

## **1 Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended), Regulation 22 - EIA Consent Decision**

- 1.1 Title:** Mostyn Energy Park Development (MEP) at the Port of Mostyn
- 1.2 Regulatory Approval:** Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended)
- 1.3 Operators:** The Port of Mostyn Limited
- 1.4 Marine Licence Application No:** CML1343
- 1.5 Location:** The Port of Mostyn, Dee Estuary, North Wales

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## **Regulatory Evaluation and EIA consent decision**

### **3. Purpose**

- 3.1 This document constitutes an EIA consent decision under Regulation 22 of the Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended) (MWR), in respect of a Marine Licence application (ref: CML1343) submitted by The Port of Mostyn Ltd. The application was supported by an Environmental Statement. The Marine Licensing Team has considered the application and information provided in support of the application and is now in a position to make an EIA consent decision to The Port of Mostyn Ltd.
- 3.2 In accordance with Regulation 22 of the MWR, the Natural Resources Wales Marine Licensing Team, as appropriate authority have considered the application, environmental statement (ES), representations of consultation bodies and members of the public and have had regard to the relevant legislation. Following the conclusion of a Transboundary Screening Assessment it was determined that consultation with other EEA states was not necessary.

### **4. Application**

- 4.1 The development proposals which were covered by the original application were:

The construction of a solid jetty up to 200m in length and 25m wide to the northwesterly side of the Mostyn Breakwater, together with a bankseat to facilitate the repositioning of the existing linkspan.

An extension to the already consented (10/07/ML/2) modification works to the existing Ro Ro berth from a 200m quay length to 270m in length and an increase of the infilled area from 1ha to 2.6ha of subtidal riverbed.

The reinforcement of the seaward (westerly) side of the Breakwater to provide protection against coastal erosion and the realignment of the sections of the Breakwater face by infilling 0.6ha of former NAABSA dock entrance and irregular areas of foreshore up to 0.2ha.

Depositing of about 350,000m<sup>3</sup> of dredged sand as fill material for the newly installed quay and jetty. It is proposed to carry out the dredging works under the existing Marine Licence (DML1542).

#### **4.2 Subsequent amendments to the application**

The Applicant proposed a variation to the Mostyn Energy Park Marine Licence application to remove the proposed solid jetty to the northwesterly side of the Mostyn Breakwater and reduce the scale of reinforcement of the seaward (westerly) side of the Breakwater. In addition the Applicant proposes to reduce the Area for infill on the landward side of the breakwater by 25m length and 25m wide to construct the quay and retain the linkspan.

The development comprises:

Reinforcement of identified areas on the seaward side of Mostynbreakwater by scraping back the rock and rubble toe allowing soft sediments to settle and mudflat to extend into these areas.

The deposit of breakwater rock armouring, (in a manner that creates ledges for roosting birds), and stone armouring to strengthen the breakwater.

Deposit of up to 188,750 m<sup>3</sup> material dredged under licence DML1542 for the construction of the quay.

Re-alignment of the breakwater face infilling the former NAABSA dock entrance.

Based upon advice from NRW TE on the potential environmental impact of this activity, MLT are satisfied that the proposed development does not constitute a material change to the conclusions of the ES and is within the parameters of the development as originally applied for.

## **5. The Environmental Statement (ES) – MWR 12 (1)(d)**

5.1 The marine licence application was supported by an Environmental Statement dated July 2013 which comprised of the following documents:

- Environmental Statement Vol 1 – Written text (July 2013)
- Environmental Statement Vol 2 – Figures (July 2013)
- Environmental Statement Vol 3 – Technical Appendices (July 2013)

Additional information was then provided following the initial consultation referenced:

Environmental Statement: Further Environmental Information (February 2014)

Bird Disturbance Monitoring of the 'RWE Pontoon' at the Port of Mostyn. First Yearly summary October 2013 to March 2014. Report R.2261 (Submitted via email 19/08/2014)

Amended Figure 6.14 (Marine Development Areas in context of Mostyn Energy Park) submitted 08/12/2014 via email.

