

# FIVE ESTUARIES OFFSHORE WIND FARM

# 10.40 APPLICANT'S COMMENTS ON DEADLINE 5 SUBMISSIONS

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### **DEFINITION OF ACRONYMS**

Term	Definition
AIS	Air Insulated Substation
CBRA	Cable Burial Risk Assessment
СРО	Compulsory Purchase Order
CSIP	Cable Specification and Instillation Plan
СТМР	Construction Traffic Management Plan
DCO	Development Consent Order
DML	Deemed Marine Licence
DWR	Deep Water Route
EACN	East Anglia Connection Node
ECC	Essex County Council
ES	Environmental Statement
GI	Ground Investigation
GIS	Gas Insulated Substation
HAT	Highest astronomical tide
HGV	Heavy Goods Vehicle
ICES	International Council for the Exploration of the Sea
IHLS	International Herring Larval Survey
LBBG	Lesser Black Backed Gull
LEMP	Landscape and Ecological Management Plan
LGPL	London Gateway Port Limited
MCA	Maritime Coastguard Agency
MCAA	Marine and Coastal Access Act
MHWS	Mean High Water Springs
MMMP	Marine Mammal Mitigation Protocol
MMO	Marine Management Organisation
MWSQ	Marine Water and Sediment Quality
NF	North Falls Offshore Wind Farm



Term	Definition
NFFO	National Federation of Fishermen's Organization
NGET	National Grid Energy Transmission
NIP	Navigation and Installation Plan
OFTO	Offshore Transmission Owner
OLEMP	Outline Landscape and Ecological Mitigation Plan
ONSS	Onshore Substation
PINS	The Planning Inspectorate
PLA	Port of London Authority
PTS	Permanent Threshold Shift
SAC	Special Area of Conservation
SAR	Search and Rescue
SNS	Southern North Sea
SSSI	Site of Special Scientific Interest
UKHO	UK Hydrographic Office
UWN	Under Water Noise
VE	Five Estuaries Offshore Wind Farm



#### 1. INTRODUCTION

- 1.1.1 As per the Rule 8 Letter [PD-009] published by the Examining Authority on 25 September 2024, comments on any submissions received at Deadline 5 are to be included with submissions for Deadline 6.
- 1.1.2 This document has been prepared to set out the response of Five Estuaries Offshore Wind Farm Limited ('the Applicant') to submissions made at Deadline 5 with regards to the Five Estuaries Offshore Wind Farm Project ('the Project'), application reference: EN010115.
- 1.1.3 The Applicant has responded to Natural England's Deadline 5 submissions in a separate document: 10.40.1 Applicant's Comments on Natural England's Deadline 5 Submission.
- 1.1.4 The Applicant has only responded to points where it believes it would be helpful to the ExA. Rather than copying across whole documents, the Applicant has presented the relevant text or a summary of the points made in the Deadline 5 submissions and then responded to them (while being mindful of the context of those excerpts and being careful not to lose context in summaries).
- 1.1.5 The absence of commentary on a submission should not be taken as implication that the Applicant supports its content.



### 2. ESSEX COUNTY COUNCIL [REP5-092]

Ref	Summary of Deadline 5 submission OR	Applicant's comments
	Excerpt of Deadline 5 submission	
ECC-01	In their response the Applicant has indicated they are not directed at them, but at NGET. However, the ExA are asked to note that both Five Estuaries, as is considered here, and North Falls, which is to enter Preliminary Hearing shortly, are wholly dependent on the EACN for a connection to the wider Grid, without it neither will be able to be implemented as no alternative connect point is proposed. Here it is also correct to point out, and indeed as is public knowledge, that the EACN will also provide a connection point to another DCO proposal which is being developed to accept power from the Tarchon Interconnector Project. This development will, and here we quote from their web page: "create a direct power link between Germany and Great Britain, connecting the two countries' energy markets and increasing the security and reliability of their electrical systems in addition to facilitating the integration of intermittent renewable energy sources like wind and solar". The Joint Councils at initial meetings with Tarchon and their consultants, understand that the proposal involves laying a seabed cable between Germany and the UK, making landfall at a currently undefined place on the Tendring peninsula before making an underground cable connection to the EACN node. Hence the EACN provides a potential link not only to Five Estuaries and North Falls, but to Tarchon also. Therefore, other developments as well as the one considered here rely wholly on the EACN for connection to the wider grid. We recognise that this proposal is not before PINS at this time as a live DCO, but we anticipate it will be prior to the formal decision on this DCO.	This is noted by the Applicant.
ECC-02	The Joint Councils responded with the information as requested at D.04 ref REP4-046. It is also correct that the root protection areas of trees as shown in the Constraints Plan need protection.	This is noted by the Applicant.
ECC-03	The Joint Councils in their D04 response at REP4-046 considers that the best solution is to seek to reduce average speeds along Bentley Road to 40mph or lower for the life of the construction period, from the current unrestricted 60mph limit, to reduce noise and vibration to properties adjoining the carriageway.	This is noted by the Applicant.
ECC-04	ECC consider that such controls would be adequate, the Applicants make reference in the CoCP at REP1-044 that such would be consistent with BS 5228 - Part 1: Noise and Part 2: Vibration which is the appropriate test. We also note that the CoCP is one of the control documents as may be attached to any Consented scheme.	This is noted by the Applicant.
ECC-05	See response to SEE.2.01 above. Whilst reducing speed limits would have some benefit this is unlikely to lead to a significant reduction on speed in isolation eg, other design considerations, such as traffic calming measures which are neither proposed nor considered appropriate here in this largely rural area. ECC as the Local Highway Authority, would encourage users accessing the site are recorded and manage speeds along Bentley Road, as part of the CoCP. Reducing traffic speeds to below 40mph would have a benefit on noise and vibration but would need to be ensured that this is enforceable.	The Applicant notes that the outline CTMP [REP5-035] includes a number of measures for managing the traffic flow and compliance along Bentley Road. Alongside new signage that would be installed for the 40 mph speed limit, the outline CTMP [REP5-035] states (at Section 4.4.1) that drivers of delivery vehicles would be advised of speed limit requirements in a driver delivery pack that would be issued by the Principal Contractor. Section 4.42, where vehicles are fitted with Global Positioning System (GPS) monitoring devices, this would record the routes, timing and speed of vehicles when making deliveries. Section 8 of the oCTMP sets out the approach of the project to enforcement in the event of breaches to the CTMP and steps that would be taken.
	It is difficult to assess the cumulative noise impact of the schemes in combination as ECC further complicated by the fact that Five Estuaries propose, under the "Rochdale Envelope", two different options for this substation, added to the fact	In 6.3.9 Airborne Noise and Vibration [APP-091], the assessment of cumulative construction noise for the onshore substation (with NF and EACN) was found to be negligible and any monitoring would be unnecessary. The Code of Construction Practice [REP5-034] sets out the relevant



