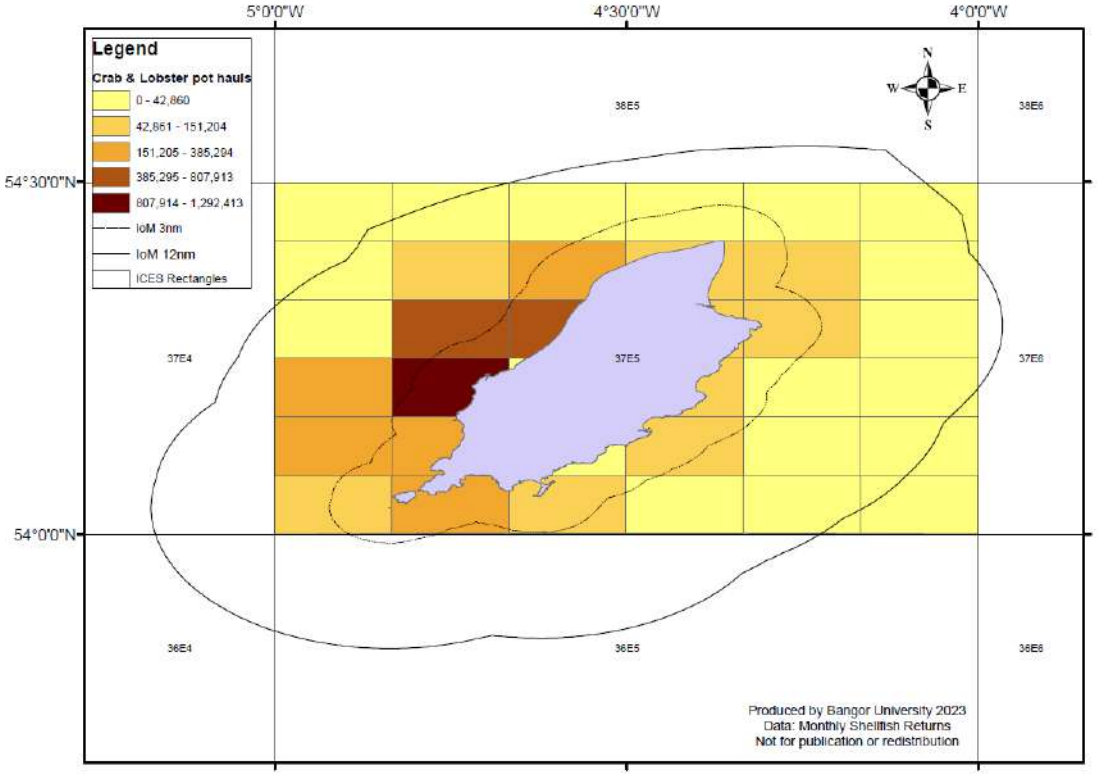
So how can effects on this sector be considered?

Figure 1.58 as noted above, why not link data sets to provide a more comprehensive map? Does fishing activity stop at the Manx TS limit? Fish and fishing activity are trans-boundary, so artificial boundaries may confuse the overall picture of activity, and also how the different jurisdictions have been included or not in the assessment.