Via email 25/11/2014:

Monthly Peak Black-tailed Godwit\_A1\_A2\_j.jpg  
Monthly Peak Curlew Low Water\_A1\_A2\_j.jpg  
Monthly Peak Dunlin Low Water\_A1\_A2\_j.jpg  
Monthly Peak Knot Low Water\_A1\_A2\_j.jpg  
Monthly Peak Oystercatcher All Tides\_Breakwater\_H\_I\_E.jpg  
Monthly Peak Oystercatcher Low Water\_A1\_A2\_J.jpg  
Monthly Peak Redshank All Tides C\_D\_G.jpg  
Monthly Peak Redshank All Tides\_Breakwater\_H\_I\_E.jpg  
Monthly Peak Redshank Low Water\_A1\_A2\_J.jpg  
Monthly Peak Redshank Low Water\_WeBs Areas.jpg  
Monthly Peak Shelduck Low Water\_A1\_A2\_j.jpg  
RWE All Species All Tides\_C.jpg  
RWE All Species All Tides\_D.jpg  
RWE All Species All Tides\_G.jpg  
Fig7\_Port\_Count\_Sections.pdf

Additional bird information:

Mostyn Energy Park Appropriate Assessment Update: Redshank Analysis sent via email 17/03/2015:

DGC All.jpg  
Monitoring around the Gym Pontoon.docx  
BrjAll.jpg  
Fig\_Port\_Count\_Sectons.pdf

Formal request to vary the Marine Licence application and supporting information 5 July 2016

Mostyn Energy Park: Appropriate Assessment Information Update. Project design review and revisions to impact assessment findings. (June 2016)

## 5.2 The Environmental Statement (ES)

The Environmental Statement submitted in support of the Marine Licence Application refers to an Environmental Impact Assessment (EIA) which incorporates the following chapters.

- Coastal and Estuarine Physical Processes
- Marine and Coastal Ecology
- Marine and Coastal Ornithology
- Fish, Fisheries Resources & Fisheries
- Water and Sediment Quality
- Flood Risk and Drainage
- Noise and Vibration
- Air Quality
- Landscape and Visual Effects
- Commercial and recreational navigation
- Road Transport
- Cultural Heritage and Archaeology
- Socio-Economic Effects
- Environmental Management and Monitoring
- Waste Management

5.3. The ES is considered to satisfy the requirements of Regulation 12 (1)(d) and Schedule 3 of the MWR

## **6. Public Notices – MWR Regulations 16(2)(g)**

6.1 Public notices advertising the project were placed in The Leader on 1<sup>st</sup> October and 8<sup>th</sup> October 2013, to notify interested parties of the proposed works and give any interested parties or members of the public an opportunity to make representation on the application as necessary.

6.2 The application documents were made available to the public at: Port Office, Port of Mostyn, Coast Road, Mostyn, Flintshire, CH8 9HE for a period of 42 days from 8<sup>th</sup> October 2013

6.3 No public representations were received

## **7. Consultation – MWR Regulations 17(1)(a)(iv)**

7.1 The Marine Licence application was consulted on 27 September 2013 for a period of 42 days. It was sent to the following Consultation Bodies:

- 7.2** The Centre for Environment, Fisheries and Aquaculture Science (Cefas), Natural Resources Wales (Technical Experts (TE)), Natural Resources Wales Planning, The Crown Estate (TCE), Ministry of Defence (MoD), Stena Line - Holyhead Port Authority, Royal Yachting Association (RYA), Maritime and Coastguard Agency (MCA), Chamber of Shipping, Trinity House (TH), NATS – NERL Safeguarding, Department for Transport (DFT), Flintshire Planning Authority (County Council), Flintshire Local Biodiversity Officer (County Council), Royal Society for the Protection of Birds (RSPB), Royal Commission on Historic Monuments Wales, Dave Andrew Waterways Manager and the Welsh Government to: Marine Enforcement Officers, Energy Branch, Cadw.
- 7.3** The following organisations submitted comments: NRW Technical Experts, Cefas, The Royal Commission of Historic monuments Wales, Flintshire County Council, RSPB.
- 7.4** Consultees who did not provide a response were assumed to have no comment

## **8. European Protected Sites**

- 8.1** The proposed development location is within a European Protected Site.
- 8.2** However, the effects of proposal on the following European Sites, their features and conservation objectives have been considered by NRW during the licence determination:
- Dee Estuary Special Area Conservation
  - Dee Estuary Special Protection Area
  - Dee Estuary Ramsar
  - River Dee and Bala Lake Special Area Conservation
  - Llyn Tegid Ramsar
  - North Anglesey Marine pSAC (Harbour Porpoise (*Phocoena phocoena*))
- 8.3** A Habitats Regulations Assessment was undertaken and potential significant effects on features of the European Sites listed above could be ruled out. It was concluded that the proposal, when considered alone and in-combination, will not adversely affect the integrity of the European site(s) concerned.
- 8.4** Further details are described within the Habitats Regulations Assessment.