	that North Falls propose the same, and the proposals for the larger EACN are not developed at this time. Hence it is necessary for the Applicant to express a qualified professional assessment of likely impact. The Joint Councils don't raise any issue with the conclusion that effects would be minor given the information it has, but would wish to see a commitment from the Applicant to monitor both construction activities and the noise as generated by the substation which is lacking from the latest iteration of the Code of Construction practice at REP1-043 (clean)	controls measures to be used during construction to manage noise more generally in line with the relevant guidance. The Code of Construction Practice only applies during construction activities. 10.36 Onshore Substations Operational Noise and the Outline Noise Complaints Protocol [REP5-088] sets out the process to be followed in the event of a noise complaint during operational of the onshore substation to rectify any faulty plant. Compliance monitoring would not add to this as it would only test noise of newly installed plant.
ECC-05	The Joint Councils note the applicant's submission at D04 with the reference REP4-038 which shows planting progression over time. However, this is not set against any of the as proposed substation elevations, which will be significant in scale and form for whichever option is implemented, hence the impact and suitability of the same is difficult to assess.	The Applicant has prepared three cross sections to show the relationship between visual receptors and how the mitigation planting would grow sufficiently to screen the onshore substation at years 5, 10 and 15. These have been included in 9.22 Outline Landscape and Ecological Management Plan – Revision D, submitted at Deadline 6. The cross sections illustrate the Five Estuaries onshore substation using the GIS model (comprising larger buildings compared to the AIS model) to cover the worst-case scenario. The optionality to select either GIS or AIS as the preferred technology is retained by the Project.
ECC-06	ECC GI Team with the opportunity to assess the changes to the Five Estuaries Draft DCO (REP4-004 Clean). We welcome the suggested edits and amendments as outlined in the Schedule of Changes to the draft DCO (revision E Deadline 4), including: • Changes to the heading for requirement 5 on pages 12 and 48 for clarity and inclusion of the works, design, and landscape to the Onshore Substation. • The addition to sub-paragraph 8 on page 48, stating that the landscaping of Work No. 15 must be maintained throughout the operation of Work No. 15B. • The strengthened wording for Biodiversity Net Gain 20 (page 52), ensuring no stage of the onshore works (Work No. 15) may commence until a net gain strategy is approved by the relevant planning authority. • Welcome the inclusion and reference to the Essex GI Strategy and Standards in the Outline LEMP and that the Nine GI standards will inform the development of mitigation proposals post-consent, which will inform the Final LEMP.	This is noted by the Applicant.
ECC-07	ECC Suds team have raised the following points with regard to the Onshore Substation:  In addition to the information provided we would like to see the modelling for the drainage system for all events up to the 1in100 plus climate change.  Confirmation of the discharge rate is required.  How will the permanent access road drain, will it be unrestricted? Is the swale sufficient treatment for the road?  In accordance with the Land Drainage Act 1991, Section 23 consent will be required for the headwalls and culverts.  When will infiltration testing be undertaken? It is preferable to undertake tests in winter months when worst case scenario can be established.	The Applicant has conducted a design exercise to outline the drainage strategy at the substation site. The exercise has been conducted in collaboration with North Falls to ensure the cumulative impact of both projects is considered. This work has previously been presented to ECC Urban Drainage Team in December 2023. The Applicant proposes to refresh this topic with ECC directly. The drainage strategy and proposals are set out in Annexes A and B of 9.4 Onshore Substation Design Principles Document – Revision B submitted at this deadline.  Existing conditions such as geology, hydrology and existing flood risk have been considered to support the development of the drainage strategy. Sustainable Drainage Systems (SuDS) have been utilised to mitigate the impact of the development on both flow rate and water quality from the site, taking consideration of both the construction and operational phases. Filter drains, swales and an attenuation volume (pond, detention basin or similar) have been proposed to manage runoff from the construction and operational sites.  An attenuation volume has been sized to accommodate stormwater up to the 1 in 100-year design storm event (45% climate change allowance) once the site is operational. An additional, temporary attenuation volume hydraulically linked to the permanent has been sized in which the total volume
		is sufficient to accommodate the 5-year (10% climate change allowance) event for both the construction compound and permanent substations as a worst case. This secondary volume could be retained or filled in after completion of construction, noting the ecological preference to create



new water features as part of the landscape and ecological proposals, as set out in 9.22 Outline Landscape and Ecological Management Plan - Revision D, submitted at Deadline 6. The drainage assessment is based on current available information regarding the proposed substation and construction compound site and any changes to these proposals will require the drainage strategy to be revised. If swales are used for the road drainage there will be pollution control mechanisms in place to ensure that oil is not transmitted to water bodies in the event of a pollution incident. The Applicant notes that in line with ongoing discussions with Essex County Council, Article 8(c) of the draft DCO [REP5-007] provides for the disapplication of consents ordinarily required in respect of the Land Drainage Act 1991. Specifically, these are the requirements for consents for the construction of culverts, together with the requirements for approval under byelaws made under the Land Drainage Act 1991. These are consents for activities which may be a necessary part of constructing the authorised development. To provide certainty that the authorised development can proceed and in line with the ethos of the DCO regime, the Order disapplies the requirement for a separate statutory consent to be obtained in relation to these activities. Schedule 9, Part 4 of the draft DCO provides the necessary controls and protection for the drainage authorities. Infiltration testing will be conducted prior to detailed design. The Applicant can confirm that the high ground water table in the winter and the local hydrogeological regime will be considered. ECC-08 Subsequent to our comments in our December 3rd ECC Responses to the ExA's The Applicant notes the preferred width of 20 metres for screening planting, this would be ExQ2, ref ECC.20, we note that OLEMP Version C (Rep2\_023) summarises an contingent upon accommodating access for maintenance, drainage, and other relevant factors. approach to GI/landscape strategy, vision and principles in Para 1.2.6 Landscape, The Applicant would seek to avoid committing to a definite minimum at this stage to maintain Para 2.6 ONSS Landscape Mitigation, and to GI in Para 2.4, which we generally flexibility during detailed design and to avoid impeding any future coordination with North Falls. welcome. Additional wording has been added to the revised Outline Landscape Ecological Management Plan - Rev C, submitted at this deadline. However, we would request that width parameters of a minimum 20m be set down in the OLEMP, for belts of screen planting, as has been discussed between the applicant and ourselves in Landscape and Ecology consultation workshops, to ensure that the ambition and intention of the proposals is carried through and delivered at the consent stage. ECC-09 In addition, we judge the growth rates of proposed screen planting identified in the Cross sections have been prepared for the following three locations around the onshore OLEMP to be optimistic, especially at a time of unpredictable and extreme weather substation; to the south of the VE onshore substation; to the north of the VE onshore substation; events. We do not accept that it is yet demonstrated that the mitigation planting and to the south of the NF onshore substation. These are presented in the updated Outline proposals will eliminate significant effects, in a 5-15 years' time period, as Landscape and Ecology Mitigation Plan Rev D submitted at this deadline and show the identified in the OLEMP. To demonstrate that the screening, as proposed, could development of mitigation planting at years 5, 10 and 15 (without any additional growth that be effective in mitigating both landscape and visual impacts, we would recommend advanced planting would enable). The sections demonstrate the effectiveness of the planting cross-sections be produced, through the proposed development, including through owing to its proximity to the visual receptors in the surrounding area. They show how within the the screen planting at different stages in its growth, as previously requested in first five to ten years, the planting will screen views of the onshore substations from the Landscape and Ecology consultation meetings. surrounding roads. They also demonstrate the depth of planting being proposed and the separation distances between the surrounding road network and the onshore substations, which further strengthen the robustness of the mitigation measures proposed. In terms of optimising the establishment and growth of the proposed planting, this will be developed post-consent, with detailed design considering existing soil types and conditions, so that the best match with suitable species can be made. Species selection will also be informed by what is seen to thrive in the local landscape and with consideration of plant communities in which companion plants benefit one another. The planting will be designed to maximise climate