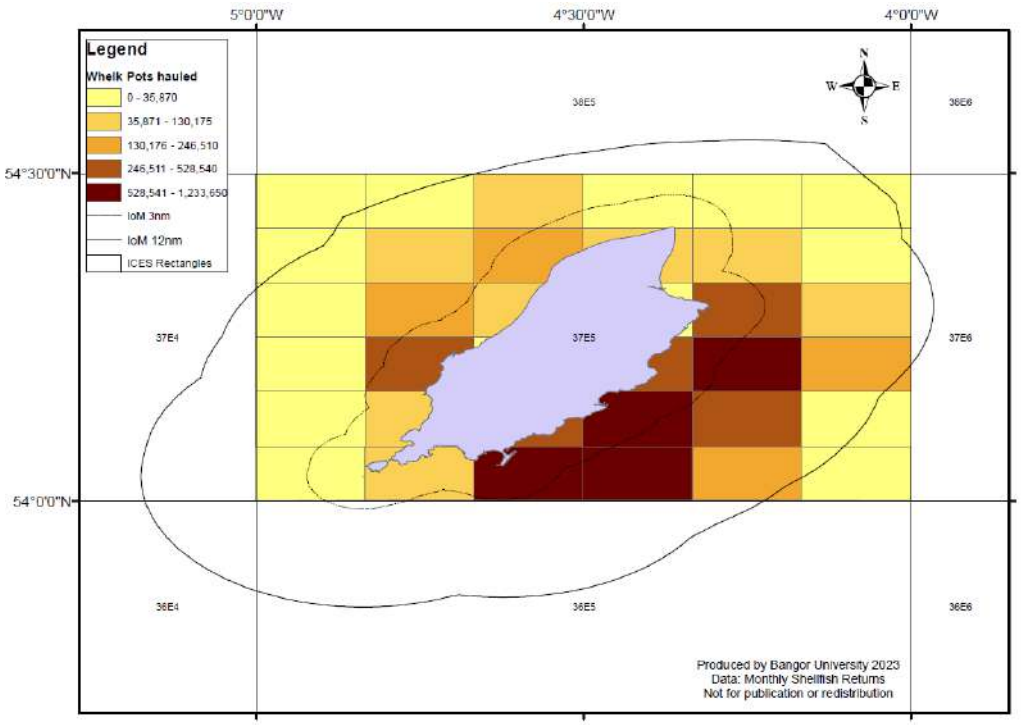
As noted previously, ALL mobile gear Manx vessels have VMS fitted and report data, and so could be similarly considered and presented for Fig 1.58.

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

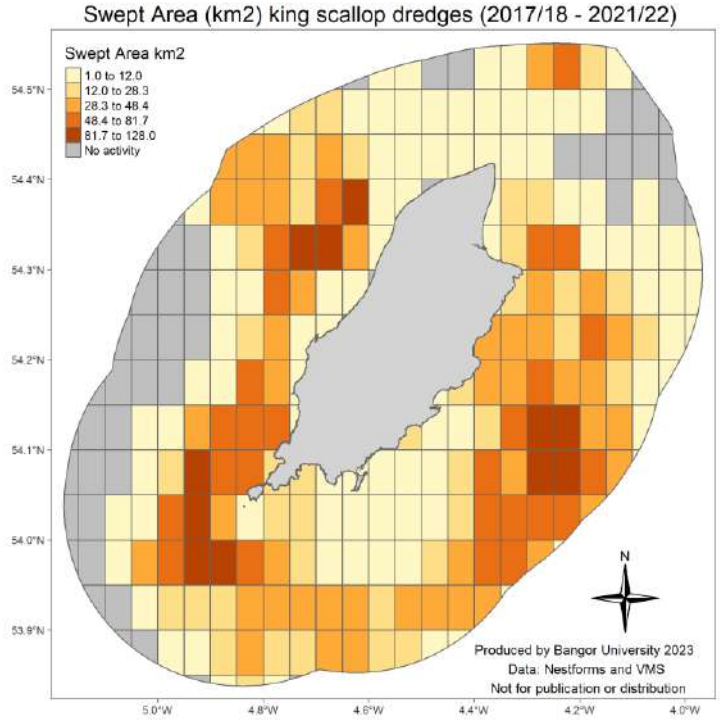
See below for comparative **commercial fishing activity maps** recently compiled for Isle of Man Government and for the Manx territorial sea area.



