MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Technical Engagement Plan Appendices Part 3 of 3

September 2024
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Prepared by:

RPS

Prepared for:

Morgan Offshore Wind Project Limited, Morecambe Offshore Windfarm Ltd

Contents

Appendix K: Hydrology and flood risk

K.1 Hydrology and flood risk meeting 1

K.1.1 Meeting Minutes

MINUTES OF MEETING

Security Classification: Project External (Restricted)

Minutes of Meeting Number	:	Transmission Assets Hydrology and Flood Risk EWG Meeting 1	**REV. No.** :	Rev02
Minutes of Meeting Subject	:	Transmission Assets Hydrology and Flood Risk EWG Meeting 1		

MINUTES OF MEETING

MEETING DATE	:	03/05/2023
MEETING LOCATION	:	Microsoft Teams
RECORDED BY	:	[redacted]
ISSUED BY	:	[redacted]

Attendees:

- [redacted]

Apologies:

- [redacted]

Agenda

1. Introductions.
2. Overview of the Transmission Assets project.
3. Programme.
4. Overview of Evidence Plan Process.
5. Expert Working Groups.
6. Hydrology and Flood Risk.
   - Scoping Opinion.
   - Constraints Work.
   - Flood Risk Assessment.
   - Conceptual Drainage.
7. Methodologies (including for crossings).
8. Preston and South Ribble Flood Risk Management Scheme.
9. Next Steps and AOB.

ITEM NO:	DISCUSSION ITEM:	Responsible party	Date
Notes	**Meeting recorded/not recorded.**		
1.	**Introduction** (presented by LA)		

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2.	**Overview of the Transmission Assets** **About the wind farms (presented by LA)** Morgan Offshore Wind Limited (Morgan OWL), a joint venture between bp and Energie Baden-Württemberg AG (EnBW), is developing the Morgan Offshore Wind Project, located in the east Irish sea. The Morgan Offshore Wind Project is located approximately 22 km (12 nautical miles (nm)) from the Isle of Man and approximately 36 km (20 nm) from the northwest coast of England (when measured from Mean High Water Springs (MHWS)). The anticipated nominal capacity of the Morgan Offshore Wind Project is 1,500 Megawatts (MW). Morecambe Offshore Windfarm Limited (Morecambe OWL), a joint venture between Cobra Instalaciones y Servicios, S.A. (Cobra) and Flotation Energy Ltd. (Flotation), is developing the Morecambe Offshore Windfarm. The Morecambe Offshore Windfarm is also located in the east Irish Sea approximately 30 km (16 nm) from the northwest coast of England (when measured from MHWS). The anticipated nominal capacity of the Morecambe Offshore Windfarm is 480 MW. **About the Transmission Assets (presented by LA)** In July 2022, the UK Government published the Pathway to 2030 Holistic Network Design documents, which set out the approach to connecting 50 GW of offshore wind to the UK electricity network (National Grid ESO, 2022). The output of this process concluded that the Morgan Offshore Wind Project and the Morecambe Offshore Windfarm would work collaboratively to develop their transmission assets for connecting the wind farms to the National Grid at Penwortham in Lancashire. Morgan OWL and Morecambe OWL (the Applicants) are therefore seeking development consent for transmission assets comprising shared offshore export cable corridors to landfall and shared onshore export cable corridors to onshore substation(s), and onward connection to the National Grid electricity transmission network at Penwortham, Lancashire. These are known as the Morgan and Morecambe Offshore Wind Farms: Transmission Assets (referred to as the Transmission Assets). Both the Morgan Offshore Wind Project and the Morecambe Offshore Windfarm fall within the definition of a Nationally Significant Infrastructure Project (NSIP), as they exceed the threshold for an offshore generating station of 100 MW, set under the Planning Act 2008, as amended. They therefore require an application for development consent to be made to the Planning Inspectorate. In relation to the Transmission Assets, the Applicants sought a direction from the Secretary of State under section 35 of the Planning Act to confirm that they should be treated as		

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	development for which development consent is required under the Planning Act 2008, as amended. A direction was given on 4 October 2022 and the Applicants are now pursuing a single Development Consent Order (DCO) for the transmission assets for both wind farms. It is anticipated that the Applicants will apply for a DCO which authorises two coordinated but electrically separate sets of transmission works (for example, where each offshore wind farm would have its own transmission cables and substation infrastructure).		
3.	**Programme and key milestones** **Key Dates (presented by LA)** The Applicants undertook pre-scoping engagement in 2021 and early 2022. Throughout 2023 the Applicants will progress with consenting and both offshore and onshore surveys. The Scoping Report was submitted in October 2022. A Scoping Opinion was received in December 2022. As a result we are starting to set up the EWGs whilst we work through the responses we have received as part of this process. The Applicants aim to publish the Preliminary Environmental Information Report (PEIR) in autumn 2023, with formal consultation scheduled for later in 2023. Statutory consultation period pursuant to sections 42, 44 and 48 of the Planning Act (2008) which will afford feedback on the PEIR and project as a whole. We will use this feedback to develop and refine our assessments and refine the project further. The Transmission Assets application is currently planned to be submitted in Q3 2024. The earliest we are anticipating earliest construction commencement is 2026 and aiming to be operational towards end of 2028/2029. AS highlighted the statutory and non-statutory consultations being undertaken at the current time. For Transmission Assets, non-statutory consultation is scheduled from the 19 April to 4 June, predominantly to seek feedback from local communities and to present the first iteration of our Transmission Assets Red Line Boundary. Constraints identified as part of this process are to be discussed during this EWG.		
4.	**Overview of Evidence Plan Process and Expert Working Groups (presented by AW)** An overview of the evidence plan process was presented. The presentation slides are attached. Highlights are below: The proposed approach has been developed following the Planning Inspectorate and Defra guidance and recent guidelines produced by Natural England. The EP is a mechanism to agree		

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	upfront what information the Applicants need to supply to the Planning inspectorate Examining Authority as part of a DCO application. It allows the Applicant to demonstrate that information provided in the application is appropriate and that the Applicants have endeavoured to agree this with the key parties. The EP process has historically been focused on the Habitats Regulations Assessment (HRA) process. However, in line with recent best practice, the Applicants propose to extend this to include the EIA process, as set out in the EWG slides later in the presentation. There is a separate EP process for the Transmission Assets to those of the Morgan Generation and Morecambe Generation assets. **Roles and responsibilities** The key roles and responsibilities of applicants and stakeholders throughout the EP process are set out in the EPP Terms of Reference (ToR). The EP process is led by the Applicants. The responsibility for updating the EP is with the Applicants, with feedback from the relevant consultees. LB requested the named individuals for each of the Steering Group members which was confirmed by AW to be included in the Terms of Reference (ToR). It was agreed that this could be issued alongside the meeting minutes. **Overview of Evidence Plan Steering Group** The EP Steering group oversees the development and monitoring of the Evidence Plan and its progress and meet at key milestones throughout the programme. The first EPP steering group meeting was help in January 2023, and a second meeting is being agreed. **Overview of identified Expert Working Groups** The aim of these EWGs is to discuss and agree (where possible) key elements of the EIA and HRA during the pre-application period. With the overall aim of having a lot of the ground work completed on the Statements of Common Ground (SoCG), so the Examination is only focussing on the key issues. Slides are provided at back of pack that set out the broad approach to agreement in the EWGs and key areas where we are looking to get agreement on. First EWGs will be established in early 2023. Some of the topics will be combined into one meeting and discussion of the scoping opinion will be undertaken within EWG meetings in an effort for efficiency. After the initial EWGs we are looking to discuss project updates, the ongoing baseline work and survey		

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	findings. We are looking to build on the approach and working for Transmission Assets in terms of methodologies etc. The ToR includes a broad approach to the EWG meeting. However, some topics are likely to involve more meetings and consultation than others. This will be topic dependent. The meeting minutes will be accompanied by Agreements Logs to record all the agreements. There is also the SoCG. LB requested the named individuals for each of the Steering Group members which was confirmed by AW to be included in the Terms of Reference (ToR). It was agreed that this could be issued alongside the meeting minutes.	**ACTION 1: AW to issue the ToR alongside the meeting minutes.**	**07/07/2023**
5.	**Onshore Route Planning and Site Selection (Presented by AS)** An overview of the route planning and site selection process was presented. The project team are currently in the process of route planning and site selection and are refining the PEIR boundary. This refinement is based on environmental data, landowner data, commercial data and engineering constraints. From these, overarching high level principles are established such as the most direct route, avoiding small land holdings, crossing utilities and roads as close to 90 degrees (perpendicular) as possible. The remaining constraints are then mapped according to a BRAG approach. • Black – potential showstopper to development. • Red – high potential to constrain development. • Amber – immediate potential to constrain development. • Green – low potential to constrain development. The aim for PEIR is to refine: • the indicative proposed onshore cable corridor to c. 120 m. • the indicative temporary compound areas and options. • the indicative temporary access tracks. • the Land Substation (LSS) – Zones already established. To date Product 6 data has been considered as part of the site selection work. More elements will be included/considered at the PEIR as more feedback is received that can be fed back into the PEIR process. Just submitted our non-statutory consultation, which presents our current corridor and the proposed LSS zones, with the view to receiving more information and feedback to inform the site selection process. Landowners will also be consulted in order to establish potential constraints that may not be known. Feedback from EPP will also		

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	be used to inform the further refinement and mitigation, if required. The refinement of the PEIR boundary will continue and the progress will be presented to EWG at the next meeting. This will include outlining the constraints that have been considered and the outcomes of preliminary assessments. The commitments register, how this will be set out and the way in which this will be used to record commitments the project will make was presented. It will also set out how mitigation will be secured as Transmission Assets moves into construction. CD acknowledged the mention of HDD and its use for main rivers, but raised the query as to whether this was to be completed for ordinary watercourses. AS confirmed this commitment would not be feasible for ordinary watercourses, but other mitigation would be implemented for open cutting ordinary watercourses.		
6.	**Hydrology and Flood Risk (presented by ALM)** The comments received on the scoping opinion relevant to Hydrology and flood risk were presented. The presentation slides are attached. PINS agreed that damage to field drainage and water pipes is unlikely, but asked for details of control measure during construction and decommissioning phases to ensure any damage would be repaired such that no impacts were caused during the operation and maintenance phase. The project team confirmed where drainage features are affected these would be restored. As maintenance works are unlikely to lead to disturbance of surface water bodies or contribute fine sediment to water courses, PINS agreed this could be scoped out for the operation and maintenance phase, but requested the provision of an Operational Management Plan (OMP). The project team confirmed this would be presented in an OMP or similar document prepared to support the application for the substations. PINS raised the consideration of a walkover to add to the third party data. The project team confirmed this would be undertaken once the Groundsure data had been received and processed. Blackpool Council suggested the drainage requirements of Blackpool Airport should be considered for routes and easements. This is to be done as part of the assessment and, if applicable, will be included within the Environmental Statement.		

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	The Environment Agency acknowledged that the EIA Scoping Report identifies the impact of increased flood risk arising from damage to existing flood defences, but requested that this should include formal constructed flood defences and impacts to natural flood defence mechanisms, notably the sand dunes at Lytham. This has been noted and will be considered within the Environmental Statement. Seven comments received from United Utilities. As requested, the project team will liaise directly with United Utilities to confirm any impacts to assets. To support the application a flood risk assessment and outline drainage strategy will be prepared. During the production of these documents the Applicants will consult with the EA, LLFA and if appropriate, United Utilities. This process will provide United Utilities with the information requested, including the intention to connect with existing infrastructure and the use of Sustainable Drainage Strategies (SuDS) as part of the surface water management hierarchy. In relation to the latter, as requested by United Utilities, all land required to facilitate a discharge to a watercourse shall be identified within the limits of the DCO. United Utilities requested that the assessment of potential impact from contamination during the construction phase to be fully considered on their assets, water resources and water quality, which will be included. A summary of the scope of the hydrology and flood risk assessment was provided. There was no deviation from that proposed in the EIA Scoping Report, with the exception of: • the impact of contaminated runoff on the quality of 'main rivers', the impact of contaminated runoff on the quality of ordinary watercourses, the impact of accidental spillages/contaminant release on the quality of surface water and ground receptors and direct disturbance of surface water bodies and increased direct soil erosion and supply of fine sediment to surface watercourses, all arising from the construction and decommissioning of the onshore elements of the Transmission Assets and previously proposed as four separate impacts, are now to be considered as one 'effect' to avoid repetition; and • the impact of increased flood risk arising from the diversion of a watercourse during construction of the onshore substations is to be scoped in until it can be ensured a diversion is not required. LL noted that only one impact related to the operation and maintenance phase for the landfall and onshore export cable corridor, and requested where the mitigation for this phase would be assessed and reported. AS confirmed the operation and maintenance phase is not anticipated to have impacts due to the		

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	nature of the activities required (i.e. predominantly remote monitoring).		
7.	**Constraints (presented by ALM)** Mapping produced from the Product 6 data, provided by the Environment Agency, was presented as part of a discussion regarding constraints. The mapping also presented the watercourse identified within the Transmission Assets Red Line Boundary, but no information was received in relation to ordinary watercourses from the Environment Agency, instead mapping was used to identify these. Mapping produced from the EA Spatial Flood Defence mapping was presented. Interrogation of the type of flood defences confirmed the majority comprised raised embankments. None appeared to be comprised of concrete walls of similar defences, albeit it was acknowledged that the Environment Agency may be able to confirm this, or that private assets may not be included within the asset register held by the Environment Agency. The mapping can be seen within the slide deck provided. The mapping presented informed site selection for the onshore substations. The sequential test confirmed the land use would be suitable for Flood Zones 1 and 2, however the exception test will be required if the onshore substation is to be located in Flood Zone 3a or 3b. A high-level conceptual drainage strategy has been completed to date. Whilst the onshore substation locations are to be confirmed, the project team has focussed on the methodology for the formulation of the drainage strategy. Key elements of this include: • proposing a greenfield run-off rate based on an indicative impermeable area; • attenuation sized to achieve the 1 in 1-year greenfield run-off rate using ICP SuDS methodology; and • it is assumed that the surface water flows will likely be discharged to a watercourse. The number of onshore substations was requested by LL. AS confirmed that there would be a maximum of two onshore substations with an approximate size of 280,000 m^2 (140,000 m^2 temporary), with the preference to collocate the two onshore substation as far as is possible to ensure shared infrastructure where feasible. The size of the onshore substations has factored in the need to deliver Biodiversity Net Gain, with the onshore substations suitable areas to help achieve this. The two onshore substations will be electrically separate. The onshore export cable (225 to 275 kV) will run up to the onshore substation. A 400 kV cable will run from the		

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	onshore substations to the National Grid connection at Penwortham. CNB raised a point in relation to an earlier discussion regarding flood defences as the Transmission Assets Red Line Boundary looks to come through Lytham St Annes sand Dunes, which should be considered a natural flood defence. AS confirmed this had been considered and conversations to commit to HDD (or other trenchless technologies) in this location are progressing internally, which the project team hopes to confirm at a later date. In the unlikely event HDD (or other trenchless technologies) is not feasible in this area, the project team will provide sufficient justification. LB asked for confirmation as to why surface water had not been considered. ALM confirmed surface water had been considered, albeit a high-level approach until the point where the onshore substation is known, with some work done for the onshore export cable corridor also. LB stated the PPG was updated in August 2022 and strengthened the need to consider all sources of flood risk. ALM confirmed this will be considered as part of the assessment. AS provided more detail on the pre and post-construction drainage work that is typically undertaken. When the trenches and cables are dug, a detailed topographical and watercourse survey will be completed by a land drainage expert, affording a detailed drainage scheme to be developed. Drainage will be run alongside the trenches and will either divert into watercourses or existing drains. Post-construction drainage from the construction phase will be designed to tie into land drains, identified through liaison with landowners. The only structure to sit on the surface will be joint bays. Otherwise the remaining infrastructure would be buried. **Data Sources and Study Areas** The data sources considered so far to inform the baseline were presented. It was identified that there was a distinct lack of up to date mapping available in the public domain and whether the members of the EWG would be able to share this with the project team. CNB stated that a Strategic Flood Risk Assessment (SRFA) for Blackpool, Fylde and Wyre had been commissioned from the Local Plans. Blackpool can provide this data once available. CNB shared that [redacted] can provide more details on the SFRA. CD stated that LCC compile a flood assets register with non-culverts and shared a link of this with the EWG.	**ACTION 2: CNB to provide timescales for the SFRA and whether this data can be shared with the Project.** **ACTION 3: ALM to review the link provided by CD and liaise directly should there be any areas of interest for additional data.** **ACTION 4: The Project to liaise with Central Lancashire to**	**27/07/2023** **27/07/2023** **27/07/2023**

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	https://www.lancashire.gov.uk/media/941590/flood-risk-asset-register-january-23.pdf CD suggested that this be reviewed and any areas of interest be raised with LCC who may be able to share the relevant data with the project team. CD also stated that the Central Lancashire SRFA (December 2007) included within the EWG slides is currently being updated, so liaison with Central Lancashire may afford some more up to date data. ALM asked LL whether there are timescales for updating the Ribble Estuary Tidal and Fluvial Model (2010) and the Ribble and Douglas Fluvial Model (2014). The former does not include detail on the consideration of climate change. LL stated that this can be confirmed following the EWG and as part of the review of the material shared and that the data should be considered with the need to consider up to date climate change allowances. LL confirmed a direct contact to discuss these matters can be provided. The study areas were presented which reflected those included within the EIA Scoping Report. LB suggested that the Flood Risk Management Plan (FRMP) for North-West and the Preliminary Flood Risk Assessment (PRFA) for Preston useful here as it had identified that Preston comprised areas of significant surface water. **Identified Receptors** The receptors identified were presented. A cautious approach will be taken for surrounding water bodies, and it will be assumed they have achieved/maintained good status at the start of the construction phase. These can be seen within the slide deck shared. CD confirmed the majority of the ordinary watercourses are unnamed and fine to refer to them as such, or, as shown on mapping. **Methodologies** Key approaches as part of the wider methodology were presented. • Contaminated run-off: No water sampling or analysis is proposed at this time, as no significant effects on watercourses are anticipated during construction. This is subject to agreement with the EA and LLFA. • Direct disturbance of surface water bodies and increased direct soil erosion and supply of fine sediment to surface watercourses: Identification of local watercourses via desktop analysis of publicly available	**determine if more up to date data is available from the work completed to update the SRFA.** **ACTION 5: LL to confirm whether the EA Product 6 data is to be updated and, if so, when this is anticipated. LL also to provide a direct contact to liaise with on queries related to this data.** **ACTION 6: LB to confirm whether the Flood Risk Management Plan (FRMP) for North-West and the Preliminary Flood Risk Assessment (PRFA) for Preston is Penwortham specific.**	**27/07/2023** **27/07/2023**