		resilience through a diversity of flood, drought, pest and disease tolerant species, through protection and enhancement of soils using ground cover, through regulating extremes of heat, cold, rain and wind by layering planting to create a micro-climate and through adaptive management practices.
ECC-10	We remain sceptical about the appropriateness of creating an orchard on the northern side of the substation for the reasons set out in our ECC Responses to the ExA's ExQ2, ref: GC.2.04. We dispute that the orchard planting would provide 'effective screening' to the substation as shown in Figure 2 of the OLEMP, if these trees need to be maintained at 5m in height. We would suggest the primary role of this feature is for biodiversity and cultural enhancement, and not screen planting, and should be identified as such.	The site is constrained by the existing overhead and future underground cables and the planting approach chosen for landscape screening has to have regard to those constraints. The following illustrative figures enable an understanding of the baseline context, the potential visual effect of the onshore substation and the screening effect of mitigation measures proposed along Grange Road. Figure 2.18a: Viewpoint 3: Grange Road PRoW [APP-185 6.2.2] demonstrates the extent to which existing mature trees enclose Grange Road, seen on the right of the view. Figure 2.18d [APP-185 6.2.2] illustrates the extent to which existing mature trees screen the VE onshore substation. During viewpoint selection, site work confirmed that views from Grange Road would be partly or fully screened by existing trees and that it would only be from within the close range of the site that clear views would be experienced. Section 2 presents a cross section through the onshore substation, the low tree planting to the north and Grange Road. This illustrates that even at a height of 5m, the proposed trees will provide an effective screen, especially taking into account the fact that visibility from this northern aspect will be largely restricted to within the close range. The low height of the trees also addresses underground and overhead constraints in respect of tree height and rooting depth.  In addition to creating an effective screen, the tree planting was recognised as an opportunity to create "Traditional orchard" the Section 41 habitat of principle importance for the conservation of biodiversity in England. The specific definition of this habitat type is provided on the Joint Nature Conservation Committee website, but to summarise:
		<ul> <li>It is defined by habitat structure rather than vegetation type and can include trees, scrub, grassland, ponds, walls, hedgerows and hedgerow trees.</li> <li>Traditional orchards comprise groups of fruit and nut trees at low densities in permanent grassland; and managed in a low intensity way.</li> <li>Spacing of trees in traditional orchards can vary quite widely (from c3m in some plum orchards to over 20m in some large perry pear and cherry orchards).</li> </ul>
		Traditional orchards are therefore very different from orchards managed intensively for fruit or nut production and can be of huge benefit to wildlife. Small species would be selected to minimise the requirement for management, and with pruning implemented where required.
ECC-11	At Para 2.6.24 of the OLEMP, and in ECC's Responses to the ExA's ExQ2 ref ECC.26, a standard 5 year maintenance period is mentioned, which we are taking as the establishment period, but our understanding from previous meetings with the applicant is that all planting around the substation will effectively be managed for the lifetime of the installation. Landscaping along the cable corridor is sought for a 10 year period. At 10.2.3 it is clarified that all habitats created as part of ecological compensation or enhancement will be managed for 30 years. Can the applicant clarify if all the landscape screening, mitigation and enhancement measures are effectively covered by this Paragraph, and if this is the case that this is identified within the OLEMP	At the onshore substation, north of Ardleigh road, maintenance and management of the landscaping will cover the lifetime of the project.  For the onshore cable corridor, maintenance and management of the landscaping will cover a 5 year period, and this will include planting replacement. The reasons for the shorter period of aftercare along the onshore cable corridor relates to the preference expressed by landowners to resume management of their land at the earliest opportunity. Furthermore, the majority of replanting along the onshore cable corridor will comprise hedgerow planting, which is relatively straightforward to establish, and which landowners will be familiar with maintaining.
ECC-12	Para 2.6.7 and Para 3.2.4 makes mention of the decommissioning of the installation and that details would be provided in a LEMP at the time of decommissioning. However we would recommend that further commentary on the approach or principles governing decommissioning in relation to landscape assets	As stated at paragraph 2.6.28 and 3.2.4 of the updated Outline Landscape and Ecological Mitigation Plan Rev D submitted at this deadline] decommissioning will need to be considered towards the end of the operational life of the project to ensure that the relevant legislation and good practice guidelines of the time are adhered to. Those cannot be fully detailed now as they are



