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MONA OFFSHORE WIND PROJECT

Technical Engagement Plan Appendices Part 2 (F to M)



Image of an offshore wind farm

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Appendix F: Marine Navigation Engagement Forum

F.1 Marine Navigation Engagement Forum overview

Table F.1: Overview of MNEF consultation materials.

Date	Meeting	Information provided
10 November 2021	MNEF meeting 1	Meeting minutes (F.2.1)
06 May 2022	MNEF meeting 2	Meeting minutes (F.3.1)
10 October 2023	MNEF meeting 3	Meeting minutes (F.4.1)
18 January 2023	MNEF meeting 4	Meeting minutes (F.5.1)
21 September 2023	MNEF meeting 5	Meeting minutes (F.6.1)

F.2 MNEF meeting 1

F.2.1 Minutes

MINUTES OF MEETING

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REV. No.: R02-00

MOM Subject: Morgan & Mona OWF, Irish Sea: Maritime Navigation Engagement Forum (MNEF)

MINUTES OF MEETING

MEETING DATE: 10-Nov-2021

MEETING LOCATION: Microsoft Teams

RECORDED BY: [redacted]

ISSUED BY: [redacted]

PERSONS PRESENT:

See: Member and Attendee List: 'Morgan_Mona_OWF_MNEF_20211110_Members_Attendees_R02-00.pdf'

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1. Member and Attendee List: 'Morgan_Mona_OWF_MNEF_20211110_Members_Attendees_R02-00.pdf'
2. Slide Pack: 'Morgan_Mona_OWF_MNEF_Slide_Pack_20211110_R01-00'
3. MNEF Terms of Reference: 'Morgan__Mona_Maritime_Navigation_Engagement_Forum_ToR_Rev02.pdf'

MEETING AGENDA:

- Introductions
- About the Projects:
  - The Team
  - The Constraints
  - The Development Process
    - Indicative timeline and programmes for shipping & navigation
    - Consent process
    - Projects development/design to date
- Community and Maritime Engagement
- About the MNEF
  - Purpose and ToR
  - Administration and logistics
  - Indicative timeline and progression of the agenda
- Roadmap
  - Project datasets and data collection
  - Work to inform projects development
- Summary

ITEM NO:	DISCUSSION ITEM:	Responsible party	Date
1.	**Disclaimer (slide 2 of attached slide pack), Introductions and Protocols (slide 3)** **ID:** Gave overview of disclaimer. **JH**: Led introductions for all attendees and gave overview of MNEF meeting protocols. **ID** and **JH:** Requested all members/attendees to confirm sharing of email address within forum and on MNEF business. **JH** will send email to all and ask that all respond	**All**	Dec-2021
2.	**Objective and Agenda (slides 4 & 5)** **JH:** Outlined the objective of this initial Maritime Navigation Engagement Forum (MNEF) meeting is to introduce the Projects and the MNEF.		
3.	**Projects Overview (slides 6 & 7)** **RH:** Introduced the projects and delivery teams **(slide 6)** with key points as follows: • bp and its partner EnBW are preferred bidders on the two 60-year leases in UK Offshore Wind Round 4 for Morgan and Mona in East Irish Sea. • ESIA Delivery Team: – RPS | ESIA lead – NASH Maritime (NASH) | Shipping & Navigation **JH:** Introduced NASH explaining personnel have wide ranging background in assessments for maritime and offshore energy projects and (on request from **KT**) confirmed this includes Master Mariners and Harbourmasters with practical navigation and operation backgrounds. Further information on some of the NASH Maritime personnel is available at [redacted] and (as requested in confirmation by **KT**) include g experience and shipping and navigation assessment experience. **KT:** Asked NASH Maritime to confirm that they are employed by the developers and their cost/fees is paid by them (developer). NASH Maritime confirmed that they have been contracted by RPS, the lead ESIA consultants, who in turn have been contracted by the developers to prepare the ESIA for the projects. RPS/NASH fees are paid for by the developer. **AE:** Noted a number of issues were raised by the ferry user groups for the Celtic Array project and recommended that relevant information from that project and the stakeholders are applicable to this project and should be considered. **ID:** Provided overview of key constraints being considered in the development of the projects **(slide 7)** and that, from a shipping perspective, these need to be drawn together to meet the needs of users and requirements on safety: – Maritime safety – Navigation – Commercial fisheries – Aviation and radar – Engineering – Ecological – Commercial **SS:** Queried the location of projects in relation to navigation features and specifically the distance from the Conwy Fields installations? **JH:** Explained there are more detailed plots, with charts, later in the Slide Pack showing the projects in context with navigation features. [Post meeting note: the Conwy platform is 1nm to the east of the Mona bidding area boundary].		

	AE: Queried how the Morgan and Mona areas were originally selected and whether ferry routes were taken into consideration during this initial decision? **ID:** Initial areas for Round 4 were determined by The Crown Estate and based on a number of factors, although navigation routes was not one of them and it is the responsibility of project developers to consider this. Maritime safety is also a key issue. **AE:** Stated that the commercial impact of the projects on ferry services is important and that navigational safety and commercial viability should be equally high priorities. **ID:** Reassured **AE** that this point is fully understood. The primary focus of the forum is navigational safety; however, navigational safety and commercial viability are not divorced from each other. There will be further individual and group sessions regarding commercial viability with agreements made on bilateral arrangements.		
4.	**Project Timeline (slides 8, 9 and 10)** **AB:** Introduced the indicative projects timeline **(slide 8)** and for Mona **(slide 9)** and Morgan **(slide 10)**. **JH:** Noted that vessel traffic surveys are scheduled Nov/Dec 2021, and summer 2022 for a winter and summer assessment respectively. **JH:** Stated that it is the intention to include as much data in the PEIR as possible, to minimise uncertainty in the assessment. **KT:** Queried whether the marine vessel traffic survey will take into account COVID-19 impact on passenger services **JH:** Confirmed that NASH have proposed to consider impacts on ferry services from COVID-19 through supplementing the marine vessel traffic survey with a range of longer term AIS datasets pre (and post) COVID-19. NASH raised this point with the MCA (when meeting them in Oct-2021 to specify the marine vessel traffic survey requirements).		
5.	**Project Design and Refinement (slide 11)** **ID:** Introduced the Scoping boundaries for both projects (the boundary on which Scoping will be undertaken) and the key features (Generation Assets and Transmission Assets). Noted that: - Mona Scoping boundary has been reduced in the north from the original bidding area with a 3nm gap between both project boundaries. - The project team is currently in the early stages of reviewing baseline navigation routes in the vicinity of the project areas. - The number and layout of wind turbines and other infrastructure is being progressed. - The project team will liaise with stakeholders with regards to the maritime aspects of the designs and its constraints. **AE:** Queried the basis of how the size and position of the Scoping boundaries were decided and in particular the space between both projects. **ID:** Explained a combination of factors were considered, based around the key constraints outlined in **slide 7**. There is also an ongoing review of cumulative considerations, including the relationship of the other Round 4 Project and other offshore developments.		
6.	**Community and maritime engagement (slides 13 & 14)** **ID:** Explained that stakeholder engagement is taken very seriously and outlined what stakeholders can expect from the project team **(slide 13)** and the principles for stakeholder engagement:		

	• Open - transparent principles. • Constructive and collaborative - listening to stakeholders and engaging with respect. • Solutions focused - working together to find mutually acceptable solutions despite differing interests. • The sharing of documents at each stage and the opportunity for working groups focussed on specific issues. **ID:** Summarised stakeholder engagement timeline **(slide 14)** and emphasised that there will be open lines of communication between the project team and stakeholders.		
7.	**Purpose of MNEF and ToR (slides 16 & 17)** **JH:** Noted that the MNEF ToR has been issued to all in the initial contact with organisations (and will be re-circulated with these minutes). The purpose of the MNEF is as a platform to exchange information, knowledge and experience that will enable marine developers, and relevant shipping & navigation (S&N) stakeholders to co-exist in the marine environment. Specific focus on: • Risk to safety of marine operations and navigation • Impact on marine operations and navigation The MNEF aims to ensure that the views and needs of relevant S&N stakeholders and marine developers are discussed and considered. MNEF occurs approx. quarterly (over 2 years) with whole forum events. Issue Specific Stakeholder Workshops (ISSW) will take place on a case-by-case basis and will include relevant user groups/users when there are concerns regarding specific project matters. Additionally, alongside the MNEF, the Navigation Risk Assessment (NRA) will involve consultation with key users and HAZID workshops.		
8.	**Membership (slide 18)** See attached Attendee list (as run through during introductions) with key user groups and organisations identified.		
9.	**Administration and Logistics (slide 19 & 20)** **JH:** Outlined administration and logistics **(slide 19)**. NASH will facilitate MNEF meetings and act as secretariat – it is important that all stakeholders bring their issues to the forums and any relevant supporting information. ISSW will directly pick up matters with specific user groups. **JH** encouraged the group to send comments via the project email address. **JH:** Summarised that the indicative timeline and agenda evolution will be maintained on a periodic basis **(slide 20)** and that NASH will report back to stakeholders on this.		
10.	**MNEF summary (slide 21)** **JH:** Opened the floor to questions. **KT:** Referred to wording within The Electricity Act 1989 – Section 36B – 'Duties in relation to navigation'. **JH** noted this and commented that a range of Acts, guidance and policy documents will be considered by the developers [post meeting note: We would note that this provision only applies to decisions on offshore energy projects made under the Electricity Act 1989 and not to Nationally Significant Infrastructure Projects (NSIPs) which are determined under the Planning Act 2008; the relevant policy provisions for NSIP projects in relation to shipping and navigation are set out in National Policy Statement (NPS) EN-3 Section 2.33]. *KT reply to post minute note: Both Electricity 1989 and Planning*		

	2008 Acts are considered in relation to renewable energy installations and where the Secretary of State consider the consents submitted. **KT:** Noted that MGN543 was replaced by MGN654 in 2021. **NS** and **JH** confirmed this and that the project will be assessed in accordance with MGN654. **JH** confirmed that NASH have undertaken a number of assessments against the updated guidance. **KT:** Asked if the developers were able to disclose the value of the project: **RH:** Explained this this isn't currently possible. The developers are in the early stages of determining the value of the project and therefore do not have exact numbers yet. Furthermore, working with The Crown Estate means commercial information cannot be divulged. **AE:** Asked whether the project is bound to providing a certain amount of GW? **RH**: Confirmed that 1.5GW (per project) is the expectation from The Crown Estate but there is future opportunity to adjust this. The developer will be working alongside government bodies and stakeholders to determine what array design works best. Future changes in technology are also considered including what the largest turbine size will be available at the time of installation. **AE:** Queried whether larger turbines mean having less turbines to reach the goal output, resulting in a smaller wind farm area? **RH:** Explained that all possible designs need to be modelled before this can be decided. There are a number of other factors that affect the number and positioning of turbines required, such as seafloor/subseafloor conditions which play a significant role in where turbines can be placed. **AE:** Queried whether floating turbines in deeper waters been considered as an alternative. **RH:** Explained that bp and EnBW can only bid on areas identified by The Crown Estate in Round 4 and the option of floating wind turbines in deeper waters was not offered within the bidding round. Additionally, floating technology is comparatively young in renewables compared to fixed bottom technology, and has not been developed at this scale to date.		
11.	**Shipping and Navigation Roadmap (slides 23 and 24)** **AB** and **JH:** Explained that a Shipping & Navigation Roadmap will be developed to document discussions and agreement between Applicant and key stakeholders in relation to the information that will be prepared to support the S&N assessment of the ESIA. **AB:** Explained the shipping and navigation roadmap document sits alongside the MNEF meetings and records all agreements and disagreements. It is a live document that will be maintained and circulated before being submitted with the ESIA. **JH:** Explained that, although the work is at very early stages, it would be helpful to outline the project datasets and planned work at this stage at a high level.		
12.	**Data Sources, collection and analysis (slide 25 & 26)** **JH:** Outlined identified data sources **(slide 25)** with respect to key shipping and navigation receptors. Through use of longer duration AIS datasets [see also minutes Item 4] the project will take into consideration COVID and other historic influencing factors on trends such as change in shipping due to Brexit. **JH:** NASH would welcome comments on likely future baseline and also invited the forum to highlight any other datasets. Group discussion held on data sources and determining the existing/future baseline.		

KT: Requested the 2020 data be omitted from analysis as ferry traffic during 2020 was significantly impacted by COVID-19.

- **JH:** Noted that the project was mindful of the representativeness of 2020 data (and some 2021 data) and will take this comment onboard noting these datasets will still provide the project with useful information on the traffic baseline (and variances) for a range of other users.
- **NS:** Noted that this had been discussed during early meetings with the MCA and that, with the PEIR due in 2023 [post meeting note: Morgan PEIR due Feb-2023 and Mona due Nov-2022] and ESIA the following year, the MCA consider there is also opportunity to supplement with data from 2021 and 2022 for benchmarking purposes.

SC: Queried about gathering data on future activity that isn't included in historic or recent data.

- **JH** explained NASH will be examining the existing baseline activity and future baseline activity within the assessment (as per guidance). The future baseline draws upon a range of sources including published shipping and port industry projected trends and consulting with stakeholders (e.g. ferry operators) to establish future activity and changes. In that regard, the project welcomes any supporting information that stakeholders can provide to the project on future activity/ traffic trends in their respective sector for consideration.

AE: Noted that, post Brexit, routes to Northern Ireland now run at capacity with numbers set to further increase. It is projected that the number of routes to Ireland may reduce.

- **JH:** Thanked **AE** for the comment and stated that NASH are keen to engage with stakeholders on this kind of information. This specific scenario will be picked up in a ferry user group.

SS: Queried whether a seafloor survey has been conducted of the wind farm bidding area?

- **AB:** Explained a geophysical survey and shallow geotechnical survey were conducted this summer and further surveys are planned for 2022.
- **RH:** Explained that a bathymetry survey is currently being conducted and thanked the group for cooperating with the operations whilst this was taking place.

JH: Outlined vessel traffic survey data collection (**slide 26**) with a Nov/Dec 2021 survey commencing imminently and plans being made for a summer 2022 survey. **Slide 27** also presented to show planned shipping and navigation assessment activities and an example of data showing raw vessel track lines for 12 months of 2019 (note - for all vessels with AIS).

ID: Noted that the projects are still early on in the design phase and there is a lot of time for discussion and consultation. At all phases, there will be different groups working in parallel to frequently inform the design team on how to work through the key constraints, and this will all be regularly reported back to the forum.

Group discussion held on basis of assessment and impacts:

AE: Queried the size of the project areas in sqkm.

- **ID:** Morgan bidding area is currently 300 sqkm and Mona bidding area was 500 sqkm although this has been reduced slightly as discussed above.

KT: Explained that ferries may have to deviate around the wind farms and queried whether adverse weather routes are being planned for/taken into consideration?

- **JH** confirmed that NASH will be considering adverse weather routes (as per guidance) and initially seeking to analyse these through analysis/identifying them within long-term AIS datasets for known routes/vessels and through consultation with specific user stakeholders.

JO: Queried whether the impact of both projects will be considered together, or separately.

- **AB:** Explained a cumulative impact assessment of Morgan and Mona plus other surrounding Round 4/development sites, will be taking place.

AE: Queried why there are two separate projects rather than one project.

- **RH:** Explained the areas have been leased as two separate areas hence they are two separate projects. However, they significantly benefit from being developed in one integrated programme because the cumulative effects can be identified and mitigated.

SS: Queried whether, with all the parameters taken into consideration, will the proposed datasets give a sufficient idea of the scoping areas?

- **JH:** explained that the project considers these proposed datasets will collectively give a good basis to understand both the Scoping areas and the wider project area and underpin the assessments.

- **NS:** Confirmed, as the MCA representative, that this is in accordance with MCA guidelines.

SS: Queried where the best regions within the bidding areas to put turbines are located?

- **RH:** Explained this is subject to assessment and there are currently metocean buoys being deployed and FLiDAR buoys will be deployed at the end of the year to measure wind data.

KT: Noted the AIS plot (**slide 27**) shows clearly established navigation routes through Morgan and Mona. How does this reconcile with the 1989 Act?

- **JH:** More detailed AIS data analysis is currently taking place to determine the baseline vessels and routes, define the nature of their operation and timetables, in order to develop a better understanding of how they will be impacted.

KT: Queried whether vessel operators will be asked to divert around the scoping areas or if the wind farm designs will be changed?

- **JH:** Explained that once the baseline is understood, the options available to vessels/routes will be examined including how and where they might divert and the feasibility of doing this in a navigationally safe manner. This will be reviewed together with potential impact on scheduled operations for example (such as turnarounds). Stakeholders, such as ferry operators, will be consulted through this to understand the feasibility of change in scheduled routes.

	• **NS:** Confirmed that this is in accordance with MCA guidance and that the consequential changes in risk of collision and contact, caused by rerouting vessels to other areas, will need to be fully considered in the NRA. **AE:** Noted that **slide 27** shows five major routes passing through the Morgan and Mona scoping areas which could be adversely affected. **AE** also noted that deviating is not a simple solution for most companies as it has knock-on effects for many factors, such as losing valuable time, having tight turn arounds that don't allow for delays, changes in crew timings/working to crew limitations etc**.** • **JH:** Thanked **AE** for this important point and that these sorts of commercial impacts are key to identify. These will be examined through the assessment and input from stakeholders. Information that stakeholders can provide in understanding these knock-on effects is helpful.		
13.	**Summary** **JH:** Opened the floor to questions and comments. **AE:** Queried that the sites appear large for comparatively few turbines in comparison to other surrounding wind farms. • **NS:** The scoping areas shown define areas of possible wind turbine placement and noted the whole area may not be developed. **AE:** Requested whether a percentage coverage of the area with wind turbines could be provided? • **RH:** Explained this is not possible at this stage in the project. • **AB:** Noted that when developers submit an application, they need to include a range of WTG options to cover current and future technology. Therefore, there will be a range of turbine options within the design envelope. • **ID:** Noted that there is no generic solution to designing a wind farm – trade offs have to be made between the various constraints when deciding where to place the turbines. **KT:** Wished it noted for the minutes that Isle of Man Steam Packet Company have operated for over 192 years and are a lifeline service integral to the commercial and social well-being of the 85,000 inhabitants of the island. **KT** noted they have no room for change if they are still to run at their current capacity. For example, the vessels used (as may also be the case for others) are unable to reach higher speeds to make up for the time lost when deviating around Morgan and/or Mona. **ID:** Responded that these concerns are understood by the project team and that they will heavily influence the decisions that are made when designing the OWF. **NS:** Stated that the issues voiced by **KT** are important to the Examining Authority and are given large weighting in decision making as per the National Policy Statement for Renewable Energy Infrastructure (Post meeting note: NPS EN-3) and in Marine Spatial Planning. **NS:** Commented to the group that the Scoping Reports (March 2022) will be the first opportunity for stakeholders to make formal comments on the proposals (outwith of discussions with the applicant).		

	RH: Thanked all for attendance and participation and asked that extensive feedback is provided by stakeholders at all points of the project and that individual meetings be requested if required. **JH:** Closed the meeting noting that any queries should be directed to the MNEF email address: [redacted]		

F.3 MNEF meeting 2

F.3.1 Minutes

MINUTES OF MEETING

Security Classification:
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Partners in UK offshore wind

MOM Number:	Morgan_Mona_OWF_MNEF_20220506_Meeting_Minutes_	**REV. No.:**	R01-00

MOM Subject: Morgan & Mona OWF, Irish Sea: Maritime Navigation Engagement Forum (MNEF)

MINUTES OF MEETING

MEETING DATE: 06-May-2022

MEETING LOCATION: Microsoft Teams

RECORDED BY: [redacted] (NASH Maritime)

ISSUED BY: [redacted] (NASH Maritime)

PERSONS PRESENT:

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2. Slide Pack: 'Morgan_Mona_OWF_MNEF_Slide_Pack_20220506_R01-00'
3. MNEF Terms of Reference: 'Morgan__Mona_Maritime_Navigation_Engagement_Forum_ToR_Rev02.pdf'

MEETING AGENDA:

- Introductions
- Review of Key Themes from Previous Meeting
- About the Projects and Project Update:
  - The Team
  - The Programme
  - Scoping Review
- Project Datasets and Data Collection:
  - Desktop Data
  - Vessel Traffic Survey
- Assessment of Impact on Commercial Ferry Operators
- Navigation Risk Assessment
- Summary

ITEM NO:	DISCUSSION ITEM:	Responsible party	Date
1.	**Introductions (Slide 1-5)** **JJH** led the introductions and outlined the meeting protocols. The agenda and objectives of the meeting were reviewed. JJH confirmed meeting minutes will be issued together with the slide pack (unchanged from the slide pack issued prior to the meeting). **JJH** reminded all members/attendees to opt in for sharing of contact details. As not all members have opted in, group MNEF correspondence and meeting invites will continue without sharing details.	**All**	**May-22**
2.	**Review of Key Themes from Previous Meeting (Slide 6)** **JJH** summarised the key themes and feedback arising from the MNEF 1 (held on 10-Nov-2021): – Site selection process with The Crown Estate (TCE): **JJH** noted that TCE has put the emphasis on developers to progress the sites post-bid as is currently being undertaken. – Issues raised on previous projects: **JJH** noted that stakeholders had been involved in previous Offshore Wind Farm (OWF) projects in the area and the project has sought to access this information to take this into account. – Importance of considering both safety and commercial impacts. – Open, constructive and collaborative consultation approach, to which **ID** reiterated the project's commitment to this. – Addressing impact of COVID on data collection (noting datasets are being discussed later in this meeting). – Potential commercial and safety impacts on Irish Sea commercial ferry operators had been understood as key theme (particularly in relation to NPS EN-3) and **JJH** noted that work had progressed on this (including engagement. **AE** added that cumulative impact had also been raised including concern in relation to future OWF projects - referring specifically to recent announcements by Boris Johnson on potential floating offshore wind farms in the Irish Sea that could impact ferry routes. **GV** explained that any further OWF plans beyond Round 4 would be subject to a new Strategic Environmental Assessment (which would consider cumulative impact) and a new tendering round. **AE** raised concern that future OWF leasing rounds may not take account of future ferry services noting that they procure and build ferries with a 30 year design life and are therefore concerned about long term impacts. **AE** added that other OWF's are proposed on the other side of the Irish Sea (such as Clogherhead). **JJH** summarised key activities carried out by the project since the last MNEF including meetings with MCA, Chamber of Shipping (CoS) and ferry companies (individually and combined), spending time with ferry masters, engaging with RYA, and engaging with CoS on other commercial users.		
3.	**About the Projects and Project Updates (Slide 7-10)** **JJH** noted that the project description in Slide 8 is unchanged from MNEF 1, but has been included for reference. **AB** provided an overview and update of the Scoping activities as part of the EIA activities. The Mona Scoping Report was submitted to The Planning Inspectorate and Natural Resources Wales (NRW) on 05-May-2022, and is available on The Planning Inspectorate's website. **AB** explained that The Planning Inspectorate		

	and NRW are responsible for consulting on the Scoping Report and will be preparing a Scoping Opinion. **AB** noted that consultation feedback can also be provided through this MNEF and will be addressed in the Preliminary Environmental Information Report (PEIR) and EIA. *Meeting Postscript: note that for consultation on the Scoping Report, stakeholders should respond directly to The Planning Inspectorate and NRW for responses to be included in the respective Scoping Opinions*. **AB** noted that the Scoping Report is structured into four parts. **AB** explained that the timescales for submission of the Morgan Scoping Report are to be confirmed pending the outcome of discussions with National Grid on the ongoing Offshore Transmission Network Review (OTNR) process. **RM** asked when the Scoping Report will be made available and if there will be any coordination between The Planning Inspectorate and NRW, i.e. do stakeholders need to respond to both parties. **AB** explained that the Scoping Report is available on The Planning Inspectorate's website [**ID** posted a link in the Teams chat: [redacted] days to prepare a Scoping Opinion, and NRW has 90 days. **AB** noted that The Planning Inspectorate will be consulting on the project as a whole whereas it is anticipated that NRW's consultation will focus on the offshore export cable route only (which overlaps with both Welsh offshore and inshore waters). The project will ask The Planning Inspectorate to confirm to what extent there will be coordination with NRW and confirm back to the MNEF. *Meeting Postscript: The Planning Inspectorate have indicated that consultees should respond to both consultations as they are separate processes and are not coordinated.* Slide 9: **AB** confirmed that the Mona programme is unchanged from that presented at MNEF 1, with PEIR due to be consulted on in Nov-2022 and the application due to be submitted in Oct-2023. The Morgan programme is to be confirmed (as mentioned above) pending the outcome of the OTNR process.		
4.	**Project Datasets (Slides 12-15)** **AR** provided an overview of the key project datasets already collected and planned to be available to support the Navigation Risk Assessment (NRA). **AR** added that the project team continues to welcome any additional data stakeholders consider relevant to the assessment. **RM** noted that incident data for 2010-2020 was insufficient to characterise infrequent incidents. **AR** confirmed that an FOI request was already underway to extend the Marine Accident Investigation Branch (MAIB) data back to the 1992 start date. **RM** offered to facilitate this access if required which was welcomed. **AR** summarised the status of the vessel traffic surveys, with the winter survey completed in Nov/Dec-2021 and the summer planned for Jul 2022. **AE** questioned (with reference to the plot on slide 14) why the survey was located in the north of the Mona area. **AR** explained that the aim was to base the survey vessel approximately at the mid-point of the Mona site, and highlighted that AIS/radar coverage from the vessel extends to the south of the site. **AR** summarised the collected data over the 28 days of radar/AIS tracking. No recreational craft were recorded during the surveys but fishing activity was recorded by radar, particularly to the west of Morgan. **KT** asked for confirmation of the survey period. **AR** explained the survey took place between 21-Nov and 19-Dec-2021. **KT** raised concern that the IoM to Liverpool route is not shown in the plot on slide 15. **AR** explained that the plot shows data captured during the vessel traffic survey period only and the assessment will be based on a combination of datasets including the full 2019 AIS dataset (i.e. not just the vessel traffic survey datasets). **AE** considered that the 'passenger' category would be better described as 'ferries' as this includes freight routes. **AR** noted		

	that this and the NRA will present a much more detailed breakdown by vessel categories (for example the aggregated plot also includes cruise ships). **KT** noted that the Mona and Morgan projects are being submitted separately and to a different timescale. **JJH** explained that despite this a lot of the work is being progressed in parallel. **AB** explained that they are two separate projects and so there will be two separate applications. **KT** asked why the projects are on a different timeline. **AB** explained that this is mainly due to the survey programmes for the marine mammal and bird data collection; two years' data is required to inform the EIA and the Mona survey programme is ahead of the Morgan programme. **AE** was concerned that they would need to comment on the impact of one project without having information on the other project. **GV** explained that the project had intended to submit Scoping Reports for both projects in the same timeframe but this was subject to discussions with National Grid and the OTNR process. **GV** explained that the project is hoping to submit the Scoping Report for Morgan in the next few months but the timescale is to be confirmed. **GV** took an action to review what information can be provided on both projects at future engagements to allow stakeholders to better consider the potential for cumulative effects. **RM** queried how The Planning Inspectorate will determine the projects if they are submitted separately. **GV** explained there is an established process for considering potential cumulative impacts of projects through a tiering system. The same process applied to the Round 3 projects. **KT** raised concern that the separate timelines are tactical. **ID** explained that the two projects were bid independently of each other and there are different energy targets for Morgan and Mona. **ID** emphasised that was not tactical; there are two licence areas subject to separate applications. **GV** added that the projects are sited in different locations, are likely to connect to the grid in different locations and are likely to have different issues. Furthermore, **GV** stated that The Crown Estate Round 4 bidding requirements limited individual project bids to a maximum of 1.5GW. **GV** commented that this situation is no different from many other developers who have a pipeline of projects. **AE** queried what percentage of the sites would need to be filled with wind turbines to meet the generating capacity. **GV** explained that the project needs to go through the EIA process and better understand all stakeholders concerns before the engineering design can be finalised for the application and therefore they could not comment on a percentage at this early stage. **AE** asked where the percentage would fall between 1% and 100%. **ID** explained that the navigation simulations planned for August 2022 would help with understanding the developable area from a safety of navigation perspective. **ID** could not confirm the percentage of the site which would be developed at this stage but considered it would be a higher percentage rather than low percentage.	**GV**	**Sep-22**
5.	**Assessment of impact on commercial ferry operators (Slides 17-19)** **JJH** summarised the impacts highlighted at the previous MNEF including impacts on normal and adverse weather routing, and safety. **JJH** explained that NASH Maritime has since collected additional baseline data (including the winter vessel traffic survey data), engaged with ferry operators and CoS collectively in Feb-2022 and subsequently held individual meetings with ferry operators in Apr-2022 including the project team participating in a ferry transit. **AR** set out the approach to the assessment of impact on commercial ferry operators. This includes a commercial shipping assessment (Task 1) involving review of AIS data to understand routing decisions; a safety assessment (Task 2) involving assessment of corridors, collision risk modelling, and navigation simulations; and engagement with ferry operators (Task 3) to understand current operations and constraints. **AR** explained that this work will feed into the NRA.		

	AR summarised the safety assessment further with reference to Tasks 2A (desktop review), 2B (collision risk modelling) and 2C (navigation simulation) and noted that this work is ongoing. **JJH** highlighted that the project is keen for ferry operators to participate in the navigation simulations. **KT** raised that Isle of Man Steam Packet Company (IoMSPC) are a national shipping line owned by the IoM Government, and there is also a need to assess the impact on the livelihoods of people from IoM. **KT** stated that the IoM depends on these shipping lines and that their vessels are designed for the existing routes. **JJH** noted that this point had been raised at a previous meeting and has been noted by the project. **RM** asked when the results of this work (including the collision risk modelling) will be made available. **JJH** explained that the results would be made available in the following ways: • In the NRA which will be consulted on at the PEIR stage. • In information to be shared with the ferry operators to inform the scope of the navigation simulations planned for late summer. • In material to be shared in advance of the hazard workshops. • At the next MNEF planned for September 2022 to provide an opportunity to feedback on the NRA and the navigation simulations. **KT** asked if NASH received feedback from the ferry masters during the ferry trip. **AR** explained he was one of the NASH personnel on the trip aboard the Ben-my-Chree (Douglas to Heysham on 05-Apr-2022) and explained that the purpose of the trip was to understand navigational decision making (e.g. existing concerns, factors to take into account for routing e.g. passing O&G platforms and other factors) rather than asking questions on potential impacts of the project. **AR** noted that many of these navigation decisions are at the discretion of the master. NASH would continue to welcome feedback from the ferry masters on the projects through the NRA consultation process.		
6.	**Navigation Risk Assessment (Slide 21)** **AR** provided an overview of NRA process, which will identify key hazards for assessment against MCA and IMO guidelines. The assessment will be based on data, and comments from stakeholders through the hazard workshop. The assessment will consider the project alone and cumulatively with other projects. **AE** asked how the project had decided how big the gap between Morgan and Mona should be. **ID** explained that this gap is not set and is being worked on, based on factors including geology, wind turbine spacing, and safe and viable navigation. **AE** asked if the gap is therefore indicative; **ID** confirmed this and explained that the project is working through the design process to decide what area will be developed – this will include the opportunity for ferry operators to participate in navigation simulations. **AE** asked if any work has been carried out on the consequence of a ship collision with a WTG, noting there was a vessel not under command in the Irish Sea recently. **AR** explained that there have been few incidents involving collisions, but referred to a known recent incident in Dutch waters where a tanker drifted during a storm and collided with a transition piece. **AR** explained that there have been simulated studies and NASH will make reference to these in the consequences assessment. **JJH** added that the Scoping Report identifies contact (between a vessel and structure) as a potential hazard which will be assessed within the NRA. **AR** added that NASH would like input from as many stakeholders as possible as part of the hazard workshop; NASH will be circulating invitation letters to MNEF members, and there will be an option to attend either in person or via Microsoft Teams.		

	JJH explained that the navigation simulations with ferry operators are planned for August 2022 (in response to question from **KT**) and NASH will liaise with the ferry companies on timelines and location; **JJH** emphasised the importance of ferry masters attending.	**CH**	**27-May**
7.	**Summary and AOB (Slide 22)** **JJH** summarised planned dates for the next meetings: • MNEF 3 (circa. Sep-2022) following simulations and hazard workshop. • MNEF 4 (circa. Nov/Dec 2022) following submission of PEIR for consultation. **JJH** asked if there were any other queries or comments from attendees. **WB** suggested an assessment is carried out on the availability of tugs in the vicinity of the project, with reference to vessels not under command. **JJH** confirmed this point has been noted. **RM** offered to assist with identifying commercial vessel owners to attend the hazard workshops. **JJH** thanked **RM** for his assistance. **RM** emphasised the value that in-person hazard workshops have in facilitating discussion and selecting a suitable location**. JJH** confirmed this and that there will be an option for attendance in person or via Microsoft Teams.	**JJH**	**May-22**

ACTIONS

ITEM NO:	**DISCUSSION ITEM**:	**Responsible party**	**Date**
1	All to opt in for contact details sharing.	All	May-22
4	GV to review what information can be provided on both projects at future engagements to allow stakeholders to better consider the potential for cumulative effects..	GV	Sep-22
6	CH to liaise with ferry operators on simulator timelines and locations.	CH	27-May-22
7	JJH to liaise with RM on relevant commercial operators for hazard workshop	JJH	May-22

F.4 MNEF meeting 3

F.4.1 Minutes

MINUTES OF MEETING

Security Classification:
CONFIDENTIAL

Partners in UK offshore wind

MOM Number:	MoMoMo_MNEF_20221010_Minutes_R02-00	**REV. No. 3**	R02-00
MOM Subject:	Morgan, Mona and Morecambe Maritime Navigation Engagement Forum (MNEF)		
	MINUTES OF MEETING		
MEETING DATE:	10-Oct-2022		
MEETING LOCATION:	Liverpool Holiday Inn / Microsoft Teams		
RECORDED BY:	CLC / JJH (NASH Maritime)		
ISSUED BY:	JJH (NASH Maritime)		

PERSONS PRESENT:

Organisation	Attendee	Role	Initial
RPS	[redacted]	Principal Environmental Consultant – EIA coordinator Morgan and Mona	MK
Royal Haskoning DHV		Senior Environmental Consultant (Marine) - EIA coordinator Morecambe	RW
Flotation Energy		Communications Manager - Morecambe	KW
Bp and EnBW		Offshore Consents – Morgan and Mona	GV
		Head of communications and advocacy – UK offshore Wind	ID
		Consenting Lead – Morgan and Mona	
		Master	LH
		Offshore Consents –Morgan and Mona	JD
Cruising Association		Representative	MP NR
IoM Department of Infrastructure		Isle of Man Government	ER
Harbour Energy		Marine and Aviation Global Technical Authority	AM
IoM Steam Packet Company		Marine Manager	RH
		Master	JP
		Master	CK
		Operations Manager	KT
Maritime and Coastguard Agency		Offshore Renewables Lead, Marine Licensing and Consenting	NS
Peel Ports		Deputy Harbour Master / Marine Operations Manager	VJ NSU
Royal Yachting Association		Environment and Sustainability Manager	PH
Seatruck Ferries		Fleet Training Superintendent	MH
Spirit Energy			DU

Stena Line	[redacted]	Safety & Security Superintendent, Deputy CSO, DP Ports (PMSC)	MP
Tom Watson			TW
UK Chamber of Shipping		Policy Manager (Safety & Nautical) & Analyst	RM
Kirkcudbright			DW
Trinity House		Navigation Manager	TH
NASH Maritime		Project Director (Morgan and Mona) Project Director (Morecambe) Maritime Consultant Principal Maritime Consultant	JJH EJR CLC SAB
In addition circa 5 MNEF invitees attended on MS Teams as 'unknown users'			

Apologies

Organisation	Attendee	Role	Initial
Trinity House	[redacted]	Navigation Services Officer	SV
UK Chamber of Shipping		Policy Manager (Safety & Nautical) & Analyst	RM
Warrenpoint Port		Harbour Master	MY

DISTRIBUTION:

MNEF Members

ATTACHMENTS:

1. 21-NASH-0146_MNEF_20221010_R00-01.pdf

MEETING AGENDA:

- Introductions – NASH Maritime
  - To project teams
  - To stakeholders
  - Review key themes from meeting (05-May-2022)
- Project Updates
  - Morgan and Mona Project Updates
    - i. Project Update – bp/EnBW
    - ii. EIA Lead Update – RPS
    - iii. Shipping and Navigation – NASH Maritime
  - Morecambe Project Update – Flotation Energy/Cobra
- Morgan Mona Morecambe Cumulative Assessment (responding to stakeholder feedback)
  - Morgan Morecambe Transmission Assets
  - Background
  - Grid Connections arrangements
  - Consenting strategy
  - Indicative timelines

ITEM NO:	DISCUSSION ITEM:	Responsible party	Date
1.	**Introductions (Slide 1-4)** **JJH** welcomed everyone to the meeting and outlined the meeting protocols. **JJH** explained that this MNEF No. 3 was a shorter format update than usual with an extended MNEF proposed for Nov/Dec-2022. **JJH** requested that questions be taken at the end and confirmed meeting minutes will be issued together with the slide pack following the meeting. **JJH reminded all members/attendees to opt in for sharing of contact details. As not all members have opted in, group MNEF correspondence and meeting invites will continue without sharing details.** **JJH** gave an overview of the objectives and agenda as per the accompanying slide pack (slide 4) noting in particular that this meeting served as an opportunity to introduce the Morecambe OWF project, how the Morgan, Mona and Morecambe projects are being assessed cumulatively and also the Morgan/Morecambe joint transmission assets project. It is intended that the MNEF will, in future, be co-hosted by the Morgan, Mona and Morecambe projects.		
2.	**Background to projects (slides 6&7)** **JJH** provided a brief background of the Morgan, Mona and Morecambe Offshore Wind Farm (OWF) projects, noting that this information has been shared previously. An informative video on the 6 stages of the development consent order (DCO) regime for Nationally Significant Infrastructure Projects (NSIPs) was shared to explain the 6-stage process for NSIP applications (which includes OWFs). The video is available **here** and more information can be found at the National Infrastructure Planning website **here**.		
3.	**Review of key themes from previous meeting (slide 8) and project updates (slide 10)** The previous meeting (MNEF 2) was held on 06-May-2022 and final minutes were issued on 20-May-2022. The key themes arising at MNEF 2 were: 1. Ongoing discussion regarding the cumulative concerns for the 3 proposed East Irish Sea OWF projects 2. Concerns regarding potential future projects beyond The Crown Estate Round 4 leasing round 3. Discussion around stakeholders responding to individual projects on differing individual timescales 4. Impact to commercial ferry operators 5. Importance of considering both safety and commercial impacts on navigation 6. Open, constructive and collaborative consultation approach **JJH** explained that the three projects have started working collaboratively since the last MNEF in order to address items 1 and 3. **GV** summarised the Morgan and Mona Project updates as follows: • The projects are currently investigating the human, physical and biological environments. This includes data collection, analysis and modelling e.g. aerial surveys for birds and marine mammals, physical processes modelling, shipping & navigation simulations and Navigation Risk Assessment. • The current activity aims are to understand the environment in and around Mona and Morgan to better understand how the proposals might impact the existing environment. • The Preliminary Environmental Information Reports (PEIRs) for Morgan and Mona are planned for submission in late Q1 2023.		

	• The applications for Morgan and Mona are planned to be submitted in Q1 2024.		
4.	**Overview of EIA Process and Scoping (slides 11&12)** **MK** summarised the Environmental Impact Assessment (EIA) process (building on the DCO material as shared on slide 7) as follows: • The EIA forms the bulk of the pre-application process and is undertaken across all topics where a potential impact has been identified. These topics are set out as individual chapters. Feedback from the scoping report is used to inform the PEIR. The PEIR findings are then presented in the Environmental Statement (ES) which presents the findings of the EIA and is submitted with the DCO application. **JJH** outlined the Scoping Report submission updates by each project: • Mona generation and transmission assets: o Submitted: 05-May-22 o Scoping Opinion: 15-Jun-2022 • Morgan generation assets: o Submitted: 15-Jun-2022 o Scoping Opinion: 22-Jul-2022 • Morecambe generation assets *[postscript added here for clarity noting subsequently presented on slide 18]*: o Submitted: 23-Jun-2022 o Scoping Opinion: 02-Aug-2022 • Morgan & Morecambe transmission assets: o Submission due: Nov-2022 tbc		
5.	**Shipping and Navigation Update – Morgan & Mona (slides 13&14)** **JJH** provided an update to the shipping and navigation activities undertaken since the last MNEF as follows: • The Vessel Traffic Surveys completed (summer & winter). • Ongoing assessment of impact on commercial ferry operators including: o Typical and non-typical (inc. adverse) weather routing o Consideration of safety and commercial impact o Desk based, risk modelling and bridge navigation simulations • The Morgan/Mona projects are working collaboratively with Morecambe on the cumulative assessment (noting MNEF 1 & 2 feedback). • Key submissions are being prepared for PEIR submission in Q1 2023 namely: o Navigation Risk Assessment (NRA) o Shipping and Navigation chapter **JJH** provided an overview of bridge navigation simulations that took place at HR Wallingford. This work was undertaken, with stakeholder participation, to test the viability and safety of ferry transits through areas between the Mona, Morgan and Morecambe. Projects. Simulations were attended by ferry masters and officers from IoMSPC, Stena Line and Seatruck, with simulation scenarios agreed in advance. Representative runs were undertaken by the team for P&O. Current status (at 30-Sep-2022) is that draft reports are with operators for comment.		
6.	**Morecambe introduction and update (slides 16-19)** **KW** explained that the Morecambe project is at a similar stage to Morgan and Mona and intends to have a similar timeline as per slide 18 – notably: • PEIR Submission in Q1 2023.		

	• ES submission and DCO application in Q1 2024. **EJR** explained that for the Morecambe project, NASH Maritime will be conducting the NRA and RHDHV will be writing the PEIR Shipping and Navigation Chapter. **EJR** summarised the shipping and navigation update for the Morecambe project as follows: • Early stakeholder engagement was undertaken in (Feb-22 to April-22) • Development of Passage Plans using information sourced from ferry operators. • Vessel traffic analysis has been undertaken using AIS data. • The vessel traffic surveys are complete (summer & winter). • Preparation of key submissions for PEIR in Q1 2023.		
7.	**MoMoMo Cumulative Assessment Overview (slide 21)** **JJH** introduced the basis of the Morgan, Mona and Morecambe (MoMoMo) cumulative assessment being undertaken collaboratively by the three projects (slide 21) noting that this took into account the cumulative concerns previously communicated by stakeholders and also sought to ensure a coordinated, consistent and efficient approach.		
8.	**Morgan and Morecambe Transmission assets (slides 23-27)** **KW** noted, with respect to the Morgan and Morecambe Transmission asset that both project teams agree with and support Holistic Network Design Review (HNDR) report conclusions. Therefore, in order to improve the coordination of offshore wind generation connections and transmission networks, Morgan and Morecambe will have a single, coordinated grid connection location at Penwortham, Lancashire (Mona will be connected separately along the north coast of Wales) and hence the combined DCO application for the Morgan and Morecambe Transmission assets (separate to the Generation Assets). Slide 26 provides clarity over which aspects of the project are considered offshore/onshore and generation/transmission assets. It was also noted that the indicative DCO timelines for the Morgan and Morecambe transmission and generation assets are aligned.		
9.	**Summary, questions and comments** **JJH** outlined the confirmed details of the next MNEF are anticipated as follows: • Nov/Dec-2022 • Inclusion of Morecambe Generation Assets • Inclusion of Morgan and Morecambe Transmission Assets **KT** asked where the substations will be located. **GV** explained that Morecambe and Morgan will have individual substations within the generation asset boundary. There is potential for Morgan to have a single offshore booster station platform locations within the transmission corridor and this may be close to the Morecambe generation asset boundary although planning for this is ongoing. **ID** stated that there is an ongoing fishery consultation running in parallel with the other planned project activities. **NS** suggested that there is collaboration and coordination regarding the substation location within array areas and their alignment with the wind turbines. The MCA preference is that platforms are aligned with the turbines. **NS** asked whether Awel Y Mor has been considered in the assessments. **GV** noted that the Awel Y Mor project is much further along in the process than MoMoMo. **JJH** confirmed that all the shipping and navigation assessments are based on Awel Y Mor being in place. **AM** asked when construction is expected to start. **GV** stated that for Morgan and Mona, construction would likely start in 2026 with operation by 2028. Generally, construction starts 2-3 years post consent (with a 4yr construction program as a worst-case scenario). KW confirmed that this timescale is similar for Morecambe. **ER** stated that there is an AfL for a Wind Farm in Manx Waters(application previously proposed by DONG Energy [now Orsted] in 2014) and therefore		

	should be considered alongside the MoMoMo developments. There is also an aspiration from the IOM Government to pursue more offshore wind generation. Additionally, there is an IoM hydrocarbon project to be considered that may also impact the MoMoMo projects, specifically Morgan. **GV** noted this and explained that a meeting has been scheduled between Orsted and bp/EnBW in late Oct-2022.		
ACTIONS			
ITEM NO:	**DISCUSSION ITEM**:	**Responsible party**	**Date**

F.5 MNEF meeting 4

F.5.1 Minutes

MINUTES OF MEETING

Security Classification:
CONFIDENTIAL

Partners in UK offshore wind

MOM Number:	MoMoMo_MNEF_20230118_ Minutes_R01-00	**REV. No.:**	R01-00
MOM Subject:	Morgan, Mona and Morecambe Maritime Navigation Engagement Forum (MNEF)		
	MINUTES OF MEETING		
MEETING DATE:	18-Jan-2023		
MEETING LOCATION:	Microsoft Teams		
RECORDED BY:	CLC (NASH Maritime)		
ISSUED BY:	NASH Maritime		

PERSONS PRESENT:

~~Organisation~~	~~Attendee~~	~~Role~~	~~Initial~~
Cruising Association	[redacted]	Representative	RB
		Representative	NR
RWE		~~Consent Manager~~	~~PC~~
RPS		Principal Environmental Consultant – EIA coordinator Morgan and Mona	MK
Royal Haskoning DHV		Principle Marine Consultant	SR
SWFPA			~~RH~~
Bp and EnBW		Offshore Consents – Morgan and Mona	GV
		Consenting Lead – Mona	
		Head of communications and advocacy – UK offshore Wind	ID
		Master	LH
		Offshore Consents – Morgan and Mona	JD
		EnBW	WA
		~~Development Manager~~	~~KD~~
Cairn Risk		Morecambe principal designer	JM
			SB
Cruising Association		Representative	NR
Flotation Energy		Communications Manager – Morecambe	KC
		Engineering Manager	PB
IoM Department of Infrastructure		Isle of Man Government	ER
IS&EFPO		Chairman	JL
Northern Ireland Fish Producers' Organisation (NIFPO)			JK
~~Harbour Energy~~			~~LL~~

	[redacted]		MB
IoM Steam Packet Company		Marine Manager Operations Manager	RHu KT
Marine Management Organisation (MMO)			KW
MOD			TO
Maritime and Coastguard Agency (MCA)		Offshore Renewables Lead, Marine Licensing and Consenting	NS VJ VNJ
Orsted		Environment Manager	HTR
Port of Mostyn		Harbour Master	HM
Peel Ports		Deputy Harbour Master / Marine Operations Manager	NSU
Royal Yachting Association			SC
Seatruck Ferries		Fleet Training Superintendent	MH
Spirit Energy			DU SG
Stena Line		Safety & Security Superintendent, Deputy	MP
Tom Watson		CSO, DP Ports (PMSC) Fisheries Advisor	TW
UK Chamber of Shipping		Policy Manager (Safety & Nautical) & Analyst	RM
NASH Maritime		Project Director (Morgan and Mona)	JJH
		Project Director (Morecambe)	EJR
		Maritime Consultant	CLC
		Principal Maritime Consultant	AR
		Expert Mariner	NM

DISTRIBUTION:

See Persons Present List.

ATTACHMENTS:

1. MoMoMo_MNEF_20230118_Slide_Pack_R01-00.pdf

MEETING AGENDA:

- Project Introductions & Summary Updates
  - Morgan + Mona + Morecambe + combined transmission
  - Key Shipping & Navigation themes
  - Work in period [HAZID, PEIR deliverables (cumulative and individual NRA), post PEIR preparation]
- DCO Process (PEIR, Statutory consultation)
- Project revisions / commitments
- Planned Activities
  - Mitigation measures assessments

- Stakeholder engagement (breakout detail for ferry operators)
- ES preparation for submissions
- Timescales

- AOB

ITEM NO:	DISCUSSION ITEM:	Responsible party	Date
1	**Introductions and Session Objectives & Agenda (Slides 1-5)**		
1.1	**JJH** welcomed everyone to the meeting of MNEF No. 4 and outlined the meeting protocols. **JJH** provided an overview of the session objectives: 1. Provide an update on Morgan (Generation Assets), Mona and Morecambe projects (generation and transmission assets) 2. Introduce proposed changes to projects (project commitments) 3. Planned activities through to Application **JJH** provided overview of the meeting agenda (slide 5).		
2	**Project Summary Updates**		
2.1	**Recap of Projects Background (slide 7)** **JJH** briefly recapped each proposed offshore wind farm (OWF) project and summarised the 4 applications across the projects: • Morecambe Offshore Windfarm Generation Assets ("Morecambe Generation Assets") • Morgan Offshore Wind Project Generation Assets ("Morgan Generation Assets") • Mona Offshore Wind Project ("Mona") • Morgan and Morecambe Transmission Assets		
2.2	**Schedule (slide 8)** **JJH** summarised the schedule for the 4 applications as outlined on slide 8 for key milestones of Scoping, PEIR, DCO/ES submission, Examination and Decision. **JJH** highlighted that the key milestone dates have now been aligned across all the generation applications (Morgan and Morecambe Transmission Assets is circa 6 months later) following feedback from previous MNEF Meetings and stakeholder comments with regard to the timing of the Preliminary Environmental Information Report (PEIR) documents and benefiting the cumulative assessment of all 3 generation assets. **LH** clarified that the timeline has not been fully finalised. The projects are aiming for the dates presented on slide 8 but document submission may not be exactly aligned due to other ongoing projects.		
2.3	**Review of key themes of previous meeting (MNEF No. 3) (slide 9)** **JJH** reviewed the key themes of the previous MNEF (no. 3) meeting held on 10-Oct-2022 (minutes issued on 29-Nov-22) as per slide 9. Ref bullet pt 1-3: Discussion was held regarding the collaborative approach and schedule alignment between the 3 projects since MNEF No. 2 and the cumulative considerations in the East Irish Sea – specifically the proposed Isle of Man OWF (being proposed by Orsted) which was raised by the IOM Government as relevant to shipping & navigation at MNEF No. 3. **GV** commented that based on feedback from attendees and the IoM Government at the last MNEF, the projects have now invited Orsted (developer) to attend the MNEF (and were attending the call today) and plan on engaging with them throughout the remaining application process. **GV** confirmed IoM OWF has been included in the cumulative assessment as a Tier 3 project.		
2.4	**Review of Scoping Opinions (slide 10)** **JJH** confirmed that scoping opinions have now been received for all 4 applications (Slide 10 outlines a review of the statutory consultee scoping opinions).		

	AR gave an overview of the key themes by the 4 responding parties (MCA, Trinity House, IOM Gov Department of Infrastructure and Planning Inspectorate). Noting the comments on potential impacts and assessment requirements were consistent with those highlighted early on in the projects and already being considered **AR** highlighted that there is consistency between the projects of key points such as navigational safety and impact on shipping routes. **AR** assured that all Scoping Opinion points and impacts will be addressed for each project.		
2.5	**Work in period | Shipping & Navigation (slides 11)** **JJH** provided an overview of the shipping and navigation work undertaken in period. **Bridge Navigation Simulation** **JJH** explained that the Bridge Navigation Simulation report was finalised on 23-Dec-2022 incorporating comments from participants. The bridge navigation simulation was undertaken with bridge teams from key commercial ferry operators participating - navigating their vessels in a simulated environment with the projects in place and looking at the feasibility of safe navigation within the key corridors. **JJH** further summarised the key findings, as detailed on slide 11, noting that in normal conditions, and without other vessels, corridors could be safely navigated although in adverse weather, or with significant traffic, some runs failed or were marginal when assessed against pre-agreed criteria. **KT** noted that the simulations had excluded night time conditions and that the Isle of Man Steam Packet Company's high-speed craft (*Manannan*) was not able to be correctly simulated in some conditions. **JJH** acknowledged these points confirming that this is detailed in the report and also incorporated in recommendations. **RB** asked whether recreational craft had been considered and specifically recreational craft under sail. **JJH** responded that the focus of the simulations was primarily the feasibility of interaction of commercial ferries with the projects and other large vessels, however several small vessels (fishing vessels and other small powered craft) were also included. As with all other vessels, recreational vessels have been considered within the Navigation Risk Assessment (NRA) with recreational representatives (RYA and Cruising Association) having participated within the HAZID workshops. **Individual and Cumulative Regional Navigation Risk Assessment, HAZID workshops and PEIR Chapters** **AR** explained that as part of the NRA process for the projects cumulatively and individually, a series of group hazard workshops were undertaken involving identifying hazards, risk scoring and discussions around hazard consequences. **AR** explained that an individual NRA and PEIR chapter was produced for each generation asset (Morgan Generation Assets, Mona Generation Assets and Morecambe Generation Assets), and was informed by the hazard workshop, stakeholder consultations and bridge navigation simulations. A cumulative regional NRA (CRNRA) was also produced, assessing the combined effect of all 3 generation areas and will be annexed for each individual NRA report. **EJR** noted that the process followed to conduct the individual NRAs and the CRNRA is aligned with MCA and industry guidance.		
2.6	**Work in period | Shipping & Navigation (slides 12)** **AR** outlined the risk assessment methodology and individual/cumulative NRA results in more detail (slide 12). Four hazard workshops were conducted in Liverpool with the attendance of a range of stakeholders representing different interests. The first day addressed the CRNRA and the following days addressed each project NRA individually. In total, 56 cumulative hazards were grouped into		

	navigation corridors between project array areas and were assessed to identify how the presence of the three projects together will impact navigational safety. **AR** summarised five hazards which were scored as 'High Risk' and deemed unacceptable for the following areas: • Corridor between Mona and Morgan Array Areas • Corridor between Morgan Array Area and Walney Offshore Wind Farm • Approaches to the TSS south of Mona Array Area. **AR** explained that as a result of the workshop, one of the key 'High Risk' hazards identified was the collision between a ferry and another large vessel (e.g. ferry/cargo/tanker), or a small craft such as fishing vessel. **AR** noted that 42 hazards were scored as 'Medium Risk' and deemed tolerable if As Low As Reasonably Possible (ALARP). Additional risk controls were identified that could be implemented to reduce risk to tolerable levels, particularly boundary revisions. **AR** concluded that the key finding of the hazard workshop was that the projects from a cumulative perspective have unacceptably high-risk scores. **RM** explained that despite there being 56 hazards in total, only around 10 hazards were addressed for each project in the hazard workshop. **RM** asked whether the amended scores for the hazards addressed, were later applied to all remaining hazards not addressed in the workshop. **AR** responded that learnings taken from the hazard workshop (e.g. discussions regarding consequences of a ferry collision with a fishing vessel having a higher consequence to people than previously scored), were applied to all other hazards of a similar nature, ensuring that stakeholder input was taken into account across all 56 hazard scores. **RM** queried whether the draft and updated scores will be shared with stakeholders. **AR** explained that the NRA reports will contain hazard logs detailing the initial draft hazard scores, the hazards that were re-scored by stakeholders in the workshop and the updated final hazard scores. **KT** requested that the NRAs containing the adjusted hazard scores are shared with stakeholders for comment. **GV** responded that project timescales for PEIR submission in Mar-2023 cannot accommodate sharing the NRAs and receiving stakeholder comments before the submission date. Therefore although the NRA documents could be shared before PEIR submission it wouldn't be possible to receive and address any stakeholder comments for the PEIR. **GV** assured **KT** that the submission of the PEIR is followed by a formal consultation period in which all stakeholders will have the opportunity to officially respond to all NRAs in the Shipping and Navigation sections of the PEIRs. **KC** agreed with this response on behalf of the Morecambe project. **KT** requested that the NRA is shared with stakeholders in advance of PEIR submission. POST MEETING NOTE. Morgan and Mona projects will look to setup a meeting during the PEIR consultation period. Morecambe Offshore Windfarm project will also offer the same. The CRNRA for Mona Offshore Wind Project, Morgan Offshore Wind Project, and Morecambe Offshore Windfarm Project is under review and has yet to be finalised. Therefore, we are not in a position to share this with stakeholders at this moment in time. If over the coming weeks we are in a position to do so, the teams will consider sharing the CRNRA with stakeholders in advance of the PEIR submission. Please note that we will not be able to accommodate any comments on the CRNRA before the PEIR submission date. We would like to assure stakeholders there will be sufficient time to submit any comments on the PEIR, which will include the NRA, during the consultation period.	**GV / KC** **GV / KC**	

	HTR queried whether the gap between Morgan Generation Assets and IoM OWF has been considered a high risk. **GV** responded that the IoM OWF was not assessed within the hazard workshop and NRA leading to this matter being raised by the IoM Government and Mona and Morgan Generating Assets teams meeting with Orsted. Subsequent to this, the IoM OWF has been included in the cumulative effects assessment as a Tier 3 project. **HTR** queried whether the IoM OWF should be considered a Tier 2 project given submission of a Scoping Report. **GV** explained that the IoM OWF Scoping Report is not published within in public domain hence the Tier 3 status. **ER** confirmed that the IoM Government has not made the IoM OWF Scoping Report available in the public domain. **KW** asked if the Marine Management Organisation (MMO) will be consulted in the PEIR process and **GV** confirmed this is the case. **RM** requested clarification that the NRA's submitted for the PEIR will not include the IoM OWF and requested that it be clearly stated. **GV** confirmed the IoM OWF was not able to be included in the PEIR NRA's and that this will be made clear in the reports submitted at PEIR also noting the IoM OWF wasn't included in supporting studies such as the hazard workshop or bridge navigation simulations.	**GV**	
3	**DCO Process**		
3.1	**Overview of EIA Process (slide 14)** **MK** summarised the PEIR stage of the EIA process (slide 14). The NRAs have been prepared and the accompanying PEIR chapters have been drafted and both are in the process of being finalised. The PEIR stage presents the initial information that has been gathered, and provides an opportunity for stakeholders to comment on the proposed project. These comments will then be considered during preparation of the final impact assessment for inclusion in the Environmental Statement which will be submitted with the application for consent.		
3.2	**PEIR Statutory Consultation (slide 15)** **MK** provided an overview of the statutory consultation process and key dates (slide 15). Statutory consultation provides an opportunity for stakeholders to review the project information submitted in the PEIR, and provide feedback/comments. The consultation includes all statutory bodies, local authorities, local community and any affected persons. PEIR consultations for Mona, Morgan Generation Assets and Morecambe Generation Assets will take place between in April and May 2023. Dates for the engagement events have yet to be confirmed, however are envisaged to take place 14-Apr to 05-May. **MK** and **NS** clarified that the NRAs were conducted using the existing wind farm array area boundaries (as per slide 7) but will address commitments which the projects are making to address issues and what changes will follow the PIER. **MK** concluded by emphasising that the PEIR will be submitted based on the current		

	wind farm array area boundaries without any adjustments to reflect the commitments made today, and this is what stakeholders will be commenting on.		
4	**Proposed revisions & Project(s) commitments post PEIR**		
4.1	**Proposed revisions & Project(s) commitments post PEIR (slide 17)** **JJH** explained that following consideration of the findings of the NRA and supporting studies, the projects have proposed changes to be implemented post PEIR. The commitments are made regarding changes to boundaries of the wind farm array areas and lines of orientation to turbines within these areas. **JJH** emphasised that the changes have only recently been made and so they will not have been considered or assessed within the PEIR (*as explained in points 3.1 and 3.2 above*). However, these commitments will be assessed for inclusion in the Environmental Statement submitted alongside the application for consent. **JJH** summarised the project commitments as: • All projects are committed to 2 lines of orientation within the wind farm array area. This benefits SAR and maintaining safe navigation within the windfarm area for those vessels electing to do so. • Boundary revisions – securing minimum widths and sea room commitments for four key corridor/areas as shown in Slide 17. **GV** stated that the project teams have taken onboard comments and feedback from consultations, the hazard workshop and bridge navigation simulations and have looked at what they can do to reduce the potential cumulative effect of the projects. The commitments for revisions (post PEIR) are stated in the text boxes on slide 17, with indicative wind farm array area boundaries given to demonstrate how the commitments would be achieved. The project teams are still in the process of examining other studies e.g. geotechnical surveys etc. Additionally, comments that come out of the PEIR submission may further inform wind farm array area boundary revisions. As a result, the wind farm array area boundaries shown are not finalised. However, the principles of increasing navigational sea room around the boundaries and commitments made in the text boxes on Slide 17 will be maintained through to Application for consent. **JJH** summarised that the objective of sharing the proposed revisions and project commitments today is to introduce them as early as possible to stakeholders. There will be opportunities to further discuss the commitments and share additional comments as the projects progress in assessing them. **LH** highlighted that the project commitments will be listed in the PEIR document, but due to their provisional status and their timing, they are not included in the assessment.		
4.2	**Commitment 1: Mona and Morgan Generation Assets Corridor (slide 18)** **AR** outlined the commitment to increase the Mona and Morgan Generation Assets corridor from 3nm to 6nm which will better accommodate the safe navigation of multiple vessels concurrently from a range of directions (large passenger vessels and small craft) and provide significant increase in sea room for adverse weather conditions.		
4.3	**Commitment 2: Morgan Generation Assets and Walney Corridor (slide 19)** **AR** described the commitment to widen the Morgan Generation Assets-Walney corridor and remove the north-western 'hump' from the Morgan Generation Assets boundary. Due to frequent ferry transits and the presence of fishing activity in the northern approaches (and other small craft), the initial boundary resulted in insufficient sea room for safe navigation, particularly in adverse weather conditions. **MP** welcomed the change as an improvement although noted the presence of Millom West gas platform within the corridor impacts navigation as it reduces the width of the corridor. **AR** responded that the structure will be decommissioned before the projects are in operation and clarified that it is an assumption that has been made for the assessment.		

	LH confirmed that the Millom Gas Field has submitted a decommissioning plan and if in the public domain, will share with stakeholders. POST MEETING NOTE: bp was not able to ascertain if there is a decommissioning plan in the public domain for the Millom Gas Field however previous feedback from Harbour Energy confirms that decommissioning is in progress for Millom West.	**LH**	Com plete
4.4	**Commitment 3: South of Mona (slide 20)** **AR** explained that the region to the south of Mona has a high confluence of vessel routes, particularly a high traffic density of large vessels approaching Liverpool. **AR** described the commitment to increase the separation between the Mona OWF boundary and a paralleling line extending from the Traffic Separation Scheme (TSS Liverpool Bay) from 1.5 – 2nm. **AR** noted that guidance advises that a boundary must remain 2nm from a TSS and, by paralleling an imaginary extension of the TSS, a precautionary approach is being taken in accordance with the guidance.		
4.5	**Commitment 4: Morecambe Generation Assets Western Boundary (slide 21)** **EJR** outlined that the western boundary of Morecambe Generation Assets is under review and could be further reduced from present. **EJR** noted that the revision of the western boundary addresses ALARP hazards from the CRNRA (not scored as a 'high risk').		
4.6	**JJH** invited stakeholders to provide any initial comment or queries on the project commitments noting that they are initial revisions, will be further assessed post PEIR submission and further opportunity for consultation will be available through this process and the planned assessments. **KT** stated he considered the timing of the change to be tactical and asked whether the revised boundaries will be fully re-assessed. **JJH** confirmed that the projects intend to fully test the efficacy of the commitments (including revised boundaries) post PEIR which will include updating all individual project NRAs and the CRNRA and the supporting studies as well as comprehensively re-consulting with stakeholders. **ER** queried whether the project commitments have taken into account the IoM OWF and/or the IoM gas field? **GV** responded that the project commitments are based off the NRA's and supporting studies completed to date (bridge navigation simulations, modelling etc…) and therefore do not take the IoM OWF into account. **ER** requested that it's made clear that the IoM OWF isn't included in the boundary revisions and **GV** confirmed the PEIR will be clear on the commitments being made and the underlying assumptions. **RH** asked whether wind turbines will be placed closer together due to a reduced project footprint which would affect navigation within the array areas e.g. fishing vessels. **JK** added that if spacing is reduced, vessels could be displaced into the corridors and increase traffic density. **GV** explained that if there are changes to turbine placement locations, this will be considered, commercial fisheries will be consulted, and it will be assessed in the updated NRAs. **RM** commented that the reduction in boundaries is welcomed although cannot comment further at this stage. The Chamber of Shipping is looking for assurance that further bridge navigation simulation will be conducted using the revised boundaries and any additional commitments, including the presence of the IoM OWF. **JJH** confirmed that in updating the NRAs, the supporting activities will be revisited (including bridge navigation simulation, hazard workshops and stakeholder consultation). In revisiting the bridge navigation simulations for the revised boundaries the recommendations from the initial sessions will be considered including, for example, night time runs. **GV** added that the addition of IoM OWF to the NRA would be necessary if its tier status changed from Tier 3.	**GV**	

	RM asked whether the reduced array areas, as a result of the revised boundaries, will result in a change in the generation capacity of the projects. **PB** explained that Morecambe is expected to produce 6.74MW/sqkm and the revised boundary may reduce the array area from 125-76sqkm. The boundary revision could take the array area down to The Crown Estate minimum requirement. Once more information is gathered (e.g. Geotechnical surveys), a decision on the boundary revision can be made. **GV** added that as the final boundary revision to Morgan Generation Assets and Mona have not been made, owing to the reasons given earlier (*see point 4.1)* Morgan Generation Assets and Mona it would not be meaningful to discuss whether the commitment made today affect generation capacity. **JJH** thanked all for these initial comments and concluded that these proposed revisions will be developed and assessed through to application.		
5	**Planned Activities**		
5.1	**Planned Activities (slide 23)** **AR** expanded on the planned activities that will be undertaken to assess the commitments post PEIR (together with provisional dates). These include: **1)** Update understanding of baseline environment – previous vessel traffic analysis was conducted on 2019 AIS data. Updated assessments will conduct vessel traffic analysis using 2022 AIS data, and benchmark it against 2019 analysis. **2)** Update passenger and commercial vessel passage plans as impacts on routeing will have changed. **3)** Analysis of risk and journey times using recent datasets and revised boundaries. **4)** Further consultation with all stakeholders who want to address any residual concerns with the wind farm array area boundary changes. **5)** Updating bridge navigation simulation including the revised wind farm array area boundaries and incorporating recommendation from previous simulations. **6)** Updated hazard workshops (project team are still considering whether to undertake as a large group or smaller groups by key users/vessel types). **7)** Update NRA, CRNRA and ES chapters. **JJH** concluded that the progress/findings of the above will continue to be communicated through the MNEF meeting approximately quarterly. **HTR** requested that Orsted (IOM OWF) would like to set up regular engagement with regards to their involvement in the cumulative aspect of the projects. **LH** responded that they would like to engage with Orsted and will arrange post meeting. **NS** commented that the MCA welcome the changes and the supporting work – and considered the changes were necessary. MCA agree with the inclusion of updated AIS data and additional bridge navigation simulation which they wish to attend. **NS** noted that the PEIR not assessing the revised boundaries will potentially limit useful feedback but the MCA will be looking at the identified key 'high risk' hazards. **ER** enquired whether a socio-economic assessment is included as part of the EIA. **LH** explained that the socio-economic section will not be included in the shipping and navigation chapter but there will be a separate socio-economic chapter. **LH** suggested setting up a meeting with ER to run through the socio-economic components of the PEIR. **KT** requested being included in the above meeting. **RM** noted that including the ferry services to Ireland and Northern Ireland are considered lifeline services and should be included in this.	**LH/HTR**	

		LH	
6	**Summary**		
6.1	**Summary (slide 24)** **JJH** summarised that the next MNEF is scheduled around Apr-2023 (post PEIR submission) and enquired whether there was any other business or queries. **RH** requested that the revised wind farm array area boundary coordinates are provided to stakeholders (also requested by **MP** and **SC**). **JJH** responded that he would take this away to the project team and would seek to share co-ordinates in the same format as previously. [POST MEETING NOTE: The projects will issue once available] **KW** asked whether there has been any research conducted regarding the affect of the projects on commercial fishing and other receptors such as marine mammals and seabed communities. **GV** explained that the PEIR will include an impact assessment on all receptors for which potential effects were identified including marine mammals, commercial fisheries and fish and shellfish, separate to the shipping and navigation chapter. **GV** also noted that the projects were hosting similar forums to the MNEF for many receptor groups such as Expert Working Groups. **PB** added that a biological impact assessment (separate from the shipping and navigation chapter) will also be conducted for the Morecambe project. **TW** queried the locations of turbines within the array area within the NW of Morgan which **GV** agreed to pick up separately owing to that relating to commercial fisheries. **NS** asked when the project team will know the finalised dates for the updated bridge navigation simulations **JJH** explained that this is currently unconfirmed - the project teams will be working on the overall schedule over the next few weeks and would also shortly be liaising with commercial ferry companies as a sub group of the MNEF. The projects recognise the need to confirm these in good time for attendance and, on current schedule estimates and the preparatory work required, this will most likely occur in Apr/May 2023. **RM** queried whether the bridge navigation simulation will consider stakeholder comments following the submission of the PEIR? **JJH** responded that formal comments (Section 42) will likely not have been received prior to the simulations based on the above schedule although noted the ongoing dialogue with commercial ferry operators was seeking to mitigate this to a degree. **GV** noted RM's comment and will take this into account when considering project timings.	**GV** **GV** **GV**	

F.6 MNEF meeting 5

F.6.1 Minutes

MINUTES OF MEETING

Security Classification: CONFIDENTIAL

Partners in UK offshore wind

MOM Number:	MoMoMo_MNEF_20230921_Minutes_R01-00	**REV. No.:**	R01-00
MOM Subject:	Morgan, Mona and Morecambe Maritime Navigation Engagement Forum (MNEF)		
	MINUTES OF MEETING		
MEETING DATE:	21-Sep-2023		
MEETING LOCATION:	Microsoft Teams		
RECORDED BY:	HLT (NASH Maritime)		
ISSUED BY:	NASH Maritime		

PERSONS PRESENT:

Organisation	Attendee	Role	Initial
Boskalis Westminster	[redacted]	Resource Development Manager	WG
Bp and EnBW		Offshore Consents – Mona	GV
		Offshore Consents – Morgan Generation	RHo
		Offshore Consents – Morgan and Mona EnBW	AW
		EnBW	MOG
		Offshore Consents – Morgan Transmission	HK
		Stakeholder Lead - EnBW	SBa
Cairn Risk		Principal Technical Safety Consultant	SBi
Flotation Energy and Cobra		Offshore Consents- Morecambe	RW
		Offshore Consents – Morecambe	NJ
		Onshore/Offshore Consents - Morecambe	TS
		Onshore Consents – Morecambe	IM
		Stakeholder Lead – Morecambe	KC
Harbour Energy		Business Lead	LL
		Marine and Aviation Global Technical Lead Decommissioning Lead	AM CM
IoM Department of Infrastructure		Isle of Man Government	EMR
Irish South and East Fish Producers Organisation		Chairman	JL
Maritime and Coastguard Agency (MCA)		Offshore Renewables Lead, Marine Licensing and Consenting	NS
		Offshore Renewables Project Lead	VJ
		Navigation Policy Advisor	VNJ
NASH Maritime		Project Director (Morecambe)	ER
		Project Manager (Morgan and Mona)	CH
		Principal Maritime Consultant	AR
		Project Director (Morgan and Morecambe Transmission)	BP
		Expert Mariner	NB
		Maritime Consultant	HT

Orsted	[redacted]	Environment Manager – IoM OWF	HTR
Port of Mostyn		Harbour Master	HM
Royal Haskoning DHV		Principal Marine Consultant	SR
RPS		Principal Environmental Consultant – EIA coordinator - Morgan and Mona Project Director – Morgan Generation	MK AB
Saipem			
Scottish Fisheries Federation		Fisheries Advisor	AI
Scottish White Fish Producers Association		Renewable Energy Policy Officer	RHa
Seatruck Ferries		Fleet Training Superintendent Marine Manager	MH SO
Spirit Energy		Head of Logistics Operations Senior Commercial Advisor	DU SG
Stena Line		Safety & Security Superintendent, Deputy CSO, DP Ports (PMSC)	MP
United Utilities		Project Manager	DI

DISTRIBUTION:

See Persons Present List.