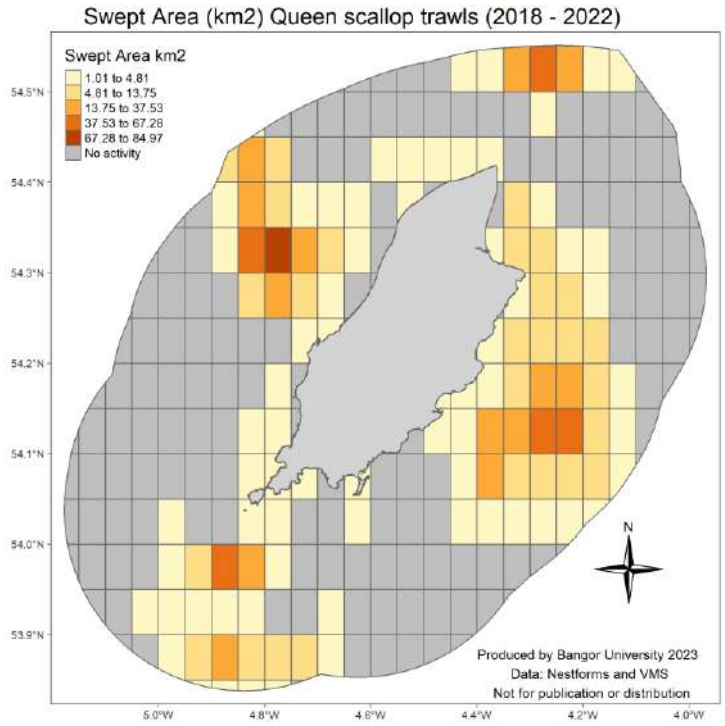
Crab and lobster commercial fishery activity data (2010 to 2021) (static gear) based on pot hauls (as a proxy for fishing effort/activity)). Data is obtained from monthly shellfish activity forms, but which does not contain EU logbook data from larger U.K. vessels (I.e. U.K. vessels fishing in 38E5), 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.



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.
Figure 1.63 (Observations) appears to show selective and limited data for Manx waters. For example, due to seasonal restrictions and fishing patterns there are only **two months** of the Manx scallop fishing season available during the observation period of **12 months (between June 2021 and Nov 2022)**, none of which is within 2021.

As such, while it is not expected to be comprehensive, restricted data presentation should be more thoroughly explained if the reports are to be considered reasonably representative and provide comfort of due consideration.

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

Vol. 2. Chapter 11 Commercial Fisheries

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 and for clarifying 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 (≥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?).

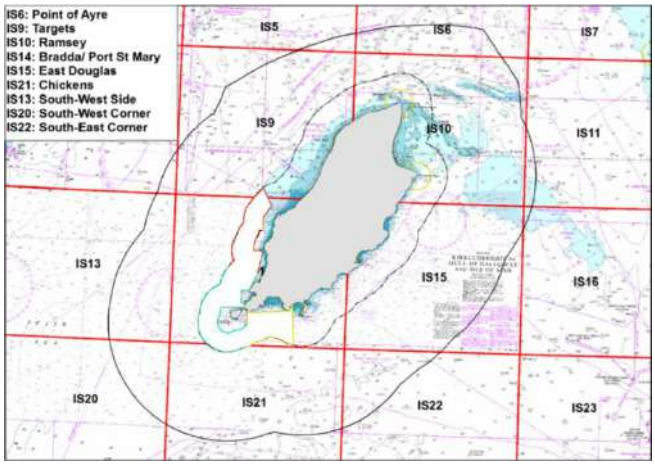
Noting that approximately 8/28 (around 28%) of Manx mobile gear vessels are under 12m, and their VMS data is available via MMO.

Please consider as appropriate, however it is acknowledged that few of these vessels would operate close to the Mona site.

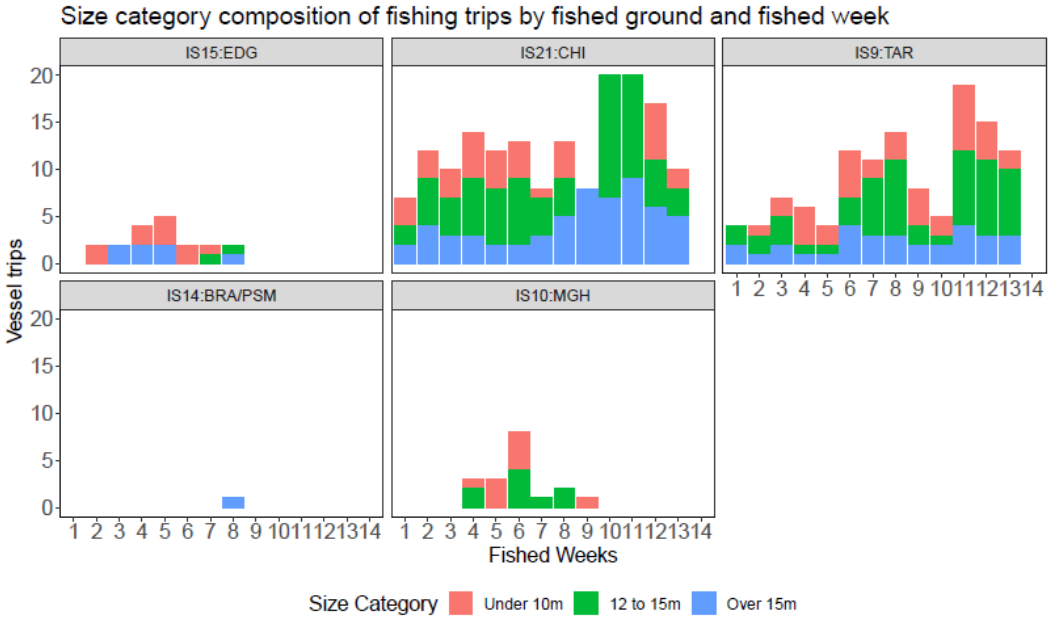
11.4.3 Site-specific surveys, Table 11.6, (and Section 1.4.8.13 of the Technical Report), and noting: 11.4.7.2 (**Data Limitations**):