	should be provided in the OLEMP so that all parties have a common understanding of the preferred outcomes for landscape and how to obtain them. If this is already identified for biodiversity mitigation and enhancement measures, can this be cross referenced with the landscape section and/or vice versa.	likely to change. It is anticipated that similar principles will be followed and a similar approach taken as during the construction phase, whereby measures will be implemented to reduce loss of planting, through controlling the extent of decommissioning works and implementing tree and hedgerow protection, where practicable.
ECC-13	In relation to Responses to the ExA's ExQ2, ECC.51, planting along public rights of way to screen infrastructure, in general we support the applicant's approach in landscape and visual terms, that this should take place, although this may in itself have a negative effect on more open views. However, we agree with the caveat from the PRoW team that enough space should be left i.e. 3m in order that the proposed hedgerows do not encroach on the PRoW.	This is noted by the Applicant. A design commitment to address this has been included within the updated Outline Landscape and Ecological Plan Rev D submitted at this deadline. The new commitment in Appendix A states "Ensure there is a minimum of 3m distance between screening planting an any PRoWs. This ensures that planting will not obstruct the use of the PRoW, even if it is not properly maintained by the landowner/site operator."
ECC-14	On the first point, this would be a decision for the Structures team to determine whether this approach would be acceptable. The comment does not seem to clarify the proposal featured in Section 10 of Annex 2 routing some AILs through Colchester which would cause severe delays during the day. The only time that this may be an option if it was restricted to off-peak and at night. It is considered sensible at this stage to undertake a swept path analysis for the new roundabout on the B1035, south of the A120 Horsley Cross.	The Applicant notes this comment in relation to the structures team.  In terms of the potential AILs through Colchester, see the Applicant's response to ECC-15 below.  In relation to the cable drum delivery vehicle movements at the recently installed mini roundabout on the B1035 south of the A120 Horsley Cross roundabout, a swept path analysis has been undertaken and is submitted into the Examination at Deadline 6 as Appendix 1 in document 10.42 Applicant's Responses to Action Points - ISH6, CAH3 and ISH7.
ECC-15	With regards to the delay, it is assumed that the point being made is that the manoeuvrability of the vehicle is not impacted by the weight of the cable drum, and as per para 2.2.4 and 3.1.4 of the Abnormal Indivisible Loads Technical Note [REP2-029] that they would move along roads with a similar manoeuvrability and tracking to a typical articulated HGV? Would they travel at similar speeds? If so, it is agreed that the impacts in isolation would not be significant and there is no further comment. The comment does not seem to clarify the proposal featured in Section 10 of Annex 2 routing AILs through Colchester which would cause severe delays during the day. The only time that this may be an option if it was restricted off-peak and at night. Plus, it is understood that the route forms a red route for Emergency vehicles.	The cable drum delivery vehicles would be slower moving at junctions but normal speed along sections of highway, albeit could be slower for the very largest cable drum delivery vehicle when fully laden.  For the potential route through Colchester, an assessment of any route identified and associated timing of deliveries would be discussed with the relevant highway authority prior to any notifications of the delivery, as set out in Section 7.2.2 of the Outline Construction Traffic Management Plan [REP5-035].
ECC-16	10.20.6 Technical Note – Haul Road between Bentley Road and the Onshore Substation [REP4-036]  Whilst it is agreed that the maximum impact would reduce and that this reflects the assessment methodology set out within the Guidance on Environmental Assessment of Traffic and Movement; it is considered reasonable that a more extensive impact, that is lower in terms of total vehicles but longer with regards to time, might be considered to be a greater impact on users of a transport network than more shortened but increased effects. Albeit an oversimplification, 50 HGVs travelling past you whilst walking to work for one month might be far more tolerable than 30 HGVs for three months. These repeated continuous impacts of numerous large projects over an extended time period are an important consideration. However, as above, it is recognised that the worst case assessment has been undertaken based on the relevant guidance. This issue can be considered to be closed out on this basis.	This is noted and welcomed by the Applicant
ECC-17	As above, this would result in repeated impacts on users of the network particularly around HGV movements and potentially delays associated with traffic management.	As per ECC-16 above, the Applicant has undertaken the worst case assessment of impacts based on the relevant guidance.



# 3. LONDON GATEWAY [REP5-106]

Ref	Summary of Deadline 5 submission OR Excerpt of Deadline 5 submission	Applicant's comments
LG-01	LGPL's comments relate to the mitigation proposed in Table 1 of the CSIP. LGPL recommend adding "save for within the deep-water routes where navigable depth shall not be reduced" to the following sentence in the table: The water depth associated with cable crossings with known projects will be sufficient to allow the installation of the crossing and associated cable protection without reducing navigable depth more than 5%.	The Applicant has updated the Outline CSIP at Deadline 6 which clarifies that the 5% reduction in navigable depth does not apply to the commitments made in relation to the Deep Water Routes.



### 4. GUNFLEET SANDS OFTO [REP5-109]

#### **Summary of Deadline 5 submission OR** Ref **Applicant's comments Excerpt of Deadline 5 submission** GS-001 TC Gunfleet Sands OFTO Limited owns and operates the offshore transmission system The Applicant has had discussions with representatives of TC Gunfleet Sands OFTO associated with the Gunfleet sands offshore windfarm. This includes the offshore Limited on 31 January 2025 and can confirm that: substation, on and offshore cables. TC Gunfleet Sands OFTO Limited holds a Transmission Licence under section 6C(5) of the Electricity Act 1989 and as such is a • Title investigation by the Applicant's land agents, Dalcour Maclaren, indicated that statutory undertaker. TC Gunfleet Sands OFTO Limited have been identified as person is Gunfleet Sands OFTO have electricity apparatus within plots 01-001 and 01-002 of within Category 2 if they are interested in the land or have the power to sell and convey or the onshore land plans [AS-019]. release the land. We currently have no agreements in place Five Estuaries Offshore Wind Plans recently received from Gunfleet Sands by the Applicant confirm that Gunfleet Farm, nor have we had any direct contact with the Applicant. We are aware from reviewing Sands assets are located within plot 01-002, under the Manor Way access to the the Statutory Undertakers Position Statement that TC Gunfleet Sands OFTO Limited has Applicant's proposed landfall works. Interaction is therefore limited to the apparatus within the Order Land and that the Applicant is seeking new rights in Plots Applicant's use of the existing route over the buried cables. where TC Gunfleet Sands OFTO Limited apparatus is located, however we have had no • The Applicant's use of the access route would be limited to the duration of direct contact with the Applicant and we request that they contact TC Gunfleet Sands construction in this section of the proposed works. OFTO Limited to discuss the potential interfaces. In principle we have no objections to the • While no interference with Gunfleet Sands OFTO assets is proposed or anticipated, development; it is however imperative that our assets and operational activities are those assets are covered by the protective provisions in the Applicant's draft protected from any detrimental impacts of the proposed development. Development Consent Order (part 1 of schedule 9) [REP5-008] as an electricity undertaker by virtue of their transmission licence. • Due to the nature of the Applicant's access over the sealed roadway, in common with other users, and the advised depth of the Gunfleet Sands assets, the Applicant is satisfied that additional bespoke protection for the benefit of the Gunfleet Sands export cables is not required. • The Applicants does not require crossing Gunfleet Sands' export cables with the Applicant's export cables at all, either onshore or offshore.



# 5. EAST ANGLIA TWO [REP5-105]

Ref	Summary of Deadline 5 submission OR Excerpt of Deadline 5 submission	Applicant's comments
EA2-001	East Anglia TWO Limited contacted the Applicant on the 13th of December to request further discussion on the most appropriate assumptions to be made in respect of both projects in order for a wake impact assessment to be undertaken but have to date received no response.  East Anglia TWO Limited have commissioned a detailed report from an independent consultant which will be available for Deadline 6, however we would stress again that without engagement from the Applicant this detailed report will be based on worst case assumptions.	The Applicant responded to East Anglia TWO (EA2) with reference provided to the most appropriate assumptions currently in the public domain. The Applicant reiterated its position that a wake assessment is not required to meet the tests of the National Policy Statement EN-3. Further, the Applicant commented that, should EA2 carry out any assessment, it is assumed that it would assess the impacts of EA2 on Five Estuaries and the operational Galloper and Greater Gabbard offshore wind farms.