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	data and consultation with EA and LLFA to identify sensitive locations. This will be supported by a walkover to be completed prior to submitting the Environmental Statement. • The impact of increased flood risk arising from additional surface water runoff during operation of the onshore substations. The FRA will comprise a desk-based assessment of flood risk from all sources of flooding, including appropriate allowances for climate change. However, LLFA climate change allowances are measured in percentages, but EA tidal climate change allowances are measured in mm. As such the requirements for climate change allowances may affect the project differently. The project team proposes to use the central estimate 2070s allowance, due to the development lifetime. However, this is to be agreed alongside the climate change allowances for sea level and river flow. • Site walkover to be undertaken once a substation locations and crossing methodologies have been confirmed. CD confirmed LCC assumed development lifetime as 100 years unless stated otherwise (higher allowance) so this needs to be included in the PEIR clearly. CD also confirmed HDD preference wherever possible, but where this is not to be used, there would need to be a sufficient justification otherwise. If using open cut approach the project team would need to approach LCC for ordinary watercourse consent. This is not the case for HDD on the presumption it would not affect the flow of the watercourse. LL flagged that the project would require permits for water discharge during the construction phase and would need to consider the relevant application timescales. AS confirmed that as part of the DCO the project would look to disapply the 2017 environmental permitting regulations. The drafting of this would be included in the DCO for which agreement would be sought. CD asked whether surplus material from HDD has been considered and this would be disposed. AS confirmed that no additional material would be produced. **Preston and South Ribble Flood Risk Management Scheme (FRMS)** From a separate meeting it was confirmed that different phases of the scheme are unlikely to interact with the Transmission Assets. LB highlighted the Government proposal on Schedule 3 which comprises the need to implement SuDS on new development from 2024. LB strongly recommend prioritising high quality	**ACTION 7: ALM to confirm the climate change allowance to be used as part of the assessment once further detail on the flood model date is provided (ACTION 5).** **ACTION 8: Wording for the draft order to be brought to the next EWG and to seek feedback prior to PEIR.**	**27/07/2023** **August 2023 (date of next EWG to be confirmed).**

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	SuDS and combine with BNG. Same provision for following hierarchy. Please liaise with us directly as well. AS suggested that this was an element to be addressed in the DAS, once in place. AS also raised the point that there is sometimes a need to have to implement non-SuDS methods and queried whether the desire was for the project to tie this into BNG. LB stated that the LLFA would be responsible to adopt new SuDS. Future proofing would involve designing in high quality SuDS as they will be more likely compliant with the mandatory standards. LB suggested the project also look at SuDS proforma on LLFA website as a toolkit to use (https://www.lancashire.gov.uk/business/business-services/pre-planning-application-advice-service/lead-local-flood-authority-planning-advice-service-for-surface-water-and-sustainable-drainage/).		
8.	**Next steps and AOB** The next steps of the assessment were presented, which included to develop drainage design approach of substations, refinement of assessment following substation site selection and refinement of crossings and associated methodology. LB discussed the Government proposal on Schedule 3 of the Flood and Water Management Act regarding the requirement to have SuDS on new development from 2024. LB strongly recommend prioritising high quality SuDS and, where possible, combine this with BNG. Offer to liaise directly with LCC on this matter. AS confirmed this would be useful, once the Design and Access Statement (DAS) is in place, specifically that is would be useful to understand how this impacts the project where non-SuDS methods are required. LB confirmed the main difference would be that the LLFA would be responsible to adopt SuDS to meet the new mandatory standards. As these are not yet available, it would be recommended to use high quality SuDS as they will be more likely compliant with the mandatory standards once published. LB also recommended for the project team to look at the SuDS proforma on LLFA website as a toolkit to use. CB provided a link to this: https://www.lancashire.gov.uk/business/business-services/pre-planning-application-advice-service/lead-local-flood-authority-planning-advice-service-for-surface-water-and-sustainable-drainage/ AS requested if there are any comments on the areas that should be prioritised for the onshore substation, or other factors that need to be considered. CD confirmed LCC would welcome avoidance of areas on or near to ordinary		

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	watercourses. Also if the project needs to alter any levels, please ensure this is not impacting areas off-site or the near surrounds. As such, this would need to be considered in the Flood Risk Strategy and Drainage Strategy both during and after construction. AS confirmed we would look to manage this during construction and the measures would be included in the Outline Drainage Strategy. ED requested a shapefile of the footprint of the works, such as the site compounds. AS confirmed this can only be provided at the point of statutory consultation for which ED agreed acceptable. LL suggested it would be useful to have an indication on the location and scale of compounds and to avoid site compounds or intensive temporary activity within flood zones. AS agreed and suggested it may be useful to discuss the temporary compounds in the next EWG meeting. LL requested further information on where the Transmission Assets would be seeking to cross the River Ribble. AS presented some of the key constraints considered as part of the site selection work and explained the preferred onshore substations location(s) would dictate the point of crossing, along with other infrastructure, development and flood risk constraints. The proposed area remains large to account for the number of constraints that are being considered as part to the site selection work. AW raised the query as to whether there are any additional considerations to the exceptions test in recent changes in methodology to how this applied to essential infrastructure. We have identified the need for an exception test should the onshore substation be located in a Flood Zone 3a or 3b area. LL would need to take that away and check with colleagues. LB suggested that the Local Planning Authorities may be best placed to ask as well in terms of the sequential test.	**ACTION 9: Indication of compounds to be presented in the next EWG meeting.** **ACTION 10: LL to confirm whether the recent changes to how essential infrastructure needs to consider the exceptions test requires any further work.**	**August 2023 (date of next EWG to be confirmed).** **27/07/2023**
Summary of Actions			
A1.	**AW to issue the ToR alongside the meeting minutes.**	**AW** [redacted]	**07/07/2023**
A2.	**CNB to provide timescales for the SFRA and whether this data can be shared with the project team.**	**CNB** [redacted]	**27/07/2023**
A3.	**ALM to review the link provided by CD and liaise directly should there be any areas of interest for additional data.**	**ALM** [redacted]	**27/07/2023**
A4.	**The project team to liaise with Central Lancashire to determine if more up to date data is available from the work completed to update the SRFA.**		**27/07/2023**
A5.	**LL to confirm whether the EA Product 6 data is to be updates and, if so, when this is anticipated. LL also to provide a direct contact to liaise with on queries related to this data.**	**LL** [redacted]	**27/07/2023**

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A6.	**LB to confirm whether the Flood Risk Management Plan (FRMP) for North-West and the Preliminary Flood Risk Assessment (PRFA) for Preston is Penwortham specific.**	**LB** [redacted]	**27/07/2023**
A7.	**ALM to confirm the climate change allowance to be used as part of the assessment once further detail on the flood model date is provided (ACTION 5).**	**ALM** [redacted]	Two weeks following the completion of Action 5.
A8.	**Wording for the draft order to be brought to the next EWG and to seek feedback prior to PEIR.**	**The project team**	**August 2023 (date of next EWG to be confirmed).**
A9.	**Indication of compounds to be presented in the next EWG.**	**The project team**	**August 2023 (date of next EWG to be confirmed).**
A10.	**LL to confirm whether the recent changes to how essential infrastructure needs to consider the exceptions test requires any further work.**	**LL** [redacted]	**27/07/2023**
Summary of Agreements			
Ag1.			
Ag2.			
Ag3.			
Ag4.			

K.2 Hydrology and flood risk meeting 2

K.2.1 Meeting Minutes

MINUTES OF MEETING

Security Classification: Project External (Restricted)

Minutes of Meeting Number	:	Transmission Assets Hydrology and Flood Risk EWG Meeting 2	**REV. No.** :	Rev03
Minutes of Meeting Subject	:	Transmission Assets Hydrology and Flood Risk EWG Meeting 2		

MINUTES OF MEETING

MEETING DATE	:	10/08/2023
MEETING LOCATION	:	Microsoft Teams
RECORDED BY	:	[redacted]
ISSUED BY	:	[redacted]

Attendees:

- [redacted]

Apologies:

- [redacted]

Agenda

1. Introductions.
2. Programme update.
3. Non-statutory consultation.
4. Site selection update.
5. Assessment update
   - Baseline and preliminary findings.
   - Methodology for construction scenarios.
   - Assessment update.
   - Approach to cumulative assessment.
   - Initial identification of mitigation
6. Next Steps and AOB.

ITEM NO:	DISCUSSION ITEM:	Responsible party	Date
Notes	**Meeting recorded.**		
1.	**Introduction** (presented by LA)		

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	LA provided a brief overview of the last EWG for hydrology and flood risk, which took place on 3 May 2023. LA welcomed introductions from all attendees, prior to starting the EWG presentation and running through the agenda.		
2.	**Programme update (presented by SA)** The Applicants undertook pre-scoping engagement in 2021 and early 2022. Throughout 2023 the Applicants have and will continue to progress with consenting and both offshore and onshore surveys. The Scoping Report was submitted in October 2022. A Scoping Opinion was received in December 2022. As a result we are starting to set up the EWGs whilst we work through the responses we have received as part of this process. The Applicants aim to publish the Preliminary Environmental Information Report (PEIR) in autumn 2023, with formal consultation scheduled for later in 2023. Statutory consultation period pursuant to sections 42, 44 and 48 of the Planning Act (2008) which will afford feedback on the PEIR and project as a whole. The Project will use this feedback to develop and refine assessments and refine the project further. The Transmission Assets application is currently planned to be submitted in Q2/Q3 2024. The earliest anticipated construction commencement is 2026 and aiming to be operational towards end of 2028/2029.		
3.	**Non-statutory consultation 2 (presented by SA)** SA provided details of the non-statutory consultation that has taken place to date. This consultation was undertaken during the same period as both generation assets projects (Morgan Offshore Wind Project Generation Assets and Morecambe Offshore Windfarm Generation Assets), between April and June 2023. The link to the consultation website was highlighted, to see further details. This link will be accessible within the slides to be shared alongside the meeting minutes. The second round of non-statutory consultation focussed on the indicative: • landfall and onshore export cable corridor (and associated temporary working areas); • Onshore substations statutory consultation area; and		

ITEM NO:	DISCUSSION ITEM:	Responsible party	Date
	• 400 kV grid connection search area. SA summarised the feedback received from the 2023 non-statutory consultation. This included the key emerging themes from the feedback.		
4.	**Site selection update** LA discussed the point at which the project is within the site selection process. The previous red line boundary, presented during the previous EWG for onshore historic environment, was compared with the refined boundary to demonstrate the changes that have been made, resulting from the feedback from consultation and assessments. The refinement of the preferred onshore substation sites was also discussed. LA noted that whilst the refinement process is still ongoing, the preference for siting is around zone 1, as presented within the slides. No questions were raised.		
5.	**Assessment update (presented by JM)** **Baseline and preliminary findings** The study area is located in the Ribble management catchment and Douglas management catchment. Both these catchments have been identified as being located in the wider north west river basin district. In addition, multiple Main Rivers and ordinary watercourses are located within the study area, most notably Main Drain, Dow Brook and Wrea Brook. It is further noted that the Canal and River Trust lease Savick Brook, own and manage locks and have right of navigation of the Ribble link. The cable route crosses a number of flood zones (from Flood Zone 1 to 3). Ongoing work is looking to ensure that the preferred substation options are steered toward areas of lowest flood risk possible, as far as is possible. Drainage will be in place at the substation sites. A high-level review of the WFD designations and their associated status has been undertaken for the PEIR. It has been identified that ecological status for most watercourses in the study area are of moderate ecological status but fail with regard to their chemical status. Despite this, the PEIR chapter considers the WFD waterbodies are seeking to achieve good overall status which equates to high sensitivity. This ensures that detrimental effects upon them do not occur.		

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	Flood alert and flood warning areas have been identified. These are most key during the construction stage and all staff need to be aware of them and what actions they need to take during any flooding event. **Methodology for construction scenarios** Several scenarios have been considered for maximum design scenario (MDS). In terms of duration, the MDS is represented by sequential construction of the Morgan Offshore Wind Project Transmission Assets and the Morecambe Offshore Windfarm Transmission Assets. A focus has been placed on open cut trenching as this will result in the compound footprint and largest area of disturbance compared to HDD (or alternative trenchless techniques). This represents the MDS in terms of potential for runoff, spillage and direct disturbance to water bodies. For areas affected by the onshore cables and substations, the MDS is represented by the largest working areas and number of trenches. Where options are still present for watercourse crossings, open cut trenching represents the MDS in terms of direct disturbance. Currently, HDD (or alternative trenchless tech techniques) are committed for crossings of Main Rivers and some ordinary watercourses where feasible. HDD (or alternative trenchless techniques) will be used to install the landfall beneath the railway line, the A584 Clifton Drive North and the sand dunes at Lytham St Annes. No queries or questions raised by meeting attendees. **Assessment update** Part of the PEIR assessed number of potential impacts including the following. • The impact of contaminated runoff on the quality of surface water and ground receptors. • The impact of increased flood risk arising from the diversion of a watercourse. • The impact of increased flood risk arising from additional surface water runoff. • The impact of increased flood risk arising from damage to existing flood defences. • The impact of damage to existing field drainage and water supply pipelines. JM highlighted that the construction phase will look to design in a number of measures in line with industry standards. One impact that requires particular attention is the damage to existing field drainage. Farmers and	.	

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	landowners are often concerned about damage to existing field drains. JM noted that where possible these will be mapped and should they be damaged during the construction of the Transmission Assets, there will be a commitment to reinstate these to their former condition in liaison with the landowners and the Applicants. LB raised a query on what the industry standard measures for drainage are. JM moves to the next slide where the drainage strategy approach is outlined. Will be undertaken in line with NPS EN-1, the NPPF (and supporting PPG), SuDS Manual (CIRIA 2015) and the adopted Fylde Council Local Plan to 2032. LB raises a further query on the technical standards for SUDS and flags the updated standards coming in place next year and would expect to see consideration of this within the assessment. In addition, LB raised a point that it is important to demonstrate to the public that surface water has been very well managed as well as the risk from flood of ordinary watercourses. Lancashire County Council requested that the project goes above and beyond the requirements of national policy, legislation and guidance, especially following recent flood events in the Fylde area. JM outlined that the 35% climate change allowance from the new guidance have been used and that going above and beyond is not a requirement. PS raised a query on how the SuDS being considered/incorporated into the design. JM highlighted that the current proposal is for open water storage. There is an option to incorporate BNG into the design through the attenuation ponds themselves as well through boundary planting around the attenuation ponds. **Approach to cumulative assessment** JM outlined the study area that was presented in the slides. Several Tier 1 projects have been identified within the study area and it is noted that while other Tier 1 developments do fall within the study area, it was not considered that they would give rise to significant effects and have therefore been scoped out of the assessment and not been considered further. **Initial identification of mitigation** JM noted that Main Rivers will be crossed via trenchless techniques and incorporate an appropriate buffer. It is intended to HDD/trenchless at least 2 m below hard bed. Where water course diversion is required, new channels will be of an appropriate size. LB raised a query regarding the wording of "*Where the construction of the onshore substations requires diversion*		

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	of an ordinary watercourse, the diversion will be appropriately sized to ensure existing watercourse capacity is maintained to afford conveyance of existing flows without increasing fluvial flood risk upstream of the onshore substation". JM outlined that this in accordance with guidance which outlines that when diverting a watercourse flooding should not be increase elsewhere. LB raised a query regarding crossing methods of main rivers and ordinary watercourses (trenchless). JM highlighted that the exact engineering methods for watercourse crossings are not yet finalised. It is anticipated that Main Rivers will be crossed via HDD (or other trenchless techniques) and crossing methods for ordinary and other watercourses includes open cut trenching techniques. All crossing methods are subject to discussion with stakeholders as other issues may already be known at a local level and site visits will also be undertaken to inform the crossing methods. In addition, it is highlighted that other factors that stakeholders may be aware of that may also influence the crossing method chosen. LB noted that Lancashire County Council would appreciate being involved in these discussions.		
6.	**Next steps** JM noted that a number of models requested from the Environment Agency (EA) have been received. However, flood depth data, undefended flood depth data and tidal data was missing. In addition, the climate change factor in the models were not identified, this is key and needs to be known. Finally, it was outlined that the .asc data and .txt data that was included with the models was not usable. JM requested that the EA took this away to resolve internally and send over the outstanding data requests. PS noted that he will take this away and get in touch with the appropriate team inside the EA. PS added that the climate change allowances for the models were not in line with the planning practice guidance at the time of their production and are therefore out of sync with current climate change allowances. The models are currently being updated, but these will still be out of sync. The EA will take it forward as an action. JM noted that no council area wide mapping available for the South Ribble area for the SFRA and asks for confirmation that this is the case. LB outlined that they don't think it is, but provided an email address [redacted] for the hydrology team to contact. Maps were missing from the original request so	**Action 1: The EA to investigate that missing data and climate change allowances used in models and to provide an update on this.**	**Ongoing**

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	this will be included in the email sent to the aforementioned address. JM asked if there is updated mapping or data with regard to the Fylde 2011 SFRA. CN notes that the SFRA update is currently going out to tender to start the update process. They do have some updated data to feed into the plan, but it currently out to tender and therefore is unavailable. JM wanted to make sure they were using the most up to data. JM noted that a crossing schedule will be prepared as part of the application for development consent and will include the watercourses to be crossed and by what method, appropriate buffers from watercourses and associated infrastructure and minimum depth of HDD (or other trenchless techniques) below the hard bed of watercourses and optimal clearance depth beneath watercourses (to be agreed with the EA). JM raised a query regarding the DCO, protected provisions and consenting regime – would it be possible to disapply the flood risk activities: environmental permits (FRAPS) and ordinary watercourse consents in the DCO. The benefits for doing this were outlined in detail. PS noted that at this stage there may not be enough information regarding the design to resolve any protected provisions, but the EA are not opposed to the concept. LL added that the legal team within the EA have standard wording that they use for this kind of activity and that these could be sent. LL also asked if this would relate to permanent or temporary works/infrastructure with JM noting that it is not possible to commit either way at this stage and need to receive and look at the legal wording in the first instance.	**Action 2: JM to contact South Ribble Borough Council at the provided email address to seek confirmation that no council are wide mapping is available and to request missing maps that were not provided with the original data request.** **Action 3: LL to send EA legal wording regarding protected provisions**	**Ongoing** **Closed. Received on the 6 September.**
7.	**Any Questions** LA welcomed questions and queries from the attendees of the EWG. LL asked whether the HDD (or other trenchless techniques) under the sand dunes could be expanded upon. LL also notes that they are aware of the borehole surveys that are being undertaken. JM noted that the plan is to HDD underneath and avoid sand dunes where possible and that awareness of not impacting upon the dunes from a flood risk point of view is needed. This also strays into a geological and ground conditions query. CN queries whether we need licences from the MMO and NE. JM, outlined that it is a bit of grey area as there is cross-over, however, they will be consulted.		