ATTACHMENTS:

1. 21-NASH-0146_MNEF_20230921_Final_R02-00.pdf

MEETING AGENDA:

1. Project introductions & summary updates
2. Summary of shipping & navigation:
   - PEIR (work and findings)
   - Project revisions
   - Work undertaken in period
3. DCO process (PEIR, statutory consultation)
4. Planned activities:
   - Hazard workshops
   - Update to CRNRA and individual NRAs
   - ES preparation for submissions
   - Timescales
5. AOB

ITEM NO:	DISCUSSION ITEM:	Responsible party	Date
1	**Introductions and Session Objectives & Agenda (Slides 1-5)**		
1.1	**ER** welcomed everyone to the meeting of MNEF No. 5 and outlined the meeting protocols. **ER** provided an overview of the session objectives:		

	1. Provide an update on Morgan, Mona and Morecambe projects (Generation and Transmission Assets) 2. Introduce revisions to projects following PEIR and feedback 3. Planned activities through to Application **ER** provided overview of the meeting agenda (slide 5).		
2	**Project Summary Updates**		
2.1	**Recap of Projects Background (slide 7)** **ER** briefly recapped each proposed offshore wind farm (OWF) project and summarised the 4 applications across the projects: • Morecambe Offshore Windfarm Generation Assets • Morgan Offshore Wind Project Generation Assets • Mona Offshore Wind Project • Morgan and Morecambe Transmission Assets		
2.2	**Schedule (slide 8)** **ER** summarised the schedule for the 4 applications as outlined on slide 8 for key milestones of Scoping, PEIR, DCO/ES submission, Examination and Decision.		
2.3	**Review of key themes of previous meeting (MNEF No. 4) (slide 9)** **ER** reviewed the key themes of the previous MNEF (no. 4) meeting held on 18-Jan-2023 (minutes issued on 02-Feb-2023) as per slide 9. This included the collaborative approach across the Morgan Generation, Morecambe Generation and Mona projects and alignment of the timescales for the 3 applications. The IoM OWF and how it is being considered within assessments was also raised and was discussed later within the MNEF 5 meeting. **SB** noted that Orsted have now provided information on the IoM OWF, and queried whether this information went beyond the lease boundary. **GV** explained that the further information provided within the last two weeks included pre-scoping indicative layouts for WTGs and OSPs, as well as proposed turbine dimensions. This information is considered adequate for undertaking a cumulative risk assessment.		
2.4	**Work in period | Shipping & Navigation (slides 11-12 and 18)** **ER** provided an overview of the assessments undertaken for PEIR, the PEIR findings, and other shipping and navigation work undertaken in the period. **CRNRA** **EMR** from the IoM Government asked whether there would be an opportunity to have sight of results prior to application submission. **GV** noted that this will be taken as an action to consider the programme. *[POST MEETING NOTE: At the two-day Morgan Mona Morecambe Cumulative Navigation Risk Assessment Hazard Workshops held on 28-29 Sept-2023 it was advised that the MNEF 6 would be used to present the findings from the cumulative regional navigation risk assessment and shipping and navigation environmental statement. This would be for information only.]*		
2.5	**Project revisions post-PEIR (slides 13-15)** **ER** gave an overview of the project revisions made post-PEIR which included: - Removal of the 'hump' at the northwest corner of the Morgan array - Increasing the separation between Morgan and Mona from 3.0 nm to 6.0 nm - Increasing the separation between Mona and the TSS Liverpool Bay from 1.5 nm to 2.0 nm - Increasing the separation between Mona southeastern boundary and the TSS Liverpool Bay from 1.7 nm to 4.5 nm - Increasing the separation between Morgan and Walney from 4.1 nm to 4.3-5.3 nm - Removal of the western portion of Morecambe - The presence of the booster station search areas was also noted. **Updated bridge navigation simulation on new boundaries** **ER** noted that updated navigation simulations have been carried out for the revised project boundaries and summarised the key findings. The revised boundaries have significantly improved navigation, although routes remain susceptible to adverse weather which necessitates longer deviations with the projects in place.		

2.6	**Consideration of the IoM OWF (slide 18)** **ER** presented information on how the IoM OWF is to be considered within future assessments, noting that the Scoping Report is expected to be released in Q4 2023. The IoM OWF is to be assessed as an additional scenario within the Hazard Workshop and CRNRA. **MP** reiterated that the IoM OWF is to be considered within next week's Hazard Workshop, and queried whether the wind farm will also be included in simulations cumulatively as has already been done for Mona, Morgan and Morecambe. **CH** explained that the IoM OWF is to be included within the cumulative assessment, which was not done within the PEIR. The IoM OWF was considered within the IoMSPC navigation simulations; however, this was not the case for the Stena Line simulations due to the information not being available at the time. **MP** noted that Stena had stated at the navigation simulations that the IoM OWF should be included as they knew this project was arising imminently. MP stated that the Projects should take an action, to include the IoM OWF in navigation simulations with other ferry operators.		
3	**DCO Process**		
3.1	**Overview of EIA Process (slide 14)** **MK** summarised the PEIR stage of the EIA process (slide 14). Statutory consultation on the Preliminary Environmental Information Report (PEIR) was held between 19th April – 4th June 2023. The PEIR stage presents the initial information that has been gathered and provided an opportunity for stakeholders to comment on the proposed project. The project is working through the comments received on the PEIR in the drafting of the Environmental Statement and Development Consent application. A Consultation Report is being prepared which sets out how responses have been considered in the development of the assessment. This report will be included as part of the Development Consent application.		
4	**Planned Activities**		
4.1	Key activities from now through to ES submission (slide 23) **ER** presented a summary of the next activities to take place - During September 2023, the Hazard Workshops will take place and the bridge navigation simulation reports will be finalised. - The NRAs, both cumulative and individual, will be updated from September to November 2023. - Top-up vessel traffic surveys and benchmarking assessment will be carried out between October and December 2023. - The Generation applications will be submitted circa Q1/Q2 2024.		
6	**Summary**		
6.1	**Provisional scheduling of next MNEF** **ER** advised that MNEF No. 6 is proposed to take place in Q1/Q2 2024, and that parties who wish to attend should opt-in via email or use/share of email addresses within MNEF of additional MNEF members with interest in the forum. MNEF No. 6 will be used to communicate the progress and findings of the planned activities (see Item No. 4.1). [*POST MEETING NOTE: At the two-day Morgan Mona Morecambe Cumulative Navigation Risk Assessment Hazard Workshops held on 28-29 Sept-2023 it was advised the MNEF 6 would also be used to present the findings from the cumulative navigation risk assessment and shipping and navigation environmental statement. This would be for information only.]*		
6.2	**AOB** **MP** asked if a copy of the slides can be sent to all present. **ER** advised that the slide pack and meeting minutes will both be circulated. **WG**, who represents operations at the aggregate extraction area (Area 457) within Liverpool Bay, asked whether there are any plans submitted or drawn for exclusion zones beyond the array boundaries. **ER** responded that there are no plans for	**ER**	

	exclusion zones and that none have been highlighted as a requirement during the risk assessment process. **WG** queried how close the turbines will be to the array boundaries. **ER** explained that turbines have potential to be placed up to the boundary line. **WG** expressed concern around navigation risk with vessels travelling or operating close to the turbines, for example if a loss of power were to occur causing a vessel to drift. He also noted the restricted manoeuvrability of dredgers during dredging activities. **ER** asked how far Area 457 lies from the project boundary. **WG** could not recall at this time. **MK** noted that the aggregate dredging area has been scoped into the Cumulative Effects Assessment (CEA). **WG** noted the issues caused at aggregate dredging areas by nearby Triton Knoll turbines, and highlighted the need to be clear on where the closest turbines are to be located. This has been noted as an action and the concerns will be considered/discussed. [POST MEETING NOTE: Area 457 lies approximately 5.9 nm east of Mona and 5.0 nm south of Morecambe].	**GV**	
6.3	**ER** thanked all attendees of the meeting for their time and input, noting once again that the slide pack and meeting minutes will be circulated following the meeting.	**ER**	

ACTIONS:

Item no.	Action	Responsible party
1	Consider the programme and whether the CRNRA can be made available for review by the IoM government prior to application submission. [*Addressed in POST MEETING NOTE in Sections 2.4 and 6.1*]	**complete**
2	Consider incorporation of the IoM OWF within navigation simulations undertaken which have not already considered it.	**Morgan Moan Morecambe Projects**
3	Discussion and consideration to be given to turbine placement in proximity to dredge area 457 to address concerns raised. [*Addressed in POST MEETING NOTE in Section 6.2*]	**complete**
4	Meeting minutes and slide pack to be circulated among those present at MNEF 5.	**NASH Maritime**

Appendix G: Archaeology and Heritage Engagement Forum - offshore

G.1 AHEF - offshore overview

Table G.1: Overview of AHEF consultation materials.

Date	Meeting	Information provided
30 November 2022	AHEF - offshore meeting 1	Meeting minutes (G.2.1)
16 March 2023	AHEF - offshore meeting 2	Meeting minutes (G3.1) Additional Information (G.3.2)
13 July 2023	AHEF – offshore meeting 3	Meeting minutes (G4.1)
13 October 2023	AHEF – offshore meeting 4	Meeting minutes (G.5.1)

G.2 AHEF - offshore meeting 1

G.2.1 Minutes

AHEF – Offshore Meeting Minutes 1

Reference:	**EOR0801 – AHEF Offshore M1**
Meeting Name:	Morgan Generation and Mona – Archaeology and Heritage Engagement Forum (AHEF) – Meeting 1
Meeting date:	30 November 2022
Meeting location:	MS Teams

Attendees

Name	Initals	Company	Role
[redacted]	SS	RPS	Consultant
	SG	RPS	Consultant
	LD	RPS	Consultant
	BM	RPS	Consultant
	MP	bp	Applicant
	GV	bp	Applicant
	AP	Marine Management Organisation - MMO	Regulator
	GR	Marine Management Organisation - MMO	Regulator
	NM	Cadw – Historic Environment	Statutory body
	CP	HE - Historic England	Statutory body

Apologies

Name	Initals	Company	Role
[redacted]	JW	RCAHMW (Royal Commission on the Ancient and Historical Monuments of Wales)	Statutory body

Item	Detail	Action	Date
1	Agenda • Introductions • Update of Morgan and Mona Projects • AHEF - offshore • Remit and Inputs • Roadmap • Indicative Meeting Programme • Ways of Working • Marine Archaeology • Agreed baseline approach • Agreed approach to PEIR assessment • Next Steps • Questions	N/A	N/A
2	Notes Presentation given by SS, MP and SG in line with the above agenda.	N/A	N/A

Item	Detail	Action	Date
3	• CP – Regarding Morgan and Morcombe transmission - are measures in place if one or the other of the projects doesn't go ahead? • GV – The projects will be electrically separate. The Draft DCO and DMLs submitted with the Application are likely to be structured to allow for construction of the transmission assets for one project in the absence of the other. This may be facilitated through, for example, separate schedules as seen for Round 3 projects where separate DNLs are included for the 'generation assets' and 'transmission assets'.	GV to provide an update on the consenting strategy once this have been established and update the AHEF at a future meeting (likely at the meeting following submission of the Transmission Assets PEIR in Q3 2023).	Q3 2023
4	• CP – Will supplementary documents be applicable to both Morecombe and Morgan projects or will individual documents be required, or have individual documents been produced for this. • GV – Action to take away from the meeting. A focus on a streamlined process to make things easier for stakeholders and means that pre commencement documents and plans could cover the transmission assets of both projects. However, where applicable, two sets of documents may be needed and would be produced. *Post-meeting note: Strategy for submission of outline Plans at application and final Plans for discharge post-consent (should consent be granted), is linked to the consenting strategy and Point 3 above. Therefore, the Project will be in a better position to provide an update on this matter following submission of the Transmission Assets PEIR in Q3 2023.*	GV to provide an update following submission of the Transmission Assets PEIR in Q3 2023.	Q3 2023
5	• CP – It was mentioned that SSS as the best option for marine archaeology surveys, however, it is important to see and know the linkages between this and the other survey methods are used to identify the potentially most valuable sites. • SG – SBP data has also been collected and used corroboratively with the SSS data. Mitigation measures have been adopted as part of the projects that will protect any as yet unknown marine archaeology that may be discovered during the course of the projects. • SG - Geophysical data collected for the cable corridors is unlikely to be submitted at PEIR but will be incorporated at ES. Geophysical data collected for the array areas will be incorporated at PEIR. • GV – Commencement of Geophysical and Geotechnical surveys of the export cable corridor was delayed to summer 2022 due to the uncertainty of the grid connection point owing to delays in completion of the National Grid Offshore Transmission Network Review (OTNR). As a result, data analysis will not complete until end 2022 / Q1 2023 and it will not be possible to include this data in the Mona and Morgan (Generation Assets) PEIRs due for publication at the end of Q1 2023. The data and relevant analyses will be included in the Application. • CP - Are Geophysical and Geotechnical data complete for the array areas and shallow seismic included. • SG – Yes.	GV - bp to ensure there is sufficient time for AHEF Offshore to review all geophysical / geotechnical analysis ahead of ES.	Ongoing

Item	Detail	Action	Date
	• NM – Concerned that geophysical analysis will not be complete at PEIR. This analysis may have significant implications requiring consultation and the stakeholders cannot be put in the position of having insufficient time to review documents with such significant implications. Geophysical assessment of cable corridors needs to be delivered to stakeholders ASAP and pre-ES. If the Impact Assessment is not appropriate that could/would invalidate the project application. • GV – Will ensure that sufficient time is given for reviews and discussion and comments ahead of ES through this forum.		
6	• CP – reference to the use of an agreement log – important to be clear that reactions and questions were not seen as agreement and listed as such within the document. • SS – Understood, the log will document all items where agreement is required. Nothing will be closed out before agreement is reached between parties.	None	N/A
7	• CP – Notes of meeting and documents will be produced and available? • SS - Slides, comments long, minutes all to be sent together by cob 7th December	SS – Circulate meeting minutes, agreement log and roadmap by cob Dec 7th	7/12/22
8	• CP – Noted that Mona was divided between English and Welsh waters. • MP – There are two small strips in English waters, but the majority is in Welsh waters. • NM – Are any turbines in English waters • GV – Amendment of the Mona and Morgan (Generation Assets) array area boundaries is anticipated to address potential impacts on safety of navigation. The outputs of that workstream are that the Mona array area submitted at Application may lie entirely in Welsh jurisdiction, however the PEIR will be based on the scoping boundary due to timescales required to complete engagement on shipping & navigation workstreams. • NM – suggested that Cadw be the lead stakeholder on Mona as it will be located almost completely in Welsh waters. • CP – HE Agreed with this suggestion	Cadw to be lead stakeholder for Mona Offshore Wind Project (offshore generation and transmission assets)	N/A
9	• CP - The IoM territorial waters run right up to the boundary (Morgan array area), is there adequate collaboration and coordination with the Isle of Man. • GV – Abuts but does not overlap the Isle of Man territorial boundary. Projects have engaged with the IoM government. They have not raised or expressed concern over marine archaeology aspects of the projects. However, potential to find archaeological resources within the array area close to the boundary with Isle of Man territorial waters is noted and will be addressed in the Offshore WSI.	Outline WSI (Offshore) submitted at Application to ensure appropriate communication pathways are in place with Isle of Man.	At Application
10	• CP – Is there adequate coordination and consultation with devolved powers and international people in the eventuality that something is found. • LD – The Preliminary results show nothing of significance on the border between Isle of Man	RPS to ascertain status of samples for Geotech analysis and report back to AHEF Offshore.	Pre PEIR meeting

Item	Detail	Action	Date
	waters and Morgan Array Area boundary, so it doesn't look likely to be an issue. • CP – What geotechnical data was obtained? Do we have viable samples? • LD - Deep borehole across the area, shallow sampling and CPT. • MP – Southampton University provided WSI and core samples which we are working with to survey and review.		
11	• GV – The post consents compliance period has gotten longer and longer since round three with a number of documents to be discharged by MMO and the discharge periods required. Aim to streamline this by submitting Outline WSI (Offshore) with the application that includes full details for any activities likely to be undertaken early in the post-consent period e.g. geophysical and ground-truthing surveys for archaeology and UXO investigations. As per best-practice, the WSI (Offshore) is expected to be a 'live' document and further updated in the post-consent period to address other activities for which final details will not be available at the Application stage (e.g. any boulder clearance and export cable pre-lay grapnel run requirements). • CP – Appreciate wanting to move on and streamline the process, however any Outline WSI (Offshore) submitted as part of a DCO application that requires formal consent discharge could reduce flexibility and not allow for changes in the crucial data acquisition period post consent and pre-construction. It is therefore important that an Outline WSI (Offshore) to be applied immediately post consent must be fit for purpose and used from first day post application acceptance. The Applicant should ensure it is used and agreement on best method for formal implementation should be agreed with input from Planning Inspectorate and MMO. WSI at application needs to be fit for the purpose re the work that will be conducted immediately post-consent to effectively support and inform data acquisition and processing.	bp - put a plan in place if they wish to streamline the WSI process. Keep statutory bodies and stakeholders informed.	TBC
12	• MP – Surveys to be undertaken next year include: – Deep Geotech surveys of both array areas with support from engineers to produce another WSI alongside a suction bucket trial due to hardness of the seafloor maybe requiring alternative to piling or drilling. Application for marine licenses in England and Wales will be submitted for this trial - the WSI would be for the Deep Geotech survey and suction bucket trial. • CP – Will that foundation type be across the array or just certain locations within it? • GV – Due to hardness of the ground we included suction bucket jackets in the PDE alongside the industry-preferred monopile foundations and jackets on pin-piles. At this stage, the Project has not made any decisions on foundation strategy beyond identifying the need to have more detailed information to feed into the decision. This is particularly important as suction bucket jackets have not been used at scale at many	MP – To establish depth the suction foot drawn into the sediment.	Pre PEIR meeting

Item	Detail	Action	Date
	projects anywhere in the world, and thus, there may be added complexities in their design, manufacture and supply. • CP – What depth is the suction foot drawn into the sediment? • GV – Do not know but we will seek feedback from our engineering team on the likely penetration range. • MP – Hoping to submit the marine licence for the above before Christmas.		

G.3 AHEF - offshore meeting 2

G.3.1 Minutes

Reference:	**EOR0801 – AHEF Offshore M2**
Meeting Name:	Morgan Generation and Mona – Archaeology and Heritage Engagement Forum (AHEF) – Meeting 2
Meeting date:	16 March 2023
Meeting location:	MS Teams

Attendees

Name	Initals	Company	Role
[redacted]	SS	RPS	Consultant
	SG	RPS	Consultant
	LD	RPS	Consultant
	BM	RPS	Consultant
	MP	BP	Applicant
	GV	BP	Applicant
	PC	BP	Applicant
	NM	CADW – Historic Environment	Statutory body
	DJW	RCAHMW	Statutory body
	CP	Historic England	Statutory body
	AP	MMO	Regulator
	MS	MMO	Regulator

Item	Detail	Action	Date
1	Agenda • Introductions • Matters arising from last meeting • Update of Morgan and Mona Projects • Marine Archaeology • Mona Offshore Wind Project • Conclusions of the Technical Report • Morgan Generation Assets Offshore Wind Project • Conclusions of the Technical Report • Next Steps • Questions	N/A	N/A
2	Notes Presentation given by SS, MP and LD in line with the above agenda.	N/A	N/A
3	• SS – Re Matters arising from last meeting: Are there any issues with the two week response time for the AHEF following issue of materials for review? This would be in line with response times for other technical forums. • CP - 10 working days and consideration of public holidays and individuals on leave and other unavoidable circumstances would be acceptable.	SS - Update agreement log accordingly	By 31/12/23
4	• NM – Should Wales take the lead as stakeholders over Cadw? • GV –who is statutory marine historic body and lead in Welsh waters? Assumed Cadw is historic body for Welsh waters.	N/A	N/A

Item	Detail	Action	Date
	• NM – probably right technically – agreed by DJW.		
5	• CP – Can Applicant offer ideas of scale and size of turbines and foundation types. • GV– Don't have the Maximum Design Scenario tables within these slides but it is in within the PEIR and topic receptor assessments where descriptions of the MDS, Project Description and Project Design Envelope are found. • GV - Have a range of 68-107 turbines (15-24MW turbines) with figures/stats on footprint requirement info for the foundation options, e.g. monopile, jacket, gravity base etc. all to be available within the PEIR.	N/A	N/A
6	• CP – Asked how has transition from BEIS to the Department for Energy Security and Net Zero been going. • GV – Business as usual for consents. • MP – Engagement is ongoing, and it is seemingly seamless.	N/A	N/A
7	• CP – What indication can you provide of the other anomalies that aren't already known and identified. • LD – Medium potential anomalies/those not identified as wrecks but of possible anthropogenic origin have been designated Archaeological Exclusion Zones (AEZs). The PEIR presents all proposed AEZs for the stakeholders to agree. • CP – Have anomalies been compared with recorded losses? • LD – Yes, recorded losses are detailed within the Technical Report. • CP – Re the Marine Archaeology chapter: Will we have technical appendixes, and will that include information on the quality and limitations of the geophysical survey data? Usually, we would expect to see a technical archaeological appendix containing quantitative and qualitative data as well as survey conditions, resolutions used and kit used, techniques use, etc. • LD - Technical specifications including quality of data and limitations are within the PEIR Marine Archaeology Technical Report.	None, but post PEIR review it is expected that any data thought to be missing will be highlighted by the AHEF.	N/A
8	• CP– | Noted the requirement for archaeology specialists to be involved in survey design and planning. • GV– agreed, geo technical cores from 2021 and 2022 surveys will be analysed and the results will be presented at Environmental Statement. • CP would you be willing to meet between PEIR and Environmental Statement to discuss the geotechnical results? • GV – Yes we would.	None, but depending upon timing an additional meeting may be required following the post PEIR meeting to discuss Geotech results. This to be kept under review.	N/A
9	• CP - Queried whether Historic Seascape Characterisation (HSC) was covered • LD - Confirmed that HSC is covered in the Technical Report. • CP- Are you happy with the programme and all it entails? • LD – This aspect of the scope was conducted using Historic England Methodology. • CP - Needs to be national consolidation to be relevant to this PEIR and ES – original works to a	See following emails re confirmation of what has been used in terms of references and dates of the advice.	N/A

Item	Detail	Action	Date
	point in time - now things like renewables and such need to be included. Want it to reflect renewables as well as hydrocarbon energy.		
12	•		

G.3.2 AHEF – offshore meeting 2 additional information

G.3.2.1 Emails regarding data used and HSC

Email 1 – from LD dated 16/03/23:

Hi [redacted],

Thank you for your inputs to the forum this afternoon. I'm just following up on HSC to let you know that the data used was: Sam Turner, Caron Newman (2011) Historic Seascape Characterisation: The Irish Sea (English sector) [data-set]. York: Archaeology Data Service [distributor] [redacted] And the data includes for renewable energy installation (wind).

The guidance utilised was: Natural England. (2012) An Approach to Seascape Character Assessment. Natural England Commissioned Report NECR 105. Online, Available at: [redacted] Accessed May 2022 which was obtained (alongside some high level the link provided on the HE website here: [redacted]

Hope that's helpful, and if you have any further questions please just get in touch.

Email 2 – from CP dated 21/03/23:

[redacted],

Thank you for your email.

The reference we refer you to is the National Historic Seascape Characterisation Consolidation exercise published 2018 (see: [redacted] The purpose of this exercise was to draw together the separate implementation projects conducted between 2008 to 2015 (e.g. for the Irish Sea area as you reference below).

The HSC Consolidation exercise used the outputs of these separate projects to produce a national HSC methodology in one national database (see link above). This database and methodological approach should now be used by your project to determine perceptions of historic seascape character and the capacity to accommodate change as proposed by the Morgan offshore wind farm development.

Email 3 – from MP dated 21/02/23

Hi [redacted]

Many thanks for providing this updated reference. We will review this consolidation exercise and look to update our Mona and Morgan Gen assessments between PEIR and ES with this information.

G.4 AHEF - offshore meeting 3

G.4.1 Minutes

Reference:	**EOR0801 – AHEF Offshore M3**
Meeting Name:	Morgan Generation and Mona – Archaeology and Heritage Engagement Forum (AHEF) – Meeting 3
Meeting date:	13 July 2023
Meeting location:	MS Teams

Attendees

Name	Initals	Company	Role
[redacted]	SS	RPS	Consultant
	LD	RPS	Consultant
	SC	RPS	Consultant
	HK	BP	Applicant
	GV	BP	Applicant
	RH	BP	Applicant
	CP	Historic England	Statutory body
	AP	MMO	Statutory body

Apologies

Name	Initals	Company	Role
[redacted]	JW	RCAHMW (Royal Commission on the Ancient and Historical Monuments of Wales)	Statutory body
[redacted]	NM	CADW	Statutory body

Item	Detail	Action	Date
1	Agenda • Introductions • Update of Morgan and Mona Projects • Section 42 responses • Update on geotechnical analysis • Conclusions of the Technical Report • Next Steps • Questions	N/A	N/A
2	Notes Presentation given by SS, GV and LD in line with the above agenda.	N/A	N/A
3	• GV – provided an update regarding removal of monopiles from PDE with gravity base and jackets (pin-piles and suction buckets) options remaining. • CP - query about suction bucket tests and if any locations in the English sector. • GV – confirm 10 locations within reduced footprint of array area of each project, fairly confident not within English waters but will check. • AP - The suction bucket trial will work towards dissemination. Application is for 30 locations – 20 for Morgan Generation, 10 for Mona. • GV - provided an update regarding removal of smallest wind turbine scenario from PDE and	GV to check Mona locations of suction bucket tests and confirm if any are in English waters. AP to clarify Mona suction bucket testing locations and follow up if Mona suction bucket trials go ahead.	

Item	Detail	Action	Date
	increase in rotor diameter for largest turbine from 280 to 320 m. • CP – asked for blade tip height for revised rotor diameter. • GV - Blade tip height increased from 324 m to 364 m.		
4	• LD - presented Section 42 responses. • LD - presented a record of a potential aircraft site. A Temporary Archaeological Exclusion Zone (TAEZ) of 100 m will be applied at UKHO coords for this site. • LD – presented understanding of HSC to be assessed as a receptor at EIA. LD inquired whether the assessment is to consider the public perception of seascape as a heritage asset and how the project might impact that perception. • CP – Key element of HSC is that it can't be equated to sensitivity and therefore assessed as a receptor. It is more of a narrative approach, acknowledging perception of historical character, what exists and what more is being introduced by the proposed development. I.e. Industrial seascape (e.g. oil and gas) is then able to accommodate further iteration of industrial development (e.g. offshore wind), contrary to 'pristine' seascapes which were, historically, less industrialised and therefore less able to accommodate industrial development. • LD - Isle of Man have acquired new shipwreck data. These data will be purchased and included as appropriate within the Environmental Statement.	RPS to acquire dataset from Isle of Man	
5	• LD - presented geotechnical analysis update. Stage 1 analysis will be presented in the Environmental Statement (ES). • GV – Stage 2 is live and not ready for application and can update the forum on timescales at next meeting. • CP - request to ensure linkage between Generation and Transmission assets.	GV to provide overview on what is necessary post-consent to complete the geotechnical exercise. Update: The update on this will be provided in the Stage 1 report included in the application, with the recommendations.	
6	• Next meeting for AHEF will be held in October/November 2023 to finalise key points raised post-PEIR and at 3rd meeting	SS to schedule AHEF 4th meeting. Update: Now scheduled for 13th October. Invitations have been issued.	
7	• No questions/AOB		

G.5 AHEF – offshore meeting 4

G.5.1 Minutes

AHEF – OFFSHORE MEETING 4 MINUTES

Reference:	**EOR0801**
Meeting Name:	Morgan Generation Assets and Mona – Archaeology and Heritage Engagement Forum (AHEF) Offshore – Fourth meeting
Meeting date:	13 October 2023
Meeting location:	MS Teams

Attendees

Name	Initals	Company	Role
[redacted]	SS	RPS	Consultant
	LD	RPS	Consultant
	SC	RPS	Consultant
	HK	bp/EnBW	Applicant
	GV	bp/EnBW	Applicant
	RH	bp/EnBW	Applicant
	CP	Historic England	Statutory body
	JW	RCAHMW	Statutory body
	NM	Cadw	Statutory body
	AP	MMO	Regulator
	MS	MMO	Regulator

Apologies

Name	Initals	Company	Role
N/A			

Item	Detail	Action	Date
1	Agenda • Update of Morgan and Mona Projects • Approach to WSI • 'Agreements'/confirmations of approach • Next Steps • Questions	N/A	N/A
2	Notes • Presentation given by SS, GV/RH and LD in line with the above agenda.	N/A	N/A

Item	Detail	Action	Date
3	• bp/EnBW provided an update on Morgan Generation Assets and Mona projects including timeline for ES and application decisions.	N/A	N/A
4	• bp/EnBW provided update on Maximum Design Scenario • CP – Sandwave clearance for inter-array cabling, can you confirm the clearance width has reduced from 104 m to 80 m? • bp/EnBW– confirmed the width reduction and reiterated it is the Maximum Design Scenario, and there will be micrositing with the aim of avoiding sand waves where it is possible. • CP – Will the distribution of sand waves be explained in the Mona and Morgan Generation Assets deliverables? • bp/EnBW– It will be explained in the Physical Processes chapter, however, these are dynamic environments, so there could be changes prior to construction, thus requiring further survey pre-construction. We are assuming maximums for permitting purposes.		
5	• CP – Regarding foundation type, is there a case of combination of types? • bp/EnBW – Yes, the Project Description includes for a combination of foundation types between gravity base and jacket foundation, but we are unsure yet of the split. The combination will be based on ground conditions in each area.		
6	• bp/EnBW presented the approach to WSI, reiterating the desire to mitigate impact on the post-consent compliance programme. The intention being to submit full details of post-consent geophysical and geotechnical surveys for approval at consent in order to have 'Day 1' approval of the survey. • CP – I recall the mention of this desire to have concurrent approval of development consent and for post-consent survey, and that this would be a focus of attention. I am entirely happy with this approach but of course It depends on what information is included in the WSI, and the compliance with working practices for how such documents inform post-consent work packages. The intention for concurrent approval is fine in principle from Historic England's perspective.	RPS to update terminology in slides and agreement log prior to issue.	
7	• LD presented the pre-ES slides reiterating the archaeological baseline. • SS – We are looking for verbal agreement that the AHEF process is fulfilled. • CP – In terms of the bullet points on the 'agreement' slide, to me this seems comparable to a 'statement of common ground'. Is this a pre-run in terms of the subject matter to be included? • SS – There is some similarity but, in this context, the intention is to effectively document what has been presented before in previous AHEF	RPS to update terminology in slides and agreement log prior to issue.	

Item	Detail	Action	Date
	meetings and to seek acknowledgement our process has been satisfactory to the AHEF as evidenced by PEIR review and S42 responses. • CP – Without going back through the PEIR submission, we can however provide acknowledgement that the information has been presented during the process. • bp/EnBW – We are not intending to hold hard to the terminology. It is more to get an acknowledgement that you are broadly happy as far as you have read the material, and we will have the formal statement of common ground process after the submission. • NM – Reiterated what CP said. We cannot formally 'agree' to this, but we can confirm we are happy with what has been presented thus far. • SS – We can revise the terminology of 'agreement' as it is acknowledged that this phrasing can have strong interpretations and specific meanings that are not intended here but could be misconstrued.		
8	• LD presented the measures adopted as part of the project's mitigation strategy. • CP – Being mindful of the point GV made earlier regarding full details being included in the WSI, can you reassure us there will be the attention given to the adoption of investigative techniques to support the principles of discover. Looking back through the PEIR there was limited magnetometry data collected. What attention will be given to the full range of geophysical techniques, how will they be incorporated, and how much detail will be included? • bp/EnBW – We will provide everything needed to meet the requirements. We will have to provide the details of planned geophysical surveys. A lot of these techniques are fairly standard, but we understand that there must be specification. • CP – We are used to the sector setting out general ideas in the WSI, but then add specificity in method statements. Are you trying to merge WSI and Method Statement documents? • bp/EnBW – We are trying to avoid separate and subsequent Method Statements because the turnaround time has programme implications for us, so we are trying to fast-track Method Statements post-consent. The aim will be to cover off in the WSI the aspects of the Method Statement that relates to confirmation of techniques, equipment specification, and survey coverage, rather than how we will handle the data. • CP - in reference to Morgan Generation Assets, the survey identified five high and five medium potential anomalies. In terms of detail, the attention should be on how the spatial area will be defined (i.e. Archaeological Exclusion Zones	bp/EnBW to confirm approach to Geotech post-consent Update: The results of the stage one archaeological assessmnet of geotechnical data have been incorporated into the ES (TR and Chapter). The results of any further archaeological assessmet arising from geotechnical survey will be reported and archived with RCAHMW through NRW for Mona and with HE through OASIS for Morgan Generation post-consent.	

Item	Detail	Action	Date
	(AEZs)). In each case, the more detailed elements will be in relation to what else will be found. • bp/EnBW – We won't be covering this off in the outline WSI, but this information can be in the full WSI. The outline WSI should cover how we collect the data. The full WSI is acting on the results (e.g., implementation of AEZs). • CP – With reference to deep geotechnical survey, will analysis be added to the Environmental Statement chapter or in the detail of the WSI? • bp/EnBW – It will not be in the Environmental Statement, but we will take an action to get back to you on how this will be addressed. • Update: Further details on the future archaeological assessment of geotechnical data and dissemination of results will be outlined in the WSI.		
9	• LD presented the 'Next steps'. Wording on agreement will be changed to acknowledgement.		
10	Further questions – applicable to Mona • JW – In the mitigation slide, and also the PEIR document, what is happening regarding the longer-term monitoring of the archaeological resource? • LD – This is covered in the mitigation strategy and in the Outline WSI • JW – Why isn't it covered anywhere here? • LD – We will look again at the comments and the reporting, too. • JW – The surveys that have been done have turned up new material, potentially. One of the things RCAHMW will be looking for is this material to be included into the National Monuments Record for Wales (NMRW) more efficiently, i.e. as much detail on assets coming from geophysical surveys as possible - perhaps within the WSI or ES. A lot of the material goes into reporting but no further. • JW – Regarding suction bucket trials, there was a disconnect without joined up thinking regarding this. I'm increasingly interested in the monitoring of the archaeological resource over the lifetime of the project, which can potentially be overlooked. • bp/EnBW – There is provision in the Morgan Generation and Mona DCOs for dissemination of information on archaeology and a requirement for the archaeological report to be submitted with an OASIS form and deposited with the Archaeological Data Service (ADS) to inform the MMO / NRW and the historic bodies. • JW – For Wales (Mona), that needs to come to the Royal Commission and deposited in the National Archive.	RPS to review S42 responses and ensure monitoring of known marine archaeology receptors, where appropriate, is covered in the mitigation and monitoring strategy. RPS to update the roadmap to that minutes list the action points within the roadmap appendices with full minutes separate to the roadmap.	

Item	Detail	Action	Date
	• bp/EnBW – We can make sure that this is all addressed so the information does not stay within the developer's or NRW servers. Further questions – applicable to Mona and Morgan Generation Assets • CP – Regarding the road map, I could not grapple with what it was trying to cover. It has appendices of minutes and email correspondence. I struggle with what it is trying to communicate. • SS – It's the constitution for this forum – rules, goals, key events. It has captured a few email items regarding after-meeting comments. At the end of that, it's the agreement log. • CP - Making the road map as succinct as possible would be greatly appreciated. • SS – The minutes as a separate document, perhaps? • CP – I guess you could pick out the actions and outcomes? For example, we covered the detail in the WSI for the clear reason to make things as time efficient as possible. But then the explanation that because of the format of the DCO, there will be a WSI that also allows for the provision of method statements. It also needs to reflect JW's comments on the long-term monitoring of the resource. • bp/EnBW – Those points are all covered in the WSI. The design plan is the key pre-commencement compliance document that describes the location of all infrastructure and provides the evidence to demonstrate that the siting of infrastructure avoids AEZs. The design plan is issued to the Licensing Authority (MMO / NRW) for approval in consultation with the statutory historic body prior to commencement of construction.. The archaeology chapter of the Environmental Statement will detail measures adopted, including use of the design plan, WSI and PAD process. • CP – Is the roadmap submitted as part of the DCO package? • SS – The minutes will be captured, but the roadmap is guidance for the forum. • CP – Will the minutes be captured as part of the consultation report? • SS – Thats my understanding • bp/EnBW – There will be a consultation section in the marine archaeology chapter that will include these forums, key points of discussion, actions agreed and copies of the minutes as appendices.		
11	• AHEF matters meeting concluded. All concur.		

Appendix H: Commercial fisheries

H.1 Commercial fisheries overview

Table H.1: Overview of Commercial fisheries consultation.

Date	Meeting	Information provided
24 June 2021	Commercial fisheries meeting 1	Meeting minutes (H.2.1)
29 June 2021	Commercial fisheries meeting 2	Meeting minutes (H.3.1)
01 July 2021	Commercial fisheries meeting 3	Meeting minutes (H.4.1)
14 February 2022	Commercial fisheries meeting 4	Meeting minutes (H.5.1)
14 February 2022	Commercial fisheries meeting 5	Meeting minutes (H.6.1)
15 February 2022	Commercial fisheries meeting 6	Meeting minutes (H.7.1)
15 February 2022	Commercial fisheries meeting 7	Meeting minutes (H.8.1)
29 March 2022	Commercial fisheries meeting 8	Meeting minutes (H.9.1)
29 March 2022	Commercial fisheries meeting 9	Meeting minutes (H.10.1)
22 November 2022	Commercial fisheries meeting 10	Meeting notes (H.11.1)
23 November 2022	Commercial fisheries meeting 11	Meeting notes (H.12.1)
24 November February 2022	Commercial fisheries meeting 12	Meeting minutes (H.13.1)
24 November February 2022	Commercial fisheries meeting 13	Meeting minutes (H.14.1)
25 November February 2022	Commercial fisheries meeting 14	Meeting minutes (H.15.1)
01 December 2022	Commercial fisheries meeting 15	Meeting minutes (H.16.1)
01 December 2022	Commercial fisheries meeting 16	Meeting minutes (H.17.1)
02 December 2022	Commercial fisheries meeting 17	Meeting minutes (H.18.1)
15 December 2022	Commercial fisheries meeting 18	Meeting minutes (H.19.1)
11 September 2023	Commercial fisheries meeting 19	Meeting minutes (H.20.1)

Date	Meeting	Information provided
19 September 2023	Commercial fisheries meeting 20	Meeting minutes (H.21.1)
19 September 2023	Commercial fisheries meeting 21	Meeting minutes (H.22.1)
20 September 2023	Commercial fisheries meeting 22	Meeting minutes (H.23.1)
20 September 2023	Commercial fisheries meeting 23	Meeting minutes (H.24.1)
21 September 2023	Commercial fisheries meeting 24	Meeting minutes (H.25.1)
03 October 2023	Commercial fisheries meeting 25	Meeting minutes (H.26.1)
04 October 2023	Commercial fisheries meeting 26	Meeting minutes (H.27.1)
04 October 2023	Commercial fisheries meeting 27	Meeting minutes (H.28.1)

H.2 Commercial fisheries meeting 1

H.2.1 Minutes

Partners in UK offshore wind

Minutes

Stakeholder name	Scottish Fishermen's Federation (SFF), Scottish White Fish Producers Association (SWFPA) and West Coast Sea Products Limited (WCSP)
Date	24/06/2021
Attendees external	SFF – [redacted] (AT) and [redacted] (MM) SWFPA – [redacted] (FDB) WCPS – [redacted] (DW) and [redacted] (JK) Fishing Industry Representative (FIR) – [redacted] (TW) MarineSpace – [redacted] (JL) and [redacted] (BO)
Attendees internal	[redacted] (ID)
Subject/purpose	Introduction to project and engagement with fisheries

	MINUTES:	**ACTION:**
1.	JL introduced project and MarineSpace.	
2.	Introductions from all. WCPS have fleet of vessels that target King and Queen scallops in the Irish Sea.	
3.	JL provided overview on fisheries roles and responsibilities of those involved in project and noted that RPS are the EIA consultants.	
4.	ID outlined the principles for stakeholder engagement and noted no permanent infrastructure until 2026. Commented that looking for feedback from industry to help with design principles.	
5.	ID provided an overview of the project, explaining that bp and EnBW are preferred bidders for the two areas in the Irish Sea. The partners intend to jointly develop and operate the leases to contribute to the UK's 40GW target for 2030. The project aims to use large wind turbines, to increase the distance between them, and reduce the number. The first of the two wind farms is planned to be operational by autumn 2028.	
6.	ID explained the project location and noted that the wind turbines will not cover the whole area, in order to minimize impacts to fisheries, shipping and other sea users.	
7.	ID discussed the project timeline – the Habitats Regulation Assessment (HRA) by The Crown Estate (TCE) will be concluded Q1 2022, after which bp and EnBW intend to sign a lease. Application for Development Consent Order (DCO) is planned for 2023. ID emphasized the importance of early engagement to help in the design process.	
8.	ID provided an overview of consenting and stakeholder consultation.	
9.	ID discussed the project context. Noted that bird and mammal surveys have already commenced; bathymetry surveys by XOcean are ongoing; Gardline survey will commence next week; metocean later in the year.	
10	MM asked which surveys are starting in next few weeks. ID confirmed XOcean have started and will discuss Gardline survey further.	
11	JL provided overview of XOcean survey which is using Unmanned Surface Vessels (USV). JL noted that Notices to Mariners (NtM) have been circulated and there have been no interactions with fishing gear.	

12	JL provided an overview of the Gardline geophysical, environmental and geotechnical surveys. Noted that two NtM have been issued to date. Explained that there would be towed gear, grab sampling and drop-down cameras. Geotechnical testing would be undertaken during September.
13	JL noted that there will be an Offshore Fisheries Liaison Officer (OFLO) provided by the National Federation of Fisherman's Organisations (NFFO) onboard the Gardline vessel. JL showed survey location charts split into blocks.
14	JL discussed FliDAR and Metocean, noting that they will be discrete locations and will have navigation aids. Will be deployed from approximately September 2021/ March 2022 to October 2023/May 2024.
15	ID re-emphasized that bp's intention is to work around commercial fishing vessels rather than causing displacement.
16	MM noted that he is happy to see the principles for engagement and highlighted that WCPS livelihoods rely on this area. MM welcomes open and transparent discussions.
17	JK explained that the Queenie season starts 1st July and WCPS intend to start fishing from middle of July until January. Also commented that there are King Scallops in the area and the season starts 1st November to end of May every year.
18	DW explained that he has worked in the region for 40 years plus and pointed out that the lease areas are in the middle of the Queen scallop area. DW noted that concerns are more related to the positions of turbines rather than the survey phases. DW explained that the most important area is approximately 5-6 minutes around 4°W. DW asked the reason for the specific site selection.
19	ID explained that the TCE lease areas were opened to bidders. Essentially we recognise that virtually all of the Irish Sea is valuable fishing ground and we will seek co-existence agreements with fishing communities where we cannot avoid interaction entirely. We are fully committed to open and constructive engagement with the fishing community and do not want to negatively impact longstanding livelihoods.
20	DW says that the area follows queen scallop ground and asked why the areas are such a specific shape. Noted that if the areas were moved to the east it would not be such a concern for them.
21	MM commented that TCE do not consider fisheries in initial areas for bidding.
22	JL noted that areas shown will not all be built upon, and re-emphasised how wind turbines locations have not been decided. Highlighted that in this region shipping and navigation are a key stakeholder. Noted that the HRA could reduce the size of areas by up to 30% following assessment, and explained that stakeholders can feed into this.
23	TW noted that Colin Warwick is a new fisheries liaison officer at Crown Estate and suggested that concerns are directed to him.
24	MM noted that TCE in Scotland also consider socio-economics.
25	JL reiterated that turbine design and layout could facilitate coexistence. JL emphasized importance of understanding finer details, such as tow design and direction.
26	MM queried whether this was a floating offshore wind farm.

27	ID confirmed that the intention is to use fixed monopiles, 19 MW turbines.	
28	MM noted that 1km spacing would not allow mobile gear to fish in area.	
29	JL summarized - NtMs have been issued for survey phase; OFLO will be onboard the Gardline vessel; Gardline vessel will have towed gear; survey vessels will work around commercial fishing vessels; metocean equipment will be in-situ (with radar and AIS). RPS will be starting conversation in next couple of months about scallop grounds and impacts from the proposed development.	
30	MM commented that are still lessons to be learnt from Round 3, particularly regarding fish ecology. Fishing community would welcome opportunities to learn about this.	
31	JL noted that the Marine Management Organisation undertook a review in 2013, but this has not been updated.	
32	MM asked whether bp will be getting involved in ScotWind and noted that most companies who are partaking have been in touch with SFF.	
33	ID happy to share slides to everyone present.	TW to share slides
34	JL noted that could meet face to face once possible. MM clarified that online meetings are suitable. TW noted that important to have face to face meetings so individual fishermen have chance to interact. ID concluded that bp are happy for either.	

H.3 Commercial fisheries meeting 2

H.3.1 Minutes

Partners in UK offshore wind

Minutes

Stakeholder name	B&M Fishing LLP (Fleetwood) Irish South and East Fish Producers Organisation (ISEFPO) Manx Fish Producers Organisation (MFPO) National Federation of Fisherman's Organisations (NFFO) Welsh Fishermen's Association (WFA) Western Fish Producers Organisation (WFPO) Whitehaven Fishermen's Cooperative (WFCOOP)
Date	29/06/2021
Attendees external	B&M Fishing LLP – [redacted](AB) ISEFPO – [redacted](JLL) Maryport – [redacted](SP) MFPO – [redacted] NFFO – [redacted](DR) WFA – [redacted](JE) WFCOOP – [redacted](RG) WFPA – [redacted](CN) Fishing Industry Representative (FIR) – [redacted](TW) MarineSpace – [redacted](JL) and [redacted](BO)
Attendees internal	[redacted](ID)
Subject/purpose	Introduction to project and engagement with fisheries

	MINUTES:	**ACTION:**
1.	JL introduced project and MarineSpace.	
2.	Introductions from all. JL provided overview on fisheries roles and responsibilities of those involved in project; MarineSpace = Company FLO; Tom Watson = Fishing Industry Representative; and RPS = EIA consultants.	
3.	RG – Chairman of NW National Federation of Fisherman's Organisations (NFFO) Committee and Whitehaven Fishermen's Cooperative. Noted that SP was present with him, who is the owner of the fishing vessel [redacted], and has keen interest in the area.	
4.	CN – Manager of the Western Fish Producers Organisation (WFPO) and raised that they have various trawlers that fish in the area.	
5.	DR – Assistant Chief Executive of the NFFO, leading NFFO engagement with respect to planning application processes on behalf of our members	
6.	ID outlined the principles for stakeholder engagement and noted the expectation that no permanent infrastructure would be constructed till at least 2026 (subject to consents). Commented that looking for early feedback from fishing industry to help with project design including array layouts.	
7.	ID provided an overview of the project, explaining that bp/EnBW are preferred bidders for the two areas in the Irish Sea. The partners intend to jointly develop and operate the leases to contribute to the UK's 40GW target for 2030. The project aims to use large wind turbines (up to 19 MW)	

	which will increase the distance between them and also reduce the number needed compared to previous projects in this region. The first of the two wind farms is planned to be operational in 2028.
8.	ID explained the project location and noted that the wind turbines will not cover the whole area, in order to minimize impacts to fisheries, shipping and other sea users.
9.	ID discussed the project timeline – the Habitats Regulation Assessment (HRA) by The Crown Estate (TCE) will be concluded Q1 2022, after which bp/EnBW intend to sign an agreement for lease. Application for Development Consent Order (DCO) is planned for 2023. ID emphasized the importance of early engagement to help in the design process.
10	ID provided an overview of consenting and stakeholder consultation.
11	ID discussed the project context. Noted that bird and mammal surveys have already commenced; bathymetry surveys by XOcean (Unmanned Surface Vessels (USV)) are ongoing; Gardline survey (manned survey vessel) will commence this week; metocean equipment will be deployed later in the year.
12	JL provided overview of XOcean survey which is using USV.
13	JL provided an overview of the Gardline geophysical, environmental and geotechnical surveys. Noted that two Notices to Mariners (NtM) have been issued to date, with Offshore Fisheries Liaison Officer (OFLO) details on. Explained that there would be towed gear, grab sampling and drop-down cameras. Geotechnical testing would be undertaken during September.
14	JL noted that there will be an OFLO provided by the National Federation of Fisherman's Organisations (NFFO) onboard the Gardline vessel. JL showed survey location charts split into blocks.
15	JL discussed FliDAR and Metocean, noting that they will be discrete locations and will have navigation aids. Will be deployed from approximately September 2021/ March 2022 to October 2023/May 2024.
16	JLL thanked for the presentation and noted that he was happy to hear the survey won't impede on fishing vessels. JLL discussed that there are 7 scallop vessels from ISEFPO that are not normally active in the area at this time of year (but could be), but are generally active December to Spring. JLL asked about the larger turbines and the greater spacing and whether scallop dredging would be able to take place once the wind farm is operational.
17	ID explained that the indicative spacing would be 1 nm, but discussed that bp/EnBW are keen to work with the industry to incorporate feedback into design to have least impact on the fisheries.
18	JLL noted that 1 nm is reasonable, but commented that the alignment of the turbines will be important.
19	ID noted that there is some flexibility in the alignment design of the turbines and explained why it is important to gain further information from the fishing industry.
20	JLL confirmed that fishermen can provide further information, and would be useful to have face to face meeting to collate this information.
21	DB queried whether the intention is to allow scallop vessels to fish in the wind farm once operational.

22	ID confirmed that bp/EnBW seek to minimize impact as much as possible, and are fully committed to open and constructive engagement with the fishing community to minimize impacts.
23	DB explained that the Isle of Man vessels that operate in the area are smaller vessels, whereas other Queen scallop vessels have dredges with a substantial dredge width. Noted that these vessels should also be included in the conversation.
24	ID noted that discussions are being held with all relevant organizations and individuals.
25	DB asked about the cables and where they will be located.
26	ID noted that this will require further assessment, and noted a 2014 study which discusses cable burial.
27	DB emphasized that the Queen scallop beds are dynamic, and it would be important to investigate a longer period than 5-10 years of activity to gain a thorough understanding of the fishery in the region.
28	RG discussed the issues with working within wind farms, and explained that it is difficult to have the full length of tow within sites. RG also explained the issues with insurance cover. RG noted that from November there are many visiting vessels who work within Liverpool Bay, so would need to be inclusive of all parties who have interest in the region.
29	ID agreed that all relevant interested organisations and individuals should be included in discussions, and commented that various meetings are being held with other organisations not present.
30	JL asked whether there was any relevant updated information on scallop beds and penetration depth. JL discussed that they would be interested in hearing about what surveys might be needed (e.g. ecological).
31	DB highlighted that the Agri-Food and Biosciences Institute (AFBI) conduct yearly surveys of Queen and King scallops in area. Studies have also undertaken which have investigated the genetic links between populations. DB also noted that there is information on the depth of dredgers.
32	JL noted that the geophysical surveys this summer may help provide some information on this, e.g. sediment mobility.
33	DR noted that he welcomes the early engagement. DR explained that the layout of the inter-array cables and burial of cables could be optimized to facilitate coexistence of the wind farm and the fishing industry. Bundling of cables and understanding the most the favourable tows are examples which could be incorporated at the design stage. DR highlighted that there is some information on penetration depth through the research programme on Round 4 from the Crown Estate. DR commented that site specific surveys may be necessary.
34	ID agreed the need to collate more information and commission studies as appropriate.
35	DR explained that there is information in the Crown Estate offshore wind strategic enabling actions programme, and the Evidence and Change Programe.
36	JE thanked for the early engagement and commented that it would be helpful to have an overview of the area with other developments. JE emphasized importance of understanding the cumulative and in-

	combination impacts with aggregate areas, other offshore wind sites, vessel traffic etc.
37	JL thanked for the comment and noted that it a slide can be added to the presentation to show other projects. Commented that the other Round 4 project is a floating wind farm, so there will be different interactions with the fishing industry due to the interray cables and mooring systems.
38	CN asked for the coordinates of the two sites.
39	ID noted that the coordinates are at the end of the NtM.
40	CN queried what format should the feedback on fishing activity be provided in. CN also asked whether the Environmental Impact Assessment (EIA) will have to take into account the cumulative displacement.
41	JL noted that RPS will be undertaking a cumulative assessment as part of the (EIA), including the displacement of activity.
42	JL noted that establishing a working group is a possibility, in order to represent all regions, organizations and individuals, but this will be explored to see if it is practical. If not, the project will collate data directly with individuals.
43	DR queried about the chart which showed a range of projects in region as it showed the turbines focused in the southern area of Yellow South.
44	ID explained that the array layout is just for illustration as there will be flexibility in the design process, depending on information from the fishing community. ID commented that it is unlikely that there will be turbines in the northern part of Yellow South.
45	JL reiterated that it is important that the industry can provide as much information as possible to influence the design and facilitate coexistence.
46	RG asked for the slides to be shared and noted that they can talk through them amongst themselves. RG noted that they would look forward to an update meeting.
47	DB highlighted that with regards to cumulative impacts to the mobile fleet, in 5 years' time there will be more areas closed off to Queen scallop grounds.
48	JL asked for clarification if this would be as a result of management measures or offshore developments.
49	DB answered that it is a range of things, such as protected areas, management measures (e.g. Dogger Bank) and developments.
50	JL assured that the EIA consultants (RPS) would consider these potential additional pressures in the assessment.
51	JL thanked for all for their attendance and noted that the project is happy to have face to face meetings as and where appropriate.

H.4 Commercial fisheries meeting 3

H.4.1 Minutes

Partners in UK offshore wind

Minutes

Stakeholder name	Anglo North Irish Fish Producers Organisation (ANIFPO), Northern Ireland Fish Producers' Organisation (NIFPO), Rederscentrale
Date	01/07/2021
Attendees external	ANIFPO - [redacted] (AM), [redacted] (DH) and [redacted] (RN) NIFPO - [redacted] (HW) Redercentrale - [redacted] Fishing Industry Representative (FIR) – [redacted] (TW) MarineSpace – [redacted] (JL) and [redacted] (BO)
Attendees internal	[redacted] (ID)
Subject/purpose	Introduction to project and engagement with fisheries

	MINUTES:	ACTION:
1.	JL introduced project and MarineSpace.	
2.	JL provided overview on fisheries roles and responsibilities of those involved in project; MarineSpace = Company FLO; [redacted] = Fishing Industry Representative; and RPS = EIA consultants.	
3.	ID outlined the principles for stakeholder engagement and commented that bp/EnBW will seek to be open and transparent in order to facilitate coexistence. ID is mindful that this is a long-term coexistence so looking for early feedback from the fishing industry that can contribute to the project design, including array layouts.	
4.	ID provided an overview of the project, explaining that bp/EnBW are preferred bidders for the two areas in the Irish Sea, with a combined potential generating capacity of 3GW. ID explained that they aim to develop approximately 600 km^2 of the 800km^2. The partners intend to jointly develop and operate the leases to contribute to the UK's 40GW target for 2030. The project aims to use large wind turbines (up to 19 MW) which could increase the distance between them and also reduce the number needed compared to previous projects in this region. The first of the two wind farms is planned to be operational in 2028, and the second one the year after.	
5.	ID explained the project location and noted that noted that the export cable route has not been decided yet.	
6.	ID discussed the project timeline – the Habitats Regulation Assessment (HRA) by The Crown Estate (TCE) will be concluded Q1 2022, after which bp/EnBW intend to sign an agreement for lease. ID explained that bird and marine mammal surveys are ongoing, and unmanned vessels operated by XOcean are currently collecting bathymetry data. ID clarified that there will be no permanent physical infrastructure expected at the sites until 2026.	
7.	ID provided an overview of consenting and stakeholder consultation.	
8.	ID showed chart with other developments in the area and mentioned cumulative impacts. ID noted that the layout of the turbines and array cables is not finalized, and as feedback from stakeholder engagement will	

	be considered in the design process. ID explained that the northern part of the southern area will likely not have turbines installed.
9.	JL reiterated that feedback from the fishing industry is important to feed into array layout design and how to facilitate coexistence.
10	JL provided a brief overview of the ongoing bird and mammal surveys, and XOcean survey. JL noted that Notices to Mariners (NtM) have been issued by TW.
11	JL provided an overview of the Gardline geophysical, environmental and geotechnical surveys. JL highlighted that they are hoping to mobilize tonight and there will be a phased approach to the surveys. JL explained that there would be towed gear, grab sampling and drop-down cameras. Geotechnical testing would be undertaken during September. JL noted that two Notices to Mariners (NtM) have been issued to date, with the Offshore Fisheries Liaison Officer (OFLO) details on.
12	JL presented the survey location charts split into blocks and commented that will communicate activity within these areas.
13	JL discussed FliDAR and Metocean, noting that they will be discrete locations and will have navigation aids. Will be deployed from approximately September 2021/ March 2022 to October 2023/May 2024. JL noted that NtM will provide locations of these.
14	JL noted that the OFLO will be first point of contact for any communications from the fishing industry during the Gardline surveys.
15	ID reiterated that bp are open to working with the industry to facilitate coexistence.
16	JV thanked for the presentation. JV explained that there are no Belgian fishing vessels active in the areas at the moment, but approximately 5 vessels may be active later in the summer and during September; these vessels generally fish in the eastern Irish Sea during the winter months. JV highlighted that they are concerned fishing vessels may be affected by the surveys and queried whether areas will be closed to fishing activity.
17	JL clarified that the intention is to have no areas closed to fishing during the Gardline surveys.
18	JV raised that the Belgian fishing vessels do not fish within offshore wind farms due to safety concerns, and also highlighted issues with cables. JV explained that Belgian vessels during winter months would be active in the eastern areas of the lease areas.
19	JL noted that fisheries information on the region will be collated through follow up meetings and ongoing discussions. JL queried whether JV could provide information on activity.
20	JV noted that they can send information on activity if there is no access to it. JV asked whether the wind farm will take up the whole of the lease areas shown.
21	ID noted that only 300km^2 in each lease area will be developed and the the northern part of the southern area will likely not have turbines. ID explained that once the safety and shipping issues are catered for, the turbine layout will be optimized to allow fishing activity between them, or they could be focused on a smaller area. ID re-emphasised that they are seeking feedback from the industry to influence the design layout.

22	JV commented that it would be better for Belgian fishing vessels if the turbines were not spaced as far apart, as they never fish between turbines. JV queried when this layout will be confirmed.
23	ID clarified that feedback will contribute to the design process.
24	AM thanked for the meeting and noted the increasing pressures in the marine environment, particularly from Marine Protected Areas (MPA). AM explained that Walney was a key nephrops grounds so has displaced fishing effort to the north; this displacement combined with displacement from MPAs is an increasing concern. AM noted that they look forward to further discussions regarding the layout of the turbines.
25	AM discussed that they are also concerned about the timings of the surveys. Between the northern lease area and the Isle of Man is the herring fishery, with spawning areas that are important for Northern Irish vessels. Therefore, it is important to reduce seismic activity and grab sampling in the area. AM it is useful for the fishing industry to be involved in discussions regarding the survey phase to reduce any impacts. AM acknowledged TW's extensive experience in the region. AM explained that approximately 80% of fishing effort in the Irish Sea is from Northern Ireland. Am noted that they would appreciate face to face meetings to facilitate discussions with individual fishermen.
26	JL noted that they are happy to hold face to face meetings once Covid-19 restrictions allow. JL explained that the geophysical surveys will be low energy seismic. JL commented that they are keen to hear about herring spawning in the area and the location of sensitive grounds. JL commented that the grab sample locations and timings could be adjusted.
27	AM recommended that grab samples should be commenced in the northern area as soon as possible.
28	ID noted that this is the current plan, but asked for any further information so could modify this if necessary.
29	DH explained that there has been a decrease in fishing activity and stock levels during the construction phase of Walney and noted that this should be taken into account for this project. DH also highlighted the success of the West of Walney fisheries fund. DH reiterated that communication is vitally important for the project.
30	HW appreciated the early communication and noted that they look forward to holding further discussions.
31	JL asked JV the reason why Belgian vessels do not fish within wind farms.
32	JV explained that it is mostly a safety reason. In Belgian they are not allowed to fish in wind farms.
33	TW commented that the Belgian vessels fish inside the Walney 4 wind farm.
34	JV was not aware of this but noted that generally vessels would avoid fishing within wind farms.
35	JL explained that they are interested to explore these discussions as there is no legal mechanism within the UK to stop fishing activity within wind farms. JL discussed that the turbines could be spaced further apart than in other wind farms, so this could be discussed further.
36	JV will discuss with members to understand their views.

37	AM explained that the Walney wind farm sites are important for nephrops for Northern Irish vessels, but it is now a MPA and fishing is prohibited in this area. AM queried whether there would be one landing site and one cable route to minimize interactions.
38	ID clarified that in terms of grid connections, National Grid have offered numerous choices around the Irish Sea. bp/EnBW are in discussions with other Round 4 developers over potentially combining the cable routing. There is also suggestion of an offshore transmission substation. ID emphasized that they are trying to minimize the number of cables routes and landfalls, and this will be developed over the next few months.
39	AM thanked for image showing other projects in the region to better understand the cumulative impacts.
40	ID thanked all for their time and noted that the slides and meeting minutes would be circulated following the meeting.

H.5 Commercial fisheries meeting 4

H.5.1 Minutes

Minutes

Stakeholder name	Anglo-North Irish Fish Producers Organisation (ANIFPO) Western Fish Producers' Organisation (WFPO) and Rederscentrale (Belgium)
Date	14/02/2022
Attendees external	ANIFPO - [redacted] Rederscentrale – [redacted] (JV) WFPO – [redacted] (CN) Fishing Industry Representative (FIR) – [redacted] (TW) MarineSpace – [redacted] (JL), [redacted] (BO) and [redacted] (JD)
Attendees internal	[redacted] (ID), [redacted] (WD) and [redacted] (IG)
Subject/purpose	Project update and outlining 2022 survey programme

	MINUTES:	ACTION:
1.	JL introduced MarineSpace and their role as Company Fisheries Liaison Officer (CFLO) acting on behalf of bp. MarineSpace's scope has expanded to undertake the Commercial Fisheries Assessment section of the EIA.	
2.	Introductions from all, TW = Fishing Industry Representative	
3.	JL highlighted the intention in-person meetings in future.	
4.	JL provided an overview of the project agenda and reiterated that questions are welcomed.	
5.	WD provided an overview of the project, explaining that bp/EnBW are in partnership and were preferred bidders for the two areas in the Irish Sea (Morgan & Mona).	
6.	The partners intend to jointly develop and operate the leases to contribute to the UK's 40 GW target for 2030 and together Morgan and Mona have a combined generating capacity of 3 GW.	
7.	WD explained that the partnership is planning for one landfall connection in the north west of England for Morgan and one landfall connection in north Wales for Mona.	
8.	WD explained the indicative project timeline and noted a key year for the project is having the first of the two wind farms operational by late 2028, and further explained that the partnership is looking at fixed bottom offshore wind farms for both Morgan and Mona.	
9.	WD highlighted the indicative stakeholder engagement timeline and explained that Development Consent Order (DCO) submission is planned for Q4 2023 for Mona and Q1 2024 for Morgan.	
10	WD further explained that the submission of scoping reports to the Planning Inspectorate for Morgan and Mona will be by Q2 2022 and then Phase 1 non-statutory community consultation will commence in Q2.	
11	Phase 2 statutory community consultation will commence in Q4 2023 and reiterated the importance of early engagement with fisheries stakeholders.	
12	WD highlighted the principles for stakeholder engagement by highlighting that bp/EnBW intend to listen to their stakeholders and engage with integrity and respect.	

13	WD further highlighted the importance of transparency and working together with stakeholders to find mutually acceptable solutions
14	BO provided a recap of the summer 2021 surveys –geophysical, environmental and geotechnical surveys were completed within both the Morgan and Mona arrays.
15	BO further explained that MarineSpace successfully worked alongside an Offshore Fisheries Liaison Officer (OFLO) who was provided through the National Federation of Fishermen's Organisations (NFFO). The OFLO worked with the fishermen and split the array areas up into blocks to allow for clear communication with fishing vessels, so that survey vessels could work around static gear rather than gear being cleared.
16	BO highlighted the intention to follow a similar approach for the 2022 surveys.
17	BO explained that 2 metocean buoys have been deployed in November 2021 (one in Morgan and one in Mona).
18	January 2022 inspection highlighted that the AIS is working intermittently and the lanterns are not working A repair and service visit is planned w/c 14 February (weather dependent) and a Notice to Mariners (NtM) was issued Friday 11 February.
19	BO explained that a Floating LiDAR buoy will be deployed in both Morgan and Mona and expects the vessel to be on site for approx. 24 hours for each site, the Floating LiDAR will be on site for two years, with service visits every nine months (with an issued NtM).
20	BO highlighted that a winter marine traffic survey was undertaken in November/December 2021, 14 days in each of Morgan and Mona using the vessel Karelle. Data primarily collected to inform the Navigation Risk Assessment – second traffic survey scheduled for July/August 2022, with issued NtM.
21	BO explained that an EIA Scoping Report is being produced and is due for submission in Q2 2022 – providing an overview of existing commercial fisheries activity within the arrays and wider region, impacts to commercial fisheries and potential mitigation measures.
22	MarineSpace are producing a commercial fisheries baseline report, (submission late 2022) as part of the Preliminary Environmental Information Report (PEIR); following this there will be further consultation with stakeholders to comment on the draft report.
23	To inform the baseline, BO explained that MarineSpace has been collecting various sources of data from the Marine Management Organisation (MMO), Marine Scotland and the European Commission.
24	BO highlighted the importance of holding consultations with fisheries stakeholders to supplement the official datasets.
25	JL explained the proposed 2022 survey activities – highlighting there will be export cable corridor surveys during spring/summer 2022, in addition to surveys of the arrays.
26	JL stated that the surveys will be of the 1.5 km export cable corridors, and that the final export cable route will have to undergo cable burial assessment to identify the precise routing within these corridors.
27	JL highlighted duration of works for proposed 2022 surveys – Gardline geophysical, benthic and geotechnical survey, 60 days, commencing in April; XOcean Uncrewed Surface Vessels (USVs), 7-8 days during the survey; Titan Discovery nearshore geophysics/benthic sampling, 1-2 weeks duration, from ~1st June; and nearshore Geotech ~1 week duration, during mid-June 2022.

28	Deep geotechnical investigation: borehole drilling vessel – mobilisation ~29th May 2022 with a duration of ~120 days. Deep geotechnical investigation: CPT vessel – mobilisation ~7th June 2022 for ~20 days.	
29	JL reiterated that NtMs will be issued with more information prior to surveys and that the presentation will be shared on conclusion of the meeting.	Project to share slides with the stakeholders.
30	JL highlighted the Projects' preference to avoid static gear clearance if possible during the 2022 surveys.	
31	JL explained the next steps – emphasizing the feedback sought from fisheries.	
32	Specific feedback - geographic constraints, opportunities to minimise interaction with fishing and opportunities to improve biodiversity and safety in the region.	
33	Key information for fisheries to provide to MarineSpace – landings value and processed value from the array areas, key areas of fishing, seasonality of the fishery and any ecological information to inform the wider impact assessment studies.	
34	Submission of PEIR late 2022 – fisheries stakeholders will be invited to comment on this draft report.	
35	DH noted that Bangor University have information on the Irish Sea scallop fisheries.	
36	DH questioned the potential cumulative impacts from the offshore wind farms (OWFs) in the region (including the OWFs planned in Irish waters) and the effect in the Irish Sea. DH noted a decline in stocks as a result of the Walney OWFs.	
37	JL explained that bp/EnBW and Flotation Energy will conduct a cumulative assessment as part of the EIA.	
38	DH questioned the approach to assessing transboundary impacts, between UK and Irish waters. JL explained that transboundary impacts are also part of the legislation with a requirement to address this within the EIA.	
39	CN raised a number of points, including: (1) a request for defined guidelines for data requested by MarineSpace; (2) questioned how potting effort data is gathered and highlights that Vessel Monitoring Systems (VMS) data does not capture effort of smaller vessels – WFPO represents a nomadic whelk vessel that is sometimes active in the region; (3) questioned whether fisheries stakeholders will have the opportunity to comment on the PEIR before submission; and (4) questioned if the design of the areas had been laid out yet and whether trawling could continue within the arrays during operation of the OWFs.	
40	ID responded regarding CN's question 4, in terms of status of design and fishing within the site, and explains that this will become clearer once the Habitats Regulations Assessment (HRA) has been completed from the Crown Estate England, which will provide the first set of layouts and allow for detailed conversation on micro-siting and where turbines will be located.	
41	WD responded to CN's question 3, and explains that there will be 42 days of consultation for the scoping reports, however the list of consultees is not extensive. WD explained that the publication of the PEIR is the formal statutory consultation phase.	

42 JL highlighted that there is still consultation post the formal consultation phase, and emphasized the need for ongoing feedback from fisheries stakeholders to inform the PEIR

43 JL responded to CN's question 2, and reiterated the short comings of VMS data not capturing smaller vessels, and encouraged feedback on vessels that may not be picked up by this data.

44 DH suggested Succorfish as a method for developers to obtain data on smaller vessels.

45 TW highlighted that fishing within the array area during operation will not be restricted, other than at the turbine positions, as it is open sea..

46 JL noted that general practice during the operational phase of OWFs is to have advisory safety zones of 50 m around turbines.

47 JL explained in regards to CN's first question, that a format for data given to MarineSpace is not required as all information is useful and it is recognised that different groups/individuals will have different levels of information they can provide.

48 JV noted that there have been Belgian vessels active in the area in the past few years. JV to send information on location of activity, seasonality and gear type.

49 ID and JL thanked all for their time and the useful feedback from the fishing industry to date.

H.6 Commercial fisheries meeting 5

H.6.1 Minutes

Minutes

Stakeholder name	Scottish Fishermen's Federation (SFF), Scottish White Fish Producers Association (SWFPA) and West Coast Sea Products Limited (WCSP)
Date	14/02/2022
Attendees external	SFF – [redacted] (MM) SWFPA – [redacted] (RH) WCPS – [redacted] (DW), [redacted] (JK) and [redacted] (SK) Fishing Industry Representative (FIR) – [redacted] (TW) MarineSpace – [redacted] (JL), [redacted] (BO) and [redacted] (JD)
Attendees internal	[redacted] (ID), [redacted] (WD) and [redacted] (IG)
Subject/purpose	Project update and outlining 2022 survey programme

	MINUTES:	**ACTION:**
1.	JL introduced MarineSpace and their role as Company Fisheries Liaison Officer (CFLO) acting on behalf of bp. MarineSpace's scope has expanded to undertake the Commercial Fisheries Assessment section of the EIA.	
2.	Introductions from all	
3.	JL highlighted the idea of proceeding with in person meetings in future but confirmed that this set of meetings for now will remain remote.	
4.	WD provided an overview of the project, explaining that bp/EnBW are in partnership and were preferred bidders for the two areas in the Irish Sea (Morgan & Mona).	
5.	The partners intend to jointly develop and operate the leases to contribute to the UK's 40 GW target for 2030 and together Morgan and Mona have a combined generating capacity of 3 GW.	
6.	WD explained that the partnership is planning for one landfall connection in the north west of England for Morgan and one landfall connection in north Wales for Mona.	
7.	WD explained the indicative project timeline and noted a key year for the project is having the first of the two wind farms operational by late 2028, and further explained that the partnership is looking at fixed bottom offshore wind farms for both Morgan and Mona.	
8.	WD highlighted the principles for stakeholder engagement by highlighting that bp/EnBW intend to listen to their stakeholders and engage with integrity and respect.	
9.	WD further highlighted the importance of transparency and working together with stakeholders to find mutually acceptable solutions	
10	RH requested the presentation slides to be shared on conclusion of the meeting.	Project to share slides with the stakeholders.
11	MM questioned the 'Mutually Acceptable Solutions' previously discussed and ID confirmed that this means that both the offshore renewables and fisheries industries will thrive, coexist and highlights that until bp/EnBw have grid connections, more details of the industries working together cannot be progressed.	

12 MM questioned this further. ID explained that both industries will be looking at ground conditions, shipping channels, fishing patterns, landed values as a starting point.

13 RH questioned the timeline's Contracts for Difference in 2025 by highlighting that the UK government announced that the auctions will be yearly as opposed to bi-yearly, and asked if this will change the timeline.

14 ID explained that yes this may possibly influence the timeline and has requested clarification for when in 2025/26 it will be. RH further asked how many offshore substations there would be for Morgan and Mona.

15 ID answered by explaining indicatively there will be 3 for Morgan and 3 for Mona. RH highlighted, on behalf of the fishing industry, for the substations to be located in the east of each site, as the least export cable laid is beneficial for both industries.

16 BO provided a recap of the summer 2021 surveys –geophysical, environmental and geotechnical surveys were completed within both the Morgan and Mona arrays.

17 BO further explained that MarineSpace successfully worked alongside an Offshore Fisheries Liaison Officer (OFLO) who was provided through the National Federation of Fishermen's Organisations (NFFO). The OFLO worked with the fishermen and split the array areas up into blocks to allow for clear communication with fishing vessels, so that survey vessels could work around static gear rather than gear being cleared.

18 BO highlighted a similar approach for the 2022 surveys.

19 BO explained – that 2 metocean buoys have been deployed in November 2021 (one in Morgan and one in Mona).

20 January 2022 inspection highlighted that the AIS is working intermittently and the lanterns are not working – recent inspection checks have confirmed that these are back running. A service visit is planned w/c 14 February (weather dependent) and a Notice to Mariners (NtM) was issued Friday 11 February.

21 BO explained that a Floating LiDAR buoy will be deployed in both Morgan and Mona and expects the vessel to be on site for approx. 24 hours for each site, the Floating LiDAR will be on site for two years, with service visits every nine months (with an issued NtM).

22 BO highlighted that a winter marine traffic survey was undertaken in November/December 2021, 14 days in each of Morgan and Mona using the vessel Karelle. Data primarily collected to inform the Navigation Risk Assessment – second traffic survey scheduled for July/August 2022, with issued NtM.

23 BO explained that an EIA Scoping Report is being produced and is due for submission in Q2 2022 – providing an overview of existing commercial fisheries activity within the arrays and wider region, impacts to commercial fisheries and potential mitigation measures.

24 MarineSpace are producing a commercial fisheries baseline report, (submission late 2022) as part of the Preliminary Environmental Information Report (PEIR); following this there will be further consultation with stakeholders to comment on the draft report.

25 To inform the baseline, BO explained that MarineSpace has been collecting various sources of data from the Marine Management Organisation (MMO), Marine Scotland and the European Commission.

26 BO highlighted the importance of holding consultations with fisheries stakeholders to supplement the data.

27 JL highlighted the baseline data will be collected over a 10-year period, where possible, to ensure that the cyclical nature of the fisheries is captured.