'*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 1.63 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, not reflected in Figure **1.63**.



- **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 (noting that IoM is not part of UK, and so technically are non-UK vessels – see Figure 11.4) or not, and amend figure legends accordingly.

Static gear **11.4.4.12 - 11.4.4.14** presumably relates to **Figures 1.51, 1.57** and 1.**59** and therefore only to >15m vessels.

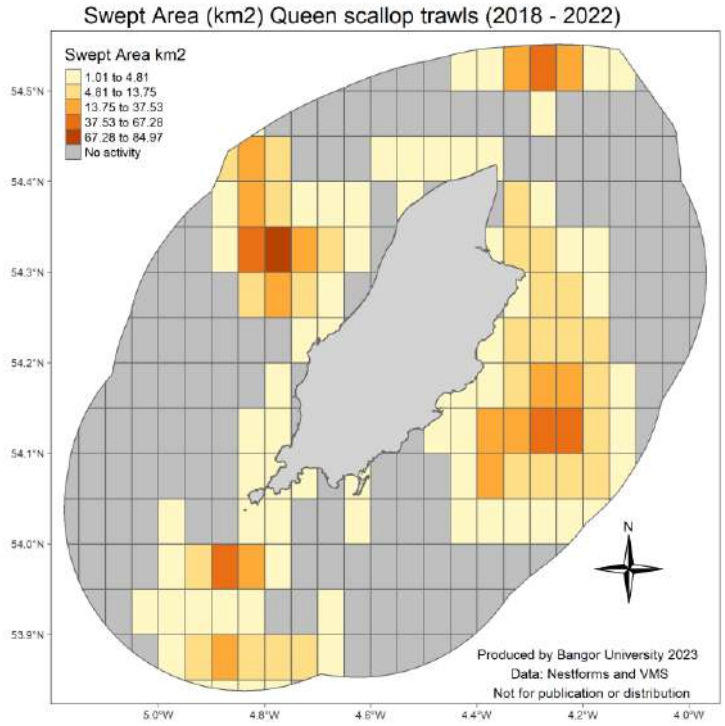
- **How have smaller potting vessels been included to any extent within this assessment, or have they not?**

- **Figure 1.51 shows static gear activity within the Manx territorial sea, but 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?

- **1.4.8.5** '……*Figure 1.53 illustrates that dredge vessels (>12m) were active across the Mona commercial fisheries study area. These dredge vessels are largely from Ireland, the Isle of Man, Northern Ireland and Scotland (section 1.4.6). Highest intensities of these vessels were observed within the Isle of Man 12nm limit, and within the central and western parts of the Mona Array Area. This is supported by feedback from project specific consultation which highlighted that the central and west part of the Mona Array Area is an important queen and king scallop fishing ground. It is evident that dredge activity and intensity varies by year, which also corroborates with information from fisheries stakeholders, which suggest that the fishery is cyclical over seven to eight year periods.*'

- 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 the 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 and clear differentiation made between otter trawl activity for queen scallops and for Nephrops** (to the west) see Figure 1.54. The receptor needs differentiation between target species for comprehensive assessment.
- **Figure 1.54** clearly indicates the Chickens and East Douglas Ground queen scallop grounds, to the west and 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.



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 but note potential requirement for differentiation between otter trawl species-specific activity (Nephrops vs queen scallop).