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	PS noted that it was good to see corridor is being narrowed and it is much more realistic than the one presented at EWG1. When it is feasible to share shapefiles of the project, this would be much appreciated as it will help the EAs scoping exercise. CN –asked whether it would be possible to share the borehole data. IM took this away as an action. IM noted that design will continue to be refined.	**Action 4: The Project to review possibility of sending out shapefile of the Transmission Assets Red Line Boundary following PEIR submission.** **Action 5: The Project to review possibility of sending out borehole data.**	**Ongoing. To be actioned following PEIR submission.** **Ongoing.**
Summary of Actions			
A1.	**The EA to investigate that missing data and climate change allowances used in models and to provide an update on this.**	**PS and LL** [redacted]	**Ongoing.**
A2.	**JM to contact South Ribble Borough Council at the provided email address to seek confirmation that no council are wide mapping is available and to request missing maps that were not provided with the original data request.**	**CNB** [redacted]	**Ongoing.**
A3.	**LL to send EA legal wording regarding protected provisions**	**LL** [redacted]	**Closed. Received on the 6 September.**
A4.	**The Project to review possibility of sending out shapefile of the Transmission Assets Red Line Boundary following PEIR submission.**	**The Project.**	**24/11/2023.**
A5.	**The Project to review possibility of sending out borehole data.**	**The Project.**	**Ongoing.**
Summary of Agreements			
No agreements to be recorded.			

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K.3 Hydrology and flood risk meeting 3

K.3.1 Meeting Minutes

MINUTES OF MEETING

Security Classification: Project External (Restricted)

Minutes of Meeting Number	:	Transmission Assets Hydrology and Flood Risk EWG Meeting 3	**REV. No.** :	Rev01
Minutes of Meeting Subject	:	Transmission Assets Hydrology and Flood Risk EWG Meeting 3		

MINUTES OF MEETING

MEETING DATE	:	30/01/2024
MEETING LOCATION	:	Microsoft Teams
RECORDED BY	:	[redacted]
ISSUED BY	:	[redacted]

Attendees:

- [redacted]

Apologies:

- [redacted]

Agenda

1. Introductions.
2. Programme update.
3. Project update following design freeze.
4. Site selection update.
5. EWG 1 and 2 recap.
6. Statutory consultation.
7. Section 42 responses.
8. Assessment update – focus on agreeing climate change scenarios and data sets for ES.
9. Commitments and mitigation.
10. Wider application documents.
11. Next steps.

ITEM NO:	DISCUSSION ITEM:	Responsible party	Date
Notes	**Meeting recorded.**		
1.	**Introduction** (presented by LM) Welcome and introductions by all.		

ITEM NO:	DISCUSSION ITEM:	Responsible party	Date
2.	**Programme update (presented by LA)** The Applicants undertook pre-scoping engagement in 2021 and early 2022. Throughout 2023 the Applicants will progress with consenting and both offshore and onshore surveys. The Scoping Report was submitted in October 2022. A Scoping Opinion was received in December 2022. As a result we are starting to set up the EWGs whilst we work through the responses we have received as part of this process. The Applicants published the Preliminary Environmental Information Report (PEIR) in autumn 2023, with formal consultation undertaken later in 2023. Statutory consultation period pursuant to sections 42, 44 and 48 of the Planning Act (2008) afforded feedback on the PEIR and project as a whole. The Project is using this feedback to develop and refine assessments and refine the project further. In 2024 the Applicant will be undertaking a targeted consultation on changes adopted since the submission of the PEIR. The Transmission Assets application is currently planned to be submitted in Q3 2024. The earliest anticipated construction commencement is 2026 and aiming to be operational towards end of 2028/2029. **Project update (presented by LA)** PEIR was submitted on the 12 October 2023. Statutory consultation took place between the 12 October and the 23 November 2023. The Applicants are working through the feedback received as part of the statutory consultation and are presently preparing the Environmental Statement submission for Q3 2024.		
3.	**Statutory consultation (LA)** A summary of the statutory consultation that has taken place since the publishing of the PEIR was presented. Key stakeholders were made aware of the consultation period by way of letter and emails. Consultation launched on the 12 October 2023. In person events were held, as well an early evening webinar with elected representatives. The statutory consultation was focussed on the PEIR and to afford stakeholders an opportunity to provide detailed responses for the Applicants to consider before the submission of the ES.		

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	Feedback from statutory consultation An overview of the feedback received was presented, including the main themes identified such as the routing and the onshore substations. No questions were raised.		
4.	**Site selection update (presented by LM** LM reminded everyone that this is two different projects (with one DCO), they are electrically seperate meaning that there will be two cables and two substations (one for each project). At landfall open cut trenching and HDD (or other trenchless techniques are being considered). The option to utilise trenchless techniques was discussed. An overview of the trenchless techniques likely to be implemented for the Transmission Assets was presented, with an acknowledgement that ongoing engineering feasibility studies would dictate the most suitable technique for each area proposed. More detail was provided on Horizontal Directional Drilling and the stages were described. A second option was presented, direct pipe installation, which utilises a micro tunnel boring. LL questioned what happens to the material that is pulled back from the drilling. LM clarified that there wouldn't be much material from the drilling, but where there is, this would be segregated and taken to waste disposal facility. There is also the option in some circumstances that these could be re-used on site, but this has not been investigated to date. LB asked for clarification that the same techniques presented are being used for main rivers and ordinary watercourses or other techniques proposed for main rivers. LM noted that there is commitment to use trenchless techniques under main rivers (not direct pipe as this is used for longer sections). LB questioned what technique is proposed for ordinary watercourses. LM notes that this work is ongoing and that the crossing schedule will include this. LB highlighted that impacts on ordinary watercourses need to be kept to a minimum and the habitats need to be protected, the LLFA are keen to see this achieved as much as possible. **Landfall and onshore export cable corridor** An overall summary of the Transmission Assets was provided for those who had not been present at previous EWGs.		

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	LM presented the refinements along the 275 kV and the reasoning behind these amendments, or, where optionality has been retained for ES. The temporary cable corridor has been reduced from 120 m in width, to 100 m. As part of this exercise, the Applicants tried to site the onshore export cable corridor at a greater distance from important ecological features. Survey data collected to date was utilised as part of the refinement. A comparison of the onshore export cable corridor presented at PEIR, against the ES refinement, was shown and the key differences were discussed. The optionality to the east of the airport, as presented at PEIR, was discussed. The reasoning behind removing the onshore export cable corridor option 2 (south) was provided which focussed on avoiding the farmland conservation area. One of the main changes to the onshore export cable corridor to be included in the targeted consultation was highlighted. The reasoning behind the introduction of this option was discussed, which focussed on feedback provided by landowners in proximity to the proposed changes and ongoing engineering feasibility studies for the suitability of trenchless techniques. **Onshore substations** Feedback on the onshore substations mainly focussed on the proximity to sensitive receptors. Refinement has since afforded greater distances between the Morgan onshore substation and these sensitive receptors, as well as the opportunity for more screening. The Morecambe onshore substation now only includes for one option, the southern option as presented at PEIR, as this was the favoured option when considering the feedback provided. In addition, this was partially driven by the fact that the northern option presented at PEIR had compounds in flood zones 2 and 3, whereas the chosen southern option is in flood zone 1. Both onshore substation options allow for better distribution of the construction traffic and therefore negate a greater impact on singular roads. The closer proximity of the onshore substations also affords a more efficient construction programme between the two site, reducing the number of crossing required. LB questioned whether surface water flood risk had been considered for the substation site selection. LA confirmed that it had. **400 kV grid connection cable corridor**		

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	The refinement of the 400 kV grid connection cable corridor was presented. A cable route has been identified within the 400 kV grid connection cable corridor search area. The PDE has been further refined from 96 m to 76 m. The same principles as for the onshore export cable corridor were applied to avoid sensitive receptors as far as is feasible. Engineering feasibility surveys are ongoing for the crossing of the River Ribble. This is currently anticipated to be undertaken using a conventional tunnel, direct pipe or micro tunnelling methodologies. Where the 400 kV grid connection cable corridor splits into two separate routes in proximity to Penwortham substation, this was confirmed to be as per the direct from National Grid.		
5.	**EWG 1 and 2 recap (presented by BP)** A summary of the key themes and actions from the previous EWGs was presented. Outstanding actions or elements to provide feedback on were highlighted.		
6.	**Section 42 responses** ALM outlines the main themes of the 42 responses. These included: • Provision of field drainage and more mitigation measures and restoration. • Additional commitments, sand dune restoration and flood defence improvement in Newton with Scales. • Clarity on where the minimum of 2m below the hard bed for HDD (or other trenchless techniques) under watercourses came from. • Request an uplift for climate change scenario along the cable route for the assessment. • Requests for method statements for watercourse crossings as well as sensitive sites. For provision of field drainage and more mitigation measures and restoration, it is intended to incorporate specific provisions in the DCO to help secure the long-term oversite where the cables would interact with existing field drainage. This will be done for life of the development. Provisions would be made in the CoCP. It was noted that the Applicant would not maintain the drainage, and this would be turned back over to the landowner who will be responsible for ongoing maintenance once land reinstated following construction. No questions raised on this. ALM invited the Environment Agency (EA) to provide steer on HDD depth of hard bed depth. PS noted that the EA used to provide a number of instructed notes on this	**RPS to summarise HDD depth below hard bed in a**	

ITEM NO:	DISCUSSION ITEM:	Responsible party	Date
	and there may be legacy documents that could be provided. However, the EA are happy to leave to the decision hydrology team who are driven by guidance. ALM flagged that Guidance notes Defra's 'Exempt flood risk activities: environmental permits' notes a depth of 1.5 m below riverbed along its whole length. Additional surveys would be undertaken to inform this. Details regarding the HDD depth approach will be included in a technical note to seek EA agreement. For the climate change scenarios on cable route, the cable itself is considered to be temporary and below ground and therefore it is not considered appropriate to include the uplift in climate change scenario on this. ALM invites the EA to outline why they require additional uplift. PS responds by noting that the consideration of climate change shouldn't be limited to elements above ground and in the fluvial or tidal floodplain. While the works may be temporary, there could be a permanent change to certain fluvial elements (both above and below ground) and therefore it is considered appropriate to include this higher climate change allowance. CD questioned what is meant by temporary. LM notes that as this is two projects (cable routes) there has to be a degree of flexibility so that they can either be constructed sequentially or concurrently. There may also be a scenario where we construct one project prior to the other one being ready for construction. Therefore, the maximum design scenario is where one project is constructed and then there is a four year gap before the second project is constructed. This allows for a seven year construction period, but this is the word case scenario. CD also asked for clarification on what is temporary works. For example, they consider it to be anything that would be constructed to aid the works and then would be removed and returned back to its natural state. LM confirms this and notes that all construction compounds and haul roads will be returned to their natural state. Where there are no watercourses, the cables will be laid by open cut trenching and then returned to its previous state and to the landowner. Lancashire County Council added requests for method statements as part of their S42 response. ALM noted that the plan is to disapply LLFA, IDB and EA consents for the DCO. Any consent from LLFA would be granted under the DCO rather than applying for them later down the line. A method statement would be produced for this.	**technical note for EA agreement.**	

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	LB noted that the comment more related to ensuring that technical comments that were provided as part of the S42 responses were taken on board as part of the production of the method statements. LB also added that justification will need to be included where different crossing methods are proposed and ensure that impacts on ecology and watercourse morphology a considered. From the LLFAs perspective, it is important to demonstrate to the local communities that everything is being properly considered.		
7.	**Assessment update (presented by ALM)** ALM notes that a walkover will be undertaken for the substation sites. The S42 highlighted that some consultees were unsure if the latest data was used. For the product 6 data, it is believed that this is the latest data set available, but a technical note will be issued outlining what is held to date and whether this is the latest. The EA will review this and provide feedback. In addition, for the product 5 data that was received for PEIR, there are unknown climate change allowances within this, and they are hard to derive from the data. Again this will be included in the technical note in order to seek clarification. At present, the current approach to climate change allowances remains the same as for PEIR, a 35% climate change uplift for the attenuation requirements. Where the scheme interacts with field drainage, these would be reinstated. No opposition to these approaches was raised. For HDD, the current commitment is where the cable corridor is crossing watercourses, this would be done so at 2 m below the hard bed. However, as noted earlier, Defra's 'Exempt flood risk activities: environmental permits' notes a depth of 1.5 m below riverbed along its whole length. This will be outlined in the technical note for agreement. The project will also seek to disapply LFA and EA consents for the DCO. It was also noted that the drainage strategy will be produced in line with SuDS Manual (CIRIA 2015) and cognisant of the emerging SABs. No additional questions raised.	**Technical note to include details of latest datasets held by the hydrology team for the EA to confirm that these are the latest one to be used.**	
8.	**Commitments and mitigation** Update to terminology with primary and tertiary mitigation combined into embedded mitigation for the ES. ALM outlined the embedded commitments and mitigation from PEIR.		

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	PS noted that for CoT10 that wording is not correct with regard to the watercourses. It should be EA Main Rivers and not ordinary watercourses and surface water courses. ALM noted that this will be updated for the ES in line with EA terminology. LL raised a point on protected provisions. The EA need minimum of 6 months to review protected provisions wording. LM noted these are with the legal team with comments to follow to the EA soon. CB questioned what is meant by surface watercourses in CoT10 and that no watercourses are going to be missed from the assessment. ALM highlights that all watercourses have been considered and will be included in the assessment at ES. CB further noted that culverted water courses shouldn't be impacted by operational and maintenance access. ALM confirms that they won't and also flags that all comments made during the S42 engagement will be taken on board for the ES where appropriate. ALM summarised the secondary mitigation measures from the PEIR. No comments raised on the secondary mitigation.		
9.	**Wider application documents (presented by ALM)** ALM summarised the wider application documents and these include: • Outline Code of Construction Practice. • Pollution Prevention Plan (appendix to the CoCP). • Spillage and Emergency Response. • Surface Water and Groundwater Management Plan. • Onshore Decommissioning Plan (post application). • Outline Operational Onshore Substation Drainage Management Plan(s). Nothing raised on these.		
10.	**Next Steps (presented by ALM)** There is a joint SFRA being undertaken at the moment and there will be new outputs especially with regard tidal flooding. JM queried what stage the SFRA is at. PS noted this is well advanced that this is a joint Lancashire Local Authorities SFRA and there will be particular outputs in relation to tidal flood risk especially. PS also noted that the modelling outputs are well progressed and have been fast tracked but are not yet available. However, specific dates for the delivery of this are not yet known. LB flagged that she would get in touch with a colleague to see if more information could be found. JM asked PS if	**LB to contact colleague regarding joint**	

ITEM NO:	DISCUSSION ITEM:	Responsible party	Date
	they have seen any modelling outputs to date and PS noted that they had not. ALM asked attendees if anyone could provide clarity on the product 6 data and noted that a technical note will be produced and issued outlining the current understanding of this. JM queried who in the EA is the best to contact regarding the queries we have (data and climate change allowance). LL noted that this is her and will be distributed as appropriate within the EA. JM asked for response in writing to the technical note that will be provided. LL confirmed they would provide comment. LB confirmed that Flood Risk Management Plan (FRMP) for North-West and the Preliminary Flood Risk Assessment (PRFA) are not Penwortham specific and advised the hydrology team to look through the documents that are publicly available. LLFA and EA open to help with any query. With regard to climate change allowances, ALM noted that these will be included as part of the technical note and highlighted that flood model data will aid in finalising this. With regard to essential infrastructure and exception tests, LL flagged that the S42 comments are their latest understanding of essential infrastructure and whether the exception test requires any further work. ALM noted that this would be done but didn't think there was anything of note. With regard to flood mapping, JM confirmed that they will get in touch with South Ribble Council to seek confirmation that no council wide mapping is available and to request maps that were not provided as part of the original data request. Nothing of note was raised for the remaining next steps. BP invited any further questions. PS flagged that the Morgan substation has now moved next to Dow Brook which is an additional area of interest. PS noted that the area now comes up to the Brook so that will need careful consideration with regard to lifetime design and climate change scenarios. LL requested shapefiles of all the refinements. LB flagged that she will be on maternity leave from the start of March so the new contact will be [redacted]	**SFRA and provide feedback.** **EA to provide feedback on the technical note following issue.** **JM to following up with South Ribble Council regarding mapping**	

ITEM NO:	DISCUSSION ITEM:	Responsible party	Date
	Meeting ended.		
Summary of Actions			
A1.	**Technical note on climate change scenarios, data sets and models to be used and HDD depth to be produced and issued to attendees.**	**JM and ALM**	
A2.	**LB to contact colleague regarding joint SFRA and provide feedback.**	**LB**	
A3.	**EA to provide feedback on the technical note following issue.**	**LL**	
A4.	**JM to following up with South Ribble Council regarding mapping**	**JM**	
A5.			
Summary of Agreements			
No agreements to be recorded.			

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K.4 Hydrology and flood risk Technical Discussion

K.4.1 Meeting Minutes

MINUTES OF MEETING

Security Classification: Project External (Restricted)

Minutes of Meeting Number	:	Transmission Assets Hydrology technical meeting	**REV. No.** :	Rev01
Minutes of Meeting Subject	:	Transmission Assets Hydrology technical meeting		

MINUTES OF MEETING

MEETING DATE	:	14/08/2024
MEETING LOCATION	:	Microsoft Teams
RECORDED BY	:	[redacted]
ISSUED BY	:	[redacted]

Attendees:

- [redacted]

Apologies:

- [redacted]

Agenda

1. Introductions.
2. Technical note discussion
3. Next steps

ITEM NO:	DISCUSSION ITEM:	Responsible party	Date
Notes	**Meeting recorded/not recorded.**		
1.	**Introduction** Welcome and introductions by all. Attendees captured in the list at the beginning of the minutes.		
2.	**Comment 1** *More details will need to be provided about the tunnel head houses, such as exactly where they will be located with reference to flood map for planning. Justification is required as to why they cannot be located outside higher flood risk areas.* ALM noted the design refinement has meant that we are n longer looking at the tunnel head houses. LL asked if they have been removed and ALM confirmed this. LL noted that there are no permanent above ground infra in that area.		