28 MM shared his approval of the baseline data being over a 10-year timescale. MM questions the potential mitigation and noted the West of Morecambe fund as good example.MM also highlighted the short comings of Automatic Identification Systems (AIS) and Vessel Monitoring System (VMS) data, particularly as smaller vessels are not captured.

29 JL explained the difference between standard and project specific mitigation, highlighting the important role project specific mitigations plays. JL and MM both welcomed discussion over project specific mitigation measures.

30 JL also explained that the AIS and VMS data would not be the primary datasets used. Landings data will be important, in addition to visual observations from the traffic surveys, from the OFLO during the offshore surveys, information from consultations etc.

31 RH highlighted the importance of the area for queen scallop fisheries and the need to maintain this for future generations – RH further suggested micro-siting the turbines, to decrease the impact on the queen scallop grounds.

32 ID responded and explained that the partnership is looking at micro-siting and larger turbines to in theory reduce the number of turbines.

33 JL explained the proposed 2022 survey activities – highlighting there will be export cable corridor surveys during spring/summer 2022, in addition to surveys of the arrays.

34 RH highlighted the export cable routes are fundamental to both industries and notes that early engagement on export cable routes is important.

35 ID highlighted that the partnership is contractually forbidden to discuss export cable route options at this time, as it is still a tender exercise with the Crown Estate.

36 JL reiterated talk of export cable, and stated that the surveys will be of the 1.5 km export cable corridors, and that the final export cable route will have to undergo cable burial assessment to identify the precise routing within these corridors.

37 JL highlighted duration of works for proposed 2022 surveys – Gardline geophysical, benthic and geotechnical survey, 60 days, commencing in April; XOcean Uncrewed Surface Vessels (USVs), 7-8 days during the survey; nearshore geophysics/benthic sampling, 1-2 weeks duration, from ~1st June; and nearshore Geotech ~1 week duration, during mid-June 2022.

38 Deep geotechnical investigation: borehole drilling vessel – mobilisation ~29th May 2022 with a duration of ~120 days.
Deep geotechnical investigation: CPT vessel – mobilisation ~7th June 2022 for ~20 days.

39 JL reiterated that NtMs will be issued with more info prior to surveys and that the presentation will be shared on conclusion of the meeting.

40 JL explained that there is more uncertainty regarding the spatial distribution of fishing closer to shore, so scouting surveys will be performed ahead of the proposed 2022 surveys to gather information on activity and presence of static gear, particularly for inshore/nearshore regions

41 JL highlighted the Projects' preference to avoid static gear clearance if possible during the 2022 surveys.

WD explained the stakeholder engagement timeline.

MM highlighted the fisheries community's great knowledge of benthic areas in the region.

MM noted that they are not represented by the NFFO.

JL explained the next steps – feedback sought from fisheries.

Specific feedback - geographic constraints, opportunities to minimise interaction with fishing and opportunities to improve biodiversity and safety in the region.

Key information for fisheries to provide to MarineSpace – landings value and processed value from the array areas, key areas of fishing, seasonality of the fishery and any ecological information to inform the wider impact assessment studies.

Submission of PEIR late 2022 – fisheries stakeholders will be invited to comment on this draft report.

MM and SK highlighted the importance of queen scallop fisheries in the region and reiterated that they are the only queen scallop beds that are commercially viable in the UK; therefore, any displacement would mean they would be unable to fish for queen scallops.

MM explained that there would be less concern if the turbines were located further east, to avoid the main queen scallop grounds.

SK discussed that the queen scallop grounds have shown increased productivity this year.

SK noted that the Mona array is of more concern, and there are already telecommunication cables running through the array area which present difficulties for scallop trawlers. SK highlighted the importance of considering array cable layout in addition to turbine layout, in order to allow them to remain fishing. SK explained that they tow north to south within a 3-mile corridor.

SK referenced the Dogger Bank offshore wind project, where turbine spacing and array cable layout allows for fishing within the array.

JL welcomed discussion over gear penetration, to feedback into the array cable layout. MM noted that there is uncertainty regarding gear penetration and a project is being undertaken by Marine Scotland to investigate this. MM noted that this could be a useful mitigation measure.

ID and JL thanked all for their time and the useful feedback from the fishing industry to date.

H.7 Commercial fisheries meeting 6

H.7.1 Minutes

Minutes

Stakeholder name	
Date	15/02/2022
Attendees external	[redacted]) [redacted] (AB) [redacted] (SH) Fishing Industry Representative (FIR) – [redacted] (TW) MarineSpace – [redacted] (JL), [redacted] (BO) and [redacted] (JD)
Attendees internal	[redacted] (ID), [redacted] (WD) and [redacted] (IG)
Subject/purpose	Introduction to project and engagement with fisheries

	MINUTES:	ACTION:
1.	JL introduced MarineSpace and their role as Company Fisheries Liaison Officer acting on behalf of bp. MarineSpace's role remains largely the same as in 2021, other than MarineSpace's scope has expanded to undertake the Commercial Fisheries Assessment section of the EIA.	
2.	Introductions from all.	
3.	Continued introductions from all.	
4.	JL provided an overview of the project agenda and reiterates that questions are welcomed.	
5.	WD provided an overview of the project, explaining that bp/EnBW are in partnership and were preferred bidders for the two areas in the Irish Sea (Morgan & Mona).	
6.	The partners intend to jointly develop and operate the leases to contribute to the UK's 40GW target for 2030 and together Morgan and Mona have a combined generating capacity of 3 GW.	
7.	WD explained that the partnership are planning for one landfall connection in the north west of England for Morgan and one landfall connection in north Wales for Mona.	
8.	WD explained the project timeline and noted a key year for the project is having the first of the two wind farms operational by late 2028, and further explained that the partnership is looking at fixed bottom offshore wind farms for both Morgan and Mona.	
9.	WD highlighted the stakeholder engagement timeline and explained that Mona's DCO submission is by Q4 2023 and Morgan's by Q1 2024.	
10	WD further explained that the submission of scoping reports to the Planning Inspectorate for Morgan and Mona will be by Q2 2022 and then Phase 1 non-statutory community consultation will commence in Q2.	
11	Phase 2 statutory community consultation will commence in Q4 2023 and highlights the importance of early engagement with fisheries stakeholders.	
12	WD explained the principles for stakeholder engagement highlighting the importance of transparency and working together with stakeholders to find mutually acceptable solutions.	
13	JL introduced the 2021 surveys.	

14 BO provided a recap of the Summer 2021 surveys that were undertaken in the array areas – geophysical, environmental and geotechnical surveys were completed within both the Morgan and Mona arrays.

15 BO further explained that MarineSpace successfully worked alongside an Offshore Fisheries Liaison Officer (OFLO) who was provided through the National Federation of Fishermen's Organisations (NFFO).

16 The OFLO worked with the fishermen and split the array areas up into blocks to allow for clear communication with fishing vessels, so that survey vessels could work around static gear rather than gear being cleared.

17 BO explained Metocean data collection by highlighting that two wave buoys have been deployed in November 2021 (one in Morgan and one in Mona).

18 BO explained that an EIA Scoping Report is being produced and is due for submission in Q2 2022 – providing an overview of existing commercial fisheries activity within the arrays and wider region, impacts to commercial fisheries and potential mitigation measures.

19 BO explained Metocean data collection by highlighting that two wave buoys have been deployed in November 2021 (one in Morgan and one in Mona).

20 January 2022 inspection highlighted that the AIS is working intermittently and the lanterns are not working A repair and service is planned w/c 14 February (weather dependent) and a Notice to Mariners (NtM) was issued Friday 11 February.

21 BO explains that a Floating LiDAR buoy will be deployed in both Morgan and Mona and expects the vessel to be on site for approx. 24 hrs for each site, the Floating LiDAR will be on site for two years, with service visits every nine months (with an issued NtM).

22 BO highlights that a winter marine traffic survey was undertaken in November/December 2021, 14 days in each of Morgan and Mona using the vessel Karelle. Data collected to inform the Navigation Risk Assessment – second traffic survey scheduled for July/August 2022, with issued NtM.

23 BO explains that an EIA Scoping Report is being produced and is due for submission in Q2 2022 – providing an overview of existing commercial fisheries activity within the arrays and wider region, impacts to commercial fisheries and potential mitigation measures. There will be consultation with stakeholders where this will be made available for comments.

24 MarineSpace are producing a commercial fisheries baseline report, (submission late 2022) as part of the Preliminary Environmental Information Report (PEIR); following this there will be further consultation with stakeholders to comment on the draft report.

25 To inform the baseline, BO explains that MarineSpace has been collecting various sources of data from the Marine Management Organisation (MMO), Marine Scotland and the European Commission.

26 BO highlights the importance of holding consultations with fisheries stakeholders to supplement the data.

27 JL explains the proposed 2022 survey activities – highlighting there will be export cable corridor surveys during spring/summer 2022, in addition to surveys of the arrays.

28 JL reiterates talk of export cable, and states that the surveys will be of the 1.5 km export cable corridors, and that the final export cable route will have to undergo cable burial assessment.

29	JL highlights duration of works for proposed 2022 surveys – Gardline geophysical, benthic and geotechnical survey, 60 days, commencing in April;	
30	XOcean Uncrewed Surface Vessels (USVs), 7-8 days during the survey; Titan Discovery nearshore geophysics/benthic sampling, 1-2 weeks duration, from ~1st June; and nearshore Geotech ~1 week duration, during mid-June 2022.	
31	Deep geotechnical investigation: borehole drilling vessel – mobilisation ~29th May 2022 with a duration of ~120 days. Deep geotechnical investigation: CPT vessel – mobilisation ~7th June 2022 for ~20 days.	
32	JL explains the next steps – feedback sought from fisheries.	
33	Specific feedback - geographic constraints, opportunities to minimise interaction with fishing and opportunities to improve biodiversity and safety in the region.	
34	Key information for fisheries to provide to MarineSpace – landings value and processed value from the array areas, key areas of fishing, seasonality of the fishery and any ecological information to inform the wider impact assessment studies.	
35	Submission of PEIR late 2022 – fisheries stakeholders will be invited to comment on this draft report.	
36	JL concludes the presentation and asks if there are any questions.	
37	[redacted] highlights there are Irish scallopers in the area but needs to track their activity (duration) and provide info to MarineSpace.	
38	JL explains that MMO data does suggest there is Irish activity within the area and cross referencing this official data with the fishing members feedback is valuable.	
39	SH highlights that his organisation trawls queen scallops in summer months up to 15 meters, and does not believe the development will affect activity significantly.	
40	AB requests to be well informed of the start of the surveys.	
41	JL, ID and WD thanked all for their time and the useful feedback from the fishing industry to date.	Project to share slides with the stakeholders.

H.8 Commercial fisheries meeting 7

H.8.1 Minutes

Minutes

Stakeholder name	National Federation of Fisherman's Organisation (NFFO), Whitehaven Fisherman's Cooperative (WFC) and IoM
Date	15/02/2022
Attendees external	NFFO – [redacted] (MC) and [redacted] (CT) WFC – [redacted] (RG) MFPO – [redacted] (DB) Fishing Industry Representative (FIR) – [redacted] (TW) MarineSpace – [redacted] (JL), [redacted] (BO) and [redacted] (JD)
Attendees internal	[redacted] (ID), [redacted] (WD) and [redacted] (IG)
Subject/purpose	Introduction to project and engagement with fisheries

	MINUTES:	ACTION:
1.	JL introduced MarineSpace and their role as Company Fisheries Liaison Officer acting on behalf of bp. MarineSpace's role remains largely the same as in 2021, other than MarineSpace's scope has expanded to undertake the Commercial Fisheries Assessment section of the EIA.	
2.	Introductions from [redacted] = Fishing Industry Representative	
3.	Continued introductions from all.	
4.	JL provided an overview of the project agenda and reiterates that a separate discussion on conclusion of the meeting is welcomed.	
5.	WD provided an overview of the project, explaining that bp/EnBW are in partnership and were preferred bidders for the two areas in the Irish Sea (Morgan & Mona).	
6.	The partners intend to jointly develop and operate the leases to contribute to the UK's 40GW target for 2030 and together Morgan and Mona have a combined generating capacity of 3 GW.	
7.	WD explained that the partnership are planning for one landfall connection in the north west of England for Morgan and one landfall connection in north Wales for Mona.	
8.	WD explained the project timeline and noted a key year for the project is having the first of the two wind farms operational by late 2028, and further explained that the partnership is looking at fixed bottom offshore wind farms for both Morgan and Mona.	
9.	WD highlighted the stakeholder engagement timeline and explained that Mona's DCO submission is by Q4 2023 and Morgan's by Q1 2024.	
10	WD further explained that the submission of scoping reports to the Planning Inspectorate for Morgan and Mona will be by Q2 2022 and then Phase 1 non-statutory community consultation will commence in Q2.	
11	Phase 2 statutory community consultation will commence in Q4 2023 and highlights the importance of early engagement with fisheries stakeholders.	
12	WD explained the principles for stakeholder engagement highlighting the importance of transparency and working together with stakeholders to find mutually acceptable solutions.	
13	JL introduced the 2021 surveys.	

14 BO provided a recap of the Summer 2021 surveys that were undertaken in the array areas – geophysical, environmental and geotechnical surveys were completed within both the Morgan and Mona arrays.

15 BO further explained that MarineSpace successfully worked alongside an Offshore Fisheries Liaison Officer (OFLO) who was provided through the National Federation of Fishermen's Organisations (NFFO).

16 The OFLO worked with the fishermen and split the array areas up into blocks to allow for clear communication with fishing vessels, so that survey vessels could work around static gear rather than gear being cleared.

17 BO explained Metocean data collection by highlighting that two wave buoys have been deployed in November 2021 (one in Morgan and one in Mona).

18 BO explained that an EIA Scoping Report is being produced and is due for submission in Q2 2022 – providing an overview of existing commercial fisheries activity within the arrays and wider region, impacts to commercial fisheries and potential mitigation measures.

19 BO explained Metocean data collection by highlighting that two wave buoys have been deployed in November 2021 (one in Morgan and one in Mona).

20 January 2022 inspection highlighted that the AIS is working intermittently and the lanterns are not working A repair and service is planned w/c 14 February (weather dependent) and a Notice to Mariners (NtM) was issued Friday 11 February.

21 BO explains that a Floating LiDAR buoy will be deployed in both Morgan and Mona and expects the vessel to be on site for approx. 24 hrs for each site, the Floating LiDAR will be on site for two years, with service visits every nine months (with an issued NtM).

22 BO highlights that a winter marine traffic survey was undertaken in November/December 2021, 14 days in each of Morgan and Mona using the vessel Karelle. Data collected to inform the Navigation Risk Assessment – second traffic survey scheduled for July/August 2022, with issued NtM.

23 BO explains that an EIA Scoping Report is being produced and is due for submission in Q2 2022 – providing an overview of existing commercial fisheries activity within the arrays and wider region, impacts to commercial fisheries and potential mitigation measures. There will be consultation with stakeholders where this will be made available for comments.

24 MarineSpace are producing a commercial fisheries baseline report, (submission late 2022) as part of the Preliminary Environmental Information Report (PEIR); following this there will be further consultation with stakeholders to comment on the draft report.

25 To inform the baseline, BO explains that MarineSpace has been collecting various sources of data from the Marine Management Organisation (MMO), Marine Scotland and the European Commission. BO highlights the importance of holding consultations with fisheries stakeholders to supplement the data.

26 DB raised a question, asking whether MarineSpace had looked into the interconnectivity with scallop stocks within the area. JL explains that MarineSpace's role remains largely the same as in 2021, other than scope has expanded to undertake the Commercial Fisheries Assessment section of the EIA. Allowing for communication with RPS on who look at the biological and interconnectivity of the scallop. DB

	also highlights the huge array of knowledge that Bangor University offers on the interconnectivity of scallop stocks and advises communication.
27	JL reiterates that the importance of consultation with the stakeholders and receiving feedback and comments throughout the process and highlights the idea of proceeding with in person meetings in future but confirmed that this set of meetings for now will remain remote.
28	JL explains the proposed 2022 survey activities – highlighting there will be export cable corridor surveys during spring/summer 2022, in addition to surveys of the arrays.
29	JL reiterates talk of export cable, and states that the surveys will be of the 1.5 km export cable corridors, and that the final export cable route will have to undergo cable burial assessment.
30	JL highlights duration of works for proposed 2022 surveys – Gardline geophysical, benthic and geotechnical survey, 60 days, commencing in April; XOcean Uncrewed Surface Vessels (USVs), 7-8 days during the survey; Titan Discovery nearshore geophysics/benthic sampling, 1-2 weeks duration, from ~1st June; and nearshore Geotech ~1 week duration, during mid-June 2022.
31	Deep geotechnical investigation: borehole drilling vessel – mobilisation ~29th May 2022 with a duration of ~120 days. Deep geotechnical investigation: CPT vessel – mobilisation ~7th June 2022 for ~20 days.
32	JL reiterates that NtMs will be issued with more info prior to surveys and that the presentation will be shared on conclusion of the meeting and highlights the Projects' preference to avoid static gear clearance if possible during the 2022 surveys.
33	DB question the connectivity between turbines which is key in determining whether towing can commence in between turbines.
34	ID thanks for the insight and explains useful information can help inform the orientation of array cables and export cables. JL reiterates this point.
35	JL explains the next steps – feedback sought from fisheries.
36	DB highlights the difficulty in evaluating the consequences of the affected interconnectivity of the scallop stocks.
37	JL explains that within the EIA Chapter there will be a section that addresses the potential impact on commercially targeted species which within will cross reference the fish and shellfish ecology chapter that will undertake an in depth assessment of a wide area not just the array area.
38	JL further highlights the importance to distinguish between queen and king scallop fisheries.
39	JL continues talk on feedback sought from fisheries and addressed Specific feedback - geographic constraints, opportunities to minimise interaction with fishing and opportunities to improve biodiversity and safety in the region.
40	RG asks if MarineSpace will liaison with European vessels as to their activity within the area
41	JL explains the use of a consultation log and reiterates the importance of speaking to as many organisations as possible.
42	TW supports this and explains that there is contact with southern and northern Irish, Scottish and Belgium organisations
43	Key information for fisheries to provide to MarineSpace – landings value and processed value from the array areas, key areas of fishing,

	seasonality of the fishery and any ecological information to inform the wider impact assessment studies.	
44	Submission of PEIR late 2022 – fisheries stakeholders will be invited to comment on this draft report.	
45	CT confirms that there will be scout vessels available when needed.	
46	RG requests the presentation slides on conclusion of the meeting.	Project to share slides with the stakeholders.
47	[redacted] requests plenty of notice of deadlines for a response to scoping documents, PEIR. JL confirms.	
48	JL thanked all for their time and the useful feedback from the fishing industry to date.	

H.9 Commercial fisheries meeting 8

H.9.1 Minutes

Partners in UK offshore wind

Minutes

Stakeholder name	Welsh Government (WG)
Date	29/03/2022
Attendees external	WG – [redacted] (TC), [redacted] (GH) and [redacted] (RP) Fishing Industry Representative (FIR) – [redacted] (TW) MarineSpace – [redacted] (CL), [redacted] (BO) and [redacted] (JD)
Attendees internal	bp – [redacted] (MP)
Subject/purpose	Project overview, activities to date, key fisheries organisations, fishing activity and next steps.

	MINUTES:	**ACTION:**
1.	**Introductions** • BO introduced MarineSpace and their role as Company Fisheries Liaison Officer (CFLO) acting on behalf of bp/EnBW and explained MarineSpace's scope also covers the Commercial Fisheries Assessment section of the Environmental Impact Assessment (EIA). • Introductions from TW = Fishing Industry Representative • Introduction from MP = Consents Team for bp. • Introductions from TW, GH and RB. TW = Head of shore-based enforcement team with WG; RP = Marine enforcement officer for WG; and GH = Science/Enforcement team at WG.	
2.	**Project Overview** • MP provided an overview of the project, explaining that bp/EnBW are in partnership and are preferred bidders for two project areas in the Irish Sea (projects now called Morgan & Mona). bp & EnBW intend to jointly develop and operate the leases to contribute to the UK's 40 GW target for 2030 and together Morgan and Mona have a combined generating capacity of 3 GW. • MP explained that the partnership is planning for one landfall connection in the north west of England for Morgan and one landfall connection in north Wales for Mona. • MP explained the indicative project timeline and noted a aim for the project is to have the first of the two wind farms operational by late 2028, and further explained that the partnership is looking at fixed bottom foundations for both Morgan and Mona. • MP highlighted the indicative stakeholder engagement timeline and explained that the Development Consent Order (DCO) submission is planned for Q4 2023 for Mona and Q1 2024 for Morgan. • MP further explained that the submission of Scoping Reports to the relevant authorities for Morgan and Mona will be by Q2 2022 and Phase 1 non-statutory community consultation will follow in Q2. Phase 2 statutory community	

	consultation will commence in Q4 2022 and MP reiterated the importance of early engagement with fisheries stakeholders.	
3.	**Activities to date** • BO added that MarineSpace has been liaising with the regional organisations since 2021 prior to offshore surveys. Meetings have been held to regularly update on the project survey phases. • BO highlighted that the EIA scoping report being submitted in Q2 2022 with a chapter on commercial fisheries will provide an overview of existing commercial fisheries activity within the arrays and the wider region, and outlines impacts that will be assessed. • BO highlighted the surveys to date: summer 2021 surveys (geophysical; environmental and geotechnical surveys); metocean data collection; Floating LiDAR data collection; winter marine traffic survey; aerial bird and marine mammal surveys and scouting survey (one completed March 2022, another scheduled for mid-April). • BO explained that the scouting survey to date has indicated low density of static gear along potential cable routes, but it is acknowledged that there is likely to be increased potting activity later in the year. • BO highlighted proposed 2022 surveys: integrated site survey; nearshore survey; deep geotechnical survey; and bathymetry survey. • BO confirmed that the slides presented in the meeting along with the meeting minutes will be shared.	BO to share slides and minutes.
4.	**Key Fisheries Stakeholders** • BO highlighted the key contacts/ organisations in England, Ireland, Isle of Man, Northern Island, Wales, Scotland and international, and asked for feedback on this list, noting that consultation to date has focused on fishing stakeholders within the array areas. • TC highlighted a concern for the Welsh Fishermen's Association (WFA) being the only key contact in the list for Wales, explaining that not all fishermen are part of the WFA or any association. TC questioned how MarineSpace plans to engage with individuals not represented by the WFA. • BO highlighted that discussions have taken place with TW about holding fisheries meetings at relevant ports once the landfall has been decided. • TW highlighted that he has a comprehensive list of individuals along the north west coast and keeps his contacts well informed through Notices to Mariners (NtM). TW highlighted the challenges of representing every fisheries stakeholder within a group. • TC acknowledged the challenges with engagement and GH questioned the engagement with fisheries stakeholders on an international level, noting Belgian vessels in particular are active within the region. • BO highlighted that there is ongoing engagement with the Belgian vessels through Rederscentrale and TW confirmed	Welsh Gvt attendees to review the list and advise if any organisations or groups are missing.

	that Rederscentrale are the only Belgian Fish Producers Organisation fishing in the area. • GH explained that there may be more active Belgian vessels in the area, and WG are aware of Belgian beam trawl vessels landing into Holyhead. BO suggested cross-referencing feedback from Rederscentrale with GH to confirm whether the data is representative of what WG are aware of in the area.	BO to cross reference fishing activity from Rederscentrale with GH at Welsh Gvt.
5.	**Fishing Activity** • MarineSpace are producing a commercial fisheries baseline report and draft commercial fisheries assessment, as part of the Preliminary Environmental Information Report (PEIR). The PEIR will be submitted for consultation in late 2022. All fisheries stakeholders will be invited to review and provide comments. The PEIR will then be updated based on any comments received and a final EIA commercial fisheries chapter produced for the final submission. • To inform the baseline, BO explained that MarineSpace has been collecting various sources of publicly available data from the Marine Management Organisation (MMO), Marine Scotland and the European Commission (including landings and Vessel Monitoring Systems (VMS) data). • BO highlighted the importance of holding consultations with fisheries stakeholders to supplement these datasets and explained that the baseline data will be collected over a 10-year period, where possible, to ensure that the cyclical nature of the fisheries is captured, in particular the scallop fishery that is known to be important in this region. • BO highlighted that within the Welsh National Marine Plan, there are figures that display relative fishing intensity, including in inshore areas, and questioned whether MarineSpace would be able to access these data sets. • TC explained that he would have to liaise with his relevant colleagues on giving access to this data and explained that a requirement for VMS on all vessels in Wales has recently been brought in, which will help with the data gaps for inshore areas. • TC further explained that it would be a few years before this data becomes a strong evidence base of actual activity within the area. • BO explained that with this in mind, this data would not be included in the technical report because it will be submitted this year. • BO displayed VMS, MMO data for UK vessels over 15 metre vessels and asked whether it aligned with the audience's understanding of fishing activity within the area. BO highlighted that this does not include all vessels and will be supplemented with other sources. • TC highlighted that the static gear will be inaccurate because it does not include smaller vessels. • BO reiterated that MarineSpace will supplement this data with feedback from consultation with fisheries stakeholders and information from scouting surveys.	BO to send a formal request to TC for fishing data layers and feed back to BO.

	• TC questioned whether this will be written consultation, as TC highlighted the challenges of consultation with stakeholders and explained that a written consultation may not be enough to achieve the desired outcome. TC noted that stakeholder events and port visits are very important given the type of industry. • BO explained that as COVID restrictions ease and once the cable corridors are known, in-person visits will be established in the next few months. • BO gave an overview of consultation feedback for queen scallop and herring grounds.	
6.	**Next Steps** • BO gave an overview of the next steps including consultation with inshore groups – once cable corridors have been decided; project specific geophys and geotech surveys this summer; continued data collation and review process; undertake PEIR/EIA work; and ongoing engagement with fishing organisations. • GH asked whether there was an update on where the landfalls are going to be located. MP explained that there are indicative landfalls in Wales and the north west coast of England. MP highlighted that these indicative landfalls are dependent on National Grid discussions and the Offshore Transmission Network Review. • RP to attend unrelated meetings with Welsh fisheries stakeholders and to ask of their awareness of the proposed project. Any individuals not aware of the project to date will be highlighted to TW to be included on the NtM distribution list. • BO thanked everyone for their time.	RP to contact TW with contact details of stakeholders unaware of the Morgan and Mona projects. TW to share his contact details with Welsh Gvt.

H.10 Commercial fisheries meeting 9

H.10.1 Minutes

Partners in UK offshore wind

Minutes

Stakeholder name	Scottish Fishermen's Federation (SFF), Scottish White Fish Producers Association (SWFPA)
Date	29/03/2022
Attendees external	SFF – [redacted] (MM), [redacted] (AT) and [redacted] (GW) SWFPA – [redacted] (RH) MarineSpace – [redacted] (BO) and [redacted] (JD)
Attendees internal	[redacted] (CW)
Subject/purpose	Morven Project Introduction and Provision of OFLO

	MINUTES:	ACTION:
1.	**Introductions** BO introduced MarineSpace and their role as Company Fisheries Liaison Officer (CFLO) acting on behalf of bp/EnBW.	
2.	BO provided an overview of the meeting's purpose, highlighting the need provide a project Morven Project Introduction and Provision of an Offshore Fisheries Liaison Officer (OFLO).	
3.	Introduction from CW = bp Stakeholder Engagement Manager.	
4.	Continued introductions from all.	
5.	MM and RH questioned as to why only fisheries stakeholders on a national level had been invited to attend the meeting, not those on a local level.	
6.	CW highlighted that this meeting is to be the first of many, and was just to provide an introduction to the project and how best to work together. CW confirmed that those not invited, will be invited to the next.	
7.	CW highlighted that MarineSpace are also the CFLO acting on behalf of bp/EnBW for the Morgan and Mona Project.	
8.	**Project Overview** CW provided an overview of the project, explaining that bp/EnBW are in partnership and were awarded a lease option off the east coast of Scotland to develop a major offshore wind project – to be known as Morven.	
9.	The partners intend to jointly develop and operate the lease to contribute to the Scotland's target of 11 GW of offshore wind by 2030 and the UK's 40 GW target for 2030.	
10.	The wind farm is planned to be operational in 8 years (2030), subject to grid. Generating capacity of just under 3 GW, area of 860 km^2, Water depth between 65-75 m and will have fixed bottom foundation.	
11.	**Project Location** CW provided an overview of the project location, highlighting that the nearest point of the coast of Scotland is approximately 60 km (Stone Haven). 1.5 GW connection planned from the north of the project and	

	1.5 GW connection planned from the south of the project, although this could be subject to change.
12.	CW displayed indictive cable routes. RH raised a concern of these indicative cable routes as the area is heavily congested with cable routes and mobile inshore fishermen significant disruption.
13.	RH highlighted to importance of early engagement with fisheries stakeholders in regard to cable routes. CW reiterates that the cables routes are indicative and are depended on the National Grid.
14.	MM reiterated the importance of early engagement, which can be beneficial to both the developer and the fisheries stakeholders.
15.	CW agreed with this and highlighted examples of where early engagement had been successful in other projects.
16.	**bp/EnBW's Commitment to Scotland** CW gave an overview of where bp/EnBW see many opportunities to deepen their commitment to Scotland's people and industry – assisting in a just transition and support Scotland as a global energy leader.
17.	CW gave particular attention to bp/EnBW's Community Fund Plan – an investment fund of £200,000 per year to support sustainability and Net Zero goals across Scotland.
18.	MM highlighted SFF are in contact with Marine Scotland and the Crown Estate about a Community Fund.
19.	CW highlighted further consultation on the bp/EnBW Community Fund later this year, and is open to ideas on how this will be best spent.
20.	**EIA Progress** CW provided an update on the EIA progress: EIA contractor in place; Developing Consenting Strategy; Scoping submission planned for late 2022.
21.	CW highlighted an overview of the planned 2022 survey activities: - Bird and marine aerial surveys (ongoing – commenced January 2021). First year's data shared. - Scoping offshore surveys in consultation with key stakeholders (ongoing) - Geophysical, benthic and shallow geotechnical survey of the wind farm area (April – Aug 2022)
22.	- Metocean and Lidar Buoy deployment within the windfarm array (July 2022). - Regional bird surveys (aim to start April 2022 subject to agreement on objectives and scope). - Onshore surveys and intertidal bird surveys at landfalls (TBA – depends on grid connection and developer responsibilities)
23.	MM highlighted his concerns in that a joint venture has historically been known for being relatively slow in decision making.
24.	CW affirmed the bp/EnBW are working on a day-to-day basis to ensure this project is delivered. CW highlighted that the joint partners are not investing partners.
25.	RH asked for details on layout designs.
26.	CW explained that layout designs are not available at this time in the project and that the geophysical and geotechnical surveys will inform design layout decisions.

27.	**General Discussions** MM displayed a figure indicating fishing activity within the region of the proposed project.	
28.	MM and AT highlighted relatively high levels of fishing activity at the north east of the proposed project.	
29.	MM suggested that if a meeting with all developers in the region was to take place, the fisheries stakeholders could give a Fisheries Awareness Course and the developers could provide a presentation on the constraints that they are working under.	
30.	CW agreed and reiterated that collaboration is an important aspect of successfully delivering OWF projects.	
31.	AT questioned whether there are plans for Scottish vessels to be used for the planned surveys.	
32.	BO confirmed that the intention is to go a head with the SFF for Guard Vessels and Scouting Vessels.	BO to contact GW on more details in regard to Scouting and Guard Vessel availability.
33.	BO drew back to MM's point on fishing activity in the area previously discussed and confirmed that MarineSpace will be in touch for more detail and the exchange of information on this in the coming weeks, and reiterated that this is just a kick off meeting.	
34.	RH and MM reiterated the difficulties in representing 200+ members of their organisations who do not agree with the proposed development.	
35.	CW explained that he understands the raised concerns during the meeting and the aim is to work together for an outcome that suits all.	
36.	CW is open to building relationships with various stakeholders and open to traveling to local affected communities in aid of this.	
37.	BO questioned whether a name has been put forward for the OFLO. Next week the name will be put forward.	
38.	Sub-contractor agreements will be sent next week to AT and GW outlining the roles and responsibilities.	
39.	MarineSpace will issue an email as suggested by AT to the fisheries groups to nominate a Fisheries Industry Representative (FIR).	
40.	RH suggests nominating an FIR that covers all developments within the area.	
41.	MM highlighted the difficulties in nominating an FIR as the work load is significant.	
42.	CW thanked RH and MM for their views and will be taken into consideration during the FIR nomination process.	
43.	MM to circulate Terms of Reference (ToR) for the FIR agreed between all other developments.	MM to circulate ToR for FIR.
44.	BO and CW thanked the attendees for their time and will circulate meeting minutes.	Project to circulate meeting minutes.

H.11 Commercial fisheries meeting 10

H.11.1 Meeting notes

Partners in UK offshore wind

Minutes

Stakeholder name	Whitehaven Fisheries Stakeholders
Date	22 November 2022
Attendees external	No attendance made
Attendees internal	[redacted] (GV) (EnBW and bp), [redacted] (ID) (EnBW and bp), [redacted] (JL) (MarineSpace), [redacted] (RJ) (MarineSpace) and [redacted] (TW) (Fishing Industry Representative (FIR)
Subject/purpose	Morgan and Mona Commercial Fisheries Stakeholder Engagement Meeting

MINUTES: **ACTION:**

A meeting was arranged at : ENERGUS, Blackwood Road, Lillyhall Industrial Estate, Workington, Cumbria, CA14 4JW on 22 November 2022 between 16:00 and 18:00.

No fisheries stakeholders attended the event.

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H.12.1 Meeting notes

Partners in UK offshore wind

Minutes

Stakeholder name	Fisheries Stakeholders
Date	23 November 2022
Attendees external	No attendance made
Attendees internal	[redacted] (GV) (EnBW and bp), [redacted] (ID) (EnBW and bp), [redacted] (JL) (MarineSpace), [redacted] (RJ) (MarineSpace) and [redacted] (TW) (Fishing Industry Representative (FIR)
Subject/purpose	Morgan and Mona Commercial Fisheries Stakeholder Engagement Meeting

MINUTES: **ACTION:**

A meeting was arranged at : The Liner Hotel, Lord Nelson Street, Liverpool, L3 5QB on 23rd November 2022 between the hours of 14:00 -16:00

No fisheries stakeholders attended the event.

H.13 Commercial fisheries meeting 12

H.13.1 Minutes

Partners in UK offshore wind

Minutes

Stakeholder name	B&M Fishing LLP
Date	24 November 2022
Attendees external	
Attendees internal	[redacted] via telephone (EnBW and bp), [redacted] (EnBW and bp), [redacted] (MarineSpace), [redacted] (MarineSpace) and [redacted] (Fishing Industry Representative (FIR))
Subject/purpose	Morgan and Mona Commercial Fisheries Stakeholder Engagement Meeting

	MINUTES:	**ACTION:**
1.	**Introductions** Introductions were given by all in the room with positions and previous experience given. AB explained his family's businesses which are based in Fleetwood. The businesses catch and process shellfish with a fleet of five vessels working static gear within the Liverpool Bay area. AB - asked why the proposed arrays are positioned in a busy fishing area and not further inshore where there is no commercial fishing activity. AB commented on the slow revolving speed of operational turbines in Walney and Burbo Bank offshore wind farms (OWFs). ID - explained that it was not the developer's decision where the initial lease areas were situated, as these were defined by The Crown Estate (TCE). EnBW and bp then selected sites within this larger lease area. With respect to the arrays being positioned further offshore, fundamentally, these areas have better wind yields. ID also explained the size and height of proposed turbines and how the wind turbine gearing system works which accounts for the perceived slow revolution speeds seen at Walney and Burbo Bank OWFs. AB - provided information on his current fishing activities with each vessel fishing around 1,000 whelk/crab pots. Each fleets/strings are made of 80 whelk pots and up to 100 crab pots. Strings are approximately 2km in length with toggle system used, usually only when moving gear longer distances. The key ground where whelks are targeted is muddy sediment.	
2.	**Powerpoint Presentation** ID - presented Morgan and Mona Fisheries Consultation PowerPoint which included: • Brief overview of the project • Programme and key dates • Activities to date • Next steps	

- Discussion on array layouts

JL and GV - explained the consenting process and gave an update of drafting of current technical reports and Preliminary Environmental Impact Report (PEIR).

3. **Discussion and array layouts**

AB - explained that all of his vessels lay static gear in a north – south alignment in both Morgan and Mona array areas (and the majority of the Irish Sea area that he fishes). This is the only orientation possible due to the tides in this region.

AB - would prefer turbines to be equally spaced in rows and as far apart as possible, although he acknowledged that the scallop fishers may not agree with him.

AB - noted that the proposed packed boundary option would not be issue for his fishing vessels, as long as there is minimum 1km spacing between turbines.

AB - Would fish within operational arrays and had confirmed that his vessels currently fish within both Walney and Burbo Bank operational OWFs. AB also confirmed that his businesses insurers (Sunderland) do currently provide cover to his vessels to operate within operational OWFs, providing they are permitted to be there.

JL - asked AB about the circular orientation which MS had observed Scottish scallop vessels conducting during November within the proposed Mona area. AB explained that queen and king scallop fishing activity will be oriented in a circle due to the lower water temperature in winter months. The scallops are not as mobile as they usually are in the summer, so are corralled into a smaller and smaller area by fishing in a circular orientation.

4. **Further Discussion**

RJ - asked about fishing activity within Walney operational OWF and asked about Belgian Beam trawler activity in the area. RJ and JL explained that Belgian stakeholders had been engaged and left feedback for the PEIR. Their feedback stated that they would not fish within any operational OWF. TW explained that he had photographic evidence of a Belgian beam trawler fishing within Walney OWF, which had fished there for a very short time.

AB - by the time that the proposed Morgan and Mona OWFs will be under construction, Belgian fishing vessels should not be permitted to fish within UK territorial waters (due to Brexit).

AB - discussed issues with finding crew for his vessels since the UK had left the EU. His crew are paid a share of the catch for normal fishing

operations but would not work to clear fishing gear for survey activity without expecting to be properly compensated (a figure of around £800/week for crew and £1,200/week for a skipper was indicated). In the past crews would move gear ahead of surveys for a minimal payment.

The group discussed other fishing activity within operational OWFs:

- AB - commented that there has been an improvement in crustacean fisheries in Walney OWF.
- AB - Whelk have been known to dissipate in operational OWFs, with operational noise impacts possibly being a factor in the disappearance of whelks.
- There have been enough whelks within the Burbo Bank OWF this last year to enable a sustainable level of fishing. Burbo Bank OWF and the Extension have had rock dumping in 2021, which has also improved fishing.
- TW - had worked with Cumbrian coast Wind Farm managers in his position as FIR to place mattresses type protection along exposed cable lengths leading into the landfall position at Middleton Sands. The mattresses have stayed in position and TW reported that divers had observed epibenthic matt growth. TW and AB agreed that this growth may be a factor in the improved fishing within the wind farm.

H.14 Commercial fisheries meeting 13

H.14.1 Minutes

Partners in UK offshore wind

Minutes

Stakeholder name	Manx Fish Producers Organisation (MFPO); local commercial fishermen, Isle of Man Government (IoMG)
Date	24 November 2022
Attendees external	[redacted] (DB) (MFPO), [redacted] (MH), [redacted] (AS), and [redacted] (PD) (IoMG)
Attendees internal	[redacted] (GV) (EnBW and bp), [redacted] (ID) (EnBW and bp), [redacted] (JL) (MarineSpace), [redacted] (RJ) (MarineSpace) and [redacted] TW) (Fishing Industry Representative (FIR))
Subject/purpose	Morgan and Mona Commercial Fisheries Stakeholder Engagement Meeting

	MINUTES:	**ACTION:**
1.	**Introductions** Introductions were given by all in the room with positions and previous experience given.	
2.	**Powerpoint Presentation** **ID** - presented Morgan and Mona Fisheries Consultation PowerPoint which included: • Brief overview of the project • Programme and key dates • Activities to date • Next steps • Discussion on array layouts **GV** – explained the project capacity and the choice of turbines when construction occurs. At this early stage there is still research to come. The larger the turbine the more space there will be between the turbine. **MH** – asked what the best foundation is in terms of minimising impacts on the environment. **GV** – explained that every foundation type has an environmental impact; monopiles result in subsea noise during construction via piling whereas Gravity Base Structure (GBS) foundations have a greater footprint (and therefore, loss of marine habitats). A range of different foundations options are currently being assessed. Further surveys on seabed conditions would be carried out in 2023 to further inform the choice of foundation type. **JL** – asked the fishermen if any issues had been experienced with the 2021/2022 survey works undertaken to date by bp/EnBW. **DB** – there have been some close calls with XOcean unmanned vessels, but no significant issues raised by any of MFPO's members.	

3.	**Discussion and array layouts** **ID** – Explained the different design options and orientations for array layouts. **DB** – asked if there would be any restrictions for commercial fishing within the operational wind farm. **GV** – explained that during construction, there would be a series of rolling temporary safety zones around vessels involved in foundation/Wind Turbine Generator (WTG) installation and similar advisory exclusion zones around Cable Lay Vessels (CLVs). During the operational phase, no such safety zones would be in place in any areas but, if major maintenance works were needed, temporary safety zones around maintenance vessels would likely exist. Further engagement with the fishing industry will help to inform any strategy/planning for the construction and operational phases re: access. **MH** – asked if there would be any restrictions to towing fishing gears within the array and whether cables could be towed over. **GV** – explained that a cable burial plan would be prepared by EnBW and bp and that the expectation at this early stage is that cable burial depths would be sufficient to enable fishing activities to continue within the arrays once the wind farm was operational. **JL** – explained the industry approach to monitoring the status of subsea cables, i.e. via surveys. If surveys are only done annually or even only every 2-3 years, then it is often difficult to provide up-to-date information to fishermen on areas of shallow burial/cable exposures. However, new methods have been developed and being used more regularly, where real-time monitoring can be carried out, i.e. Distributed Temperature Sensing DTS). **PD** – asked if there is evidence of fishing within operational offshore wind farms. **RJ** – explained that Marine Space regularly monitor and study operational wind farms for commercial fishing activity. Although there has been a reduction in towed gear activity in most farms, it has continued at many sites. Static gear fishing also continues and, in some cases, increases within operational wind farms. Some operational wind farms are now situated within Marine Protected Areas where towed gear fishing is restricted. **ID** – showed examples of operational arrays from other UK offshore wind farm sites, i.e. Dogger Bank, and explained the concept of “packed

boundaries" included within their design. He then showed potential array layouts for the Morgan and Mona sites.

AS – asked how the tide would be affected within the array itself.

GV – explained that because of the spacing between the turbines (at least 1.4km), far-field changes in tidal flow would not be expected. There would be an increase in flow around the base of each turbine which would only be local (near-field).

MH – an old colleague fishes with a dredge for scallops within a wind farm off the coast of Wales.

DB – explained that the when Manx fishing vessels are fishing they would only use around 100ft of cable. Because of the proposed distances between the turbines, he was not concerned about the orientation.

The Queenie fishery (which is targeted using lighter otter trawl gear compared to the King scallop fishery, where dredges are used), needs the catch to be actively swimming which is why the season is in the summer months when this species are more actively swimming.

MH – if there were no restrictions as where we could fish in the array and the cables were monitored our vessels would be able to tow around the turbines safely.

GV – there will be a commitment to bury the cables with a cable burial plan.

DB – there was a high mortality episode of queenies after a cable was buried during construction.

JL – explained that the Fish and Shellfish chapter of environmental assessment would cover impacts on populations and also gave an example of the Havhingsten telecom cable system where there was mitigation of impacts on a scallop fishery by fishing the area in question out before construction works started.

DB – some form of research should be undertaken before and after construction to investigate potential effects on the recruitment of scallop spat.

PD – we have very good heat maps of the distribution of stocks within IoM waters which may be obtainable by request.

ID – showed layout designs for the Morgan and Mona arrays and asked for comments.

MH – my vessel is small enough to fish around the array layouts so not particularly concerned about exact layout.

DB – suggested that having an open area (as shown for Mona array) may mean that the fishery is heavily fished in a single area which may damage the overall stock.

PD – will an array designed to limit impacts / increase co-existence on / with commercial fisheries potentially increase the consenting risk due to other factors, i.e. seabird activity?

GV – too early in the process to answer that but it is true that the final array design will need to be the best compromise that reduced consenting risk as far as possible.

MH – asked why the proposed array was placed east of the Chickens fishing ground and not to the west where the wind is stronger.

ID – explained the lease process from The Crown Estate (TCE), specifically the fact that TCE identified the broad regions that sites could be located in.

GV – explained the process of the Preliminary Environmental Information Report (PEIR) and asked that all in the room please make an effort to engage with the process and make comment on any reports/chapters produced so that comments could be incorporated into the final application.

DB – underwater noise is a concern during construction. Scallops are potentially sensitive to this effect, but little is really known about this issue.

GV – all potential impacts from underwater noise on scallops (and other fish species) will be assessed and presented in the Fish and Shellfish Ecology PEIR Chapter.

4. Further Discussion

RJ – Asked for an update on the herring quota for the Isle of Man, noting that stock surveys had recently been carried out in Isle of Man waters.

DB – the herring quota that the MFPO are hoping to acquire will be for areas within the whole of the Irish Sea. MFPO vessels may be fishing outside of the Manx Territorial Seas (MTS) area. Northern Irish vessels are permitted to fish within the MTS, but currently, the MFPO do not have quota to fish these grounds for herring.

GV – over 20 years of monitoring of operational offshore wind farms, there is no evidence that there are any significant effects on benthic communities within l wind farm sites. There is also no clear evidence of

any impacts on fish species, with operational-phase monitoring surveys showing no major absence of species within sites that were also recorded pre-construction.

DB – noted, however important to recognise that very few (if any) sites have been built on king scallop and queen scallop grounds as important as this before. Scallops are high density species and any impact on a relatively small area has the potential to result in significant impacts on the overall stock .

PD – showed examples of research which had been taken in partnership with Bangor University and said they could ask fishermen for permission to share some VMS data for fishing activity within the proposed array areas.

Meeting end.

H.15 Commercial fisheries meeting 14

H.15.1 Minutes

Partners in UK offshore wind

Minutes

Stakeholder name	Conwy commercial fishermen
Date	25 November 2022
Attendees external	[redacted] (CD), [redacted] (AH), [redacted] (PT), [redacted] (RT), and [redacted] (JT)
Attendees internal	[redacted] (GV) (EnBW and bp), [redacted] (ID) (EnBW and bp), [redacted] (EnBW and bp), [redacted] (JL) (MarineSpace), [redacted] (RJ) (MarineSpace) and [redacted] (TW) (Fishing Industry Representative (FIR)
Subject/purpose	Morgan and Mona Commercial Fisheries Stakeholder Engagement Meeting

	MINUTES:	**ACTION:**
1.	**Introductions** Introductions were given by all in the room with individual fishermen clarifying what gear they used and broad areas of activity (all present were static gear vessels, targeting lobster, crab and whelk).	
2.	**Powerpoint Presentation** **ID** - presented Morgan and Mona Fisheries Consultation PowerPoint which included: • Brief overview of the project • Program and key dates • Activities to date • Next steps • Discussion on array layout	
3.	**Discussion and array layouts** **JL** – Discussed the survey activities which took place in 2022. **ID** – gave an update on the planned works for 2023 and asked all present if there were concerns with works undertaken in 2022 and/or planned for 2023. **AH** – no concerns as most present would be working to the south of the arrays. **RT** – had to move a couple of strings of pots for the cable corridor survey in 2022. **JL** – thanked RT for moving his gear and asked if there were any issues with the Unmanned Surface Vessels (USVs) operated by XOcean, carrying out survey works this summer.	

CD – there were no issues that they knew of with the USVs.

ID – asked for the room's opinions on the Morgan array layouts, specifically the proposed orientation and distances between turbines.

AH – we would not expect to fish within the array area, so we are not concerned about the operational phase after construction.

RT – we fish within the Welsh limits as we have a Whelk permit and would not go out that far.

ID – explained the plans for layout designs for the Mona array.

AH – asked about the change in ferry routes associated with the project as this would be a concern to himself and CD.

GV – explained that some of the changes to the shapes of the array areas which had been shown were down to navigational simulations and work done with ferry operators.

ID – asked thoughts on preferences for Mona array orientation.

AH – I shoot my pots north to south and my nets east to west. The squeeze of space in the area is becoming difficult with the wind farms the change in the Liverpool ferry route may also cause us to have to move our fishing activity.

AH – asked where the export cable route is going? Will it be well away from Rhyl Flats offshore wind farm and will it clip the edge of the Constable Bank.

GV – explained the preferred export cable route was well clear of the Rhyl Flats offshore wind farm and it would likely follow a route south of the western Constable Buoy before heading north towards the Mona array.

AH – commented on the vibrations he experienced during the construction of some of the previous offshore wind farms in this region. These made his boat shake.

GV – noted and accepted that and explained that this would have likely been due to piling activities. Work done to date on the Morgan and Mona arrays is indicating that the ground conditions may be too hard for piling and it is currently proposed to test a suction bucket foundation in2 023. EnBW and bp will know more about the likely foundation option after this further testing is completed in 2023.

AH – the eventual export cable route will affect the whelk fishermen working in the area. Whelk are very important in that inshore area.

GV – explained the different variations of cables. There will be up to four export cables in the marine cable corridor, each separated by anywhere between 50 to 200m. The cable could be installed at around 300m per hour. The exact route/method of installation and measures to limit impacts on local fishermen will be detailed in a range of documents, including a project-specific Cable Installation Plan and also the Commercial Fisheries Mitigation and Co-Existence Plan.

CD – asked for information on the ownership of the transmission assets once the projects are fully operational.

ID – explained the different ways in which transmission assets are managed in UK waters, namely that another organisation (known as an Offshore Transmission Owner, or OFTO) will eventually be responsible for the management and maintenance of the marine export cables. The OFTO will need to comply with a range of consent conditions, including appointing a Fisheries Liaison Officer (FLO) and issuing Notice to Mariners (NtMs) prior to any works associated with the marine export cables.

RJ – asked if there was any existing interaction between scallop vessels and the static gear vessels fishing close to the Mona array. Had there been any problems with their gear being towed away.

CD – no; they were not bothered by them and would not expect to fish in that area during the scallop season anyway.

Meeting end.

H.16 Commercial fisheries meeting 15

H.16.1 Minutes

Partners in UK offshore wind

Minutes

Stakeholder name	Northern Irish – Anglo-North Irish Fish Producers Organisation (ANIFPO), Northern Ireland Fish Producers Organisation (NIFPO), Welsh Fisheries Association (WFA)
Date	01 December 2022
Attendees external	[redacted]
Attendees internal	[redacted] (EnBW and bp), [redacted] (EnBW and bp), [redacted] (EnBW and bp), [redacted] (MarineSpace), [redacted] (MarineSpace) and [redacted] (Fishing Industry Representative (FIR)).
Subject/purpose	Morgan and Mona Commercial Fisheries Stakeholder Engagement Meeting (Teams online meeting)

	MINUTES:	**ACTION:**
1.	**Introductions** Introductions took place by all in the meeting where roles, responsibilities and previous experience were given. ID – explained that meeting notes and a copy of the slides used will be circulated following the meeting.	
2.	**Powerpoint Presentation** ID - presented Morgan and Mona Fisheries Consultation PowerPoint which included: • Brief overview of the project • Programme and key dates • Activities to date • Project update • Proposed 2023 survey activities • Discussion on array layouts ID – explained the consenting process and gave an update of drafting of current technical reports and Preliminary Environmental Impact Report (PEIR).	
3.	**Discussion on Powerpoint Presentation** HW – highlighted that Offshore Wind Farm (OWF) Environmental Impact Assessments (EIA) should consider impacts to species further down the food chain as opposed to a focus on birds and marine mammals. GV explained that the EIA for Morgan and Mona does cover fish and shellfish and seabed communities. Inter-related effects between Physical Processes, Fish and Shellfish, Seabed Communities, Birds and Marine Mammals are also covered alongside Commercial Fisheries and other impact assessment topics. Such	

	information will be presented in the individual Morgan and Mona OWF PEIR's that will be published at the end of quarter 1/start of quarter 2 2023.	
	JK – highlighted that this area of the Irish Sea has high levels of hydrogen sulphide gas and there are issues with pockets of the gas. This safety concern should be considered for the Morgan and Mona proposed 2023 geophysical and geotechnical survey. ID and GV noted this concern and will pass onto the EnBW and bp Survey Team.	ID and GV to pass on the safety concern to the Survey Team that was highlighted by JK.
	AM – highlighted that geophysical surveys and borehole timing should avoid periods that are sensitive to fish stocks, such as herring spawning. GV explained that all key spawning and nursery grounds in the Irish Sea, such as herring spawning grounds, have been identified. These are key receptors that will be assessed within the fish and shellfish chapter.	
	HW – asked how much of the UKs OWF energy the Morgan and Mona Projects will provide and what is EnBW and bp's perception of fishing activity in the area. ID explained that the target the UK has set for OWF is 50 gigawatts (GW) by 2040, Morgan and Mona OWFs will contribute up to 3GW to that Government target. RJ explained that VMS data, landings data, MarineTraffic and Offshore Fisheries Liaison Officer (OFLO) observations have provided knowledge of all vessels active in the Irish Sea. 28 Northern Irish vessels have been identified, all of which fish outside the proposed Morgan and Mona OWF array areas. Main Northern Irish fisheries identified are herring, *Nephrops* and demersal trawl in the Liverpool Bay area.	MarineSpace to share fishing activity data for cross-reference purposes.
	HW – asked how smaller vessels that are not acknowledged in Vessel Monitoring (VMS) data are accounted for and recorded. RJ explained that these vessels have been recorded during scouting surveys and through liaison with the FIR. The smaller vessels consist mostly of inshore static gear vessels that target whelk and lobster. ID suggested cross referencing fishing activity data relevant to Northern Irish fleets.	
4.	**Discussion and array layouts** ID – explained the proposed array layout designs in terms of turbine spacing, packed boundaries, inner grid, orientation of turbines and orientation of array cables, and how these can enable the potential for co-existence with fishing.	AM and HW to liaise with ANIFPO and NIFPO vessels that fish in the Irish Sea and feedback orientation preferences
	ID – asked which orientation is preferable, a N-S or NNW-SSE. JK explained that from a safety point of view, fishing and crew transfer vessels are more suited to a N-S orientation.	
	ID – explained that within Morgan OWF, turbines will be tightly packed along the perimeter with a minimum 1.4km spacing, while the inner	

	grid will have a wider spacing of approximately 2km between rows of turbines. AM and HW took an action to discuss orientation and spacing of wind turbines with their colleagues and provide feedback to MarineSpace. ID – explained the equivalent plans for Mona OWF and asked for preference on turbine spacing in terms of option A or B. Option B leaves the core scallop grounds free of wind turbines (see presentation slides for further information). AM took an action to discuss preferences with regard to leaving the core scallop grounds within Mona free of wind turbines with his colleagues and provide feedback to MarineSpace.	to MarineSpace. AM to liaise with ANIFPO scallop vessels on their preference to leaving the core scallop grounds within Mona free of wind turbines.
5.	**Further Discussion** AM – asked about opportunities for coexistence with the fishing industry in terms of, for example, infrastructure design. GV explained that there have been several studies looking at this in the past where he understood the key issues related to practical implementation and safety. GV also noted that a request has been made by other fishing groups recently consulted with, for designing cable protection in a way that promotes beneficial productivity within the OWF area for different fisheries. GV explained that he had agreed to raise that suggestion internally and would feedback at a future meeting.	

H.17 Commercial fisheries meeting 16

H.17.1 Minutes

Partners in UK offshore wind

Minutes

Stakeholder name	Rederscentrale
Date	01 December 2022
Attendees external	[redacted]
Attendees internal	[redacted] (EnBW and bp), [redacted] (MarineSpace), James [redacted] (MarineSpace) and [redacted] (Fishing Industry Representative (FIR))
Subject/purpose	Morgan and Mona Commercial Fisheries Stakeholder Engagement Meeting (Teams online meeting)

	MINUTES:	ACTION:
1.	**Introductions** Introductions took place by all in the meeting, where roles and responsibilities were given. SM explained that Rederscentrale is the only producer organisation in Belgian fisheries and currently have around 58 active vessels that operate in areas such as the Irish Sea. ID – explained that meeting notes and a copy of the slides used will be circulated following the meeting.	

2.	**Powerpoint Presentation**
	ID - presented Morgan and Mona Fisheries Consultation PowerPoint which included:
	• Brief overview of the project
	• Programme and key dates
	  ○ ID explained the consenting process and gave an update of drafting of current technical reports and Preliminary Environmental Impact Report (PEIR).
	• Activities to date
	• Project update
	  ○ During the project update section of the presentation, ID explained that in parallel with public consultation relating to the environmental impact report, EnBW and bp have been convening with a Maritime Navigation Engagement Forum (shipping and navigation safety across the Irish Sea) over the last year. SM asked whether UK fishery stakeholders are involved in the Maritime Navigation Engagement Forum. ID answered that fisheries are involved indirectly through ongoing engagement with TW the FIR and the Company Fisheries Liaison Officer (CFLO) who bring input into shipping and navigation. *Post-meeting note: the FIR also sits on the MNER*
	• Proposed 2023 survey activities	

- RJ raised a concern regarding possible displacement of static gear vessel into areas operated by Rederscentrale as a result of proposed survey work. However, following consultation with the static gear vessels, RJ explained that the static gear vessels are aware of areas operated by Rederscentrale and are likely to avoid such areas.

- Discussion on array layouts

3. **Discussion and array layouts**

ID – explained proposed array layout designs in terms of turbine spacing, packed boundaries, inner grid, orientation of turbines and orientation of array cables, and how these can enable the potential for co-existence with fishing.

SM – asked whether there was a difference in array layout design with other existing wind farms in the Irish Sea. ID answered by explaining that the array layout designs with Morgan and Mona Offshore Wind Farms (OWF) are less dense, as EnBW and bp are aiming for larger turbines. Within the project envelop, the aim is to install the largest commercially available turbines at the point of construction.

ID – explained that within Morgan OWF, turbines will be tightly packed along the perimeter with a minimum 1.4km spacing (the 'packed-boundary'), while the inner grid will have a wider spacing of approximately 2km between rows of turbines. SM explained that in Belgium, a minimum spacing of 1km is required between turbines; however fishing within the array is still not possible as there is a 500m exclusion zone around each turbine. SM explained that for safety reasons, a spacing of 1.4km between turbines is difficult for fishing; however, a spacing of 2km would be adequate. *Post-meeting note: there will be no exclusion zones within the wind farm during operation. However, 500m safety zones around a maintenance vessel will be applied for during periods of major maintenance only.*

SM – asked TW whether he was aware of fishing activity within existing windfarms in the UK. TW explained that beam trawlers have been observed fishing within the operational Walney OWF, which has a spacing of 500m between turbines.

RJ – asked SM for Rederscentrale's beam trawl penetration depth. SM explained that although a newer gear technology is used by their vessels that operate within the Irish Sea that limits impact on the seabed, some penetration is still required in order to target sole and plaice. ID explained that EnBW and bp have made a commitment to bury cables, where possible and to use cable protection where cables cannot be buried. Furthermore, cable burial status will be

	monitored through surveys and where possible, the use of new technologies that monitor burial status. In terms of the turbine spacings discussed for Mona OWF, no particular feedback was given by SM on this.	
4.	**Further Discussion** SM – asked whether Rederscentrale's fishing activity aligned with ENBW and bp's knowledge - activity mostly to the east of Morgan OWF, to the south of Mona OWF and no activity within the Morgan and Mona OWF areas. RJ suggested cross-referencing MarineSpace's observations with Rederscentrale to ensure a true reflection of activity. SM – asked ID why Morgan and Mona OWFs are both fixed bottom OWFs rather than floating foundations. ID explained that the water depth and sea bed conditions are more suited to fixed foundations. SM – asked what other fisheries stakeholders have been consulted. ID explained that all relevant UK based fisheries stakeholders and the Isle of Man have been consulted in this round of consultation. Rederscentrale is the first non-UK stakeholder that has been consulted during this round, the Northern Irish and Irish are to be consulted over the next couple of days also. Stakeholders consulted have been identified as active in the area of the Morgan and Mona OWFs. SM – asked what is EnBW and bp and the UK government's vision for fishing within OWFs in the UK. ID explained that EnBW and bp's objective is to enable full co-existence, and in terms of access, EnBW and bp are not planning for any exclusions or for vessels to self-exclude. In terms of the UK government, unless there will be introduction of new Marine Conservation Zones, it is expected that there will be no additional restrictions on fishing fleets accessing OWFs. RJ added that new post-Brexit UK fisheries legislation has recently been released that outlines co-existence between fishing industry and OWFs. ID – In terms of liability in the case where an accident occurs, it is EnBW and bp's view, at this stage, that it is their duty to ensure cable protection is maintained. In a case where cables have become uncovered and a Notice to Mariners (NtM) was issued, the liability would then be with the fishing operator. *Post-meeting note: bp / EnBW to raise this internally and feedback to SM at the next meeting*	MarineSpace to provide Rederscentrale with Belgian beam trawl fishery observations for cross-reference. Bp / EnBW to raise the matter of 'liabilities' internally and feedback at next meeting.

H.18 Commercial fisheries meeting 17

H.18.1 Minutes

Partners in UK offshore wind

Minutes

Stakeholder name	Irish Fish Producers Organisation (IFPO) and Irish South and East Fish Producers Organisation (ISEFPO)
Date	02 December 2022
Attendees external	[redacted] (ISEFPO) and [redacted] (IFPO)
Attendees internal	[redacted] (EnBW and bp), [redacted] (EnBW and bp), [redacted] (MarineSpace), [redacted] (MarineSpace) and [redacted] (Fishing Industry Representative (FIR)).
Subject/purpose	Morgan and Mona Commercial Fisheries Stakeholder Engagement Meeting (Teams online meeting)

	MINUTES:	ACTION:
1.	**Introductions** Introductions took place by all in the meeting where roles, responsibilities and previous experience were given. ID – explained that meeting notes and a copy of the slides used will be circulated following the meeting.	MarineSpace to circulate slides used and meeting minutes.
2.	**Powerpoint Presentation** ID - presented Morgan and Mona Fisheries Consultation PowerPoint which included: • Brief overview of the project • Programme and key dates • Activities to date o ID – asked whether survey lookaheads and notices have been communicated successfully. JL and CW confirmed that the IFPO have been well informed. • Project update • Proposed 2023 survey activities • Discussion on array layouts ID – explained the consenting process and gave an update of drafting of current technical reports and Preliminary Environmental Impact Report (PEIR).	
3.	**Discussion and array layouts** ID and GV – explained proposed array layout designs in terms of turbine spacing, packed boundaries, inner grid, orientation of turbines and orientation of array cables, and how these can enable the potential for co-existence with fishing. ID – explained that within Morgan OWF, turbines will be tightly packed along the perimeter with a minimum 1.4km spacing, while the inner	

grid will have a wider spacing of approximately 2km between rows of turbines.

ID – asked which orientation is preferable, a N-S or NNW-SSE. There was some feedback that N-S would be preferable on the basis of the tides.

JL – questioned whether there will be safety zones around each turbine inside the packed boundary during operation of the wind farm as this was the feedback that had been received from other Producer Organisations. GV explained that once the Morgan and Mona Offshore Wind Farms (OWFs) are in operation, the only safety zones will be 500m around vessels undertaking major maintenance. However, during construction, there will be mandatory 500m safety zones around a wind turbine Jack-up / Installation Vessel whenever Jacked-up On-Site, either installing or maintenance / offshore substation platform under construction and a 50m advisory safety zone around wind turbine only partially constructed / where construction has not been completed and a rolling 500m exclusion safety zone around vessels installing cables. Additionally, it is anticipated that construction of the two wind farms will utilise a programme of small area construction zones i.e advising that certain parts of the OWFs is closed to fishing (as opposed to declaring the whole area of the wind farm as a construction zone.

GV - to raise matter of any liabilities associated with fishing vessels snagging unburied / unprotected cables and provide written feedback.

JL – asked whether scallop dredging will be able to take place across cables within the Morgan and Mona OWFs array area. ID explained that it is EnBW and bp's intent to bury all cables and that the Scoping Report states that cables would be buried to between 0.5 and 3m where possible. New technologies, such as sensors that can detect the burial status of a cable could also be implemented to facilitate a better understanding of burial status, should these technologies be available at the time of cable installation. Additionally, EnBW and bp would implement regular surveys to monitor burial status, which is generally part of the regular Operation and Maintenance (O&M) regime. If the uncovering of cable took place, Notice to Mariners would be issued in addition to other agreed communication requirements and the location would likely be buoyed or a guard vessel deployed at the location.

JL – questioned who is liable if a cable is snagged, the fishing industry or the OWF operator. GV stated that the *Fisheries Liaison and Co-existence Plan* would include for 'snagging' and 'loss of gear' protocols in line with the recommendations of the *Fishing Liaison with Offshore Wind and Wet Renewables Group* (FLOWW) and was not aware of liabilities issues with regard to the renewables industry. However, GV

agreed to take this question away and seek to provide feedback in due course. JL requested written confirmation.

GV – explained EnBW and bp's commitment to align cables within the array area to avoid dominant fishing direction, with fewer cables crossing between rows of turbines, which is anticipated to minimise snagging risk.

RJ – asked for IFPO dredging penetration depth. CW explained that a maximum of 6.5 inch teeth are used.

GV – questioned if the cables are buried to at least half a metre, the potential for snagging risk would be low. CW agreed but raised a concern for the shifting tides in the Irish Sea potentially uncovering cables. GV reiterated ID previous comments on monitoring and managing any cable exposures.

CW – questioned how quickly individual vessels are notified by an NtM, noting the possibility of absent internet connection offshore. GV explained that this will be addressed in the *Fisheries Liaison and Co-existence Plan*, and that in addition to NtM's the project would also be able to utilise the project's Marine Coordination Centre, which would be able to contact vessels by VHF radio in addition to the likelihood that there would be O&M vessels within the wind farm that could contact fishing vessels.

ID – explained the equivalent plans for Mona OWF and asked for the stakeholders views on preference on turbine spacing in terms of option A or B. Option B leaves the core scallop grounds free of wind turbines (see presentation slides for further information). CW acknowledged a preference for avoidance of the core scallop grounds.

RJ – asked whether vessels would fish between turbines with a minimum distance of 1km, noting other OWFs are less than 1km and records of Belgian beam trawlers operating within these. CW and JL agreed that fishing between rows of wind turbines with a 1km spacing was feasible when a vessel is fishing alone, but raised concerns about number of vessels within the array or between two rows of turbines at the same time and hazards such fires on board becoming more severe while operating within an array area.

4. Further Discussion

RJ – asked for cross reference in terms of Irish fishing activity within the region, noting observation of two Irish vessels in the last year. JL explained that the ISEFPO have seven scallop vessels active in the region; although, these are not active in the region yearly.

H.19 Commercial fisheries meeting 18

H.19.1 Minutes

Partners in UK offshore wind

Minutes

Stakeholder name	West Coast Sea Products Ltd (WCSP), Scottish Fishermen's Federation (SFF), Scottish White Fish Producers Association (SWFPA)
Date	15 December 2022
Attendees external	[redacted] (JC), [redacted] (DW), [redacted] (JK), [redacted] (SK), [redacted] (MM), and [redacted] (RH)
Attendees internal	[redacted] (GV) (EnBW and bp), [redacted] (ID) (EnBW and bp), [redacted] (RJ) (MarineSpace), [redacted] (MarineSpace) and [redacted] (TW) (Fishing Industry Representative (FIR))
Subject/purpose	Morgan and Mona Commercial Fisheries Stakeholder Engagement Meeting (Online Teams meeting)

	MINUTES:	**ACTION:**
1.	**Introductions** ID commented that bp and EnBW had taken onboard feedback from the November fisheries meetings to feed into the array designs. This meeting is to present these designs to understand implications on scallop fishery.	
2.	**Morgan - ID presented indicative layouts** ID - commented that had taken onboard feedback about removing turbines from the western part of the array areas, and not proposing the array design which has turbines across the whole array. GV - explained key features of the '2cNS'. Originally we had presented larger spacing of turbines to allow fishing for fishing within the Morgan array area; EnBW and bp have now revised the layouts to the request accommodate a turbine free zone over the core scallop area. However, with this exclusion of turbines, the packed boundary would be required with a minimum spacing of 1.4km and inner array of 1.8km spacing. GV asked for fisheries feedback. SK - asked whether the packed boundary would be 1.4km, which is less than a nautical mile. ID - confirmed that the effective spacing would actually be approximately 1.3km when you take into account the wind turbines. JC - asked for positions of the turbines of the packed boundary, so they could plot it. ID – discussed that the boundary is adjacent to the IoM 12nm and GV confirmed that the boundary is the lease area which can be provided to stakeholders. JC - said he was actually asking for where the eastern line of no turbines was. GV - confirmed that where the N-S line is, there would not be a packed boundary. JC - asked for a shapefile of the N-S line.	

GV - reiterated that the layout is indicative at this stage, but that MarineSpace can provide this to fisheries stakeholders.
JC - they would still lose 40% of the area that they fish, so would be essential to understand where the N-S line falls.
RH – there are 14 turbines along the packed boundary. Asked whether there could be larger turbines within the array, to avoid having packed boundary altogether.
ID - the layout is based on 17MW turbines, but still hoping for larger turbines. GV acknowledged that they are factoring for larger turbines, but need to include smaller turbines in the design envelope to gain consent. Understood that using larger turbines would minimize the number of turbines.
RH – queried where would the inter-array cables be located for the packed boundary?
GV – feedback from engineering has suggested that it is highly unlikely to only have all cables along boundary, so at this stage they cannot guarantee that there will be no cables running through any areas which are left clear for scallop fishing. . Re-highlighted commitment to bury cables. Packed boundary is key, as most optimal for the wind resource, so keeping the packed boundary allows us to remove turbines from inside the array area.
RH – emphasized the importance of not having turbines on the scallop beds, as these are very valuable to the fishermen. Could they come to a compromise to remove the turbines completely from the scallop beds?
GV – the premise of presenting these images is to show the packed boundary, but turbine locations are only indicative. Asked if there was the packed boundary, would it be better to have larger spacing?
RH – mentioned that 1.4km is only 0.7nm which is not a lot.
DW – if increased from 1.5km to 2.5km spacing, then would accommodate the fishermen. Losing too much ground with 1.4km spacing. Need to consider the impact of scour and additional areas lost to scallops.
GV – reiterated trying to find a compromise to free up the scallop grounds.
SK – could they put more turbines in the NW to remove some turbines from the scallop grounds?
ID – the array layout is still undergoing optimization, so layouts are only indicative. We appreciate that you want the western area clear of turbines.
JC – understand that the layouts are indicative, but within the arc that we provided, there are still 6 turbines. Would be useful to understand how much space this actually takes up, as appears that they would have 60% of what we asked for.
ID – this is not specifically showing 60%, but more the principles to understand how to feedback into the design layout. N-S line is arbitrary, and the southern part overlaps with the nursery grounds. Thanked for helpful feedback, which will be fed back into the process.
JC – commented that as it stands, the Morgan array layout does not fulfill their needs.

3. **Mona - ID presented indicative layouts**
   ID - commented that had taken onboard feedback about removing turbines from the central part of the array areas. Not the full extent of the scallop grounds, but includes the core scallop grounds.

JC – positions are of upmost importance to us, so would request turbine positions to be able to plot on their fishing grounds.
All – commented that it is difficult to understand what area is being shown.
DW – commented that they have to avoid the cables as well.
SK – can see that there is a corridor, but cannot see how wide this is (requested 4-5nm corridor) and cannot understand where the scallop beds are in comparison. Would suggest it looks a bit tight, but difficult to understand without a scale.
ID – apologized that image was not on admiralty chart, as these images are outputs from design optimization.
DW – noted that they have a scallop vessel fishing in that area today.
GV – asked for view on the packed boundary for Mona.
SK – packed boundary is not as much of a concern in Mona than Morgan.
JC – difficult to understand where the positions are without seeing this overlaid on a chart.
DW – asked why the importance of the packed boundary.
ID – confirmed that main wind optimization is on the east and GV noted that they don't have full results from yield analyses. But yield decreases through the wind farm to the east.
DW – said that if the turbines affect the wind, then how does it affect the water.
GV – commented that the area of the turbine in the water column is much smaller than the swept area of the turbines in the air. Studies by CEFAS that monitored different ground conditions within wind farms showed that the impacts that were concluded from the physical process modelling are in line with what has been seen post monitoring. The exception of this was Scroby – sand bar formed in wind farm which wasn't predicted to.
SK – pointed out that it is different for different projects. Asked about Manx feedback on this.
GV – confirmed that the Manx fisheries stakeholders have said there will be no impact as they will be able to fish between the turbines.
DW – queen scallops are such a small industry. Bangor said that spat will come out of Barrow wind farm, and due to tidal currents this could affect them. Surprised that Manx were not concerned about the impacts on spat.
SK – Manx do not fish outside of 12nm and never in Mona. They would be more concerned about impacts on fish stocks.
RJ – Manx had evidence that they sometimes fish within Morgan.
DW – if best yield on west, can they not pack more turbines in on the western side?
ID – confirmed that this is all indicative, and said that the wake modelling will affect this. Wanted to discuss with fisheries first before optimization.
GV – noted that also have to take into account other receptors, e.g. shipping and navigation, marine mammals, fish and shellfish, benthic ecology.
DW – more turbines packed into west would be better for them, to allow them to fish. Already squeezed by cables.
ID – Summarized that the WCSP are happy for more turbines to the west and a larger corridor in the middle?