## **9. Issues arising for consideration of the Environmental Statement, Marine Licence Application and representations received**

- 9.1.1** In taking a Regulation 22 EIA consent decision, we have considered the issues that have been identified following consideration of the ES, representations from

consultation bodies, and any resultant supplementary information provided in response by the applicant.

- 9.1.2** The material issues that were highlighted by the ES and consultation process and the extent to which they have been addressed are detailed in this section

## **9.2 Coastal and Estuarine Physical Processes**

- 9.2.1** The RSPB requested clarification on the timing of dredging events required for the construction of the quay and jetty. ABPmer, on behalf of the Applicant, clarified via submission of Further Environmental Information (February 2014) that the infill for the dredge arisings will be derived from the existing channel maintenance dredge regimes. There would be no additional dredging undertaken permitted by this licence to provide construction material for the development of the quay.
- 9.2.2** **MLT clarified with the RSPB that Marine Licence 12/38/ML (now DML1542) currently permits the dredge of the approach channel at the Port of Mostyn and the deposit of material at Mostyn Deep. Marine Licence 11/61/ML permits plough and water injection dredging within the Port of Mostyn Harbour Authority Area. Whilst these applications were assessed in combination for the proposed project no additional dredging will be undertaken for the construction of the quay and the removal of the jetty from the proposal negates the need for a deeper dredge in the Harbour Authority Area for the berthing of vessels. Therefore, the MLT consider this issue to have been resolved.**
- 9.2.3** Cefas raised concerns that the dredging consents would allow the applicant to dredge the approach channel to 4.0m below Chart Datum (CD) and the harbour area to 8.0m below CD while the modelling was conducted with a channel and berthing areas at 3.0m and 6.5m below CD respectively. ABPmer on behalf of the Applicant, have clarified via submission of Further Environmental Information (February 2014) that initial model runs used a channel dredge depth of 4.0m below CD but that this configuration produced a marked dominance of the effect of the channel, effectively masking the effect of the development. The channel depth was therefore adjusted to 3.0m below CD to simulate a more representative morphological case. This depth is considered realistic based upon the rapid rates of infill and the fact that 3.0m below CD is the current optimum planned dredge depth. In addition, ABPmer have referenced reports containing model runs with a 4.0m channel. Cefas responded on 17 March 2014 advising that the modelling undertaken is highly conservative but are content that the modelling assessment was appropriate. Further assessment may be required in the future if the applicant wished to dredge to a level below 6.5m CD for further applications.
- 9.2.4** **The Marine Licensing Team (MLT) consider this issue resolved by the clarification provided and modelling at 3.0m below CD was considered**

**appropriate. In addition the removal of the jetty from the proposal negates the need for a deeper dredge in the Harbour Authority Area for the berthing of vessels.**

**9.2.5** NRW Technical Experts (TE) indicated that the location of the proposed development was in a 'Hold The Line' policy unit area of Shoreline Management Plan (SMP2) for the North Wales and North West England. The Habitats Risk Assessment associated with the Shoreline Management Plan concluded that the implementation of certain 'Hold the Line' Policy Units would result in European Protected Site habitat loss due to coastal squeeze. These are predicted not likely to manifest themselves until sometime towards the end of the second epoch (25-50 years time) and possibly not until the 3<sup>rd</sup> epoch (50-100 years). However based on a coastal squeeze assessment undertaken by NRW TE using best available information it was concluded that there would be no coastal squeeze attributed to this project to this section of the PU5.1 due to the topography of the area – the naturally high ground landward of the Dock Area. All of the losses referred to coarsely in the HRA are likely to refer to the northern end of PU5.1.

**9.2.6 MLT consider that the application is in accordance with SMP2 policy of Hold The Line and that the issue of potential European Protected sites habitat loss has been resolved due to the conclusion of NRW TE coastal squeeze assessment.**

### **9.3 Marine and Coastal Ecology**

**9.3.1** RSPB considered that the possible introduction of non-natives during construction phase must be considered and addressed and species such as *Didemnum vexillum* should be considered. ABP Mer on the Applicants behalf advised Marine Non-natives Construction operators will be required to adhere to the same, established, ballast water treatment methods for their vessels as those that would use the Port during the operational phases (see Section 6.57 page 244 of the ES). The construction vessels will not be from a large range of geographic locations but are expected to be mainly from northern Europe (see also Chapter 14 and page 532 of the ES for more detail). The specific consideration on the issues associated with non-native species introductions will be provided by NRW TE.