ITEM NO:	DISCUSSION ITEM:	Responsible party	Date
3.	**Comment 2** *The technical note acknowledges that the tunnel head houses serving the crossing under the River Ribble are located within Flood Zone 2 and 3 and are therefore assessed to be at risk of tidal flooding. The stated approach to assess the impacts of climate change over the development lifetime is that the (EA) 2119 0.5% AEP tidal event which incorporates a 970mm allowance for sea level rise is proposed to be used to provide what is stated as an 'onerous proxy' for sea level rise expected by 2065 (497mm for the upper end allowance).* *The application of this approach is somewhat misleading, lacking clarification and incorrect. Reference to the 2119 0.5% AEP tidal event (T200) is incorrect. If our data is being referred to, the 'baseline' would be the year of the tidal study T200 level, that being the 2014 tidal modelling. The 2019 reference is the climate change update only, the 'baseline' T200 from the 2014 tidal model is based on the 2009 Coastal Flood Boundary datasets, which were not updated as part of the exercise. To be technically correct, the assessment of climate change associated flood risk should follow the guidance https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances), or provide acceptable justification for divergence from the guidance. We have some concerns about the rather opaque and pick and mix approach to the application of climate change allowance values given the nature of the development and the NSIP status.* *The correct approach would be to apply the most up to date T200 level (0.5% AEP tidal event baseline) and then apply the NW Upper End values from the guidance; - Table 1: sea level allowances by river basin district for each epoch in mm for each year (based on a 1981 to 2000 baseline). In the case, the baseline would be the year of the tidal study T200 level, that being 2014 Tidal modelling, plus allowance years 2014- 2035 @ 5.7mm per year plus full 297mm value for years 2036 to 2065 (@ 9.9mm a year). This may or may not result in the stated proxy approach being conservative/ onerous. The proxy approach would only be acceptable if it demonstrated that it does not represent a lower value than the guidance value. The guidance also makes it clear that the Environment Agency will want to see if you have considered whether it is appropriate to apply the H allowances for your flood risk assessment or strategic flood risk assessment. Where applicable you should do H allowance assessments as well as assessing the sea level rise allowances in table 1.* ALM highlighted that the project is still taking forward the approach the EA approach the EA requested even tough we are not undertaking the assessment of tunnel head houses. The Ribble Estuary model does not cover the landfall so flood risk at this location has been ascertained using the 'Coastal Design Sea		

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	Levels – Coastal Flood Boundary Extreme Sea Levels (2018) dataset using the T200 peak sea level at chainage 1210 with an allowance incorporated for sea level rise to 2030.All detail is in the FRA and ALM noted the TJB is not a risk of tidal flooding. The area of where the cable lands is at risk of tidal flooding but mitigation to reduce the site user will be put forward. LL asked if all measures for flood risk management for construction will be included in the FRA. ALM confirmed this. ALM noted that the CoCP includes commitments around flood evacuation measures. ED highlighted that if all the models are in the FRA, it will be easier to review this, but noted they are happy with everything presented. ALM noted that with regard to H++ allowance, the project has calculated an increase of 1.9m in sea level rise to the 0.5% AEP undefended tidal event baseline and to the T200 peak sea level to assess a credible maximum scenario. This is in line with 'H++ sea level rise allowance' within 'Flood risk assessments: climate change allowances ' guidance. LL clarified that the slide is discussing the elements that are at risk from flooding but are waterproof. ED highlighted that this H++ approach will be taken away for discussion and will provide comment prior to the FRA submission.	**Environment Agency (ED) to take this H++ approach away for discussion and will provide comment prior to the FRA submission**	
4.	**Comment 3** *This seems a reasonable justification. The Flood risk assessment should be updated to include this reasoning.* ALM noted that this is discussed in the FRA. It makes sense to apply climate change scenarios across the project and the FRA has been updated to reflect this. ALM, noted that this would be a worst-case scenario. This is different to H++, the climate change is what we are assessing to based on NPS and NPPF guidance. ED, which allowance is being used. ALM flagged that this is covered in following slides.		
5.	**Comment 4** *It stated that it should be noted that as outlined in the PEIR, there are climate change allowances for peak rainfall applied to*		

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	the permanent elements of the substation sites of 35% and this will remain the same for the ES, in line with Environment Agency climate change guidance. (https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances). Amendments to the Development Management Procedure Order (DMPO) came into effect on 15th April 2015. As a result, we are no longer a statutory consultee on the surface water aspects of development proposals. Providing detailed comments on the drainage strategy is not within our remit and we are not resourced to provide this service as part of our Flood and Coastal Risk Management function. Lancashire County Council in their role as the Lead Local Flood Authority (LLFA) and Local Planning Authority, will need to consider if surface water has the potential to impact third parties as a result of the proposed development under their responsibilities of the Floods and Water Management Act 2010. The LLFA will seek to ensure that the https://environment.data.gov.uk/hydrology/climate-change-allowances/rainfall have been correctly applied. Notwithstanding the above, if it is apparent, or later becomes apparent that there is potential for surface water to have an impact, we could raise this with you as part of our strategic overview role to Local Planning authorities. ALM noted that this relates to the drainage strategy. RPS undertook this at PEIR and consulted with LCC. RPS is not undertaking this for the ES and are in talks with the consultant producing this to ensure climate change scenarios and uplifts are consistent across all documents. LCC consultation continues. ED, noted that this was a comment for awareness rather than action.		
6.	**Comment 5** *The 2014 Tidal modelling and the 2010 Ribble-Douglas modelling haven't been superseded. These models are our most up to date models, however, it is up to you to determine their suitability for your purposes. Please see the following gov.uk guidance: Using modelling for flood risk assessments -GOV.UK (www.gov.uk).* ALM noted the EA have confirmed that the models are up to date but it is up to RPS to determine if they are suitable.	RPS to determine if models are suitable.	

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7.	**Comment 6** *The GIS files previously supplied as part of Product 6 data have attribution which explain the Climate Change allowances applied to the scenarios. You should have received both the Climate Change 2020 reporting and the 2010 Ribble-Douglas report as part of your previous request for data. This also explains the Climate Change allowances applied. For the Ribble-Douglas 2010 model only fluvial climate change data was applied.* ALM noted that this relates to climate change in 2010 Ribble Douglas model. This allowance has been located in the model and has been used within the FRA. Climate Change allowance for fluvial flooding follows in additional slides.		
8.	**Comment 7** *Regarding the 2020 Climate Change study, 3 fluvial climate change allowances were applied to the 1% Annual Exceedance Probability (Defended and Undefended) for the 2010 Ribble-Douglas model. As you noted in 3.2.2, 30%, 35% and 70% were to the 1% AEP scenarios as part of this 2020 Climate Change study. Please be aware, however that the 30%, 35% and 70% uplifts were based on the river basin district peak river flow climate change guidance at the time. The guidance has since changed and management catchment peak river flow allowances are stated for the Ribble, Douglas & Alt and Crossens catchments. Flood risk assessments: climate change allowances - GOV.UK (www.gov.uk) The original 2010 Ribble-Douglas model only applied 20% uplift to the 1% AEP.* ALM noted that the 30% and 35% uplifts have been included in the FRA. No comments raised.		
9.	**Comment 8** *The only modelling that we hold for Dow Brook is 1% AEP and 0.1% AEP fluvial JFLOW run as part of the 2014 Tidal modelling. These JFLOW GIS outputs should be incorporated within the Product 6 data. No Climate Change scenarios were run as part of this JFLOW modelling. Section 9 of the 2014 Tidal study Model Development Report (previously supplied to you) explains the fluvial JFLOW modelling undertaken.* ALM noted that the project requested data for Dow Brook. This was only JFLOW modelling for the fluvial 1% and 0.1% AEP, with no climate change scenarios available for this modelling. The extents of Flood Zone 2 (0.1% AEP) and Flood Zone 3 (1% AEP) JFLOW data for the Dow Brook are very similar in extent and		

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	closely correlate to the 0.1% annual chance 'Risk of Flooding from Surface Water' data. Tis has been used to inform the assessment of Dow Brook. Topographical data was used and shows that the 1 in 1,000 year flood even comes to 7 mAOD and the Morgan substation sits at 10 mAOD. There is no risk of climate change scenarios flooding reaching the Morgan onshore substation. ALM noted that the fluvial catchment for the Dow Brook approximately 16.5km2 at a point immediately downstream of the onshore substations. Due to the size of the catchment, flows are understood to predominantly respond to rainfall events. The catchment response to the 3.3%, 1% and 0.1% annual chance 'Risk of Flooding from Surface Water' data and as such has been used to assess the likely impacts from climate change on fluvial flows. LL noted that the extents of the flood zones correlated to the surface water flooding extents, but climate change uplift can't be assessed as the modelling is JFLOW. ALM noted that the 1 in 1,000-year flood event is used as a proxy for climate change and that they don't want to use JFLOW modelling and would prefer surface water mapping as it is a higher resolution. ED highlighted that they would take this approach away for feedback as this is not a common approach. It was noted however that the approach did appear to make sense.	Environment Agency (ED) to take this approach away for feedback as this is not a common approach. It was noted however that the approach did appear to make sense.	
10.	**Comment 9** *We are not clear what if any industry standards suggest for indication of spot depths on open trenching. If the spot depths are proposed to be mapped at intervals of 100m along the onshore export cable corridor (where open trenching is proposed), we would enquire as to what the acceptable depth tolerances would be? Is this level of information acceptable the principal contractor and client? Would it be safe to interpolate levels between the spot depths? In our opinion the spot depth intervals seem a little large, and no justification is provided why they could not be 25m or 50m as an absolute minimum.* ALM highlighted that the project is seeking confirmation from the EA on figure presentation within the FRA. ALM noted that they wanted to present flood level and depth with spot depths on top at 100 m resolution. This will be split into four figures and this resolution would be sufficient to see the information. ALM noted that the EA wanted 50 m or 25 m resolution. Examples show to that the EA resolution is not appropriate as the nodes are too close together to show the depths. ALM requested feedback from the EA. ED, noted that it is not easy interpret at the resolution and asked whether ALM was looking at 50m or 100m.		

Appendix L: Landscape and Visual Assessment

L.1 Landscape and Visual Assessment Meeting 1

L.1.1 Meeting Minutes

MINUTES OF MEETING

Security Classification: Project External (Restricted)

Minutes of Meeting Number	:	Transmission Assets LVIA Stakeholder Meeting 1	**REV. No.** :	Rev02
Minutes of Meeting Subject	:	Transmission Assets LVIA scope and viewpoints		

MINUTES OF MEETING

MEETING DATE	:	22 February 2024
Az-MEETING LOCATION	:	Microsoft Teams
RECORDED BY	:	[redacted], Associate Director EIA, RPS
ISSUED BY	:	[redacted], Associate Director EIA, RPS

Attendees:

- [redacted], Fylde Council (AS)
- [redacted], South Ribble Council (DR)
- [redacted], Lancashire County Council (RS)
- [redacted], Natural England (EW)
- [redacted], Natural England (JC)
- [redacted], Preston Council (PM)
- [redacted], bp (AT)
- [redacted], Flotation Energy (LA)
- [redacted], bp (HK)
- [redacted], Flotation Energy (IM)
- [redacted], Technical Director Landscape, RPS (PE)
- [redacted], Senior Landscape Planner, RPS (YT)
- [redacted], Senior Consultant EIA, RPS (BP)
- [redacted], Associate Director EIA, RPS (PK)

Apologies:

- [redacted], Blackpool Council
- [redacted], Historic England
- [redacted], West Lancashire Council

Agenda

1. Programme update
2. Project refinements post-PEIR (offshore and onshore)
3. Stakeholder responses
4. Items for agreement
5. Next steps and discussion

ITEM NO:	DISCUSSION ITEM:	Responsible party	Date
Notes	Meeting recorded		
1.	**Programme** (presented by PK) Autumn 2022 to Autumn 2023 – submission of Scoping Report, receipt of Scoping Opinion, submission of Preliminary Environmental Information Report (PEIR), followed by period of statutory		

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	consultation, including consultation with stakeholders on the candidate viewpoints. Summer 2024 – submission of the application for Development Consent. 2026 – 2029 – construction period.		
2.	**Project refinements – offshore** (presented by HK) Design amended in response to Section 42 comments, where stakeholders commented that the offshore substation platforms and interconnector cables were also included in both the Morgan and Morecambe Generation Assets project in addition to the Transmission Assets project. This made the cumulative impact assessment difficult to follow. Therefore, it was proposed during this meeting that these elements of infrastructure would be wholly within the relevant generation assets infrastructure applications. Following review of survey data, it was also proposed that the offshore booster station (a compensation substation) would be removed from the application material. The Transmission Assets application (offshore) will therefore focus on the offshore export cable and landfall with no sea surface piercing infrastructure. As a consequence of these changes, there would be less vessel and helicopter movements for construction, operation and maintenance.		
3.	**Project refinements – onshore: landfall and cable corridor** (presented by AT) No significant changes since PEIR at landfall, primarily because the team are waiting for feedback from engineering studies. For the temporary cable corridor, this has been reduced from 122 metres to 100 metres. This has followed the design principles that were set out at PEIR. Two areas of note: - East of Queensway (B5261) and Higher Balham. Two options presented at PEIR. Team has decided to go with the northern option as this has less of an environmental impact. - Halfway along cable corridor (between Saltcotes Road and Bryning Lane). New option presented following landowner feedback as option presented at PEIR less suitable for their operations.		
4.	**Project refinements – onshore: substations** (presented by AT and IM) Substations: at PEIR, one option for Morgan and two options for Morecambe. Changes as follows: - Morgan: the location of the substation has been moved eastwards. Reasons being to increase the distance between the substation and the residential properties on Lower Lane. This also has the benefit of removing direct impacts on the public right of way. The footprint seeks to respect field boundaries. Area to the east of the permanent substation footprint identified for landscaping, ecology enhancements and drainage. Maximum building heights of the substation will be reduced in the final application - Morecambe: following consultation and review of the design strategy, the team decided to opt for Morecambe South option. There was no single factor driving the decision-making process. The benefits of this option are: to split construction access between Preston New Road and Blackpool Road, maintain an efficient construction process		

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	alongside the Morgan substation as no cables would interact; In addition Morecambe South is further away from a greater number of residential receptors . Maximum building heights will be reduced in the final application.		
5.	**Project refinements – onshore: 400kV cable route to grid** (presented by AT) Route from the substations to the National Grid substation at Penwortham has been defined since PEIR. Width of temporary cable corridor has been reduced from 96 to 76 metres. Still considering engineering options as to how to 'cross' the River Ribble. One option is the traditional tunnelling system which would have permanent head houses either side of the river (discussed further below). These would have an approximate area of 18 metres by 12 metres and a maximum height of 10 metres.		
6.	**Section 42 comments** (presented by PE) Can be summarised into eight key elements: - Maximum design scenarios to inform the assessment and to identify the need for mitigation. Consider design with other disciplines (e.g. ecology, heritage and hydrology). - Look at native planting and the substations, and align with biodiversity net gain. This will be covered in an outline landscape management plan. - The scale and massing of the substations within the Green Belt will be discussed within the Planning Statement. The openness of the landscape will be discussed in the ES chapter. - Consultation with stakeholders to discuss scope and the LVIA and viewpoint selection and future consultations to cover visualisations. - Wirelines at PEIR will be replaced by greyscale renders of buildings, infrastructure and fencing at ES stage (presented as photomontages). - No longer a conflict with the Area of Separation policy in Fylde at Newton with Scales. - Cumulative effects – to consider the nearby proposals for a solar farm		
7.	**Items for agreement** (presented by PE) - To remove seascape from the scope of the assessment – i.e. scoping out seascape character, marine based visual receptors. Seascape will be covered in the Morgan/ Morecambe Generation DCO applications. - To agree the location of the representative viewpoints around the substation and head houses. - To produce grey rendered photomontages.		
8.	**Onshore substations Zone of Theoretical Visibility (ZTV)** (presented by PE) - New ZTV produced relating to new footprints of substations and reduced heights of substations. However, ZTV not reduced significantly since PEIR, so 11 original viewpoints are still relevant. Remove Viewpoint 6 (south of Morecambe substation) because trees obstruct the views. - Fylde Council has requested five candidate viewpoints to explore the potential for views from more distant locations. - Three further candidate viewpoints identified by RPS. - The ZTV is within the 5 km radius study area. This study area is appropriate and is likely to capture any significant effects on either landscape character or visual receptors.		