GV – Also summarized that WCSP are accepting of a packed boundary on this project, if turbines are more tightly packed to the west to increase the area of the corridor to avoid scallop beds.
SK – cannot get perspective of where array boundary is, so would like to see the scallop beds overlaid. But yes are happy for packed boundary and would prefer turbines packed in west to avoid core scallop ground. Also asked about the inter-array cables.
GV – would aim to run inter-array cable up and down rows, with fewer between them running E-W. Cannot say that there would be none across core scallop ground, but are seeking to minimize them.
ID – also cables will be fully buried and will be monitoring this, so impact will not be as much of a problem.
RH – asked why no turbines in eastern area, as this would solve a lot of problems.
ID – wind yields.
RH – asked that next meeting is face to face and so that they can look at the arrays on plotters, so that fishers can understand where the areas are properly.
GV – will aim to have a face to face meeting in March 2023 after the Preliminary Environmental Information Report (PEIR) has been submitted, with charts to facilitate. Must highlight that the PEIR will be based on wider scoping area and not be able to include the feedback, as chapters are already being finalized now to be ready to submit in early 2023.
RJ – asked what plotter systems WCSP use?
JC – confirmed that they are using Olex.
RH – using Sedena on his laptop.
JC – trying to match up the array layout chart with his plotter. Seemed that the corridor is too far to the east based on the locations of the cables. Really need to look at positions to see if the compromise is in the correct area.
ID – reiterated these are not definitive. Will investigate packed boundary and higher density of turbines in the west, and to try to avoid core scallop grounds.
GV – summarized feedback on Morgan, WCSP would prefer no turbines on boundary, but if there were a packed boundary, then would prefer wider spacing. WCSP are keen to understand what percentage of the scallop area has turbines.

Meeting end.

H.20 Commercial fisheries meeting 19

H.20.1 Minutes

MOM Number	EOR0801	**REV. No.** :	03
MOM Subject	Commercial Fisheries Engagement – Isle of Man		

MINUTES OF MEETING

MEETING DATE	11th September 2023
MEETING LOCATION	Teams meeting
RECORDED BY	[redacted] RPS
ISSUED BY	

PERSONS PRESENT:

- [redacted] – CEO, Manx Fish Producers Organisation
- [redacted] – Morgan and Mona Commercial Fisheries EIA author, Marine Space/ERM
- [redacted] – Seafisheries Policy Officer, IoM Government
- [redacted] – Morgan Offshore Wind Project (Generation Assets) Offshore Human Lead, bp
- [redacted] – Offshore Fisheries Liaison Officer, Marine Space/ERM
- [redacted] – Morgan EIA coordinator, RPS
- [redacted] – DEFA IoM
- [redacted] – Morgan and Mona Fish and Shellfish EIA author, RPS
- [redacted] – Fisheries Liaison Officer, MarineSpace/ERM
- [redacted] – Mona Offshore Consent Lead, bp

ITEM NO:	DISCUSSION ITEM:	Actions	Date
1.	**Project status:** GV provided an overview of both projects progress to date, the current status of the projects and expected application dates.		
2.	**EIA update:** RJ provided an overview of the key feedback that had been received on the Preliminary Environmental Information Report (PEIR) in relation to commercial fisheries and how the project was addressing this within the environmental assessment.		
3.	**Data availability:** MoU to share data with Manx fishermen to provide AIS data to support data gap on queen scallops. OFLO on board survey vessels including radar, comms data and AIS data which will help support the updated assessment for the ES.		

4.	**Displacement** - concerns about displacement during construction and negligible impacts identified in assessment. Assessment looks at rolling advisory exclusion zones during construction which would allow areas to remain open to fishing throughout the construction phase. During operation advisory exclusion zones of 500m would only be in place during period of major maintenance. **DB:** exclusion zones still have potential impacts due to tow directions, wind conditions, tides etc which is more complicated in practice affect. **GV:** responded that we are aware of the likely complexity on managing construction activities whilst maintaining the area open to fishing activities. However, GV also stated that there should be sufficient time to ensure communication processes and plans are discussed and in place prior to commencement of construction.. Ongoing liaison to give prior warning and the Fisheries Liaison and Coexistence Plan will be used to plan ahead. **DB:** Queen scallop tend to aggregate, not easy to move to other grounds if they're aggregating in one particular area. Need to fish at a certain density to make it financially feasible. If these areas are within exclusion zones then it would affect value of fishery during construction. **DB:** There are also seasonal closures within the Isle of Man Territorial Sea for both king and queen scallop to protect the spawning periods. King scallop: from 01 June to 31 October; and queen scallop from 01 April to 30 June.		
5.	**Cables:** there were no queries raised during the meeting on the proposed approach to cable installation which involves burial/backfill with existing seabed substrate.		
6.	**Cumulative effects assessment:** The proposed IoM Offshore wind farm and the proposed Crogga oil and gas production will be brought into cumulative assessment. The extent of assessment will depend on the information available on these projects. **DB:** mentioned the lack of information of the IoM Offshore Windfarm and the proposed Crogga and the overlap of AfL with the Orsted Offshore Windfarm.		
7.	**Spatial squeeze:** this will be considered within the cumulative assessment, MCZ displacement will be considered.		
8.	**Brexit:** the potential impact of Brexit on fish prices will be looked at within the assessment. **DB:** clarified Brexit has affected costs rather than markets. Peruvian queen scallop market is a factor in prices.		

9.	**Project changes and commitments - Morgan Gen** **GV**: talked through key changes to the project following consultation. • Reduction in extent of array area • TEZ in western corner of array area • Minimum spacing 1.4km • North south orientation of rows • Two lines of orientation • Max turbines decreased to 96 (removed smallest turbine from project envelope) • Removal of monopile foundation as an option • Reduced max length of array cables (25%) **TW**: asked for lat/long of the proposed array boundaries as well as northings and eastings. To update and circulate with slides. **GV:** clarified that exclusion zones do not apply once windfarm is in operation unless there is maintenance being undertaken. Safety Zone Statement will detail intention to apply for the ability to implement safety zone during construction and periods of major maintenance during operations. There is an application process for this which is undertaken post-consent and pre-construction and has a public consultation applied to it. **DB:** queen scallop fish with nets (not dredgers) and lighter gear so less likely to be impacted than scallop fishers with heavier gear.	**ACTION bp** To provide both sets of coordinates with the slides Morgan Gen newsletter	
10.	**Project changes and commitments - Mona** **GV:** talked through key changes to the project following consultation. • Reduction in extent of array area • TEZ in middle of array area • Minimum spacing 1.4km • North south orientation of rows • Max turbines decreased to 96 (removed smallest turbine from project envelope) • Removal of monopile foundation as an option • Reduced max length of array cables (35%)	**ACTION bp** To provide both sets of coordinates with the slides **Mona newsletter** here	
11.	**Next Steps:** **GV:** discussed the next steps for the project: • Engagement on outline Fisheries Liaison and coexistence plan. Q4 this year • Engagement on statements of common ground. Post submission once stakeholders have reviewed Application for consent.		

12.	**LS:** asked whether additional data could be made available on queen scallop fishing grounds outside of the array boundaries to provide characterisation context. Data request would be for information available within the last 5 years. **DB:** can request this from fishers and said information should be available from plotters. The data varies a lot year to year due to queen scallop aggregation. There is very little management which makes it fairly boom and bust. Fisheries management plan will be done for English waters in next three years.	**ACTION DB** To request and provide data to bp/RPS for inclusion within their fish and shellfish assessment	

H.21 Commercial fisheries meeting 20

H.21.1 Minutes

MOM Number	EOR0801	**REV. No.** :	03
MOM Subject	Commercial Fisheries Engagement – Kirkcudbright		

MINUTES OF MEETING

MEETING DATE	19th September 2023, 10:00
MEETING LOCATION	West Coast Sea Products, Kirkcudbright; Teams meeting.
RECORDED BY	[redacted]
ISSUED BY	

PERSONS PRESENT:

- [redacted] – Scottish White Fish Producers
- [redacted] – Brown and May Marine (Morecambe)
- [redacted] West Coast Sea Products
- [redacted] – West Coast Sea products
- [redacted] – Skipper
- [redacted] – Skipper
- [redacted] – Floatation Energy (Morecambe)
- [redacted] – Morgan and Mona Commercial Fisheries EIA author, Marine Space/ERM
- [redacted] – Offshore Fisheries Liaison Officer, Marine Space/ERM
- [redacted] Fisheries Industry Representative, Marine Space/ERM
- [redacted] – Mona Offshore Consents Lead, bp

PERSONS PRESENT ONLINE:

- [redacted] Morgan EIA coordinator, RPS
- [redacted] – Morgan and Mona Fish and Shellfish EIA author, RPS
- [redacted] Morgan and Mona Commercial Fisheries EIA Project Director, Marine Space/ERM
- [redacted] – Morgan Offshore Wind Project (Generation Assets) Offshore Human Lead, bp

ITEM NO:	DISCUSSION ITEM:	Actions	Date
1.	**Project status: GV:** provided an overview of the projects progress to date, the current status of the projects and expected application dates.	**Bp to share slide pack with copy of minutes**	
2.	**EIA update: RJ and JD:** provided an overview of the key feedback that had been received on the Preliminary Environmental Information Report (PEIR) in relation to commercial fisheries and how the project was addressing this within the environmental assessment.		

3.	**Data used:** Additional data from OFLO observations on board survey vessels. Additional information from AIS data. **SK:** IoM data – IoM fisheries use this ground very little. **SK:** pleased to see that negligible adverse impacts are being reviewed. The fishing community is gravely concerned about the impacts of the offshore wind developments to the seabed and how this will affect the scallop stock. **JC:** concerns about data that is being presented, how is the fishing data used/presented publicly? **RJ:** confirmed that vessel names, company names etc do not get shared. It's only the vessel locations that are referred to. Try to get the balance right of presenting data but not giving fishing areas/positions away.		
4.	**Co-existence:** key feedback on coexistence through the PEIR. The design envelope has been amended to take account feedback on coexistence from pre-PEIR and PEIR consultation. These project commitments were presented later in the meeting and are summarised in item no.s 10 and 11		
5.	**Displacement** - concerns about displacement during construction and negligible impacts identified in assessment. Assessment looks at rolling advisory exclusion zones which would allow areas to remain open to fishing throughout construction. **GV:** we will submit a Safety Zone Statement which describes the intention to apply for safety zones. These will be applied for separately post consent. 500m exclusion zones around vessels during construction and 50m exclusion zones around infrastructure which is partially built. 500m rolling exclusion zones around cable laying vessels. Potentially temporary exclusion zones around cable laid, but not yet buried, subject to which cable installation method is used. **RaH:** Cable laying is a big issue if there will be large areas of closure due to cables being laid down and being buried later. Experience on Scottish projects has been cables have been laid on the seabed and then buried later. **GV**: project aim is to bury vessels to minimum 0.5m. Where seabed conditions don't allow then cable protection may be required but project aim is to minimise this. **JK:** is there an understanding of current seabed conditions and whether ground is suitable for cable burying and, or where it is expected that cable burial will not be possible and cable protection required? **GV:** Not sure at this stage and it is likely that this cannot be answered until the cable installation contractor(s) are appointed to the project. Project team will pick this up with engineers. **ACTION**	**ACTION:** GV to ask engineers whether they have established where cable installation may be more challenging and cable protection may be required.	

6.	**Cables:** Predominantly north-south alignment of array cables with fewer east-west orientated cables where possible, to avoid fishing tows, based on feedback from fishers was that orientation should be north/south direction based on their fishing practices.		
7.	**Cumulative effects assessment:** The proposed IoM Offshore wind farm and the proposed Crogga oil and gas production will be brought into cumulative assessment. The extent of assessment will depend on the information available on these projects. **RaH:** Rumour of project near Stranraer. Was under Scotwind but got removed. **GV:** there needs to be a licencing round first before it would be considered within the cumulative assessment which screens in projects based on three tiers – the tiers categorise projects depending on what stage they are within the development process e.g. lease awarded, Scoping, Construction etc. There is unlikely to be another Scotwind leasing round for a few years.	**ACTION:** Check that this is included within the CEA long list	
8.	**Spatial squeeze:** this will be considered within the cumulative assessment, MCZ displacement will be considered. **Fishers:** Scallops are hit the hardest because of leasing rounds being on sandbank areas. **GV:** explained that the locations of the leasing rounds is established by The Crown Estate who undertake assessments and spatial planning before lease areas are released. Shallow areas of seabed are needed due to engineering requirements of fixed turbine foundations which means lease areas are currently dictated by depth. **GV:** Commercial fisheries are included in the decision and assessment along with all other topics to inform assessment. Detailed assessment process through the environmental impact assessment to understand the existing use of the area and potential impacts. Offshore wind farms are not always granted consent based on the potential impacts that are identified. [short discussion on wind farms which have been refused consent or not taken forward due to identified impacts]. [short discussion on CfD and lack of bidders in offshore wind this year. Strike price was not increased from last year despite escalating costs for industry which is why developers were unable to bid].		
9.	**Brexit:** the potential impact of Brexit on fish prices will be looked at within the assessment. Understanding further how Brexit is influencing fishing activity in the area		

10.	**Project changes and commitments – Morgan Gen** **GV**: talked through key changes to the project following consultation. This information will be published in the public domain w/c 18 September to confirm the commitments that are being made. • Reduction in extent of array area • TEZ in western corner of array area. Turbine exclusion zones based on information provided by fishers last year. There will still be a boundary of turbines around the TEZ. • Minimum spacing 1.4km Minimum spacing has increased which should allow better access. • Roughly north south orientation of rows – may need to go slightly off this if ground conditions dictate. • Two lines of orientation • Max turbines decreased from 107 to 96 (removed smallest turbine from project envelope) • Removal of monopile foundation as an option • Reduced max length of array cables (22%) – reducing overall length reduces cable protection allowance. **GV:** Cable protection will only be used where cables can't be buried. Aim is to bury cables at sufficient depth where they won't become uncovered or require cable protection. **GV:** Commitments will be secured through an Outline Fisheries Liaison & Co-existence Plan which will be submitted with the application for consent. The full plan will be prepared post consent which will include full details of the information set out within the outline plan.	Final Morgan and Mona newsletters also available on the Morgan website here and Mona website here.	

11.	**Project changes and commitments – Mona** **GV:** talked through key changes to the project following consultation. • Reduction in extent of array area • TEZ in middle of array area • Minimum spacing 1.4km • North south orientation of rows • Max turbines decreased from 107 to 96 (removed smallest turbine from project envelope) • Removal of monopile foundation as an option • Reduced max length of array cables (35%) – reducing overall length reduces cable protection allowance. **GV:** as with Morgan Gen, the commitments will be secured through an Outline Fisheries Liaison & Co-existence Plan which will be submitted with the application for consent. **RaH:** raised concerns about cables crossing the TEZ and the impact this would have on the key scallop area within the Mona array. Particular concerns were raised about cables crossings in these areas where rock protection will be needed. **GV:** confirmed that cables will need to be laid across the TEZ likely east to west. Areas of rock protection needed for cable crossings will be discrete and will be marked on charts. **RaH, DW & SK:** rock protection is a snagging hazard particularly for cable protection proud of the seabed / in the water column. Fishers preference would be for commitment that there would be no cables within the TEZ. **GV:** The minutes will record fishers preference of no cables within the TEZ, but installation of some cables through the TEZ will be required. However, as stated earlier, the Project will aim to reduce number of east-west cables, and thus may only have 2 or 3 cables through the TEZ. Mattresses can have tapered edges which reduce snagging risk. The cable installation methodology and requirements for cable protection will be prepared and submitted to the Licencing Authority prior commencing cable installation works. **RaH:** concerns that cable layout will be decided post consent. Surely cable positions have a big impact and would be best discussed pre-consent. **GV:** there will be further consultation on this post consent but due to the nature of cable laying process it is difficult to provide positions pre-consent given the long timeframe between consent application, gaining consent and commencing construction which is a few years. During this time there may be seabed changes and technology changes which would affect the cable laying. If a cable laying plan were made now the design may be out of date, this is why final design is decided post consent. In EIA the assessment is always based on the worst case scenario to ensure the maximum extent of potential impacts are considered within the assessment. The final design must always be within the envelope of the maximum design scenario that's been assessed.	Final Morgan and Mona newsletters also available on the Morgan website here and Mona website here.	

	JL: Cable installation plan sets out detail before installation and there is opportunity to see this before installation commences, however it will always be the 'as built' information which is provided on plans/charts etc and which will shows sea users exact locations of the cables. **GV:** there will be monitoring to determine whether cables become expose and need reburial. [Short discussion on guard vessels and use of fishing vessels – project is open to this but needs to make sure that vessels being used are appropriate for the task]. **GV:** the boundary changes to the array areas have been made for a number of different reasons which will be detailed in the Site Selection and Considerations of Alternatives chapter within the Environmental Statement. The reduction to the extent of the array area was primarily related to chipping and navigation, but a number of the other changes made relate to commercial fisheries including the TEZ, increased spacing between infrastructure and orientation of wind turbine rows.		
12.	**Extent of area important for scallop stocks** **GV:** please can fishers provide more information on other areas which are important for scallop stock to characterise and provide context in the region. **LS:** Also interested to understand other areas fished for scallop. Current data we hold suggests that only important areas are within array but would be useful to be able to extrapolate data to areas outside of Mona and Morgan array areas. This will help with understanding recoverability, spill over etc and will help inform the assessment. **JC:** this would be guess work, not always easy to know and this varies. **LS:** can we infer from sediment type or is all of the Irish Sea area considered important? **JC:** will take this away and provide any additional information after the meeting based on their current knowledge.	**ACTION:** Fishers to provide further information on areas outside of array boundaries which may be important for scallop recruitment	

13.	**Next Steps:** **GV:** discussed the next steps for the project: • Engagement on outline fisheries engagement and coexistence plan. Q4 this year • Engagement on Statements of Common Ground. Post submission once stakeholders have reviewed Application for consent. These documents inform the Examining Authority of where agreement has/hasn't been reached on key issues. These can be started pre-application but stakeholders often want to see the findings of the final assessment beforehand. **RaH & SK:** Statement of common ground is a big ask when long term impacts aren't known, particularly on queen scallop. It will be difficult to understand impacts until it's built. This is the biggest concern for fishers with offshore wind. This fishery is critical for the coastal community. If the fishery falters, then the whole community is impacted. Project changes go a long way to address concerns however, main amendments seem to address navigational issues and fishers are seriously concerned about long term impacts to scallop stock. **GV:** push for 1.4km was primarily to address fishing concerns and reduce impacts on fisheries. The TEZ, north-south orientation of wind turbine rows and aim to reduce east-west cable runs over north-south cable runs are all for the benefit of commercial fishing activities.. **Further engagement will be as required. Minutes and slides will be shared after the meeting.**		
14.	**AoB** **GV:** the project changes and commitments are now on the bp website and have been emailed out to stakeholders to inform people of the changes. **Morgan Generation Assets:** [redacted] **Mona:** [redacted]		

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H.22.1 Minutes

MOM Number	EOR0801	**REV. No.**	: 03
MOM Subject	Commercial Fisheries Engagement – Annan		

MINUTES OF MEETING

MEETING DATE	19th September 2023, 15:00
MEETING LOCATION	Corner House Hotel; Annan; Teams meeting.
RECORDED BY	[redacted]
ISSUED BY	

PERSONS PRESENT:

- [redacted] (CN) – Annan Fisher
- [redacted] (IM) - Floatation (Morecambe project)
- [redacted] (JD) – Morgan and Mona Commercial Fisheries EIA author, MarineSpace/ERM
- [redacted] (RJ) – Offshore Fisheries Liaison Officer, MarineSpace/ERM
- [redacted] (TW) – Fisheries Industry Representative, MarineSpace/ERM
- [redacted] (GV) – Mona Offshore Consents Lead, bp

PERSON PRESENT ONL NE:

- [redacted] (MK) – Morgan EIA coordinator, RPS
- [redacted] (LS) – Morgan and Mona Fish and Shellfish EIA author, RPS
- [redacted] (RH) – Morgan Offshore Wind Project (Generation Assets) Offshore Human Lead, bp
- [redacted] (JL) – Morgan and Mona Commercial Fisheries EIA Project Director, MarineSpace/ERM

ITEM NO:	DISCUSSION ITEM:	Actions	Date
1.	**Project status: GV:** provided an overview of the projects progress to date, the current status of the projects and expected application dates.	**Bp to share slide pack with copy of minutes**	
2.	**EIA update: RJ and JD:** provided an overview of the key feedback that had been received on the Preliminary Environmental Information Report (PEIR) in relation to commercial fisheries and how the project was addressing this within the environmental assessment.		
3.	**Data used:** Additional data from OFLO observations on board survey vessels. Additional information from AIS data.		
4.	**Co-existence:** key feedback on coexistence through the PEIR. The design envelope has been amended to take account feedback on coexistence from pre-PEIR and PEIR consultation. These project commitments were presented later in the meeting and are summarised in item no.s 10 and 11 **GV**: not planning to close wind farm areas during construction. There will be safety zones around construction vessel activity of 500m and of 50m around wind turbines / offshore substation platforms where construction is paused but not yet finished. There will also be 500m rolling exclusion zones around cable installation vessels. During operation safety zones will only be required for major maintenance activities.		

5.	**Displacement** - concerns about displacement during construction and negligible impacts identified in assessment. Assessment looks at rolling advisory exclusion zones which would allow areas to remain open to fishing throughout construction.		
6.	**Cables:** Aim to lay array cables north-south rather than east-west where possible, to reduce for potential to interfere with predominantly north sound fishing activity. **GV**: committed to target range of 0.5 – 3m deep for cable instalation. A cable burial risk assessment will be undertaken to understand how deep the cables need to be buried.. Aim is to bury cables and reduce need for cable protection wherever possible. Cable crossings will require cable protection. Aim to minimise cable crossings as far as possible. Methodology for cable protection will depend on specific crossing. **CN**: Regarding cable burial depth and fishing gear penetration depth, note that scallop fishing gear tooth bars are 9-10 inches long. **RJ**: This information has been fed into the assessment.		
7.	**Cumulative effects assessment:** The proposed IoM Offshore wind farm and the proposed Crogga oil and gas production will be brought into cumulative assessment. The extent of assessment will depend on the information available on these projects.		
8.	**Spatial squeeze:** this will be considered within the cumulative assessment, MCZ displacement will be considered.		
9.	**Brexit:** the potential impact of Brexit on fish prices will be looked at within the assessment. Understanding further how Brexit is influencing fishing activity in the area. **CN:** price of steel has increased their costs on gear requirements and maintenance as well as price of fuel.		

10.	**Project changes and commitments – Morgan Gen** **GV**: talked through key changes to the project following consultation. This information will be published in the public domain w/c 18 September to confirm the commitments that are being made. • Reduction in extent of array area • TEZ in western corner of array area. Turbine exclusion zones based on information provided by fishers last year. There will still be a boundary of turbines around the TEZ. • Minimum spacing 1.4km Minimum spacing has increased which should allow better access. • Roughly north south orientation of rows – may need to go slightly off this if ground conditions dictate. • Two lines of orientation • Max turbines decreased from 107 to 96 (removed smallest turbine from project envelope) • Removal of monopile foundation as an option • Reduced max length of array cables (22%) – reducing overall length reduces cable protection allowance. **GV:** Commitments will be secured through an Outline Fisheries Liaison & Co-existence Plan which will be submitted with the application for consent. This outline plan will be issued to fisheries stakeholders for comment. The full plan will be prepared post consent which will include full details of the information set out within the outline plan.	Final Morgan and Mona newsletters also available on the Morgan website **here** and Mona website **here**.	
11.	**Project changes and commitments – Mona** **GV:** talked through key changes to the project following consultation. • Reduction in extent of array area • TEZ in middle of array area • Minimum spacing 1.4km • North south orientation of rows • Max turbines decreased from 107 to 96 (removed smallest turbine from project envelope) • Removal of monopile foundation as an option • Reduced max length of array cables (35%) – reducing overall length reduces cable protection allowance. **GV:** as with Morgan Gen, the commitments will be secured through an Outline Fisheries Liaison & Co-existence Plan which will be submitted with the application for consent. **CN:** no major concerns with information presented. **GV:** other key feedback was for predominantly north south alignment of cables. Project will try to reduce number of cables east west and bury them wherever possible to reduce potential impacts on tows as far as possible.	Final Morgan and Mona newsletters also available on the Morgan website **here** and Mona website **here**.	

12.	**Extent of area important for scallop stocks** **GV:** explained data that was received and fed into the PEIR which was based on feedback from other fishers in the area. Currently does not include data for areas outside of the array areas. It would be helpful to have any data on areas outside of the array boundaries to understand areas important for fishing or supporting scallop stock important for scallop stock for characterisation and regional context. **LS:** Any information on areas which are important for fishing, supporting scallop stock etc which are outside of the array boundaries. Current data we hold suggests that only important areas are within array but would be useful to be able to extrapolate data to areas outside of Mona and Morgan array areas. This will help with understanding recoverability, spill over etc and will help inform the assessment. **CN:** areas change seasonally but can supply data on areas which have been important over the last 4 – 5 years. TW to reach out to CN for this data.	**ACTION:** Chris to provide data on last 4-5 years of fishing in that area. TW to Reach out to CN for this data.	
13.	**Next Steps:** **GV:** discussed the next steps for the project: • Engagement on outline fisheries engagement and coexistence plan. Q4 this year • Engagement on Statements of Common Ground. Post submission once stakeholders have reviewed Application for consent. These documents inform the Examining Authority of where agreement has/hasn't been reached on key issues. These can be started pre-application but stakeholders often want to see the findings of the final assessment beforehand. **Further engagement will be as required. Minutes and slides will be shared after the meeting.**		
14.	**AoB** **GV:** the project commitments are now on the bp website and have been emailed out to stakeholders to inform people of the changes. **Morgan Generation Assets:** [redacted] **Mona:** [redacted] **CN**: main concern is loss of fishing ground. Main ground is up and down 4 degree line which is within the turbine free area (the TEZ).		

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H.23.1 Minutes

MOM Number	EOR0801	**REV. No.**	**:** 03
MOM Subject	Commercial Fisheries Engagement – Blackpool		

MINUTES OF MEETING

MEETING DATE	20th September 2023, 16:00
MEETING LOCATION	The Carousel, Blackpool; Teams meeting
RECORDED BY	[redacted] RPS
ISSUED BY	

PERSONS PRESENT:

- [redacted] (KW)– Industry Engagement Manager, Seafish
- [redacted] (MR) – Fisher, Lucky Lady
- [redacted] (RW) – Fisher, Grace Margaret Ann
- [redacted] (PS) – Fisher, Ribble Reaper
- [redacted] (AB) – Fisher, Avocet
- [redacted] (SB) – Ex-Inshore Fisheries and Conservation Authorities officer
- [redacted] P) – Fisher, Ribble Ranger
- [redacted] (RC) – Brown and May Marine (Morecambe Project)
- [redacted] JD) – Morgan and Mona Commercial Fisheries EIA author, Marine Space/ERM
- [redacted] (NJ) – Consents Lead, Floatation Energy (Morecambe Project)
- [redacted] (SJ) – Marine Management Organisation (MMO)
- [redacted] (RJ) – Offshore Fisheries Liaison Officer, Marine Space/ERM
- [redacted] (TW) – Fisheries Industry Representative, Marine Space/ERM
- [redacted] (GV) – Mona Offshore Consents Lead, bp

PERSONS PRESENT ONLINE:

- [redacted] (MK) – Morgan EIA coordinator, RPS
- [redacted] (LS) – Morgan and Mona Fish and Shellfish EIA author, RPS
- [redacted] (RH) – Morgan Offshore Wind Project (Generation Assets) Offshore Human Lead, bp

ITEM NO:	DISCUSSION ITEM:	Actions	Date

1.	**Project status: GV:** provided an overview of the project progress to date, the current status of project and expected application dates. Consultation events were held during the development of the PEIR last year with fishing groups. PEIR documents submitted in April this year with consultation ending on 4th June 2023. Reviewing consultation feedback on the projects and how to address responses received. Series of engagement events now to explain how feedback from the PEIR is being considered. Anticipating submitting the Mona application in Q1 2024 and the Morgan Gen application in Q2 2024. A number of commitments have been made to address potential impacts on commercial fisheries. Commitments will be secured through an Outline Fisheries Liaison & Co-existence Plan FL&CP) which will be submitted with the application for consent. This outline plan will be issued to fisheries stakeholders for comment. The full plan will be prepared post consent which will include full details of the information set out within the outline plan. **PS:** Bass and Dover Sole fishery up the coast. Concerns about the impact of underwater sound from the piling. Can feel the vibrations from the piling. **GV:** underwater sound is recognised as a big issue during the construction phase. Lots of work on reducing impacts to marine mammals and fish, approach of soft start piling was used historically with a focus on marine mammals in particular. Defra are doing a lot of work looking at noise abatement which is a requirement on all noisy activities not just piling. Focus on new methods to reduce impacts on noise sensitive species. Noise pollution falls under the Water Framework Directive which looks at reducing noise pollution in the sea from many different activities. **KW:** has there been much work done on sole and bass species which are of interest here? **GV:** generally fish most sensitive to noise are species with swim bladder. Flat fish don't have a swim bladder and are less sensitive to pressure component of noise. Herring and sprat (cupleids) have swim bladder connected to ears and most sensitive, cod and gadoid have swim bladder but not connected so are less sensitive. **PS:** clarified that mid water pelagic species will have swim bladders. **GV:** will take away and look at evidence and make sure it is considered within the environmental impact assessment. **AB:** very important species for the area and very valuable. Impacts on the species would have significant impact on the fishery.	**ACTION:** bp to share slide pack with copy of minutes **ACTION:** RPS to look at evidence of noise impacts on seabass.	

2.	**EIA update: RJ** and **JD:** provided an overview of the key feedback that had been received on the Preliminary Environmental Information Report (PEIR) in relation to commercial fisheries and how the project was addressing this within the environmental assessment.		
3.	**Data used:** Additional data from OFLO observations on board survey vessels. Additional information from AIS data.		
4.	**Co-existence:** key feedback on coexistence through the PEIR. The design envelope has been amended to take account feedback on coexistence from pre-PEIR and PEIR consultation. These project commitments were presented later in the meeting and are summarised in item no.s 10 and 11 **GV:** not planning to close wind farm areas during construction. There will be safety zones around construction activity of 500m and of 50m around construction which is paused but not yet finished. There will also be 50m exclusion zones around cable installation vessels. During operation safety zones will only be required for certain maintenance activities.		
5.	**Displacement** - concerns about displacement during construction and negligible impacts identified in assessment. Assessment looks at rolling advisory exclusion zones which would allow areas to remain open to fishing throughout construction.		
6.	**Cables:** Position of inter-array cables away from tows to allow routing of tows in north/south direction. there were no queries raised during the meeting on the proposed approach to cable installation which involves burial/backfill with existing seabed substrate. **PS:** concerns over cable burying and snagging and process of cables becoming removed on the seabed. **GV:** previous projects have had success for laying and installing in one go in this area. **GV:** the aim is to bury cables wherever possible with the project committed to target range of 0.5 – 3m deep. A cable burial risk assessment will be undertaken to understand how deep the cables need to be buried. This will need to be approved by MMO or NRW before proceeding. Minimum depth of 0.5m. Aim is to bury cables and reduce need for cable protection wherever possible. Cable crossings will require cable protection. Aim to minimise cable crossings as far as possible. Methodology for cable protection will depend on specific crossing, mattressing is often used for cable crossings where concrete mattress is put down to protect the cables.		
7.	**Cumulative effects assessment:** The proposed IoM Offshore wind farm and the proposed Crogga oil and gas production Agreement for Lease (AfL) will be brought into cumulative assessment. The extent of assessment will depend on the information available at the time of the assessment on these projects.		
8.	**Spatial squeeze:** this will be considered within the cumulative assessment, MCZ displacement will be considered.		

9.	**Brexit:** the potential impact of Brexit on fish prices will be looked at within the assessment. Understanding further how Brexit is influencing fishing activity in the area. **SB:** Has anyone looked into mussels and cockles – this is a huge industry in the North West. **GV:** Shellfish has been consistently raised as a concern in the area. One question is where are resources which feed scallop and other shellfish stock are, this is currently a bit of a data gap.		
10.	**Project changes and commitments – Morgan Gen** **GV**: talked through key changes to the project following consultation. This information will be published in the public domain w/c 18 September to confirm the commitments that are being made. • Reduction in extent of array area • TEZ in western corner of array area. Turbine exclusion zones based on information provided by fishers last year. There will still be a boundary of turbines around the TEZ. • Minimum spacing 1.4km Minimum spacing has increased which should allow better access. • Roughly north south orientation of rows – may need to go slightly off this if ground conditions dictate. • Two lines of orientation • Max turbines decreased from 107 to 96 (removed smallest turbine from project envelope) • Removal of monopile foundation as an option • Reduced max length of array cables (22%) – reducing overall length reduces cable protection allowance. **SB:** query on scour protection and types being considered. Shouldn't be limestone as this could be incompatible with mussel settlement. **ACTION:** bp/RPS to take this away and look into.	**ACTION bp/RPS:** limestone not compatible with mussel spat settlement and should not be considered as a material for scour protection. Final Morgan and Mona newsletters also available on the Morgan website here and Mona website here.	
11.	**Project changes and commitments – Mona** **GV:** talked through key changes to the project following consultation. • Reduction in extent of array area • TEZ in middle of array area • Minimum spacing 1.4km • North south orientation of rows • Max turbines decreased from 107 to 96 (removed smallest turbine from project envelope) • Removal of monopile foundation as an option • Reduced max length of array cables (35%) – reducing overall length reduces cable protection allowance.	Final Morgan and Mona newsletters also available on the Morgan website here and Mona website here.	

12.	**Extent of area important for scallop stocks** **GV:** explained data that was received and fed into the PEIR which was based on feedback from other fishers in the area. Currently does not include data for areas outside of the array areas. It would be helpful to have any data on areas outside of the array boundaries to understand areas important for fishing or supporting scallop stock important for scallop stock. **GV:** any information that can be provided on shellfish spatfall would be really helpful. **LS:** any information considered important for seeding cockle and mussel fishing grounds or important for fishing this would be really useful. **MR:** Has contact details for a fisheries scientist at NWIFCA who has a lot of useful data on shellfish in the area. TW to reach out to MR for this data.	**ACTION:** any relevant data to be shared via TW Watson or RJ, at MarineSpace. TW to reach out to MR for this data.	
13.	**Next Steps:** **GV:** discussed the next steps for the project: • Engagement on outline fisheries engagement and coexistence plan. Q4 this year. Project will share outline plan and request input from stakeholders. Tried and tested tool which we will be building on for this project. • Engagement on Statements of Common Ground. Post submission once stakeholders have reviewed Application for consent. These documents inform the Examining Authority of where agreement has/hasn't been reached on key issues. These can be started pre-application but stakeholders often want to see the findings of the final assessment beforehand. • Looking at potential to create a fisheries working group for the east Irish sea as a way to keep the industry aware of plans should the projects gain consent. We have been operating a marine navigation engagement forum for the past couple of years to engage on shipping and navigation issues and the project will look at trying to create something similar for fisheries. **GV:** process is likely to focus more on unresolved issues now. **Minutes and slides will be shared after the meeting.**		
14.	**AoB** **GV:** the project commitments are now on the bp website and have been emailed out to stakeholders to inform people of the changes. [Discussion on location of Morgan landfall and process for coming ashore. To be discussed further in Transmission Assets meeting following on from this Mona and Morgan meeting] [redacted]		

H.24 Commercial fisheries meeting 23

H.24.1 Minutes

MOM Number	EOR0801	**REV. No.**	**:** 03
MOM Subject	Commercial Fisheries Engagement – Whitehaven		

MINUTES OF MEETING

MEETING DATE	20th September 2023: 10am
MEETING LOCATION	Whitehaven Harbour Commissioners, Whitehaven; and Teams meeting.
RECORDED BY	[redacted] RPS
ISSUED BY	

PERSONS PRESENT:

- [redacted] (MR) – Deputy Chief Executive, National Federation of Fisherman's Organisations (NFFO)
- [redacted] (AVB) – NFFO Services offshore
- [redacted] (JG) – Fisher, JA Graham Shellfish
- [redacted] (AG) – Fisher, JA Graham Shellfish
- [redacted] (RG) – Whitehaven Fishermen's Cooperative and NFFO
- [redacted] (SH) – Fisher, Chelaris
- [redacted] (SP) – Fisher, P and M Fishing
- [redacted] (SC) – Marine Mammal Organisation (MMO)
- [redacted] (EW) – MMO
- [redacted] (JD) – Morgan and Mona Commercial Fisheries EIA author, MarineSpace/ERM
- [redacted] (RJ) – Offshore Fisheries Liaison Officer, MarineSpace/ERM
- [redacted] (TW) – Fisheries Industry Representative, MarineSpace/ERM
- [redacted] (GV) – Mona Offshore Consents Lead, bp

PERSONS PRESENT ONLINE:

- [redacted] (JL) – Morgan and Mona Commercial Fisheries EIA Project Director, MarineSpace/ERM
- [redacted] (MK) – Morgan EIA coordinator, RPS
- [redacted] S) – Morgan and Mona Fish and Shellfish EIA author, RPS
- [redacted] (RH) – Morgan Offshore Wind Project (Generation Assets) Offshore Human Lead, bp

ITEM NO:	DISCUSSION ITEM:	Actions	Date

1.	**Project status: GV:** provided an overview of the projects progress to date, the current status of the projects and expected application dates. PEIR documents submitted in April this year with consultation ending on 4th June 2023. We have reviewed consultation feedback on the projects and how to address responses received. **Fishers:** Consultation process, was feedback through consultation in person or solely online? **GV:** responded by sharing that the Projects have spoken to fishers' face to face as well as online through consultation events earlier in 2023. Statutory consultation information was published on the website and lots of feedback given from a range of fishermen from around the Irish sea. Explained that consultation report will be submitted with application which will describe all of the consultation undertaken and all of the feedback received and how that feedback has been taken on board. **MR:** Happy to share NFFO response to the S42 responses with others at the meeting.	**ACTION Bp:** to share slide pack with copy of minutes **ACTION MR:** will share the NFFO S42 response they provided to other attendees if requested	
2.	**EIA update: RJ** and **JD:** provided an overview of the key feedback that had been received on the Preliminary Environmental Information Report (PEIR) in relation to commercial fisheries and how the project was addressing this within the environmental assessment.		
3.	**Data used:** Additional data from OFLO observations on board survey vessels. Additional information from AIS data.		
4.	**Co-existence:** key feedback on coexistence through the PEIR. The design envelope has been amended to take account of feedback on co-existence from pre-PEIR and PEIR consultation. These project commitments were presented later in the meeting and are summarised in item no.s 10 and 11 **GV:** we are not planning to close wind farm areas during construction. There will be safety zones around construction activity of 500m and of 50m around construction which is paused but not yet finished. There will also be 50m exclusion zones around cable installation vessels. During operation safety zones will only be required for certain maintenance activities.		
5.	**Displacement** - concerns about displacement during construction and negligible impacts identified in assessment. Assessment looks at rolling advisory exclusion zones which would allow areas to remain open to fishing throughout construction.		

6.	**Cables:** Position of inter-array cables away from tows to allow routing of tows in north/south direction. there were no queries raised during the meeting on the proposed approach to cable installation which involves burial/backfill with existing seabed substrate. **RG:** Will there be wet storage of materials during construction? Previous projects had put materials on the seabed with marker buoys without information on exclusions etc. or understanding of length of time they would be there. **GV:** offshore aspects of build are specifically licensed through the MMO which lists what the project can and can't do in terms of construction, frequency of construction operations, through the licence and associated conditions. The project will be required to meet all conditions relevant to the marine licence to manage the offshore construction process. **GV** explained that the licencing process is a lot more rigorous than it was during round one offshore wind farms which were built in the early 2000s. **MR:** rolling closure a step in right direction. Concern that level of liaison needs to be stepped up and this needs to be reflected in the Fisheries Liaison and Coexistence plan (FL&CP). Concerns about experience on the East coast. Rolling construction makes liaison more complicated particularly cumulatively with other projects, this needs to be carefully thought through. **RJ:** potential use of vessels as guard vessels will be reflected in FL&CP.		
7.	**Cumulative effects assessment:** The proposed IoM Offshore wind farm and the proposed Crogga oil and gas production Agreement for Lease (AfL) will be brought into cumulative assessment. The extent of assessment will depend on the information available on these projects at the time of assessment. **Fishers:** expressed concern about displacement through cumulative development in the Irish Sea. **GV:** explained that fishing can and does continue within windfarm array areas with data showing that many different types of fishing can continue within windfarms. **Fishers:** can't always tow in a straight line along the seabed due to rocks, wrecks or other debris which may be present. **RJ:** project commitment to bury cables where possible, cable protection will be used where burial depth can't be achieved and for cable crossings but this will be minimised as far as possible. **Fishers:** travelling further afield to fish isn't viable. Concerns about other vessels being forced into certain areas where they would have had more space to fish previously and this squeezing fleets into the same area.		

8.	**Spatial squeeze:** this will be considered within the cumulative assessment, MCZ displacement will be considered. **RJ:** difficult to get data on foreign vessels. Belgian fleet has agreed to share additional data to fill gaps.		
9.	**Brexit:** the potential impact of Brexit on fish prices will be looked at within the assessment. Understanding further how Brexit is influencing fishing activity in the area.		
10.	**Collaboration: AG:** Collation of data from different fishing groups and how this is presented together. Getting around the table to discuss issues together has worked well previously on other offshore wind farm projects. **GV:** There were discussions about setting up a working group at the start of the project but feedback was that discussions with individual groups were more effective. Project is happy to set up a commercial fisheries engagement forum. This could work well for the development of the FL&CP as well as preparing statements of common ground. **RJ:** suggests that a representative from each receptor group identified could work well so that each fishing type is represented. **GV:** subject to gaining consent for the Projects, EnBW/bp can look into setting up a fisheries working group. Project will take a commitment to look into this and potential for Mona, Morgan and Morecambe working together on this.	**ACTION bp:** project to look at commitment to setting up a joint fisheries working group.	

11.	**Project changes and commitments – Morgan Gen** **GV**: talked through key changes to the project following consultation. This information will be published in the public domain w/c 18 September to confirm the commitments that are being made. • Reduction in extent of array area • TEZ in western corner of array area. Turbine exclusion zones based on information provided by fishers last year. There will still be a boundary of turbines around the TEZ. • Minimum spacing 1.4km Minimum spacing has increased which should allow better access. • Roughly north south orientation of rows – may need to go slightly off this if ground conditions dictate. • Two lines of orientation • Max turbines decreased from 107 to 96 (removed smallest turbine from project envelope) • Removal of monopile foundation as an option • Reduced max length of array cables (22%) – reducing overall length reduces cable protection allowance. **GV:** explained project envelope for assessment. Important that the maximum e.g. turbine size reflects potential changes to the market between consent application and construction is the project is successful. **GV:** Commitments will be secured through an Outline Fisheries Liaison & Co-existence Plan (FL&CP) which will be submitted with the application for consent. This outline plan will be issued to fisheries stakeholders for comment. The full plan will be prepared post consent which will include full details of the information set out within the outline plan. **GV:** the aim is to bury cables wherever possible with the project committed to target range of 0.5 – 3m deep. A cable burial risk assessment will be undertaken to understand how deep the cables need to be buried. Minimum depth of 0.5m. Aim is to bury cables and reduce need for cable protection wherever possible. Cable crossings will require cable protection. Aim to minimise cable crossings as far as possible. Methodology for cable protection will depend on specific crossing, mattressing is often used for cable crossings where concrete mattress is put down to protect the cables.	Final Morgan and Mona newsletters also available on the Morgan website here and Mona website here.	
12.	**GV:** newsletter with project commitments was circulated to stakeholders this week. **GV:** commitments will be secured through FL&CP. An outline plan will be prepared for application submission with key commitments.		

13.	**Project changes and commitments – Mona** **GV:** talked through key changes to the project following consultation. • Reduction in extent of array area • TEZ in middle of array area • Minimum spacing 1.4km • North south orientation of rows • Max turbines decreased from 107 to 96 (removed smallest turbine from project envelope) • Removal of monopile foundation as an option • Reduced max length of array cables (35%) – reducing overall length reduces cable protection allowance. **GV:** as with Morgan Gen, the commitments will be secured through an Outline Fisheries Liaison & Co-existence Plan which will be submitted with the application for consent. **Fisher:** no major concerns with information presented. **GV:** other key feedback was for predominantly north south alignment of cables. Project will try to reduce number of cables east west and bury them wherever possible to reduce potential impacts on tows as far as possible.	Final Morgan and Mona newsletters also available on the Morgan website here and Mona website here.	
14.	**Extent of area important for scallop stocks** **GV:** explained data that was received and fed into the PEIR which was based on feedback from other fishers in the area. Currently does not include data for areas outside of the array areas. It would be helpful to have any data on areas outside of the array boundaries to understand areas important for fishing or supporting scallop stock important for scallop stock. **GV:** please send any relevant data via Richard. There isn't a lot of data available through the scientific community. **LS:** experience through UK scallop assessment board. This is an ongoing data gap for queenies. Looking for generalised guidance for any anecdotal information on areas which might be important for spat and supporting the queen scallop stock. **MR:** Is there any information available from ICES working group on scallop. **LS:** yes there is potential. Lucy is making contact to gather any additional information which may not be currently available publicly.	**ACTION:** any relevant data to be shared via Richard Joseph, at Marine Space	

15.	**Next Steps:** **GV:** discussed the next steps for the project: • Engagement on outline fisheries engagement and coexistence plan. Q4 this year. Project will share outline plan and request input from stakeholders. • Engagement on Statements of Common Ground. Post submission once stakeholders have reviewed Application for consent. These documents inform the Examining Authority of where agreement has/hasn't been reached on key issues. These can be started pre-application but stakeholders often want to see the findings of the final assessment beforehand. **MR:** query on process for Statements of Common Ground and changes to the process. **GV:** process is likely to focus more on unresolved issues now. **Further engagement will be as required. Minutes and slides will be shared after the meeting.**		
16.	**AoB** **GV:** the project commitments are now on the bp website and have been emailed out to stakeholders to inform people of the changes. [redacted]		

H.25 Commercial fisheries meeting 24

H.25.1 Minutes

MOM Number	EOR0801	**REV. No.** :	03
MOM Subject	Commercial Fisheries Engagement – Conway		

MINUTES OF MEETING

MEETING DATE	21st September 2023, 10:00
MEETING LOCATION	Conway Church Hall; Teams meeting .
RECORDED BY	[redacted] RPS
ISSUED BY	

PERSONS PRESENT:

- [redacted] CD) – Conway fisher shellfish
- [redacted]) – Conway fisher
- [redacted] (RT) – Conway fisher
- [redacted] (GV) – Mona Offshore Consents Lead, bp
- [redacted] (IG) – bp Communication and Stakeholder Engagement lead on Morgan and Mona
- [redacted] (RJ) – Offshore Fisheries Liaison Officer, Marine Space/ERM
- [redacted] (JD) – Morgan and Mona Commercial Fisheries EIA author, Marine Space/ERM
- [redacted] (RC) – Brown and May Marine leading on Commercial Fisheries for the Transmission Assets
- [redacted] (KC) – Morecambe Communication and Stakeholder Engagement lead on the Transmission Assets

PERSONS PRESENT ONLINE:

- [redacted] (RH) – Morgan Offshore Wind Project (Generation Assets) Offshore Human Lead, bp
- [redacted] (MK) – Morgan EIA coordinator, RPS
- [redacted] (LS) – Morgan and Mona Fish and Shellfish EIA author, RPS

ITEM NO:	DISCUSSION ITEM:	Actions	Date
1	**Project status: GV:** provided an overview of the Mona and Morgan projects' progress to date, the current status of the projects and expected application dates. Consultation events were held during the development of the PEIR last year with fishing groups. PEIR documents submitted in April this year with consultation ending on 4th June 2023. Reviewing consultation feedback on the projects and how to address responses received. Series of engagement events now to explain how feedback from the PEIR is being considered. Anticipating submitting the Mona application in Q1 2024 and the Morgan Gen application in Q2 2024. A number of commitments have been made to address potential impacts on commercial fisheries. Commitments will be secured through an Outline Fisheries Liaison & Co-existence Plan which will be submitted with the application for consent. This outline plan will be issued to fisheries stakeholders for comment. The full plan will be prepared post consent which will include full details of the information set out within the outline plan.	**ACTION Bp:** to share slide pack with copy of minutes	

2	**EIA update: RJ** and **JD:** provided an overview of the key feedback that had been received on the Preliminary Environmental Information Report (PEIR) in relation to commercial fisheries and how the project was addressing this within the environmental assessment.		
3	**Data used:** Additional data from OFLO observations on board survey vessels. Additional information from AIS data.		
	Co-existence: feedback was received during the PEIR consultation on co-existence. The design envelope has been amended to take account feedback on coexistence from pre-PEIR and PEIR consultation. These project commitments were presented later in the meeting and are summarised in item no.s 10 and 11 **CD:** main concern is not within the area but displacement and squeeze into areas outside of it. **GV:** Project wants to minimise impact as far as possible and is looking at implementation of rolling construction zones to minimise disruption and displacement impacts as far as possible. **GV:** There will be safety zones around construction activity of 500m and of 50m around construction which is paused but not yet finished. There will also be 50m exclusion zones around cable installation vessels. During operation safety zones will only be required for certain maintenance activities.		
5	**Cables:** Position of inter-array cables away from tows to allow routing of tows in north/south direction. there were no queries raised during the meeting on the proposed approach to cable installation which involves burial/backfill with existing seabed substrate. **GV:** the aim is to bury cables wherever possible with the project committed to target range of 0.5 – 3m deep. A cable burial risk assessment will be undertaken to understand how deep the cables need to be buried. This will need to be approved by MMO or NRW before proceeding. Minimum depth of 0.5m. Aim is to bury cables and reduce need for cable protection wherever possible. Cable crossings will require cable protection. Aim to minimise cable crossings as far as possible. Methodology for cable protection will depend on specific crossing, mattressing is often used for cable crossings where concrete mattress is put down to protect the cables.		

6	**Cumulative effects assessment:** The proposed IoM Offshore wind farm and the proposed Crogga oil and gas production Agreement for Lease (AfL) area will be brought into cumulative assessment. The extent of assessment will depend on the information available on these projects at the time of the assessment. **CD:** Asked about the IoM OWF and their plans and timeframes. **GV:** This project is being taken forward by Orsted. There is an AfL in place with the IoM Government but still limited information available on the project. Orsted is expected to submit a Scoping report in October 2023.		
7	**Spatial squeeze:** this will be considered within the cumulative assessment, MCZ displacement will be considered. RJ highlighted the recent report on spatial squeeze in fisheries, commissioned by the NFFO and SFF and produced by ABPMer.		
8	**Brexit:** the potential impact of Brexit on fish prices will be looked at within the assessment. Understanding further how Brexit is influencing fishing activity in the area. **CD/RT:** Prices of production have gone up and prices have therefore increased on shellfish.		
9	**Project changes and commitments – Mona** **GV:** talked through key changes to the project following consultation. • Reduction in extent of array area • TEZ in middle of array area • Minimum spacing 1.4km • North south orientation of rows • Max turbines decreased from 107 to 96 (removed smallest turbine from project envelope) • Removal of monopile foundation as an option • Reduced max length of array cables (35%) – reducing overall length reduces cable protection allowance. **PT:** query on Mona export cable and cable protection. **GV:** Limits on amount of cable protection, MMO has a general rule that it can't exceed 5 % of the total water depth of the area. Likelihood is that cable can be installed using a plough however until we have fuller details from survey work on the seabed conditions we need to apply a worst case scenario on the amount of cable protection that may be required. **RJ:** will boundary changes to east of Mona help address some of the Conway fishers concerns? **PT:** Stakeholder that this concerns is currently at sea and is unable to attend.	Final Mona newsletter available on the Mona website here.	

12	**Project changes and commitments – Morgan Gen** **GV**: talked through key changes to the project following consultation. This information will be published in the public domain w/c 18 September to confirm the commitments that are being made. • Reduction in extent of array area • TEZ in western corner of array area. Turbine exclusion zones based on information provided by fishers last year. There will still be a boundary of turbines around the TEZ. • Minimum spacing 1.4km Minimum spacing has increased which should allow better access. • Roughly north south orientation of rows – may need to go slightly off this if ground conditions dictate. • Two lines of orientation • Max turbines decreased from 107 to 96 (removed smallest turbine from project envelope) • Removal of monopile foundation as an option • Reduced max length of array cables (22%) – reducing overall length reduces cable protection allowance. **CD:** Is initial array boundary provided to appease people when boundary changes are made later down the line? **GV:** Clarified that this is not the case as the larger the area the greater the cost to the developer. It is more to do with the process of refinement based on the environmental assessment. So much is unknown at the start of the project that there needs to be flexibility for site refinement. **CD:** concerns about noise impacts on fish species and stocks. **GV:** Lots of work ongoing in industry to address impacts of underwater sound. Defra leading on underwater sound work through the Water Framework Directive to address underwater sound impacts across all areas of marine industry.	Final Morgan newsletter is available on the Morgan website here.	

11	**Next Steps:** **GV:** discussed the next steps for the project: • Engagement on outline fisheries engagement and coexistence plan. Q4 this year. Project will share outline plan and request input from stakeholders. Tried and tested tool which we will be building on for this project. • Engagement on Statements of Common Ground. Post submission once stakeholders have reviewed Application for consent. These documents inform the Examining Authority of where agreement has/hasn't been reached on key issues. These can be started pre-application but stakeholders often want to see the findings of the final assessment beforehand. • Looking at potential to create a fisheries working group for the east Irish sea as a way to keep the industry aware of plans should the projects gain consent. We have been operating a marine navigation engagement forum for the past couple of years to engage on shipping and navigation issues and the project will look at trying to create something similar for fisheries. **GV:** process is likely to focus more on unresolved issues now. **Minutes and slides will be shared after the meeting.**		
12	**AoB** **GV:** the project commitments are now on the bp website and have been emailed out to stakeholders to inform people of the changes. https://morecambeandmorgan.com/morgan/		

H.26 Commercial fisheries meeting 25

H.26.1 Minutes

MOM Number	EOR0801	**REV. No.** :	01
MOM Subject	Commercial Fisheries Engagement – Ireland, Dublin		

MINUTES OF MEETING

MEETING DATE	03rd October 2023, 14:00
MEETING LOCATION	The Maldron Hotel; Teams meeting
RECORDED BY	[redacted], MarineSpace
ISSUED BY	

PERSONS PRESENT:

- [redacted]) – Morgan Offshore Wind Project (Generation Assets) Offshore Human Lead, bp
- [redacted] (RJ) – Offshore Fisheries Liaison Officer, Marine Space/ERM
- [redacted] (AM) – Consultant, MarineSpace/ERM
- [redacted] (YC) – Principal Consultant – Renewable Energy, MarineSpace/ERM
- [redacted] (JL) – CEO, Irish South and East Fish Producers Organisation
- [redacted] (LS) – Morgan and Mona Fish and Shellfish EIA author, RPS
- [redacted] (TW) – Fisheries Industry Representative, Marine Space/ERM
- [redacted] (GV) – Mona Offshore Consents Lead, bp

ITEM NO:	DISCUSSION ITEM:	Actions	Date

1.	**Project status: RH:** provided an overview of the project progress to date, the current status of project and expected application dates. Consultation events were held during the development of the PEIR last year with fishing groups. PEIR documents submitted in April this year with consultation ending on 4th June 2023. Reviewing consultation feedback on the projects and how to address responses received. Series of engagement events now to explain how feedback from the PEIR is being considered. Anticipating submitting the Mona application in Q1 2024 and the Morgan Gen application in Q2 2024. A number of commitments have been made to address potential impacts on commercial fisheries. Commitments will be secured through an Outline Fisheries Liaison & Co-existence Plan FL&CP) which will be submitted with the application for consent. This outline plan will be issued to fisheries stakeholders for comment. The full plan will be prepared post consent which will include full details of the information set out within the outline plan.		
2.	**EIA update: RJ:** provided an overview of the key feedback that had been received on the Preliminary Environmental Information Report (PEIR) in relation to commercial fisheries and how the project was addressing this within the environmental assessment.		
3.	**Data used:** Additional data from OFLO observations on board survey vessels. Additional information from AIS data.		

4.	**Co-existence:** key feedback on coexistence through the PEIR. The design envelope has been amended to take account feedback on coexistence from pre-PEIR and PEIR consultation. These project commitments were presented later in the meeting and are summarised in item no.s 10 and 11 **GV:** not planning to close wind farm areas during construction. There will be safety zones around construction activity of 500m and of 50m around construction which is paused but not yet finished. There will also be 50m exclusion zones around cable installation vessels. During operation safety zones will only be required for certain maintenance activities. Discussion had regarding co-existence plan. **JL** not satisfied uncertainty of whether cable rock protection will be placed along the export cable route. Scallops don't move like other species, there is the potential for issues to arise from time to time with scallop fishers snagging cables and concerns of developers pursuing legal action. **GV** not aware of developers pursuing liability over snagged cables. **JL** would like to see a snagging no-fault protocol in writing, comfort in writing.	**ACTION:** bp to consider a written snagging no-fault protocol for fishermen.	
5.	**Displacement** - concerns about displacement during construction and negligible impacts identified in assessment. Assessment looks at rolling advisory exclusion zones which would allow areas to remain open to fishing throughout construction.		
6.	**Cables:** Position of inter-array cables away from tows to allow routing of tows in north/south direction. there were no queries raised during the meeting on the proposed approach to cable installation which involves burial/backfill with existing seabed substrate.		
7.	**Cumulative effects assessment:** The proposed IoM Offshore wind farm and the proposed Crogga oil and gas production Agreement for Lease (AfL) will be brought into cumulative assessment. The extent of assessment will depend on the information available at the time of the assessment on these projects.		
8.	**Spatial squeeze:** this will be considered within the cumulative assessment, MCZ displacement will be considered.		
9.	**Brexit:** the potential impact of Brexit on fish prices will be looked at within the assessment. Understanding further how Brexit is influencing fishing activity in the area.		

10.	**Project changes and commitments – Morgan Gen** **GV**: talked through key changes to the project following consultation. This information will be published in the public domain w/c 18 September to confirm the commitments that are being made. • Reduction in extent of array area • Turbine Exclusion Zone in western corner of array area. TEZs based on information provided by fishers last year. There will still be a boundary of turbines around the TEZ. • Minimum spacing 1.4km Minimum spacing has increased which should allow better access. • Roughly north south orientation of rows – may need to go slightly off this if ground conditions dictate. • Two lines of orientation • Max turbines decreased from 107 to 96 (removed smallest turbine from project envelope) • Removal of monopile foundation as an option • Reduced max length of array cables (22%) – reducing overall length reduces cable protection allowance.	**ACTION bp:** Final Morgan and Mona newsletters also available on the Morgan website here and Mona website here.	
11.	**Project changes and commitments – Mona** **GV:** talked through key changes to the project following consultation. • Reduction in extent of array area • TEZ in middle of array area • Minimum spacing 1.4km • North south orientation of rows • Max turbines decreased from 107 to 96 (removed smallest turbine from project envelope) • Removal of monopile foundation as an option • Reduced max length of array cables (35%) – reducing overall length reduces cable protection allowance.	Final Morgan and Mona newsletters also available on the Morgan website here and Mona website here.	
12.	**Extent of area important for scallop stocks** **GV:** explained data that was received and fed into the PEIR which was based on feedback from other fishers in the area. Currently does not include data for areas outside of the array areas. It would be helpful to have any data on areas outside of the array boundaries to understand areas important for fishing or supporting scallop stock. **GV:** any information that can be provided on shellfish spatfall would be really helpful. **LS:** any information considered important for seeding cockle and mussel fishing grounds or important for fishing this would be really useful. **JL** – agreed to get areas marked out for different scallop grounds and stocks from Irish fishers.	**ACTION:** any relevant data to be shared via TW Watson or RJ, at MarineSpace.	

13.	**Next Steps:** **GV:** discussed the next steps for the project: • Engagement on outline fisheries engagement and coexistence plan. Q4 this year. Project will share outline plan and request input from stakeholders. Tried and tested tool which we will be building on for this project. • Engagement on Statements of Common Ground. Post submission once stakeholders have reviewed Application for consent. These documents inform the Examining Authority of where agreement has/hasn't been reached on key issues. These can be started pre-application, but stakeholders often want to see the findings of the final assessment beforehand. • Looking at potential to create a fisheries working group for the east Irish sea as a way to keep the industry aware of plans should the projects gain consent. We have been operating a marine navigation engagement forum for the past couple of years to engage on shipping and navigation issues and the project will look at trying to create something similar for fisheries. Conversation had regarding the determination for setting up the fisheries liaison group and the process that will follow, exploring the concept of eastern fisheries group being broken into sub-groups (inside and outside 12nm limit). **Minutes and slides will be shared after the meeting.**		
14.	**AoB** **GV:** the project commitments are now on the bp website and have been emailed out to stakeholders to inform people of the changes. [Discussion on location of Morgan landfall and process for coming ashore. To be discussed further in Transmission Assets meeting following on from this Mona and Morgan meeting] https://morecambeandmorgan.com/morgan/		

H.27 Commercial fisheries meeting 26

H.27.1 Minutes

MOM Number	EOR0801	**REV. No.** :	01
MOM Subject	Commercial Fisheries Engagement – Northern Ireland, Kilkeel		

MINUTES OF MEETING

MEETING DATE	04th October 2023, 11:00
MEETING LOCATION	ANIFPO Office
RECORDED BY	[redacted] MarineSpace
ISSUED BY	

PERSONS PRESENT:

- [redacted] (RH) – Morgan Offshore Wind Project (Generation Assets) Offshore Human Lead, bp
- [redacted] (RJ) – Offshore Fisheries Liaison Officer, Marine Space/ERM
- [redacted] (AM) – Consultant with MarineSpace
- [redacted] (TW) – Fisheries Industry Representative, Marine Space/ERM
- [redacted] (GV) – Mona Offshore Consents Lead, bp
- [redacted] (TA) – Local skipper
- [redacted] (GC) – Retired fisherman
- [redacted] (AC) – Fisherman
- [redacted] DH) – Sea Source/ ANIFPO
- [redacted] (BC[1]) – CEO ANIFPO
- [redacted] (BC[2]) – Fisherman
- [redacted] (DC) – Fisherman

ITEM NO:	DISCUSSION ITEM:	Actions	Date

	Project status: RH: provided an overview of the project progress to date, the current status of project and expected application dates. Consultation events were held during the development of the PEIR last year with fishing groups. PEIR documents submitted in April this year with consultation ending on 4th June 2023. Reviewing consultation feedback on the projects and how to address responses received. Series of engagement events now to explain how feedback from the PEIR is being considered. Anticipating submitting the Mona application in Q1 2024 and the Morgan Gen application in Q2 2024. A number of commitments have been made to address potential impacts on commercial fisheries. Commitments will be secured through an Outline Fisheries Liaison & Co-existence Plan FL&CP) which will be submitted with the application for consent. This outline plan will be issued to fisheries stakeholders for comment. The full plan will be prepared post consent which will include full details of the information set out within the outline plan. Issue raised in reference to a windfarm off Blackpool where ANIFPO members were told that they were no longer allowed to fish within the windfarm area. **TW**: Clarified that windfarm sites are classified as open sea, navigation rights are only excluded at the turbine position, fishing is permitted windfarm areas.		
	EIA update: RJ: provided an overview of the key feedback that had been received on the Preliminary Environmental Information Report (PEIR) in relation to commercial fisheries and how the project was addressing this within the environmental assessment.		
	Data used: Additional data from OFLO observations on board survey vessels. Additional information from AIS data.		

	Co-existence: key feedback on coexistence through the PEIR. The design envelope has been amended to take account feedback on coexistence from pre-PEIR and PEIR consultation. These project commitments were presented later in the meeting and are summarised in item no.s 10 and 11 **GV:** not planning to close wind farm areas during construction. There will be safety zones around construction activity of 500m and of 50m around construction which is paused but not yet finished. There will also be 50m exclusion zones around cable installation vessels. During operation safety zones will only be required for certain maintenance activities.		
	Displacement - concerns about displacement during construction and negligible impacts identified in assessment. Assessment looks at rolling advisory exclusion zones which would allow areas to remain open to fishing throughout construction. **DH**: raised concern regarding the cumulative impact on fisherman, policy changes that stop fishing within the array areas, leading to displacement to more confined areas. **GV**: There will be no restriction within the windfarm once operational, except for around O&M vessels performing maintenance.		
	Cables: Position of inter-array cables away from tows to allow routing of tows in north/south direction. There were no queries raised during the meeting on the proposed approach to cable installation which involves burial/backfill with existing seabed substrate.		
	Cumulative effects assessment: The proposed IoM Offshore wind farm and the proposed Crogga oil and gas production Agreement for Lease (AfL) will be brought into cumulative assessment. The extent of assessment will depend on the information available at the time of the assessment on these projects.		
	Spatial squeeze: this will be considered within the cumulative assessment, MCZ displacement will be considered.		
	Brexit: the potential impact of Brexit on fish prices will be looked at within the assessment. Understanding further how Brexit is influencing fishing activity in the area.		

	Project changes and commitments – Morgan Gen **RH**: talked through key changes to the project following consultation. This information will be published in the public domain w/c 18 September to confirm the commitments that are being made. • Reduction in extent of array area • Turbine Exclusion Zone in western corner of array area. TEZs based on information provided by fishers last year. There will still be a boundary of turbines around the TEZ. • Minimum spacing 1.4km Minimum spacing has increased which should allow better access. • Roughly north south orientation of rows – may need to go slightly off this if ground conditions dictate. • Two lines of orientation • Max turbines decreased from 107 to 96 (removed smallest turbine from project envelope) • Removal of monopile foundation as an option • Reduced max length of array cables (22%) – reducing overall length reduces cable protection allowance.	**ACTION bp:** Final Morgan and Mona newsletters also available on the Morgan website here and Mona website here.	
	Project changes and commitments – Mona **GV:** talked through key changes to the project following consultation. • Reduction in extent of array area • TEZ in middle of array area • Minimum spacing 1.4km • North south orientation of rows • Max turbines decreased from 107 to 96 (removed smallest turbine from project envelope) • Removal of monopile foundation as an option • Reduced max length of array cables (35%) – reducing overall length reduces cable protection allowance.	Final Morgan and Mona newsletters also available on the Morgan website here and Mona website here.	

	Next Steps: **GV:** discussed the next steps for the project: • Engagement on outline fisheries engagement and coexistence plan. Q4 this year. Project will share outline plan and request input from stakeholders. Tried and tested tool which we will be building on for this project. • Engagement on Statements of Common Ground. Post submission once stakeholders have reviewed Application for consent. These documents inform the Examining Authority of where agreement has/hasn't been reached on key issues. These can be started pre-application, but stakeholders often want to see the findings of the final assessment beforehand. • Looking at potential to create a fisheries working group for the east Irish sea as a way to keep the industry aware of plans should the projects gain consent. We have been operating a marine navigation engagement forum for the past couple of years to engage on shipping and navigation issues and the project will look at trying to create something similar for fisheries. Conversation had regarding the determination for setting up the fisheries liaison group and the process that will follow, exploring the concept of eastern fisheries group being broken into sub-groups (inside and outside 12nm limit). **BC**[2] – Any scope for any commitments made to be reassessed after a period of time, for example 5 years? **GV** – Highlights that this already occurs, referencing the state of review the CEFAS and MMO/CEFAS post-construction monitoring programmes. **BC**[2] – Can we be confident that the mitigation of previous project has actually worked? **GV** – Yes. Post construction monitoring demonstrates the effectiveness of previous mitigation measures. **BC**[2] – fishermen are obviously concerned about displacement; fishermen rely on quota which is based on fisheries assessment. Are they able to conduct the fisheries assessment within the windfarm post construction? **GV** – Scientist are going to be able to conduct their assessment within the windfarm array post construction. **BC**[1] – No one has quantified the effect of spatial squeeze as a result of these developments within the Irish Sea. **GV** – ANIFPO should respond to consultation with reference to increased monitoring and that CEFAS need to do more. Discussion had regarding the impact of piling on herring and the need for improved monitoring.		

	Concern raised regarding the impact of windfarms on fish species and stocks. Species disappearing from site where they used to be prolific, concern raised of potential impact. **Minutes and slides will be shared after the meeting.**		
	AoB **GV:** the project commitments are now on the bp website and have been emailed out to stakeholders to inform people of the changes. [Discussion on location of Morgan landfall and process for coming ashore. To be discussed further in Transmission Assets meeting following on from this Mona and Morgan meeting] https://morecambeandmorgan.com/morgan/		

H.28 Commercial fisheries meeting 27

H.28.1 Minutes

MOM Number	EOR0801	**REV. No.** :	01
MOM Subject	Commercial Fisheries Engagement – Northern Ireland, Kilkeel		

MINUTES OF MEETING

MEETING DATE	04th October 2023, 11:00
MEETING LOCATION	NIFPO Office
RECORDED BY	[redacted] MarineSpace
ISSUED BY	

PERSONS PRESENT:

- [redacted] (RH) – Morgan Offshore Wind Project (Generation Assets) Offshore Human Lead, bp
- [redacted] (RJ) – Offshore Fisheries Liaison Officer, Marine Space/ERM
- [redacted] (AM) – Consultant with MarineSpace
- [redacted] (IK) – NIFPO
- [redacted] (TW) – Fisheries Industry Representative, Marine Space/ERM
- [redacted] (GV) – Mona Offshore Consents Lead, bp

ITEM NO:	DISCUSSION ITEM:	Actions	Date

	Project status: RH: provided an overview of the project progress to date, the current status of project and expected application dates. Consultation events were held during the development of the PEIR last year with fishing groups. PEIR documents submitted in April this year with consultation ending on 4th June 2023. Reviewing consultation feedback on the projects and how to address responses received. Series of engagement events now to explain how feedback from the PEIR is being considered. Anticipating submitting the Mona application in Q1 2024 and the Morgan Gen application in Q2 2024. A number of commitments have been made to address potential impacts on commercial fisheries. Commitments will be secured through an Outline Fisheries Liaison & Co-existence Plan FL&CP) which will be submitted with the application for consent. This outline plan will be issued to fisheries stakeholders for comment. The full plan will be prepared post consent which will include full details of the information set out within the outline plan.		
	EIA update: RJ: provided an overview of the key feedback that had been received on the Preliminary Environmental Information Report (PEIR) in relation to commercial fisheries and how the project was addressing this within the environmental assessment.		
	Data used: Additional data from OFLO observations on board survey vessels. Additional information from AIS data.		

	Co-existence: key feedback on coexistence through the PEIR. The design envelope has been amended to take account feedback on coexistence from pre-PEIR and PEIR consultation. These project commitments were presented later in the meeting and are summarised in item no.s 10 and 11 **GV:** not planning to close wind farm areas during construction. There will be safety zones around construction activity of 500m and of 50m around construction which is paused but not yet finished. There will also be 50m exclusion zones around cable installation vessels. During operation safety zones will only be required for certain maintenance activities.		
	Displacement - concerns about displacement during construction and negligible impacts identified in assessment. Assessment looks at rolling advisory exclusion zones which would allow areas to remain open to fishing throughout construction.		
	Cables: Position of inter-array cables away from tows to allow routing of tows in north/south direction. There were no queries raised during the meeting on the proposed approach to cable installation which involves burial/backfill with existing seabed substrate.		
	Cumulative effects assessment: The proposed IoM Offshore wind farm and the proposed Crogga oil and gas production Agreement for Lease (AfL) will be brought into cumulative assessment. The extent of assessment will depend on the information available at the time of the assessment on these projects.		
	Spatial squeeze: this will be considered within the cumulative assessment, MCZ displacement will be considered.		
	Brexit: the potential impact of Brexit on fish prices will be looked at within the assessment. Understanding further how Brexit is influencing fishing activity in the area.		

	Project changes and commitments – Morgan Gen **RH**: talked through key changes to the project following consultation. This information will be published in the public domain w/c 18 September to confirm the commitments that are being made. • Reduction in extent of array area • Turbine Exclusion Zone in western corner of array area. TEZs based on information provided by fishers last year. There will still be a boundary of turbines around the TEZ. • Minimum spacing 1.4km Minimum spacing has increased which should allow better access. • Roughly north south orientation of rows – may need to go slightly off this if ground conditions dictate. • Two lines of orientation • Max turbines decreased from 107 to 96 (removed smallest turbine from project envelope) • Removal of monopile foundation as an option • Reduced max length of array cables (22%) – reducing overall length reduces cable protection allowance.	**ACTION bp:** Final Morgan and Mona newsletters also available on the Morgan website here and Mona website here.	
	Project changes and commitments – Mona **GV:** talked through key changes to the project following consultation. • Reduction in extent of array area • TEZ in middle of array area • Minimum spacing 1.4km • North south orientation of rows • Max turbines decreased from 107 to 96 (removed smallest turbine from project envelope) • Removal of monopile foundation as an option • Reduced max length of array cables (35%) – reducing overall length reduces cable protection allowance.	Final Morgan and Mona newsletters also available on the Morgan website here and Mona website here.	
	Extent of area important for scallop stocks **GV:** explained data that was received and fed into the PEIR which was based on feedback from other fishers in the area. Currently does not include data for areas outside of the array areas. It would be helpful to have any data on areas outside of the array boundaries to understand areas important for fishing or supporting scallop stock. **IK**: identified that the queen scallop impact does not differentiate between dredge or net fishing methods, highlighting that the effects would be different for each.	**ACTION:** any relevant data to be shared via TW Watson or RJ, at MarineSpace.	