# 6. MARINE MANAGEMENT ORGANISATION [REP5-101]

Dof	Summary of Deadline Fourthissian OB	Applicantia commente
Ref	Summary of Deadline 5 submission OR  Excerpt of Deadline 5 submission	Applicant's comments
MMO-01	Schedule 10 Part 2, Condition 11/Schedule 11, Part 2, Condition 12 - Force Majeure	The Applicant does not agree and maintains its position as set out in REP4-039
	The MMO maintains its position regarding Force Majeure, as it is not necessary to be included within the DMLs. It is not something that the MMO would include in standalone marine licences. PINS own guidance note 11 says that DMLs should be broadly consistent with standalone marine licences.  The MMO understands that Force Majeure is about events, situations and circumstances that arise which are outside of a person's control.  Currently the condition wording used is drafted to apply for stress of weather or any other cause which is very broad. It could cover anything, including causes which are entirely within the master's control such as negligence matters. Currently the MMO believes Conditions 11 in Schedule 10 and 12 in Schedule 11 do not meet the five tests as set out in the National Planning Policy Framework for a number of reasons: • necessary; • relevant to planning; • relevant to the development to be permitted; • enforceable; • precise; and • reasonable in all other respects.	Force majeure is defined in law as covering events outwith a parties' reasonable control commonly including Acts of God, flood, drought, earthquake or other natural disaster; terrorist attack, civil war, civil commotion or riots, war, threat of or preparation for war, armed conflict, imposition of sanctions, embargo, or breaking off of diplomatic relations; nuclear, chemical or biological contamination or sonic boom; fire, explosion or accident. The Applicant does not accept that there is any basis for submitting that force majeure would cover the Applicant's contractor's negligence (noting that nothing in the DCO or DML differentiates between the undertaker and its contractors, the undertaker cannot 'pass off' responsibility to a contractor and somehow become immune under the DCO). The MMO's position is contrary to judicial interpretation of force majeure and requires to be substantiated.  The Applicant maintains that within the accepted, judicially interpreted meaning of force majeure and not the incorrect meaning the MMO are attempting to ascribe, it is entirely reasonable for this to be included.  Broadly consistent with does not mean identical. Simply because the MMO have adopted a misleading interpretation of force majeure does not mean that the Secretary of State is bound to follow that. It is noted that this provision has been included in the Sheringham Shoal and Dudgeon DCO (2024), the Awel y Mor DCO (2023), the Hornsea Four DCO (2023) and the East Anglia ONE North DCO (2022) as examples. It is therefore clear that this inclusion is well precedented in recent offshore wind DCO decisions.
MMO-02	Necessary	See the response to MMO-01.
	The MMO does not agree with the Applicant's reasoning in PD4-006 and REP1-05	
	'The Applicant does not agree that this wording is not necessary because Section 86 provides a defence for actions taken in an emergency – this condition is about notifying of a deposit in those circumstances. It does not overlap with s86 which will still apply. No change to the dDCO is proposed.	
	If you read Section 86(1)(b) and 86(2) of Marine and Coastal Access Act 2009 (MCAA), for the defence to be relied on the person relying on it must inform the MMO that the act was carried out, tell it where it was carried out, the circumstances in which it was carried out, and what articles/objects were concerned. The inclusion of Conditions 11 in Schedule 10 and 12 in Schedule 11 removes this defence and replaces it with a wider and less stringently controlled authorisation to deposit articles/substances and the MMO does not believe this is necessary.	
MMO-03	Enforceable	See the response to MMO-01.



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	The condition as it stands is too subjective and therefore unenforceable and this due to the fact that it is down to the master to determine whether it is necessary to make the deposit and there are no defined criteria.	
MMO-04	Precise The condition is also not restricted to Force Majeure situations or 'no fault situations', due to the inclusion of 'for any other cause'. The MMO questions this wording and why this has been included? The MMO notes the Applicant has provided comments in REP4-039 ExA WQ DCO.2.06.  The MMO notes these are only examples and highlights as worded the MMO does not	See the response to MMO-01
	In addition to this, in effect the only obligation the master would have if Conditions 11 in Schedule 10 and 12 in Schedule 11 are included, is to notify the MMO within 48 hours that the deposits have been made. The MMO questions if this notification would be enough to allow enforceability and part 2 of the condition.	
MMO-05	Reasonable  The test set in Conditions 11 in Schedule 10 and 12 in Schedule 11 which must be met to allow these deposits to be made is a much lower threshold test to that set in Section 86 of MCAA. This is because the safety of human life and/or the vessel is threatened is not the same as for the purpose of saving life or securing the safety of the vessel. The MMO questions why these masters and vessels be treated more favourably than others in this situation?	See the response to MMO-01
	The inclusion of 'The unauthorised deposits must be removed at the expense of the undertaker unless written approval is obtained from the MMO', also goes against the MMO's regulations. This is because the MMO would not be able to give permission for the removal of the deposit without a marine licence and if this incident occurred outside the red line boundary this would not be included within the DML. In addition to this there would not be an exemption as the deposit would not be classed as accidental.	
	The MMO also notes that in REP2 REP4-040, the Applicant notes that 'any other cause' is the wording used in precedent licences, including the 2024 Sheringham and Dudgeon order and there is precedent set in other licences. The Applicant also states this would create divergence from other licences administered by the MMO creating uncertainty in practice as to what this means and why it is different to other licences.	
	The MMO is reviewing the ExA's Recommendation Report and SoS decision to understand if any reasoning or further information was included on the inclusion of this and may provide an update at Deadline 6.	
	To summarise the MMO does not agree with the Applicant's reasons for including this provision. The condition should be removed, as the defence (Section 86 of MCAA) will apply if the Applicant or vessel masters needs to make a deposit for a Force Majeure reason.	
MMO-06	Transfer of the Benefit	The Applicant has no further response beyond that submitted in REP1-049 and REP4-039, question DCO.2.03 which in summary sets out both the need for this article within



# Ref Summary of Deadline 5 submission OR Excerpt of Deadline 5 submission The MMO provided comments in Section 6.1 of our response (REP4-052) The MMO will review the Applicant's response submitted to these comments at Deadline 5 and respond in due course. Applicant's comments the dDCO and confirms that this is standard wording that has been accepted by the Secretary of State in numerous offshore wind orders.