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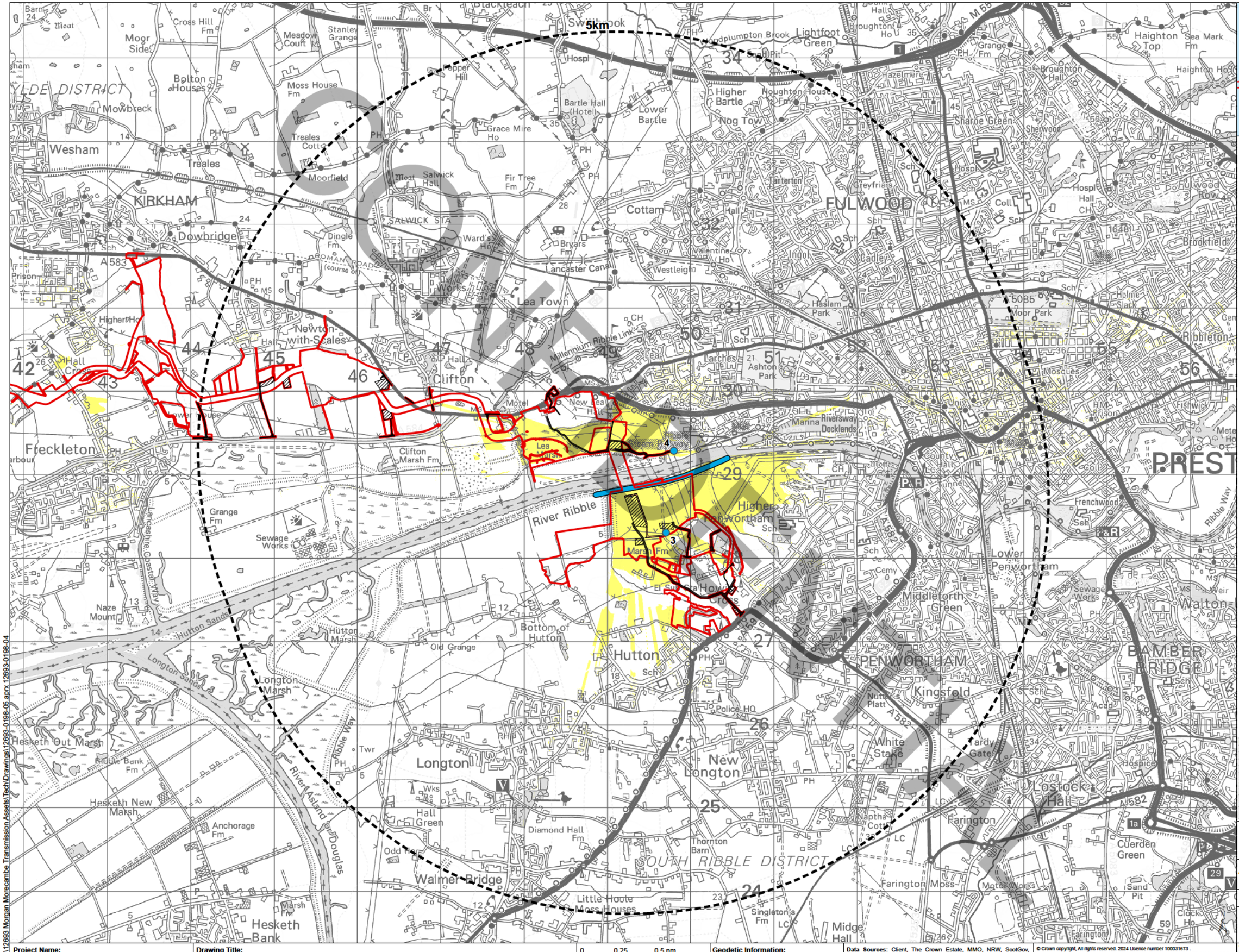
	- As land falls to the south across the River Ribble marshlands, the ZTV extends further away from the substations. - All viewpoints to be tested during a field survey. Some viewpoints may need to be slightly moved at this point.		
9.	**River Ribble head houses Zone of Theoretical Visibility (ZTV)** (presented by PE) - Four candidate viewpoints identified with potentially two viewpoints along the Ribble Way (footpath along an earth bund with planting along it), one on Howard Cross Lane (public right of way) and to the north at Wall End Road. - The study area would also have a 5 km radius.		
10.	**Next steps** (presented by PE) - Stakeholder confirmation of scope by the end of February 2024, i.e. removal of seascape. - Stakeholder feedback on the candidate viewpoint locations by the end of February. - Field survey work and photography in early March. RPS to present the results and if some of the viewpoints had to be micro-sited or discarded (with agreement). - Draft photomontages presented mid March. Feedback encouraged from stakeholders in terms of mitigation and enhancement measures in late March.		
11.	**Questions and answers** - DR asked whether a slide pack would be issued to stakeholders. PK/AT confirmed that one would be along with high resolution pdfs of the ZTVs. - AS queried whether the substations would be air cooled. AT confirmed that the Morgan team discounted an air insulated switchgear (AIS) system and are now proposing a gas insulated switchgear (GIS) or hybrid system. IM stated that the Morecambe team are still to make a decision around an AIS or GIS system. - AS asked how tall the substations would be. AT clarified that Morgan would likely be 15 m and IM confirmed that Morecambe would be 13 m. Meeting ended.		
Summary of Actions		**Status**	**Completion Date**
A1.	**Slide pack and high resolution versions of the ZTV to be issued to the stakeholders.**	**PK. Complete**	**22.02.24**
Summary of Agreements			
Ag1.	To reduce the scope of the topic from a Seascape, Landscape and Visual Impact Assessment (SLVIA) to LVIA in response to a reduction in the offshore element of the project. [Post meeting minute: a technical note has been prepared and issued to stakeholders 29.04.24].	**All Stakeholders**	29.04.24
Ag2.	To agree the onshore substation Representative Viewpoints presented at PEIR (subject to different view orientations and micro-siting of locations) and the additional Candidate Viewpoint locations.	**All Stakeholders**	01.03.24
Ag3.	To agree the Representative Viewpoints/Candidate Viewpoint Locations for the River Ribble crossing head houses	**All Stakeholders**	01.03.24

ITEM NO:	DISCUSSION ITEM:	Responsible party	Date
Ag4.	To present grey rendered photomontages of main buildings and infrastructure at the onshore substations for all viewpoint locations	**All Stakeholders**	01.03.24



Data source	OS Terrain 5
Date sourced	2024
Coverage	Within 10km of the site.
Original cell size	1m
Ground cover is modelled using indicative heights of 9m for buildings, and 12m for woodland blocks. Ground cover is located using OS Open Maps.	ZTV calculated using building height of 10m.
ZTV is not calculated beyond 10km from the site areas.	Viewer height is 2m.
ZTV calculation does not use mathematically approximate methods.	The effects of earth curvature and light refraction are considered.

Figure CVP 03

Drawing Number:
12693-0198-05

Project Name:
MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Drawing Title:
HEAD HOUSES AT THE RIVER RIBBLE: ZONE OF THEORETICAL VISIBILITY AND CANDIDATE VIEWPOINTS

0 0.25 0.5 nm
0 0.5 1 km

Geodetic Information:
Datum: OSGB 1936
Projection: British National Grid
Scale@379mmx231mm: 1:40,000

Data Sources: Client, The Crown Estate, MMO, NRW, ScotGov, MarineRegions.org

VER	DATE	DETAILS	BY	CHECK
04	21/02/24	FINAL	AC	PE

Path: O:\12693 Morgan Morecambe Transmission Assets\Tech\Drawings\12693-0198-05.aprx, 12693-0198-04

Data source	OS Terrain 5
Date sourced	2024
Coverage	Within 5km of the site.
Original cell size	5m
Ground cover is modelled using indicative heights of 9m for buildings, and 12m for woodland blocks. Ground cover is located using OS Open Maps.	ZTV calculated using building heights of 15m (Morgan Substation) and 13m (Morecambe Substation).
ZTV is not calculated beyond 10km from the site areas.	Viewer height is 2m.
ZTV calculation does not use mathematically approximate methods.	The effects of earth curvature and light refraction are considered.

LEGEND

- Transmission Assets Order Limits
- Onshore Substations
- 5km Radius Study area
- 10km Buffer
- Zone of Theoretical Visibility
- Representative Viewpoints (PEIR)

VP1: Bridleway south of Morgan substation (equestrians)

VP2: Strike Lane (equestrians/walkers)

VP3: Bridleway BW0505016 (equestrians)

VP4: Parrox Lane (occupiers of vehicles)

VP5: Footpath FP0509005 (walkers)

VP6: Footpath north of A584 (walkers)

VP7: Kirkham Bypass (occupiers of vehicles)

VP8: National Cycle Network route 62 (cyclists)

VP9: Footpaths at Brown's Lane (walkers)

VP10: Footpath/ NCR 62 (cyclists/walkers)

VP11: Ribble Way (walkers)

- Viewpoints Requested by Fylde Council

A. Edith Rigby Way A582 overbridge (pedestrians/ occupiers of vehicles)

B. Blackpool Road A583/ Preston New Road A584 (occupiers of vehicles)

C. Ribble Way embankment (walkers)

D. Wrea Green (public open space)

E. Freckleton, Hillock Lane (occupiers of vehicles)

- Candidate Viewpoints

A. Blackpool Road B5192 (pedestrians/occupiers of vehicles)

B. Farm access track/ bridleway BW0505016 (equestrians/walkers)

C. Public footpath east of Morecambe substation site (walkers)

MORECAMBE
cobra | FLOTATION ENERGY
EnBW | RPS A TETRATECH COMPANY

Figure CVP 02

Drawing Number:
12693-0191-08

VER	DATE	DETAILS	BY	CHECK
04	21/02/24	FINAL	AC	MS

Project Name:
MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Drawing Title:
ZONE OF THEORETICAL VISIBILITY FROM THE MORECAMBE AND MORGAN ONSHORE SUBSTATIONS

0 0.2 0.4 nm
0 0.5 1 km

Geodetic Information:
Datum: OSGB 1936
Projection: British National Grid
Scale@379mmx231mm: 1:45,000

Data Sources: Client, OS Terrain 5

Service Layer Credits: World Topographic Map: Esri, HERE, Garmin, FAO, NOAA, USGS

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	ALM noted that 100 m would be better and a more user friendly resolution. ED confirmed they are happy with this.		
11.	**Comment 10** *It is unclear what aspect of the guidance (https://www.gov.uk/guidance/flood-risk-assessment-standing-advice) is deemed applicable, as while it may be general consideration, we would question the direct relevance of flood risk standing advice in the respect of the production of ES information in support of an NSIP. Again, because of the way the paragraph is written, the intention is somewhat confusing. We would refer you to our previous comments made in relation to 2.1.2 and 3.3.1, on the subject of assessment of the impact of SLR in line with the published guidance, as opposed to reference to, and limited to and use of a deemed 'onerous' proxy. Please clarify the stated intention of the Sensitivity Testing? What is it that the proposal is seeking to be compliant with?* ALM noted that this is the EA asking for clarification. This mainly relates to sea level rise applied to tidal data allowance onto the 1 in 200 year food level as per EA guidance. No objections raised.		
12.	**Comment 11** *Confirmation of the existing climate change allowance in the Ribble Douglas model is covered in 3.2.2. The 30%, 35% and 70% were applied to the 1% AEP scenarios as part of this 2020 Climate Change study. These peak river flow climate change values are not in line with the suite of Management Catchment peak river flow values for the Ribble or Douglas Management Catchment peak river flow allowances, which were implemented into the guidance on 20 July 2020, when UKCP19 projections were used to update the peak river flow allowances based on management catchments instead of river basin districts. Please clarify your approach to the application of peak river flow allowances in this regard, relevant to development and epoch being considered following the guidance https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances.* ALM noted that the project has now received the 2020 Ribble Douglas climate change study data which includes the 30%, 35% and 70% peak river flow climate change uplifts in addition to the original 20% uplift included within the 2014 Ribble Douglas model. Only the 400kV grid connection cable corridor is located within the modelled extent of the Ribble Douglas model. Aside from link boxes and transition joint bays, which are expected to be flush to ground level, no above ground infrastructure is proposed within the 400 kV grid connection cable corridor during the operational and maintenance phase and an assessment of flood risk during operation for this aspect of the Transmission Assets will not be required. The 2020's epoch (2015 – 2039) higher central allowance has been incorporated within the Flood Risk Assessment to assess uplifts to peak river flow from the Ribble Douglas model data to 2030, the end of the construction phase. This equates to 19% within the Ribble catchment and 15%		

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	within the Douglas catchment. The project has used the 20% allowance to assess fluvial flood risk to development during the construction phase (the 2020's epoch) for works within the Ribble and Douglas management catchments as a worst case scenario. ALM noted that a similar approach with regard to climate change allowances has been applied to the operational period (which has been adjusted slightly to end in 2067). A 30% climate change allowance will be used to assess how fluvial flood risk evolves until the end of operation. ED highlighted that this approach to climate change uplift approach for both construction and operation would be taken away for discussion and comments would be provided.	Environment Agency (ED) to take away the climate change uplift approach for both construction and operation and to provide comment.	
13.	**Comment 12** *We reiterate our previous comments about how the depth of the cables should consider the lifetime of the development and the changes that could happen to river/ stream bed levels as a result of incision associated with increased peak rainfall and peak flows in rivers due to climate change.* ALM noted that with regards to the potential for incision to occur within river/stream beds during the development lifetime due to the effects of climate change (changes in peak river flow and peak rainfall intensities), at the detailed design stage, where appropriate natural scour will be estimated for each service crossing location using the method of (Lacey, 1930). These calculations will be taken based on bed material data from ground investigations and flow models which account for climate change over the design life of the service crossings. A 20% factor of safety will be applied where required to the natural scour calculations. Where possible the crossings will be designed with a minimum of 1.5m of clearance from the estimated natural scour depth, in line with 'Service crossing below the bed of a main river not involving an open cut technique (FRA3). ED highlighted that this approach to would be taken away for discussion and comments would be provided.	ED to take approach to cable depth away for discussion and to provide comment.	
14.	**Questions/AOB**		

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	ED asked if the slide pack could be provided. LM, this will be done but the text is the same as the technical note. ALM asked if the EA wanted any figures producing to sit alongside the technical note. ED noted that this would be useful if they could be sent across. LM asked the EA if they are you happy to respond in writing or would they require another meeting another meeting. LL noted that if PS and ED are happy to respond to the written technical note that should be fine. ED followed up and noted that they are happy to respond to the details in the technical note and can set a meeting up if client team think it is useful. LM asked if the EA had a timeframe for responses. ED highlighted that PS is off for a few weeks to a month. LM noted that the project is submitting at the end of September so would struggle to feed in comments based on this. ED noted this and will send over comments asap. LL highlighted that if the FRA is finished prior to submission and the EA have not issued comments, there is a situation where the EA could review the draft document or run through individual sections. This could be a beneficial approach but notes the project is waiting for the EA.		
Summary of Actions			
A1.	Environment Agency (ED) to take this H++ approach away for discussion and will provide comment prior to the FRA submission		
A2.	RPS to determine if models are suitable.		
A3.	Environment Agency (ED) to take this approach away for feedback as this is not a common approach. It was noted however that the approach did appear to make sense.		
A4.	Environment Agency (ED) to take away the climate change uplift approach for both construction and operation and to provide comment.		
A5.	ED to take approach to cable depth away for discussion and to provide comment.		
Summary of Agreements			
Ag1.	Agreement that a figure resolution of 100 m would be acceptable for the FRA.		
Ag2.			
Ag3.			
Ag4.			
Ag5.			

ITEM NO:	DISCUSSION ITEM:	Responsible party	Date

L.1.1.1 Response from Flyde Borough County Council to the Landscape and Visual Assessment

[redacted]

From: [redacted]
Sent: 14 May 2024 10:19
To: [redacted]
Subject: Comments from Fylde1

From: [redacted]
Sent: Tuesday, February 27, 2024 3:34 PM
To: [redacted]
Subject: RE: The Morgan and Morecambe Offshore Wind Farms Transmission Assets: Landscape and Visual Impact Assessment (LVIA)

Afternoon [redacted]

Thanks for the update last week and for sending over the requested plans for our consideration.

We have looked over the ZTV plans and the Viewpoints that are provided on them. These are satisfactory from a Fylde Council perspective as they include the viewpoints we had previously requested. The headhouses are in a location that is sufficiently remote from Fylde that we will not have any comment on them, although it would be helpful to have some indication of the scale and design of the buildings at as early a stage as possible so that this view can be confirmed.

With regards the substation buildings and infrastructure, it would be helpful to have some indication of their scale and appearance as that was an omission from the PIER which devalued that process. The work since then seems helpful, and given the proposed location of these buildings is in an entirely agricultural landscape I suggest that efforts are made to disguise these buildings and infrastructure as if they are agricultural buildings or barns.

Regards

[redacted]

From: [redacted]
Sent: Thursday, February 22, 2024 3:26 PM
To: [redacted]
Subject: The Morgan and Morecambe Offshore Wind Farms Transmission Assets: Landscape and Visual Impact Assessment (LVIA)

External Email - Use Caution

[redacted]

Dear All,

Many thanks to those who were able to join the call earlier today. For everyone's benefit, I attach a pdf of the slide deck and two high resolution pdf figures of the Zones of Theoretical Visibility and Candidate/ Representative Viewpoints. As some of the information contained in the documents has not been in the public domain, we have marked it as restricted/confidential.

As per slide nine of the presentation, we would like to agree the following with you by close of business next **Friday 1st March** to enable us to undertake further fieldwork shortly thereafter:

- To reduce the scope of the topic from a Seascape, Landscape and Visual Impact Assessment (SLVIA) to LVIA in response to a reduction in the offshore element of the project
- To agree the onshore substation Representative Viewpoints presented at PEIR (subject to different view orientations and micro-siting of locations) and the additional Candidate Viewpoint locations
- To agree the Representative Viewpoints/Candidate Viewpoint Locations for the River Ribble crossing head houses
- To present grey rendered photomontages of main buildings and infrastructure at the onshore substations for all viewpoint locations with the ES.

We look forward to hearing from you soon.

Kind regards

[redacted]

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Message ID	zrsjnHkLZFIftgVYibI3MN
Message Expires	Thursday, 7 March
Message URL	[redacted]
Permission	Only specified recipients can access the files attached to this message.

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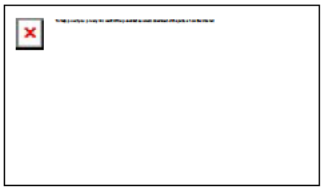
[redacted]



[redacted]

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L.1.1.2 Response from Natural England to the Landscape and Visual Assessment 1

[redacted]

From: [redacted]
Sent: 05 March 2024 12:28
To: [redacted]
Subject: Comments from Natural England

[redacted]

From: [redacted]
Sent: Friday, March 1, 2024 3:31 PM
To: [redacted]
Subject: RE: The Morgan and Morecambe Offshore Wind Farms Transmission Assets: Landscape and Visual Impact Assessment (LVIA)

Good Afternoon [redacted],

Thank you for providing the agreements that are being sought from the SLVIA Expert Working Group held on 22nd February.

I have included Natural England's response (in orange) to each agreement below.

1) To reduce the scope of the topic from a Seascape, Landscape and Visual Impact Assessment (SLVIA) to LVIA in response to a reduction in the offshore element of the project
    - Generally, Natural England would support this reduction in reporting scope if it is appropriate to the change in scope of the project. However, we would need to see clarity on the reduction in the offshore element before fully confirming this. It may be that removing the Seascape element of the report is too simplistic and therefore inappropriate at this stage, and a scoping exercise to determine this would be beneficial in order to make a more informed decision. We would need to see considered, balanced evidence as to why removing the Seascape element is an appropriate course of action.
2) To agree the onshore substation Representative Viewpoints presented at PEIR (subject to different view orientations and micro-siting of locations) and the additional Candidate Viewpoint locations
    - Yes, Natural England agrees with these.
3) To agree the Representative Viewpoints/Candidate Viewpoint Locations for the River Ribble crossing head houses
    - Viewpoint 3 would benefit from another viewpoint closer to the River Ribble to support it. Currently viewpoint 3 is at a location where you can't see the river or its direct surrounds.
4) To present grey rendered photomontages of main buildings and infrastructure at the onshore substations for all viewpoint locations with the ES.

- Yes, Natural England agrees to this. In addition, these should be supported with outline proposals for advance planting to be determined in the outline planting design plan on which the management plan would be based. This is to give an idea of how it will look in 10-15 years time.

If you have any questions about these comments, please let me know.

Kind regards,

[redacted]

[redacted]

[redacted]

[redacted]

www.gov.uk/natural-england

Thriving Nature for people and planet

NATURAL ENGLAND

From: [redacted]
Sent: Thursday, February 22, 2024 3:26 PM
[redacted]
Subject: The Morgan and Morecambe Offshore Wind Farms Transmission Assets: Landscape and Visual Impact Assessment (LVIA)

[redacted]

Dear All,

Many thanks to those who were able to join the call earlier today. For everyone's benefit, I attach a pdf of the slide deck and two high resolution pdf figures of the Zones of Theoretical Visibility and Candidate/ Representative Viewpoints. As some of the information contained in the documents has not been in the public domain, we have marked it as restricted/confidential.