	Next Steps: **GV:** discussed the next steps for the project: • Engagement on outline fisheries engagement and coexistence plan. Q4 this year. Project will share outline plan and request input from stakeholders. Tried and tested tool which we will be building on for this project. • Engagement on Statements of Common Ground. Post submission once stakeholders have reviewed Application for consent. These documents inform the Examining Authority of where agreement has/hasn't been reached on key issues. These can be started pre-application, but stakeholders often want to see the findings of the final assessment beforehand. • Looking at potential to create a fisheries working group for the east Irish sea as a way to keep the industry aware of plans should the projects gain consent. We have been operating a marine navigation engagement forum for the past couple of years to engage on shipping and navigation issues and the project will look at trying to create something similar for fisheries. Conversation had on the concept of a working group. IK thought it would be useful but depends on how it is approached. The biggest issue will be geographic; therefore, the aim will be for the group meetings to be predominantly online based. **IK -** stated that they can't stop wind farms, but they can work with developers to find solutions that work for all and get the best deal for fishermen. **Minutes and slides will be shared after the meeting.**		
	AoB **GV:** the project commitments are now on the bp website and have been emailed out to stakeholders to inform people of the changes. [Discussion on location of Morgan landfall and process for coming ashore. To be discussed further in Transmission Assets meeting following on from this Mona and Morgan meeting] https://morecambeandmorgan.com/morgan/		

Appendix I: Shipping and navigation

I.1 Shipping and navigation overview

Table I.1: Overview of Shipping and navigation consultation.

Date	Meeting	Information provided
14 October 2021	Shipping and navigation meeting 1	Meeting minutes (I.2.1)
01 February 2022	Shipping and navigation meeting 2	Meeting minutes (I.3.1)
09 February 2022	Shipping and navigation meeting 3	Meeting minutes (I.4.1)
14 February 2022	Shipping and navigation meeting 4	Meeting minutes (I.5.1)
04 April 2022	Shipping and navigation meeting 5	Meeting minutes (I.6.1)
05 April 2022	Shipping and navigation meeting 6	Meeting minutes (I.7.1)
14 April 2022	Shipping and navigation meeting 7	Meeting minutes (I.8.1)
21 April 2022	Shipping and navigation meeting 8	Meeting minutes (I.9.1)
05 July 2023	Shipping and navigation email to the MCA	Email to the MCA regarding vessel traffic surveys (I.10.1)
07 December 2023	Shipping and navigation meeting 9	Meeting minutes (I.11.1)
11 December 2023	Shipping and navigation meeting 10	Meeting minutes (I.12.1)
13 December 2023	Shipping and navigation meeting 11	Meeting minutes (I.13.1)
18 December 2023	Shipping and navigation meeting 12	Meeting minutes (I.14.1)
19 December 2023	Shipping and navigation meeting 13	Meeting minutes (I.15.1)

I.2 Shipping and navigation meeting 1

I.2.1 Minutes

MINUTES OF MEETING

Security Classification:
CONFIDENTIAL

Partners in UK offshore wind

MOM Number:
MOM_20211014_v1

REV. No.: 1

MOM Subject: Morgan & Mona OWF, Irish Sea: Briefing

MINUTES OF MEETING

MEETING DATE: 14-Oct-2021

MEETING LOCATION: Microsoft Teams

RECORDED BY: [redacted]

ISSUED BY: [redacted]

PERSONS PRESENT:

INITIALS:	NAME:	INITIALS:	NAME:
JH	[redacted] – NASH Maritime	AB	[redacted] – RPS
RM	[redacted]	MP	[redacted] – bp
NS	[redacted] & Coastguard Agency	CW	[redacted] – bp
PL	[redacted] - Maritime & Coastguard Agency	ID	[redacted] - bp

DISTRIBUTION: Attendees +

[redacted] – Maritime & Coastguard Agency	[redacted] – NASH Maritime
[redacted] – Trinity House	
[redacted] - Northern Lighthouse Board	
[redacted] – NASH Maritime	

MEETING AGENDA

- Introductions
- About the Project: Overview and timeline (inc principles for stakeholder engagement)
- Project design and refinement
- S&N data (noting marine vessel traffic survey)
- Summary and next steps

ITEM NO:	DISCUSSION ITEM:	Responsible party	Date
1.	**Introductions** **ID** and **JH** led introductions of all attendees and overview of agenda. Meeting protocols covered including confirmation that slide pack and minutes be shared post meeting.		
2.	**JH:** Outlined that NASH Maritime have been appointed as shipping and navigation leads for the project with the key scope items listed below (as per slide 3). - Project design refinement and optimisation		

	- Data to be used for the S&N studies, principally the Vessel Traffic Survey (noting proposals to commence in Nov-2021) - Stakeholder consultation (including the Maritime Navigation Engagement Forum [MNEF]) - S&N deliverables within the PEIR and ES submission (NRA technical report and ES chapter) The objective of the meeting is to introduce the project, project team and provide an early overview of these scope items. **ID:** Provided background to the project (as per slide 4) Stakeholder engagement taken very seriously and as early as possible – recognising this is a highly congested area of seabed with competing interests (slide 5). Currently at pre-scoping engagement (slide 6). Already engaged with onshore planning groups, councils and MPs. Starting informal engagement with planners towards the end of the year. Fisheries liaison has commenced – led by MarineSpace as CFLO and working with NFFO. MNEF also being established (noting later agenda item).		
3.	**AB** – Introduced indicative project timeline as per slide 7 (general timeline), slide 8 (Mona timeline) & slide 9 (Morgan timeline). - Number of surveys for Mona underway - birds and marine mammals. Metocean surveys due to be deployed Q4 2021 and cable route surveys and onshore surveys planned for 2022. - Planning to scope projects at the same time – Scoping Report submission March 2022. - Submission of PEIR and final application for Morgan (slide 9) is 3 months later than Mona (slide 8); Morgan application scheduled to be submitted January 2024. **JH –** Noted (with reference to slide 8 (Mona timeline)) that vessel traffic surveys are scheduled Nov/Dec 2021, and Apr/May 2022 (recognising this is early in 'summer window' – see later agenda discussion). This is on basis of NASH substantially progressing draft NRA and draft ES chapter for PEIR and then integrating summer survey prior to submission of the PEIR. Schedule is tight in order to achieve this. More pronounced issue for Mona than Morgan given the stagger between projects. **JH** and **AB** stated that it is the projects intention to include as much data in the PEIR as possible, to minimise uncertainty in the assessment. Anticipate reviewing NRA and ES chapter prior to the final EIA submission.		

	JH noted that whilst there is stagger between projects, elements such as data collection, analysis and stakeholder consultation for both projects will be run in parallel.		
4.	**JH - Project Design and Refinement (slide 10)** Ship routes (ferry and commercial) identified and considered in the bidding work during 2019 (noting meeting held with MCA on 15-Nov-2019). Current work ongoing includes: - Constraints assessment from 2019/2020 being updated, feeding more recent and extensive data into analysis - Ongoing review of cumulative considerations (the relationship of the project with Cobra and other offshore developments) - Commercial users are being identified through updated, more recent and longer-term AIS data (non anonymised). **PL** commented that one project may have an impact on the other. **ID –** noted that the project is not planning to develop all of the Mona bidding area, and there is space to leave safe passage. **NS –** Queried the distance between southern boundary of the Mona site and TSS? - **JH** – within circa 2nm [postscript meeting: clarified that the absolute distance from TSS boundary to Mona bidding area boundary is 1.7nm. The distance/effective width between a continuation of the TSS boundary (i.e. extended west) and the bidding area boundary is circa 1.6nm)] **JH** noted that the project may likely seek to engage directly with MCA, Trinity House (and Northern Lighthouse Board) on project design and refinement considerations.	**JH / AB**	**Ongoing**
5.	**JH - Data Collection (slide 11)** JH ran through the key desk-top datasets proposed to inform the assessment for the projects. - MMO 2015 was used during the bidding phase – this has been updated with the 2017 MMO data - Project has acquired longer term AIS data for 2019/2020 which is full field and non-anonymised - COVID benchmarking will be undertaken through data review and consultation. Consideration to other 2021/2022 datasets will be given. Marine Vessel Traffic Survey forms key dataset as per MGN654 and project is progressing the planning of this in order to obtain data in good time to input into assessments.	**JH**	**Ongoing**

	NASH seeking to understand whether any relevant seasonality related to fishing that can be incorporated into the marine vessel traffic survey. **NS -** commented on datasets: - Determination of seasonal fishing data to help support assessment – recommend speaking to fishing groups. JH confirmed in discussion with the CFLO. - Recreation data – speak to RYA who are keen on seasonality trends to ensure peak period is identified. RYA may also be updating RYA Coastal Atlas in due course. Recommend speaking to Richard Hill at RYA. **JH –** noted RYA have not been consulted separately on the marine vessel traffic survey at this time. Anticipate liaising with them to identify additional relevant information on recreation activity. **JH - Data Collection (slide 12 & 13)** **JH** presented overview of MGN654 guidance in relation to proposed survey. Collecting AIS, radar and visual observation across bidding areas - Splitting into two 14 day surveys (one per site) winter/summer. JH queried earliest 'summer' window and whether Apr/May might be considered on basis of Easter and other summer activity. **NS –** MCA would consider April too early. Would be recommending July/August as the busiest time in the UK although may consider June if the case is made. **JH** noted and that discussion with RYA would be prudent here. **NS –** Noted that Morgan DCO application in January 2024 will mean that the vessel traffic survey data planned to be collected in 2021 would be outside the 24 month traffic survey window required by MGN654. **JH –** Would 60-day window outside of 24 months be acceptable to MCA rather than additional vessel traffic survey (noting Morgan submission of Jan 2024)? - **NS –** yes, but would be seeking to see that the Applicant had considered additional winter data to support. E.g. desktop study, review of traffic survey (winter 2022/2023) – to determine if this is in line with the 2021 survey. - Package of top up of data post PEIR with winter 2022/23 and validation against previous survey and longer-term AIS datasets (this would mean that 4 winter data periods are considered and also encompass any Covid-19 considerations). Other stakeholders may comment on this. **JH –** Surveys will be 14 days within one site, followed by 14 days within the other site. Vessel – larger vessel with higher radar and AIS receiver to maximise endurance, minimise downtime and maximise detection range.	**JH** **JH**	**Ongoing** **Ongoing** **Ongoing (post PEIR and prior to ES)**

	Intention is to roam vessel within Mona in order to capture maximum coverage across the bidding area and beyond, noting that full coverage from a static point is unlikely. NS – confirmed MCA happy with this proposal		
6.	**Maritime Navigation Engagement Forum (JH) slide 14** **JH** gave overview noting that ToR issued separately. Early consultation was being sought (as noted by ID earlier) to ensure the project correctly identifies the vessel traffic picture and can consider potential issues/impacts early in project planning. Quarterly meetings are proposed, with the first meeting due to take place 10 November 2021. Specific engagement with specific stakeholders is also proposed – plan discussion with ferry operators earliest towards the end of 2021 (as previously identified key user). JH noted HAZID workshops would be carried out pre-PEIR submission, for inclusion in the draft NRA. MCA would like to understand the agendas for each meeting, so they can tailor their attendance. JH explained that all members will receive agendas and meeting minutes. **NS –** comments on list – NASH should consider Cruising Association in addition to RYA	**JH**	**Ongoing**
7.	**ESIA (JH) slide 15** Summary of approach across Scoping, PEIR and ES **NS –** MCA currently speaking to all developers about terminology in the NRA. NS highlighted the challenges of translating NRA terminology into EIA terminology and expressed that it is key that NRA terminology is used in the NRA, and also ideally the S&N chapter. **JH –** NASH approach is to utilise technical NRA terminology. Noted challenges of translating NRA matrices into ES chapter matrices and terminology and that AB and JH are working together on this.	**JH/AB**	**Ongoing**
8.	**Summary / AOB** **NS** – recommend arranging an introductory meeting with Trinity House also. JH also noted NLB. **JH** – summarised that, from this meeting, the proposed approach to the winter survey is agreeable with the MCA. NASH will come back to MCA to discuss summer survey – specifically dates.	**JH**	**Ongoing**

I.3 Shipping and navigation meeting 2

I.3.1 Minutes

MORGAN AND MONA OWFS

Project Title	Morgan and Mona OWFs
Project Number	21-NASH-0146
Meeting subject / purpose	MCA/Trinity House - Methodological Engagement
Revision	R03-00
Date of meeting	01-Feb-2022
Start time	14:00 UTC
Finish time	16:00 UTC
Client	RPS / bp / enBW
Location	MS Teams

DOCUMENT CONTROL

Revision	Date of Issue	Description	Approved
R01-00	15-Feb-2022	First Draft Minutes.	AR
R02-00	15-Feb-2022	Issued to attendees for comment	AR
R03-00	22-Feb-2022	Updated with comments from MCA	AR

ATTENDEES

Organisation	Attendee	Role	Initial
NASH Maritime	[redacted]	Project Director	JJH
	[redacted]	Project Manager	CH
	[redacted]	Principal Consultant	AR
	[redacted]	Subject Matter Expert - Maritime	SW
RPS	[redacted]	Lead EIA Manager	AB
bp	[redacted]	Head of communications and advocacy, UK offshore wind	ID
	[redacted]	Environmental Consents Manager (RES)	GV
EnBW	[redacted]	Senior Manager Business Development Generation	AW
MCA	[redacted]	Offshore Renewables Lead	NS
	[redacted]	Navigation Policy Advisor	VJ
Trinity House (THLS)	[redacted]	Navigation (Examiner) Manager	TH
	[redacted]	Navigation Services Officer	SV

NOTES OF MEETING

1	Introductions	Action
1.1	Introductions made between attendees.	
1.2	JJH explained that BEIS were unable to attend and so a separate meeting is scheduled 09-Feb-2022 to discuss the same agenda. Furthermore, a meeting with Chamber of Shipping and Irish Sea ferry companies is being scheduled in February.	
2	**Agenda (Slide 2 -3)**	

2.1	An agenda and slide pack were circulated before the meeting:
	The objectives were:
	• To set the scene including update on project (since first Maritime Navigation Engagement Forum [MNEF] held in Nov-2021).
	• To confirm interpretation and application of relevant policies (NPS-EN3) and guidance.
	• To summarise key impacts and early assessment findings.
	• To present, discuss (and agree) proposed approach to assessment and resolution of impacts (Methods, assumptions and data).
	Agenda:
	• Introductions and Objectives
	• Setting the Scene / Update
	• Key Potential S&N Impacts:
	  • NPS and guidance summary
	  • Shipping Corridors
	  • Vessel Routeing
	• Proposed S&N Strategy:
	  • Commercial Modelling and Adverse Weather Routes Analysis
	  • Compliance with Guidance
	  • Collision Modelling
	  • Bridge Simulation
	  • Engagement
	  • Reporting
	• AOB
	In addition, and in line with the objectives, **four questions** were asked of the MCA ahead of the meeting:
	1. Does the MCA accept the approach for assessing and reporting the impact of the Morgan and Mona projects on shipping using/in the area as summarised on slide 13 'Overview of Proposed Approach' and detailed in slides 14-20?
	2. Does the MCA agree that the approach is line with NPS EN-3 and associated draft NPS-EN-3-2021?
	3. Does the MCA agree that slides 6-11 have identified the key potential shipping and navigation impacts of Morgan and Mona?
	4. Is the MCA in support of bp/EnBW's approach as set out in the presentation, which will be discussed initially with key ferry operators and then presented to stakeholders at the next MNEF?
	CH emphasised that it was important to get agreement on these questions.
	ID noted the project is planning to discuss the approach with ferry companies and Chamber of Shipping (CoS), and the project would like to agree the	

	approach with MCA in advance. ID described the relationship with the MNEF and that it was important to be efficient with the time of the principal stakeholders.	
3	**Setting the Scene/Update (Slide 4 – 6)**	
3.1	CH described the ongoing work for the projects and referred to the Morgan and Mona Array Scoping Boundaries shown in the figures, noting these will be taken forward into the Scoping Report *[post-meeting note: The Crown Estate has since advised that the original Mona bidding area must be taken forward into Scoping, although the project will also make reference to the preferred area shown on the figures]*. The AIS data show that the project boundaries would have some impact on shipping and navigation (including ferries, commercial shipping, recreational etc.)	
3.2	CH provided a recap on the feedback from the November 2021 MNEF meeting where concerns were raised by stakeholders (primarily ferry operators) with routeing around OWFs (and consequential operational impact) and issues which they had raised with previous OWF proposals. JJH stated that since the MNEF, the project had worked to develop a methodological approach to further understand these issues so they can be taken into account in the development of the projects.	
3.3	CH gave an overview of ongoing tasks including preparation of the EIA Scoping Report, early analysis of vessel traffic, vessel-based vessel traffic surveys (MGN654 compliant), with preparation of PEIR/NRA to be commenced.	
3.4	JJH/CH clarified that the date for the second meeting of the MNEF (scheduled for Q1 2022) has been postponed pending discussion with MCA/Trinity House/BEIS and CoS/Ferries on the proposed approach. It is anticipated the second MNEF will be held in early March 2022.	
4	**S&N Impacts Summary (Slide 7 – 12)**	
4.1	CH/JJH described the key extracts from NPS EN-3 (2011 and draft 2021) relevant to shipping and navigation. In particular, the importance of safety, commercial and cumulative impacts which will be assessed using the relevant MCA guidance.	
4.2	With reference to the revised wording in draft NPS EN-3, JJH queried how MCA saw the role of BEIS, noting that draft NPS EN-3 may become current during the Mona/Morgan application. NS believed that the revised wording in the NPS would not significantly change anything, but BEIS should be kept informed separately. NS did not know why BEIS had been specifically mentioned in the draft NPS under paragraph 2.33.21 for proactively engaging with developers and navigation stakeholders to discuss shipping and navigation matters.	
4.3	JJH emphasized that cumulative issues were recognized to be potentially important for Mona/Morgan OWFs together with Morecambe OWF and existing developments. The feedback from the Walney Extension/NEPDA (North East Potential Development Area) application is relevant in relation to cumulative impacts.	
4.4	CH/AR presented plots of historical AIS data and outlined key shipping and navigation activities that were recognized to interact with the projects. The key ferry routes were described, and CH highlighted the need to address both normal routes and adverse weather routes.	
4.5	AR described how the Mona/Morgan and Morecambe projects could create shipping corridors which need to be assessed in terms of safety.	
4.6	AR noted that any deviation will increase journey time and costs.	

	NS welcomed the consideration of cumulative impacts from all three Round 4 sites. NS noted that alternative routes need to be discussed with the ferry operators. JJH noted that a precautionary approach to assessment is being taken which assumes that the project will build out to the full Scoping boundary extents, however, these boundaries may be refined; GV added that further work will take place following feedback post-Scoping.	
4.7	TH questioned how adverse weather affects commercial ship routeing. These vessels may be less manoeuvrable and there had been incidents of vessels damaging or losing cargo in such conditions. CH responded that early analysis suggested that they were relatively less impacted, but more work would examine them. SW gave an overview of commercial vessel routeing in the Irish Sea, with the main routes clear of much of the Morgan/Mona sites. AR stated that the principal early analysis was focused towards ferries due to the prominence of lifeline services in the NPS and feedback at the first MNEF.	
5	**Proposed Approach (Slides 13-22)**	

5.1	CH provided an overview of the proposed approach to investigate these issues:
	• Task 1: Commercial Shipping Assessment
	• Task 2: Safety Assessment:
	  ○ Desk based corridor assessment
	  ○ Quantitative collision risk modelling
	  ○ Bridge Navigation Simulation
	• Task 3: Engagement
	• Task 4: Reporting	

5.2	The initial findings of Task 1 (Commercial Shipping Assessment) were discussed. CH/AR described the initial analysis of 2019 vessel tracks against metocean data to identify adverse weather routes, and their frequency and potential impacts on schedule with Morgan and Mona in place. Noted that in some cases ferries do not take adverse weather routes in similar wind conditions and, although not shown on the slides, wave conditions. Recognition of the need to engage with operators to clarify Master decision making and understand 'real' adverse weather impacts on the baseline routing. TH described the conditions in the Irish Sea, with the importance of wave height and direction correlated with wind. AR responded that the analysis for this had also been performed with similar results. SW agreed with TH that this is a complex matter and the analysis presented here is just an indication.	NASH to include sea state in future presentations
5.3	CH described Task 2A (Safety assessment: desk-based corridor assessment) and that all identified corridors for Morgan and Mona will meet guidance (MGN654/PIANC WG161). AR noted the corridor considered in the Walney Extension Application, the Examining Authority and MCA did not consider the evidence base (presented by the Applicant) for cumulative impacts was sufficient to conclude that it was safe. CH sought feedback from MCA on this decision and whether any lessons learned could be identified which could then be taken into account on the Morgan and Mona projects. NS was not able to provide feedback at the time as he was not involved in this previous application. JJH noted that the corridor between Walney Extension and the NEPDA was analogous to the Morgan/Walney Extension corridor; CH asked if MCA would be able to look into this and provide	NS to feedback on previous Walney Extension

	feedback so the Mona/Morgan project could address any relevant aspects in their approach (particularly as the ferry operators had referred bp/EnBW to this application). NASH will also seek to access the relevant responses from The Planning Inspectorate archive. TH asked what regulations were in place at the time. AR believed that MGN371 and the Marine Spatial Planning guide (Nautical Institute) were in place at the time and these offered very similar guidance on crossing corridors as MGN654 and PIANC WG161. JJH understood that Walney Extension had also performed bridge navigation simulation and collision risk modelling but these outputs are not available. AR emphasized that it was important that the MCA understood and approved of the process/methodology being undertaken, otherwise a different approach would need to be identified. CH added that the MCA and THLS would be kept up to date and involved throughout.	position (if possible) NASH to enquire with The Planning Inspectorate to access the previous application responses.
5.4	AR described Task 2B (Collision Risk Modelling (CRM)). CRM will involve using peer-reviewed domain and near miss modelling to understand the impacts of the projects on vessel interactions. CH added that the outputs will remove some of the subjectivity of the results and serve as inputs into the bridge simulation. TH requested that the modelling reflects the competency of operators, like the causation probabilities within the IALA risk modelling toolbox IWRAP. Ferry masters and visiting commercial trade will behave differently. AR/JJH noted that this and other adjustments (e.g. bridge team) could be factored into the model.	NASH to address in CRM/Nav Sim Spec
5.5	CH provided an overview of Task 2C (Simulations), noting that the MCA had questioned the value of simulators at Walney Extension due to artificiality. NASH aim to avoid artificiality by using a well-established centre and inviting both ferry companies and independent pilots. It was hoped that engagement with the MCA on the set up of the simulations would ensure these issues were not repeated. The project proposes to use independent experts to facilitate these sessions. NS described a document he had found from 2013 (comments from MCA on the Walney Extension simulation) which noted issues with unrealistic responses due to short bursts of mental activity rather than long passage lengths (where crews become more fatigued). TH noted that these were also experienced during the Thanet Extension simulations, with runs later in the day different to early morning. JJH will discuss this with the simulation provider. JJH asked whether MCA/THLS would be willing to be involved in the set up and in establishing the Terms of Reference (ToR) for the simulations, and attending/witnessing simulations to ensure they were of an appropriate standard. Both MCA and THLS agreed they would be and JJH thanked them and said this would be of value. NS noted they were involved in the set-up of the Thanet Extension simulations and advised NASH look into the results of this also. TH considered that if simulations last long enough and there are enough scenarios, responsiveness/alertness can be factored in. TH noted that the quality of AtoNs in simulators was sometimes limited. TH added that it might be sensible to involve a mixture of crew, as the Officer of the Watch when navigating around the OWFs might not be the master.	NASH to involve MCA and THLS in Nav Sim ToR JJH to discuss concerns over alertness with the simulation provider.
5.6	CH summarized Task 3 (Engagement) and the keenness to involve stakeholders and regulators at an early stage. The project is aiming to agree the potential impacts of the projects and achieve agreement on how to address these impacts. CH sought feedback from MCA on this approach. NS agreed the approach sounds sensible; and advised engaging with ports and pilots also. AR responded that this work is running in parallel to the wider	

	consultation as part of the NRA and PEIR. SW believed that whilst some pilots might be overcarried they are outside of pilotage limits; most ferries would have Pilotage Exemption Certificates (PEC) and good local knowledge. JJH added that ports (and those with Competent Harbour Authorities therefore managing pilots) are in the MNEF membership.	
5.7	CH provided a summary and recap of the presentation, re-emphasizing that these tasks were specifically developed to address concerns raised at the MNEF. CH asked MCA to advise if anything was missing from this approach. NS stated that he was happy with the approach and that it seemed logical. NS was pleased that cumulative issues were being looked in such detail at such an early stage. TH agreed with this, supporting engagement with regular operators on impacts at this early stage. NS added that the project should follow MGN654/Methodology guidance for the NRA. JJH agreed and that whilst discussion today had not focused on the NRA (and PEIR/ES) the project is committed to following MGN654 and accompanying guidance documentation. ID asked how the MCA weighted the adverse weather routeing of lifeline ferries. NS responded that it was very important and the project should minimize it as far as possible but there is no specific proportion or threshold to target.	
6	**Specific Questions**	
6.1	JJH reviewed the four questions issued to MCA/THLS prior to the meeting: 1. *Does the MCA accept the approach for assessing and reporting the impact of the Morgan and Mona projects on shipping using/in the area as summarised on slide 13 'Overview of Proposed Approach' and detailed in slides 14-20?* NS agreed with the approach.	
6.2	2. *Does the MCA agree that the approach is line with NPS EN-3 and associated draft NPS-EN-3-2021?* It was clarified that this question relates to section 2.33 of the draft NPS EN-3. NS agreed that the sections of the NPS are clear on minimizing impacts to commercial operations and safety of vessels. NS confirmed that whilst the outcome of this process is not known, he was content with the proposed approach. NS also pointed to the list of endorsed tools and techniques in the MGN654 NRA methodology document (includes modelling and simulation).	NASH to note list of tools endorsed in MGN654 in ongoing work
6.3	3. *Does the MCA agree that slides 6-11 have identified the key potential shipping and navigation impacts of Morgan and Mona?* JJH recapped that corridors and routing (normal and adverse weather routes) are the focus of ferry operator concerns. NS confirmed this, noting disruption to their businesses and ability to continue their business safely as the two main concerns. These are to be tested with stakeholders during the NRA.	
6.4	4. *Is the MCA in support of bp/EnBW's approach as set out in the presentation, which will be discussed initially with key ferry operators and then presented to stakeholders at the next MNEF?* JJH recognized that the wider impacts of the project will be assessed as part of the NRA, but the key issues identified in the 1st MNEF are being explored here, and that the project is seeking to put forward an appropriate methodological approach to assessing these issues which meets guidance and is acceptable to the MCA (as the primary statutory regulator).	

	NS agreed with this – the proposals for assessment clearly seek to address disruption to business and safety of vessel operations. JJH thanked NS and emphasized the value that endorsement of the process by the MCA would have when presented to stakeholders. JJH also recognized that engaging with the Applicant on these activities can represent a significant use of stakeholder time and resource and so it is essential the approach is appropriate and efficient. In terms of proportionality of approach, full bridge navigation simulation is one level below full-scale trials and so high up the hierarchy of evidence. JJH asked whether MCA would want to attend some of the upcoming project meetings. NS requested that MCA and THLS be kept informed and they would make decisions on attendance at meetings on a case by case basis. NS was invited to attend the Chamber of Shipping/Ferries meetings in mid-Feb to make clear the MCA's position and regulatory process. JJH believed this would be useful to provide assurance that the approach is in line with guidance and the methodologies are endorsed by the regulator. NS agreed this would be of value.	NASH to include MCA/THLS in CoS/Ferry Co Mtg
7	**AOB**	
	JJH and ID thanked everyone for their attendance.	

ACTIONS

Section	Action	Responsible
5.2	NASH to include sea state in future presentations on adverse weather routeing.	NASH (AR)
5.3	NS to provide feedback on previous Walney Extension position (if possible) regarding the decision-making process on the scope of evidence of CRM/Bridge Simulation.	MCA (NS)
5.3	NASH to enquire with The Planning Inspectorate to access the previous application responses.	NASH (AR/JJH)
5.4	NASH to address bridge awareness and familiarity factors in CRM/Bridge Simulation.	NASH (AR/JJH)
5.5	NASH to involve MCA and THLS in Nav Sim ToR	NASH (JJH)
6.2	NASH to note list of tools endorsed in MGN654 in ongoing work	NASH (AR)
6.4	NASH to include MCA/TH in CoS/Ferry Co Mtg	NASH (CH)

I.4 Shipping and navigation meeting 3

I.4.1 Minutes

MORGAN AND MONA OWFS

Project Title	Morgan and Mona OWFs
Project Number	21-NASH-0146
Meeting subject / purpose	BEIS - Engagement
Revision	R01-00
Date of meeting	09-Feb-2022
Start time	14:30 UTC
Finish time	15:30 UTC
Client	RPS / bp / EnBW
Location	MS Teams

DOCUMENT CONTROL

Revision	Date of Issue	Description	Approved
R01-00	23-Feb-22	Issued for comment.	AR

ATTENDEES

Organisation	Attendee	Role	Initial
NASH Maritime	[redacted]	Project Manager	CH
	[redacted]	Principal Consultant	AR
RPS	[redacted]	EIA Project Director	NS
	[redacted]	Lead EIA Manager	AB
bp	[redacted]	Head of communications and advocacy, UK offshore wind	ID
	[redacted]	Environmental Consents Manager (RES)	GV
EnBW	[redacted]	Senior Manager Business Development Generation	AW
BEIS	[redacted]	Head of Offshore Wind Policy	YC

NOTES OF MEETING

1	Introductions	Action
1.1	Introductions were made between attendees.	
1.2	AR explained that this meeting is a follow up to a meeting held with MCA/Trinity House on 01-Feb-2022 which BEIS were unable to attend. This meeting is to discuss the same agenda. A meeting with Chamber of Shipping (CoS) and Irish Sea ferry companies is scheduled for 14-Feb-2022 to cover similar ground.	
2	**Agenda (Slide 2 -3)**	

2.1	An agenda and slide pack were circulated before the meeting [Note: the agenda, objectives and slide pack were prepared with the intention of there being a joint meeting between MCA, Trinity House and BEIS]:
	The objectives were:
	• To set the scene including update on project (since first Maritime Navigation Engagement Forum [MNEF] held in Nov-2021).
	• To discuss interpretation and application of the policies (NPS-EN3) and guidance.
	• To summarise key impacts and early assessment findings.
	• To present and discuss proposed approach to assessment and resolution of impacts (Methods, assumptions and data).
	Agenda:
	• Introductions and Objectives
	• Setting the Scene / Update
	• Key Potential S&N Impacts:
	  • NPS and guidance summary
	  • Shipping Corridors
	  • Vessel Routeing
	• Proposed S&N Strategy:
	  • Commercial Modelling and Adverse Weather Routes Analysis
	  • Compliance with Guidance
	  • Collision Modelling
	  • Bridge Simulation
	  • Engagement
	  • Reporting
	• AOB	

3	**Setting the Scene/Update and S&N Impacts Summary (Slides 4 – 9)**	
3.1	AR provided an update on project activities in relation to shipping and navigation: Scoping is underway and a Maritime Navigation Engagement Forum (MNEF) has been established. At the first MNEF, concerns were raised by ferry operators on impacts to vessel routing. AR referred to the figure on slide 5 and commented that the AIS data shows that the project boundaries would have some impact on shipping and navigation (including ferries, commercial shipping, recreational etc.)	
3.2	AR highlighted the four workstreams illustrated by the flowchart on slide 6 including preparation of the Scoping Report, establishment of the MNEF, supporting studies including early analysis of vessel traffic and routing to	

	understand impacts in more detail, with the supporting studies feeding into the PEIR/NRA and ES.	
3.3	AR noted that the project team has requested this meeting with BEIS due to the revised wording in draft NPS EN-3 (section 2.33), which now refers to both MCA and BEIS. The project is keen to understand the role of BEIS in this process going forward. YC noted that the Secretary of State for BEIS is the final decision-maker in the DCO process. BEIS may assist projects in reaching out to statutory consultees and stakeholders where this was providing difficult. However, BEIS would rely on MCA as the regulator to assess impact/ ensure impacts were properly assessed and BEIS would not be involved in giving any view. YC noted that he felt the project team was doing the right thing in reaching out early to stakeholders including the ferry companies and involving MCA. AB sought clarification that BEIS would therefore only become involved if they needed to facilitate discussion with stakeholders. YC clarified that it is not envisaged that BEIS would have more of a role than they have historically played on these projects. It was understood that BEIS would therefore not attend shipping and navigation meetings for the project.	
3.4	AR noted that the project is seeking agreement on the approach to understanding the potential impacts from a wide range of stakeholders, particularly that the proposed approach to assess impacts is effective and logical. Given the NPS EN-3 emphasis on lifeline ferries, this is an area of early focus.	
4	**Impact Description (Slides 10 – 12)**	
4.1	AR gave an overview of marine traffic in and around the project area and noted the overlap between marine traffic routes from AIS data and project areas. Impact on a range of users was noted and the particular impact on the four ferry companies highlighted.	
4.2	AR noted that the project areas would create shipping corridors. The project is reviewing MCA guidance on shipping corridors and had discussed this in more detail in the meeting with MCA.	
4.3	AR discussed the potential impact of the projects on vessel routeing including potential impact on transit times and cost, both for normal weather and adverse weather routes.	
5	**Proposed Approach (Slides 13-21)**	

5.1	AR provided an overview of the proposed approach to investigate these issues:
	• Task 1: Commercial Shipping Assessment
	• Task 2: Safety Assessment:
	  ○ Desk based corridor assessment
	  ○ Quantitative collision risk modelling
	  ○ Bridge Navigation Simulation
	• Task 3: Engagement
	• Task 4: Reporting
	AR noted the pivotal role of engagement in Task 3.	

5.2	Task 1: Commercial Shipping Assessment: AR explained that this task will examine impact on routes/timescales via commercial modelling. The initial indications of impacts on ferry routes were briefly discussed including reiteration of the differing normal and adverse weather routing and likely	

	impacts. The approach to understand and evaluate impacts collaboratively with the relevant organisations was also noted by AR.	
5.3	Task 2A: Safety Assessment (Desk-based corridor assessment): AR described Task 2A and noted that all corridors with the projects in place meet guidance (MGN654/PIANC WG161). AR noted that MCA had questioned the evidence gathered to support a similar corridor considered in the cumulative assessment for the Walney Extension application, and NASH sought background on this from MCA. AB noted that this question was not resolved at the meeting with MCA as MCA staff now were different to those at the time of the Walney Extension application, therefore NASH are looking into this application further to understand any lessons learned. AR explained that with the proposed approach for this project the team felt the navigation simulations would be of better quality and the plan was to agree the terms of reference/scope with the MCA/CoS/ferry companies in advance to help reach agreement on the suitability of the assessment.	
5.4	Task 2B: Safety Assessment (Collision Risk Modelling): AR mentioned briefly the proposed Collision Risk Modelling (CRM) designed to understand the impacts of the projects on vessel interactions with the aim of removing some of the subjectivity of the risk assessment and to inform design of some of the bridge simulation scenarios.	
5.5	Task 2C: Safety Assessment (Bridge Navigation Simulation): AR provided an overview of the proposed bridge navigation simulation, noting that the project proposes to use independent experts to facilitate these sessions and involve CoS/ferry companies and MCA in developing the terms of reference/scenarios.	
5.6	Task 3: Engagement: YC sought clarification if Trinity House would also be involved. AR confirmed and added that the project will also engage with Northern Lighthouse Board (NLB), who are the General Lighthouse Authority with responsibility for the Isle of Man; AR clarified that MCA/ Trinity House were consulted in parallel last week.	
5.7	NASH noted that the project are speaking with CoS and ferry operators next week to discuss the proposed approach outlined here. AR noted that MCA and Trinity House were happy with the approach as set out here.	
6	**Summary and AOB (slide 22)**	
6.1	AR sought clarification on future interaction with BEIS. YC noted that it would be helpful to be kept updated, and to be advised if there are any difficulties with engaging with stakeholders. YC suggested being kept up to date via periodic emails to himself and Katherine Prentice. bp/EnBW to arrange BEIS update telecon in 6 months (early Sept/Oct).	bp/EnBW to arrange BEIS update telecon in 6 months
6.2	AR welcomed comments from BEIS given their expertise on this process. YC confirmed that asking MCA about the process and engaging early with stakeholders seemed sensible and in line with the NPS.	
6.3	YC asked about engagement with the fishing community. AB explained that commercial fisheries engagement is already underway; to date this has focused on engagement on the various offshore surveys. AB explained fisheries are represented in the MNEF by the Fisheries Liaison Officer (FLO); MNEF focuses on safety of navigation rather than commercial impacts on fisheries.	
6.4	YC asked about involvement with RYA.	

	AR advised that RYA and all other identified relevant marine navigation stakeholders were invited to participate in the MNEF, but this early work is focussed on ferry companies, following representations made at the first MNEF. Further consultation with wider stakeholders to support the NRA and PEIR is planned. YC commented that early engagement was positive and offered support if required.	
6.5	YC confirmed that he did not advise or influence the BEIS licensing team. The planning team is a separate group relying on The Planning Inspectorate for information.	
6.6	AR thanked everyone for their attendance.	

ACTIONS

Section	Action	Responsible
6.1	bp/EnBW to propose/circulate dates/times for BEIS update	ID

I.5 Shipping and navigation meeting 4

I.5.1 Minutes

MORGAN AND MONA OWFS

Project Title	Morgan and Mona OWFs
Project Number	21-NASH-0146
Meeting subject / purpose	CoS/Ferry Co - Methodological Engagement
Revision	R03-00
Date of meeting	14-Feb-2022
Start time	15:00 UTC
Finish time	16:45 UTC
Client	RPS / bp / EnBW
Location	MS Teams

DOCUMENT CONTROL

Revision	Date of Issue	Description	Approved
R00-01	03-Mar-2022	Issued to attendees for comment	AR
R02-00	31-Mar-2022	Updated to address attendee comments	CJH/JJH
R03-00	13-May-2022	Updated to address further comment	JJH

ATTENDEES

Organisation	Attendee	Role	Initial
Chamber of Shipping	[redacted]	Policy Manager (Safety & Nautical) & Analyst	RM
Seatruck Ferries	[redacted] [redacted]	Chief Executive Officer Marine Superintendent	AE SO
Stena Line (also representing Stena Ports)	[redacted]	Marine Safety and Security Superintendent	MP
Isle of Man Steam Packet Company	[redacted] [redacted]	Operations Director Marine Manager	KT TD
NASH Maritime	[redacted] [redacted] [redacted]	Project Director Project Manager Principal Consultant	JJH CH AR
RPS	[redacted] [redacted]	EIA Project Director Lead EIA Manager	NS AB
bp	[redacted]	Head of communications and advocacy, UK offshore wind	ID
EnBW	[redacted]	Senior Manager Business Development Generation	AW
MCA	[redacted] [redacted]	Offshore Renewables Lead Navigation Policy Advisor	NS VJ

APOLOGIES

Organisation	Name	Role	Initial
bp	[redacted]	Environmental Consents Manager (bp/RES)	GV

NOTES OF MEETING

1	Introductions	Action
1.1	JJH welcomed everyone to the meeting and introductions were made between attendees.	
2	**Objectives and Agenda (Slide 2)**	

2.1	JJH noted that, since the Maritime Navigation Engagement Forum (MNEF) on 10-Nov-2021, the project has developed a methodology for the shipping and navigation assessment specifically taking into account the impacts raised and discussed at the MNEF by the ferry companies.
	
	JJH explained the project is currently in the information gathering stage in order to identify and assess impacts. The slide pack, which had been circulated before the meeting, provides an overview of the proposed methodological approach to assessing the impacts.
	
	JJH explained the purpose of the meeting is to talk through the key impacts which the project has identified (informed by discussions to date) and run through the proposed method and approach to assessment. The project is very keen to get stakeholder feedback on this and engagement through the process.
	
	JJH explained the project had met with Maritime and Coastguard Agency (MCA), Trinity House (TH) on the 1 February 2022 and provided an update on activities to The Department for Business, Energy and Industrial Strategy (BEIS) on the 9 February 2022. JJH also noted that MCA were also attending this meeting.
	
	JJH recapped the agenda below.
	
	Agenda:
	• Principles of stakeholder engagement
	• Review of Key Questions
	• Project update (since MNEF in Nov-2021)
	• Review key potential S&N impacts:
	  • Vessel Routing (Typical and Adverse) (NPS 2.6.162)
	  • Safety of Shipping Corridors (NPS 2.6.165)
	  • Cumulative Impacts (NPS 2.6.169)
	• Review proposed approach to assessment:
	  • Vessel Routing	

	• Collision Risk Modelling • Bridge Navigation Simulation • Discussion of Key Questions • AOB JJH invited any comments on the proposed agenda.	
2.2	KT asked: a) That the National Policy Statement (NPS) for Renewable Energy Infrastructure (NPS) EN-3 paragraph 2.6.55 [which requires consideration of 2.5.31 and 2.5.32 [Impact assessment principles]] and paragraph 2.6.161 [1] [which refers to decision making in relation to recognized sea lanes essential to international navigation] be referred to, as they held important statements relevant to ferry operators. b) For transparency in how minutes of the meeting were documented. JJH confirmed that: a) NPS EN-3 is a key document for the DCO applications and the project is considering this carefully. JJH noted (with reference to the agenda and questions) that the proposed approach being presented is focussed around the NPS and also confirmed that NPS 2.6.55 and NPS 2.6.161 would be addressed within the scope of the Shipping & Navigation assessment (including the Navigation Risk Assessment (NRA)). b) Draft meeting minutes would be shared with attendees for review and comment before final issue.	
2.3	AE commented: a) AE wished it recorded his view (which had been made elsewhere previously) that The Crown Estate should not have awarded leases for offshore wind farms without talking to ferry operators and other users of the marine environment first. b) AE suggested these meetings were recorded in order to provide a full and transparent record. c) AE noted that this meeting focused on safety, but that commercial and environmental impacts of any route deviations also needed to be assessed. ID noted point a). JJH agreed to review with the project whether future meetings could be recorded.	NASH to review with bp/EnBW whether future meetings could be recorded

[1] NPS EN-3 para2.6.161 states “The IPC should not grant development consent in relation to the construction or extension of an offshore wind farm if it considers that interference with the use of recognised sea lanes essential to international navigation is likely to be caused by the development. The use of recognised sea lanes essential to international navigation means:
(a) anything that constitutes the use of such a sea lane for the purposes of article 60(7) of the United Nations Convention on the Law of the Sea 1982; or
(b) any use of waters in the territorial sea adjacent to Great Britain that would fall within paragraph (a) if the waters were in a Renewable Energy Zone (REZ).

	JJH confirmed that the project does intend to cover commercial and environmental impacts together with safety impacts.	
2.4	AE noted that cumulative impacts with Morecambe Offshore Wind Farm, (OWF) but also all proposed wind farms, needed to be considered. ID noted that the project team is in discussion with the Morecambe (Flotation Energy) team to discuss a coordinated approach to cumulative assessment.	
2.5	RM echoed AE's comments on cumulative impacts and welcomed these coordinated discussions. RM requested the three projects [Morecambe, Mona and Morgan] develop a joint terms of reference which could be shared with the Chamber of Shipping (CoS) and ferry companies regarding approach to cumulative impact assessment. RM supported the idea of recording the meetings.RM asked whether the project was also considering the North West Inshore and Offshore Marine Plan policy provisions for shipping and navigation in the EIA process. AB confirmed that the North West Marine Plans are considered within the Scoping Reports and will be addressed in the PEIR and ES.	
3	**Principles for Stakeholder Engagement and Key Questions (Slides 3-4)**	
3.1	ID introduced the projects' principles for stakeholder engagement, recognizing that the process is complicated and that this meeting was part of the engagement in seeking to work together to find solutions.	
3.2	JJH referred to the key questions which the project would like feedback on, either during the meeting or in writing following the meeting. JJH reminded attendees that while the focus of this meeting was on commercial ferry operators, other marine users are being considered.	
4	**Project Update (Slides 5-6)**	
4.1	AB noted that in earlier discussions at the MNEF the project had shown boundaries for the Mona array area as illustrated in the solid pink area on Slide 6, rather than the bidding area which includes the area to the north outlined in pink. AB further explained that The Crown Estate had since advised that the original Mona bidding area [and all Round 4 bidding areas] must be taken forward into Scoping, although the focus of the Scoping Report will be on the preferred area shown on the figures.	
4.2	JJH talked through the progress and plans (as set out on slide 6) regarding key project activities through to ES submission in 2023/24.	
4.3	AE asked why the project had decided not to develop the top part of the pink area [Mona].	

	AB responded that this was due to a combination of constraints as presented previously at the MNEF. AB offered to re-circulate the relevant information. *[Post meeting note. The Scoping boundaries discussed at the MNEF are shown in MNEF Meeting 1 slide 11 and discussed in item five on the MNEF meeting minutes – copy of both attached with these minutes].* ID added that the decision not to develop the top area included issues around a range of topics and receptors including geology, aviation and shipping. It was included as part of the bidding strategy to prevent other developers from the area in order to secure the area between Morgan and Mona to ensure that a geographical offset could be maintained between the two projects. RM expressed concern about the approach to bid on areas of seabed to block other potential developers. ID explained that the primary rationale was to maximise flexibility in developing a challenging area with multiple constraints *[Post-meeting note: the Scoping Documents for each project will provide further information on the site selection process].* ID advised that only the purple shaded area had been surveyed for birds so the top part would not be developed despite the need to cover it in the Scoping Reports. AE referred to Slide 9 and noted that there are a number of routes intersecting the Morgan site. AE could not see how the Morgan project could work without disrupting ferries.	
4.4	RM questioned whether the need to comply with The Crown Estate requirement to consider the full bidding area within the Scoping Report (Item 4.1 above) made for additional work, when the project planned not to use the full area. ID confirmed that the project is required to reference the full bidding area as this is linked to the Habitats Regulations Assessment being prepared by The Crown Estate. ID confirmed the project can also present the smaller area in the Scoping Report and clarified that there would be more emphasis on the shaded (smaller area).	
5	**Key Potential S&N Impacts Summary (Slide 7 – 15)**	
5.1	AR introduced the initial analysis and review of baseline vessel activities in the area carried out to date, based on 2019 Automatic Identification System (AIS) data. AR identified three key impacts of the proposed Morgan, Mona (and other proposed) OWFs as follows: • Impacts on typical (day to day) vessel routing • Impacts on adverse weather routing • Creation of new shipping corridors between OWFs AR sought feedback from attendees on whether these were indeed the principal impacts and whether there were others to be considered. AR noted that the NASH Maritime team had questions for the operators around the baseline data and Master decision making which they would like to discuss in future sessions with individual operators. He also noted that the wider impacts of the OWF's on navigation would be addressed within the Navigation Risk Assessment (NRA) process. AE asked where the ferries were shown on Slide 8. AR explained that slide 8 showed other vessel traffic in the area by vessel category type (cargo, fishing, recreational, tanker, tug and	

	service) while commercial ferry data was shown on subsequent slides. [Later] RM asked if cruise vessels were shown on this slide. AR responded that cruise vessel data was included in the overall AIS data (but not on slide 8) and would be considered within the NRA. JJH reiterated that the focus of this meeting (and the material being presented for this meeting) is on ferries.	
5.2	AR described the typical ferry routing images shown on Slide 9 with the AIS data in the left-hand images separated by the 4 ferry companies. The right-hand images show the NASH Maritime initial interpretation of the base case (without proposed OWFs) centreline routes for each ferry company (in black) and the possible diverted centreline routes (with proposed OWFs in place) for each ferry company (in red). AR noted that potential increases in journey time may lead to operational cost and scheduling impacts. AR welcomed feedback from vessel masters on whether the deviations shown are realistic. KT asked NASH Maritime whether the images showed that the project boundaries interfered with well established ferry routes and shipping lanes. This question was repeated a number of times and JJH confirmed the answer to be "Yes" that the ferry vessel tracks are either adjacent to or intersect the project boundaries and therefore there is potential for impact.	
5.3	KT noted NPS paragraph 2.6.162 requirement not to cause impact on lifeline ferry services (such as those to/from IoM). ID commented that the NPS requires developers to avoid or minimise impacts on lifeline ferry services. ID noted that this would need to be worked through in collaboration with the ferry operators. KT stated that IMO compliance meant that the project could not impact on established sea routes.[Post meeting note from IoMSPC - IMO article 60(7) 2 states "Artificial islands, installations and structures and the safety zones around them may not be established where interference may be caused to the use of recognized sea lanes essential to international navigation".] ID added that the project will work with the ferry companies to understand the impact on journey times, turnaround and schedule feasibility. ID noted the stakeholder concerns. KT raised that IoM depends on its lifeline ferry services, particularly the Heysham route which provides essential food and supplies for the island that the community depend on, medical supplies, and passenger transfer to and from the UK including hospital transfer patients. When the West of Duddon Sands OWF was approved it required IoMSPC ferries to divert around it, which incurred cost and schedule impacts. To address this, IoMSPC commissioned a purpose-built vessel which can carry out two return trips, at a cost of £75m. KT raised that more deviations may affect the lifeline services of IoM.ID recognised concerns.	[Post meeting note from IoMSPC - Section 1.2.5 of NPS makes reference to Electricity Act 1989 where section 36B states "The appropriate authority **may not** grant a consent in relation to any particular offshore generation activity if the appropriate authority considers that interference with the use of recognized sea lanes essential to international navigation"] [Post meeting note from RPS - We would note that this provision only applies to decisions on offshore energy projects made under the Electricity Act 1989 and not to Nationally Significant Infrastructure Projects (NSIPs) which are determined under the Planning Act 2008; the relevant policy provisions for NSIP

[2] https://www.un.org/depts/los/convention_agreements/texts/unclos/part5.htm

		projects in relation to shipping and navigation are set out in NPS EN-3 Section 2.6.147 onwards and the Draft NPS EN-3 Section 2.33]
5.4	AE asked for a version of Slide 9 showing all ferry company tracks on one image. JJH confirmed that a summary plot of the four ferry companies could be provided.	NASH to provide plot showing all ferry tracks on one slide (see accompanying plot with these minutes)
5.5	RM commented that the project should not lose sight of safety impacts of any route changes and that any route impacts should consider the worst case scenario. In particular the point of entry into a deviation or new corridor should be the worst not best/mid-point.	
5.6	AR described Slide 10 (Impact: Vessel Routeing (adverse weather) which provides an example of initial analysis of how vessel routes change in adverse weather. For the example image covering 12-13 March 2019 during a significant storm (with SW winds at Force 10 and WSW waves with significant wave height (Hs) of 2.0-3.5m) the data showed some cancelled ferries, some diverted routes and some unchanged from normal weather. AR noted the requirement to better understand the reasons for these different responses to adverse weather. KT noted that this example is only from a sample of two days, and weather impacts started at much lower wind speeds (e.g. Force 8). AR replied that this (Slide 10) was just one example, with other examples at different wave heights on subsequent slides.	
5.7	AR introduced slides 11-14 by describing Slide 11 (Adverse Weather Routeing (1) Sig. Wave Height) showing AIS vessel tracks from 2019 for ferries, grouped according to the wave height bands (0-1m, 1-2m, 2-2.5m and 2.5-3.5m). AR observed that these slides reinforced the observation (from Slide 10) that wave height (and wind speed) were not the only factors affecting route choice as similar variations of route were shown at different wave height/wind speed band. KT questioned why the images showed diversion for 1-2m Hs but not for larger wave heights. AR replied that the images are based on AIS data of actual tracks and that NASH are keen to better understand the combination of metocean factors that lead to different route choices. AR/JH added that input from operators is needed to understand master decision-making; individual consultation with the operators is planned to understand this.	
5.8	AE proposed that NASH Maritime talk to ferry company senior masters and offered to provide passage for NASH on ferries, to enable discussion with masters to better understand decision making and passage planning. JJH confirmed that NASH Maritime was keen to engage with the mariners and practitioners making route decisions to help ensure the base case of current operations is correctly understood. This is proposed as part of the further engagement with ferry companies to be covered later in the meeting.	

5.9	MP stated he was happy to ask masters to join a call to discuss weather routing and also offered to provide passage for NASH on ferries if this would be of value. MP took the view that the weather data set presented in Slides 11-14 was too small and that more consideration needed to be given to vessel direction (E or W bound), wind and wave direction and wind/wave interaction. AR pointed to the bottom right image of Slide 13 which illustrated a range of different route selections for the Liverpool to Belfast route within one wave height range. JJH confirmed that more work was needed to understand the vessel/weather interaction and welcomed the offer of input from masters to help with this.	
5.10	AR described Slide 15 (Impact: Shipping Corridors) which shows new corridors between OWF's which might be created by the project and stressed the project aims to find a safe route in these circumstances. AE observed that when the ferry companies were engaged on the West of Duddon Sand OWF impact assessment, they agreed to mitigation measures, but were at the time, unaware of what future developments might happen. He therefore felt it would be difficult to comment on the safety of a proposed new corridor without knowing what further development might happen next.	
5.11	KT asked for the distance between the Millom gas field and the Walney site, noting that MCA guidance (shipping route template) considered low risk passing distances from wind farms of 2.0 to 3.5nm. AR advised it was approximately 3.5nm. *[Post-meeting note: distance measured to 3.7nm - initial consultation between the project and Harbour Energy/Spirit Energy has indicated that the Millom West platform is planned to be decommissioned – further consultation will be carried out with Harbour Energy/Spirit Energy to further understand plans and timescales].* JJH noted that MCA guidance and other industry wide guidance (e.g PIANC) provides a clear basis for shipping route and corridor widths. He also commented that the project was aware of the discussions that took place during the Walney Extension application and Examination on the corridor between Walney Extension and the proposed (at that time) North East Potential Development Area (NEPDA). NASH Maritime has discussed the approach to be used to assess corridor widths with MCA, and JJH noted that this needs to be informed by the learnings from Walney Extension.	
6	**Impacts Review Summary (Slide 16)**	
6.1	JJH referred to the slide and asked whether the project had identified the main impacts correctly and if there were any additional impacts that had not been identified.	
6.2	AE considered that commercial viability is not covered. He noted that all ferries operate to tight schedules and have hours of rest rules for crews. He stated that any time increases could cause a loss of one sailing per day and this could make the operation uneconomic. AE has concerns on safety, but also commercial impacts, along with impacts of COVID and Brexit.	

	AE considered that the existing vessel traffic through the proposed Morgan OWF site and a requirement for a 3.5nm separation between wind farm boundaries meant he could not see how the Morgan project could go ahead. ID noted that the project is aware these questions need to be addressed. The project will be modelling impacts on journey times/deviations (and would be engaging with operators to understand this), but planned to address safety first.	
6.3	AE asked whether the project had considered ship crossings [interactions] (within the new corridors and around the new wind farm boundaries) especially with other ferries. ID noted this would be discussed in more detail in later slides [Slide 21 Task 2B: Quantitative Collision Modelling).	
6.4	RM raised allision and anchor snagging, noting allision can be significant with increased vessel activity during construction and O&M. JJH responded that this would be covered within the NRA in accordance with MGN 654	
7	**Proposed Approach (Slides 17-22)**	

7.1	JJH provided an overview of the proposed approach to investigate these issues:
	• Task 1: Commercial Shipping Assessment
	• Task 2: Safety Assessment:
	  ○ Desk based corridor assessment
	  ○ Quantitative collision risk modelling
	  ○ Bridge Navigation Simulation
	• Task 3: Engagement
	• Task 4: Reporting
	
	Slide 19 summarises the indicative schedule for the proposed work being discussed today, noting the overall Environmental Impact Assessment (EIA) programme dates, the interactions with the MNEF and the relationship between the supporting studies and the PEIR and ES submissions.	

7.2	ID commented that the project did not expect to reach full agreement or alignment with the ferry companies at PEIR, and acknowledged this will be an ongoing process.	
7.3	JJH emphasised the proposed continuing engagement with CoS and the ferry companies throughout this work, with the aim of: • Better understanding route choice and passage planning with existing and new OWFs in place in typical and in adverse weather • Better understanding impacts on journeys and schedules (and commercial impacts) • Providing inputs and realism into Bridge Navigation Simulations proposed to assess safety of new corridors created by the new OWFs.	
7.4	AR described the approach for quantitative collision risk modelling (Slide 21) in different scenarios.	

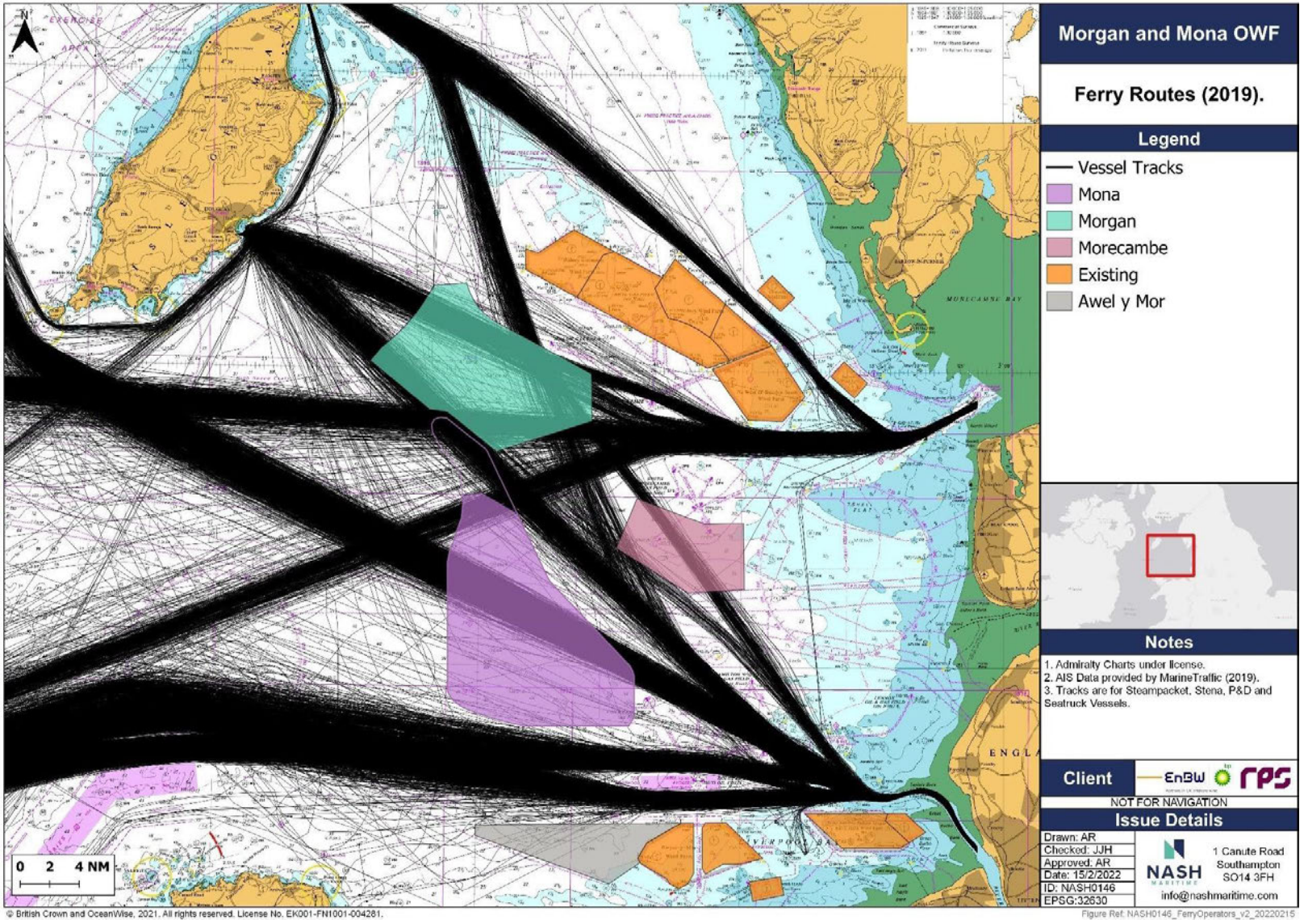
	KT asked whether the green lines in the bottom right image were what the project wanted to see as a solution. AR clarified that they were just examples of a scenario that could be modelled, and will be discussed with operators	
7.5	JJH described the planned bridge navigation simulations which are designed to bring mariners and practitioners fully into the process of assessing feasibility and safety of navigating through corridors created by the existing/proposed OWFs. JJH noted a key desire was for the ferry companies to input into the run specification, the actual simulations and the conclusions of the work. JJH also advised that the simulation conclusions would feed into the NRA.	
8	**Recap of Key Specific Questions (Slide 23)**	
8.1	JJH reviewed the three questions issued to prior to the meeting and welcomed any follow up responses in writing (noting minutes will be issued concurrently to aid this): 1. Have the principal impacts of the Mona/Morgan project been identified (to then be quantified through the NRA)? 2. Are the tasks in the proposed approach appropriate for investigating these impacts and if not, what other activities are proposed? 3. Are the Chamber of Shipping/Ferry Operators willing to engage with the Applicant and support the process in the following ways? JJH invited all organisations to make comment on the 3 key questions in turn.	
8.2	KT stated that he understood the need for co-existence but noted they have a duty to protect the ferry masters. KT felt that the NRA should be impartial but noted that NASH was working for the developer. KT asked whether NASH had previous examples where it had advised its developer clients that a project was not viable. KT commented that NASH Maritime's general publicity material did not seem impartial as it referred to projects progressing through planning.JJH responded that whilst NASH Maritime was contracted through RPS to bp/EnBW, it had a duty to follow well established MCA guidance and advise the project in accordance with this NPS. NASH has worked on projects where early identification of issues had helped to find solutions to allow co-existence with projects and stakeholders.	
8.3	KT stated that the MGN recognizes there should be minimal or no interference with established routes, but these projects do interfere. JJH responded that this is very early in the process and the project is keen to engage thoroughly with the ferry companies through the assessment process.	
8.4	AE noted in response to Q3 that they are willing to engage but do not support the process of building wind farms in the middle of ferry routes. AE also restated that he questioned whether Morgan is a viable project.	

	ID responded that the project was looking for specific support on the elements listed and the engagement process, not the outcome.	
8.5	MP considered there were large adverse risks with corridors A and B (on Slide 15) which could put at risk passengers and crew. He pointed to the issue of vessels approaching Corridor B from various angles and the potential hazards this would create, noting the presence of the Millom platform and Walney Extension. ID explained NASH is assisting the project in working through the NPS and MCA regulations. The project is aware we need to work through this and identify a solution. ID noted the NPS is very clear in regard to lifeline ferries. ID noted the project is taking this seriously, and can only put forward something that is safe, meets the tests and is commercially viable. ID added it is in bp and EnBW's interests to work through this with stakeholders and find a solution. MP asked whether there is acceptance that there may not be a safe solution. ID pointed to Thanet Extension OWF as a clear example of this where shipping and navigation concerns resulted in refusal of consent. ID responded that for bp, safety is a priority and it would not put forward a project that is not safe.	
8.6	NS (MCA) requested that the North West Marine Plan policies were also addressed in the evaluation and assessment process. NS (MCA) noted that NASH Maritime is currently gathering evidence to determine whether the projects can be built and operated safely. He commented that commercial discussions lie outside of the NRA process. NS (MCA) confirmed agreement of the assessment approach proposed, noting it was above and beyond what other wind farm developers have done and the MCA consider this approach is necessary for this location. NS (MCA) noted that adjustments to the projects could be made, noting that other OWF projects had made adjustments to proposed boundaries, and wind turbines will not necessarily cover the whole area. The Planning Inspectorate will look at whether any reasonable adjustments can be made to ensure co-existence, and any safety concerns need to be supported with evidence. NS (MCA) noted that engagement between MCA, ferry operators, ports and the project is key, with the objective of understanding if risks to safety are acceptable or tolerable with mitigation.	
8.7	AE asked whether NS (MCA) considered The Crown Estate leasing process as flawed [offering bid areas without pre-screening for navigation issues and engaging with maritime stakeholders in advance]. NS (MCA) considered that The Crown Estate do not go into this much [navigational] detail in advance but noted that pre-screening and engagement was planned for the Celtic Sea round now. It was likely that Crown Estate had looked at AIS data to determine shipping routes. AE asked how Morgan and Mona could have been allowed to progress if The Crown Estate had looked at AIS data. NS (MCA) is not able to answer this but noted there was a Round 4 area in the Dover Strait that was identified for possible development but no	

	developers submitted proposal bids to The Crown Estate and it did not proceed.	
8.8	KT hopes MCA had understood IoMSPC concerns and reiterated that they do agree with co-existence provided it was not at the detriment of the safety and viability of their routes. NS (MCA) responded that the NRA is a two-way process which needed operator input. NS (MCA) advised not to consider NASH Maritime as biased and that they would follow the MCA's NRA process which relies on input from stakeholders.	
8.9	RM agreed with NS (MCA) that it is incumbent upon the ferry operators to input and CoS will be inputting fully into the process. RM considered early-stage engagement is a good start. However, concurrent developments arriving simultaneously with such negative impacts on lifeline services are setting a precedent and is very concerning for those involved. RM encouraged operators to provide as much feedback as possible.	
8.10	JJH thanked everyone for their contributions and asked whether Stena Lines had anything further to add. MP said it did not. ID thanked participants for their time and effort.	
9	**AOB**	
9.1	JJH/ID/AB thanked everyone for their attendance. JJH thanked participants for their commitment to engage in the process. JJH noted that the minutes would be issued and welcomed comments on these and reflection on the questions. JJH also noted that NASH Maritime would be in touch to arrange individual meetings with the ferry companies to discuss route planning in normal and adverse weather conditions.	NASH Maritime to arrange individual follow up meetings

ACTIONS

Section	Action	Responsible
2.3	NASH to review with bp/EnBW whether future meetings could be recorded.	JJH/AB/ID
5.3	KT to clarify reference to IMO compliance.	KT
5.4	NASH to provide image showing all ferry tracks on one slide *[post meeting note – included as attachment to these minutes]*	AR
9.1	NASH Maritime to arrange individual follow up meetings	JJH
General	Attendees to provide comment on the questions prior to 17-Mar-22.	


Morgan and Mona OWF
Ferry Routes (2019).
Legend
Vessel Tracks
Mona
Morgan
Morecambe
Existing
Awel y Mor
Notes
1. Admiralty Charts under license.
2. AIS Data provided by MarineTraffic (2019).
3. Tracks are for Steampacket, Stena, P&D and Seatruck Vessels.
Client
NOT FOR NAVIGATION
Issue Details
Drawn: AR
Checked: JJH
Approved: AR
Date: 15/2/2022
ID: NASH0146
EPSG:32630
1 Canute Road
Southampton
SO14 3FH
info@nashmaritime.com
0 2 4 NM
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Figure Ref: NASH0146_FerryOperators_v2_20220215

I.6 Shipping and navigation meeting 5

I.6.1 Minutes

MORGAN AND MONA OWFS

Project Title	Morgan and Mona OWFs
Project Number	21-NASH-0146
Meeting subject / purpose	IoMSPC: Baseline Data Gathering
Revision	R01-00
Date of meeting	04-Apr-2022
Start time	11:00 UTC
Finish time	12:45 UTC
Client	RPS / bp / EnBW
Location	Imperial Building, Douglas /MS Teams

DOCUMENT CONTROL

Revision	Date of Issue	Description	Approved
R01-00	29-Apr-2022	Issued to attendees for comment	AR

ATTENDEES (* INDICATES JOINED VIA TEAMS)

Organisation	Attendee	Role	Initial
Isle of Man Steam Packet Company (IoMSPC)	[redacted]	Marine Manager/DPA	TD
	[redacted]	Consultant Commercial Director	JW
	[redacted]	Marine Manager/DPA designate	RH
NASH Maritime	[redacted]	Principal Consultant	AR
		Principal Associate	NB
bp	[redacted]	Offshore Consents Manager	GV
EnBW	[redacted]	Senior Manager Business Development Generation	AW
	[redacted] *	Nautical Expert	FK

APOLOGIES

Organisation	Name	Role	Initial
Isle of Man Steam Packet Company	[redacted]	Operations Director	KT

NOTES OF MEETING

1	Introductions	Action
1.1	AR thanked everyone for their time attending this meeting and introductions were made between all.	
1.2	AR explained that the purpose of this meeting was to provide the evidential basis behind the current operations and constraints of ferry operations in order to inform the Navigation Risk Assessment (NRA) and Environmental Impact Assessment (EIA). It also provides an opportunity for the project team to see the operations in person through site visits and tripping on the ferries.	
1.3	AR proposed to run through the questionnaire sent in advance of the meeting.	
2	**Baseline Characterisation**	
2.1	AR reviewed the questions on baseline characterisation in the questionnaire and several points were noted.	
2.2	2019 AIS data was agreed to be generally representative of normal operations (accounting for pre-COVID).	
2.3	Ro-Pax Ben-my-Chree performs 2 x daily return crossings between Heysham and Douglas year-round. Fast ferry Manannan offers a seasonal service from early April to late October between Liverpool and Douglas, once or twice daily increasing to 3 x daily during significant events (e.g. TT (Tourist Trophy) races, indicative dates 28 May – 11 Jun 2022). Crossing routes to Dublin/Belfast are principally with the fast ferry; these are unaffected by the Mona and Morgan proposal and take approximately 3 hours. From 2023, the replacement Ro-Pax Manxman will provide a twice daily Heysham service (reducing to 6 days per week from Nov – March when a Liverpool return is planned on day 7 during the seasonal absence of the fast ferry – to honour government Service Agreement).	
2.4	Passage Plans for favourable and adverse weather for the routes are held onboard vessels, although it was emphasised the routes can be varied at the Master's discretion as the forecast weather increases or moderates.	
2.5	Freight demand is relatively constant throughout the year, with passenger demand peaking during the summer and around the TT. During the TT, the timetables are adjusted to provide 3x crossings of the fast ferry service and every crossing is generally full.	
2.6	In the event of maintenance absence, another RoRo vessel could be chartered in e.g. m.v. Arrow, but this is a freight only vessel. However, as the IoMSPC is a critical service to the Isle of Man economy, high reliability is maintained and sufficient spares are kept to rectify any issues quickly. In general, the Manannan is laid up over winter in Douglas so could be reactivated, but this is rare. Mannannan can be used on the Heysham route, but has very limited space suitable for trailers. The new build vessel Manxman is designed to have additional redundancy.	
2.7	Constraints on different harbours were discussed: • **Heysham**: Can be challenging to enter and berth, combination of little sea room, strong tides and wind conditions. Heysham is also dredged but has issues with access at spring low tides, requiring	

	planning and amendment of timetables around entry/exit for sufficient under keel clearance. Berth pocket is deep enough to remain alongside at spring LW. • **Douglas**: Also can be challenging in certain wind conditions. The harbour has a size limit of 135m for turning and the new vessel will be 132m. • **Liverpool**: VTS provide slots for vessel access, can have issues with congestion, potentially exacerbated by new terminal. The tidal flow rates in the Mersey can also be significant.	
2.8	As vessels are normally operated at maximum speed, any delays in the service cannot be regained through speed adjustments, typically requiring management of turn-around time in ports, however, there is also little contingency here (particularly when service is busy with passengers). Often delays result in freight cargo being left behind (95% of which is unaccompanied) in favour of cars with passengers.	
2.9	All bridge watches during crossings are manned by an Officer of the Watch and lookout, and occasionally, the Master if required.	
2.10	The greatest times for fishing and recreational activity is April to September. However, whilst present, they are rarely a significant hazard to ferry crossings. It was noted that any proposed corridors between offshore wind farms might increase the frequency at which vessels encounter one another, potentially increasing collision risk.	
2.11	Whilst NASH questioned what the impacts during the construction of the previous offshore wind farms were, JW was not able to recall specific issues. In general, high-speed O&M vessels servicing the wind farms have AIS and are easily detectable. It was noted that the addition of more of these vessels could increase collision risk.	
2.12	No specific concerns with radar echoing/artefacts when passing near the existing offshore wind farms have been reported recently.	
2.13	The IoMSPC is the principal ferry service to the Isle of Man (including time-sensitive supplies and medical transport). The Silver River cargo ship offers a non-time sensitive alternative into Ramsey.	
3	**Master Decision Making**	
3.1	Company SMS and Master's Standing Orders on the vessels provide closest point of approach parameters; it was anticipated that these would be either 1nm or 2nm when navigating the project area. These distances applied to both other vessels and offshore platforms/existing wind farms.	
3.2	From reviewing the AIS data, the decision making to pass to the north/south of specific production platforms on route is a decision related to the wind conditions and traffic density.	
4	**Adverse Weather Routeing**	
4.1	Whilst bad weather is common in winter when only the RoRo is in operation, adverse sea conditions can also be expected in April/May and September/October and so affects both vessels / routes.	
4.2	A previous winter trial of running fast craft services resulted in the loss of 1/3 of sailings due to bad weather, so was not seen as viable going forward.	