In relation to the comments raised by the Applicant in REP1-050 and in response to ExQ2 DCO.2.03 (REP4-039), the MMO believes a lot of these comments have been explained within our previous response REP1-064 including substantive comments received by the MMO from Counsel as part of the Rampion 2 examination. The MMO does not believe there is any new reasoning why the DML should be included within this Article and requests the DML is updated to remove this provision.

Please see comments 1.2.13-1.2.20 of REP1-064 in relation to previous DCOs. The MMO would highlight that even if they have been included in previous DCOs it means that these provisions should continue to be included, the drafting process is iterative, it has to be appropriate both generally and in the particular order in which it is to be included.

In addition to this the MMO notes in relation to consultation with the MMO the Applicant states 'The Applicant accordingly submits that this issue has been considered by the SoS, precedent should be followed and that it is not for the Applicant to impose requirements on the SoS as to how they deal with any views expressed by the MMO'. The MMO questions why it is ok to require the SoS to consult with the MMO? If the SoS fails to do this they commit and offence under s161(1)(b) of the Planning Act if the SoS does not have a reasonable excuse. This is another unintended consequence if the inclusion of the DML in this Article.

The reason that the DCOs only deem the Marine Licence to be granted, rather than bringing the DML into the DCO as it does for other permissions under s33 of the Planning Act 2008 is because the MMO was considered to be the expert in this area (see PINS note Annex 11 - MMO). The MMO questions why now is the SoS best placed to consider the implications of the marine licence being transferred and what might need to change?

Therefore, the provision in paragraph (4) should not extend to the DML. The Order and the DML are not the same thing and so this provision does not extend to the DML, and references to the undertaker in the DML will stay as is.

In addition to comments 6.1.6 and 6.1.7 of REP4-052, Whilst the mechanism is different, what falls out of the DCO process is a marine licence granted under MCAA which is distinct and separate to the DCO itself. The DML falls back to the MMO to further manage/regulate under the provisions of MCAA once the DCO is granted, to be regulated alongside and consistently with all the other marine licences we might issue. This is in part why s149A(4) says a person who fails to comply with a condition of the DML does not commit an offence under the s161 of the Planning 2008 Act and why 149A(5) disapplies the notification of application and representations provisions of MCAA from the DCO process.

In relation to 'There is a legal point to note as well that some Articles and Requirements relating to offshore matters within the DCO overlap with the deemed marine licence and it would not be appropriate for those to be transferred separately. The MMO request further rationale in relation to this statement.



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	The MMO notes the Applicant's concern in relation to the undertaker being required by statute to transfer the transmission assets to an OFTO and cannot retain those in the same ownership as the generation assets and that this is done at the earlier stages and any delay in this process. However, even for granted offshore windfarm orders that include a form of the Benefit of the Order Article, the MMO has done multiple variations alongside the transfer of benefit to ensure the DML variation is issued as close to the approval from the SoS to ensure the correct undertaker is on the face of the DML and so that updates to the Marine Case Management system can be completed. The MMO notes the Applicant stated this would be required in REP1-050.	
	With the addition of Article 7 (9) current wording this causes the MMO concern as this is just a notice of the transfer and does not include an official variation request to the MMO as required under Section 72 of the Marine and Coastal Access Act 2009. The MMO does not believe the SoS cannot amend the DML once consented. Therefore, the MMO would have to use their regulatory power to conduct a variation and vary the licence to ensure the correct undertaker is on the schedule, this could cause a potential delay the project as if the transferring of unvaried licence impacted on our ability to enforce during this time, the MMO may have to suspend the licence while the MMO conducted the variation.	
	This process could be delayed without the direct contact to the MMO to vary the DML. In addition to this the MMO has statute to charge for any variations and this is not covered by the current Article. This is an issue for two reasons, the Applicant would be getting work at a different rate as the consultation would be a statutory request from the SoS and this is not aligning with other marine licences as per PINS MMO advice note B and two this puts the emphasise for the MMO to vary the licence once notified so there would still be an additional step for the MMO to take which adds in further timescales.	
	The MMO does not agree with the Applicant's reasoning to include Transfer of the Benefit and believes the inclusion causes more work and does not streamline the process. The Applicant states that precedent should be followed, however the MMO has pushed back on the inclusion of the provisions for many of the DCOs, therefore precedent should not be reason to keep including it.	
MMO-07	Materiality  The MMO is aiming to provide a response directly to the Applicant during the week of 20 January 2025. The MMO will also submit this to the ExA as an additional submission. The MMO notes it is up to the ExA to accept an additional submission and will work with the Applicant if this is not accepted and provide all the information to the ExA in our Deadline 6 response.	The Applicant notes that an additional submission has been made by the MMO but this does not address this point. The Applicant maintains its position on this point. The Applicant has sought and continues to seek a meeting with the MMO specifically on dML matters, however no date has been provided by the MMO.
MMO-08	Schedule 10/Schedule 11 Comments  The MMO welcomes the addition of Schedule 10, Part 2, Condition 19, and Schedule 11, Part 2, Condition 20 for a marine mammal condition. The MMO notes that Part 1 says the first 4 piles will be monitored but part 2 states that it would be the first 4 of the first 12 – can this be clarified by the Applicant. In addition to this any agreement should be clearly stated who by and this would be in writing.	The Applicant clarifies that the wording should be 4 of the first 12 piles and the DML has been updated.  A commitment to 2 of those being the worst case cannot be made. This is for a number of reasons – the piling schedule is constrained by a number of other factors including the site layout and geology, array electrical design, commissioning sequence, pile design clustering and fabrication sequencing, vessel considerations.