As per slide nine of the presentation, we would like to agree the following with you by close of business next **Friday 1st March** to enable us to undertake further fieldwork shortly thereafter:

- To reduce the scope of the topic from a Seascape, Landscape and Visual Impact Assessment (SLVIA) to LVIA in response to a reduction in the offshore element of the project
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- To agree the Representative Viewpoints/Candidate Viewpoint Locations for the River Ribble crossing head houses
- To present grey rendered photomontages of main buildings and infrastructure at the onshore substations for all viewpoint locations with the ES.

We look forward to hearing from you soon.

Kind regards

[redacted]

[redacted]

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L.1.1.3 Response from Natural England to the Landscape and Visual Assessment 2

[redacted]

From: [redacted]
Sent: 14 May 2024 10:16
To: [redacted]
Subject: Comments from Natural England2

From: [redacted]
Sent: Friday, May 10, 2024 10:24 AM
To: [redacted]
Subject: RE: The Morgan and Morecambe Offshore Wind Farms Transmission Assets: Seascape and Visual Impact Assessment

Hi [redacted],

Thank you for your email.

Natural England agree that seascape can be scoped out of the Morgan and Morecambe Transmission Assets ES.

Kind regards,
[redacted]

[redacted]

[redacted]

[redacted]

www.gov.uk/natural-england

From: [redacted]
Sent: Friday, May 10, 2024 9:51 AM
To: [redacted]
Subject: FW: The Morgan and Morecambe Offshore Wind Farms Transmission Assets: Seascape and Visual Impact Assessment

Some people who received this message don't often get email from [redacted] Learn why this is important

Hi [redacted]

I was just wondering whether you had any comments on the seascape technical note I issued a couple of weeks ago? So far, we have had confirmation from Fylde, Blackpool and South Ribble Councils that seascape can be scoped out of the ES.

We look forward to hearing from you soon.

Kind regards

[redacted]

From: [redacted]
Sent: Monday, April 29, 2024 4:54 PM
To: [redacted]
Subject: The Morgan and Morecambe Offshore Wind Farms Transmission Assets: Seascape and Visual Impact Assessment

Dear All,

Following the meeting held on 22 February, I attach a technical note that outlines the rationale for scoping out seascape from the Transmission Assets EIA process. We are seeking agreement from yourselves that the scope of the seascape, landscape and visual impact assessment topic presented in the PEIR can be modified to a landscape and visual impact assessment.

We look forward to hearing from you soon.

Kind regards

[redacted]

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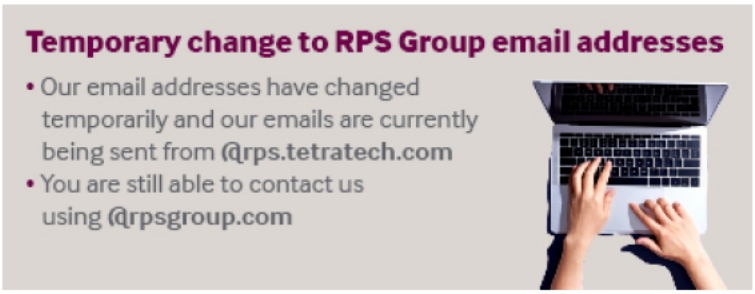

From: [redacted]
Sent: Monday, February 5, 2024 5:52 PM
To: [redacted]
Subject: The Morgan and Morecambe Offshore Wind Farms Transmission Assets: Landscape and Visual Impact Assessment

Dear All,

Following feedback on the candidate viewpoints for the Morgan and Morecambe Offshore Wind Farms Transmission Assets project, we would like to invite stakeholders to a meeting on **Thursday 22nd February** to discuss the landscape and visual impact assessment.

Please could you let me know if you have availability between **9AM and 4PM** on that day. I anticipate that the call would last between 1 and 1.5 hours.

The aim of the call would be to:

- provide an update of the project since publication of the Preliminary Environmental Information Report,
- seek agreement on the revised representative viewpoint locations following stakeholder comments and revisions to the design, and
- discuss the scope of the assessment.

We will share further information including the revised candidate viewpoint plan, and photography (where possible) before the call, to aid discussion.

I would be grateful if you could respond by COB 7th February.

Many thanks,
[redacted]

[redacted]

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L.1.1.4 Response from South Ribble Borough Council to the Landscape and Visual Assessment 1

[redacted]

From: [redacted]
Sent: 14 May 2024 10:37
To: [redacted]
Subject: Comments from South Ribble1

From: [redacted]
Sent: Monday, February 26, 2024 9:47 AM
To: [redacted]
Subject: RE: The Morgan and Morecambe Offshore Wind Farms Transmission Assets: Landscape and Visual Impact Assessment (LVIA)

Hi [redacted]

I think the viewpoints from South Ribbles perspective at this stage are acceptable, but wondered if some might be considered facings southwards towards the future infrastructure areas on Howick Cross Lane if the site has been chosen.

Whilst I appreciate these would be part of a separate planning application, the residents of Howick Cross Lane will ask the question.

Thanks and best regards

[redacted]

[redacted]

southribble.gov.uk

South Ribble Borough Council

From: [redacted]
Sent: Thursday, February 22, 2024 3:26 PM
To: [redacted]
Subject: The Morgan and Morecambe Offshore Wind Farms Transmission Assets: Landscape and Visual Impact Assessment (LVIA)

Dear All,

Many thanks to those who were able to join the call earlier today. For everyone's benefit, I attach a pdf of the slide deck and two high resolution pdf figures of the Zones of Theoretical Visibility and Candidate/ Representative Viewpoints. As some of the information contained in the documents has not been in the public domain, we have marked it as restricted/confidential.

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We look forward to hearing from you soon.

Kind regards

[redacted]

[redacted]

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L.1.1.5 Response from South Ribble Borough Council to the Landscape and Visual Assessment 2

[redacted]

From: [redacted]
Sent: 07 May 2024 10:34
To: [redacted]
Subject: South Ribble
Attachments: EOR0823-04 Transmission Assets - Technical note to scope out seascape.pdf

[redacted]

From: [redacted]
Sent: Friday, May 3, 2024 11:54 AM
To: [redacted]
Subject: FW: The Morgan and Morecambe Offshore Wind Farms Transmission Assets: Seascape and Visual Impact Assessment

You don't often get email from [redacted] why this is important

CAUTION: This email originated from outside of RPS.

Hi [redacted]

If I haven't already responded (I've checked and cant find anything but feel like I have) then we are ok with this

Best regards

[redacted]

[redacted]

southribble.gov.uk

South Ribble Borough Council

From: [redacted]
Sent: Tuesday, April 30, 2024 7:03 AM
To: [redacted]
Subject: FW: The Morgan and Morecambe Offshore Wind Farms Transmission Assets: Seascape and Visual Impact Assessment

Could you have a look at this please [redacted]?

Thanks [redacted]

[redacted]

From: [redacted]
Sent: Monday, April 29, 2024 4:54 PM
To: [redacted]

Subject: The Morgan and Morecambe Offshore Wind Farms Transmission Assets: Seascape and Visual Impact Assessment

Dear All,

Following the meeting held on 22 February, I attach a technical note that outlines the rationale for scoping out seascape from the Transmission Assets EIA process. We are seeking agreement from yourselves that the scope of the seascape, landscape and visual impact assessment topic presented in the PEIR can be modified to a landscape and visual impact assessment.

We look forward to hearing from you soon.

Kind regards

[redacted]

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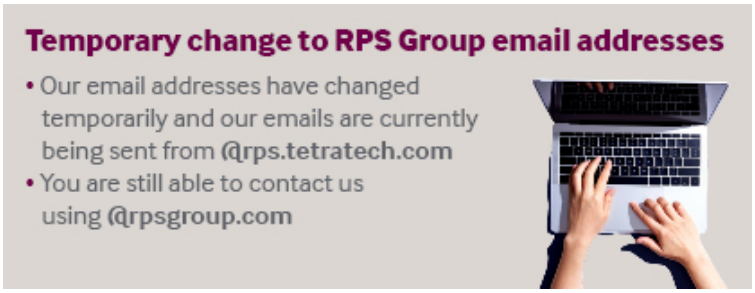

From: [redacted]
Sent: Monday, February 5, 2024 5:52 PM
To: [redacted]
Subject: The Morgan and Morecambe Offshore Wind Farms Transmission Assets: Landscape and Visual Impact Assessment

Dear All,

Following feedback on the candidate viewpoints for the Morgan and Morecambe Offshore Wind Farms Transmission Assets project, we would like to invite stakeholders to a meeting on **Thursday 22nd February** to discuss the landscape and visual impact assessment.

Please could you let me know if you have availability between **9AM and 4PM** on that day. I anticipate that the call would last between 1 and 1.5 hours.

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We will share further information including the revised candidate viewpoint plan, and photography (where possible) before the call, to aid discussion.

I would be grateful if you could respond by COB 7th February.

Many thanks,
[redacted]

[redacted]

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Appendix M: Commercial Fisheries Technical Engagement Plan

MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Environmental Statement

Commercial Fisheries Technical Engagement Plan

September 2024
Rev01

Prepared by:	Prepared for:
RPS	**Morgan Offshore Wind Project Limited, Morecambe Offshore Windfarm Limited**

Contents

Tables

Appendices

Glossary

Term	Meaning
Applicants	Morgan Offshore Wind Limited (Morgan OWL) and Morecambe Offshore Windfarm Limited (Morecambe OWL)
Environmental Statement	The document presenting the results of the Environmental Impact Assessment (EIA) process.
Generation assets	The generation assets associated with the Morgan Offshore Wind Project and the Morecambe Offshore Windfarm include the offshore wind turbines, together with other electrical infrastructure that contributes to electricity production, including inter-array cables, offshore substation platforms[1] and possible platform link cables to connect offshore substations.
Morecambe Offshore Windfarm: Generation Assets	See above.
Morecambe OWL	Morecambe Offshore Windfarm Limited is a joint venture between Cobra Instalaciones y Servicios, S.A. (Cobra) and Flotation Energy Ltd
Morgan and Morecambe Offshore Wind Farms: Transmission Assets	The transmission assets for the Morgan Offshore Wind Project and the Morecambe Offshore Windfarm. This includes the offshore substation platforms, interconnector cables, Morgan offshore booster station, offshore export cables, landfall site, onshore export cables, onshore substations, 400 kV cables and associated grid connection infrastructure such as circuit breaker compounds. Also referred to in this report as the Transmission Assets, for ease of reading.
Morgan OWL	Morgan Offshore Wind Limited is a joint venture between bp and Energie Baden-Württemberg AG (EnBW)
Transmission Assets	See Morgan and Morecambe Offshore Wind Farms: Transmission Assets (above)

Acronyms

Acronym	Meaning
ANIFPO	Anglo-North Irish Fish Producers Organisation
CMS	Construction Method Statement
CSIP	Cable Specification and Installation Plan
DEFRA	Department for Environment, Food and Rural Affairs
EnBW	Energie Baden-Württemberg AG
ES	Environmental Statement

[1] It is possible that all or part of the offshore substation platforms will be classed as generation assets as the Transmission Assets are refined in the future, but for the purpose of this PEIR a precautionary approach has been taken and all infrastructure that may form part of the Transmission Assets has been included. A similar precautionary approach has been taken in scoping the generation assets.

Acronym	Meaning
FLCP	Fisheries Liaison and Coexistence Plan
ISEFPO	Irish South and East Fish Producers Organisation
MFPO	Manx Fish Producers Organisation
NFFO	National Federation of Fisherman's Organisations
NIFPO	Northern Ireland Fish Producers' Organisation
NWIFCA	North Western Inshore Fisheries and Conservation Authority
OFLCP	Outline Fisheries Liaison and Coexistence Plan
SFF	Scottish Fishermen’s Federation
SWFPA	Scottish White Fish Producers Association
WCSP	West Coast Sea Products Ltd
WFA	Welsh Fishermen’s Association
WFC	Whitehaven Fishermen's Cooperative
WFPO	Western Fish Producers Organisation
VMS	Vessel Monitoring System

1 Technical Engagement Plan

1.1.1 Overview

1.1.1.1 The approach to commercial fisheries consultation was to identify commercial fishers that operate within the Irish Sea where there was potential for their activities to be impacted by the Transmission Assets. Consultation focused on improving understanding of the different fishing methods and practices in the vicinity of the Transmission Assets, discussing the potential impacts and possible measure to address these. A number of meetings have taken place between the Applicant and fisheries stakeholders, as detailed in Table 1-1. Full meeting minutes and any additional information has been included within Appendix A.

Table 1-1 Commercial fisheries consultation held to date

Date	Participants	Focus of consultation
29 June 2021	Individual fishers from Fleetwood and Maryport; 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); and Whitehaven Fishermen's Cooperative (WFC).	• To introduce the Morgan Offshore Wind Project: Generation Assets. • To provide fisheries stakeholders with an outline of the 2021 offshore survey programme and discussion of potential impacts on fisheries stakeholders.
24 June 2021	Scottish Fishermen's Federation (SFF); Scottish White Fish Producers Association (SWFPA); and West Coast Sea Products Ltd (WCSP).	• To introduce the Morgan Offshore Wind Project: Generation Assets. • To provide fisheries stakeholders with an outline of the 2021 offshore survey programme and discussion of potential impacts on fisheries stakeholders.
15 February 2022	MFPO, NFFO and WFC.	Meeting to update on programme, and provide an outline of the planned 2022 offshore survey programme. To also describe the data being used to inform the assessment being undertaken for the: • Morgan Offshore Wind Project: Generation Assets • Transmission Assets.

14 February 2022	Anglo-North Irish Fish Producers Organisation (ANIFPO), Rederscentrale and WFPO.	Meeting to update on programme, and provide an outline of the planned 2022 offshore survey programme. To also describe the data being used to inform the assessment being undertaken for the: • Morgan Offshore Wind Project: Generation Assets • Transmission Assets.
14 February 2022	SFF, SWFPA and WCSP.	Meeting to update on programme, and provide an outline of the planned 2022 offshore survey programme. To also describe the data being used to inform the assessment being undertaken for the: • Morgan Offshore Wind Project: Generation Assets • Transmission Assets.
24 November 2022	Department of Environmental, Food and Agriculture (DEFRA) and MFPO	Meeting to update on: • Programme • Proposed grid connections • 2022 offshore survey activities completed • Planned 2023 offshore survey programme • Initial ideas on array layout • Morgan Offshore Wind Project: Generation Assets • Transmission Assets.

23 November 2022	SFF, WCSP and SWFPA	Meeting to update on: • Programme • Proposed grid connections • 2022 offshore survey activities completed • Planned 2023 offshore survey programme • Initial ideas on array layout • Morgan Offshore Wind Project: Generation Assets • Transmission Assets.
24 November 2022	Individual static gear operator from Fleetwood.	Meeting to update on: • Programme • Proposed grid connections • 2022 offshore survey activities completed • Planned 2023 offshore survey programme • Initial ideas on array layout • Morgan Offshore Wind Project: Generation Assets • Transmission Assets.
25 November 2022	Individual fishing operators from Conwy.	Meeting to update on: • Programme • Proposed grid connections • 2022 offshore survey activities completed • Planned 2023 offshore survey programme • Initial ideas on array layout • Morgan Offshore Wind Project: Generation Assets • Transmission Assets.

01 December 2022	ANIFPO, Northern Ireland Fish Producers' Organisation (NIFPO) and WFA	Meeting to update on: • Programme • Proposed grid connections • 2022 offshore survey activities completed • Planned 2023 offshore survey programme • Initial ideas on array layout • Morgan Offshore Wind Project: Generation Assets • Transmission Assets.
01 December 2022	Rederscentrale	Meeting to update on: • Programme • Proposed grid connections • 2022 offshore survey activities completed • Planned 2023 offshore survey programme • Initial ideas on array layout • Morgan Offshore Wind Project: Generation Assets • Transmission Assets.
02 December 2022	ISEFPO	Meeting to update on: • Programme • Proposed grid connections • 2022 offshore survey activities completed • Planned 2023 offshore survey programme • Initial ideas on array layout • Morgan Offshore Wind Project: Generation Assets • Transmission Assets.
May 2023	Individual fishing operators from Lytham.	Public consultation meetings relevant for the Transmission Assets.
19 September 2023	SWFPA and WCSP (SFF invited but did not attend).	Consultation meeting to update on:

19 September 2023	TN Trawlers.	• Status of the EIA / consenting process • To discuss key issues raised via consultation feedback on the Preliminary Environmental Information Report (PEIR) (Morgan Array only) • To provide an update on changes made to the project design and commitments based on consultation feedback • Morgan Offshore Wind Project: Generation Assets • Transmission Assets.
11 September 2023	MFPO and Isle of Man Government.	Consultation meeting to update on: • Status of the EIA / consenting process • To discuss key issues raised via consultation feedback on the Preliminary Environmental Information Report (PEIR) (Morgan Array only) • To provide an update on changes made to the project design and commitments based on consultation feedback • Morgan Offshore Wind Project: Generation Assets • Transmission Assets.
11 September 2023	Rederscentrale.	Consultation meeting to update on: • Status of the EIA / consenting process • To discuss key issues raised via consultation feedback on the Preliminary Environmental Information Report (PEIR) (Morgan Array only) • To provide an update on changes made to the project design and commitments based on consultation feedback • Morgan Offshore Wind Project: Generation Assets • Transmission Assets.

20 September 2023	NFFO, NFFO Services, Whitehaven Fishermen's Cooperative, P&M Fishing and the MMO.	Consultation meeting to update on: • Status of the EIA / consenting process • To discuss key issues raised via consultation feedback on the Preliminary Environmental Information Report (PEIR) (Morgan Array only) • To provide an update on changes made to the project design and commitments based on consultation feedback • Morgan Offshore Wind Project: Generation Assets • Transmission Assets.
20 September 2023	Seafish and individual fishing operators from Blackpool.	Consultation meeting to update on: • Status of the EIA / consenting process • To discuss key issues raised via consultation feedback on the Preliminary Environmental Information Report (PEIR) (Morgan Array only) • To provide an update on changes made to the project design and commitments based on consultation feedback • Morgan Offshore Wind Project: Generation Assets • Transmission Assets.