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

Agree.

Scallop vessels – Scottish west coast
11.8.2.17 - 19 ` Landing statistics indicate that the commercial fisheries study area was **particularly** important to Scottish west coast scallopers during the period 2010 to 2020, with 11 scallop vessels based in Annan, Ballantrae and Kirkcudbright particularly active.'

Given this statement, and the proximity to the Morgan array site (also with importance to this sector – how is it predicted to have low impact? Where will they go?

How has displacement into, or adjacent to, Manx waters been considered given the combined areas affected?

Has it been considered how many of these vessels have a Manx licence?

The Isle of Man Government would be interested in sight of more detail on this assessment/conclusion, and the associated quantitative evidence base.

Scallop vessels – Isle of Man

`***11.8.2.20*** *Feedback from project-specific consultation has established that, at the time of writing, there are* ***33 scallop vessels registered in the Isle of Man*** *(the majority of these vessels have a licence for both king and queen scallop)…'*

See comment above 1.4.29

33 Manx-registered scallop vessels is not correct. At 2023 there are 29 and 25 Manx-registered vessels licenced for scallops and queen scallops respectively. However, that doesn't adequately 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

Also:
`*Fisheries monitoring has recorded 2 Manx vessels* ***large enough*** *to fish outside of the Manx territorial sea*.`

Vessel size is not indicative of ability to fish in an area (likelihood perhaps), but actual data showing presence is. Essentially, size class can't be considered as a proxy for spatial use, only actual fishing activity.

11.8.2.21 - 22 Scallop vessels – Isle of Man

` …..*loss or restricted access to fishing grounds is assessed as* ***only representing between 5-20%*** *of the annual value of landings for vessels within this receptor group*.'

Noted: and given the combined effects of the Covid pandemic and Brexit, 5-20% of annual value must be considered significant, and over a period of 4 years.

As such, the conclusion that the magnitude of impact for this receptor is deemed as **low** and negligible (Table 11.16), is not supported and the Isle of Man Government requests an indication as

to how 5-20% of lost revenue for the Manx scallop fleet will be compensated over the four year period?

***11.8.2.34**: '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 patters during and post-constriction be undertaken to confirm these conclusions?
This may be important to the Isle of Man, particularly if displaced vessels also hold Manx licences.

11.8.2.63 'As it is assumed that fishing will continue within the Mona Array Area during the operations and maintenance phase, the area unsuitable for continued fishing is assessed as representing **<5%** of the annual value of landings for vessels in this receptor group.'

At 11.8.2.2, this receptor group is indicated as losing between 5 and 20% - why is lower value used here? **Please clarify**.

11.8.2.64. Once clarified, the Isle of Man Government requests an indication as to how 5-20% of lost revenue for the Manx scallop fleet will be compensated over the four year period?

'***11.8.3.11** Displacement of other fishing vessels from the Mona Array Area into areas where Isle of Man scallop vessels fish could cause conflict between these different receptor groups. However, displacement of non-UK vessels, such as Belgian beam trawl vessels or Irish scallop vessels, into the Manx Territorial Sea (within 12nm) within the 36E5 will not occur, as non-UK vessels do not have access to this area, under the London Fisheries Convention 1964. Displacement of Scottish west coast scallop vessels and other scallopers into the Manx Territorial Sea is also limited, as under the Isle of Man Scallop LTMP, access to king scallop dredging is limited to vessels under 221kW, unless they possess Grandfather Rights. These Grandfather Rights will be terminated by November 2024 under the LTMP.'*

This is correct, however, as below, has it been ascertained <u>how many of those vessels do have Manx scallop entitlements</u>? Therefore this is the actual potential displacement effect and should be indicated and quantified.

`*Only vessels which possess a UK and Isle of Man fishing vessel licence with scallop entitlement, may fish for scallops within Manx Territorial waters. In light of this, and the discrete spatial areas of exclusion during construction, the displacement of fishing activity during construction therefore results in a predicted loss* ***of <5% of this receptor's annual value of landings****.'*

In addition, and as posed above, How will this 5% (or up to 20% at 11.8.2.2), be compensated over 4 years, given the recent hardships experienced by industry. It cannot simply be written off as trivial, and assumed to be absorbed by Manx fishermen.