**9.3.2 MLT consider it appropriate to include a condition with regard to marine non-natives which will require the Licence Holder undertake a bio-security risk assessment containing an investigation of the pathways that may carry non-native organisms to the works area prior to commencing construction activities. It should include measures to reduce the risk of the introduction of invasive non-native species and periodic monitoring of the species growing on the structures with further action to be taken if invasive non-natives are found. The Bio-security Risk Assessment must be available for inspection upon request.**

- 9.3.3** RSPB stated effects of disturbance/collisions on mammals during construction must also be considered and addressed. The Applicant responded within "*Further Environmental Information*" (February 2014) advising that the risks from vessel impacts on marine mammals are low during the construction phase given the applicability of the key considerations that have already been highlighted for operational vessels and include the slow speeds of the vessels, the limited occurrence of mammals in the vicinity of the construction site, the agility of marine mammals and, additionally, the absence of any jack-up barges with ducted propellers during the construction phase. It is of course relevant that this is already an active Port that already services jack up barges and a range of other vessels. As proposed by the RSPB (see RSPB comment below on Sections 6.4.4 and 6.5.7) and agreed separately between the RSPB and ABPmer on behalf of the Applicant by telecom in December 2013.
- 9.3.4** MLT sought advice from NRW TE regarding the issues raised by RSPB associated with marine mammals. NRW TE do not consider impacts to marine mammals as being an issue for the proposed development.
- 9.3.5** **MLT consider this issue resolved given that this is already an active port and there are a limited occurrence of mammals in the vicinity of the site, therefore the risks from vessels on Marine Mammals are low during both the construction and operational phase of the development. MLT also acknowledge that the proposed development has significantly reduced in size since the original application was submitted further reducing the risk to marine mammals due to the reduction in the number of vessels likely to use the facility.**
- 9.3.6** RSPB consider that no evidence has been provided to assess the relationship between sediment changes and benthic invertebrate populations and shorebird feeding potential. The Applicant responded within "*Further Environmental Information*" (February 2014) advising there will be no loss of mudflat from within the estuary and there will be localised changes to the way in which the mud grades into the toe of the breakwater. Currently the habitat grades from stable mudflat to a less consolidated often more fluid sediment closer to the breakwater. In the areas directly at the toe of the breakwater there is soft fluid mud overlying gravel/slag/shell at a shallow depth. These spatial physical changes to the mudflat are likely to result in a net reduction in invertebrates and prey species closer to the breakwater. However, the overall mudflat biotope is largely unchanged in this marginal zone. Once the toe is scraped back this change will still be evident but will be less gradual. The ecological consequences (for prey species) is likely to be negligible. The toe of the breakwater is used as a roosting area (especially Area E). Roosting areas will still be available after the works are completed. The introduction of armouring along the breakwater will introduce more roosting areas that are more stable, are at higher elevations and are longer-lived (i.e. less subject to erosion and collapse).
- 9.3.7** **The MLT consider this issue resolved by the clarification provided within "*Further Environmental Information*" (February 2014) submitted in support of the application.**

**9.3.8** NRW Technical Experts raised the issue that any loss of the designated feature “mudflats and sandflats not covered by seawater at low tide” would be considered an adverse effect on site integrity to the Dee Estuary Special Area of Conservation.

**9.3.9** **MLT agreed that any loss of the SAC habitat feature would have an adverse effect on site integrity and could only be licensed if the proposed development application were to go through the IROPI (Imperative Reasons of Overriding Public Interest) process.**

**9.3.10** NRW TE identified two aspects of the project that contributed to the loss of the SAC:

- The boundary of area D2 encroached into the SAC
- The construction of the jetty and its associated dredging requirement for the creation of berth 8 alongside which is integral to the scheme.