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	The MMO requests the Applicant if a commitment can be included to the condition that at least 2 of the piles monitored would be worst case scenario to ensure the predictions of the ES can be validated. The MMO would highlight there is currently ongoing discussions on the wording of this condition with Statutory Nature Conservation Bodies as the information being received is not always providing the validations requested with the inclusion of this condition. The MMO will provide an update on these discussions as soon as possible.  The MMO welcomes the addition of Schedule 11, Part 2, condition 20 for a marine mammal condition. The MMO notes that Part 1 says the first 4 piles will be monitored but part 2 states that it would be the first 4 of the first 12 – can this be clarified by the Applicant. In addition to this any agreement should be clearly stated who by and this would be in writing.  The MMO requests the Applicant if a commitment can be included to the condition that at	Further what constitutes the de facto 'worst case' is not necessarily possible to determine ahead of time, given that for noise emissions this could be influenced by potentially unforeseen ground conditions and unanticipated interruptions in piling (for example hammer break down). The Applicant considers it more reasonable to ensure that those 4 monitored piles are representative of general piling conditions, i.e. using the maximum hammer energy. Once these piles are monitored then there is increased confidence in the modelling, or the model can be recalibrated to empirical data and hence the results can be used to validate the theoretical "worst case".
	least 2 of the piles monitored would be worst case scenario to ensure the predictions of the ES can be validated. The MMO would highlight there is currently ongoing discussions on the wording of this condition with Statutory Nature Conservation Bodies as the information being received is not always providing the validations requested with the inclusion of this condition. The MMO will provide an update on these discussions as soon as possible.	
MMO-09	Additional DCO/DML Comments  The MMO notes the Applicant has included Part 9 in Schedule 9 for PLA protection (onshore). The MMO is still in discussion with the PLA on whether their concerns have been resolved in relation to offshore matters and is maintaining a watching brief of how the Applicant and PLA are resolving any issues.	This is noted by the Applicant.
MMO-10	The MMO still notes the suggestion of the inclusion of a timeframe for Schedule 10, Part 2, Condition 18(5) has not yet been included and will maintain a watching brief for its inclusion in the next revision.	The reporting of surveys carried out pursuant to this condition will vary in timing depends on the type and scope of the survey carried out (for example where laboratory analysis is required, this may extent reporting timeframes subject to the availability of laboratories). The Applicant is required to submit a pre-construction monitoring plan which must contain timings and it is therefore considered more appropriate to agree those timings with the MMO when more is known about the likely scope of pre-constructions. The Applicant also notes that fixed timings are not typically provided (presumably for the above reasons) and cites the Sheringham and Dudgeon DCO (2024) and Hornsea Four DCO (2023) as two such examples.
MMO-11	The MMO provided further information in our deadline 4 response regarding our request for Schedule 10, Part 2, Condition 20(5) in REP4-005 to be amended to state 'sub-paragraphs (1-4)'. This has not been updated within the recent DCO submission. The MMO will maintain a watching brief for this amendment.	The Applicant has responded to this in REP5-073.  Paragraph 5 is provided for the sole purpose of ensuring that monitoring of cable repairs or replacements can be secured (if required), not so that post-construction monitoring could be extended indefinitely. The requirements that are conditioned in paragraphs 1-3 provide for necessary post-construction monitoring to be approved by the MMO and reported on. The Applicant does not agree that the change is appropriate.
MMO-12	The MMO is maintaining a watching brief for the contact details within Schedules 10 and 11 (Part 1 4(d)) to be updated to include telephone numbers.	The Applicant would be pleased to add these once they are provided but cannot force bodies to provide it. If the MMOs holds such information it would be helpful if they could share it.
MMO-13	The MMO noted in our deadline 4 response that there were a number of Conditions in addition to those mentioned that are being reviewed and updates would be provided to the	The use of the offshore chemical regulations 2002 as the basis to control the use of chemicals has been accepted on many prior offshore wind DCOs including Hornsea



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	Applicant and the ExA in due course. All conditions that are in both Schedule 10 and 11 should be updated accordingly. These included: chemicals, drilling and debris 10(1)  The MMO requests that this condition is updated to the following wording:  Unless otherwise agreed in writing by the MMO, all chemicals and substances, including paints and coatings, used below MHWS for the undertaking of the licensed activities must be approved in writing by the MMO prior to use. Submission for approval to the MMO must take place no later than ten weeks prior to use, unless otherwise agreed by the MMO in writing.  This is because the offshore chemical regulations 2002(a) (as amended) do not apply to chemicals used by the offshore wind industry, and the regulations only pertain to chemicals used in the oil and gas industry.  For all chemicals that do not fall under the explicit remit of other regulations for their function, use, and discharge in the marine environment (under MARPOL written approval from the MMO must be obtained before their use regardless of the risk of entering the marine environment.  The submission should include methodological information including chemical function (meaning what the chemical will be used for, e.g., use within engines, paint, degreaser), methodology, quantity, and frequency of use.  The MMO would highlight as part of the submission of chemicals a Chemical risk assessment could be used to provide further information. • Construction monitoring 17(1)(b) now Condition 19 in REP4-004.	Four (2023) and Norfolk Vanguard (2022). The MMO has not explained why the chemicals approved for use in the marine environment by the oil and gas industry should, in the absence of a similar list specifically for offshore wind, not be an appropriate point of reference.  The Applicant notes that some other offshore wind DCOs, for example East Anglia TWO (2022) and Sheringham and Dudgeon (2024), have used a different reference as a basis for approved chemicals – the Internal Convention for the Prevention of Pollution Ships, a similarly non-offshore wind specific reference which nonetheless provides a standard to work to.  It is essential that the Applicant and its contractors have an appropriate basis on which to design, procure and engineer its infrastructure including which chemicals it can or cannot use (without further approval). The MMO's suggested condition is therefore wholly impractical, ignoring any approved use of chemicals for other marine industries and starting again from first principles. The Applicant therefore does not agree that this change of wording is appropriate as it is likely to lead to delay, uncertainty and unnecessary administrative burden on both itself and the MMO when previously agreed lists of chemicals deemed appropriate for other marine industries are available.
MMO-14	This has been updated in the Draft DCO (REP4-004) as per comments in Section 1.4.4 and further updates may be requested by the MMO. • Reporting of impact pile driving 20(1)(b) & (c) now Condition 22(1)(b) and (c) in REP4-004  The MMO requests that this condition is updated to the following wording:  23.—(1) In the event that driven or part—driven pile foundations are proposed to be used as part of the foundation installation the undertaker must provide the following information to the Marine Noise Registry—  1.9.13 (a) no less than six months prior to the commencement of each stage of construction of the licensed activities, information on the expected location, start and end dates of impact pile driving to satisfy the Marine Noise Registry's Forward Look requirements,  (b) within two weeks after commencement of each stage of construction of the licensed activities, information on the expected location, start and end dates of impact pile driving to satisfy the Marine Noise Registry's Forward Look requirements;  (c) at six month intervals following the commencement of pile driving, information on the locations and dates of impact pile driving to satisfy the Marine Noise Registry's Close Out	The Applicant will provide details for the Marine Noise Registry (MNR) as they are available and does not consider the inclusion of a timing requirement in part (a) necessary, nor is this time period reflected in relevant documents relating to the Forward Look part of the MNR.  The Applicant does not understand the need for part (b) as this appears to duplicate information provided in part (a).  In part (c) it is unrealistic that the details required to be submitted as part of the close out requirements will be available within 7 days and maintains that 12 weeks is an appropriate and accepted time period to meet the close out requirements.