The Isle of Man Government requests an indication as to how 5 - 20% of lost revenue for the Manx scallop fleet will be compensated over the four year period?

11.8.8
Scallop vessels – Isle of Man
'11.*8.8.11* *The impact is predicted to be of local spatial extent, short to medium term duration and intermittent. It is predicted that the impact will affect the receptor directly, but only be of minor benefit, as it is judged that any such support by this receptor group would create a value equivalent to between* ***5-20%*** *of the receptor group's annual value of landings. The magnitude is therefore, considered to be low.'*

Is it coincidence that the 5-20% estimate is the same for both the potential coast and potential benefit to Manx scallop vessels? Does this value apply to all vessels equally?

The Isle of Man Government would like to see how both the potential negative cost effect of displacement noted above (eg. **11.8.2.21 - 22 and 11.8.2.63**) and the potential benefit noted here have been calculated.

- And requests clarification of whether it's 5% or 20%, or how this will be resolved,

and;

- questions whether either of these values is actually 'low' in the context of recent fishing industry financial pressures and, for example, bp/EnBW shareholder expectations of corporate performance.

Noting Monitoring commitments at 11.8.10

Table 11.32: Monitoring commitments. Environmental effect	***Monitoring commitment***	***Means of implementation***
Potential snagging risk.	*Monitoring of the cables and their burial status to reduce snagging risk.*	*Expected to be a condition of the deemed Marine Licence (dML) within the DCO.*
Effects of the operational phase on fishing activity and subsequent value.	*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.*	*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 to some extent.

'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, as acknowledged already for the 4 year construction phase (-5 to 20% of annual income). Comprehensive cumulative effects can only presumably enhance this effect?

Table 11.47: Monitoring commitments. Environmental effect	**Monitoring commitment**	**Means of implementation**
Effects of the operational phase on fishing activity and subsequent value.	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.	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 Mona Offshore Wind Project 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 Plan[1] 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 a 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.

[1] https://www.gov.im/media/1376550/ltmp-10-260522.pdf

- *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.* '

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

What is the expected outcome if monitoring shows a change?

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 wtihin 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 4.5.3.2). 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 Mona Array 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 Mona 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.

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). There should be an acknowledgement between the winter and summer surveys that there will likely be seasonal variations. The IOMSPC Douglas – Liverpool route is undertaken by the fast craft which is much more susceptible to variations in weather conditions, and when decisions as to its routeing are being made, passenger comfort ranks very high on the list of considerations. The normal weather route for Douglas Liverpool runs along the westerly boundary of the Mona Array area, whereas during periods of adverse weather, the Masters are forced to move that route to the eastern edge of the Mona Array Area, and many times, as shown in 12.5, the route has had to deviate through the Mona Array Area. 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 – Liverpool route resulting in a 0.01nm deviation around the northwestern boundary of the Mona Array Area.

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 Mona Array area, including the proposed offshore windfarm in Manx waters. It is not clear from Figure 12.7 whether the Ørsted Agreement for Lease site has been included as part of this consideration, as deviations proposed in the future less than 1 trip per day could be being proposed to reroute through that site in Manx waters.

It is noted that this expected deviation to the IOMSPC Douglas Liverpool route is to be applied during all phases of Mona – constructions, operation and decommissioning. Clarification is sought on proposed mitigation measures, as were expected to be included within PEIR.

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 Mona Array Area. However, with the presence of the Mona 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 Mona 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 Douglas - Liverpool would be impacted at a significant wave height (Hs) of 1.6m and cancelled at 2m Hs; the frequency for which these conditions would be exceeded within a year are given as Liverpool to Douglas - Between 4.8% and 13.4% of sailings would require some weather routeing (average of 9.6%). Between 1.5% and 7.3% of sailings could be cancelled due to adverse weather (average of 4%). This has then been further estimated to equate to a basecase estimate of 26 sailings cancelled would increase to 35 sailings cancelled with the Mona Generation Assets. This analysis suggests that there would be an additional 9 sailings per annum that would be affected during the construction phase (which estimated to take approx. 4 years, is 36 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 Mona 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. 10-33minutes, and with an additional 27minutes, as estimated, could result in journey times of up to 60minutes in worst cases on a 158minute journey. The TSC appreciates the acknowledgement that "It should be noted during the bridge navigation simulation it was verified that the Manannan is more sensitive to adverse weather conditions than conventional ro-ro ferries and therefore may be more likely to take adverse weather routes and be impacted by the presence of the Mona Array Area". The Manannan, as the IOMSCP fast craft is a seasonal ferry, serving these routes for local Island residents, businesses and for tourism promotion for the Island. It is noted that it has different requirements to conventional ferries, however, it is unacceptable for this route, in adverse weather to face up to 60 minutes of a delay owing to the presence of the Mona Array.