21 September 2023	Individual fishing operators from Conwy	Consultation meeting to update on: • Status of the EIA / consenting process • To discuss key issues raised via consultation feedback on the Preliminary Environmental Information Report (PEIR) (Morgan Array only) • To provide an update on changes made to the project design and commitments based on consultation feedback • Morgan Offshore Wind Project: Generation Assets Transmission Assets. Consultation meeting to update on: • Status of the EIA / consenting process • To discuss key issues raised via consultation feedback on the Preliminary Environmental Information Report (PEIR) (Morgan Array only) • To provide an update on changes made to the project design and commitments based on consultation feedback • Morgan Offshore Wind Project: Generation Assets • Transmission Assets.
04 October 2023	ANIFPO, ISEFPO, NIFPO	Consultation meeting to update on: • Status of the EIA / consenting process • To discuss key issues raised via consultation feedback on the Preliminary Environmental Information Report (PEIR) (Morgan Array only) • To provide an update on changes made to the project design and commitments based on consultation feedback • Morgan Offshore Wind Project: Generation Assets • Transmission Assets.
February 2024	North Western Inshore Fisheries and Conservation Authority (NWIFCA)	Engagement regarding intertidal cockle and mussel fishery data for the Transmission Assets.

18 June 2024	Individual fishing operators from Liverpool	Consultation meeting – Project update for: • Morgan Offshore Wind Project: Generation Assets • Transmission Assets.

1.1.2 Issues agreed

1.1.2.1 The following issues have been agreed with commercial fisheries stakeholders:

- Long-term data sets should be used where possible. Ten-year datasets have been obtained for landings and Vessel Monitoring System (VMS) data.
- Section of Transmission Assets is located within key queen scallop fishing grounds. Fishing activity feedback from consultees has been presented within the baseline and considered in the assessment of effects.
- Baseline data used within the assessment has been agreed, in addition to agreement that cumulative impacts and impacts on fish stocks have been assessed in the appropriate chapters of the Environmental Statement (ES).
- Operations and maintenance coexistence; target burial depth of export cables is 1 m, or where burial not possible, cable protection used.
- Where there is a lack of data for <15 m vessels, multiple datasets have been used which capture <15 m vessels, in addition to consultations and surveys to understand <15 m activity in more detail.
- Offshore booster substation removed from design envelope.
- Spatial data for shellfish beds within study area have been obtained from NWIFCA and incorporated into the commercial fisheries technical report.

1.1.3 Issues under discussion

1.1.3.1 The following issues are under discussion with commercial fisheries stakeholders:

- An Outline Fisheries Liaison and Coexistence Plan (OFLCP) is being developed, through ongoing consultation, which will make commitments, including a Construction Method Statement (CMS) and a Cable Specification and Installation Plan (CSIP), designed to enable coexistence as far as possible. This OFLCP has been submitted with the Application (document reference J13)

1.1.4 Summary of progress

1.1.4.1 The project has made a number of commitments to address coexistence of commercial fishing activity within the Transmission Assets Area, as a direct result of engagement with fisheries stakeholders. These commitments have been presented to fishing stakeholders and relevant measures will be secured through the Fisheries Liaison and Coexistence Plan (FLCP), for which an outline plan has been submitted as part of the application. The OFLCP will be shared with commercial fishing stakeholders for comment and the final plan will be developed with ongoing engagement between the Applicant and commercial fisheries stakeholders.

Appendix A: Commercial Fisheries Consultation

A.1 Commercial Fisheries Consultation Minutes

Table 1-2 Overview of commercial fisheries consultation

Date	Meeting	Information Provided
29 June 2021	Commercial Fisheries Meeting 1	Meeting Minutes A.1.1
24 June 2021	Commercial Fisheries Meeting 2	Meeting Minutes A.1.2
15 February 2022	Commercial Fisheries Meeting 3	Meeting Minutes A.1.3
14 February 2022	Commercial Fisheries Meeting 4	Meeting Minutes A.1.4
14 February 2022	Commercial Fisheries Meeting 5	Meeting Minutes A.1.5
24 November 2022	Commercial Fisheries Meeting 6	Meeting Minutes A.1.6
23 November 2022	Commercial Fisheries Meeting 7	Meeting Minutes A.1.7
24 November 2022	Commercial Fisheries Meeting 8	Meeting Minutes A.1.8
25 November 2022	Commercial Fisheries Meeting 9	Meeting Minutes A.1.9
01 December 2022	Commercial Fisheries Meeting 10	Meeting Minutes A.1.10
01 December 2022	Commercial Fisheries Meeting 11	Meeting Minutes A.1.11
02 December 2022	Commercial Fisheries Meeting 12	Meeting Minutes A.1.12
19 September 2023	Commercial Fisheries Meeting 13	Meeting Minutes A.1.13
19 September 2023	Commercial Fisheries Meeting 14	Meeting Minutes A.1.14
11 September 2023	Commercial Fisheries Meeting 15	Meeting Minutes A.1.15
11 September 2023	Commercial Fisheries Meeting 16	Meeting Minutes A.1.16
20 September 2023	Commercial Fisheries Meeting 17	Meeting Minutes A.1.17
20 September 2023	Commercial Fisheries Meeting 18	Meeting Minutes A.1.18
21 September 2023	Commercial Fisheries Meeting 19	Meeting Minutes A.1.19
04 October 2023	Commercial Fisheries Meeting 20	Meeting Minutes A.1.20
04 October 2023	Commercial Fisheries Meeting 21	Meeting Minutes A.1.21

04 October 2023	Commercial Fisheries Meeting 22	Meeting Minutes A.1.22
18 June 2024	Commercial Fisheries Meeting 23	Meeting Minutes A.1.23

A.1.1 Commercial Fisheries Meeting 1 – Minutes

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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; [redacted] = 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 Fred Wood, 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)	

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	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-

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	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.

A.1.2 Commercial Fisheries Meeting 2 – Minutes

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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; MarineSpace = Company FLO; [redacted]; Fishing Industry Representative and RPS; EIA consultants.	
4.	ID outlined the principles for stakeholder engagement and noted no permanent infrastructure would be constructed till at least 2026 (subject to consents). Commented that looking for early feedback from industry to help with design principles/array layouts.	
5.	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 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/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 (Unmanned Surface Vessels (USV)) are ongoing; Gardline survey (manned survey vessel) will commence next week; metocean equipment will be deployed later in the year.	

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10	MM asked which surveys are starting in next few weeks. ID confirmed XOcean have started and will discuss Gardline survey further in presentation.
11	JL provided overview of XOcean survey which is using USV. JL noted that Notices to Mariners (NtM) have been circulated with respect to this activity and there have been no interactions with fishing gear/vessels noted to date.
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/EnBW'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 an initial short-list of potential lease areas were identified by TCE and then individual companies identified potential sites within these areas. Essentially, bp/EnBW recognise that virtually all of the Irish Sea is valuable fishing ground and will seek co-existence agreements with fishing communities where they cannot avoid interaction entirely. Bp/EnBW 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 still prove problematic for 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.	

A.1.3 Commercial Fisheries Meeting 3 – Minutes

Minutes

Stakeholder name	Manx Fish Producers Organisation (MFPO), National Federation of Fisherman's Organisation (NFFO) and Whitehaven Fisherman's Cooperative (WFC)
Date	15/02/2022
Attendees external	MFPO – [redacted] (DB) NFFO – [redacted] (MC) and [redacted] (CT) WFC – [redacted] (RG) 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 TW = Fishing Industry Representative	
3.	JL provided an overview of the project agenda and reiterates that a separate discussion on conclusion of the meeting is welcomed.	
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 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.	
9.	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.	
10	Phase 2 statutory community consultation will commence in Q4 2023 and reiterated the importance of early engagement with fisheries stakeholders.	
11	WD explained the principles for stakeholder engagement highlighting the importance of transparency and working together with stakeholders to find mutually acceptable solutions.	
12	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.	
13	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).	
14	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.	
15	BO explained that 2 metocean buoys have been deployed in November 2021 (one in Morgan and one in Mona).	
16	January 2022 inspection highlighted that the AIS is working intermittently and the lanterns are not working. A repair and service visit are planned w/c 14 February (weather dependent) and a Notice to Mariners (NtM) was issued Friday 11 February.	
17	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).	
18	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 collected primarily to inform the Navigation Risk Assessment – second traffic survey scheduled for July/August 2022, with issued NtM.	
19	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.	
20	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.	
21	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. BO highlights the importance of holding consultations with fisheries stakeholders to supplement the official datasets.	
22	DB raised a question, asking whether MarineSpace had looked into the interconnectivity of scallop stocks within the area. JL explains that in addition to providing Fisheries Liaison support, MarineSpace's scope has expanded to undertake the Commercial Fisheries Assessment section of the EIA; MarineSpace are in communication with RPS who are undertaking the Fish and Shellfish assessment, which would consider the biological and interconnectivity of the scallop grounds.	
23	DB also highlighted the huge array of knowledge that Bangor University offers on the scallop stocks in the region, and advises MarineSpace contact them. JL acknowledged that MarineSpace would contact [redacted] (IB) at Bangor.	MarineSpace to get in contact with IB.
24	JL reiterated the importance of consultation with fisheries stakeholders and receiving feedback throughout the process. JL noted intention to potentially hold face to face meetings to facilitate discussions.	

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 export cable 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 info prior to surveys and that the presentation will be shared on conclusion of the meeting.	
30	JL highlighted the Projects' preference to avoid static gear clearance, within the cable corridors, if possible during the 2022 surveys.	
31	DB explained that, in addition to turbines spacing, the layout of the inter-array cables between turbines is key in determining whether towing can commence within the array.	
32	ID thanked for the insight and reminded of the need for feedback from fisheries to help inform the layout of turbines, array cables and export cables.	
33	JL provided example of the topic of gear penetration, and highlights the need for discussions on this.	
34	DB noted that the Centre for Environment, Fisheries and Aquaculture Science (CEFAS) has a project investigating the depths of dredging.	DB to send paper to MarineSpace.
35	JL explained the next steps – emphasizing the feedback sought from fisheries.	
36	DB highlighted the difficulty in evaluating the impacts to the interconnectivity of the scallop stocks, and the resulting impact to scallops stocks which do not overlap with the project.	
37	JL explained that within the commercial fisheries impact assessment there will be a section that addresses the potential impact on commercially targeted species, which will cross reference the fish and shellfish ecology chapter that will undertake an in depth assessment of fish stocks in the region.	
38	JL further highlighted the importance to distinguish between queen and king scallop fisheries.	
39	JL continued 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 asked if MarineSpace will liaise with European vessels as to their activity within the area.	
41	JL confirmed that consultation has included representatives from Belgium and Ireland who represent fishing vessels active in the region. JL explains the importance of speaking to as many organisations as possible.	

42	TW supported this and explained that there is contact with fishing representatives from Ireland, Northern Ireland, Scotland, England (including the south-west) and Belgium.	
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	RG reiterated that need to keep engaging with fisheries stakeholders. RG noted that the siting of turbines should also consider nephrops grounds (muddy areas).	
46	JL welcomed feedback about any nephrops fisheries within the arrays but noted that there had been none to date. JL asked for nephrops contacts, but RG noted that there is no evidence of nephrops fishery within the array. RG suggested that Northern Irish fisheries groups may be able to provide more information.	
47	CT confirmed that there will be NFFO scout vessels available when needed.	
48	RG requested the presentation slides on conclusion of the meeting.	Project to share slides with the stakeholders.
49	DB suggested to include [redacted] in discussions – Welsh fishermen active in the region.	
50	MC requested plenty of notice of deadlines for a response to scoping documents, PEIR, etc. JL confirms.	
51	JL thanked all for their time and the useful feedback from the fishing industry to date.	

A.1.4 Commercial Fisheries Meeting 4 – 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.

A.1.5 Commercial Fisheries Meeting 5 – 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.

42	WD explained the stakeholder engagement timeline.
43	MM highlighted the fisheries community's great knowledge of benthic areas in the region.
44	MM noted that they are not represented by the NFFO.
45	JL explained the next steps – feedback sought from fisheries.
46	Specific feedback - geographic constraints, opportunities to minimise interaction with fishing and opportunities to improve biodiversity and safety in the region.
47	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.
48	Submission of PEIR late 2022 – fisheries stakeholders will be invited to comment on this draft report.
49	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.
50	MM explained that there would be less concern if the turbines were located further east, to avoid the main queen scallop grounds.
51	SK discussed that the queen scallop grounds have shown increased productivity this year.
52	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.
53	SK referenced the Dogger Bank offshore wind project, where turbine spacing and array cable layout allows for fishing within the array.
54	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.
55	ID and JL thanked all for their time and the useful feedback from the fishing industry to date.

A.1.6 Commercial Fisheries Meeting 6 – Minutes

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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.	

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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

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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.

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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 I wind farm sites. There is also no clear evidence of

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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.

A.1.7 Commercial Fisheries Meeting 7 – Minutes

EnBW bp
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Minutes

Stakeholder name	West Coast Sea Products Ltd (WCSP), Scottish Fishermen's Federation (SFF), Scottish White Fish Producers Association (SWFPA)
Date	23 November 2022
Attendees external	[redacted] (JC), [redacted] (DW), [redacted] (JK), [redacted] (SK), [redacted] (MM), and [redacted] (RH)
Attendees internal	[redacted] (GV) via telephone (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 stakeholder and developer/consultant positions given. JC - Scallop Fisherman (on behalf of WCSP) **DW** - Scallop Fisherman (on behalf of WCSP) **JK** – Managing Director WCSP **SK** – Director and General Manager WCSP **RH** – SWFPA **MM** – SFF **JL & RJ** – MarineSpace – appointed as Company Fisheries Liaison Officer (CFLO) by EnBW and bp **ID & GV** – EnBW and bp – Project Developers **TW** – appointed as FIR **ID** – Thanked everyone attending and explained that the meeting was the to update on both projects and seek comment on initial layout designs of Wind Turbine Generators (WTGs) within the 2 array boundaries. JC asked why the arrays were planned to be constructed on the largest Queen Scallop grounds in Europe. **ID** explained that it was not the developer's decision where the initial Search Areas were situated, as these were defined by The Crown Estate (TCE). EnBW and bp then selected potential sites within these larger Search Areas. With respect to the arrays being positioned further offshore compared to earlier projects, fundamentally, these offshore areas have better wind yields.	

JC commented that there is just as much wind, if not more "west of the Chickens" where there is no fishing activity.

ID explained that the existing locations are largely fixed following award of these areas to EnBW and bp via TCE's Round 4 bidding process. However, EnBW and bp were committed to working with the fishermen to explore options for co-existence that would minimise disruption to fishing activity within the arrays over the lifetime of the projects.

JC asked if the whole area will be closed during construction as a significant amount of their income comes from both Morgan and Mona areas.

GV at this early stage construction planning has not yet commenced, but it is unlikely that both array areas would be closed completely at the same time and construction would likely be phased. As per surveys undertaken in summer 2021 and 2022, the CFLO, Offshore FLO (OFLO) and FIR will work closely with the Industry to minimise disruption.

RH This is a very important fishery to a number of vessels and the SWFPA do not want the installation of WTGs and associated cables to completely stop fishing activity in this area. Also important to recognise that any cables installed without appropriate burial or with external rock protection needing to be installed, will also create an issues for fisheries operating in these areas.

GV whilst the focus of the meeting is the position/spacing/alignment of WTGs, we are keen to discuss the orientation of array cables to minimize disruption to fishing activity. Any information you can pass will help us at this early planning stage.

RH Concrete mattresses are problematic and not worth using as cable protection in open waters. On the USA – Denmark cable, 54 mattresses moved from their original positions. The impact of exposed/unburied cables within the array areas could be devastating for these fishermen.

It was requested that the EnBW and bp engineers investigate new cable protection options that might be more compatible with mobile fishing / scallop dredging. **GV** stated that he would pass this request to the engineering team.

JL also noted issues with concrete mattresses in other locations and highlighted that there are new cable protection solutions available. **JL** showed an example of new sleeve type cable protection on his laptop (www.tekmar.co.uk).

GV In response to a question regarding the number of export cables to shore from the Morgan projects, GV explained the range of cable laying

techniques were being considered under the impact assessment including trenching and the use of a sub-sea plough – the most common installation technique, and noted that the Morgan project could have up to 4 export cables located in a corridor or 1 to 1.5km wide between Morgan and the coast between Blackpool and the Ribble estuary. GV further explained that the Morgan cable corridor would be coordinated with the proposed Morecambe Offshore Windfarm, which would add up to two further export cables into the corridor.

RH- Reiterated the importance of ensuring adequate cable burial depth so that the scallop fisheries could continue in the area.

JL Asked what depths do your scallop dredges penetrate the seabed?

DW / JC / JK depends on where we are towing; anywhere between 5-25cm.

MM asked if the cables would contain fiber optics.

GV yes, they will

JL MarineSpace have been working on developing new computational techniques to detect real time cable depths. New developments in the industry can be used to reduce the risk by detecting cables which may become exposed within offshore wind farms, thus allowing for faster reactive measures and, potentially, a lower frequency of cable exposures.

RJ It has been difficult to assess your vessels activity on the queen scallops this summer and we had not seen your vessels working in the proposed array areas as expected. I have noticed your activity in the area has increased significantly since 1st of November when the King scallop season started, and you are fishing the grounds regularly now.

SK We have been concentrating our fishing in Scottish waters around the Moray East area this summer.

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).

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RJ gave an update on the level of monitoring of fishing activity which had occurred so far.

JL explained that all impacts on fish and shellfish ecology would be dealt with by a separate team (RPS) writing the "Fish & Shellfish Ecology" chapter of the PEIR.

3. **Discussion on Morgan array layouts**

MM Asked if the size of the WTGs had been set.

ID Explained that the EIA Scoping Report contained information on the expected size range for WTGs.

GV gave a range of 107 -68 WTGs which would be dependent on market availability. A 20 MW WTG would equate to approximately 80 turbines per site.

SK ,JC & JK -. The proposed layout design of Morgan was very disappointing as they were expecting the whole of the Queen Scallop area, which they had identified in the stakeholder engagement questionnaire to be clear of WTGs and cables.

DW – Asked what the effect from tidal disruption would be on the site as WTGs and their foundations would change the flow of tide in the area (and, therefore, may effect distribution of spat in the water and eventual settlement on the seabed). Increased tidal current velocity around the WTG foundations could be disastrous for the queen scallop fishery. There is no research available on the impacts on scallop fisheries from offshore wind farms

GV explained that the environmental impact assessment included an assessment of how tides and currents might be affected by the wind turbines. GV stated that the assessment was only in draft at this stage, but predicted that changes would only extend to the local area around each wind turbine. The Physical Processes assessment will be included in the PEIR report that will be issued to all stakeholders for consultation in early 2023. Furthermore, the results of the physical processes assessment will be used to inform the impact assessment of seabed communities and fish and shellfish, which will also be published for consultation in the PEIR report EnBW and bp

ID asked what the preferred direction of tow for the scallop vessels is.

All fishers agreed that north-south was the preferred direction of tow and, therefore, a north-southorientation of WTGs would be preferred.