The Applicant agreed to modify the boundary of the scheme in line with NRW TE suggestions so it did not encroach into the SAC and there would be no loss from this Area

The Applicant requested to vary the Marine Licence application removing the jetty from the proposal and consequently the berth 8 dredging requirement preventing the loss of SAC feature. (Formal request to vary the Marine Licence application and supporting information 5 July 2016)

**9.3.11** **The MLT consider this matter resolved with the amendment to the works boundary provided by the Applicant and the request to vary the Marine Licence application.**

**9.3.12** NRW TE raised concerns with regard to whether the one off removal of 350,000m<sup>3</sup> of dredged material for the use as infill for the construction of the quay would be likely to have significant effects on the protected sites’ features within and beyond the locality of the Harbour Authority Area. NRW TE commissioned an external consultancy to review the assessment of coastal processes within the Environmental Statement. Based on this review significant effects on the ‘Estuaries’ SAC feature are unlikely as a result of the use of approximately 350,000m<sup>3</sup> of sand, sourced from that dredged under existing licence DML1542 (previously 12/38/ML/1) as fill material for the new quay.

**9.3.13** **MLT consider this issue resolved following the outcome of the assessment of coastal processes within the Environmental Statement. No more than 350,000m<sup>3</sup> of dredged material may be removed from the estuary in total without further analysis in combination with other licences and any other plans or projects. The amendments to the proposed Marine Energy Park development Marine Licence application reduced the quantity of material required as fill to 188,750m<sup>3</sup>.**

## 9.4 Marine and Coastal Ornithology

**9.4.1** RSPB and NRW TE raised concerns regarding the reporting, analysis and presentation of the marine ornithological data for specific designated species and the lack of references and literature to support the conclusions of the Environmental Statement. The Applicant provided clarification and detailed analysis as required by NRW TE. NRW TE advised that the monitoring data show the importance of count sectors C (closest to the pontoon) and J (closest to the jetty) for autumn passage redshank. However, there is uncertainty in determining if the high level of decline in passage redshank after the pontoon was installed was due to disturbance activities or natural fluctuation in numbers of birds. Due to the view that passage redshank are potentially more vulnerable to disturbance due to their energetic requirements and are less likely to habituate NRW recommends that the current screening measure using a berthing plan is continued at the pontoon(11/76/ML) and is conditioned as a requirement at the proposed jetty.

In addition the Applicant has committed to use personnel exclusion fencing to direct staff along certain sections of the Port estate and keep people away from the edge of the breakwater where roosting birds may be using the ledges.

**9.4.2** **MLT consider the data issues resolved on receipt of the requested analysis prepared prior to the alterations to the proposed development. The removal of the jetty from the proposed development reduced the risk of disturbance and consequently the need for the associated condition.**

**9.4.3** RSPB and NRW TE raised concerns regards the potential disturbance of migratory bird species during piling operations. The ES states that where possible a 'vibro-piling' technique will be used but that impact piling will also be required on occasions. The relative extent to which either technique will be used and their impacts is unclear. It is suggested that piling works be restricted to outside of the Autumn passage period (August, September and October) but, as the numbers of passage migrants in the vicinity appear to be considerably lower in the spring passage period, vibro-piling supplemented by impact piling should be allowed to continue through the Spring passage period. This strategy would enable piling works to proceed without interruption through to the start of the autumn passage period while then avoiding significant disturbance to SPA bird features during the period when they are most abundant.

**9.4.4** **MLT consider it appropriate to draft a condition restricting piling works to outside of the autumn passage period.**

## 9.5 Fish, Shellfish Resources & Fisheries

**9.5.1** Cefas raised concerns regards the impacts of elevated Suspended Sediment Concentrations (SSC) and re-suspension of sediments on shellfish species. Clarification was sought on the modelling undertaken. The Applicant provided

clarification on the modelling process and the advised that the conclusions about SSC and water quality contamination were based on real-world and non-modelling factors such as: the results seen from past SSC monitoring work (including the work done at the time of the previous Port of Mostyn reclamation), the results of past assessment work for the already consented development at the Port (see Section 9.5.16); and the results of sediment contamination analyses (see Section 9.4.3). Also appropriate embedded mitigation will be applied (e.g. bunding to retain sediments during the infill), which provide a reassurances of no significant adverse effect in this case. Cefas were satisfied with this response.