4.3	Swell is the limiting factor for most crossings, however wind/tidal issues dictate berthing in Heysham/Douglas. In general, vessels try to avoid sailing beam-on to the conditions to reduce the risks of cargo shift, passenger injury and to maintain manoeuvrability. This may require course deviation, e.g. to keep prevailing sea conditions on the bow/stern rather than the beam. The Welsh coast offers some lee from the prevailing south-westerlies.	
4.4	Historical incidents associated with bad weather and cargo shifting were discussed, notably the 2008 loss of m.v. Riverdance in the Irish Sea and in 2020 the European Causeway incident had occurred.	
4.5	A key challenge in adverse weather is the hours of rest limit of 14 hours. Existing schedule is for 12-hour shifts, therefore there is a maximum 2 hours delay before hours of rest are a constraint. Existing vessels have no or minimal live-aboard facilities. Given the constraints on berthing in Heysham, decisions to sail must be confident the vessel can berth as there is limited slack in manning requirements to wait for conditions to ease. On occasion, vessels have returned back to Douglas as safe entry to Heysham was not possible. Sailings can be cancelled given concerns on entry/exit into Heysham.	
4.6	Delays and cancellations are significantly more common in winter, although typically have fewer passengers and therefore loading is quicker. During summer, any delays can have significant impacts on timetabling. Delays from adverse weather often take a long time to recover, e.g. 1 hour delay in schedule can often take up to 2 days to recover from.	
4.7	Adverse weather requires additional lashings for cargo (as per Cargo Securing Manual) which increases time pressure and crew workload on turn around.	
4.8	IoMSPC obtain specific forecasts from the local met office at Ronaldsway as well as for Heysham. Peel Ports, operators of Heysham, also issue detailed forecasts. In general, the team would take a look ahead each week and ask the Masters for their opinions on the weather conditions. Up to 24 hours beforehand, a weather warning is issued by IoMSPC, but the decision is not made until late-on whether to sail or not, given that conditions can change. These are often then reported by the media.	
4.9	The fast ferry is always the first to be cancelled and has constraints on operating based on significant wave heights (Hs >3m).	
4.10	Repeated cancellations during extended bad weather results in shortages in the Isle of Man, including gaps on supermarket shelves and reputational risk to IoMSPC.	
4.11	IoMSPC emphasised that the presence of new offshore wind farms limits the ability of masters to take adverse weather routeing and therefore would result in more cancellations.	
5	**Future Changes to Operations**	
5.1	TD described the Manxman being constructed to replace the Ben-my-Chree as the conventional ferry. This has been purpose built and designed for the current Irish Sea routes, principally the Douglas to Heysham route. It is anticipated that the vessel would be ready by summer 2023. The vessel is expected to have more windage but to benefit from: • Better seakeeping qualities • Improved reliability • Being slightly larger (length/beam)	

	• More powerful engines/thrusters • Greater passenger capacity and facilities (up from 630 to 1000). For the purposes of NASH's assessment it was agreed that the Ben-my-Chree and Manxman are approximately equivalent.	
6	**AOB and Impacts of Mona and Morgan Project**	
6.1	TD emphasised the following key points: • The IoMSPC is a lifeline ferry service and the community of the island depend on it for their supplies, many of which are 'just-in-time'. • The National Policy Statement gives significant importance to these routes. IoMSPC routes have been in existence for 200 years. • The ferries do not have the speed capability to change routes or make up lost time. • This will inevitably result in more trip cancellations as delays are difficult to recuperate (given constraints on weather, hours of manning etc.). Even 10-minute delays have knock on effects given tight turnaround times and transit times. • The IoMSPC is in direct competition with the airlines, and it is estimated that the easyJet operation that commenced in 2008 had resulted in 100,000 lost ferry passenger trips per year. Any additional delays as a result of new offshore wind farms could result in less demand. • The safety of any corridors between wind farms needs to be maintained or the masters will not sail through them, particularly in bad weather, resulting in more cancellations. JW noted the overlap of the Morgan project with the Heysham route and that this would raise significant commercial impacts. JW questioned how this would be assessed; IoMSPC do not know what is specifically on each trailer and therefore the economic costs of service cancellations to the IoM would be difficult to assess. GV noted that a socio-economics impact assessment will be conducted as part of the EIA process.	
6.2	AR thanked everyone for their time, emphasising that this is the first of several engagements to inform the NRA process. Future meetings would enable the specific impacts (safety and commercial) to be explored in detail and assessed through a hazard workshop.	

ACTIONS

Section	Action	Responsible

I.7 Shipping and navigation meeting 6

I.7.1 Minutes

MORGAN AND MONA OWFS

Project Title	Morgan and Mona OWFs
Project Number	21-NASH-0146
Meeting subject / purpose	Seatruck: Baseline Data Gathering
Revision	R01-00
Date of meeting	05-Apr-2022
Start time	13:00 UTC
Finish time	14:30 UTC
Client	RPS / bp / EnBW
Location	North Quay, Port of Heysham /MS Teams

DOCUMENT CONTROL

Revision	Date of Issue	Description	Approved
R01-00	29-Apr-2022	Issued to attendees for comment	AR

ATTENDEES (* INDICATES JOINED VIA TEAMS)

Organisation	Attendee	Role	Initial
Seatruck	[redacted] [redacted]	CEO Marine Superintendent	AE SO
NASH Maritime	[redacted] [redacted]	Principal Consultant Principal Associate	AR NB
bp	[redacted]*	Environmental Consents Manager (bp/RES)	GV
EnBW	[redacted] [redacted]*	Senior Manager Business Development Generation Nautical Expert	AW FK
RPS	[redacted]*	Lead EIA Manager	AB

APOLOGIES

Organisation	Name	Role	Initial

NOTES OF MEETING

1	Introductions	Action
1.1	AR thanked everyone for their time attending this meeting and introductions were made between all.	
1.2	AE provided an overview of Seatruck Ferries: • Started in 1996 with one vessel running the Heysham to Warrenpoint route. • Specialist in freight (unaccompanied trailers). • Schedule currently operates 66 sailings per week. • 6,600 units of freight are moved weekly. • Seatruck carries 20% of Irish Sea freight.	
1.3	AE summarized concerns with the level of development activity (including Offshore Wind Farms (OWFs), seismic surveys) in the Irish Sea, in particular: • The basis through which The Crown Estate have identified lease areas. • Seatruck are not always aware of the 'bigger picture' regarding future OWF proposals and viewing a succession of individual consultations is difficult e.g. Boris Johnson's recent statements on Irish Sea OWFs, seismic surveys proposed by Green Maritime off Liverpool. • Seatruck operate a tight schedule with no margin of slack versus constraints on hours of rest and therefore delays from weather, operational issues and proposed OWFs are a problem. A strict 24h rotation is paramount. • Safety is paramount and there have been recent incidents on board and any threat to safety that an OWF may bring is a concern. • Seatruck have significant concerns on Morgan in particular which impacts ferry routes. • Seatruck are attempting to represent their concerns with limited resources against large well-resourced companies.	
1.4	GV stated that the project recognizes the potential for impacts on shipping & navigation and opportunities for better strategic marine spatial planning by Government in the future. Consideration of potential cumulative impacts with other projects and socio-economic effects are a key part of the EIA process and so will be considered. The draft NPS makes it clear there is a need to consider how a proposed project could affect existing users of the marine environment, including shipping. It is for these reasons that the project is engaging with key stakeholders early (pre-Scoping).	
1.5	AR explained that the purpose of this meeting was to provide the evidential basis behind the current operations and constraints of ferry operations in order to inform the Navigation Risk Assessment (NRA) and Environmental Impact Assessment (EIA). It also provides an opportunity for the project team to see the operations in person through site visits and tripping on an Irish Sea ferry route.	
1.6	AR proposed to run through the questionnaire sent in advance of the meeting.	

2	Baseline Characterisation	
2.1	AR reviewed the questions on baseline characterisation in the questionnaire and several points were noted.	
2.2	**Question 1.1: Timetables** AE/SO provided a summary of the Seatruck timetable: • Heysham to Dublin is 2x/day • Heysham to Warrenpoint is 1x/day • Liverpool to Dublin is 3x/day. AE noted that the Liverpool to Dublin route is not impacted by the projects. Freight operators are reliant on the schedules. These schedules (and vessels) are based on strict 24-hour rotations, maintaining hours of rest requirements and there is lack of contingency in turnaround times or hours of rest. The service is yearly (no seasonality due to constant demand). Weekly schedules are 'flat out' but there are reduced sailings at weekends when demand drops off.	
2.3	SO explained that Heysham has multiple constraints on operations. These include tidal constraints on access to the berths due to a necessity to provide safe under keel clearance at spring low tides. Available depths in Heysham are dynamic and depend on the status of the dredge campaign. In addition, Warrenpoint is also constrained so the Heysham-Warrenpoint route is the most constrained for arrivals/departures. Any delays might result in missing tidal access window, given the tight schedule. Furthermore, where sailings are constrained by low water, other operators want to arrive and/or leave at the same time causing congestion. Arrivals need to be 30 mins apart – tail end vessel can result in lack of available stevedore labour. The vessels are purpose designed for operating at Heysham (142m 'Heysham-max'') and would not be suitable for operating on other routes.	
2.4	AE noted that speed cannot be used to account for any delays in schedule. In particular, hours of rest are already limited: • Maritime Labour Convention requires 10 hours of rest in any 24-hour period, in a maximum of 2 periods, of which at least 6 hours must be uninterrupted. Isle of Man flag, in particular, does not permit any exceptions. • Given the crossing times and the pilotage elements (which require enhanced manning), vessels often slow steam in one direction to ensure the time between pilotage is >6hrs. • Deviations that result in increased distance on a crossing cannot be recovered simply by speeding up as this would not enable hours of rest requirements to be met. Longer crossings would cause a cumulative delay in the schedule which makes 24-hour schedules difficult to maintain. Schedules will then be delayed for the remainder of the week until Saturday, where some slack in the weekend schedule exists. • Exceptions to hours of rest requirements can be made in exceptional circumstances (e.g. emergency, adverse weather/fog), but deviation around an OWF would not count as exceptional circumstances. • Vessels are 'single manned' in each crew position e.g. no 2nd Master available if hours of rest limits are exceeded.	

	Q1.2: Passage plans • Seatruck has provided passage plans to NASH. • AR noted that significant variation is shown in the AIS data. AE explained that ships may anchor behind Anglesey or Isle of Man in bad weather if they cannot get into Heysham. AE explained that the ships are purpose built for Heysham (deck heights, speed, manoeuvrability).	
2.5	**Question 1.6: Constraints on vessel operations in ports** Future constraints on Dublin were identified. AE explained that the freight terminals were being moved to the furthest berths from the sea in summer 2022 which could increase transit and manoeuvring time by circa 20 mins per port turnaround. Dublin operates 15-minute arrival and departure time slots which are agreed one year in advance, so a missed slot means a potentially long wait.	
2.6	Liverpool is constrained by lock timings and other vessel movements; Heysham and Warrenpoint often constrained by tide.	
2.7	SO explained that there is variation in the volume and location of fishing and recreational activity along the route. This can vary between one fishing boat or a fleet of 20 fishing boats. AE considered there was not much activity at Heysham, but more off the Isle of Man and coast of Northern Ireland around Kilkeel. Fishing to the south and west of the Isle of Man is often the most dense. AE noted that recreational vessels are limited. On arrival in ports, vessels need to slow down early to minimize wash issues for small vessels and recreational craft (jet skis, paddleboarders), aquaculture and vessels alongside (in particular Warrenpoint).	
2.8	Historically, OWF Service Vessels have not been a significant constraint on Seatruck operations given the OWF locations. OWF service vessels mainly route from Barrow and Liverpool.	
2.9	**Question 1.10: Emergency situations** Irish Sea ferries are occasionally called to SAR incidents, such as standing by whilst RNLI/HMCG attend, or providing a lee; this can add several hours to their schedule.	
2.10	**Question 1.11: Radar effects of OWF** AR asked if there were radar reflections for vessels passing OWFs. SO responded no. AE added that Seatruck don't pass that close to existing OWFs (1.2 nm). NB concluded that Seatruck are therefore not aware of radar issues that their ships have experienced. AR asked how visible craft are. SO explained that small craft within a wind farm can be difficult to track. ARPA tracking of targets within wind farms will not work and although AIS is carried by OWF service vessels, AIS should not be used for collision avoidance.	
3	**Master Decision Making**	
3.1	No CPA limits have been defined in the standing orders of the vessels; SO explained it is difficult to provide a number as it depends on conditions. This could be 1 nm, but less in the River Mersey; it is left to the Master's discretion. These CPAs vary based on experience, traffic conditions and weather.	

4	**Adverse Weather**	
4.1	**Question 3.1: Adverse Weather Routeing** Adverse weather routes provided before the meeting were reviewed. In general, vessels try to keep adverse sea conditions 30 degrees on the bow and some lee is achieved from Anglesey. Therefore, tracks often head southwest out of Heysham. SO explained that in extreme conditions, vessels can pass to the south of the rigs at Morecambe, towards Liverpool before turning west. Fair and adverse weather routes are loaded into ship's ECDIS but Master has discretion to vary route as conditions dictate.	
4.2	Vessel tracks in the AIS data were reviewed and vessels performing manoeuvres to the east of Anglesey were discussed. SO suggested that these could be vessels killing time if there are issues at Liverpool (e.g. delays with the locks) or if conducting pilot transfers.	
4.3	**Question 3.3: Forecasts** AE explained they use the shipping forecast, NAVTEX on the ship, and subscription forecasts. Seatruck use Met Office data for Heysham, Warrenpoint and Dublin (for the ports only). Vessels generally will not enter Heysham if the wind is averaging more than 29 knots mean wind.	
4.4	**Question 3.4/3.5: How often are crossings cancelled/delayed?** During one week in February 2022, when three named storms occurred in close succession, Seatruck cancelled 16 of their 66 planned sailings.	
4.5	A single late sailing has a knock-on to subsequent sailings. This could be due to weather, operational issues or longer turnaround times in port (e.g. stevedoring shortages). Reasons for delay are not formally recorded at present so detailed statistics cannot be provided. If a sailing is cancelled (such as due to the conditions in Heysham), the reciprocal sailing might also be cancelled so as not to have two ferries on the same side of the Irish Sea at the same time. Similarly, if absolutely necessary, vessels will be short loaded, leaving some freight behind to catch-up the schedule.	
5	**Future changes**	
5.1	At present, Seatruck own 8 vessels but only operate 6 on their regular routes, with 2 chartered out. In the future, it may be that these vessels are used on existing or new routes. This depends on many factors, including market demand, Brexit etc.	
5.2	AE noted that the hours of rest requirements might change in the future to become more onerous. Currently under review by the unions and other maritime bodies.	
6.	**Seatruck specific questions**	
6.1	**Seatruck 2:** Reasons for course changes: SO explained that there is a lock schedule on the Liverpool to Dublin route and the Master may steam up and down waiting for the lock. AE added that there have been issues with breakdown at the locks.	
6.2	**Seatruck 3 (AWR):** AE explained that the greatest concern from looking at the AIS data is the south of Morgan (where they would have to divert) and north of Mona (where they would need to go further north). AE explained that removal of these areas from the project boundaries would alleviate the majority of	

	hours of rest/commercial issues, but it is still a narrow corridor with potential for safety issues. However, it was recognized that different operators will have different preferences.	
7	**AOB**	
7.1	AR thanked everyone for their time, emphasising that this is the first of several engagements throughout the NRA process. Future meetings would enable the specific impacts (safety and commercial) to be explored in detail and assessed through a hazard workshop.	
7.2	AE/SO offered the project team future tripping opportunities aboard the Seatruck vessels.	

ACTIONS

Section	Action	Responsible

I.8 Shipping and navigation meeting 7

I.8.1 Minutes

MORGAN AND MONA OWFS

Project Title	Morgan and Mona OWFs
Project Number	21-NASH-0146
Meeting subject / purpose	Stena: Baseline Data Gathering
Revision	R01-00
Date of meeting	14-Apr-2022
Start time	12:30 UTC
Finish time	13:30 UTC
Client	RPS / bp / EnBW
Location	MS Teams

DOCUMENT CONTROL

Revision	Date of Issue	Description	Approved
R01-00	29-Apr-2022	Issued to attendees for comment	AR

ATTENDEES

Organisation	Attendee	Role	Initial
Stena Line	[redacted]	Safety & Security Superintendent, Deputy CSO, DP Ports (PMSC)	MP
NASH Maritime	[redacted]	Principal Consultant	AR
	[redacted]	Principal Associate	NB
RPS	[redacted]	Lead EIA Manager	AB

APOLOGIES

Organisation	Name	Role	Initial

NOTES OF MEETING

1	Introductions	Action
1.1	AR thanked everyone for their time attending this meeting and introductions were made between all.	
1.2	MP stated that Stena were not anti-wind energy and had supported numerous energy efficiency initiatives (including methanol fuel, electrification etc.). Stena have concern on the level of development in the Irish Sea, concurrently between different projects which will cumulatively have impacts on operations and safety. Particularly: • During prolonged adverse weather which can result in congestion and cancelled sailings. • Creation of navigational corridors which decreases sea room to alter course or weather route. • Increasing numbers of small craft and increased collision risk.	
1.3	AR explained that the purpose of this meeting was to provide the evidential basis behind the current operations and constraints of ferry operations in order to inform the Navigation Risk Assessment (NRA) and Environmental Impact Assessment (EIA).	
1.4	MP offered the project team future tripping opportunities aboard the Stena vessels.	
1.5	AR proposed to run through the questionnaire sent in advance of the meeting which Stena Line had already completed.	
2	**Baseline Characterisation**	
2.1	AR reviewed the questions on baseline characterisation in the questionnaire and several points were noted.	
2.2	**Question 1.1: Timetables** MP described the timetables and operations of Stena relevant to the consultation area: • 3x vessels on Liverpool-Belfast route. • 2x vessels on Heysham-Belfast route. As a result of Brexit, all vessels and routes are nearing full capacity. Liverpool to Belfast vessels already replaced with larger ships. AR noted that the trip length and turn-around time meant that each vessel was capable of two transits per 24 hour period. MP noted that Stena used to operate reduced sailings on Monday (due to lower demand) but this has recently changed to winter only, and is likely to be dropped due to increasing demand.	
2.3	MP described that the largest vessels (E-Flexer) are capable of carrying 1,000 passengers, and were custom designed for the Irish Sea routes. The Stena Estrid and Edda were delivered in 2019/2020. These vessels were also designed to be more environmentally friendly and burn less fuel. The ferries have limited additional speed capacity that can be used in order make up lost time due to any delays. Any increase in vessel speed would result in greater fuel consumption which has environmental and economic impacts.	

2.4	**Question 1.2: Passage Planning** AR asked for clarification on the passage planning to the east/west of the Isle of Man and east/west of the oil and gas fields. MP explained that it was principally due to tides, weather or traffic: • Vessels would utilize tides to best advantage when planning around Isle of Man. The eastern passage also offers greater shelter during prevailing south-westerlies. • Vessels departing Liverpool could head north earlier to avoid congestion in approaches to Liverpool. Additionally, making the turn earlier may be better in adverse weather as it is more sheltered. AR asked how the decision is made to route east or west of Walney/West of Duddon Sands. MP explained this is due to good practice of the master.	
2.5	**Question 1.4: Port Constraints** MP described how Stena have multiple vessels from multiple routes calling into Belfast, whilst operating only 2x berths in that port. There are constraints on berthing slot times for the ports as well. Some delays can be addressed by reducing time alongside or short loading the vessel. However, some freight is Just-In-Time or perishable, therefore missed sailings can have commercial consequences.	
2.6	**Question 1.5: Transit speed** Transit speed has an impact on fuel consumption, environment and cost. MP explained Stena aim to improve fuel saving and reduce operational costs and are always looking at new ways to reduce fuel consumption.	
2.7	**Question 1.7: Fishing/recreational** MP clarified that this activity is seasonal and concentrated to summer months, however some yachts are found on passage in the Irish Sea in the winter months.	
2.8	**Question 1.10: Incidents.** Stena regularly exercise with HMCG/RNLI and have been called on to both standby a casualty vessel, provide a lee or to relay VHF communications. Stena vessels have fast rescue craft but are not usually called upon to use these.	
2.9	**Question 1.11/1.12: Radar effects/OWF service vessels** MP noted that there was evidence of radar effects on vessels passing OWFs. However, Stena have modern radar systems that reduce these effects. OWF service vessels carry AIS, more frequently today than historically. On occasion, wind farm craft have cut across the bow of the ferries.	
3	**Master Decision Making**	
3.1	**Question 2.1: CPA** MP described the Stena Ships Operations Manual which aim for a minimum of 1nm clearance from other vessels/obstructions. On discretion of the Master, this could be increased to 2nm (e.g. if the officer is new, or during adverse weather).	
3.2	MP noted that bridge manning arrangements are structured around open water navigation requiring only officer and one lookout. If there are more OWFs, then coastal/pilotage type navigation (with structures in close proximity and large alterations of course) could be required which	

	potentially requires enhanced manning, master on bridge and has issues on rest requirements.	
3.3	AR questioned the navigation inshore of West of Duddon Sands wind farm for the Heysham-Belfast route. MP noted that the parameters of this route were different to the Liverpool-Belfast route and he had only completed the questionnaire on the basis of Liverpool-Belfast.	
4	**Adverse Weather Routeing**	
4.1	**Question 3.2: Process for Deciding to Weather Route** MP stated that generic passage plans are submitted to the office for approval, however all adverse weather routeing was at the master's discretion. Safety was the principal concern with no commercial pressure exerted on the master.	
4.2	**Question 3.4/3.5: Frequency of Cancellations** MP explained weather disruption cancellations are always at the master's discretion and this is not questioned. AR noted that AIS data often shows Stena as the last to cancel sailings, likely due to the greater vessel size. MP added that they do cancel but prefer to sail earlier or later, rather than delay to the next scheduled sailing time.	
4.3	NB questioned how Stena promulgated sailing early – especially for passengers/accompanied freight. MP explained that often this was a matter of an hour or two, with mass texting/messaging and an online freight portal.	
5	**Future Changes**	
5.1	It was noted that Stena have route and vessel development opportunities that might materialise during the proposed project lifecycle. These plans have not yet been released. Due to Brexit, Stena are carrying more on some sailings from UK to Ireland.	
6	**AOB**	
6.1	AR asked if there are any other constraints that NASH should be aware of. MP did not identify any other constraints but referred to the need for cumulative assessment across these and future projects. AR explained that the NRA will cover a cumulative assessment looking at Morgan, Mona and Morecambe plus existing OWFs. AR explained a project alone assessment is also required.	
6.2	MP noted that The Crown Estate lease process had resulted in developments which overlap with ferry and shipping routes.	
	NB asked if Stena terminals in Dublin port are within the port or near the entrance? MP noted that the Stena berth is close to the entrance of the port, and Stena vessels currently have to pass two other vessels to access own berth. Additional berths are planned at the port but the project is delayed until 2025.	
6.3	AR thanked MP for his time, emphasising that this is the first of several engagements throughout the NRA process. Future meetings would enable the specific impacts (safety and commercial) to be explored in detail and assessed through a hazard workshop.	

ACTIONS

Section	Action	Responsible

I.9 Shipping and navigation meeting 8

I.9.1 Minutes

MORGAN AND MONA OWFS

Project Title	Morgan and Mona OWFs
Project Number	21-NASH-0146
Meeting subject / purpose	RYA Consultation and Survey Strategy
Revision	R01-00
Date of meeting	21-Apr-2022
Start time	14:00 UTC
Finish time	14:20 UTC
Client	RPS / bp / EnBW
Location	MS Teams

DOCUMENT CONTROL

Revision	Date of Issue	Description	Approved
R01-00	28-Apr-2022	Issued to attendees for comment	AR

ATTENDEES

Organisation	Attendee	Role	Initial
RYA	[redacted]	Planning and Environment Officer	RH
NASH Maritime	[redacted] [redacted]	Principal Consultant Director	AR JJH
RPS	[redacted]	Lead EIA Manager	AB
bp	[redacted]	Head of communications and advocacy, UK offshore wind	ID
EnBW	[redacted]	Senior Manager Business Development Generation	AW

APOLOGIES

Organisation	Name	Role	Initial
bp	[redacted]	Environmental Consents Manager (bp/RES)	GV

NOTES OF MEETING

1	Introductions	Action
1.1	AR thanked everyone for their time attending this meeting and introductions were made between all.	
1.2	AR explained that the purpose of this meeting was to undertake early consultation on the Morgan and Mona Offshore Wind Farms, particularly in respect to: 1. Membership of the MNEF. 2. RYA Comments on Project. 3. Hazard Workshop Attendance. 4. Summer Vessel Traffic Survey Dates. 5. Points of Contact and Wider Consultation.	
1.3	AR provided a summary of the Morgan and Mona Offshore Wind Farms and timelines, with NRA preparation through 2022.	
2	**Data Collection Strategy**	
2.1	AR explained that vessel traffic surveys are being carried out in compliance with MGN 654. A winter vessel traffic survey was carried out in winter 2021/2022 and this showed little recreational activity. AIS data from 2019 is also being used. AR explained that a summer survey is planned and asked RH to confirm the appropriate period to survey. RH indicated that a mid-June to mid-August survey window would likely be representative of summer recreational activities. JJH noted that NASH are planning to carry out the survey in July; RH was content with this and asked for RYA to be informed if there are any delays.	Update RYA if there are any delays to the July 2022 survey.
2.2	JJH asked for an update on the status of the RYA Coastal Atlas. RH noted the current version is still live; an update was in progress in order to incorporate 2019 AIS data as well as outputs from the RYA Safetrx mobile app. The resulting coastal atlas would represent recreational vessel intensity and is anticipated in 2022. JJH concluded that NASH would therefore use the current version of the RYA Coastal Atlas for PEIR but would look to include the updated RYA Coastal Atlas for the EIA.	
2.3	RH asked for the source of the 2019 AIS data. AR confirmed this is from MarineTraffic.	
2.4	NASH sought confirmation from RYA on how they would like to be engaged during the project going forwards and whether RYA will attend the Maritime Navigation Engagement Forum and NRA hazard workshop: • RH noted that the RYA receives numerous consultation requests so would prioritize those deemed to have an impact on recreational activities. This would likely be apparent upon review of the Scoping Report. AB explained that the Scoping Report issue date is currently TBC but is planned to be issued in Q2 2022. AB confirmed the Scoping Report could be circulated by RYA to member clubs. • Consultation with individual clubs is needed only if necessary, e.g. very localized impacts. • In relation to attending the hazard workshop, RH reiterated that RYA need to prioritise projects on the basis of likely impacts on	

	recreational boating. RH explained that RYA would usually respond to consultation on the draft NRA.	
3	**NRA Methodology and Impacts**	
3.1	AR described the potential impacts on recreational activities to be assessed in the NRA, and covered potential impacts identified in RYA guidance documents. RH noted that, from review of the RYA Coastal Atlas, most recreational users avoid offshore wind farm licence areas, which leads to a "bowing" effect in vessel tracks. Therefore, the NRA should consider "navigational squeeze" arising from all licence areas.	
4	**AOB and Questions**	
4.1	NASH summarized RYA responses to the key questions posed at the start of the meeting: 1. Membership of MNEF: RH will decide whether to attend the MNEF following review of the Scoping Report. 2. RYA comments on project: RYA will reserve comments until they have reviewed the Scoping Report/draft NRA. 3. Hazard workshop attendance: RH will decide whether to attend following review of the Scoping Report. 4. Summer vessel traffic survey dates: RH confirmed July falls within an appropriate window. 5. Points of contact: RH is the key point of contact for the RYA. NASH explained that the Cruising Association have also been contacted. ID closed by stating that the project is offering opportunity for stakeholders to participate but the project is also happy for RYA to engage how they would like. RH noted that this was understood but RYA have to prioritise projects.	

ACTIONS

Section	Action	Responsible
2.1	Update RYA if there are any delays to the July 2022 survey.	NASH

I.10 Shipping and navigation email to the MCA

I.10.1 Email to the MCA regarding vessel traffic surveys

From: Vella, Gero (CONTRACTOR)
To: Nick Salter
Cc: Sahota, Ant; Carter, Paul; Rachel Watson; Tracey Siddle; Khaleda Chowdhury; j.holmes
Subject: Mona, Morgan and Morecambe - Vessel Traffic Surveys
Attachments: image001.png

Hi Nick

I am writing with regard to data validity of vessel traffic surveys for:

- Mona
- Morgan Generation Assets
- Morecambe Generation Assets, and
- Morgan and Morecambe Transmission Assets

Further to your email of 31 May 2023, feedback to Nash Maritime during consultation engagement on the Morgan and Morecambe Transmission Assets project on 31 May 2023 and your PEIR responses, the Projects have agreed to address concerns on data validity by undertaking further vessel traffic surveys as follows:

1. Undertake "14-day continuation surveys" (during Winter 2023) as required by MGN654 4.6b to increase the data validity for a further 12 months for each project (Mona, Morgan Generation Assets and Morecambe Generation Assets) so that vessel traffic surveys data would be within 24 months of the Application date.

2. Provide a separate document for each survey/project detailing the results of the surveys, a comparison with previous surveys and specify any impact to the findings of the individual and cumulative regional NRA's and ES Chapters. Assuming the survey results are in line with previous survey results, then these reports would be drafted as addendum reports to individual NRA's. This is due to each individual project's programme constraints, which means it would not be possible to integrate into the actual NRA documents themselves without significant delays to ES submissions.

The table below summarises the existing vessel traffic data held by the projects, current validity at application and proposed actions to increase validity. We would be grateful if you could confirm that the proposed strategy would meet the requirements of MGN654 and the MCA.

Project	Existing Data			Application date	Current Validity at Application	Action Required to Increase Validity
	AIS	PEIR Winter Survey	PEIR Summer Survey			
Mona Offshore Wind Project	2019 (full year) 2022 (full year)	05-Dec-21 to 19-Dec-21	30-Jun-22 to 14-July-22	c.Q1-Q2 2024	Winter: Out of date Summer: In date	**Undertake Winter 2023 Top-Up survey**
Morgan Generation Assets		21-Nov-21 to 05-Dec-2021	15-Jul-22 to 29-Jul-22	c.Q1-Q2 2024	Winter: Out of date Summer: In date	**Undertake Winter 2023 Top-Up survey**
Morecambe Generation Assets		09-Feb-22 to 26-Feb-22	30-Jul-22 to 13-Aug-22	c.Q1-Q2 2024	Winter: Out of date Summer: In date	**Undertake Winter 2023 Top-Up survey**
Morgan + Morecambe Transmission Assets		09-Feb-22 to 26-Feb-22	30-Jul-22 to 13-Aug-22	c.Q3 2024	Winter: Out of date Summer: Out of date	Undertake Summer 2023 Top-Up survey *(previous commitment made to MCA).* **Undertake Winter 2023 Top-Up survey**

Best regards, Gero

Gero Vella

Offshore Environment and Consenting | Morgan and Mona
direct: +44 (0) 7884 051857 | email: gero.vella@bp.com

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I.11 Shipping and navigation meeting 9

I.11.1 Minutes

MONA, MORGAN AND MORECAMBE OWFS

Project Title	Mona, Morgan and Morecambe OWFs
Project Number	22-NASH-0306
Meeting subject / purpose	Seatruck Pre-Application Engagement
Revision	R01-00
Date of meeting	07-Dec-2023
Start time	12:00 UTC
Finish time	14:45 UTC
Client	bp / EnBW / Flotation Energy
Location	MS Teams

DOCUMENT CONTROL

Revision	Date of Issue	Description	Approved
R01-00	08 December 2023	First draft	AR

ATTENDEES

Organisation	Attendee	Role	Initial
Seatruck	[redacted]	Marine Superintendent	MH
	[redacted]	Marine Superintendent	SC
	[redacted]	Marine Safety Manager	SO
NASH Maritime	[redacted]	Principal Consultant	AR
	[redacted]	Project Manager	CH
	[redacted]	Senior Consultant	AF
RPS	[redacted]	EIA lead	MK
bp	[redacted]	Offshore Consent Lead Mona	GV
	[redacted]	Offshore Consent Lead Morgan Generation Assets	RH
Flotation Energy	[redacted]	Offshore Consent Lead	NJ
RHDHV	[redacted]	EIA lead	SM

NOTES OF MEETING

1	Introductions	Action
1.1	Introductions between attendees.	
1.2	CH presented the agenda for the meeting and provided a summary of the consultation activities that have been undertaken to date.	

2	**CRNRA**	
2.1	CH presented the AIS data showing the Seatruck tracks for 2022 in relation to the proposed boundaries for the OWFs.	
2.2	CH presented a summary of the impacts of the Projects on the typical and adverse weather routeing for Seatruck. CH recognised that the Projects would have an impact on these passage plans.	
2.3	CH presented the top 10 hazards for the CRNRA with scorings for the Mona, Morgan and Morecambe potential array areas and the Mona, Morgan and Morecambe array areas. He noted that post hazard workshop, some hazard scores were increased based on the stakeholder feedback.	
2.4	SO noted that the ferry operators still object to the schemes as the risk is still higher than current levels. AR confirmed that the assessment shows that the additional infrastructure will increase the risk in the area, the CRNRA has been undertaken to understand whether the change in risk is acceptable. The Phase 1 CRNRA concluded that the risk was unacceptable, and post-changes, the Phase 2 CRNRA concluded that the risk was Medium Risk, with all Project mitigations in place and that further risk controls (such as vessel routeing schemes) would not be required. SO said that Seatruck will not accept the Projects based on an increase of risk and commercial impacts to their operations, such as increased transit time. GV said that potential commercial impacts are not the focus of the current meeting and that the Projects were keen to demonstrate that they are safe to navigate around. GV will arrange a further meeting between bp/EnBW and Seatruck to discuss potential commercial impacts relating to Mona and Morgan Generation Assets.	GV /RH
2.5	CH presented the results of the CRNRA relevant to Seatruck operations. SC noted that the adverse weather routeing effects are considered negligible. Dependent on the direction of weather and the approaches to Heysham, he did not consider that this could be negligible. The Projects reduce the available options for adverse weather routeing which may result in more situations where weather is on the beam. SO stated the need to be mindful of effects of the Irish projects on the other side of the route as well.	
2.6	MH said that the scorings provided at the hazard workshop were based on the need for as much navigable space as possible. The simulations showed that the area could be navigated through but there are also commercial effects due to deviation and increased transit time. CH asked whether there are effects from deviation other than commercial. MH said that the tidal window for Heysham means that increased transit time could affect timetables. SO noted that with the increased environmental restrictions, deviations could affect the ability for ships to comply.	
3	**Mooir Vannin**	
3.1	CH presented the Mooir Vannin Scoping Boundary and asked whether it is expected to affect Seatruck operations. SO said that the Mooir Vannin project is the least likely to affect Seatruck. AR noted that the presence of the Scoping Boundary could increase traffic density on routes used by Seatruck and this was accounted for within the CRNRA.	
3.2	CH presented the changes to the top 10 hazards from the CRNRA based on the additional presence of the Mooir Vannin project.	

3.3	CH asked about Seatruck's position on the impacts of all four Projects. SO said that Seatruck has raised concerns based on the cumulative effects of the Projects.	
4	**Individual Projects**	
4.1	CH presented the top hazards for the projects individually and asked whether there are any comments on the individual projects. MH confirmed that the cumulative aspects are more significant than projects individually. There are differences based on which project is considered in isolation, Mona and Morgan would have more of an effect on Seatruck routeing. AR summarised that the Mona Array Area primarily impacts the Heysham to Dublin route (particularly in adverse weather) and the Morgan Array Area primarily impacts the Heysham to Warrenpoint route.	
5	**Timeline**	
5.1	CH provided a recap of the timeline for the Projects. CH added that the next MNEF is planned for February.	
6	**AOB**	
6.1	GV confirmed earlier commitment to set up a further meeting between bp/EnBW and Seatruck to discuss potential commercial concerns with regard to Mona and Morgan Generation Assets.	GV, RH
6.2	AR noted that if there are any further points to consider, they can be further included in the NRAs	
6.3	SC asked whether the examinations will consider the Projects cumulatively or separately. GV said that the examinations will be for each Project individually but includes a cumulative effects assessment.	

ACTIONS

Section	Action	Responsible
2.4/6.1	Meeting between bp/EnBW and Seatruck to be arranged before Christmas or early January 2024 to discuss potential commercial impacts.	GV, RH

I.12 Shipping and navigation meeting 10

I.12.1 Minutes

MONA, MORGAN AND MORECAMBE OWFS

Project Title	Mona, Morgan and Morecambe OWFs
Project Number	22-NASH-0306
Meeting subject / purpose	IoMSPC Pre-Application Engagement
Revision	R02-00
Date of meeting	11-Dec-2023
Start time	11:00 UTC
Finish time	12:00 UTC
Client	bp / EnBW / Flotation Energy
Location	MS Teams

DOCUMENT CONTROL

Revision	Date of Issue	Description	Approved
R01-00	15 December 2023	First draft	AR
R02-00	19 January 2024	Update following comments	AR

ATTENDEES

Organisation	Attendee	Role	Initial
IoMSPC	[redacted]	Marine Manager	RH
IoM Government	[redacted]	Director of Harbours	DG
NASH Maritime	[redacted]	Principal Consultant	AR
	[redacted]	Project Manager	CH
	[redacted]	Senior Consultant	AF
RPS	[redacted]	EIA Project Director Morgan Generation Assets	AB
bp	[redacted]	Offshore Consent Lead Mona	GV
	[redacted]	Offshore Consent Lead Morgan Generation Assets	RoH
	[redacted]	Consent Lead Morgan Generation Assets	RE
EnBW	[redacted]	Maritime Affairs	FK
Flotation Energy	[redacted]	Stakeholder Lead. Morecambe Generation Assets	KC
RHDHV	[redacted]	EIA Project Manager Morecambe Generation Assets	SR

APOLOGIES

Organisation	Name	Role	Initial
IoMSPC	[redacted]	Managing Director	BT

Organisation	Name	Role	Initial
IoM Government	[redacted]	Infrastructure Policy Advisor	ER

NOTES OF MEETING

1	Introductions	Action
1.1	Introductions between attendees	
1.2	CH presented the agenda for the meeting and provided a summary of the consultation activities that have been undertaken to date.	
2	**CRNRA**	
2.1	CH presented the AIS data showing the IoMSPC tracks for 2022 in relation to the proposed boundaries for the OWFs.	
2.2	CH presented a summary of the impacts of the Projects on the typical and adverse weather routeing for IoMSPC. CH recognised that the Projects would have an impact on these passage plans.	
2.3	CH presented the top 10 hazards for the CRNRA with scorings for the Mona, Morgan and Morecambe potential array areas and the Mona, Morgan and Morecambe array areas. He noted that post hazard workshop, some hazard scores were increased based on the stakeholder feedback with scores remaining in the Medium Risk category.	
2.4	CH presented the assessment that has been undertaken to inform the hazard scores for the CRNRA.	
2.5	RH asked whether the increase in time to transits will feed into the socio-economic assessment. He noted that whilst they may appear small, they would affect timetables and port operations. AB confirmed that they will feed into the socio-economic chapter. AR said that whilst the wider effects on the IoM economy are relevant to the socio-economic assessment, shipping and navigation will need to consider the impacts on the operators (e.g. IoMSPC) and therefore would welcome any comment on the effect on the operations of the ferries. RH summarized that the effect is lost time, schedule, operations in ports fuel and emissions. GV offered to arrange a further meeting between bp/EnBW and IoMSPC to discuss potential commercial impacts with Mona and Morgan Generation Assets which RH welcomed.	GV/RoH
2.6	CH asked whether there are any planned changes to IoMSPC operations that had not been considered as part of the assessment. RH said that Manannan will likely continue operations during the summer from Douglas to Liverpool and sometimes to Heysham for the next few years and until at least 2026. RH noted that the replacement for the Manannan has not currently been decided, pending governmental decisions. RH said that the Manxman will operate on the Heysham Douglas route but also operate the route to Liverpool (once the Liverpool passenger terminal is complete). RH commented that they still had the Ben-My-Chree but there has not currently been a decision made on the future role of the Ben-My-Chree. RH	

	also noted that there is also a cargo vessel (MV Arrow) which operates cargo services to the IoM.	
2.7	CH asked whether the hazards are considered to be a fair appraisal. RH confirmed that they are a fair representation.	
2.8	AR stated that all the hazards assessed through the second workshop fall into the Medium Risk category as a result of the boundary changes made by the developers. He asked whether IoMSPC agrees with that? AR asked whether the main outstanding concerns relate to increased transit time? RH said that the now available sea area has greatly improved the safety aspects and agrees with that conclusion but that the increased transit times and effects to timetables as well as fuel use is still a concern.	
3	**Mooir Vannin**	
3.1	CH presented the Mooir Vannin Scoping Boundary and summarised the findings of the navigation simulations that the width of the route between Morgan and Mooir Vannin was considered to be too narrow to allow IoMSPC to safely navigate. He presented the cumulative risk assessment with Mooir Vannin previously presented at the hazard workshop. He asked whether this is a fair representation? RH said that it is a fair representation and asked to what degree the projects are working together to improve the risk? CH said that Orsted attended the second hazard workshop and were provided the opportunity to input their views. GV said that there are ongoing meetings with Orsted to discuss our applications, but no further specific workstream for shipping and navigation at this time due to the programme for submission. DG noted the discussion had on this matter during the introductory and closing session of the HazID workshop in September 2023 and issue around timing of Mooir Vannin publishing its Scoping Report and planned submission of applications for Mona, Morgan and Morecambe	
3.2	CH asked if there were any other areas of concern regarding Mooir Vannin? RH confirmed that the width of the route between Morgan and Mooir Vannin is the main area of concern.	
4	**Individual Projects**	
4.1	CH presented the top hazards for the projects individually and asked whether there were any comments on the individual projects? AR clarified whether there were any specific concerns or impacts that only Morgan, Morecambe or Mona would have on either of the IoMSPC routes.	
4.2	RH said that Morgan would have the largest effect on the Heysham-Douglas route and Mona would have the largest effect on the Liverpool-Douglas route in adverse weather. RH said that from an IoMSPC point of view, Morecambe would have little impact.	
5	**Timeline**	
5.1	CH provided a recap of the timeline for the Projects. CH added that the next MNEF is planned for February.	
6	**AOB**	
6.1	CH provided a summary of what was discussed during the meeting and the conclusions.	

DG agreed with the summary and the potential issues with the addition of the Mooir Vannin Project.

ACTIONS

Section	Action	Responsible
2.5	Meeting between bp/EnBW and IoMSPC to be arranged to discuss potential commercial impacts with Mona and Morgan Generation Assets.	GV & RoH

I.13 Shipping and navigation meeting 11

I.13.1 Minutes

MONA, MORGAN AND MORECAMBE OWFS

Project Title	Mona, Morgan and Morecambe OWFs
Project Number	22-NASH-0306
Meeting subject / purpose	Stena Line Pre-Application Engagement
Revision	R01-00
Date of meeting	13-Dec-2023
Start time	09:00 UTC
Finish time	10:30 UTC
Client	bp / EnBW / Flotation Energy
Location	MS Teams

DOCUMENT CONTROL

Revision	Date of Issue	Description	Approved
R01-00	19 December 2023	First draft	AR

ATTENDEES

Organisation	Attendee	Role	Initial
Stena Line	[redacted] [redacted]	Designated Person Ashore Senior Master	MP SF
HR Wallingford	[redacted]	Navigation Simulation	MM
NASH Maritime	[redacted] [redacted] [redacted]	Principal Consultant Project Manager Senior Consultant	AR CH AF
RPS	[redacted]	EIA lead	MK
bp	[redacted] [redacted]	Offshore Consent Lead Mona Offshore Consent Lead Morgan Generation Assets	GV RH
EnBW	[redacted]	Maritime Affairs	FK
Flotation Energy	[redacted] [redacted]	Consent Lead Morecambe Generation Offshore Consent Lead Morecambe Generation	RW NJ
RHDHV	[redacted] [redacted]	EIA Project Manager Morecambe Generation Assets Consultant	SR SM

NOTES OF MEETING

1	Introductions	Action
1.1	Introductions between attendees	
1.2	CH presented the agenda for the meeting and provided a summary of the consultation activities that have been undertaken to date.	
1.3	MP said that Stena Line will be commencing a new route between Liverpool and Dublin that will replace the ceasing P&O route. It will start with one vessel (2 transits) per day in Q1 2024. Plans to increase to a two ship operation by Q4 2024. These will be similar vessels to those currently on Irish Sea routes.	
2	**CRNRA**	
2.1	CH presented Stena Line vessel transits and the project boundaries in the area for typical and adverse weather routeing. He then presented the potential deviations required for the passages.	
2.2	MP stated the Liverpool-Belfast adverse weather route to the east of the Isle of Man (IoM) and the route from Heysham to Belfast would be compromised. With Mooir Vannin OWF in place, the route between Liverpool and Belfast east of the Isle of Man would no longer be possible. CH noted that there would be a subsequent discussion on Mooir Vannin but to please consider Mona, Morgan and Morecambe within this section. MP agreed that they would be less likely to take this route with the three (Mona, Morgan and Morecambe) Projects in place.	
2.3	CH presented the top 10 hazards for the CRNRA with scorings for the Mona, Morgan and Morecambe Array Areas (as assessed at PEIR) and the Mona, Morgan and Morecambe Array Areas (reflecting the revised array boundaries). CH noted that post hazard workshop, some hazard scores were increased based on the stakeholder feedback with scores remaining in the Medium Risk category. MP accepted that the changes to the Projects' boundaries had reduced the risk, but commented that he believes that the risk when considered over the lifetime of the projects will be higher. AR noted that the CRNRA concludes that there will be an increased level of risk due to the projects but the aim of the CRNRA is to test whether that risk is unacceptable against the MCA's guidance and the NPS tests. CH noted that the risk is considered tolerable if it is as low as reasonably practicable.	
2.4	CH presented the assessment that has been undertaken to inform the hazard scores for the CRNRA. CH said that the P&O route from Liverpool to Dublin will be taken over by Stena Line was considered to not be significantly affected. MP agreed with this.	
2.5	MP stated that Stena Line do not have objections to offshore wind projects per se. MP said that the concerns for Stena Line are considering whether their operations are not unduly affected from a safety and commercial perspective. This includes increased fuel usage and environmental considerations. The incoming environmental requirements (EEXI/CII) means that any additional speed or distance affects the viability of routes and that for some older tonnage it may make the route no longer economically viable. Money may need to be invested into different paint coatings, changing schedule or routes to mitigate this. GV offered to arrange a further meeting between bp/EnBW and Stena Line to discuss potential commercial impacts with Mona and Morgan Generation Assets which MP welcomed. RW also offered to arrange a meeting to discuss the commercial effects of the Morecambe Generation Assets project.	GV/RW

	MP recognised that beneficial changes had been made by the projects. MP said that there are two main points regarding navigational safety, which are related to additional interactions with other vessels and adverse weather routeing. He shared the Stena Line AIS tracks over the past month showing the routes taken during the named storms that have been experienced recently. The Stena Scotia had to deviate on 10-Dec because of weather limitations at Heysham to anchor off the IoM which could no longer be an option with the projects in place. CH asked whether this winter has been different considered to previous years which have been used to inform the CRNRA. MP said that there does appear to have been more named storm events this year however there does tend to be year to year variation. SF said that this December 2023 had two named storm events in one 24 hour period. There is advice now suggesting that there are more frequent heavy weather patterns expected compared to previous years.	
2.6	MP also noted that there could be less options available during an emergency event onboard. AR said that testing through the navigation simulations identified that, whilst the likelihood of occurrence was low, there are still options available to the master even if less optimal and this was reflected in the CRNRA.	
2.7	MP said that due to the drive to be more energy efficient, vessels will be configured to have two engines rather that the current four meaning that they are more vulnerable to engine failure events.	
3	**Mooir Vannin OWF**	
3.1	CH presented the Mooir Vannin OWF Scoping Boundary alongside the Mona, Morgan and Morecambe projects. He discussed the distances available between Mooir Vannin, Morgan Array Area and Walney Extension OWF. AR noted that there was agreement with Stena Line that the inclusion of Mooir Vannin means that the route from Liverpool to the east of the IoM would no longer be viable. MP and SF agreed that the route would not be navigationally safe. CH asked whether the Heysham route when passing south of Walney would still be viable. MP said that this would result in the sea on the beam meaning that there is no advantage using that route during adverse weather conditions. SF said that there is an old route off the Point of Ayre but this is not currently used and would need surveying, as chartered depth of 6m.	
3.2	CH presented the simulation that was undertaken including Mooir Vannin noting that the Mooir Vannin project information had not been published previously and so was not available for use in the simulations with Stena Line. MP said that the information was available to Stena Line, so could have been used. GV explained that whilst the projects were aware of the Isle of Man Agreement for Lease area, in the absence of a scoping report, we were not aware when an offshore wind farm project would be proposed and the nature of the proposal. It was for that reason that the Isle of Man Agreement for Lease area was listed as a 'Tier 3' project in our PEIRs. We made a decision to include the Isle of Man Agreement for Lease area in our applications, following the response to the PEIRs where Orsted set out their intention to submit a scoping report in autumn 2023 and offered to provide pertinent information on their project pre-scoping. This pre-scoping information was requested, but not received until September 2023 and therefore was not available to be included within the main work streams of the CRNRA. GV stated that until the response to the PEIRs was received, there was no indication of when a Scoping report for the Mooir Vannin project would be available. GV noted that there had been a significant change between Mona and	

	Morgan Generation Assets Agreement for Lease areas through Scoping, PEIR and ES boundaries. GV confirmed that the Projects will consider the cumulative effects of Mooir Vannin through an addendum to the CRNRA.	
3.3	CH presented the results of the testing undertaken through navigation simulation. AR noted that a run was undertaken with IoMSPC passing between Mooir Vannin and Morgan whilst there were fishing vessels northwest of Morgan and a vessel on a reciprocal course. This run was considered to have failed because it was not possible to maintain a 1nm CPA to infrastructure and vessels. AR noted that it was agreed with IoMSPC that there was little value in testing this any further. SF said that a distance of 2.5nm between Mooir Vannin and Morgan means that there is only 0.5nm of navigable space whilst maintaining 1nm CPA to the projects making it not viable for Stena Line. CH presented a second run with the ferry transiting northwest between Morgan and Walney with another vessel approaching from the north. The presence of Mooir Vannin was considered to not affect this situation because the gap between Mooir Vannin and Walney is 4.7nm. SF said that an overtaking situation would still result in a convoy situation meaning a need to reduce speed and, during adverse weather could lead to extended periods with weather on the beam. AR asked whether Stena Line would proceed to the east of the IoM given the increased distance and additional course changes. SF said that this route would still be critical for the vessels operating out of Heysham.	
3.4	MP said that even without Mooir Vannin, there are further deviations to the routes which may make them unviable. AR agreed that there will still be effects, but this would be more significant with Mooir Vannin in place, it is not currently known what level would result in the route becoming unviable. MP noted the composition of the bridge team (1x OOW / 1x lookout) would need to be reviewed due to the number of course alterations meaning more experienced personnel would be required on the bridge. SF noted that the Heysham ships are cargo ships and so are not required to carry two Masters. This may need to be reviewed given the more complicated navigation through the area.	
3.5	AR asked whether Stena Line vessels would pass between Mooir Vannin and Walney given the significant increase in route duration. MP said that for the Heysham route, there are periods of adverse weather that require the vessels to keep close to the IoM for shelter which would no longer be an option. AR asked whether they would be able to proceed to the south of the IoM instead. MP said that the vessels don't currently pass to the south of the IoM and this would be a significant amount of additional distance. SF noted that seas up to 6m could be encountered off the Calf of Man and with only passive stabilization of these vessels it may be more prudent to head down towards Anglesey to enable a safe turn to be completed.	
3.6	CH presented the changes to scoring with the inclusion of Mooir Vannin which were presented during the hazard workshop. He asked whether there is something that Stena Line believes has not been considered which should be. Stena Line did not request any additional assessment to be undertaken.	
3.7	AR asked whether there is agreement that there are hazards which are unacceptable with Mooir Vanin in place. MP asked what the mitigation measures are for the unacceptable risks.	

	GV said that due to the Mooir Vanning Scoping Report being published very late in the pre-application process for our projects, we have sought to identify the potential cumulative risks but are not currently seeking to mitigate them. He highlighted the tiered approach to cumulative effects assessments recognized by the Planning Inspectorate and noted that Projects will consider the cumulative effects of Mooir Vannin through an addendum to the CRNRA. MP said that as an operator, regardless of who the developer is, it is still affecting operations and so needs to be mitigated. Stena Line appreciate the Project's transparency that there have been two unacceptable risks identified but cannot comment on the detail of the assessment as they have not been part of it.	
4	**Individual Projects**	
4.1	CH presented the top hazards for the projects individually. MP asked whether it is common that the projects are considered in isolation? GV clarified that this has to be done and it is the standard approach for the projects to be considered individually and cumulatively.	
4.2	CH asked whether there are any comments on the projects individually? MP said that there are no additional comments. AR said that Stena Line are in the position where each project affects one route which have been drawn out from the CRNRA and reflected in the assessment for the individual projects.	
5	**Timeline**	
5.1	CH provided a recap of the timeline for the Projects. CH added that the next MNEF is planned for February 2024.	
6	**AOB**	
6.1	MP asked whether information can be provided for the commercial meeting so that the appropriate people can be made available to attend. GV/RW said that the structure and content of the meeting will be shared to allow for appropriate to attend.	GV/RW

ACTIONS

Section	Action	Responsible
2.5	Meeting between bp/EnBW and Stena Line to be arranged to discuss potential commercial impacts with Mona and Morgan Generation Assets.	GV & RH
2.5	Meeting between Flotation Energy and Stena Line to be arranged to discuss potential commercial impacts with Morecambe Generation Assets.	RW

I.14 Shipping and navigation meeting 12

I.14.1 Minutes

MONA, MORGAN AND MORECAMBE OWFS

Project Title	Mona, Morgan and Morecambe OWFs
Project Number	22-NASH-0306
Meeting subject / purpose	Trinity House Pre-Application Engagement
Revision	R02-00
Date of meeting	18-Dec-2023
Start time	10:00 UTC
Finish time	11:00 UTC
Client	bp / EnBW / Flotation Energy
Location	MS Teams

DOCUMENT CONTROL

Revision	Date of Issue	Description	Approved
R01-00	03 January 2024	First draft	AR
R02-00	04 January 2024	Updated following comments	AR

ATTENDEES

Organisation	Attendee	Role	Initial
Trinity House	[redacted]	Navigation Manager	TH
NASH Maritime	[redacted]	Principal Consultant	AR
	[redacted]	Project Manager	CH
	[redacted]	Senior Consultant	AF
RPS	[redacted]	EIA Project Director Morgan Generation Assets	AB
bp	[redacted]	Offshore Consent Lead Mona	GV

NOTES OF MEETING

1	Introductions	Action
1.1	Introductions between attendees	
1.2	CH presented the agenda for the meeting and provided a summary of the consultation activities that have been undertaken to date. TH noted the complications of Transmission Assets and Mooir Vannin to which CH noted that we would address later in the presentation.	
1.3	CH noted the navigation simulations carried out with the ferry companies. TH asked whether the simulations included night runs. CH confirmed that there were night runs during the second set of simulations in 2023. The concern raised by stakeholders was that it could be difficult to identify vessels because of the lighting on turbines. This was concluded with stakeholders to not be an issue due to the separation	

	distance between turbines and the lights being located at the top of the turbine.	
2	**CRNRA**	
2.1	CH presented the Mona, Morgan and Morecambe Array Areas against vessel traffic density and ferry transits per operator using AIS data for 2022. He noted that most interactions are on the IoMSPC and Stena Line routes.	
2.2	CH presented the top 10 hazards for the CRNRA with scorings for the Mona, Morgan and Morecambe Potential Array Areas (as presented in the PEIR) and the Mona, Morgan and Morecambe Array Areas (as assessed for the ES). CH noted that post the September 2023 hazard workshop, some hazard scores were increased based on the stakeholder feedback with scores remaining in the Medium Risk category.	
2.3	CH presented the key risk control measures. GV noted that there will be an outline vessel traffic management plan submitted with the application. The remaining key risk controls will be secured through each project's development consent. TH highlighted that the Welsh Act could change the mechanism of marine licensing for NRW. TH said that when the plan for construction buoyage is being developed post application, it should be noted that buoyage can sometimes be placed outside of the red line boundary. In areas between Mona, Morgan and Morecambe this would have to be carefully considered so as not to unduly reduce the searoom between the projects. This would also depend on the schedule of build out of all sites.	
3	**Mooir Vannin**	
3.1	CH presented the Mooir Vannin Scoping Boundary alongside the Mona, Morgan and Morecambe projects. He discussed the distances available between Mooir Vannin, Morgan Array Area and Walney.	
3.2	CH summarized the simulations that were run with IoMSPC and with project teams only, including Mooir Vannin and the conclusions for navigational safety and adverse weather routing.	
3.3	CH presented the changes to scoring with the inclusion of Mooir Vannin which were presented during the September 2023 hazard workshop and asked whether there are any comments. TH said that the cumulative issues are increased with the presence of Mooir Vannin and the changes to hazard scoring seem reasonable.	
4	**Individual Projects**	
4.1	CH presented the top hazards for the projects individually.	
4.2	TH said that Trinity House consider projects individually as well as cumulatively with regards to lighting and marking.	
5	**Timeline**	
5.1	CH provided a recap of the timeline for the Projects.	
6	**AOB**	
6.1	CH asked if there is anything else that should be covered. TH said that the navigation simulations which had been undertaken were important to interrogate/address stakeholder concerns as well as the cumulative and individual assessments.	

6.2	GV thanked TH for input through S42 consultation and asked whether there has been discussion with Natural Resources Wales (NRW) regarding a standard set of marine licence conditions. TH confirmed that there is ongoing discussion with NRW on this.	
6.3	TH asked whether there are any changes to the updated NPS that will affect shipping and navigation. GV said that draft NPS was used to undertake the assessment with updates being undertaken after the new NPS was published. AR confirmed that there are no fundamental changes regarding shipping and navigation.	

I.15 Shipping and navigation meeting 13

I.15.1 Minutes

MONA, MORGAN AND MORECAMBE OWFS

Project Title	Mona, Morgan and Morecambe OWFs
Project Number	22-NASH-0306
Meeting subject / purpose	MCA Pre-Application Engagement
Revision	R01-00
Date of meeting	19-Dec-2023
Start time	13:30 UTC
Finish time	16:00 UTC
Client	bp / EnBW / Flotation Energy
Location	MS Teams

DOCUMENT CONTROL

Revision	Date of Issue	Description	Approved
R01-00	20 December 2023	First draft	AR

ATTENDEES

Organisation	Attendee	Role	Initial
Maritime and Coastguard Agency	[redacted] [redacted]	Offshore Renewables Project Lead Navigation Policy Advisor	VaJ ViJ
NASH Maritime	[redacted] [redacted] [redacted]	Principal Consultant Project Manager Senior Consultant	AR CH AF
RPS	[redacted]	EIA Project Director Morgan Generation Assets	AB
bp	[redacted]	Offshore Consent Lead Mona	GV
RHDHV	[redacted]	EIA Lead Morecambe Generation	SM
Flotation Energy	[redacted]	Morecambe Generation	TS

NOTES OF MEETING

1	Introductions	Action
1.1	Introductions between attendees	
1.2	CH presented the agenda for the meeting and provided a summary of the consultation activities that have been undertaken to date.	
2	**CRNRA**	
2.1	CH presented the Mona, Morgan and Morecambe Array Areas against vessel traffic density and ferry transits per operator using AIS data for 2022.	

2.2	CH provided a list of the potential impacts that have been assessed as part of the CRNRA.	
2.3	CH presented the top 10 hazards for the CRNRA with scorings for the Mona, Morgan and Morecambe Potential Array Areas and the Mona, Morgan and Morecambe Array Areas. CH noted that post hazard workshop, some hazard scores were increased based on the stakeholder feedback with scores remaining in the Medium Risk category.	
2.4	CH listed the assessment that has been undertaken as part of the CRNRA. VaJ noted that the assessment has been thorough and asked what the outcomes of the navigation simulations for IoMSPC and Seatruck. CH said that Seatruck are less affected by the projects in terms of navigational safety with the main concern being additional time and distance due to passing between Morgan and Mona. AR noted that there was extensive scenarios undertaken including at night with Seatruck being satisfied with the outcomes. CH said that for IoMSPC, the adverse weather route for Heysham – Douglas required a deviation and additional distance. There were runs undertaken with multiple fishing vessels near the northern boundary of Morgan with no issue. The boundary changes provided additional room to navigate between the Mona, Morgan and Morecambe Array Areas. It was noted that there were fewer options in terms of adverse weather routeing. VaJ stated that there appeared to no longer be a significant safety related issue for ferry operators and that it was more of a commercial impact.	
2.5	ViJ noted that the MCA would like a summary of the navigation simulations. AR confirmed that the reports will be appended to the CRNRA within the Application of each of the Projects.	
3	**Mooir Vannin**	
3.1	CH presented the Mooir Vannin Scoping Boundary alongside the Mona, Morgan and Morecambe projects. He discussed the distances available between Mooir Vannin, the Morgan Array Area and Walney.	
3.2	CH presented the AIS vessel transit data through Mooir Vannin and noted that it was recognised that there were potential navigational issues due to the available sea room.	
3.3	CH summarized the simulations that were run including Mooir Vannin and the conclusions for navigational safety and adverse weather routeing.	
3.4	CH presented the changes to scoring with the inclusion of Mooir Vannin which were presented during the hazard workshop. He noted that the assessment for Mooir Vannin will be included as an addendum to the NRA given the late availability of information and asked whether there are any comments. VaJ noted that the risk may be more manageable between Mooir Vannin and Morgan due to it being a pinch point rather than a longer corridor. He noted that the importance of the cumulative effects has been raised within the Mooir Vannin Scoping Report and the MCA is looking to engage further, having recently submitted their Scoping Opinion. GV noted that in the Mooir Vannin Scoping Report, there was a commitment to follow the guidance in MGN 654. ViJ noted that the planning process for the IoM was presented at the September 2023 hazard workshop appeared to be proposed to be similar to the English approach.	

	GV noted that the engagement plan for Mona, Morgan and Morecambe involved extensive and wide engagement for navigational stakeholders and ongoing engagement with the ferry companies. VaJ stated that the MCA recognized this. CH noted that Mooir Vannin was invited to the hazard workshop and so are aware of the progress of the Mona, Morgan and Morecambe Projects.	
4	**Individual Projects**	
4.1	CH presented the top hazards for the projects individually and asked if there were any comments on the Projects individually. VaJ noted that the MCA has reviewed the scores for all projects post hazard workshop and agree with the current outcomes for the hazards.	
5	**Timeline**	
5.1	CH provided a recap of the timeline for the Projects. CH added that the next MNEF is planned for February 2024.	
6	**AOB**	
6.1	AR noted that the relevant stakeholders have received updates on the progress of the Mona, Morgan and Morecambe Projects regarding safety of navigation. GV stated that the Projects have largely sought to address the impact on navigation safety but that stakeholders have also been engaged with regarding other issues they have raised relevant to their operations.	
6.2	VaJ noted that there appears to have been a thorough assessment and welcomed the Project changes and didn't have anything further to add. ViJ agreed with the comment.	

Appendix J: Aviation and radar

J.1 Aviation and radar overview

Table J.1: Overview of Aviation and radar consultation.

Date	Meeting	Information provided
20 January 2023	Aviation and radar meeting 1	Meeting minutes (J.2.1)
28 March 2023	Aviation and radar meeting 2	Meeting minutes (J.3.1)
31 March 2023	Aviation and radar meeting 3	Meeting minutes (J.4.1)
1 August 2023	Aviation and radar meeting 4	Meeting minutes (J.5.1)
10 August 2023	Aviation and radar meeting 5	Meeting minutes (J.6.1)
25 August 2023	Aviation and radar meeting 6	Meeting minutes (J.7.1)
05 September 2023	Aviation and radar meeting 7	Meeting minutes (J.8.1)
26 September 2023	Aviation and radar meeting 8	Meeting minutes (J.9.1)
04 October 2023	Aviation and radar meeting 9	Meeting minutes (J.10.1)
03 November 2023	Aviation and radar meeting 10	Meeting minutes (J.11.1)
08 November 2023	Aviation and radar meeting 11	Meeting minutes (J.12.1)
04 December 2023	Aviation and radar meeting 12	Meeting minutes (J.13.1)

J.2 Aviation and radar meeting 1

J.2.1 Minutes

Minutes

35 New Bridge Street
London, EC4V 6BW
T +44 207 280 3400

Reference:	EOR0801
Meeting Name:	Morgan and Mona EIA – IoM safeguarding Windfarms
Meeting date:	20/01/2023
Meeting location:	MS Teams

Attendees

Name	Initials	Company	Role
[redacted]	GV	bp/EnBW	Applicant
[redacted]	VR	bp/EnBW	Applicant
[redacted]	GC (IoM)	IoM government	Airport Director
[redacted]	GP (IoM)	IoM government	Head of Air Traffic Services
[redacted]	TW (IoM)	IoM government	Airfield Operations Manager
[redacted]	MS (IoM)	IoM government	Airport Fire & Rescue
[redacted]	RH	Osprey	Aviation consultant
[redacted]	SS	RPS	Environmental consultant
[redacted]	TGB	RPS	Environmental consultant

Ref no.	Item	Actions	Date
1.	**Agenda** • Introductions (bp&EnBW, RPS, OspreyCSL) • Projects Overview • Effects to IoM Airport • Detail on Effects – Radar Line of Sight (LoS) – IFP/ATCSMAC • Discussion • Questions • Next Steps.		

Minutes

Ref no.	Item	Actions	Date
2.	**Notes**		
	• **VR**: Run-through of the above agenda – introductions.		
	• **GV**: AfL signed on Tuesday for 60 year leases for each project, general project overview (Morgan Offshore Wind Project ("Morgan") wholly English, Mona Offshore Wind Project ("Mona") to the south in England/Wales with Welsh grid connection). The Offshore Transmission Network Review (OTNR) resulted in a co-ordinated grid connection at Penwortham, Lancashire being offered to both Morgan and Morecambe Offshore Windfarm ("Morecambe"). As a result of this, Morgan and Morecambe intend to submit separate applications for Development Consent Order (DCO) for their generation assets in addition to a single application for both projects' transmission assets ("Morgan and Morecambe Transmission Assets"). Mona intends to submit a single application for DCO for both generation and transmission assets. Key milestones (Mona and Morgan PEIR submission for March 2023, DCO application Q1 2024, Morgan and Morecambe Transmission Assets PEIR and DCO application programme is approximate six months behind Morgan. RH added that the project aware of potential effects on IoM aerodrome and that the impact assessment is ongoing, which has fed into the PEIR and the results of which will be presented on following slides. PEIR will be distributed to the IoM government which will then be fed down through the IoM CAA to the airport operators.		
	• **IoM:** Asked for clarification of their stakeholder status as this will impact their degree of involvement in the engagement process. **VR** explained that IoM Government is not listed under schedule 1 of the Infrastructure Planning APFP regulations, which defines 'prescribed consultation bodies', but area listed as a 'non-prescribed consultation body' through being a relevant British Crown Dependency. However, Morgan Generation Assets and Mona are treating the Isle of Man Government a key stakeholder. **GV** took an action to provide a post-meeting response on the consultation status of the Isle of Man.	**GV – see next steps**	
	Post-meeting response:		
	– The Planning Inspectorate 'Advice Note Three: EIA Notification and Consultation'[1] – describes the Notification and consultation by the Secretary of State under the Planning Act, 2008 (PA 2008) for prescribed consultees, local authorities and non-prescribed consultees.		
	– Before an applicant applies for development consent for a Nationally Significant Infrastructure Project (NSIP) it has a statutory duty to undertake pre-application consultation with a wide variety of stakeholders (as described under Section 42 PA 2008). The requirements of such consultation are outlined in the 'Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009' (APFP Regulation).		
	– The prescribed consultees, which the Planning Inspectorate is required to notify and consult, are those bodies identified in Schedule 1 of the APFP Regulations, which does not include the Isle of Man Government.		
	– However, The Planning Inspectorate has identified a number of bodies which are not defined as consultation bodies under the EIA Regulations, but have relevant functions and responsibilities which are akin to other consultation bodies. The Planning Inspectorate will exercise judgment and may on a discretionary and non-statutory basis consult with these bodies on the information to be included in an ES. These bodies are termed 'non-prescribed consultation bodies' and include the Isle of Man Government.		
	– Under Section C3. Relevant British Crown Dependencies, PINS Advice Note Three states that "The Planning Inspectorate has identified the following British Crown Dependencies, which are not listed in Schedule 1 of the APFP Regulations but have planning functions akin to a local authority: The Isle of Man and the Channel Islands (the Bailiwicks of Jersey and Guernsey). Additional information is provided in Table 3, which is annexed to Advice Note Three[2], and states the following (relevant section of Table 3 included below):		

[1] Advice Note Three: EIA Notification and Consultation, Planning Inspectorate, 2017: Available here: https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-three-eia-notification-and-consultation-2/#C

[2] Annex to Planning Inspectorate Advice Note Three – see page 22 of 25. Available here: https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2013/07/an3_annex1.pdf

Ref no.	Item	Actions	Date

Name of non-prescribed consultation body	Situations where the Planning Inspectorate may consult this body on a discretionary basis	An explanation of why the Planning Inspectorate has identified this body as a non-prescribed consultation body
The relevant British Crown Dependency	All proposed applications likely to affect land and/or the marine environment in that Dependency	The Isle of Man and the Channel Islands (the Bailiwicks of Jersey and Guernsey) are not included in Schedule 1 of the APFP Regulations. These islands are all British Crown Dependencies. Neither forms part of the United Kingdom or the European Union. As it is possible that proposed NSIPs may affect these Dependencies, the Planning Inspectorate will exercise judgment and may on a discretionary basis consult the government(s) of these Dependencies in relation to all proposed application likely to affect land and/or the marine environment in that Dependency.

- **RH:** Location of Morgan Array Area on NATS chart. Western tip is close to IoM ATSMAC and close to some procedures, particularly runway 26. The Mona Array is further east, further away from procedures but still quite close to the ATSMAC. LoS to both array areas from the IoM PSR, so there will be an effect. Both array areas are far enough away for obstacle limitation surfaces (OLS). Morgan will have an effect on runway 26 – one mitigation measure would be to limit the base of the procedure from 2000ft to 2100ft. Knock-on effect uncertain. Distance Measuring Equipment (DME) OCA would need increasing from 810ft to 1100ft. Southeastern section of ATSMAC would need raising to 2100ft. LoS analysis has shown that the entire Morgan Array Area and Mona Array Area will be visible to the IoM PSR. No effect on OLS due to distance. More detail on ATSMAC – predominantly the Morgan Array Area which has an effect on the SE sector of the ATSMAC. Assessment done on a 5nm radar buffer. IoM have approval for 3nm buffer (but effect would still pertain). 5nm buffer covers western part of Morgan Array Area and clips the northern part of Mona Array Area.
- **IoM:** Hopefully soon finalising 5 year IFP update, review of procedures, ILS approaching completion also. DME infrastructure will be changing.
- **RH:** Sees this as a good opportunity to work together.
- **IoM:** Think 1600ft for the current ATSMAC is quite large, SE Sector, for Morgan ideally 2100ft probably to cover the CTAs 1 3 & 4 to a lesser or greater degree. PSR, potential for airspace change to go through CAP1616 – potential for Transponder Mandatory Zones (TMZ). Could take time and money – can be up to 2 years, up to £2 million. Quite a lot of work to be done.
- **RH**: Lots of time left in the application process to work out suitable PSR mitigation to undertake necessary work.
- **IoM:** Happy to move forward on development of a Statement of Common Ground (SoCG) but developer should cover the financial requirements. IoM CAA would appreciate being considered as a statutory stakeholder and this would make the process easier.
- **RH:** Important for the project to ensure that IoM CAA and UK CAA are coordinated in their approach to any airspace changes.
- **IoM:** IoM CAA final decision-maker, only one airport so processes easier to work with, definitely would be a useful statutory consultee.
- **VR:** UK CAA non-statutory consultee, IoM CAA non-prescribed consultee. **IoM:** Level of consultee they are informs the level of powers they get, would be useful to know, and of course would like to be statutory. Asked what level of impact on IoM is predicted in the PEIR.
- **RH:** Initially significant but following mitigation potential impacts would not significant in EIA terms.
- **IoM:** Asks how much say they've got on whether the mitigation is actually acceptable to make impact insignificant. **RH:** Mitigation not specified yet but the Applicant would be keen to progress discussions through pre-application period with the IoM airport to agree on the best route to, and level of, mitigation which would be secured through the Statement of Common Ground.
- **IoM:** Radar infill for radar, developer taking the airport through CAP1616 and new procedures is probably likely, RH/GV agree. Both Morgan and Mona need to be aggregated throughout mitigation, RH agrees and states that cumulative assessment is ongoing.
- **GV:** Agree, single coverage for both, is keen for a draft SoCG at application with mitigation worked out so it's not identified as an issue at examination.
- **IoM:** Happy to begin discussion on SoCG, lots of commercial models for the types of mitigation suggested. **GV:** Suggests another meeting pre-PEIR submission to present the PEIR assessment, and a post-PEIR meeting to discuss the IoM response to that. Very keen to map out the engagement process and SoCG, IoM agree

Minutes

Ref no.	Item	Actions	Date
	• **RH:** IoM to preferably instigate, through their Approved Procedure Design Organisation (APDO), a detailed report on procedures against the most up to date co-ordinates for the wind farms. • **IoM:** Who pays? Large/detailed amount of work, probably getting to the level that they'd expect some sort of funding towards this work. • **VR:** Something to be looked at, commercial discussion to be had, will get back to the IoM with a response. **Next Steps** • **GV:** Minutes/slides to be circulated, along with the exact status of consultee IoM airport is (see '**post meeting response**' above) and a note on planned engagement, with details on a pre-PEIR meeting on the findings of the impact assessment with further engagement saved for a post-PEIR meeting.		