The TSC notes that "In addition to the impact on vessel routeing, the presence of the Mona Array Area reduces the optionality of vessels to maintain a safe and comfortable heading to the adverse conditions. A passage to the east of the Mona Array Area 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 Mona, without the capability to turn west into the prevailing conditions". Passenger comfort and safety is of paramount concern to the IOMSPC and this will have to be carefully considered by the IOMSPC in respect of these proposed deviations.

It is further noted that the same conclusions have been reached with regards both the operational and decommissioning phases of the Mona 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". Further clarification is sought as to which specific situations the CPA was not maintained, and whether this took into account the cumulative impact of the other proposed R4 sites as well as the proposed Orsted Agreement for Lease site in Manx waters.

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 Mona 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. The TSC had however expected there to be more emphasis and greater detail provided on proposed mitigation measures for the impacts identified to date as part of the PEIR, particularly as set out in the Statement of Community Consultation whereby "It (the PEIR) also sets out measures that could prevent, reduce or offset any environmental effects, identified as part of early assessments and consultation". The TSC requests confirmation as to when consultation on such proposed mitigation measures will be undertaken prior to submission of DCO application.

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), Mona (11th August 2022), Morecambe Bay (11th August 2022) and more recently, Mona 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 assement 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 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. Conclusions suggest that there will be a 1minute addition to journey time for the Douglas – Liverpool route and a 4 minute addition to the Douglas – Heysham. This will require further confirmation from the IOMSPC.

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.

The TSC notes that the Ørsted site has been omitted from Figure 12.10 showing the proposed deviations around Mona and Morgan Array areas for the various ferry operators. Until such times as this site is taken into account as part of the cumulative impact assessment, the TSC cannot accept all the conclusions presented, particulalry those proposed deviations presented in Figure 12. 11. ,

Impact on adverse weather routeing
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 Mona Array Area. However, with the presence of the cumulative impacts, 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 Mona 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 Liverpool and Douglas would be impacted at a significant wave height (Hs) of 1.6m and cancelled at 2m 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 routeing (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 routeing (average of 9.6%). 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 worst 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 Mona Array Area reduces the optionality of vessels to maintain a safe and comfortable heading to the adverse conditions. A passage between the Mona 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 Mona, 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 Mona 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 Mona 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 43years.

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 based on the impact it could have on the Isle of Man. 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 Mona Array, taken to be 1.5nm – the deviation shown in this figure rather proposes that the Stena route would be deviated, to clear Mona, 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 might 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 Mona 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 wtihin those. Any undue delay to arrivals and departures could result in financial penalties, and who would be responsible for covering those is the delays were due to deviations from well established routes as a result of the Mona Array, or indeed, the cumulative impact of all the shipping? In additional Heysham presents additional restrictions in terms of tide times, and access / manouverability 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 Mona 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 Mona and the wider, cumulative impact 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 Mona 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 fo 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 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 wind farm is located to the south of the interconnector; no direct conflict.

The wind farm export cables will be positioned within the indicative cable corridor proposed, which runs from the southern boundary of the wind farm towards north coast of Wales; no direct impact.

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	**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 north of the proposed Mona 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.

Chapter 26 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 27 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 28 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 29 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 eleviate 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 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. 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, National Nature Reserves (under the wildlife Act 1990), and other designations as appropriate, 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 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:

An EIA would need to contemplate the following issues:

Visual impact of proposals on the setting of protected monuments on the east side of the watershed of the Island. As with the Morgan development, this could involve approximately 25 monuments. Whilst 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 albeit fewer than for the proposed Morgan Generation Assets windfarm. 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 suggest that given that their data also tails off in this direction because coverage only extends to the median line, so the developer would have to consult other sources in Wales and England for the Liverpool Bay area.

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.