- 9.5.2 MLT consider this issue resolved by the clarification provided within “*Further Environmental Information*” (February 2014) submitted in support of the application.**
- 9.5.3** Cefas noted that there was no evidence of consultation with the local fishermen within the ES. The Applicant advised that the Port had attempted to open communication channels with local fishermen previously but had received no response. Which could be because the submitted application is a revision to a similarly consented application and no extra comment that local fishermen would wish to make.
- 9.5.4 Following advertisement in the local papers encouraging public engagement, no further comments were received from local fishermen. Considering this is already an operational Port MLT consider no further action is required.**
- 9.5.5** Cefas identified that lamprey ammocoetes, ‘larvae’, following hatching drift downstream to areas of low velocity and silt or sand substrate and can remain burrowed in the stream bottom, living as filter feeders on algae and detritus for 2 to 7 years. This life stage is entirely relevant and should be included in the section. Following submission of Further Environmental Information (February 2014) provided in support of the application, Cefas agreed that in this case it does not alter the assessment conclusions (Section 8.5.3.) which are based on extent of habitats affected and nature of the substratum and environment.
- 9.5.6 MLT consider that the clarification provided within “*Further Environmental Information*” (February 2014) submitted in support of the application has addressed the concerns raised.**
- 9.5.7** Cefas and NRW TE raised concerns in relation to the method of piling - particularly percussive and the timing of piling operations throughout the 24 hour period that are to be undertaken and their effects on salmon smolts and returning adult salmon and sea trout and other sensitive species. The Applicant advised within Further Environmental Information (February 2014) provided in support of the application that percussive piling will only be undertaken during the latter stages of any piling process with vibropiling being the predominant method of piling. Piling will only take place for about 4-6 hours per day within daylight hours (between 7am and 7pm) – (peak salmon and sea trout migration takes place *at night* between June to October). Following further discussion between the Applicant and Cefas the applicant agreed

that percussive piling in May could be prevented to protect the salmon smolts (Email 20/08/2014). Cefas and NRW TE agreed that adhering to appropriate timing restrictions would minimise the disturbance to specific species.

**9.5.8 MLT consider it appropriate to include a condition to require the Licence Holder to vibro-pile as standard however when percussive piling may be required soft start procedures are considered necessary. MLT consider it appropriate to include a condition to require the Licence Holder to adhere to annual restrictions on the timing of percussive piling operations to protect the designated site species feature.**

**9.5.9** Cefas required clarification on how the 'minor' assessment for Atlantic salmon was derived. The Applicant clarified through submission of "*Further Environmental Information*" (February 2014) that a standard EIA framework methodology was followed which had been developed from a range of sources, statutory guidance, consultations and the Applicant's consultants extensive EIA project experience. Given that the sensitivity of salmon to noise is lower than twaite shad, the impacts have a slightly lower level of significance despite their level of importance being higher. (NB the work will be done by vibropiling which further reduces/mitigates the level of exposure and sensitivity). Cefas were satisfied with this response.

**9.5.10 MLT consider this issue resolved by the clarification provided within Further Environmental Information (February 2014) submitted in support of the application.**

**9.5.11** Cefas consider the maximum duration of any piling expected is approximately 12 hours. This could provide a regular daily non piling 'window' for migratory species to pass along the estuary, which could be added mitigation for migratory species such as Atlantic salmon if formalised as a licence condition, however the suitability of this approach for mitigation would depend on environmental conditions. If extreme environmental conditions should occur (of low flow and extended warm temperature) then percussive piling should be halted. The Applicant clarified through submission of "*Further Environmental Information*" (February 2014) provided in support of the application that as the impacts to salmon have been assessed as minor, the impacts are not of a level that would require specific mitigation and note that vibropiling techniques will be used predominantly and will be intermittent in its nature. In addition piling will only be undertaken for a period of between 4 – 6 hours per day.

**9.5.12 MLT consider it appropriate to include a condition to require the Licence Holder to vibro-pile as standard however when percussive piling may be required soft start procedures are considered necessary. MLT consider it appropriate to include a condition to require the Licence Holder to adhere to ensure there is a 12 hour break in piling activities in any 24 hour period to allow a window of passage to migratory fish. However the suggestion to halt piling altogether at times of low flow and high temperatures would be unenforceable and unreasonable.**

**9.5.13** Cefas advise that the construction of Burbo Bank windfarm extension should be included in the cumulative effects section with regards to noise impacts on migratory fish. Burbo Bank Extension has accepted mitigation for adult salmon in the form of a daily non-piling period. This, however, is only considered to be partial mitigation and hence there is a possibility for overlap and cumulative effects with this project. The Applicant notes the Fish and Shellfish Ecology chapter of the Burbo Bank Extension ES assessed noise impacts on diadromous migratory fish as slight adverse significance, which is not significant in EIA terms. Impacts to migrating salmon and sea trout in the River Dee and River Mersey were assessed as moderate/large adverse in smolt and slight/moderate adverse in adults. However, the developer for Burbo Bank extension has committed to a piling restriction between 1st April and 31st May in order to mitigate any effect of noise on sole, salmon and sea trout smolts, reducing impacts to slight adverse. Consultation is also ongoing to explore the potential for mitigation measures to minimise adverse effects on adult salmon and sea trout within the Dee Estuary. The Applicant does not anticipate cumulative effects with the Burbo Bank extension project based on the conclusions of the ES.