J.3 Aviation and radar meeting 2

J.3.1 Minutes

Minutes

35 New Bridge Street
London, EC4V 6BW
T +44 207 280 3400

Reference:	EOR0801
Meeting Name:	Morgan and Mona EIA – OWF Safeguarding (BAES)
Meeting date:	28/03/2023
Meeting location:	MS Teams

Attendees

Name	Initials	Company	Role
[redacted]	GV	bp/EnBW	
[redacted]	CB	BAE (Warton)	
[redacted]	PPB	BAE (Barrow/Walney)	
[redacted]	SB	BAE	
[redacted]	RH	Osprey	
[redacted]	SH	Osprey	
[redacted]	SS	RPS	
[redacted]	TGB	RPS	

Ref no.	Item	Actions	Date
1.	**Agenda** • Introductions (bp&EnBW, RPS, OspreyCSL) • Projects Overview • Effects to Warton Aerodrome • Effects to Barrow/Walney Island Aerodrome • Detail on Effects – Warton Radar Line of Sight (LoS) – Minimum Sector Altitudes (MSA) • Discussion • Questions • Next Steps.		
2.	**Notes**		

Minutes

Ref no.	Item	Actions	Date
	• **GV:** General project overview – Agreement for Lease (AfL) for both Morgan and Mona were entered into in early 2023. Morgan English Waters, Mona Welsh. Morgan will share a grid connection with Morecambe Offshore Windfarm (being developed by a JV of Flotation and Cobra) under a separate DCO for the joint transmission assets only. DCO application submission dates are Q1 2024 for Mona and the Morgan Generation Assets, anticipated Q3 2024 for the Morgan/Morecambe Transmission Assets. The Morgan and the Mona Preliminary Environmental Information Reports (PEIR) will be released in April 2023. • **RH:** Description of the airspace over the Morgan and Mona Array Areas. The Warton PSR has full coverage of both array areas, no impact to IFPs or OLS. There is an impact on WTN TAC MSA 25NM sector, and the MOCA would need lifting. For Barrow/Walney, no IFP/OLS impact and no PSR, but an impact on the MSA SW Sector – similarly to Warton would need lifting (from 1,800ft to 2,100ft). Information included in the PEIRs. • **RH:** The radar Line of Sight (LoS) assessment was made, on a turbine (blade tip height of 324 m) regular/even grid within the respective development redline boundaries, for the current Warton PSR. Responding to CB, RH considered that Warton's new Hensoldt radar, when fully operational, is highly likely to have equivalent coverage of the developments' arrays. • **GV:** The extent of the development redline boundaries are being revised because of shipping and navigation. Commitments have been made to undertake further studies of reduce array areas to determine whether this reduces the potential for impacts on safety of navigation. These commitments could reduce the overlap with WTN TAC MSA 25NM. To be followed up post-PEIR once all feedback on each project has been received. • **CB:** Not many concerns about MSA, more interested radar mitigation as this is an important test flying area. • **RH:** Important to note that Development Consent Order (DCO) pre-application process is iterative with design evolutions often being made in response to consultation (e.g. Scoping Report and PEIR) and therefore, some relevant parameters can change, e.g. turbine tip height. The projects will make sure relevant stakeholders, such as BAE are made of aware of this if it occurs. • **GV:** Looking to engage from now until submission of applications on the potential mitigation solutions with the aim of identifying and agreeing appropriate mitigation which would be documented through a Statement of Common Ground and where necessary, secured through the DCO. PEIR documents published in mid-April and BAE will be written to formally and personally to make aware when live and provide links to relevant documents. If BAE would like further discussion before finalisation of their response to PEIR that would be agreeable to solve as much as possible before formal response. **Next Steps** • Slide deck and minutes to be shared • Bp to notify BAE when PEIR documents are live and provide links to relevant documents (project description, aviation chapters and technical reports) • Potential meeting pre-deadline for section 42 consultation to run through BAE's concerns on PEIR.		

J.4 Aviation and radar meeting 3

J.4.1 Minutes

Minutes

35 New Bridge Street
London, EC4V 6BW
T +44 207 280 3400

Reference:	EOR0801
Meeting Name:	Morgan and Mona EIA – OWF Safeguarding (LJLA)
Meeting date:	31/03/2023
Meeting location:	MS Teams

Attendees

Name	Initials	Company	Role
[redacted]	PC	bp/EnBW	
[redacted]	GV	bp/EnBW	
[redacted]	CB	LJLA	
[redacted]	MB	LJLA	
[redacted]	FB	Osprey	
[redacted]	RH	Osprey	
[redacted]	SS	RPS	
[redacted]	TGB	RPS	

Ref no.	Item
1.	**Agenda** • Introductions (bp/EnBW, RPS, OspreyCSL) • Projects Overview • Effects to Liverpool Airport • Detail on Effects – Radar Line of Sight (RLOS) • Discussion • Questions • Next Steps.
2.	**Notes** • **GV:** General project overview – Agreement for Lease (AfL) for both Morgan and Mona were entered into in early 2023. Morgan English Waters, Mona Welsh. Morgan will share a grid connection with Morecambe

Minutes

Ref no.	Item

Offshore Windfarm (being developed by a JV of Flotation and Cobra) under a separate DCO for the joint transmission assets only. DCO application submission dates are Q1 2024 for Mona and the Morgan Generation Assets, anticipated Q3 2024 for the Morgan/Morecambe Transmission Assets. The Morgan and the Mona Preliminary Environmental Information Reports (PEIR) will be released in April 2023. Commercial operation to commence before 2030.

- **RH**: Description of the airspace over the Morgan and Mona Array Areas.
- **RH and FB**: Picking up on previous conversation, MB was to talk to Raytheon Canada (who provide the current LJLA PSR) – have these conversations happened? FB knows system at LJLA currently but important to understand what Raytheon can do regarding the impacts of Morgan/Mona. Currently modelling shows there will be a LoS impact on LJLA specifically from the east and southeast of the Mona Array Area (but not Morgan).
- **MB**: Haven't had direct contact with Raytheon but need to provide them with more detail (what/when) so they can provide more detailed support. Might be that by the time projects are constructed the radar isn't there any more or has been updated (radar tend to have approx. 19 years lifetime), so important to discern whether radar then will be the same as it is now.
- **FB**: Developer looking at certainty for life of the wind farm, so important to have an idea of current and future system. How long does the radar have left, how might it be updated and how can mitigation work now or in future?
- **RH**: Do we need a flight check working on current information? Currently know LoS and new kit probably has similar requirement.
- **FB**: We see quite a lot with new wind farms, a basic flight test is taken at the start to work out what the current status of the radar is. Agrees that might not be necessary although part of discussions as a lot might change. Even if the radar does still exist by construction, we'd want a more accurate idea of how it's working (so flight trial nearer the time, can be parked for now although still important in the future).
- **MB**: Agree, a lot can change, important to capture as part of the process but not essential right now. If done now, information would be irrelevant. Mid-life upgrade to be undertaken on radar in next few years, so a lot of factors not in place now that might be nearer the time. More sensible to undertake flight trial roughly 18 months pre-construction.
- **RH**: Do LJLA get SSR from Manchester and St. Anne's?
- **MB**: Yes, use Manchester as a primary (preferred) feed and have the capability to get it from St. Anne's as secondary/backup.
- **RH**: A lot of TMZs in the Irish Sea, likely NATS would prefer this mitigation measures
- **MB**: Mitigations in place for several wind farms in the Irish Sea and no degradation to radar. Real question mark is whether we'll be looking at the same PSR system, reiterates that waiting until nearer construction for trials is sensible, RH agrees.
- **GV**: Looking to engage from now until submission of applications on the potential mitigation solutions with the aim of identifying and agreeing appropriate mitigation which would be documented through the Statement of Common Ground process and where necessary, secured through the DCO. PEIR documents published in mid-April and LJLA will be written to formally and personally to make aware when live and provide links to relevant documents. If LJLA would like further discussion during the consultation period before finalisation of their response to PEIR that would be agreeable to solve as much as possible before formal response.
- **CB and MB**: Definitely good to get together during consultation period for discussion.

Next Steps/Actions

- LJLA to request an update from Raytheon
- Slide deck and minutes to be shared
- Bp to notify LJLA when PEIR documents are live and provide links to relevant documents (project description, aviation chapters and technical reports)
- RPS to organise meeting with LJLA post-PEIR for discussion of mitigation options, queries arising from review and PEIR, and SoCG.

J.5 Aviation and radar meeting 4

J.5.1 Minutes

MOM Number	:	**REV. No.**	: 01
MOM Subject	:	Morgan and Mona OWF Aviation stakeholder meeting with Isle of Man Airport	

MINUTES OF MEETING

MEETING DATE	:	01 August 2023
MEETING LOCATION	:	Microsoft Teams
RECORDED BY	:	[redacted] (RPS)
ISSUED BY	:	[redacted] (RPS)

PERSONS PRESENT:

- [redacted] – bp (GV)
- [redacted] – bp (RoH)
- [redacted] – RPS (SS)
- [redacted] – RPS (BM)
- [redacted] - Isle of Man (IOM) Airport (GC)
- [redacted] – IOM Airport (GP)
- [redacted] – IOM Airport (TW)
- [redacted] – Osprey (SH)
- [redacted] – Osprey (RH)

ITEM NO:	DISCUSSION ITEM:	Responsible party	Date
1	**Introduction** A round of introductions and review of agenda.		
2	**Overview of Projects** GV – described the status of the projects, including the locations and landfalls of the projects and key consenting milestones. Further information is available on the slides. bpEnBW explained that the projects are reviewing feedback from PEIR, engaging with stakeholders and undertaking assessments for the application which is Q1 2024 for Mona and Q1/2 for Morgan Generation. bpEnBW have considered how the project can be revised in response to stakeholder consultation via existing workstreams and the section 42 consultation comments. As a result, several project revisions will be made for the application (outlined in presentation).		
3	**Discussion** GC – With regard to aggregated impacts, having spoken to developers for other projects it might be worth having or creating a forum to have a conversation with all relevant parties to establish joined up approaches to mitigation. RH – Noted IOM Airport were to remain informed on the projects and this is the purpose of this meeting. In terms of comments		

	regarding aggregated impacts, this will likely come up in the discussion following the presentation. GV - The Morgan Project array area has been reduced in size through changes to northern boundary to ensure more space for ferry transit, between Morgan and existing windfarms (Walney and West of Duddon). The Mona Project array area has also been reduced in size quite significantly. The changes to the Mona Project boundary are also principally to reduce potential impacts on shipping and navigation. However, the revised boundary no longer overlaps the 'Holyhead CTA D FL45-EL195'. RH – Identified previously that there is an effect on the MSA down to the southeast for the Surveillance Minimum Altitude Chart (SMAC) chart and a slight effect on the Distance Measuring Equipment (DME) approach plate. The minimum altitude would need to be raised to 2100ft. There is an effect on the radar and this will be covered in the next slide. GP – the Minimum Obstacle Clearance Altitude (MOCA) would need to be raised to 2100ft not by 2100ft? RH – That is correct. This may subtly change with the reduction in each project's array area, especially for the Mona Project, where the northwest tip will be removed. The PEIR assessments for Aviation and Radar will be updated for each project's Application on the basis of the revised array area boundaries and other project changes and we will present the results of the updated assessments at a future meeting. GV – Noted that in the last meeting we discussed the IOM undertaking an instrument flight procedures (IFP) assessment. GV took away an action to establish whether the project's could pay for that and confirmed that bp/EnBW will pay for the IFP assessment. RH – Noted that Osprey is now an IOM airport approved procedure design organisation, so this subsequent assessment that will be done for the wider Irish sea will have done a lot of the work anyway. The IOM Airport will need to ensure that Osprey undertake a second report with the information that the IOM Airport and the Civil Aviation authority (CAA) required in terms of the safeguarding aspect. GC – The commonality of both sides contracting Osprey is useful and makes translation much easier. Even with the changes there will be some form of radar mitigation required and some form of IFP/ air space change required. The aggregated impacts may make things easier for bp/EnBW because the total cost of mitigation will be shared. We want to avoid a situation where 4 groups independently want to mitigate our radar due to the costs as this could become very complex. For radar mitigation options the IOM airport are happy to enter into Statements of Common Ground (SoCG) or commercial discussion on radar mitigation at any time. Radar mitigation should come first and changes to IFP air space comes later, because all the projects will want to work with at different times so we might do a stage gated approach to that to ensure it doesn't hold projects up, but we don't want it to be one piece of work. We are open to pragmatic conversations but don't		

	want an impact to be a cost burden to us, but otherwise see no reason to step in the way of the projects. GP – With all the various projects in the Irish Sea there are a lot of impacts to consider. If we avoid multiple separate rounds of mitigation that would make sense for us and be cost effective as one group doesn't have to pay for all of the mitigation that benefits other projects. GC – Have seen that sometimes no project wants to be first as it can mean significant costs for radar mitigation so this way would be fairer for all projects. Also this de-couples us from the projects critical path in terms of construction. GP – Re the IFP review: We have engaged with Osprey to do that and the kick-off meeting for that is next week. This needs to be done alongside separate works for the Instrument Landing System (ILS) projects and positioning of 2 DME. Any IFP updates because of the Non-Directional Beacon (NDB) procedure and Air Traffic control Surveillance Minimum Altitude Chart (ATCSMAC) needs to be done as a separate piece of work. GC – Are we statutory consultees? GV – no but we are treating you as a key stakeholder as ensuring any potential impacts on aviation and radar are mitigated is critical. In terms of the SoCG process, we are happy to kick this off soon so that we can start to document where agreements have been made prior to application and whether any activities are outstanding and the programme and actions required to close them out. GC – The IOM airport are also keen to commence the SoCG process to have the certainty to put in at submission. GV - can put these things into SoCG of what we want to agree. In respect of the 'aggregated' approach to any mitigation requirements, we are very open to working with others but we will need to consider programme to ensure on time submission. That is something to take forward from this meeting. GC – Ørsted have spoken to us and stated they want to progress their aviation and radar work quickly as do Manx utilities to get these things done. GV - Orsted have not yet provided bp/EnBW with relevant project details for the IOM Offshore Wind Farm, but we are engaging and can discuss aviation and radar matters. GV - Re the suggestion of aggregated approach, I think this needs to be taken away and discussed before a decision is reached. **ACTION** SH – An important discussion is what the airport see as the third mitigation solution for radar. The aggregated approach is I agree, the best way forward, but the way this is managed will be dependent on what the mitigation solution might be. For example, an airspace change, to mitigate the radar impacts via aggregated approach may be difficult due to the timings of the individual projects. Radar manipulation could fall under an agreed approach	To discuss the working together on mitigation strategies alongside other projects	01 August 2023

	to mitigation of the radar system. The distance from Mona and the line of sight suggests it will have an impact. Has the airport a preferred radar mitigation strategy for each or all the developments? GP – No advanced conversations, certainly for the Manx Utilities onshore wind farm proposal there are two sites being considered. One is outside the Control Zones (CTR) and the other is inside. The radar mitigation for a project within controlled airspace will likely look different to that for a project outside controlled airspace. We don't have mitigation for some of the sites to the far eastern side of the Irish sea, but these don't impact us. For Morgan and potentially Mona which sits under Lima 10, it seems like a Transponder Mandatory Zone (TMZ) probably makes sense. Mitigation may be different but the assessment needs to be aggregated. The tried and tested route for this is infill. SH – Does the airport receive any data from the NATS radar systems alongside your own radar? GC and GP – No SH – What might the radar source be for Radar infill? There is an impact to the west coast radar systems created by the development, so I can't think of an individual radar that isn't impacted that might provide an infill solution. Is the suggestion to use blanking of the radar system and infilling the blanking from a non-impacted radar. GP – Primary radar is from an onsite conventional radar head. Secondary is a Multi-Lateration (M-LAT)[1] system which is wholly contained within the Island. SH – So where would an infill come from? GC – potentially a secondary radar/ another radar to infill the others, unless the project can come up with an alternative. Will need some form of stipulation that if the radar fails, the turbines are stopped, for safety. It is possible to build in resilience's so should certain things fail, the turbines can continue to turn. Should look at the redundancies to the mitigation. GP - What have you seen at other projects? I assume impact on M-LAT system will be different to conventional Primary Surveillance Radar (PSR) and conventional Secondary Surveillance Radar (SSR). SH – Outside of 10km from the radar source for secondary surveillance radar (SSR) we don't consider an impact and that is CAA guidance. In terms of M-LAT and Automatic Dependent Surveillance - Broadcast (ADS-B)we have not seen any impact from operational wind projects on these so far. With regards to the airport's specific radar is there a case for radar manipulation of that system that would reduce the impact to acceptable without going to an infill system. GP – what sort of manipulation are you talking about?		

[1] Multi-Lateration (M-LAT) is a proven technology that has been in use for many decades in both navigation and surveillance applications

	SH –where the radar is manipulated to accept the impact caused by the windfarm. GP – Would be cautious / resistant to making manipulations of that sort of radar and its sensitivities as we don't have any infill capabilities. There is no other radar in the UK which can provide us coverage to those levels. GC – Furthermore, we would struggle to get that past the CAA also. SH – Likely need to speak offline about what mitigation may be needed and then come back for an open discussion with ideas about what the mitigation might be. GP – Given that the airport has an M-LAT system, another approach would be to increase the number of sensor sites out into the array area if we did feel infill was needed. A new radar system could range from a full new system down to additional coverage into the existing area. This would be done as primary mitigation as this is the radar that will be affected by the wing tips. For secondary coverage, given the airport has an M-LAT system the only consideration would be in the long-term strategic plan and replacement of assets which we would be likely to have to consider in the not to distance future. RH – the airports current M-LAT is completely island inward looking, nothing offshore. SH – Do you see any impact to the M-LAT system from any onshore developments on the IOM at the moment? GP – Have had some phenomena with our M-LAT, these systems are not a very mature technology. The type of interference is more to do with radio interference such as phones and microwaves. No evidence to suggest any issues faced currently have anything to do with structures and reflections from these. That's not to say they are not. As far as we know we don't have any interference from onshore developments. SH – What is the process with regards to the CAA and safety considerations of just using a pure M-LAT system? GP – M-LAT is preferred and has priority over processing of picture, there are rules and procedures in place for operating under primary alone or secondary alone. Primary only requires permissions from the CAA and can only be for a set period. Secondary is more well-established principle. Technically the IOM CAA does all the approvals for the equipment but use the UK CAA and technical inspectors to do that. In terms of operating SSR alone it would be an approval from the IOM CAA. SH – With regards to regulations of an airspace change, would that fall under the IOM or UK CAA? GP – It would fall under the IOM CAA but the IOM CAA uses the same Civil Aviation Publication (CAP) 1616 process. The advantage an airspace change on the IOM is there are no adjacent aerodromes, so apart from the airway structure interface with	To consider mitigation options ahead of open discussion.	

	NATS, there isn't really any issues with surrounding airspace. Consultation processes would therefore be less complicated with fewer consultees and the environmental impact side of things would be easier. GC – It's a highly expedited process compared to the CAP 1616 in the UK. GP – Is any of the slide information not shareable? GV – We will share the slides with you; note that there is a caveat on the slides describing the revisions to the array area for each project stating that the reduced areas shown are draft and included to further engagement with the IOM airport and that the array area reduction is expected to be finalised in early September 2023. We will publish the change via a statement and updated details on the project websites and will make this available to the IOM Airport.. End of Meeting.		

J.6 Aviation and radar meeting 5

J.6.1 Minutes

MOM Number	:	**REV. No.** : 01
MOM Subject	:	Morgan and Mona OWF Aviation stakeholder meeting with NATS

MINUTES OF MEETING

MEETING DATE	:	10 August 2023
MEETING LOCATION	:	Microsoft Teams
RECORDED BY	:	[redacted] (RPS)
ISSUED BY	:	[redacted] (RPS)

PERSONS PRESENT:

- [redacted] – bp (GV)
- [redacted] – bp (RoH)
- [redacted] – bp (HK)
- [redacted] – NATS (EB)
- [redacted] – NATS (BR)
- [redacted] – Osprey (RH)
- [redacted] – RPS (SS)
- [redacted] – RPS (TGB)

ITEM	DISCUSSION ITEM:	ACTIONS
1	**Introduction** Introductions of attendees.	
2	**Overview of Projects** GV – Described the status of the projects, including the locations and landfalls of the projects and key consenting milestones. Further information is available on the slides. bpEnBW explained that the projects are reviewing feedback from PEIR, engaging with stakeholders and undertaking assessments for the application which is Q1 2024 for Mona and Q1/2 for Morgan Generation. bpEnBW have considered how the project can be revised in response to stakeholder consultation via existing workstreams and the section 42 consultation comments. As a result, several project revisions will be made for the application (outlined in presentation).	Publication of project updates will be communicated to NATS in September
3	**NATS Responses to PEIR consultation** No NATS responses to PEIR were received.	
4	**Effects to NATS Lowther Hill and St Anne's** RH – Morgan Array Area has Line of Sight (LoS) to Lowther Hill, particularly to the north and the east of the array area. Mona Array Area also, from the north of the array area. Both Morgan and Mona Array Areas have extensive LoS to the St Anne's radar. EB – Impacts are as expected. The next steps are mitigation (including Mitigation Description Document (MDD)) fitting in with	

	project timelines, in order to get approvals from the safeguarding team and others with possible objections. No preferred mitigation identified yet by the NATS team. Radar blanking and Transponder Mandatory Zones (TMZs) are likely to be the way forward but need to confirm within NATS team. The output of the MDD will identify which mitigation options are available, the costings of them and the different routes the Morgan/Mona projects can take. The document isn't shared outside NATS/NERL and their en-route radar data users - it's a technical document circulated for solution optimisation. GV – asked whether it was correct to assume that on the basis of bp & EnBW accepting the mitigation requirements identified by NATS through the MDD, the parties could move to commencing preparation of the commercial agreement and statement of common ground (SoCG) prior to submission of the project Applications in 2024? . EB – Correct, looking to ensure that mitigation is all in place with all aviation stakeholders with possible objections (not just NATS). GV – Who is covering the cost of BR's input? EB – Once the MDD is in place BR would contact the client for legal instructions. Instruction and costs would cover input into preparation of the commercial agreement and SoCG. BR – Would be useful to have a copy of the DCO Application submission dates, to ensure that everything can be handled according to project deadlines. **Post meeting note [1]:** • Mona DCO submission date: late February 2024 • Morgan Generation Assets DCO submission date: early April 2024 GV – Enquired over timescale for completion of the MDD and thus, timescale for a follow up meeting. EB – stated that the MDD process will take approximately 6 to 8 weeks as it involves contacting all relevant aviation stakeholders who might object to the project. GV – Noted that we should therefore plan to meet again in mid-October. Assuming bp & EnBW accept the mitigation identified by NATS, there should be sufficient time to make good progress on preparation of the commercial agreement to secure commitments to the mitigation and document progress through the SoCG prior to Application. **Post meeting note [2]** – would NATS be able to send a draft commercial agreement for implementation of radar blanking and TMZ (or non-technical aspects of any NATS standard agreements)? This might allow us to expedite the process once started in the Autumn by allowing us to form a view on any key T&C in the interim period whilst we wait for the MDD process to run its course.	**NATS to begin MDD process** **Development Consent Order (DCO) dates to be sent to NATS** **Complete – see post meeting note [1]** **Another meeting to be set up in Mid-October**

	End of meeting.	

J.7 Aviation and radar meeting 6

J.7.1 Minutes

MOM Number	:	**REV. No.** : 00
MOM Subject	:	Morgan and Mona OWF Aviation stakeholder meeting with Blackpool airport

MINUTES OF MEETING

MEETING DATE	:	25 August 2023
MEETING LOCATION	:	Microsoft Teams
RECORDED BY	:	[redacted] (RPS)
ISSUED BY	:	

PERSONS PRESENT:

- [redacted] – bp (GV)
- [redacted] – bp (RoH)
- [redacted] – bp (HK)
- [redacted] – Osprey (RH)
- [redacted] – Blackpool airport (JW)
- [redacted] – Blackpool airport (SF)
- [redacted] RPS (SS)
- [redacted] – RPS (TGB)

ITEM	DISCUSSION ITEM:	ACTIONS
1	**Introduction** Introductions of attendees.	
2	**Overview of Projects** RoH – Described an overview of the projects, including the locations and landfalls of the projects and key consenting milestones. Further information is available on the slides. bpEnBW explained that the projects are reviewing feedback from PEIR, engaging with stakeholders, and undertaking assessments for the respective applications which is Q1 2024 for Mona, and Q1/2 for Morgan Generation. bpEnBW have considered how the project can be revised in response to stakeholder consultation via existing workstreams and the section 42 consultation comments. As a result, several project revisions will be made for the application (as outlined in the presentation). This information will be released publicly in September.	
3	**Blackpool Responses to PEIR consultation** RH – we acknowledge Blackpool Airport's response is concerned about the effects on MSAs and current and planned Instrument Flight Procedures (IFPs) for Morgan and Mona. SF – Correct, updates on IFPs currently underway, submission of statement of need for Airspace Change Procedure (ACP) about to happen. Design of new IFPs dependent on boundaries of Morgan and Mona.	

	RH – As the updates aren't currently in the UK Integrated Aeronautical Information Package (UK IAIP), they can't be included in the baseline for the Environmental Impact Assessment (EIA). GV – We can still reflect the information in the consultation table and consider it, but hard to include without detail. RH – If draft designs are provided, we could include these in the assessment, but it would have to be caveated as draft. SF – If Mona can give the worst-case wind turbine location and maximum height of that turbine, Blackpool can try to work designs of their general Required Navigation Performance (RNP) Runway10 IFP around that. GV – Mona (and Morgan) worst-case scenario for wind turbine location and aviation and radar assumes wind turbines occupying the entire array area up to 160m from the array area boundary (to avoid blades overhanging the boundary). The post-PEIR project changes; Array Area reduction and increased maximum wind turbine tip height discussed earlier, would be pertinent to any analyses undertaken by the airport.	
4	**Effects to Blackpool airport** RH – Morgan will have an impact on the IFPs based on the PEIR Array Area and the PEIR maximum tip heights. And an impact on the MSA 25NM NDB(L) BPL SW Sector. The Minimum Obstacle Clearance Altitude (MOCA) would need to be increased from 2000 ft to 2100 ft. In the coming ES/application phase, effects will be assessed using the revised Array Areas for both projects and using the revised maximum tip height. RH – Blackpool Airport will have to do their own assessment for Civil Aviation Authority (CAA) purposes but the new assessment from Morgan and Mona can help inform a potential worst-case scenario.	
5	**Discussion** SF – Obviously an increase in Minimum Safety Altitude (MSA) is never ideal but as it's the 25-mile MSA rather than the 10-mile MSA, it isn't likely to be significant. The main concern is for the airports ongoing design procedures, but the reduction of the Mona Array Area to the southwest may potentially alleviate this. There is flexibility in the design process also, with more points available on the approach procedure. Blackpool Airport will continue this process to determine the impact of the proposed wind farms on these updates. SF – Outcomes of the five-year plan (released in 2020) are still ongoing, which may impact on this. The CAA are looking at 3500 ft MSA, determining whether it is necessary, which may affect processes as they currently stand. This should be happening in the next couple of months, the outcomes of which can be incorporated into the new design procedures and fed back to bp. The airport will commission this work, but would expect the costs	

	to be covered by bp / EnBW. Therefore, It would be good to have a point of contact within bp to discuss costs. GV – RoH and I with be your key points of contact. We would be grateful on the airports view of the costs and how you would anticipate facilitating that / commercial agreement. SF – As with most airports, there's normally a charge for pre-planning consultation but predominantly, it is the cost of the Approved Procedure Design Organisation (APDO) that we'd be looking to have covered. We will discuss with the Blackpool commercial team following the five-year review on the approach and come back to bp.	**Blackpool Airport to confirm to Morgan and Mona the commercial requirements and timeline of five-year review.** **bp to circulate minutes and slides.**

J.8 Aviation and radar meeting 7

J.8.1 Minutes

MOM Number	:	**REV. No.**	: 00
MOM Subject	:	Morgan and Mona OWF Aviation stakeholder meeting with Isle of Man Airport to discuss PSR mitigation	

MINUTES OF MEETING

MEETING DATE	:	05 September 2023
MEETING LOCATION	:	Microsoft Teams
RECORDED BY	:	[redacted] (RPS)
ISSUED BY	:	

PERSONS PRESENT:

- [redacted] – bp (GV)
- [redacted] – bp (RoH)
- [redacted] – RPS (SS)
- [redacted] RPS (TGB)
- [redacted] - Isle of Man (IOM) Airport (GC)
- [redacted] – IOM Airport (GP)
- [redacted] – IOM Airport (TW)
- [redacted] – Osprey (SH)
- [redacted] – Osprey (RH)

ITEM NO:	DISCUSSION ITEM:	Responsible party	Date
1	**Introduction** Summarised agenda from last meeting, focus of this meeting is to discuss PSR mitigation.		
2	**Discussion** RH –In advance of knowing NATS preferred solution, it is anticipated based on existing solutions in the Irish Sea, that a TMZ would be a likely solution for Isle Of Man airport. The TMZ would go up to the base of the airway. Transponders are mandated over FL100. Looking at a 2 mile buffer from the wind farm boundary. GP – There's a lot of air traffic that won't be transponder fitted (e.g. microlights), so from the IoM airport view the TMZ would work, but it would prevent airspace access to others. From the IoM's specific viewpoint this would be very straightforward. It is likely that ACP smaller aircraft would give negative feedback on a TMZ consultation and it would therefore need to be justified and its spatial coverage kept to a minimum RH – All TMZs have a controlling authority, so it would make sense that the IoM airport would be the controlling authority of the TMZ, able to adapt conditions as defined by the airport (subject to the NATS confirmation of preferred mitigation). This could allow people with a radio but no transponder to communicate with the airport and still use the airspace. TMZs can also be adapted for individual circumstances.		

	RH – If TMZs weren't the selected option, updates to the PSR, as alternatives, could be made either at the radar head or within the Radar Data Processor (RDP) but would have to go down a very technical route with engineers and would take more time/be more complicated. Furthermore, this would not meet technical or temporal criteria for an aggregated or a regional solution. GC – Getting an airspace change through for a TMZ may also take a long time (up to 2 years with the UK CAA). The pilot lobby is one of the most powerful lobbies on the island, and decisions can take a while to be finalised. It would be preferable to have an aggregated approach between wind farms (e.g. between the Mona and Morgan Generation wind farms) rather than approaching with separate mitigation solutions. GP – Have there been other TMZ schemes where the secondary is provided by MLAT? MLAT is great in principle but having slight issues with monitoring and feedback. We are currently experiencing some anomalies with it, so would also favour the idea that with the TMZ approach, more local MLAT sensors would be installed to add coverage. This would provide the solid secondary cover needed for the TMZ. These sensors would have to be in the array area somewhere, potentially being located on the Wind Turbines Generators (WTGs) or Offshore Substation Platforms (OSPs) but would need to be discussed with engineers as to how this would work. Access for maintenance etc. would need to be worked out with access the structure that the MLAT is installed upon for a minimum of annual maintenance and service, etc. How often are the WTG and OSPs maintained? GV – Operations and maintenance teams will be operating in the wind farm throughout the year, so access is unlikely to be an issue if this was an agreed solution. SH – There's precedent for this already; an offshore wind farm lighting system in mainland Europe is based on an MLAT sensor placed on a wind turbine. GP – Agree overall that TMZ is the right way to go, just need to work out secondary cover above the TMZ, which may include support to the MLAT system and maintenance of that support. GC – This also presents the option of removing primary radar and moving completely to secondary. The safety case for this would be much more complicated with a mixed PSR/SSR approach with blanking, MLAT, infill etc., rather than just going to a full secondary system with TMZs and making the safety case on that. We would require support in developing the safety case, whichever option is taken forward. GV – Based on a consent decision in mid 2025, offshore construction is likely to commence within 2 years of consent and thus by 2027. The WTG towers are usually erected in the second year, and there for the TMZ and any agreements would need to be in place before this. GC – That's around the time that IoM airport would be looking at buying their next radar system, potentially PSR, so agreement		

	would be needed well ahead of that purchase timeline to be able to work with the Morgan and Mona projects and ongoing discussions will be required to ensure programme alignment. GV – Next steps involve a conversation with Ørsted to determine if mitigation plans align.		

Post meeting note:

From discussion, it is considered beneficial to await a response from NATS confirming their preferred mitigation solution prior to our next meeting. Confirmation from NATS is expected mid-October 2023, meaning our next meeting is anticipated to be towards the end of October 2023.

J.9 Aviation and radar meeting 8

J.9.1 Minutes

MOM Number	:	**REV. No.** : 01
MOM Subject	:	Morgan and Mona OWF Aviation stakeholder meeting with Walney Aerodrome

MINUTES OF MEETING

MEETING DATE	:	26 September 2023
MEETING LOCATION	:	Microsoft Teams
RECORDED BY	:	[redacted] (RPS)
ISSUED BY	:	

PERSONS PRESENT:

- [redacted] – bp (GV)
- [redacted] – bp (RoH)
- [redacted] – Osprey (RH)
- [redacted] – Walney Aerodrome (Manager ATS) (PPB)
- [redacted] – Walney Aerodrome (Aerodrome manager) (SB)
- [redacted] – RPS (SS)
- [redacted] – RPS (TGB)

ITEM	DISCUSSION ITEM:	ACTIONS
1	**Introduction** Introductions of attendees. Noted that the correct name for Walney is now the Walney Aerodrome.	
2	**Overview of Projects** RoH – Described the status of the projects, including the locations and landfalls of the projects and key consenting milestones. Further information is available on the slides. bpEnBW explained that the projects are reviewing feedback from PEIR, engaging with stakeholders and undertaking assessments for the application which is Q1 2024 for Mona and Q2 for Morgan Generation. bpEnBW have considered how the project can be revised in response to stakeholder consultation via existing workstreams and the section 42 consultation comments. As a result, several project revisions will be made for the application (outlined on slide nine of the presentation). GV – provided links to newsletters for Morgan Generation Assets, Mona and Morecambe, providing further details on the project revisions.	GV to send links to the project newsletters (done).
3	**Walney Responses to PEIR consultation** RH – No response from Walney Aerodrome to either projects PEIR.	
4	**Effects to Walney Aerodrome** RH – Slide 10 and 11 show the reduction of the Morgan and Mona Array Areas since PEIR. The Morecambe Offshore Windfarm will be located to the east of the Morgan and Mona Array Areas. The	

	Morgan Generation Array will affect the Minimum Sector Altitude (MSA) in the southwest sector. An update has been made to this assessment since PEIR due to the increase in tip height from 324 m to 364 m, resulting in a required (mitigation) increase to the MSA from 1,800 to 2,200 ft. It should be noted that this assessment doesn't consider the Morecambe Offshore Windfarm, as that is a separate project with different developers and they will submit a separate application.	
5	**Discussion** PPB – Increased tip height will need considering. The aerodrome doesn't currently provide much of a service to the southwest, but our Documented Operational Coverage (DOC), where we potentially provide a service, has just been increased from 10 nm to 25 nm which just overlaps the northeastern Morgan Array Area boundary. GV – Explained that although the largest wind turbine option ('worst-case') now being considered is 364 m (24 MW wind turbine), the actual turbine that will be available from the supply chain at the time of construction is likely to be smaller, around the 18 MW (250 m tip height). Updates to the MSA, if required, don't need to be started within the aviation regulatory process until 18 months from beginning of construction, and we would know the exact wind turbine dimensions by that point and therefore the need for mitigation. RoH – Morgan and Mona can commit to an absolute wind turbine maximum tip height ('worst-case') of 364 m. PPB – Discussions have been had within Walney regarding 2,100 ft MSA increase so more discussions will need to take place regarding the new proposed 'worst-case' increase to 2,200 ft. Hopefully it will be possible to get back within a few weeks.	**bp to circulate minutes.** **Walney Aerodrome to discuss increase in MSA to 2,200 ft.**

J.10 Aviation and radar meeting 9

J.10.1 Minutes

MOM Number	**:**	**REV. No.** **:** 01
MOM Subject	**:**	Morgan and Mona OWF Aviation stakeholder meeting with Harbour Energy to discuss key findings from the aviation study

MINUTES OF MEETING

MEETING DATE	**:**	04 October 2023
MEETING LOCATION	**:**	Microsoft Teams
RECORDED BY	**:**	[redacted] (RPS)
ISSUED BY	**:**	

PERSONS PRESENT:

- [redacted] – bp (RoH)
- [redacted] – Anatec (LC)
- [redacted] – Harbour Energy (CM)
- [redacted] – Anatec (AM)
- [redacted] – Harbour Energy (MR)
- [redacted] – Harbour Energy (CC)
- [redacted] – Anatec (MP)
- [redacted] – RPS (SS)
- [redacted] – RPS (TGB)

ITEM	DISCUSSION ITEM:	ACTIONS
1	**Introduction** Introductions of attendees. Presentation regarding Harbour Energy's aviation study and helicopter access to assets.	
2	**Key findings of the aviation study** MR – Study undertaken by independent aviation advisors based on the AW169 aircraft (helicopter), to determine helicopter space requirements for aviation support of oil and gas facilities. The two main limiting manoeuvres in terms of space are: • Approach path with one engine inoperable • Take off with one engine inoperable. Current flying to installations (focusing on Millom East and Millom West) is conducted day or night, on instruments or visuals. For instrument flights the distance required is 3.3 nm to climb to 1,000 ft and perform a rate 1 turn, including a 1 nm required buffer to any obstacle. Our assessment is that with any wind turbine closer than 3.3 nm to the assets, all flights must be during daylight and visual, with minimum visibility limits (agreed by helicopter operators and the CAA). Although changes to the CAA limits have not been confirmed, it is assumed that only Day VMC flights will be permitted within 3nm of a wind turbine. In addition, the current Day VMC Limits will be increase d from a cloud base of 600ft to 700ft and the minimum visibility from 4,000m to 5,000m.	

	CM – The main access concern is about plugging wells at Millom East. MR – Millom West flights are currently day only, but if a rig was flown in then day and night access would be required.	
3	**Discussion** MP – Discussions are ongoing over changes to the CAA limits for flights in proximity to wind farms. There's a backlog of CAA changes that have to be cleared with Department for Transport lawyers. Even if this change was agreed it could take several years to come into force. Currently helicopter operators are flying to platforms inside wind farms, or to platforms adjacent to wind turbines, demonstrating that it can be done safely in Day VMC. MR – At this point the outcome is unknown/under discussion, but approached by Harbour Energy as if this will be coming in. Worst case impacts to Millom East/West could lead to up to 25% of flights being unavailable if wind turbines are located within 3 nm to 3.3 nm. If wind turbines are located closer than 3 nm the worst case month could mean over 61% of flights are unavailable. MP – Our figures differ from those – it would help to have Harbour Energy's Vantage data to align with the met data to work out the true impact of the wind farm if it was there. MR – If operations were going to continue the Vantage data would be relevant, but as future operations are decommissioning, Harbour Energy don't consider that the Vantage data is appropriate or representative. MP – Anatec considers that Vantage data can still be relevant in a lot of ways, the timings of the flights, helicopter payload etc. Based on Anatec's assessment, the change in impact is small, perhaps 4-5% on daylight operations. Flights are being flown to Hornsea 1 and 2 platforms with wind turbines within 1 km. Vantage data combined with met data helps to produce a balanced, and evidence based, assessment. MR – Harbour's situation in the east Irish Sea is that we share logistics with other operators in the area – we cannot move flights easily. Flights that come to our assets may visit several other installations on one trip. The environment is completely different to the operational Vantage data you're requesting. Our report represents a worse case assessment. AM – Spirit Energy has operated a rig within the Walney wind farm – not aware of them ever not being able to access that rig which is within circa 1nm of the wind turbines. Similar for Blyth which has had an NPI working over it for some months. If the impacts were between 25% and 61% of flights impacted, then we would be aware as it is likely that it would have been brought to our attention – we don't consider these statistics to represent a realistic scenario. MR – That's a best case (Blyth and Walney), our assessment is an absolute worst case which we aren't expecting to always be the case. Likely impact is somewhere between the two cases.	

	CC – In the east Irish Sea, Harbour Energy is at the back of the queue (behind Spirit Energy and ENI). When we do have a flight we have to absolutely maximise the payload. Other aircraft operating close to wind farms have lighter payloads and therefore more room. Our operations cannot be compared to Hornsea etc. AM – We're of the opinion that the ExA will ask for Vantage data to be provided at application, and therefore we'd consider it more beneficial if provided now MR – Our position is that we don't consider that the data will be helpful. MP – We think that it might be helpful for our evidence-based approach. Other known locations aren't operating with a 3.3 nm buffer. AM – Can you explain why the distances in the SNS are not comparable to the east Irish Sea such as Harbour Energy's agreed distances for an NPI working inside Hornsea 4 at the Johnstone field for decommissioning operations? MR – Its not a like for like comparison. We're not stating we require a 3.3 nm buffer, but merely outlining that if there are wind turbines within that 3.3 nm buffer there begins to be an impact. Once it's understood that there is an impact, conversations can proceed from there. MP – As shown in the past, sticking to day VMC there is a minimal impact. Is the core issue not the flight scheduling, rather than the distance of the wind farm? MR – Wouldn't say a core issue, rather a key constraint unique to this area (the east Irish Sea) which makes it differ from other areas. AM – Wouldn't the Vantage data show this difference then already, if that was the main issue? MR – We can still fly if wind turbines are within 3.3 nm. The reason for the 3.3 nm is in response to the question posed at PEIR – where does there begin to be an impact. We'd rather look at exploring the solutions mitigating those impacts. MR – Summary is: • If turbines are located over 3.3 nm away there's a limited impact on flying relative to current operations but this is manageable. • If the array is between 3.3 nm and 3 nm from the helideck, Harbour Energy perceives a significant impact on flying relative to the current situation, including loss of instrument flights. • If the array is within 3 nm of the helideck Harbour Energy perceives a very significant impact on flying relative to the current situation, including loss of instrument flights, loss of flights outside of daylight (which significantly affects winter flying) and loss of flights when visibility criteria are	

	not met. However even in this scenario, we would still be able to fly. MP- Any turbines within 9nm would have an impact on the ability to fly an Airborne Radar Approach, so why has 3.3nm been selected? MR – Impacts between 9nm and 3.3nm are impacts we can accept, hence why 3.3nm has been selected.	
4	**Timescales and next steps** CM – Three month operation duration with the rig at Millom West. The rig is currently be brought around, although there are delays bringing it around. MP – What are the next steps in terms of comparing/sharing data? MR – We don't consider there to be a fundamental problem – we don't agree with a 1 nm gap as per your project examples but the array is currently over 2 nm from the helidecks. AM – With respect to a commercial agreement, are you happy to use the same terms as those outlined in the Hornsea 4 DCO for the Johnstone field in this scenario? MR – Doesn't include the criteria for any commercial settlements so not in the detail that would be relevant here. CC – Harbour would need to make sure that we were covered for maximum payload for helicopters taking off from the platform. MP – Some work would have to be done regarding maximum payload, as because of Blackpool's proximity full fuel would not be needed, and therefore 'max payload' is different to 'maximum mass'? CC – This would also include freight, maximum personnel, baggage etc. – there's more than payload to mass, as well as potentially requiring to fly to an alternative airport. MP – We've nearly finished our work on the Met data and it's currently under review at RPS. Realistically a month away (considering comments and internal reviews) from being able to share with stakeholders. MR – We consider that as a useful next step – when this can be shared with us we can share data with you to agree on ranges of impacts and mitigation. As a question, would it be at all feasible for no wind turbines to be within 3.3 nm of Millom East? RoH – Due to the reductions in the array between PEIR and application, the Applicant needs to retain the option to build wind turbines throughout the array. CC – It's only when the wind turbines are fully constructed (above base height) that there will be an impact – what duration of time are we looking at? RoH – Construction commencing mid-2027.	**<u>Actions</u>** **Harbour Energy to share slide pack** **RPS to circulate minutes** **bp to share construction programme with Harbour Energy** **Once ready, finding of MetOcean data analysis done by Anatec to be sent to Harbour Energy, following which another meeting to be set up to discuss**

	SS – Would be useful to consider the wind farm construction programme alongside the provisional Harbour Energy decommissioning programme. This could identify any extent of temporal overlap between the above foundation wind farm operations and Harbour Energy decommissioning operations.	

J.11 Aviation and radar meeting 10

J.11.1 Minutes

MOM Number :		**REV. No.** : 01
MOM Subject :	Morgan and Mona OWF Aviation stakeholder meeting with NATS	
	MINUTES OF MEETING	
MEETING DATE :	03 November 2023	
MEETING LOCATION :	Microsoft Teams	
RECORDED BY :	[redacted] (RPS)	
ISSUED BY :	[redacted] (RPS)	

PERSONS PRESENT:

- [redacted] (GV)
- [redacted] – bp (RoH)
- [redacted] – NATS (EB)
- [redacted] – NATS (DW)
- [redacted] – Osprey (RH)
- [redacted] – RPS (SS)
- [redacted] – RPS (TGB)

ITEM	DISCUSSION ITEM:	ACTIONS
1	**Introduction** Introductions of attendees.	
2	**Approach to mitigation, including MDD** GV – For us the main point of discussion is the Mitigation Description Document (MDD). Can you feedback on findings at this stage? DW – NATS have come up with a bespoke solution, but it is quite complex. The exact logistics of which are still being worked on before going through an internal approval process. It is hoped that this process will be complete December or January. GV – Due to the proposed submission of the Mona application in Q1 2024, it may have to just be noted in the chapter that engagement is ongoing with NATS RE mitigation. This may also have a knock-on effect on other receptors, such as Ronaldsway airport. EB – The upcoming deadline for Mona submission can be stressed to the NATS team working on this, to see if any information can be sent over before December or the review period accelerated. Both Morgan Gen and Mona are being looked at together, so should still be within the current programme for the Morgan Generation Assets. NATS will send over draft commercial agreements this week or early next week – to note that before a fixed solution is proposed these are drafts only.	NATS to enquire with internal team RE whether anything can be sent over to bpEnBW before December NATS to send over a draft Commercial Agreement before CoB Tuesday 7th November Set up another call to follow up on this to be scheduled at 9am Friday 8th December (Actioned)

J.12 Aviation and radar meeting 11

J.12.1 Minutes

MOM Number	**:**	**REV. No.** **:** 00
MOM Subject	**:**	Morgan and Mona OWF Aviation stakeholder meeting with LJLA
		MINUTES OF MEETING
MEETING DATE	**:**	08 November 2023
MEETING LOCATION	**:**	Microsoft Teams
RECORDED BY	**:**	[redacted] (RPS)
ISSUED BY	**:**	

PERSONS PRESENT:

- [redacted] – bp (GV)
- [redacted] – bp (RH)
- [redacted] – Osprey (SH)
- [redacted] – Environment and Safeguarding Advisor at LJLA (CB)
- [redacted] – Air Traffic Engineer and Manager at LJLA (MB)
- [redacted] – RPS (SS)
- [redacted] – RPS (TGB).

ITEM NO:	DISCUSSION ITEM:	Action
1	**Introduction** Introduction of attendees.	
2	**Overview of Projects** bp/EnBW described an overview of the projects, including the locations and landfalls of the projects and key consenting milestones. Further information is available on the slides. bp/EnBW explained that the projects are reviewing feedback from PEIR, engaging with stakeholders, and undertaking assessments for the respective applications which are scheduled for Q1 2024 for Mona, and Q2 2024 for Morgan Generation Offshore Wind Project. bp/EnBW have considered how the project can be revised in response to stakeholder consultation via existing workstreams and the section 42 consultation comments. As a result, several project revisions (e.g. a reduction to the array areas and the number and size of wind turbines) will be made for the application (as outlined in the presentation). These updates were described in project update newsletters published on 19 September 2023.	
3	**LJLA's responses to PEIR consultation** bp/EnBW – RE Morgan Generation Offshore Wind Project, it is noted that LJLA have accepted the IFP/radar LoS analysis presented at PEIR (for 324 m tip height) and have raised no objections, although a request for a flight trial post construction is still made and acknowledged by bp/EnBW. For the Mona Offshore Wind Project, it is also noted that LJLA do not have objections to the Applicant's conclusion that the Mona Offshore Wind Project does not represent obstacles (OLS or IFP) to LJLA, but there may be an impact on radar which will need to be addressed.	

4	**Effects to LJLA and discussion** SH – The updated RLoS analysis shown indicates a theoretical LoS impact to the LJLA radar at 364 m max. tip height despite the reduction in the Mona Array Area. The IFP at 324 m did not impact LJLA, and this is still true at 364 m for both Morgan Generation Offshore Wind Project and Mona Offshore Wind Project. Therefore, the only impact to LJLA is exclusively a radar impact from the Mona Offshore Wind Project wind turbines. MB – All noted and understood. For the Mona flight trial, we were looking for a flight trial both before and after, to ensure assessments are correct and that LJLA can maintain the same levels of reliable detection. SH – Based on previous consultation, I believe it was decided that only the flight trial post-construction would be required. MB – We initially need the revised wind turbine heights, Mona Array Area and the layout used for the radar Line of Sight modelling for the Mona Offshore Wind Project. We will then provide this to Raytheon (radar provider) to see what they can do to mitigate the wind farms presence. If Raytheon do have any questions following provision of this information, we will contact bp/EnBW. We have a good working relationship with them but unsure if Raytheon have specific teams that work with these scenarios so unsure on timescales, but I can get in touch with them this afternoon and as soon as we get any indications of timescales from Raytheon, we can pass this on to bp/EnBW. bp/EnBW – IT would be useful to get assessment conclusions confirmed and agreed with Raytheon with a view to moving towards a Statement of Common Ground. MB – Is there any indication whether generation from the Morgan Generation Offshore Wind Project and Mona Offshore Wind Project is going to increase aviation activity (e.g. maintenance via helicopter) in the east Irish Sea? bp/EnBW – Helicopter and drone trips associated with Morgan and Mona are included in the project description and aviation and radar assessment, in addition to detail regarding maritime vessels which will also be used for these purposes. SH – Worth mentioning to LJLA that consultation with other aviation stakeholders is ongoing, such as NATS, and a mitigation solution is being worked towards for those radars. Do you utilise anything from NATS radars? MB – Under normal operations no, but on certain occasions we take SSR feed from NATS St. Anne's. this only happens when Manchester is unavailable. SH – There is no impact on St. Anne's SSR or Manchester from either Morgan and Mona.	**RPS to share layout used by Osprey for LoS assessments with LJLA along with shapefiles for revised Mona Array Area and revised wind turbine tip heights to LJLA** **Once the above is received, LJLA to contact Raytheon RE radar mitigation. LJLA will update bp/EnBW with indicative timescales for a response when known** **Meeting to be scheduled before Christmas to follow up**

J.13 Aviation and radar meeting 12

J.13.1 Minutes

MOM Number	**:**	**REV. No.**	**:** 01
MOM Subject	**:**	Morgan and Mona OWF Aviation stakeholder meeting with Harbour Energy	

MINUTES OF MEETING

MEETING DATE	**:**	04 December 2023
MEETING LOCATION	**:**	Microsoft Teams
RECORDED BY	**:**	[redacted] (RPS)
ISSUED BY	**:**	

PERSONS PRESENT:

- [redacted] – bp (RH)
- [redacted] (bp) (RJ)
- [redacted] – Harbour Energy (CM)
- [redacted] – Harbour Energy (MR)
- [redacted] – Harbour Energy (SC)
- [redacted] – Anatec (LC)
- [redacted] – Anatec (AM)
- [redacted] – Anatec (MP)
- [redacted] – RPS (SS)
- [redacted] – RPS (TGB)

ITEM	DISCUSSION ITEM:	ACTIONS
1	**Introduction** Introductions of attendees.	**Minutes and slides to be circulated**
2	**<u>Anatec presentation</u> – minutes are structured by relevant slide presented.** **Industry Guidance – HeliOffshore Approach Path Guidance** MP – Most aviation crashes caused by an unstable approach to landing (e.g. not pointing into the wind, not at the correct speed etc.). HeliOffshore was formed to ensure a stable final approach. For a day VMC/night approach the stabilised point had to be 0.5 nm from landing. This is not written into CAA rules but is industry best practice. MR – Just to note that 0.5 nm is the minimum level; operators can set higher limits, and many choose to have a 0.7 nm final stabilised point, for example. MP – The main providers who took part in the HeliOffshore update at the end of 2022 (Bristow, CHC, NHV) are happy with the 0.5 nm final stabilised point. **Results – Met Analysis** MP – If there is a jack-up vessel currently operating in the Irish Sea, data could be fed into this analysis. SC – There is a rig in the Irish Sea, but this data is currently unavailable as the operation is ongoing. This could potentially be reviewed after the end of the operation, but this data won't be	

	available until March/April. No other rigs have been operating in the Irish Sea recently. MR – Any data shared would have to be heavily caveated as operations are very different from one another. It can't be predicted in advance how many flights are going to be required during a decommissioning operation. The scheduled flights aren't an issue - it's key specialist/equipment transfer which is an uncertain area. AM – Patterns tend to be similar based on analysis of hundreds of operations including P&A operations, which can be proved statistically. **NPI Vantage data** SC – We are working with you to the best of our capabilities and sharing data wherever possible. We are finding ourselves doing more P&A operations in winter, so the one dataset displayed on this slide through the summer/autumn months is not necessarily representative of the potential Harbour Energy Irish Sea operations. MR – Would it be possible to see the Helicopter Access Report before application? This may reduce the need for further discussions at a later stage in the permitting process. RH – We will discuss this internally and bpEnBW will come back to Harbour Energy if this is possible. **Mitigations** MP – Photos of platforms within offshore wind farm boundaries/close to wind turbines are included to illustrate the point that helicopters operate in close proximity to oil and gas facilities often and safely, and that the presence of wind farms has no impact on SAR given correct mitigation. RH – We are keen to further explore temporal measures and to keep communication ongoing. From your perspective, what are the key issues/concerns to take away to the bp/EnBW consents team? CM – We think we can work together well and safely – there is unfortunately a degree of uncertainty (e.g. when production at these wells will end, which informs the decommissioning process) but we know that there will be suitable solutions for both sides where they are required.	**bpEnBW to ascertain whether the Helicopter Access Report (HAR) can be sent to Harbour Energy before the formal submission of the Morgan application**

Appendix K: Other sea users

K.1 Other sea users overview

Table K.1: Overview of Other sea users consultation.

Date	Meeting	Information provided
07 August 2023	Other sea users meeting 1 (Harbour Energy)	Meeting minutes (K.2.1)

K.2 Other sea users meeting 1

K.2.1 Minutes

MOM Number	:	**REV. No.**	: 00
MOM Subject	:	Morgan and Mona OWF Aviation stakeholder meeting with Harbour Energy	

MINUTES OF MEETING

MEETING DATE	:	07 August 2023
MEETING LOCATION	:	Microsoft Teams
RECORDED BY	:	[redacted] (RPS)
ISSUED BY	:	[redacted] (RPS)

PERSONS PRESENT:

- [redacted] – bpEnBw (GV)
- [redacted] – bpEnBW (RH)
- [redacted] – RPS (SS)
- [redacted] – RPS (BM)
- [redacted] – Harbour Energy (SC)
- [redacted] – Harbour Energy (AM)
- [redacted] – Harbour Energy (MR)
- [redacted] – Harbour Energy (HM)
- [redacted] – Anatec (AM)
- [redacted] – Anatec (MP)

ITEM NO:	DISCUSSION ITEM:	Responsible party	Date
1	**Introduction** A round of introductions and review of agenda.		
2	**Overview of Projects** GV – described the status of the projects, including the locations and landfalls of the projects and key consenting milestones. Further information is available on the slides. bpEnBW explained that the projects are reviewing feedback from PEIR, engaging with stakeholders and undertaking assessments for the application which is Q1 2024 for Mona and Q1/2 for Morgan Generation. bpEnBW have considered how the project can be revised in response to stakeholder consultation via existing workstreams and the Section 42 consultation comments. As a result, there several project updates for the application (outlined in presentation).		
3	**Opening questions** SC – Has there been a slight change for the submission date for Morgan generation. If so, what is the reason? GV – Acknowledged a change, with the principal reason being to ensure resourcing across the staggered application of the projects. CM – Enquired if the piling timeframe is known and when this might occur.	RH to confirm survey areas for geotechnical surveys and provide visuals.	

	GV - Programme is dependent upon consent, with a consent decision for Mona anticipated in Q2/3 2025. On this basis the earliest construction commencement would be in Q2 2027. It should be noted that this assumes a worse case of both projects being constructed simultaneously, which would be unlikely to happen. CM – how long would piling take? GV – Piling would commence at the start of construction and be subject to weather and the capability of vessels. Duration would likely be one season but potentially up to one year. SC – Can visuals be provided regarding geotechnical survey areas. RH – To look inn to availability and provide if available. **ACTION**		
4	**Section 42 PEIR Response discussion** MP - Wanted to understand the derivation of the 3.3 nm aviation zone as included in the Harbour Energy Section 42 response. MP also enquired is Harbour Energy could provide access to vantage data as this would help to assess the actual impact the windfarm may have on flights. MR – Noted that vantage data has limitations in its applicability, being historical. MP – Acknowledged, however it should still be useful as indicative. Furthermore, the met data to be used is also historic. Do Harbour Energy have a 10-year data set for MET data that they can also provide to aid assessment? AM – the 3.3 nm zone was based on an independent study. MP – summarised requests for: **ACTION** - MET data - The assessment resulting in the 3.3nm zone - vantage data SC – Wanted to understand how the data requested would be used and what would be the objective. MP – An initial helicopter access report is set out within the PEIR; we can use the requested MET data to consider the period of time where visual approach or instrumental approach would be applied. We can use the vantage data to see the volume of flights to Millom West and assess how they may have been impaired by the project. The data would help to understand any potential impact in more detail ahead of further discussion. CM – Summarised the decommissioning operations planned for Millom West, which could continue up to 2027 with the considerable flexibility in the programme. The Millom east wells are not plugged and abandoned (P&A), and a rig will be required to visit each well location to perform this operation. It is predicted that this will take from 4 months to 6 months between 2025-2030, with the rig being immobile whilst operational. Once P&A is completed and	RPS to send through details of the data requested. Harbour Energy to take away and revert on data requests.	

	after approximately two years (dependent on vessel availability) the wellheads will be removed.		

Appendix L: Seascape, landscape and visual resources

L.1 Seascape, landscape and visual resources overview

Table L.1: Overview of Seascape, landscape and visual resources consultation.

Date	Meeting	Information provided
12 September 2022	NRW position on Mona SLVIA	Email outlining NRW position on Mona SLVIA (L.2.1)
09 November 2022	Natural England buffer recommendation	Email from Natural England regarding the recommended size of the visual buffer (L.3.1)
24 November 2022	Seascape, landscape and visual resources meeting 1	Meeting minutes (L.4.1)
17 August 2023	Seascape, landscape and visual resources meeting 2	Design Review Report which summarises the meeting (L.5.1)
04 October 2023	Onshore ecology EWG meeting 5 (SVIA discussed so included here)	Meeting minutes (L.6.1)
08 December 2023	Onshore ecology EWG meeting 6 (SVIA discussed so included here)	Meeting minutes (L.7.1)

L.2 NRW position on Mona SLVIA

L.2.1 Email outlining NRW position on Mona SLVIA

From: [redacted]
Sent: 12 September 2022 18:10
To: [redacted]
Cc: [redacted]
Subject: RE: bp/EnBW Mona Offshore Wind Project - SLVIA Workshop

CAUTION: This email originated from outside of RPS.

Good afternoon [redacted]

Many thanks for your invite to the Mona SLVIA Workshop and apologies for the delay in completing the Microsoft Form – I have been following up discussions internally with our SLVIA specialist. Based on the location of Project Mona, the current design envelope turbine parameters, the distance from Welsh sites, alongside existing (and proposed) developments in the foreground, NRW Advisory do not currently have any concerns relating to SLVIA for Project Mona, and are of the opinion that the likelihood of significant visual effects on North Wales's National Parks and Areas of Outstanding Natural Beauty, singularly or in combination, is low. However, should the scale of the project / turbine parameters increase we would obviously be keen to be included in further discussions and retain the opportunity to comment at a later stage.

At this preliminary stage, therefore, our SLVIA specialist will not attend the upcoming workshop, but I will endeavour to do so in my capacity as NRW Advisory Case Manager and to remain updated on project developments. I have therefore completed the Microsoft Form with my availability, although please note that I accidentally completed the Site Selection Workshop Form at first – I do not currently plan to attend the Site Selection workshop, but forwarded the email to my colleague Sion Williams to respond. Sion, as you are aware, is leading on the terrestrial aspects of the Project for NRW Advisory. Apologies for any confusion.

Kind regards,

[redacted]

L.3 Natural England buffer recommendation

L.3.1 Email from Natural England regarding the recommended size of the visual buffer

From: [redacted]
Subject: RE: bp/EnBW Morgan Offshore Wind Project - SLVIA Workshop
Date: 09 November 2022 17:05:11
Attachments: image001.png
image002.png

CAUTION: This email originated from outside of RPS.

Dear [redacted],

Thank you for your email re the SILVA workshop. Natural England have provided comments on the EIA Scoping report advising that the visual buffer be extended from 50km to 60km due to the height of the turbines. Beyond that Natural England does not have further comment to provide regarding SLVIA and do not consider impacts are within the setting of any National Park or AONB. As such we will not be attending the SLVIA workshop. Please do let us know if there are any changes in future or our understanding is incorrect and we can consider any further advice.

Best wishes,

[redacted]



L.4 Seascape, landscape and visual resources meeting 1

L.4.1 Minutes

MINUTES OF MEETING

Security Classification: Project Internal

Partners in UK offshore wind

MOM Number:	20221124	**REV. No.:**	F01

MOM Subject: Morgan Generation Offshore Windfarm – Seascape, Landscape and Visual Impact Workshop 1.

MINUTES OF MEETING

MEETING DATE: 24/11/2022

MEETING LOCATION Microsoft Teams

RECORDED BY: [redacted]

ISSUED BY: [redacted]

ATTENDEES:

• [redacted]	ER	Isle of Man
• [redacted]	AM	Isle of Man
• [redacted]	PD	Isle of Man
• [redacted]	GW	West Lancashire Council (WLC)
• [redacted]	NS	Preston City Council (PCC)
• [redacted]		
• [redacted]		
• [redacted]	CD	RPS
• [redacted]		
• [redacted]	MP	bp

APOLOGIES:

- [redacted] bp)

AGENDA

- Introductions: introductions, purpose of the workshop, agenda (MK)
- Overview of the Morgan Offshore Wind Project (MP)
- Project programme: (MP)
- EIA process: (MK)
- Baseline characterisation: study area, indicative distances, baseline character: (CD)
- Turbine layouts and viewpoint plan: (CD)
- Wirelines – discussion and agreement on 'worst case': (CD)
- Summary: (CD)
- Close: MK

ITEM NO:	DISCUSSION ITEM:	RESPONSIBLE PARTY	ACTION
1.	DM - is Morgan an NSIP? MP/MK - clarified that the Morgan Generation Assets project is a Nationally Significant Infrastructure Project (NSIP) and an application for a Development Consent Order will be submitted via the Planning Inspectorate. A Scoping Report was submitted to the Planning	MK/MP presented slides 1-8	

	Inspectorate in June 2022 and Statutory consultees provided input to the Scoping Opinion which was received in July 2022.		
2.	PD – are the same consultants involved across both projects? Are Morgan and Mona applications prepared/submitted together? MK – RPS is leading the EIA on behalf of bp/EnBW for both the Morgan Generation Assets project and the Mona Offshore Wind Project. Both the Mona and Morgan Generation projects are going through their application processes at the same time. MP – The transmission assets for the Morgan Offshore Wind Project will be taken through as part of a separate DCO application. This is because the Morgan Offshore Wind Project will share a joint grid connection with the Morecambe Offshore Windfarm (a joint venture between Cobra Instalaciones y Servicios, S.A. (Cobra) and Flotation Energy Ltd.). This joint transmission assets project will be taken forward as a separate DCO application to consent the construction, operation and maintenance and decommissioning of the transmission assets required to enable the export of electricity from both the Morgan Offshore Wind Project and the Morecambe Offshore Windfarm with shared offshore and onshore export cable corridors to the National Grid connection point at Penwortham.		
3.	PD – asked how the marine character areas (MCAs) are defined and agreed? CD – explained that MCAs have been characterised for English waters through the Marine Management Organisation (MMO) and Welsh waters through Natural Resources Wales (NRW). The Isle of Man Government has defined landscape character areas (LCAs) but not MCAs within its waters. The MCAs for the IoM have been characterised by the RPS technical specialists for the purposes of the SLVIA. The RPS characterisation is in accordance with best practice guidance set out in Natural England's 'An Approach to Landscape Character Assessment (2014) and the Landscape Institute's 'Guidelines for Landscape and Visual Impact Assessment: Third Edition 2013' (GLVIA3).	CD presented slides 9-28 (baseline characterisation, viewpoint plans, turbine layouts and wirelines)	
4.	PD - how is the Met Office data integrated with the assessment of visual impact? CD - explained that it is one of many factors considered within the assessment. PD - described his experience in visibility of existing landmarks from the IoM and how visibility changes considerably with different conditions.		
5.	ER – how is the 'worst case' considered across different topics within the EIA, as the worst case for SLVIA may not be the same as that for e.g. commercial fisheries? CD - each topic undertakes the assessment based on the maximum design scenario for that topic. This allows the assessment to be conducted on the basis of a realistic 'worst case' scenario which is selected from a range of design values for each assessment topic. For SLVIA we need to consider what is the 'worst case' in terms of visual impacts only. The starting point for this is the 'bare earth' zone of theoretical influence (ZTV) which presents the theoretical worst case visibility of the blade tips of the turbines across the study area. In other words, it shows the areas from which an observer can theoretically see any part of the turbine array in		

	clear weather down to a single blade tip. It does not take into account vegetation or other upstanding features such as buildings which may block visibility.		
6.	PD - how do you assess/judge visual impact? CD - explained/clarified - amount of development visible from different distances and elevations – e.g. some think fewer-taller turbines is better because they're more widely spaced thus allowing visibility through the array and beyond. These matters are dealt with in Landscape Institute's GLVIA3 and further in NatureScot's (formerly Scottish Natural Heritage) 'Siting and designing wind farms in the landscape' version 3a 2017.		
7.	PD - who can/should give SLVIA advice/feedback in absence of inhouse expertise? CD – a qualified landscape architect preferrably a chartered member of the Landscape Institute (CMLI).		
8.	PD - what guidelines/criteria to follow with SLVIA/related studies? CD - referred to GLVIA senstivity factors etc. and other relevant Landscape Institute guidance.		
9.	PD - need time to produce IoM background seascape/landscape study. CD - mentioned Blandford's extant IoM landscape character study.		
10.	ER/PD – asked whether the location of the potential Orsted IoM OWF could be included on the wirelines to provide an indication of where this would be. MK – need to be careful with how this information is presented due to the current stage of the proposed development and that the current boundary is an agreement for lease area. The windfarms shown on the wirelines are those which are either already existing within the baseline or where we have information on layouts from the projects being in the application stage. RPS and bp to discuss.		
11.	MK – thanked everyone for joining and closed the meeting. Slides and minutes will be sent out early next week with any feedback on 'worst case' to be provided by Monday 5th Dec.		RPS to issue slides and meeting note w/c/ 05/12/22
12.	**Close of meeting**		

L.5 Seascape, landscape and visual resources meeting 2

L.5.1 Design Review Report which summarises the meeting

DESIGN
COMMISSION
FOR WALES
COMISIWN
DYLUNIO
CYMRU

Design Review Report

Mona Offshore Wind Project, Denbighshire

DCFW Ref: 302

Meeting of 17th August 2023

Review Status	**PUBLIC**
Meeting date	17th August 2023
Issue date	31st August 2023
Scheme description	Renewable Energy Infrastructure
Scheme location	Denbighshire
Scheme reference number	N302
Planning status	Pre-planning

Key Points

- The process that has been undertaken to date was presented clearly and concisely demonstrating a rigorous process that has been followed.
- A narrative is needed that reflects the qualitative commitments and ambition of the project beyond the technical requirements and how this translates into stewardship of a piece of the community in which the onshore interventions are located.
- The narrative should reflect a positive, enhancing approach to the landscape rather than just mitigating impact.
- There is a cumulative impact of various interventions related to the National Grid connection point at Bodelwyddan which needs to be considered and would benefit from strategic coordination.

Consultations to Date

This is the first Design Review with the Design Commission for Wales.

The Proposal

The Mona Offshore Wind Project is an offshore energy generating station and, for consenting purposes, is categorised as a Nationally Significant Infrastructure Project (NSIP). At the current stage of development, the Mona Array Area (i.e. the area within which up to 107 offshore wind turbines will be located) is 449.97km^2 in area and is located 28.2km (15.2nm) from the Ynys Môn (Anglesey) coastline. The key components of the Mona Offshore Wind Project include:

- Offshore wind turbines
- Foundations (for wind turbines and Offshore Substation Platforms (OSPs))
- Scour protection
- Inter-array cables linking the individual wind turbines to the OSPs

- Connection works to the existing Bodelwyddan National Grid substation
- Temporary construction compounds, including storage areas
- Permanent and temporary access roads
- High Voltage Alternating Current (HVAC) transmission system including: – OSPs, Offshore interconnector cable(s), Offshore export cable(s), Mona 400kV Grid Connection Cable, Onshore export cable(s), Onshore Substation

Context

The onshore export cables and onshore substation will be located within the Mona Proposed Onshore Development Area, which overlaps Conwy and Denbighshire, in north Wales. Connection will be made with the Bodelwyddan National Grid Substation to the west of St Asaph. The proposed location of the substation was selected in the days prior to this design review and is identified as Option 2 in the pre-review material. This is located to the south of the National Grid Substation, south of St Asaph Business Park. Several other substations are located or proposed in this area relating to other offshore wind farms that also plan to connect to the grid at this point.

Main Points

Design Principles

The design process presented was largely driven by constraints and the assessment process whereas the discussion in the review revealed a potentially more ambitious approach that seeks to better understand and then enhance the landscape. This needs to be documented, presented and communicated as part of a narrative for the scheme and, crucially, embedded into firm commitments for the project. To inform this approach, a more qualitative analysis of the existing landscape context needs to be developed and fed into a clearly presented vision. This analysis should include consideration of the history of the area, landscape character and functions, natural vs manmade interventions, noise, views etc.

Further work is needed to inform the proposals and present a coherent approach to design which is clearly discernible amongst the myriad of other material that accompanies a consent application of this scale. This work should include definition of high-level design principles that are guiding work across the whole project, that can then lead to sub-sets of more detailed principles or design commitments specific to individual elements of the work or individual sites, enabling appropriate responses to local context.

Design Development

Once identified, those design principles should inform design considerations at all levels.

The approach to minimal impact and restoration along the route of the cable seems to be the right approach and we support avoiding significant mature trees and tunnelling under mature hedgerows. Consideration should still be given to any 'gaps' the proposals may leave in existing vegetation in the longer term due to over planting restrictions on such cable corridors.

There is much more scope for creative intervention at the substation site. Early indicative 3D visuals of the sub-station site are helpful to begin a discussion about the design and provide a much more informative idea of the scale and potential visual impact of the facility than a parameters plan/box which, visually, is highly misleading and unhelpful in engagement with stakeholders and the community. It is always helpful to show the site in context including orientation, access and surrounding landscape features. Aspects to consider at this stage include the shape of the operational site and how it relates to existing field boundaries, boundary treatments, approach to the design of any internal buildings, lighting, positive integration of SuDS requirements, land surface treatment and whether this is overlooked from higher land, access, potential for arts contributions. Each of these should be informed by the design principles.

For the purposes of future community engagement, it would be helpful to be clear about what decisions and designs are fixed and what can be influenced at any consultation stage.

Strategic Coordination

The proposed substation at Bodelwyddan is one of several that have been or will be located in this area but there has been no apparent strategic planning around how all of these significant interventions will work together. Consequently, the area is developing in a piecemeal way and, understandably, the local community is cautious about the overall impact. Some creative thinking is needed in relation to what sort of place this will be. It is divorced from both the source of the energy generation and its point of use and yet the area is being heavily influenced by energy infrastructure. A creative interpretation of what this means for the area and how this could influence the landscape and west St Asaph as a place would help to inform the design of each of the substations and other energy related development. A landscape-led 'masterplanning' approach to the area would be helpful and could help to define important aspects of the immediate area and the adjacent business

park (such as key views to/from) and the surrounding landscape and how each of the new interventions can fit into this. It might also consider how local communities can best engage with and understand such infrastructure and its wider purpose and benefits. Such an approach might well also consider any collective community, landscape, ecological or other benefits, facilities or initiatives to improve the immediate area that could be supported by the multiple proposals.

Consideration should be given to how best to use contributions from any planning performance agreements to contribute to some of this strategic thinking whilst also ensuring partiality. DCFW would welcome further engagement in this and can potentially offer a facilitation role in future workshop discussions.

A piece of more strategic work could also help to inform some general design principles and design guidance for the area, potentially in the form of an SPG document or similar. It is recognised that with increasing demand for electrical energy, substantial new and expanded National Grid infrastructure and supplier substations are inevitable across Wales, therefore similar strategic work is needed at a national level.

Next Steps

A rigorous process has been undertaken but it is now time to look back and ensure that a design approach that reflects the stated ambitions of the project has been undertaken and can be presented clearly.

The Design Commission would welcome a further Design Review at which we would like to see the design principles refined and presented, and a demonstration of how these are informing the design of the substation and any incorporated mitigation and enhancement, on and off site.

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code of conduct and complaints procedure, which should be read and considered by users of the service.

A Welsh language copy of this report is available upon request.

Attendees

Client:	[redacted]
Design Team:	[redacted]
Stakeholder Engagement:	[redacted]
Local Authority:	[redacted], Denbighshire County Council
Observing:	[redacted]g, Denbighshire County Council

DCFW Design Review Panel

Chair:	[redacted]
Panel:	[redacted]

Declarations of Interest

Panel members, observers and other relevant parties are required to declare ***in advance*** any interests they may have in relation to the Design Review and meeting Agenda items. Any such declarations are recorded here and in DCFW's central records.

There were no declarations of interest.