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SK again asked if the whole south-western edge of Morgan could be removed and commented that the area to the east of the queen scallop grounds was important for juvenile queen scallops.

GV stated that at this stage, avoidance of the scallop ground had not been proposed as the project was actively seeking views from the fisheries stakeholders as to wether adopting a 2km spacing within the inner wind turbine grid would allow them to continue fishing the scallop grounds within the array area. Additionally, avoiding the scallop ground would require the project to reduce the space between rows of turbines within the array area in order to maintain the target capacity of 1.5GW, which could affect other fisheries stakeholders.

All present noted this but reiterated that spacing and alignment of WTGs was irrelevant if the cables were not buried as deep as possible to allow fishing to continue in the array.

GV reiterated that a commitment had been made in the Scoping Report to bury cables, where possible and noted that the Isle of Man interconnector had been installed using a subsea plough, which indicated that cable burial is possible. Where cables cannot be installed using a subsea plough, they could be trenched, but that this isn't always a popular installation technique with some stakeholders as it can have a higher ecological effect.

MM There should be a joint process with commercial fisheries on the cable plan.

JL if the southwestern edge of Morgan was removed from the array plans, would any vessels fish inside the rest of the array area?

All - No we would not as we don't ever fish in that area.

4. Discussion on Mona array layout

ID asked the room for feedback on the preferred layout design for Mona array.

All - agreed that the design that included an exclusion area in the centre of the array for high density scallop fishing was preferred (as long as any cables were buried to a safe depth).

JL Asked if there was any knowledge that this high density scallop ground in Mona ever shifts from east to west.

JK Not in my experience the ground seems to be quite hard, and we have always found scallops in that area.

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DW Working the ground regularly provides a silt free area which we believe encourages juvenile scallops to settle.

RJ I believe this to be true in Oyster fisheries as well especially where there are species which may become super abundant and change seabed characteristics.

DW Our concern is that the seabed might change after construction due to the turbines effect on tidal flow.

RH this happened at Robin Rigg after construction.

JK, SK The scallops spat could move from impacts of construction and settle on unsuitable ground (and therefore not develop into adult scallops).

ID Gave an update on PEIR and encouraged the room to make comments.

JC, SK Offered more GIS coordinates of king and queen scallop activity in both Morgan and Mona arrays and invited RJ to observe queen scallop fishing activity aboard one of their vessels in 2023.

MM – noted that it was an encouraging meeting in that a Developer was actively seeking feedback from the commercial industry at this early stage. However, advice provided must be taken on board otherwise significant impacts will occur on this important fishery.

Meeting end.

A.1.8 Commercial Fisheries Meeting 8 – 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.

A.1.9 Commercial Fisheries Meeting 9 – 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] (IG) (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.

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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.

A.1.10 Commercial Fisheries Meeting 10 – Minutes

EnBW bp
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	

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	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.	
	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.	MarineSpace to share fishing activity data for cross-reference purposes.
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.	
	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.	AM and HW to liaise with ANIFPO and NIFPO vessels that fish in the Irish Sea and feedback orientation preferences
	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.	

A.1.11 Commercial Fisheries Meeting 11 – Minutes

EnBW bp
Partners in UK offshore wind

Minutes

Stakeholder name	Rederscentrale
Date	01 December 2022
Attendees external	[redacted]
Attendees internal	[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 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	

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- 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.

A.1.12 Commercial Fisheries Meeting 12 – 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 ○ 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

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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.

A.1.13 Commercial Fisheries Meeting 13 – 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] RPS		
ISSUED BY			

PERSONS PRESENT:

- [redacted] (RaH) – Scottish White Fish Producers
- [redacted] (RC) – Brown and May Marine (Morecambe)
- [redacted] (JK) – West Coast Sea Products
- [redacted] (SK) – West Coast Sea products
- [redacted] (DW) – Skipper
- [redacted] (JC) – Skipper
- [redacted] (IM) – Floatation Energy (Morecambe)
- [redacted] (JD) – Morgan and Mona Commercial Fisheries EIA author, Marine Space/ERM
- [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] (JL) – Morgan and Mona Commercial Fisheries EIA Project Director, Marine Space/ERM
- [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.	**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:** https://morecambeandmorgan.com/morgan/ **Mona:** https://www.morganandmona.com/en/		

A.1.14 Commercial Fisheries Meeting 14 – 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] RPS		
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

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
- [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:** https://morecambeandmorgan.com/morgan/ **Mona:** https://www.morganandmona.com/en/ **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).		

A.1.15 Commercial Fisheries Meeting 15 – 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] (DB) – CEO, Manx Fish Producers Organisation
- [redacted] (JD) – Morgan and Mona Commercial Fisheries EIA author, Marine Space/ERM
- [redacted] (JE) – Seafisheries Policy Officer, IoM Government
- [redacted] (RH) – Morgan Offshore Wind Project (Generation Assets) Offshore Human Lead, bp
- [redacted] (RJ) – Offshore Fisheries Liaison Officer, Marine Space/ERM
- [redacted] (MK) – Morgan EIA coordinator, RPS
- [redacted] (RR) – DEFA IoM
- [redacted] (LS) – Morgan and Mona Fish and Shellfish EIA author, RPS
- [redacted] (TW) – Fisheries Liaison Officer, MarineSpace/ERM
- [redacted] (GV) – 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	

A.1.16 Commercial Fisheries Meeting 16 – Minutes

MOM Number	EOR0801	**REV. No.** :	03
MOM Subject	Commercial Fisheries Engagement – Rederscentrale		
	MINUTES OF MEETING		
MEETING DATE	11th September 2023: 11:00am		
MEETING LOCATION	Teams meeting		
RECORDED BY	[redacted] bp, [redacted] MarineSpace.		
ISSUED BY			

PERSONS PRESENT:

- [redacted] (JD) – Morgan and Mona Commercial Fisheries EIA author, Marine Space/ERM
- [redacted] (RH) – Morgan Offshore Wind Project (Generation Assets) Offshore Human Lead, bp
- [redacted] (RJ) – Offshore Fisheries Liaison Officer, Marine Space/ERM
- [redacted] (TW) – Fisheries Industry Representative, Marine Space/ERM
- [redacted] (GV) – Mona Offshore Consents Lead, bp
- [redacted] (SM) – Belgium Producers Organisation (Rederscentrale).

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. GV further highlighted the importance of the Consultation Report feedback table within the ES Chapters for each project.		
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. RJ noted that no comments on the PEIR were received from Rederscentrale.		
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. **RJ** queried whether data could also be provided by Rederscentrale. Rederscentrale has agreed to share additional data to fill gaps. Speaking to Welsh fisheries about getting updated landings data for Holyhead.	**TW to follow up with additional data request from Rederscentrale**	
4.	**Co-existence:** 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.		

6.	**Cables:** Predominantly north-south alignment of array cables with fewer east-west orientated cables where possible, to avoid fishing tows.. **SM** stated that rock dumping in the cable array would also be an issue for Belgium dredge gear. **GV** confirmed that cables will be buried where possible in order to reduce risk and where protection is required on cable crossings, locations will be marked accordingly. **TW** added that latitudes/longitudes can be marked on plotters. **RJ** asked if all vessels are using winged beam technology. **SM** confirmed that 90% of the fleet are beam trawlers using wing technology.		
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. **SM** confirmed that sole is their target species and the quota for next year is not good and they are negotiating with their government.		
10.	**RJ** noted that no comments on the PEIR were received from Rederscentrale and offered to send the Mona and Morgan Generation commercial fisheries PEIR chapters to SM. **SM** mentioned that Belgian beam trawlers are more active in the NE array areas of Morgan and Mona, less in the west part, but are still important areas for the fisheries. **RJ** confirmed OFLO presence within the array areas, collecting data for incorporation into the Environmental Statement (ES) chapters.	**RJ** to send PEIR chapters to SM **SM** to check GEOFISH activities in the Morgan Generation and Mona array areas	11/09/2023

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 • Minimum spacing 1.4km • North south orientation of rows • 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. 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. Commitments will be secured through an Outline Fisheries Liaison & Co-existence Plan which will be submitted with the application for consent.	Final Morgan and Mona newsletters also available on the Morgan website here and Mona website here.	
12.	**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. As with Morgan commitments will be secured through an Outline Fisheries Liaison & Co-existence Plan which will be submitted with the application for consent. GV also noted that in additional to project changes presented for both Morgan Generation Assets and Mona, there has been a number of additional project changes made not reported here, such as reductions in maximum requirements for sand wave clearance and seabed preparation. These will be detailed in the Project Description chapter of the Environmental Statement.	Final Morgan and Mona newsletters also available on the Morgan website here and Mona website here.	

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 wat to see the findings of the final assessment beforehand.	SM requested the presentation slides for inclusion within the Rederscentrale monthly newsletter. https://rederscentrale.be/infobladd/	11/09/2023
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:** https://morecambeandmorgan.com/morgan/ **Mona:** https://www.morganandmona.com/en/		

A.1.17 Commercial Fisheries Meeting 17 – 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] (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 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. https://morecambeandmorgan.com/morgan/		

A.1.18 Commercial Fisheries Meeting 18 – 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] (AP) – 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:

- Miriam Knollys (MK) – Morgan EIA coordinator, RPS
- Lucy Shuff (LS) – Morgan and Mona Fish and Shellfish EIA author, RPS
- Rosie Howatt (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] https://morecambeandmorgan.com/morgan/		

A.1.19 Commercial Fisheries Meeting 19 – 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] (PT) – 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	

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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/		

A.1.20 Commercial Fisheries Meeting 20 – Minutes

MOM Number	EOR0801 **REV. No. : 01**
MOM Subject	Commercial Fisheries Engagement – Northern Ireland, Kilkeel
	MINUTES OF MEETING
MEETING DATE	04th October 2023, 15:00
MEETING LOCATION	ANIFPO Office
RECORDED BY	[redacted]
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: RJ: provided an overview of the project, the current status of project and expected application dates. PEIR documents submitted in October this year with consultation starting on 12th October .Consultation will close at 23:59 on 23rd November 2023 and continued commercial fisheries engagement will remain ongoing throughout the subsequent design work and preparation of the EIA. Anticipated submission of application in summer 2024, with construction expected to begin in 2026/27 and operational by 2028/29 at the earliest if development consent is granted. No comments or concerns raised in regard to the project. **Minutes and slides will be shared after the meeting.**		

A.1.21 Commercial Fisheries Meeting 21 – Minutes

MOM Number	EOR0801	**REV. No.** :	01
MOM Subject	Commercial Fisheries Engagement – Northern Ireland, Kilkeel		
	MINUTES OF MEETING		
MEETING DATE	04th October 2023, 12:00		
MEETING LOCATION	NIFPO Office		
RECORDED BY	[redacted]		
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: RJ: provided an overview of the project, the current status of project and expected application dates. PEIR documents submitted in October this year with consultation starting on 12th October .Consultation will close at 23:59 on 23rd November 2023 and continued commercial fisheries engagement will remain ongoing throughout the subsequent design work and preparation of the EIA. Anticipated submission of application in summer 2024, with construction expected to begin in 2026/27 and operational by 2028/29 at the earliest if development consent is granted. **IK:** NI vessels will have very little static gear in the area, any vessels in the area will most likely use dredge or trawl nets. Unlikely that NIFPO members active along the coast of the TA landfall, activity is thought to be further north. **Minutes and slides will be shared after the meeting.**		

A.1.22 Commercial Fisheries Meeting 22 – Minutes

MOM Number	EOR0801 **REV. No. : 01**
MOM Subject	Commercial Fisheries Engagement – Northern Ireland, Kilkeel
	MINUTES OF MEETING
MEETING DATE	04th October 2023, 12:00
MEETING LOCATION	NIFPO Office
RECORDED BY	[redacted]
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, 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

	Project status: RJ: provided an overview of the project, the current status of project and expected application dates. PEIR documents submitted in October this year with consultation starting on 12th October .Consultation will close at 23:59 on 23rd November 2023 and continued commercial fisheries engagement will remain ongoing throughout the subsequent design work and preparation of the EIA. Anticipated submission of application in summer 2024, with construction expected to begin in 2026/27 and operational by 2028/29 at the earliest if development consent is granted. **JL**: Currently no Irish vessel are thought to fish in the Transmission Assets area and fishing is unlikely to affect Irish fishers inside the 12nm limit. **Minutes and slides will be shared after the meeting.**		

A.1.23 Commercial Fisheries Meeting 23 – Minutes

MOM Number	MC000012	**REV. No.** :	01
MOM Subject	Commercial Fisheries Engagement – Liverpool Stakeholders		

MINUTES OF MEETING

MEETING DATE	18 June 2024, 17:00-18:00
MEETING LOCATION	Microsoft Teams - Online

PERSONS PRESENT ONLINE:

- [redacted] (GV) – Mona Offshore Consents Lead, bpEnBW
- [redacted] (RH) – Morgan Offshore Wind Project (Generation Assets) Offshore Human Lead, bpEnBW
- [redacted] (ST) – Mona Offshore EIA Lead, RPS
- [redacted] (MK) – Morgan (Generation Assets) EIA Lead, RPS
- [redacted] (RJ) – Offshore Fisheries Liaison Officer, ERM
- [redacted] (JD) – Marine Consultant, ERM
- [redacted] (KM) – The Traditional & Sustainable Commercial Fishing Association
- [redacted] (TW) – Fisheries Industry Representative, Independent

ITEM NO:	DISCUSSION ITEM:	Actions	Date
1.	**Project Status:** **RJ:** Provided an overview of the various Projects timelines, which are all currently on target. **Mona Generation and Transmission** The Mona Application (Generation and Transmission Assets) has been submitted (22 February 2024) and accepted for examination (21 March 2024). The period for registering as an interested party with the Planning Inspectorate ran until 6 May. The examination timeline was explained, with the examination due to commence in summer 2024 and a consent decision expected to be made mid-2025. Subject to this decision, pre-construction activities are anticipated to start in 2026, through 2027, with the commencement of construction in early 2027. The Planning Inspectorate published the notification of the preliminary meeting and matters to be discussed for the Mona Offshore Wind Project (07 June 2024). This notification also presented a draft examination timetable, including the preliminary deadline of 07 August 2024 for submission of written representations. **Morgan Generation Assets** Application was submitted to the Planning Inspectorate on 24 April 2024 and was subsequently accepted for examination on 17 May 2024, Morgan will follow the same process as Mona for Examination. Individuals are able to register as an interested party for the project using the Planning Inspectorate webpage and submit any relevant representations by 10 July 2024.		

	The Secretary of State (SoS) will make a decision on the Development Consent Orders (DCOs) for Mona, Morgan Generation and the Morgan and Morecambe Transmission Assets projects. The Marine Management Organisation (MMO) will be the licensing authority for offshore works on Morgan Generation Assets and Morgan and Morecambe Transmission Assets. For Mona (Generation and Transmission Assets), Natural Resources Wales (NRW) will be the licensing authority.		
2.	**Survey Activities 2024:** **RJ:** Offshore survey activities are scheduled for summer 2024. The Metocean FLiDAR survey equipment has now all been recovered, and will not be redeployed. These surveys are complete. There are 2 remaining Deep Geotechnical surveys to be carried out this year. 1 – *Fugro Synergy* is currently carrying out Borehole surveys, the same as last year. The survey vessel will be situated at each bore hole for over 24 hours. There is not be an OFLO onboard the survey vessel, due to vessel logistics and facilities. Instead, a CFLO (RJ) and FIR (TW) is being utilised. 24-48 hour notices will be issued to industry. 2 – *Normand Mermaid* will carry out Deep CPT Surveys. The survey vessel will be on site in July. Due to the nature of the work and previous experience of the FLO team, it is not considered necessary to employ an OFLO onboard for this survey. To minimise disruption to industry, the CFLO (RJ) and FIR (TW) will be utilised. 24-48 hour notices will be issued as well as regular NtMs.		
3.	**Project changes and commitments – Mona:** **RJ:** Provided a re-cap summary of changes made to the Project design as presented to fisheries stakeholders in Autumn 2023 following conclusion of the statutory consultation on the PEIR. These changes include: • Reduction in array area extent • Inclusion of a Scallop Mitigation Zone (SMZ) • Increased minimum spacing between turbines & rows • North-South orientation of turbine rows • Reduction in maximum overall length of array cables (length reduced differs between Mona and Morgan) These commitments have been secured through the Outline Fisheries Liaison and Co-existence Plan (OFLCP) An OFLCP must be submitted alongside application, and a 'Final' FLCP will be prepared post-consent. The draft DCO states that the FLCP must be prepared in accordance with OFLCP, therefore, stakeholders can be assured that the commitments detailed within the OFLCP will be transferred to the final FLCP post-consent.		

	The Morgan OFLCP content and measures adopted are consistent with those in the Mona OFLCP.		
4.	**Feedback/Questions:** 1. **KM**: Raised that an email with a query had been sent to Nancy James over five weeks ago and a response had still not been received. **RJ**: Nancy James is the Principal Offshore Consenter for the Morecambe Generation Assets, a separate project to the Mona Offshore Wind Project and Morgan Generation Assets. 2. **KM**: Queried the method of turbine installation within the Mona and Morgan array areas, noting the potential underwater noise impacts of piling. **GV** confirmed that turbines will not be installed on monopiles, but instead via a combination of gravity foundations and jacket foundations on pin piles. Removal of the monopile foundation removes one of the noisiest installation activities, but that underwater sound would still be generated through piling of pin-piles associated with the jacket foundations. However, the Applicant has also committed to developing and underwater sound management strategy post-consent (in accordance with an outline underwater sound management strategy submitted alongside the application) which will investigate methods to reduce underwater sound during installation. 3. **KM**: Queried potential impacts of construction on bass migratory routes. **LS** highlighted research has shown that bass do not follow the same migratory route year on year and are quick to recover following periods of distress. Herring have been observed in areas near piling activities, noting that the species are hearing specialists. 4. **RJ**: Queried **KM** whether he operates within offshore wind farms and if target species have ever been observed around turbines during the operations phase. **KM** confirmed that he had operated within Burbo Bank and Barrow and noted that "massive" shoals of mackerel, tope and smooth hound have been spotted in proximity to the wind farm and as a result they would fish just outside the wind farm array area. **KM** highlighted that an offshore wind farm can provide great benefits to the fishing industry once operational and construction has finished. **KM** reiterated that the main concern was around installation, specifically the potential underwater noise impacts of pilling but was generally pleased with how the projects have developed to reduced underwater sound and that the projects have committed to a strategy to ensure sound is kept to a minimum.		
5.	**AoB/Next Steps:** **RJ**: Meeting slides and minutes will be issued.	**ACTION: RJ to finalise and issue slides.**	