**9.5.14** The Burbo Bank windfarm extension has been considered in the Appropriate Assessment and MLT consider the proposed mitigation on the method of piling and daily & annual timing restrictions are adequate to address any cumulative effects on the migratory fish species. MLT also acknowledge that the proposed development has significantly reduced in size since the original application was submitted further reducing the scale of impact on migratory fish species.

## **9.6 Water and Sediment Quality**

**9.6.1** No comments received.

## **9.7 Flood Risk and Drainage**

**9.7.1** NRW TE considered the flood risk and drainage section of the ES (Chapter 10) and were satisfied that the development was acceptable in accordance with the requirements of TAN 15 Development and Flood Risk (July 2004).

**9.7.2** Additional comments were received by NRW TE regarding Shoreline Management Plan 2 reported under the Coastal and Estuarine Physical Processes section of this document.

**9.7.3** MLT consider that the application is in accordance with SMP2 policy of Hold The Line and that the issue of potential European Protected sites habitat loss has been resolved due to the conclusion of NRW TE coastal squeeze assessment.

## 9.8 Noise and Vibration

- 9.8.1 The RSPB advised of the potential disturbance to marine mammals during the construction phase of the proposed development and suggested a European Protected Species Licence may be required. The Applicant reviewed the noise generation of impact piling and the disturbance thresholds of marine mammals and concluded that there would be no significant adverse effect. The Applicant also noted that marine mammals are very infrequently recorded in this part of the estuary. The use of vibropiling for the majority of the piling operations suggests the impacts of noise on marine mammals will be insignificant and no disturbance is anticipated. The piling window is likely to be for approximately 4 – 6 hours per day.
- 9.8.2 **MLT consider it appropriate to include a condition to require the Licence Holder to vibro-pile as standard however when percussive piling may be required soft start procedures will be considered necessary. This is in order to minimise disturbance on any mobile species. Based on advice received from NRW TE the MLT do not consider there to be disturbance to EPS and no EPS licence would therefore be necessary.**
- 9.8.3 Cefas required clarification on underwater noise modelling and following iterative discussion via submission of “*Further Environmental Information*” (February 2014) agreed that providing mitigation measures were in place then no significant adverse effect to marine ecology should occur and therefore, further modelling was not necessary.
- 9.8.4 **MLT consider it appropriate to include a condition to require the Licence Holder to vibro-pile as standard however when percussive piling may be required soft start procedures will be considered necessary. MLT acknowledge that the proposed development has significantly reduced in size since the original application was submitted further reducing the effects of noise on marine ecology.**

## 9.9 Air Quality and Dust

- 9.9.1 No comments were received

## 9.10 Landscape and Visual Effects

- 9.10.1 No comments were received

## 9.11 Commercial and Recreational Navigation

- 9.11.1 NRW TE highlighted a number of statements requiring amendment or updating within the ES in support of future Marine Licence applications for the Port of Mostyn to which

the Applicant agreed. NRW TE would wish that the Port continues to work closely with the Dee Conservancy Harbour Master in addressing the points raised to his satisfaction and in dealing with further navigation issues as they arise. The Port of Mostyn have agreed to continue to work closely with the Dee Conservancy and trust that any further matters arising can be dealt with satisfactorily at the regular meetings of the respective Harbour Masters.

**9.11.2 The MLT consider the issues raised by NRW TE resolved by clarification provided within Further Environmental Information (February 2014) submitted in support of the Marine Licence application.**

**9.11.3** The Marine and Coastguard Agency (MCGA) advised that the works are unlikely to have an adverse impact, with regards to safety of navigation provided a number of conditions are included within the licence.