L.6 Onshore ecology EWG meeting 5

L.6.1 Minutes

Appendix A Onshore Ecology EWG05 Meeting Minutes

Reference:	RPS_EOR0801_Mona_Onshore_Ecology_EWG05_MoM_Rev01
Meeting Name:	Mona Evidence Plan Onshore Ecology Expert Working Group (EWG) – Meeting 5
Meeting date:	04 October 2023
Meeting location:	Virtual (Microsoft Teams)

Attendees

Name	Initials	Company	Role
Introduction			
[redacted]	CR	RPS	Consultant
[redacted]	BJ	RPS	Consultant
[redacted]	JC	RPS	Consultant
[redacted]	FM	RPS	Consultant
[redacted]	LR	RPS	Consultant
[redacted]	CD	RPS	Consultant
[redacted]	PRW	bp	Applicant
[redacted]	PC	bp	Applicant
[redacted]	JF	bp	Applicant
[redacted]	KS	Conway County Borough Council (CCBC)	Statutory body
[redacted]	SW	Cyfoeth Naturiol Cymru (Natural Resources Wales, NRW)	Statutory body
[redacted]	NS	Cyfoeth Naturiol Cymru (Natural Resources Wales, NRW)	Statutory body
[redacted]	ME	Cyfoeth Naturiol Cymru (Natural Resources Wales, NRW)	Statutory body

Name	Initials	Company	Role
[redacted]	JW	Denbighshire County Council (DCC)	Statutory body
[redacted]	NMa	Welsh Government	Statutory body
[redacted]	NMo	Woodland Trust	Statutory body

Meeting Minutes

Item	Detail	Actions	Date
Introduction			
1	Introduction RPS provided a summary of the agenda for the fifth Onshore Ecology EWG. This included the following items: Summary of 4th Onshore Ecology EWG; indicative meetings programme update; update on the Mona Offshore Wind Project; onshore and intertidal ornithology; onshore ecology; landscape and ecological strategy; next steps and questions.		
2	Summary of 4th Onshore Ecology EWG RPS provided a summary of the points covered during the 4th Onshore Ecology EWG. This included meeting programme; actions following 3rd onshore ecology EWG; onshore and intertidal ornithology; onshore ecology; and key section 42 responses. The key actions following the 4th Onshore Ecology EWG included: EWG • Review meeting minutes and agreement log (incomplete); • Review survey methodologies and provide feedback (incomplete); and • Review wintering and migratory survey technical note (incomplete). RPS • Share meeting minutes and agreement log from 4th Onshore Ecology EWG (complete) • Provide updated survey methodologies addressing EWG feedback (complete) • Share GCN survey data/findings with relevant databases (complete) • Share technical note for 1 year survey of wintering/migratory birds (complete) RPS provided an overview of completed and upcoming Onshore Ecology EWGs, including the dates, stakeholders and focus of previous and future meetings.		

Item	Detail	Actions	Date
3	Update on the Mona Offshore Wind Project The client provided a summary of Project updates reported during the 4th Onshore Ecology EWG, including selection of onshore cable route, onshore substation, and access routes. In addition, the client stated that refinements to the Mona Onshore Order Limits remain ongoing in response to design/environmental constraints. The client then presented figures illustrating the differences in the Mona Onshore Order Limits between the 4th Onshore Ecology EWG (July 2023) and 5th Onshore Ecology EWG (October 2023).		
4	Alterations at landfall/intertidal area The client provided a summary of the alterations to the Mona Onshore Order Limits at landfall and within the intertidal area. This included: refinement of the landfall and intertidal access areas; removal of landfall and intertidal areas where access is no longer required; reduction in the drill splay at the landfall and intertidal areas; and an exclusion zone provided around the vegetated shingle bank, including an area for welfare access. **NS** (NRW) – Happy with the proposed design of the Mona Onshore Order Limits at landfall and within the intertidal area on the basis that we avoid the SSSI (associated with the shingle beach). However, suggested opportunity to contribute to the shingle beach replenishment plan. **KS** (CCBC) – Stated that they will investigate and provide further information to the Mona Offshore Wind Project regarding the shingle beach replenishment plan.	**CCBC/NRW** – to provide further information regarding the shingle beach replenishment plan.	04 October 2023
5	Alterations along the onshore cable corridor The client provided a summary of the alterations to the Mona Onshore Order Limits along the onshore cable corridor. This included: reduced optionality (i.e. single onshore cable corridor) except for one location; width of onshore cable corridor reduced from approximately 100m to 74m; and identification of locations for each of the Temporary Construction Compounds (TCCs).		
6	Mitigation requirements and other engineering decisions RPS explained that the Mona Onshore Order Limits now included areas for temporary and permanent mitigation (which were explained in detailed during the onshore ecology sections of the presentation).		

Item	Detail	Actions	Date
	The client provided a summary of the other engineering decisions. This included the decisions to adopt Gas-insulated Switchgear (GIS) as opposed to Air-insulated Switchgear (AIS) for the onshore substation. The client explained what GIS and AIS meant in terms of design and that the GIS option resulted in a reduction of the onshore substation footprint from 125,000m2 (12.5ha) to 70,000m2 (7.0ha) and maximum height from 20m to 15m.		
7	Ancient Woodland Shapefile – DataMap Wales RPS explained that online mapping data provided on DataMap Wales indicates that the eastern access route intersects with an area of designated ancient woodland. However, site surveys indicate that there is no ancient woodland present at this location. RPS requested clarification from NRW, CCBC and DCC as to why this may be the case and how this area of ancient woodland would need to be considered. **SW/ME** (NRW) / **JW** (DCC) – stated that the relevant local planning authority is ultimately responsible for the management of ancient woodland. JW stated that provided that suitable justification is provided for why this access is required and the Mona Offshore Wind Project explain that there is no ancient woodland at this location, then DCC would be satisfied with this approach.		
Onshore and Intertidal Ornithology			
8	Introduction RPS provided a summary of the agenda for onshore and intertidal ornithology. This included the following items: summary of survey programme; survey progress to date; intertidal waterbirds; and issues for agreement with the Onshore Ecology EWG.		
9	Survey Programme RPS provided a summary of field surveys undertaken to date, including the area, methodology, frequency, and timings of intertidal waterbird surveys; breeding bird surveys; onshore and wintering passerine and raptor surveys. RPS also provided a summary of field surveys that remain outstanding, including a second year of intertidal waterbird surveys proposed from July 2023 and November 2023.		
10	Survey Progress RPS provided a summary of survey progress, including those discussed during the 4th Onshore Ecology EWG and	**RPS** – to provide further information to	04 October 2023

Item	Detail	Actions	Date
	explained that the key findings of surveys undertaken to date remain unchanged following refinements to the Mona Onshore Order Limits. RPS also explained that the second year of intertidal water bird surveys remain ongoing (December 2022 to November 2023) and a summary of the findings of these surveys will be reported as part of the 6th Onshore Ecology EWG in November 2023. **JW** (DCC) – stated that crossbills may be present within the vicinity of the Onshore Substation and questioned if these had been considered as part of the onshore and intertidal ornithology surveys. **JC** (RPS) – stated that the Onshore and Intertidal Ornithology Team would provide further information as to when onshore and intertidal ornithology surveys were undertaken and if/how crossbills have been considered.	DCC as to when onshore and intertidal ornithology surveys were undertaken and if/how crossbills have been considered.	
11	Issues for Agreement with Onshore Ecology EWG RPS identified the following key issues for agreement with the EWG: • Having reviewed the technical note shared on 18 September 2023, is the EWG satisfied with one year's survey data for the wintering passerine and raptors? **SW** (NRW) – stated that they would provide an official response to the technical note shared on 18 September 2023, including if they agree with 1 years' worth of surveys for wintering and passerine birds.	**NRW** – to provide official response to technical note.	04 October 2023
12	Questions – no further issues raised during the EWG.		
Onshore Ecology			
13	Introduction RPS provided a summary of the agenda for onshore ecology. This included: survey progress to date; summary of key findings; Great Crested Newt (GCN) mitigation; landscape/ecological connectivity; digital data sharing platform; key issues for agreement with the Onshore Ecology EWG; next steps; and questions.		
14	Surveys Completed RPS provided a summary of the surveys have now been completed: • Otter and Water vole: Walkover surveys for signs (1st and 2nd survey visits);		

Item	Detail	Actions	Date
	• Extended Phase 1 Habitat Survey: This included additional or repeated phase 1 habitat surveys; • National Vegetation Classification (NVC): Detailed botanical survey of plant species; • Terrestrial Invertebrates: Walkover scoping survey (sweep netting and sample analysis where required); • Aquatic Invertebrates: Walkover scoping survey, (netting and sample analysis where required); and • Fish and eel surveys: Further survey scoped out following initial inspection of watercourses.		
15	Surveys Underway RPS provided a summary of the surveys which remain underway: • Bats - Trees: Preliminary Ground Level Roost Assessments (PGLRA), Tree Inspections and Dusk/ Dawn Surveys; • Bats - Buildings: Preliminary Roost Assessments (PRA), Buildings Inspections and Dusk/Dawn Surveys; • Bats - Activity: Bat Activity Surveys using Static Bat Monitors at multiple locations, including Kinmell Hall; • Badger: Badger walkover surveys and sett monitoring; • Otter and Water Vole: Further walkover surveys for signs and evidence of otter and water vole; • Hazel Dormice: Checking dormouse tubes for presence / likely absence; • Hedgerows: Hedgerow Condition Assessment and Hedgerow Regulations Survey; and • Invasive and Non-Native Species (INNS): INNS walkover surveys/ identification and mapping.		
16	Further surveys required post-application (2024) RPS provided a summary of the surveys which were either completed for the purpose of the Environmental Statement but required further surveys post application, or remained ongoing but required further surveys post application. These included: • Great Crested Newt (GCN): eDNA, Habitat Suitability Index (HSI) and Population Size Class Assessments. • Hazel Dormouse: Continuation of checking dormouse tubes to achieve sufficient survey effort to meet presence/likely absence probability score. • Badger Monitoring: Where potential breeding sets have been identified and are likely to be impacted by permanent infrastructure (e.g. onshore substation), monitoring would be undertaken during the optimal period (January to February 2024) to assess for breeding. • Bats: Where confirmed roosts have been identified and are likely to be impacted by permanent infrastructure (e.g. onshore substation) then further surveys would be undertaken during the optimal survey window (May to September 2023).	RPS – to confirm the feasibility of completing additional surveys in time to inform the DCO decision making process.	04 October 2023

Item	Detail	Actions	Date
	RPS explained that due to existing data and monitoring programmes associated with other nearby developments, it is considered that the Mona Offshore Wind Project would have sufficient baseline data to inform the ES. RPS also explained that further surveys for GCN, dormouse, badger and bats would be undertaken and reported in subsequent addendum report to the ES. These would also be used fulfil requirements of relevant EPS licences. **ME, SW** (NRW) – stated that they were happy with the approach that additional surveys for GCN, dormouse, badger and bats could be completed post-application. However, this is on the basis that information is available to inform the DCO decision making process.		
17	Bat dusk/dawn emergence surveys RPS explained that Dawn/dusk emergence surveys undertaken to date have focused on key areas located around the Onshore Substation. However, due to the continuous presence of livestock in this area (throughout the summer period), surveys could not be repeated on all the trees. These include trees identified with high potential for bat roosts, which could not be climbed safely, and confirmed bat roosts, where only a single dusk/dawn survey has been undertaken. RPS also explained that extensive bat activity surveys have been undertaken via automated static detectors throughout the summer period (as described during the 4th Onshore Ecology EWG). RPS stated that further dusk/dawn emergence surveys will be undertaken post-application (where required) for roosts identified beyond the vicinity Onshore Substation. Two alternative approaches were proposed to address the requirement for additional dusk/dawn emergence surveys. These included: • Option 1: Pre-construction dawn/dusk surveys of trees/buildings to determine usage of identified bat roosts; or • Option 2: Additional dawn/dusk surveys to be undertaken post-application and reported in an ES addendum report. RPS stated that these additional surveys would also be used fulfil requirements of relevant EPS Bat Mitigation Licences. RPS asked the Onshore Ecology EWG which of the two alternative approaches described above is most appropriate given the nature of the Mona Offshore Wind Project, the mobility of bat species and how they use roosts and the sensitivity of the receiving environment.	**RPS** – to confirm the feasibility of completing additional surveys in time to inform the DCO decision making process.	04 October 2023

Item	Detail	Actions	Date
	ME, SW (NRW) – stated that NRWs preference would be for surveys to be completed and reported in time to inform the DCO decision making process.		
18	Key updates following the 4th Onshore Ecology EWG RPS provided a summary of the key survey findings to date following the 4th Onshore Ecology EWG. These included: • Confirmed presence of hazel dormouse within the Mona Onshore Order Limits during dormouse tubes setup/checks; • Confirmed presence of reptiles within the Mona Onshore Order Limits, including the Onshore Substation during refugia setup/checks; and • Confirmed presence of greater horseshoe bat (*Rhinolophus ferrumequinum*) identified following analysis of data from static bat monitors. Greater horseshoe bat is listed under an Annex II and IV of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.		
19	GCN Mitigation Areas RPS provided a description of the initial proposals for temporary and permanent GCN mitigation areas, which have been identified to avoid direct impacts during construction and compensate for the loss of suitable habitat associated with the Onshore Substation. RPS explained that temporary mitigation areas would be provided on three land parcels east of the Onshore Substation. The parcels currently comprise of intensively grazed areas with ponds in poor condition. RPS also explained that these temporary mitigation areas would be enhanced. The construction area would be fenced off, but the receptor area would remain open to the surrounding landscape. RPS stated that the intention was that GCN would be transferred to the temporary mitigation areas prior to construction and permanent mitigation areas would replace land previously occupied by the Temporary Construction Compounds (TCCs) and comprise pond creation, scrub, hibernacula and rough grassland. RPS proposed that on completion of construction and the establishment of the permanent mitigation areas the fencing would be removed. This will allow GCN to colonise this area, which is currently not suitable for GCN, of their own volition to prevent double handling of the same population.		
20	Draft GCN Mitigation Strategy RPS stated that The Draft GCN Mitigation Strategy, including the habitat retention, creation and enhancement		

Item	Detail	Actions	Date
	proposals will be submitted to NRW and other relevant stakeholders on the 31 October 2023 for review (this was subsequently delayed until 30 November 2023). RPS provided a summary of the information to be provided in the Draft GCN Mitigation Strategy. This included: • The nature, location, and numbers of ponds to be temporarily/permanently lost or damaged. • Further details regarding the creation of temporary and permanent mitigation areas within the Mona Onshore Order Limits, including the Onshore Substation. • Further details regarding terrestrial habitat loss, terrestrial habitat damage, terrestrial habitat creation for temporary/ permanent pond creation. • The location and geographic extent of areas requiring GCN exclusion during construction of the Mona Offshore Wind Project. RPS stated that the Draft GCN Mitigation Strategy will not include detailed design for planting and management. RPS also requested that The Mona Offshore Wind Project would like to receive stakeholder feedback on the Draft GCN Mitigation Strategy by the 30 November 2023. RPS explained that the Mona Offshore Wind Project is particularly interested to learn if stakeholders are broadly satisfied that sufficient mitigation and compensation measures have been identified prior to application (Q1 2024). The intention is to use feedback received from stakeholders to inform the GCN mitigation strategy for the purposes of the ES and DCO application for the Mona Offshore Wind Project.		
21	GCN Survey Data/ COFNOD Data Limitations RPS provided a summary of the GCN surveys undertaken to date and explained that these have been uploaded to COFNOD. However, RPS stated that the results of GCN surveys were uploaded after the initial data request was submitted to COFNOD. RPS explained that following the COFNOD data request, it was identified that GCN data associated with St Asaph Solar Farm has not been included. RPS asked the Onshore Ecology EWG if they could clarify the mechanism through which GCN records are submitted, which appears to be a separate process to COFNOD.	EWG to clarify the mechanism through which GCN records are submitted, which appears to be a separate process to COFNOD.	
22	Further GCN Surveys RPS explained that the Mona Offshore Wind Project proposes to exclude the refined onshore cable corridor from further GCN surveys for the following reasons: • Based on COFNOD and GCN survey data collected to date, the distribution of GCN is predominately focussed	EWG to provide input regarding if they agree that the onshore cable corridor can be excluded	

Item	Detail	Actions	Date
	on the Onshore Substation at St Asaph (as illustrated in the figures included on the previous slides). • TCCs located along the refined onshore cable corridor would be subject to further surveys if they were to occupy habitats that were considered suitable for supporting GCN. • Trenchless crossing techniques would be utilised where the onshore cable was required to across areas of ancient wood and hedgerows (where practicable). RPS asked the Onshore Ecology EWG if they agree that the onshore cable corridor can be excluded from further GCN surveys, and if they could they advise what would happen if GCN was identified during a Precautionary Method of Working, as all trenching works will have an Ecological Clerk of Works.	from further GCN surveys, and if they could they advise what would happen if GCN was identified during a Precautionary Method of Working.	
23	Landscape/ecological connectivity within the onshore cable corridor RPS explained that Hedgerow Regulations / Condition Assessment were used to identify important (or good quality) hedgerows within the Mona Onshore Order Limits. The intention is to enhance hedgerows to important (or good quality) by creating suitable habitat where breaks in the hedgerow occur, to improve landscape/ecological connectivity. Hedgerow enhancements are proposed at strategic locations within the Mona Onshore Order Limits. These include: • Llanddulas Limestone & Gwrych Castle Wood SSSI Enhancement: Hedgerows surrounding Llanddulas Limestone & Gwrych Castle Wood Site of Special Scientific Interest (SSSI) to improve connectivity to with the nearby areas of woodland. • Dormouse Enhancement: Hedgerows where evidence of dormouse has been identified following surveys to establish better ecological connectivity with nearby habitats. • Lesser Horseshoe Bats at Kimnel Hall: Hedgerows at Kimnel Hall to improve and strengthen links between the known lesser horseshoe bat roost located to the north of the onshore cable corridor and suitable habitat located to the south of the onshore cable corridor.		
24	Digital Data Sharing Platform RPS stated that the Digital Data Sharing Platform (previously shared as part of the 4th Onshore Ecology EWG) had been updated and was available using the links provided in the presentation.		
25	Issues for Agreement with Onshore Ecology EWG RPS identified the following key issues for agreement with the EWG:	EWG to respond to issues for agreement via	04 October 2023

Item	Detail	Actions	Date
	• In terms of the requirement for additional GCN, dormouse and badger surveys, is the Onshore Ecology EWG satisfied with the approach, whereby further surveys would be reported in an ES addendum report? • Regarding the requirement for additional bat dawn/dusk surveys, which of the following approaches does the EWG consider most appropriate: o Pre-construction dawn/dusk surveys of trees/buildings to determine usage of bat roosts; or o Additional dawn/dusk surveys to be undertaken post-application and reported in an ES addendum report. • Is this Onshore Ecology EWG satisfied with the proposals for temporary and permanent GCN mitigation areas at the Onshore Substation? • Does the Onshore Ecology EWG consider the option of excluding the refined onshore cable corridor (except TCCs) from further GCN surveys appropriate?	the agreements log.	
26	Questions – no further issues raised during the EWG		
Landscape and Ecological Strategy			
27	Landscape and Ecological Strategy RPS provided a summary of the factors that influenced the design of the Landscape and Ecological Strategy. This included: existing vegetation, including hedgerows and trees; Root Protection Zones; historic field boundaries; and other design constraints, including other proposed developments. RPS identified the other proposed developments located near the Onshore Substation have informed the landscape and ecological strategy. These included the proposed grid connection for Awel y Mor Offshore Wind Farm and the extension of the National Grid Bodelwyddan substation, including proposed overhead lines, which will form a separate planning application under Section 37 of the Electricity Act 1989. RPS then showed visualisations of the Onshore Substation design provided at PEIR and visualisations/ 3D models of the Onshore Substation design to be considered for the Environmental Statement. RPS then showed figures presenting the early design and current design of the Landscape and Ecological Strategy, including restored hedgerows, GCN ponds and areas of scrub, wildflowers, and woodland planting. RPS also stated that the Landscape and Ecological Strategy will be considered in the Design Principles Document.		
Next Steps			

Item	Detail	Actions	Date
28	RPS provided a summary of the next steps following the 5th Onshore Ecology EWG. These included: • Circulation of Meeting Minutes and Agreement Log for the 5th Onshore Ecology EWG for comment; • RPS/EWG to progress actions identified during the 5th Onshore Ecology EWG; • Continuation of onshore ecology surveys prior to 6th Onshore Ecology EWG (November 2023); • Ongoing refinement of the Onshore Order Limits in response to environmental and/or design constraints.		
29	Questions – no further issues raised during the EWG		

L.7 Onshore ecology EWG meeting 6

L.7.1 Minutes

Appendix A Onshore Ecology EWG06 Meeting Minutes

Reference:	RPS_EOR0801_Mona_Onshore_Ecology_EWG06_MoM
Meeting Name:	Mona Evidence Plan Onshore Ecology Expert Working Group (EWG) – Meeting 6
Meeting date:	08 December 2023
Meeting location:	Virtual (Microsoft Teams)

Attendees

Name	Initials	Company	Role
Introduction			
[redacted]	CR	RPS	Consultant
[redacted]	BJ	RPS	Consultant
[redacted]	SM	RPS	Consultant
[redacted]	LM	RPS	Consultant
[redacted]	CD	RPS	Consultant
[redacted]	PRW	bp	Applicant
[redacted]	JF	bp	Applicant
[redacted]	KS	Conway County Borough Council (CCBC)	Statutory body
[redacted]	SW	Cyfoeth Naturiol Cymru (Natural Resources Wales, NRW)	Statutory body
[redacted]	NS	Cyfoeth Naturiol Cymru (Natural Resources Wales, NRW)	Statutory body
[redacted]	ME	Cyfoeth Naturiol Cymru (Natural Resources Wales, NRW)	Statutory body

Meeting Minutes

Item	Detail	Actions	Date
Introduction			
1	Introduction RPS provided a summary of the agenda for the sixth Onshore Ecology EWG. This included the following items: Summary of key points from 5th Onshore ecology EWG; Indicative meetings programme update, update on mona offshore wind project, onshore and intertidal ornithology, onshore ecology, landscape and ecology management plan (LEMP), next steps and questions.		
2	Summary of 5th Onshore Ecology EWG RPS provided a summary of the points covered during the 5th Onshore Ecology EWG. This included Meeting programme, Actions following 4th onshore ecology EWG; update on mona offshore wind project; onshore and intertidal ornithology, including survey progress and areas for agreement with EWG; onshore ecology, including survey progress, mitigation proposals and areas for agreement with EWG and LEMP, including key environmental and design constraints at the onshore substation. The key actions following the 5th Onshore Ecology EWG included: EWG • Review meeting minutes and agreement logs • Review survey methodologies and provide feedback RPS • Share meeting minutes and agreement log from 4th & 5th EWG • Provide updated survey methodologies addressing EWG feedback • Share Outline GCN Mitigation Strategy to be included in the ES RPS provided an overview of completed and upcoming Onshore Ecology EWGs, including the dates, stakeholders and focus of previous and future meetings.		
Project Update			
3	Update on the Mona Offshore Wind Project The client provided a summary of project updates reported during the 5th Onshore Ecology EWG, including refinements to landfall area, reduced optionality along the Onshore Cable Corridor, inclusion of temporary and permanent ecology/landscape mitigation areas and adoption of Gas Insulated Switchgear (GIS) for the Onshore Substation.		

Item	Detail	Actions	Date
	The client then presented figures illustrating the differences in the Mona Onshore Order Limits between the 5th Onshore Ecology EWG (October 2023) and 6th Onshore Ecology EWG (November 2023).		
4	Changes at 6th Onshore Ecology EWG: The client presented changes at the 6th Onshore Ecology EWG. This includes additional or refined areas for proposed hedgerow enhancement along the Onshore Cable Corridor. These were identified to account for recent survey findings and to improve ecological connectivity. Further information on this is provided during the onshore ecology section of this presentation. The client presented a figure to show the removal of the Western route for the permanent access roads to the Onshore Substation and the inclusion of an additional compound and storage area to the east of the eastern access route.		
5	Updates to the Outline LEMP: The client presented updates to the Outline LEMP, including the updated mitigation areas included in the LEMP and presented a figure to show these changes at the Onshore Substation site. Further information regarding development of the LEMP provided in the Ecology section of this presentation.		
Onshore and Intertidal Ornithology			
6	Updates from PEIR to ES: RPS presented updates from PEIR to ES, including: survey programme, intertidal waterbirds (year 2), Bird Protection Plan (BPP), issues for agreement with the onshore ecology EWG and questions. RPS provided an overview of the onshore and intertidal ornithology survey programme, including the type of survey, the area, methodology, frequency and completed surveys.		
7	Key findings of intertidal waterbird surveys: RPS presented the following key findings of intertidal waterbird surveys: • Common scoter present in nearshore waters during non-breeding season for year 1 and year 2. RPS presented a figure to show the distribution of common scoter recorded during the non-breeding season within the intertidal ornithology study area for year 1 and year 2 surveys combined. • Oystercatcher was the most abundant wader species present within the intertidal zone during non-breeding season for year 1 and year 2. RPS		

Item	Detail	Actions	Date
	presented a figure showing the distribution of oystercatcher in the core wintering period within the intertidal ornithology study area for year 1 and year 2 surveys combined. • Also, that there were larger numbers of wader species recorded within the intertidal zone during the year 1 survey period, compared to the year 2 winter survey period. • RPS presented figures showing the monthly peak maximum counts of common scoter and oystercatcher.		
8	Bird Protection Plan (BBP) RPS stated that a BBP will be prepared and submitted with the Environmental Statement. RPS presented the following BBP areas and provided a description for each: Ecological Clerk of Works (ECoW), timings of works, pre-construction surveys, continued assessment, Bird Protection Zones (BPZ), habitat management, dissuasion techniques and Schedule 1 species.	RPS to share Draft BPP for comment.	Following 6th Onshore Ecology EWG
9	Issues for Agreement with EWG: RPS identified the following key issues for agreement with the EWG: • Having reviewed the technical note shared on the 18 September 2023, is the EWG satisfied with one year's survey data for the wintering passerine and raptors? • Is the EWG satisfied with the general measures to be included in the BPP?	EWG to respond to issues for agreement via the agreements log.	Following 6th Onshore Ecology EWG
10	Questions		
Onshore Ecology			
11	Updates from PEIR to ES: RPS presented updates from PEIR to ES including: survey progress, summary of key findings, hedgerow enhancement, outline GCN mitigation strategy, digital data sharing platform, key issues for agreement with the onshore ecology EWG, next steps and questions.		
12	Notable survey findings since the 5th Onshore Ecology EWG (October 2023) • Bats • Great Crested Newts (GCN) • Hazel dormouse • Badgers • Terrestrial invertebrates • Aquatic invertebrates • Fish and eel • National Vegetation Classification (NVC)		

Item	Detail	Actions	Date
	• Invasive Non-Native Species (INNS).		
13	Bats tree roosts in Substation Area RPS explained that a total of 14 bat tree roosts have been identified within survey area. These comprise the following: • One roost for two unknown bats (didn't echolocate on emergence – not climbable) located within the Mona Onshore Development Area (indicated by the yellow circle) - trenchless proposed - Retained • One roost for three noctule bats (within an oak tree) is located within the area for the Onshore Substation (indicated by the green circle) - Loss • One roost for one soprano pipistrelle (within an oak tree) is located within the Temporary Construction Compound (indicated by the purple circle) - Retained (with disturbance impacts) • The remaining bat tree roosts identified were located outside the Mona Onshore Development Area. These locations were presented in a figure.		
14	Bat tree roost along Cable Corridor RPS stated that roosts identified within the cable corridor will not be directly impacted. RPS presented figures with the locations of the roosts along the cable corridor. There is a soprano pipistrelle located along an access track to the Temporary Construction Compound (TCC), but the design has been amended to avoid direct impacts to this roost.		
15	Bat activity RPS presented the details of the bat activity surveys. Automatic static bat monitors were deployed at 14 different locations across the survey area, this was presented in a figure. The locations were chosen by a combination of Habitat Suitability Modelling, Known important bat receptors (i.e. Llanddudlas Limestone & Gwrych Castle Wood). Data collection at each of these 14 locations commenced in April 2023 and were repeated twice a month until October 2023.		
16	Bat Activity Survey Results RPS presented the following notable results from the from automatic static bat monitors surveys between April to October 2023: • Survey location 14: highest average number of identifications per night (total of 2198.5 identifications per night – all species)		

Item	Detail	Actions	Date
	• Survey location 3: second highest average number of identifications per night (total of 1757.7 identifications per night – all species) • Survey locations 1/3: only locations where Greater Horseshoe (GHS) Bats recorded (0.1 identifications per night) • Survey location 5: highest average number of Lesser Horseshoe (LHS) bats recorded (24.8 identifications per night) • Overall, with respect to LHS bats there was a marked seasonal increase in activity in the autumn through all locations.		
17	Bats – Kinmel Hall RPS explained that fixed point count surveys were undertaken in June, August and September 2023 at six hedgerows near Kinmel Hall, which were presented on a figure, depicted as points FL1 to FL6. The following results are of note: • LHS activity recorded at FL1 in July 2023 and both FL1 and FL3 in September 2023. • Other species recorded include common pipistrelle, soprano pipistrelle, brown long-eared, Myotis sp., and big bats (e.g. noctule, serotine and Leisler's bats).		
18	Great Crested Newts (GCN) RPS explained that to date, none of the ponds located within the Mona Onshore Development Area subject to eDNA surveys have returned positive results for GCN. However, some ponds located within the wider Survey Area returned positive results for GCN. Where access limitations prevented surveys from taking place, GCN will be assumed to be present within suitable ponds located within the Mona Onshore Development Area. Further target presence / absence surveys are planned in 2024 to get a up to date populations class size assessment. However, as discussed during previous EWGs, sufficient baseline data (e.g. data associated with St Asaph Solar Farm) has been obtained to inform the assessment and mitigation requirements in the ES and we are assuming a good (high) population of national importance in our assessment. RPS presented a figure showing the location of the Mona Onshore Development Area and the survey area for GCN. Further figures presented showed sections along the Mona Onshore Development area and the results of the eDNA surveys, where there were no positive results for eDNA within the Mona Onshore Development Area however		

Item	Detail	Actions	Date
	some ponds in the wider survey area showed positive eDNA for GCN.		
19	Hazel Dormouse RPS explained that a total of 100 hazel dormouse surveys (setting up/ checking dormouse tubes) have been undertaken across 46 land parcels within the Survey Area. Surveys undertaken following the 5th Onshore Ecology EWG have identified additional dormouse nests located within the Mona Onshore Development Area, which was presented in a figure. The location of dormouse nests have been used to inform the areas for proposed hedgerow mitigation/enhancement. Due to access limitations (e.g. grazing cattle) further surveys are proposed in 2024 to fulfil requirements of EPS mitigation licenses. However, as discussed during previous EWGs, sufficient baseline data has been obtained to inform the assessment and mitigation requirements in the ES.		
20	Badgers RPS explained that a total of 52 badger surveys, including walkovers and sett monitoring have been undertaken across 66 land parcels within the Survey Area. Walkover surveys undertaken following the 5th Onshore Ecology EWG have identified additional active badger setts located within the Mona Onshore Development Area. In addition, to date, sett monitoring has confirmed the presence of active setts within the Mona Onshore Development Area. Due to access limitations (e.g. removal/disturbance of monitoring equipment) further surveys are proposed throughout the 2023 winter period and in 2024 to fulfil requirements of EPS mitigation licenses. However, as discussed during previous EWGs, sufficient baseline data has been obtained to inform the assessment and mitigation requirements in the ES. Figures were presented which showed the location of active setts, dung pits, foraging signs, hair, prints and other signs within the Mona Onshore Development Area.		
21	Terrestrial invertebrates RPS stated that 10 species of conservation concern have been identified within the Mona Onshore Development Area during terrestrial invertebrate surveys. These include: • Grayling (Endangered) butterfly • Small heath (Vulnerable) butterfly		

Item	Detail	Actions	Date
	• Robber fly, planthopper, ground beetle, seed bug and dung beetle (Nationally Rare species) • Leaf beetle and striped snail (Data Deficient) RPS presented a figure showing the locations of these species in the survey area.		
22	Aquatic invertebrates RPS explained that a total of 20 waterbodies and 16 watercourses have been subject to aquatic invertebrate surveys. These comprised waterbody sampling for diversity, including visual searches, sweep netting and kick sampling. No protected or notable species were identified within the Mona Onshore Development Area during the aquatic invertebrate surveys. All watercourses subject to surveys were identified as unsuitable for supporting white-clawed crayfish. Four waterbodies were identified as supporting a diverse assemblage of aquatic invertebrates (10 or more aquatic invertebrate families). Three were located beyond the Mona Onshore Development Area. One waterbody was located within the Permanent Access Route. All other waterbodies and watercourses were identified as supporting lower aquatic diversity. RPS presented a figure to show the location of the surveys and where waterbodies were scoped out.		
23	Terrestrial Invertebrates RPS presented a figure showing the presence of invertebrate species in the survey area surrounding the onshore substation. These included Robber fly, planthopper and leaf beetle. 10 species of conservation concern have been identified within the Mona Onshore Development Area during terrestrial invertebrate surveys. These include: • Grayling (Endangered) butterfly • Small heath (Vulnerable) butterfly • Robber fly, planthopper, ground beetle, seed bug and dung beetle (Nationally Rare species) • Leaf beetle and striped snail (Data Deficient).		
24	Fish and eel RPS explained that a total of 14 watercourses were subject to fish and eel surveys. Of these, four were considered suitable for supporting fish and eel. These four watercourses were subject to electric fishing to confirm the presence/ absence of protected or notable fish/eel species.		

Item	Detail	Actions	Date
	Four eels were recorded within two watercourses, which form tributaries of the Afon Dulas. Of these, only one individual eel was identified within a watercourse inside the Mona Onshore Development Area. This was presented in a figure.		
25	National Vegetation Classification (NVC) RPS explained that a total of 45 NVC surveys have been undertaken across 21 land parcels within the Survey Area. These surveys identified a total of 19 NVC plant communities. Of these, seven were located within the Mona Onshore Development Area. The most frequently recorded NVC plant community within the Mona Onshore Development Area comprised: • MG7a Lolium perenne leys and related grasslands, Lolium perenne-Trifolium repens leys; and • MG7b *Lolium perenn*e leys and related grasslands, *Lolium perenne* • Lolium perenne - Poa trivialis leys. • In addition, the NVC plant community CG7a *Festuca ovina-Hieracium pilosella-Thymus praecox/pulegioide*s grassland was identified within the Mona Onshore Development Area, which is classed as a Habitat of Principal Importance under Section 7 of the Environment (Wales) Act 2016.		
26	Invasive Non-native Species (INNS) RPS explained that Surveys for INNS were undertaken alongside NVC, extended Phase 1 Habitat and hedgerow surveys. INNS surveys identified a total of five species of INNS within the Mona Onshore Development Area which were presented on a figure, including: • Himalayan balsam • Montbretia • Rhododendron • Japanese knotweed. However, INNS surveys also identified Japanese rose within the wider survey area. In addition, INNS surveys identified Himalayan balsam within the area for the Onshore Substation. This was presented on a figure. Japanese knotweed shoots were identified along a trackway to the north of the temporary construction compounds.		

Item	Detail	Actions	Date
27	Mitigation: Bats – Noctule Roost in Substation Area RPS explained that one roost for three noctule bats (within an oak tree) is located within the area for the Onshore Substation, which will be lost. However, there is potential for translocation of the roost.		
28	Hedgerow Enhancement RPS stated that, As discussed during the 5th Onshore Ecology EWG, hedgerow enhancements are proposed to be included as part of the Mona Offshore Wind Project. These have subsequently been updated/refined in response to the findings of additional survey work undertaken between October and November 2023. These include hedgerow enhancements in areas where dormouse nests have been confirmed within the Mona Onshore Development Area. The Hedgerow Regs Assessment results and Habitat Condition Assessment were also presented. RPS presented figures to show the location and geographic extent of hedgerow enhancement areas 1 to 4.		
29	Outline GCN Mitigation Strategy RPS stated that An Outline Great Crested Newt (GCN) Mitigation Strategy will be submitted with the Environmental Statement and focuses on the following key areas: • Mitigating temporary and permanent loss of habitat suitable for GCN during construction of the Mona Offshore Wind Project • Enhancing the population of GCN within and surrounding the Mona Onshore Development Area • Describing how works requiring a mitigation licence would be undertaken, including precautionary methods of working • Future monitoring requirements for the existing and newly created ponds following construction of the Mona Offshore Wind Project. • A draft version of the Outline GCN Mitigation Strategy will be shared for comment following the 6th Onshore Ecology EWG.	RPS to submit draft outline GCN mitigation strategy for comment.	Following the 6th Onshore Ecology EWG
30	Permanent Impacts substation RPS presented a figure showing the location of permanent habitat loss – terrestrial and aquatic near the onshore substation.		
31	Outline GCN Mitigation Strategy – GCN habitat loss RPS reported that habitats suitable for supporting GCN would be permanently (e.g. Onshore Substation, and access road) and temporarily lost is approximately 7.48ha.		

Item	Detail	Actions	Date
	Habitats damaged through works (construction / earthworks/ mitigation creation areas) is approximately 12.9ha. A total of six ponds, where GCN have been confirmed (or assumed) present, are located within the Mona Onshore Development Area. Of these, two ponds would be permanently lost, and four ponds would be temporarily lost (located within area for Temporary works).		
32	Outline GCN Mitigation Strategy – GCN Capture and exclusion RPS explained that capture and exclusion of GCN is proposed across all areas impacted by works and not restricted to onshore substation, access road TCC. We have also included areas where woodland planting and biodiversity benefits are extensive due to likely presence of plant and machinery and risk / killing injury. • Areas requiring capture and exclusion of GCN would be fenced off and trapped for a 60-day period using the permeant exclusion fencing, drift fencing / and pitfall trapping /' carpet tile methods • Following construction of the Mona Offshore Wind Project, newt fencing would be removed from the works site and GCN left to re-colonise the newly created habitats if their own volition (no double handling) • A total of permanent exclusion fencing is 7239 metres • Drift fencing areas and locations to be confirmed following site visit in Jan 2024. • Capture and exclusion of GCN is proposed across all areas impacted by works and not restricted to onshore substation, access road TCC. We have also included areas where woodland planting and biodiversity benefits are extensive due to likely presence of plant and machinery and risk / killing injury. • Areas requiring capture and exclusion of GCN would be fenced off and trapped for a 60-day period using the permeant exclusion fencing, drift fencing / and pitfall trapping /' carpet tile methods • Following construction of the Mona Offshore Wind Project, newt fencing would be removed from the works site and GCN left to re-colonise the newly created habitats if their own volition (no double handling). • A total of permanent exclusion fencing is 7239 metres • Drift fencing areas and locations to be confirmed following site visit in Jan 2024.		

Item	Detail	Actions	Date
	Figures were presented to show the locations of the mona onshore development area and the areas of habitat damaged, the GCN receptor site and the GCN fencing.		
33	Outline GCN Mitigation Strategy – habitat creation and enhancement RPS explained that terrestrial and aquatic habitat suitable for GCN would be created in the areas for the TCCs and mitigation site. This includes: • 25 ponds (increase in ponds from 0.02ha of the six ponds to 0.89ha of the 25 ponds). • c.3.92 ha Wildflower meadow • c.0.58ha scrub habitats • c. 3.4ha of grassland (tussocky managed for GCN) • Hedgerow enhancements of 10, 715 metres in sub-station • Hibernacula is LP22 and LP 31 (dedicated GCN parcels) Habitat enhancement This includes 5.8 ha of woodland planting in proximity to onshore sub-station and Biodiversity Benefit (identified opportunity) – 1621 of hedgerows re-instated. A figure was presented to show the onshore development area, excavation footprint, onshore substation, GCN habitat enhancement woodland planting, GCN fencing and GCN potential enhancement biodiversity benefit. Habitat creation and enhancement • Creation of optional permanent habitats is 11.13 ha • Loss of 7.48 GCN habitat is not optimal (less than 30%) • Temporary loss of 12.89ha is not optimal (less than 20%) • Creation of 25 ponds and reinstatement/enhancement of existing ponds (if possible), increasing available aquatic habitat by 0.98 ha when compared to baseline • Ponds are key to success as they will act the stepping stones to expand GCN metapopulation range into the suitable terrestrial habitat. A figure was presented which illustrates the locations of the above.		
34	Outline GCN Mitigation Strategy – future GCN monitoring requirements RPS presented the future GCN monitoring requirements for the Mona Offshore Wind Project: • Following construction of the Mona Offshore Wind Project, existing and newly created ponds would be subject to future monitoring surveys		

Item	Detail	Actions	Date
	• Monitoring surveys (i.e. presence/absence) of the existing and created ponds would be undertaken once per year during the first 5 years of operation of the Mona Offshore Wind Project • After this 5-year period had elapsed, monitoring surveys would then be undertaken during year 7 and year 10 of operation of the Mona Offshore Wind Project. A larger figure illustrating the GCN mitigation strategy was presented.		
35	Digital Data Sharing Platform: RPS has created a digital data sharing platform, which presents the location and results for surveys undertaken to date. Moving forwards, this digital data sharing platform will be updated and shared at each Onshore Ecology EWG. This digital data sharing platform operates using the online ArcGIS web map, which allows users to select/de-select features of interest and view these in relation to the Mona Offshore Wind Project.		
36	Issues for Agreement with EWG: Is the EWG satisfied with the general measures to be included in the Outline GCN Mitigation Strategy for the Mona Offshore Wind Project ?	EWG to respond to issues for agreement via the agreements log.	January 2023
37	Questions?		
Outline Landscape and Ecology Management Plan (LEMP)			
38	Ecology RPS stated that an Outline LEMP will be submitted with the Environmental Statement and will focus on the following key areas with respect to ecology during operation of the Mona Offshore Wind Project: a) Retention and/or enhancement of high value habitats within the Mona Onshore Development Area, including woodland, hedgerows, ditches and watercourses with appropriate buffers. b) Additional planting at the Onshore Substation comprising a variety of habitats, including woodland, ponds, wildflowers, scrub and a swale. c) Ongoing management of retained and newly created habitats at the Onshore Substation to ensure overall net benefit for biodiversity. The Outline Code of Construction Practice (CoCP) will set out mitigation measures required during construction of the Mona Offshore Wind Project.		

Item	Detail	Actions	Date
39	Landscape RPS stated that an Outline LEMP will be submitted with the Environmental Statement and will focus on the following key areas with respect to landscape during operation of the Mona Offshore Wind Project: a) Retention and/or enhancement of key boundary features at the Onshore Substation, including areas of woodland and hedgerows to provide visual screening and integrate the development into the surrounding landscape b) Additional planting at the Onshore Substation, including areas of woodland to screen views of the development and mitigate impacts on the character of the surrounding landscape c) Restoring and infilling existing hedgerows at the Onshore Substation where required, to reconnect features of the landscape and provide further visual screening The Outline Code of Construction Practice (CoCP) will set out mitigation measures required during construction of the Mona Offshore Wind Project.		
40	LEMP RPS presented a comparison of two figures, one showing the baseline environment and the second showing the land with the outline LEMP, including the location of the onshore substation and mitigation strategies.		
Next Steps			
41	Next Steps RPS presented the next steps, which included: • Circulation of Meeting Minutes and Agreement Log for the 6th Onshore Ecology EWG for comment • RPS/EWG to progress actions identified during the 6th Onshore Ecology EWG • Submission of DCO application, including ES and supporting documentation by Q1 2024.	RPS to circulate meeting minutes and agreement log for the 6th Onshore Ecology EWG RPS to progress actions identified during the 6th Onshore Ecology EWG	January 2023

Appendix M: Socio-economics

M.1 Socio-economics overview

Table M.1: Overview of socio-economics consultation.

Date	Meeting	Information provided
23 January 2023	Socio-economics meeting 1	Meeting minutes (M.2.1)
25 January 2023	Socio-economics meeting 2	Meeting minutes (M.3.1)
25 January 2023	Socio-economics meeting 3	Meeting minutes (M.4.1)
05 December 2023	Socio-economics meeting 4	Meeting minutes (M.5.1)

M.2 Socio-economics meeting 1

M.2.1 Minutes

MINUTES OF MEETING

Security Classification: Project Internal

Partners in UK offshore wind

MOM Number : **REV. No.** : 01

MOM Subject : bp/EnBW Morgan Generation Assets / Mona Offshore Wind Farm Project– Economy Stakeholder Consultation Workshop

MINUTES OF MEETING

MEETING DATE : January 23rd 2023

MEETING LOCATION : Online Meeting

RECORDED BY : Hardisty Jones Associates

ISSUED BY :

PERSONS PRESENT:

Project Representatives

- EnBW/bp
- RPS (EIA Consultants)
- Hardisty Jones Associates (HJA) (Economic Development Consultants)

Stakeholders

- Cumbria Local Enterprise Partnership (LEP)
- Liverpool City Region Combined Authority (LCRCA)
- ORE Catapult
- Renewable UK Cymru
- Welsh Government (Relevant Representative)
- Cumbria County Council
- ABP Port of Barrow

ITEM NO:	DISCUSSION ITEM:	Action required	Date
1.	**Project Information** The Projects spoke to slides 4-6, providing an overview of consenting strategy's and indicative timelines associated with the respective Morgan Generation Assets / Mona Offshore Wind Farm Project.	N/A	N/A
2.	**Workshop Purpose** HJA explained that the purpose of the workshop was to gather as much information as possible from stakeholders to inform the socio-economics assessments as part of the Preliminary Environmental Information Reports (PEIRs) for the Morgan Generation Assets / Mona Offshore Wind Farm Project.	N/A	N/A

3.	**Assessment Approach – Study Areas** HJA set out the assessment approach and the study areas being used: the UK level, Wales Level, Regional Level (slides 7-9). They highlighted that current approach and project information was based on the best-available information at this point in the project lifespan – i.e. pre-consenting and therefore pre-procurement and pre-contracting. For the purposes of this assessment the Projects have used potential port sites of Holyhead, Mostyn, Birkenhead, Heysham and Barrow. Noting that the final selection of port facilities will be subject to ongoing engineering and procurement considerations, and the use of potential facilities for the purposes of this assessment does not indicate any preference or imply any decision. The labour catchments (i.e., impact areas coverage) associated with each potential port facility have been defined using a 60-minute drive time catchment as a proxy. If activity for the Projects is to be located at any of the port sites in North-west England it is estimated they will have a reasonably similar impact in terms of labour catchments. This assumption, in terms of the labour catchment impacts after the location of the Projects activity is determined, can also be applied to the North Wales port sites.	Considered during PEIR	By PEIR

4.	**Discussion Points – Approach** • *Have all viable ports in North Wales/North West England been considered for construction and/or operation activities?* *Stakeholder Comments* Stakeholders were in general agreement that the potential port sites chosen were suitable, with the reasoning that the locations are previous ports used by existing developers in the area. An error was noted in a figure used in the ppt (Birkenhead mislabelled as port of Liverpool). It was noted that there is an updated version of the map. It was suggested that in terms of the approach being used to port groupings (e.g. North Wales and North West England), as Birkenhead is closer to Mostyn it might be more suitable to group it as North Wales, rather than North West England. • *To what extent would any or all of these ports require further investment and infrastructure development to deliver primary construction support across multiple components i.e. fabrication and/or staging of major components such as WTGs, foundations, cables* *HJA additional questions:* • *Would you anticipate that operationally and delivery-efficiency wise that a developer would tend to use the same base, or would it be advantageous to split activity at different ports? How does that play into decisions around investment in ports, infrastructure development and that whole space?* *Stakeholder Comments* It was discussed that Barrow port had experience, being previously involved in the construction side of a number of wind farms in the East Irish Sea. It was noted in particular, that Barrow port was involved in the first two Walney Wind Farms, handling monopiles and transition pieces within that project. Barrow port benefitted by gaining a long-term O&M base for the Walney Wind Farms and other wind farms, but a point was made that turbines are now constituted of much larger components compared to past designs. A constraint for number of the ports, e.g. Barrow, is being able to handle the current size of jack-up vessels. That particularly has led to Belfast becoming the major port location for export of the large components, and once that happened, input in construction from Barrow became more associated around inter array cables and the smaller components. With investment in port infrastructure several ports could potentially handle those larger jack-up vessels during construction.	Considered during PEIR	By PEIR

	Partly because components are now bigger, means there are potentially fewer of them. The large output from wind farms now means the number of turbines is reduced (compared to 33 megawatt turbines on Barrow which requires more space against a smaller number of larger turbines). Despite constraints in access and infrastructure for larger jack-ups, stakeholders raised that Barrow would not need to be ruled out as a construction port. Barrow has 5 O&M bases that operate from within the port. Depending on the operating model being used – which stakeholders assumed would be larger SOVs (Service Operation Vessels) than CTVs (Crew Transfer Vessels) - with investment Barrow port could provide a good facility to provide O&M, which is also backed up with current facilities. Stakeholders raised the question of if there was benefit with working with other developments in the regions as opposed to competing for resources within the same time frame. Bp/EnBW responded explaining that in terms of constructability, the Projects will look at the port facilities and what they can currently provide; the Projects will look for the biggest/most efficient turbines available and scale foundations accordingly. The Projects will pose some challenges on the cooperation with other developers given that land take will be significant. It is noted that there are synergies with the Projects and the activities of other developers and that there is opportunity for scaling up in the supply chain, but there are also challenges of capacity. • *What planned investment is in place for the ports in question?* • *What capacity is in place at the ports in question, taking due consideration of current activity?* **Recognise that only one representative from list of ports*. *Stakeholder Comments* There is a number of different manufacturers and companies that are looking to build British content in the North West area, and a lot of people going forward. It was highlighted that there is so much work potentially coming in that it would have to be shared amongst the different ports in the different regions. It was raised that there would be a need for investment in infrastructure in the ports chosen – in the past they were used as marshalling yards for different wind projects but haven't been maintained since. Stakeholders noted that the Morlais tidal demonstration zone is doing some work out of Holyhead, so in terms of competing for space and construction that might be something to consider. ABP have produced a masterplan for the Barrow port, that illustrates what might be achievable not just in offshore wind but in a number of other development areas.		

	One of the things that has come to pass is that no one port is large enough to accommodate all the requirements as a construction base – developers may need to look at multiple ports. In terms of investment, on paper there is the potential for new facilities for offshore berths that wouldn't have restrictions for large jack up vessels, but they would need financial commitment to a port for anything to happen. In the time frame that the project is looking at it, it would be very challenging, this questions whether time frame is achievable in terms of additional significant port infrastructure. • *Is it reasonable to identify a North Wales study area and a North West England study area for assessment? Does this reflect he reality of how offshore wind sector would typically operate in these areas? If not, please explain.* *Stakeholder Comments* In terms of O&M, if the decision is made to go down the route of SOVs then typically those are offshore for 2 weeks at a time. Stakeholders envisage in that scenario the personnel could come from anywhere. Notes personnel could go back to port at end of 2 weeks and go home which could be local or anywhere. A question was raised by stakeholders on whether population density was considered when looking at the map. The question was raised whether it had been taken into account that the map goes from densely populated to sparsely to densely. HJA responded to the question raised informing that baseline conditions are looked at in those impact areas to understand the potential dynamics of immediate and wider labour catchments. Across the North Wales zone there is some difference at the western edge to Holyhead to the eastern edge with Mostyn and Birkenhead; the strong connections into major transport routes and highly dense areas of population will all be taken into consideration. It was noted that there is a complicating factor of how the port areas are grouped as there is a national border in between which means different policies are in place. Looking at catchments around ports individually was considered but was judged to create a too complex piece of analysis.		

5.	**Discussion Points – Supply Chain** • *How would you describe supply chain capacity within the Offshore Energy Alliance (OEA) cluster for the following components, both fabrication and installation:* • *WTGs: blades, nacelle, tower* • *Foundations* • *Cables – export/inter array cabling* • *Offshore substations?* • *Onshore substations?* • *O&M* *Stakeholder Comments* Knowledge of the developer is useful, and stakeholders noted that the North Wales region would want to to take on work in respect to all aspects of the Projects. It was raised that there is a piece work hoping to start in the North Wales region with both developers to understand the reality of what is realistically possible in the region. Components are much larger depending on the choice of provider for turbines, the potential for manufacturing for blades, nacelles etc. Such work is done elsewhere and it is unlikely to develop those in these regions and the same can be said with cables. Sub-stations are an area where there may be potential to do that kind of construction within a port location and have that transported out. However there is the challenge of competing against other locations in Europe which dominate this industry. • *Is supply chain capacity for any of these components high in any location within the OEA cluster?* *Stakeholder Comments* Orsted has an O&M facility base outside of Birkenhead due to it being close enough to international airport that has direct flights to their head office. It was raised that the assessment should avoid making assumptions about port capability based on past project delivery. HJA responded that the process is about trying to present an assessment of potential impacts of the scheme, and it might be for consenting authorities to make an informed decision about that. The more contextualised then the more useful it will be to make an informed decision. Ability build monopile is difficult in the region, but something smaller like transition pieces where majority components are brought in that would be easier. Stakeholders raised the point that there is a need to ensure conversations are held with different places that will ensure they have the right welders that are quoted to do different jobs.	N/A	N/A

	However, it is hard to diversify away from business as usual if there is no funding in place. The Projects flagged there is ongoing conversations on with potential suppliers to try and see what constraints, opportunities and potential interventions can be put in place to ensure an easier path during construction phase. **(Other discussion bullet points in following slides have been mainly covered from past discussion)*		

6.	**Discussion Points – Labour and Skills** • *How would you describe labour and skills capacity within the Offshore Energy Alliance cluster, both fabrication and installation, and operation and maintenance?* *Stakeholder Comments* It was noted that there is already a significant offshore wind supply base in the Barrow area in which stakeholders agree they would always look to increase. They note there are other opportunities and projects; : BAE Systems submarine is expanding into areas e.g. carbon capture, so there are other opportunities, but offshore wind is considered one of the key areas. Similar in Birkenhead, there is a significant pool of labour with relevant skills, welders, fabricators, and electricians. Barrow labour is on the up and are recruiting heavily at the moment. Offshore wind Orsted has been able to offer competitive salary and we have good skills and training facilities. BAE are taking on many apprentices who can potentially also move into other industries. Skills development with University of Cumbria is expanding in Barrow and Furness college, which provides a good base to build on whether from existing offshore companies or what BAE are doing. There is potential for apprenticeship programmes to be built into the future. Noted that there is activity by the North Wales Regional Skills Partnership that is being worked on that there is a need to be aware of. It was raised that there needs to be an understanding of when it is worth people looking into reskilling their pools of labour and how long the work will provide them for. It was also noted that an understanding of the link for skill for offshore wind and the skill for nuclear should be identified. The point was made that if all these projects came forward in this arc, there is going to be a lot of demand for forms of technology. There is a need to understand how reactive the labour force can be with that demand increasing dramatically over certain years and then disappearing, and how sustainable we can make those skills over the long term. Stakeholders shared a concensus with this point. There is a large supply chain in the Birkenhead region: marine based electricians, welders, sub-contractor units nearby and there is an engineering college to build up labour for apprentices for Cammell Laird. There is also an O&M base for Orsted in Birkenhead. Suggested that thought needs to be put in about the infrastructure that needs to be in place. There should be a look at the availability of mobile cranes as size of components, if they can't be fabricated in the region, are enormous and to be able to have facilities in the North West that has the craneage that doesn't need to be brought	Considered during PEIR	By PEIR

	in a mobile form may be needed to be considered. Suggested that dredging capabilities should also be considered. *HJA raised a question on the relevance of the oil and gas offshore industries that are declining and if that labour workforce would possibly need to be reskilled.* It was suggested skills in region are easier to transfer. Projects coming forward in the regions have been quite significant with relation to nuclear so there is the capacity of engineers and their ability to adapt that could be worked on and taken advantage of. The point was made that having a welder who's trained to do ship building is different to one trained to nuclear build. There is a need for skills, but also extra functions behind them, so that traceability and quality assurance need to be brought in and that would need to be brought in for offshore wind as there would be different coding capabilities from ship building to offshore wind to nuclear. *HJA raised a question on the discussion of the time frame of taking someone from one particular related specialism and transitioning them to another specialism (i.e., offshore wind).* It was suggested that it could potentially take up to a year to transition skills – need to change culture, mindset, implement new processes for traceability aspects, lifetime records, and make sure this is all embedded in the culture before progressing further. This element is being looked at, through working with the further educational colleges in North Wales. CIST are looking to work with developers/businesses on how to retrain or upskill labour. Structure is there to allow things to happen in North Wales. Important thing is that the structure is there now it can happen quickly but if the structure isn't there it will take more than a year to make sure that they are in place to support the industry going forward. The other element that is upcoming is housing – private companies popping up where their accreditation might not be what's required for the industry, so the industry needs to be clear on the type of accreditation and insurance they'd acquire to allow people to make the right choice when they are looking to up/reskill.		

7.	**Discussion Points – Final Thoughts** • *Are there any important lessons that have been learned from previous similar projects e.g., unanticipated impacts, potential mitigations, or enhancement measures?* *Stakeholder Comments* It is worth looking at the short-term/immediate effects as well as long-term. E.g., workers who come to the region for work and who then leave once it's over. Suggested to look at the impact of the short-term jobs (which means they aren't long-term/sustainable) on services in both regions, what does it mean for housing, GPS, dentists etc. About making sure that doesn't have costs to the community *HJA asked if there were any lessons from previous projects (e.g., SOVs – workers could not necessarily be in the region for 2 weeks when returning to land). Discussing the extent of large infrastructure schemes and extent they've been an issue. Examples of that we can reflect on about community.* Experience in construction phases of previous windfarms uses lots of contracted labour that's brought in from elsewhere which has its own benefit – housing, spending money on the economy – real benefit is from O&M as technicians tend to live and work in the Barrow travel to work area. Contrast to BAE Systems where there is large tidal workforce of contractors who come to Barrow and stay a week and then return home on the weekends – financial benefit to Barrow is reduced as a result. Suggestion for the project to ensure they consider the associated needs for transport (and associated government policies) and what it means to a community to be hosting these types of projects.	Considered during PEIR	By PEIR
8.	**Summary and Next Steps** HJA set closed the workshop by thanking stakeholders for their valuable contributions and time; recapping on how the information will be used to inform the socio-economics PEIR chapter for the Projects.	N/A	N/A

AGREEMENT LOG					
Meeting Date	**Issue on which agreement is sought**	**Consultee**	**Progress of agreement**	**Agreement**	**Notes**

M.3 Socio-economics meeting 2

M.3.1 Minutes

MINUTES OF MEETING

Security Classification: Project Internal

Partners in UK offshore wind

MOM Number : **REV. No.** : 01

MOM Subject : bp/EnBW Mona Offshore Wind Projects T– Socio-economics Stakeholder Consultation Workshop

MINUTES OF MEETING

MEETING DATE : January 25th 2023

MEETING LOCATION : Online Meeting

RECORDED BY : Hardisty Jones Associates

ISSUED BY :

PERSONS PRESENT:

Project Representatives

- EnBW/bp
- RPS (EIA Consultants)
- Hardisty Jones Associates (HJA) (Economic Development Consultants)

Stakeholders

- Denbigshire Council

ITEM NO:	DISCUSSION ITEM:	Action Required	Date
1.	**Purpose** HJA explained that the purpose of the workshop was to gather as much information as possible from stakeholders to inform the socio-economics assessments as part of the Preliminary Environmental Information Reports (PEIRs) for the Mona Offshore Wind Project. Stakeholders suggested they be sent an update at the end of each step within the DCO process to follow the projects.	EnBW/bp to supply progress updates and overview of DCO process	N/A
2.	**Project Information** The project team spoke to slides 5-6, providing an overview of consenting strategy's and indicative timelines associated with the respective Mona Offshore Wind Project.	N/A	N/A

3.	**Project Scope** The project team spoke to slide 7 providing an overview of the technicalities of constructing offshore wind farms. Stakeholders noted that Landfall in Llanddulas would not interfere with wider projects in the region, such as new sea defences in Rhyl. EnBW/bp explained, for the purposes of PEIR, that 2 sub-station options around the existing national grid sub-station have been chosen. Also noted that there is awareness of the Awel Y Môr wind farm project.	**N/A**	N/A
4.	**Potential Impact Area** HJA explained the labour catchments associated with the 2 potential onshore sub-stations (in Denbighshire) have been defined using a 60-minute drive time catchment which is a proxy indicator of where labour for the project workforce might travel from. *Stakeholder Comments* Stakeholders raised the point that Denbigshire are willing to engage in discussion to gain some legacy from the skills and work that will be used in the project. Noted Rhyl college is in phases of building a new large engineering department which will lend to apprenticeships. HJA and EnBW/bp both pointed out no specific decisions are being made around where labour will be drawn as of yet. Suggested it is important to look at local supply chain so goods and services are looked at to be obtained locally and businesses get the opportunity early on to know what is coming forward and what skills and opportunities may be available.	Considered during PEIR	By PEIR

5.	**Discussion Points – Labour and Skills** • *Is labour and skills capacity in infrastructure high or low in your area?* • *Are there any existing or potential plans in your area to develop labour market capacity in support of the infrastructure construction sector?* • *What significance, could the Mona project have in your area's labour market dynamics e.g., employment opportunities for local workers?* *Stakeholder Comments* Capacity of Denbighshire is low growing towards medium. Noted the centre of excellence in Rhyl is expected to have a good impact as it will draw learners and trainees in. Sea defences delivered concurrently so lots of skills transferrable from there. Strong first tier sub-contractors – for moving stuff around. Nationally significant deliverers based in Denbighshire that are strong, suggested the overall outlook is average, and the forecast is that labour capacity will get better. Stakeholders pointed out the North Wales construction partnership have significant projects in that scheme which demonstrate local skills and sourcing them which could potentially be looked at. For construction there is an excellent baseline of good practice for maximising local benefits and social value out of those projects as they are delivered. *HJA raised a question on the opinions of the Mona Project fitting in the pipeline of previous projects and whether the Project is seen as an opportunity.* Stakeholder in agreement that all major infrastructure gives opportunity to the local environment. Previously seen with East Rhyl sea defence scheme which brought a lot of local work into the scheme. Highlighted two major schemes: central Prestatyn and Central Rhyl Sea defences which are using local workforces. Next three years there will ample opportunity for local workforce. *HJA enquired about capturing local employment content on projects within Denbighshire.* Point raised that job opportunities and training will depend on construction, and whether construction will be leaving off Denbighshire coast or from the English coast. Suggested moving forward with the project that engagement would be beneficial. Working Denbighshire works with young people and people wanting to retrain to enter the workforce. 1st and 2nd Tier Across north Wales coast do have experience in working in big infrastructure projects. Major opportunities seen in 2nd,3rd,4th tier (which will probably be post-consent). (Stakeholder was happy to share information capturing Denbighshire spend and local content.)	Considered during PEIR	By PEIR

	The North Wales construction partnership helps demonstrates what firms can provide the skills needed. Can identify skills gaps to increase training in those areas. Framework shows large-scale projects can generate jobs in the area, and do not just source labour from outside the county. Noted that upskilling businesses in the area is achievable and sustainable in the long run. Now a different market and political dynamic to when Gwynt Y Môr was built. More pro renewable energy community now with businesses looking to train people in this industry. Currently difficulty in not having people available now: there is difficulty to get staff in and retain them. Stakeholder believes by the time the project comes into position there will be skilled labour, especially following Awel y Môr. Stakeholder suggests that businesses are targeted so they can feedback on capacity and whether they can deliver this scheme locally. Important for all regions in north Wales that something is given back to community. Particular importance as there is a need to balance cumulative effects on tourism and recreation along the coast. There are lots of sea defence, offshore wind, solar farm schemes which may create lots of construction disruption, so engagement with local community is needed. Denbighshire Council have a goal to regenerate and rejuvenate tourism. Suggests looking at impact on tourism at construction phase. Local community are keen to help supply labour but needs to be a balance in benefits. Denbighshire Council worked closely on Balfour Beatty sea defence project. Report showed the first scheme was delivered under budget and ahead of schedule, able to source labour, 99% local sub-contractor spend was within 40miles, 86% supply chain was local SME's and 85% of employment was local. Shows capacity was there to deliver sea defences and imagines there is some crossover with some of the skills, goods & services with the project. *HJA asked if the details of this project could be sent over.*		

6.	**Discussion Points – Workforce Dynamics** • *Is there a history/heritage of a mobile/temporary/itinerant workforce in your area?* • *Examples? What were the main social/community impacts of these projects?* • *What is the capacity of the local housing market to accommodate temporary or permanent workforce?* *Stakeholder Comments* Main consideration from community perspective of these schemes is that they do not make any decisions. Decisions made by huge developers/government and there is a disconnect, so important that developers work with communities to voice concerns and ensuring that the delivery of the project aligns with how things work locally. There is momentum around climate agenda, people understand importance of these developments but probably some have anxieties around construction phase. Notes there is an ongoing challenge of the perception that community don't have control, so it is important to create opportunities for participation within the process. Stakeholder notes that currently there isn't housing supply. Local development plan that will be in place later on is not looking to allocate a significant number of new houses. Would struggle to accommodate extra workforce but of course can look at other areas/counties.	Considered during PEIR	By PEIR
7.	**Discussion Points – Final Thoughts** • *Are there any important lessons that have been learned from previous similar projects e.g. unanticipated impacts, potential mitigations or enhancement measures?* *Stakeholder Comments* It was raised that one resident by a previous site said it would impact the value of their property. Suggested that discussions with local Council will be necessary to keep them well-informed. In relation to the point above, also noted that there will probably be no major problem on the issue as this offshore wind farm is further away and behind Gwynt Y Mor. Majority of work will be going through ports and different harbours. Consider amount of traffic with cabling, though it was noted previous wind farm projects saw little disruption. Building other substations have not really caused disruption. Point raised that constant communication on the progress of the project will be beneficial.	Considered during PEIR	By PEIR

8.	**Summary and Next Steps** HJA set closed the workshop by thanking stakeholders for their valuable contributions and time; recapping on how the information will be used to inform the socio-economics PEIR chapter for the project.	N/A	N/A

AGREEMENT LOG					
Meeting Date	**Issue on which agreement is sought**	**Consultee**	**Progress of agreement**	**Agreement**	**Notes**

M.4 Socio-economics meeting 3

M.4.1 Minutes

MINUTES OF MEETING

Security Classification: Project Internal

Partners in UK offshore wind

MOM Number : **REV. No.** : 01

MOM Subject : bp/EnBW Morgan Generation Assets / Mona Offshore Wind Project – Tourism Stakeholder Consultation Workshop

MINUTES OF MEETING

MEETING DATE : January 25th 2023

MEETING LOCATION : Online Meeting

RECORDED BY : Hardisty Jones Associates

ISSUED BY :

PERSONS PRESENT:

Project Representatives

- EnBW/bp
- RPS (EIA Consultants)
- Hardisty Jones Associates (HJA) (Economic Development Consultants)

Stakeholders

- Visit Wales

ITEM NO:	DISCUSSION ITEM:	Action Required	Date
1.	**Project Information** The project team spoke to slides 5-6, providing an overview of consenting strategy's and indicative timelines associated with the respective Morgan Generation Assets and Mona Offshore Wind Project.	N/A	N/A
2.	**Project scope** *Stakeholder Comments* Suggested that visualisation in terms of tourism, stakeholders, businesses and visitors is where there will be the biggest kick-back. For example, when Gwynt Y Môr started at least 15 years ago the the biggest issue was the visualisation of the turbines from the Llandudno promenade and hotels. Note there seems to be less issue with this now potentially due to greater acceptance of renewables and seeing the turbines.	Considered during PEIR	By PEIR

3.	**Assessment Approach – Study areas/Visual Impacts/Workforce (slides 8-14)** *Stakeholder Comments* Stakeholder raised the issue of taking bed stock from the tourism sector. Noted if there is accommodation and it is selling then there is guaranteed income, however this could have an effect on attractions and taking away the bed stock for visitors. Also need to consider the impacts on accommodation once the Projects are finished – there may be additional costs for refurbishment to bring back standards that fit the visitor economy. Stakeholder agreed that identifying the North Wales Local Authorities as the study area for potential tourism impacts of Mona was suitable.	Considered during PEIR	By PEIR
4.	**Discussion Point – Visual** *No Stakeholder Comments*	N/A	N/A
5.	**Discussion Point – Accommodation** *Stakeholder Comments* Regarding Wylfa and Gwynt Y Môr, stakeholder could provide no information on accommodation impacts. Raised the point that since covid-19 the industry has changed and looks like more people will stay within the UK, creating a bigger demand for bed stock in the UK visitor sector.	N/A	N/A
6.	**Discussion Point – Recreation** **No Stakeholder Comments**	N/A	N/A
7.	**Discussion Point - Final Thoughts** *Stakeholder Comments* Stakeholder is able to provide contacts for head of tourism in each local authority and tourism associations for further discussion. Notes displacement of bed stock for worker accommodation played a large part in the consultation process for Wylfa so should be considered.	Considered during PEIR	By PEIR
8.	**Summary and Next Steps** HJA set closed the workshop by thanking stakeholders for their valuable contributions and time; recapping on how the information will be used to inform the socio-economics PEIR chapter for the Projects.	N/A	N/A

AGREEMENT LOG					
Meeting Date	**Issue on which agreement is sought**	**Consultee**	**Progress of agreement**	**Agreement**	**Notes**

M.5 Socio-economics meeting 4

M.5.1 Minutes

MOM Number	EOR0801	**REV. No.** :	01
MOM Subject	Socio-economics data discussion		

MINUTES OF MEETING

MEETING DATE	5th December 2023, 14:00
MEETING LOCATION	Teams meeting.
RECORDED BY	[redacted] RPS
ISSUED BY	[redacted]

PERSONS PRESENT:

- [redacted] (CK) - Ports Business Manager at Harbours Division, IoM Gvnt Department of Infrastructure
- [redacted] (DM) – IoM Gvnt Department of Enterprise
- [redacted] (JP) - Head of Chamber of Commerce at IoM Government
- [redacted] (RHu) - Marine Manager Isle of Man Steam Packet Company (IoMSPC)
- [redacted] (GV) – Mona Offshore Consents Lead, bp
- [redacted] (RHo) – Morgan Offshore Wind Project (Generation Assets) Offshore Human Lead, bp
- [redacted] – Director, Hardisty Jones Associates (HJA)
- [redacted] – Socio-economics assessment lead, Hardisty Jones Associates (HJA)
- [redacted] (MK) – Morgan EIA coordinator, RPS Energy

ITEM NO:	DISCUSSION ITEM:	Actions	Date
1	**Project status RHo:** provided an overview of the Mona and Morgan projects' progress to date, the current status of the projects and expected application dates.		
2	**Overview of data request SH:** Hardisty Jones Associates (HJA) is undertaking the Socio-economics impact assessment work for the Environmental impact Assessment (EIA) on both the Mona and Morgan Generation Assets Offshore Wind Projects. This call is to understand data that may be available to inform their assessment. It is primarily to better understand the socio-economic elements of the Isle of Man ferry services following the work that has been undertaken on shipping and navigation for the EIA: • Who or what is being transported on the ferry services? • Data: passengers by route I. Capacity II. Number of service users. III. Type (and number) of service users. Resident? Visitor (day/overnight)? Business? • Data: freight by route I. Capacity II. Total tonnage. III. Type (and tonnage) of freight. • Data: service profile by route I. No. of cancellations/delays. II. No. of cancellations/delays due to adverse weather.		

	III. Seasonal/monthly instances of cancelled/delayed services due to adverse weather. IV. Capacity utilization – freight/passengers • How users adapt to any delays/cancellations in the services		
3	**Data available:** **RHu:** IoMSPC has quite a large amount of data which has been requested via Emma Rowan at IoM Gvnt. This can be made available subject to commercial implications/confidentiality of the data. Data includes the following: - Freight by route - Service profile by route including cancellations/delayed services/capacity utilisation	**RHu: to provide list of data that can be made available and please note/highlight any commercial sensitivities that shouldn't be made public**	**15/12/23**
	SH: confirmed that a 3-5 year profile of data would be most helpful for the assessment as this would account for inter-annual variation.		
5	**DM:** provided an overview of lifeline services the ferries provide: Food: all food import comes via ferries very little comes via other means. There is limited storage on the island so the majority of supermarkets operate a just in time economy of goods coming straight from the ferries and onto the shelves. Tesco has entered into buy out discussions of a local supermarket chain which does have storage on island so this is currently in flux and may change in future. Unscheduled stoppages are the most difficult as it's not easy to plan and has impacts on perishable goods. Medical: medical supplies including medical oxygen and vaccines. Special restricted service which supplies oxygen when stocks are low on the island. These are usually scheduled services but are limited. If these are cancelled due to adverse weather then additional services may need to be put on. Construction: supplies for infrastructure projects. Some data may be available but much of it is likely to be commercially confidential.	**DM/RHu: to look into availability of data**	**15/12/23**
6	**RHu:** In 2022 there were approximately 40 cancelled sailings (90% of these would have been weather related). Technical problems usually result in delays rather than cancellations. IoMSPC will have more capability with their new ship to hold for weather windows rather than cancel services.	**RHu: will look at providing cancellation profile data from the IoMSPC database.**	**15/12/23**
7	**DM**: raised tidal restrictions at ports and the impact this can have on delays if a tidal window is missed.		
8	**RHu:** advised that it usually takes 2 to 3 days to clear a transport backlog following periods of adverse weather when services have	**RHu: will speak to freight operator and**	**15/12/23**

	been cancelled. IoMSPC has a vessel which can be brought in to support services to clear the backlog subject to availability. A query was raised about how freight is prioritised following periods of delay.	**shore operations side at IoMSPC to see if information can be gathered on this**	
9	**JP:** there is no specific data on how businesses currently deal with delays		
12	**CK:** raised a comment on managing the public's expectations. Considerable negative feedback when there are sailings delayed/cancelled on the island and potential reputational impact on IoMSPC if there was an increase in delays and cancellations		
11	**Next steps:** **RHu: Data requests would be looked into and relevant data passed onto HJA including details of any commercial confidentiality.** **RHo: to share contact details between HJA and IoMSPC to facilitate data exchange.** **RPS would consider commercial confidentiality of the data and limits of what can be used to inform the EIA.**		**15/12/23**