**9.11.4 MLT considered the suggested conditions and where appropriate will include them within the licence.**

## **9.12 Road Transport**

9.12.1 No comments received

## **9.13 Cultural Heritage and Archaeology**

**9.13.1** The Royal Commission on Ancient and Historic Monuments of Wales (RCHAMW) raised concerns that the Environmental Assessment failed to review the potential for evidence for submerged Paleolandscapes. The Applicant submitted Further Environmental Information (February 2014) advising that the Cultural Heritage study, informing Chapter 16 of the ES submitted with the Marine Licence application, consulted a wide range of available sources including a number of CPAT reports which discussed the Port and evolution of the coast line, notably the Clywd Coastal Survey 1995/6 and 1997 provided by CPAT; these studies focus on the land and LE11540/LET-002 2 04-02-14 inter-tidal archaeology and cover the Port of Mostyn. Information was also obtained from the recent English Heritage and Cadw sponsored West Coast Palaeolandscapes project which was published in 2011 (West Coast Palaeolandscapes by Finch and Gaffney 2011). Whilst this did not include the application area or the Dee Estuary, extrapolation from the report suggests that the greater potential for the survival of palaeolandscapes occur off northern coast of the Wirral with the coast line of the Dee being considered to be of lesser potential (Finch and Gaffney, 2011, 87, Figure 55). Geological and geomorphological information for the Dee estuary that is pertinent to the issue of palaeolandscapes is provided in Chapter 5 of the ES. RCHAMW provided no further comment.

**9.13.2 The Marine Licensing Team (MLT) consider this issue resolved by the clarification submitted entitled Further Environmental Information (February 2014).**

**9.13.3** RCHAMW noted the development proposes to undertake steel sheet piling through ‘the superficial geological strata’ (e.g. paragraphs 2.6.3. and 2.6.12) but no depth is suggested. Clarification was sought on the depth of piling. The Applicant clarified that the depth of piling will vary between 12-17m into the ground based on the length of the piles (circa 30m), the designed Marine Energy Park elevation (11.5m) and the existing ground levels at the construction areas towards the outer end of the Breakwater (1m below to 6m below Chart Datum (CD)). Based on the known depths of the local drift geology (using the 2010 borehole logs) it is therefore expected that the piling will not reach the solid strata. RCHAMW provided no further comment.

**9.13.4 MLT consider this issue resolved by the clarification provided within Further Environmental Information (February 2014) and acknowledge that the number of piles required for the development has reduced due to the removal of the jetty from the application.**

**9.13.5** RCHAMW were concerned that the mitigation measures agreed with CPAT and documented in the Environmental Impact Assessment submitted in support of the application, did not include a Protocol of Reporting Finds from the marine operations – as now standard good practice for developments associated with renewable energy. The Applicant responded advising that no excavations are to take place in the development areas. In the case of works to retain and reinforce the seaward face of the Breakwater wall, it is proposed to draw back the rubble-strewn toe of the Breakwater and place armour stone to form a new wall face. This would not involve the removal or disturbance of underlying geological materials.

**9.13.6 The proposed scheme does not involve the excavation of material from within the area of development. The area has been subject to historic dredging under Marine Licence 11/61/ML and in the absence of any recorded features found within the application area to be affected by land reclamation it is considered mitigation works are not required. MLT consider it appropriate to include a condition to require the Licence Holder to require the applicant to report any archaeological finds to the relevant authorities should any objects of interest be discovered during construction.**

## **9.14 Socio-economic effects**

**9.14.1** No comments received

## **9.15 Environmental Management and Monitoring**

**9.15.1** No comments received

## 9.16 Waste management

**9.16.1** NRW TE advised that if any waste is to be transported on or off site all relevant waste permissions must be in place.

**9.16.2** MLT will ensure guidance is provided to the applicant about the relevant waste legislation. Conditions referring to other legislation cannot be placed within the Marine Licence.

## 10. Regulatory Evaluation and EIA consent decision

In considering the application for the amended Marine Energy Park Development at the Port of Mostyn the following has been considered:

- The ES, including the mitigation measures proposed;
- The relevant provisions of Marine and Coastal Access Act 2009 and
- The representations received.

Through consideration of these, a full and detailed assessment has been made of the potential direct and indirect effects of the proposals on human beings, fauna and flora, soils, water, the landscape, material assets and the cultural heritage including any risk to the integrity of nearby sites of conservation importance.

The Marine Licensing Team has determined that the environmental impacts of the Marine Licence application for the development at the Port of Mostyn have been adequately identified, described and assessed and that mitigation can be secured which would be sufficient to allow Marine Licence application to be approved.

### Sign off

Signed: 

**Zoe McMellin – Permitting Officer, Marine Licensing**

**Date:** 05/08/2016

**Approved by: Eleanor Smart – Senior permitting Team Leader, Marine Licensing**

Signed: 

**Date:** 11/08/2016