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	requirements by 7 April for winter season October – March inclusive and 7 October for summer season April – September inclusive or (c) within 12 weeks of completion of impact pile driving whichever is earlier	
	Maintenance reporting 21(3) now Condition 23 in REP4-004.	
MMO-15	The MMO is still reviewing if any additions to the DML are required.	
	In addition to this the MMO questions why Aviation safety is within the DML and the DCO. The MMO believes that this would be best placed and reduce duplication on the face of the DCO not the DML and would request that any updates can be added to Schedule 2, Requirement 3 within the DCO and deleted from the DML.	This is a standard condition in offshore wind DMLs and is routinely included by the Secretary of State. It has been included, for example, in Sheringham Shoal and Dudgeon DCO (2024), Hornsea Four DCO (2023), the East Anglia ONE North DCO (2022) as examples.
		The Applicant understands that the MoD requests inclusion of this provision so would not propose to delete it.
MMO-16	The MMO is aiming to provide a response in relation to the MCA conditions directly to the Applicant during the week of 20 January 2025. The MMO will also submit this to the ExA as an additional submission. The MMO notes it is up to the ExA to accept an additional submission and will work with the Applicant if this is not accepted and provide all the information to the ExA in our Deadline 6 response.	The Applicant notes that an additional submission has been made by the MMO but that does not address this point. The Applicant maintains its position on this point.



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MMO-17	The MMO notes the Applicant has now removed the 5 dB incremental noise contours from the maps in Figures 5 and 6 (REP4-032) and instead, has presented only the 135 dB sound exposure level single strike (SELss) noise contour to demonstrate the range of effect over which behavioural responses in herring may occur (as per Hawkins et al., 2014). The MMO thanks the Applicant for making this change in presentation. Figures 5 and 6 are now easier to interpret and the range of effect for piling in each of the arrays can be seen more clearly. The range of effect on herring for the pin-piling, and monopiling scenarios is shown to extend over approximately three quarters of the historic spawning ground and covers a large proportion of areas where larval abundances of between 1,500 – 9,500 metres squared (m2) have been recorded.	This is noted by the Applicant. The Applicant does, however, maintain their position, that they do not support the application of the 135 dB SEL underwater noise contour to establish behavioural impact ranges for sensitive receptors (this position is detailed in full in the Applicants response to MMO-RR77 in REP1-049, and MMO01 in REP4-040). Furthermore, whilst the 135 dB SEL contour overlaps with a large portion of the historic spawning ground, this area represents a site of low intensity herring spawning (over a 10-year period) with low densities of herring larvae consistently recorded in the areas (1,500 – 9,500 larvae per m²). As informed by the IHLS surveys, areas of high densities of herring larvae for the Downs herring stock occur within the English Channel (9,500 - 62,000 larvae per m²), outside of the range of the 135 dB SEL contour. Therefore, there is no evidence that high intensity spawning is occurring in the vicinity of the Proposed Development, or within the range of the 135dB SEL contour.  Notwithstanding this, the Applicant has taken a highly precautionary approach in proposing a piling restriction during the Downs stock spawning period, to mitigate against the potential for impacts from piling on spawning herring (albeit of low intensity).
MMO-18	In the revised Herring Seasonal Restriction Note (REP4-011) the Applicant has taken note of our request to undertake interrogation of International Herring Larval Survey (IHLS) data by the individual survey periods (1-15 January and 16-31 January), based on the current understanding that spawning of Downs herring generally occurs earlier in the spawning season in the south in the English Channel, and later in the season further north in the Southern North Sea (SNS), as the herring migrate northwards (see Annex 1 for International Council for the Exploration of the Sea (ICES) bubble plot maps which demonstrate how abundance on herring larvae varies in throughout the three survey periods 16-31 December, 1-15 January and 16-31 January in the English Channel and SNS Downs spawning grounds). Using IHLS data from these survey periods, the Applicant has carried out revised back-calculation exercises using different parameters to determine the start and end of the 'peak' of herring spawning activity.	This is noted by the Applicant.
MMO-19	The MMO notes the Applicant has identified that the earliest start date for IHLS survey period 1-15 January is 3 January, and the latest end date for the survey period 16-31 January is 24 January. These dates represent the points from which the back calculation of the start and end in the 'peak' of spawning activity should	This is noted by the Applicant.
MMO-20	Larval (catch) lengths in IHLS data  The MMO notes the Applicant has reviewed the IHLS larval length (catch length) data and plotted the mean herring larval lengths per sampling station from the IHLS data over a 10-year period (2012-2024) for each of the three survey periods (16-31 December, 1-15 January and 16-31 January) in Figures 2-1, 2-2 and Figure 2-3, respectively. Using this data, the Applicant has determined that a larval catch length of 11 millimetres (mm) is appropriate for use in the back-calculation. This length is appropriate and is in agreement with ICES who classify newly hatched Downs stock larvae at those <11 mm in length.	This is noted by the Applicant.
MMO-21	Hatch length - larval length at hatching  The MMO notes the Applicant has selected hatch lengths of 5mm and 6mm (based on Heath, 1993), 7.5mm (Blaxter and Hempel, 1963) and 11mm (as larvae within the Downs stock are known to hatch up to 11 mm in length) for use in the back calculation. The Applicant has noted that only 0.2% of the	This is noted by the Applicant, the Applicant confirms that, as presented in the revised Herring Seasonal Restriction Note (REP4-011), back calculations have been run for both the 5 mm and 11 mm hatch length scenarios.



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	recorded larvae from 2012/2013 to 2023/2024 in the January surveys, and 0% of the recorded larvae from 2012/2013 to 2016/2017 in the January surveys measured 5mm. However, the Applicant has recognised that newly hatched larvae would not be routinely collected in the IHLS surveys due to the limitations of the sampling method and hence have used suitable peer-reviewed literature as a reliable source for hatch lengths. As per our REP1-064 and REP3-029, a hatch length of 5 mm is the most appropriate and conservative hatch length for use in the back-calculation, as it is based on data collected on wild caught Downs larvae in the field (Heath, 1993), whereas Blaxter and Hempel (1963) fertilised and incubated the herring eggs under laboratory conditions. A hatch length of 11mm is valid for the purpose of establishing the most conservative end date for the peak of spawning.	
MMO-22	As recommended, the Applicant has used the egg development periods (Table 1 in REP3-029) from Russell (1976) to determine the number of days over which Downs herring eggs develop before hatching, depending on sea bottom temperatures. The Applicant has used IHLS data for the temperature at the maximum sampling depth for the years 2012/2013-2023/2024 to determine the average temperature at the maximum sampling depth to calculate an average seafloor temperature for egg development duration of 8.3°C. The mean temperature at the maximum sampling depth per sampling station for the years 2012 – 2024 is presented in Figure 2-4 and the temperatures at the maximum sampling depth per sampling station for the individual survey years (2012-2013 to 2023-2024) is shown in Figures 6-2 to 6-10 of REP4-010. The average seafloor temperature of 8.3°C equates to an egg development period of 14-18 days according to Russell (1976). Adopting a precautionary stance, we still request that an 18-day egg development period is used for the purpose of the back-calculation.	The Applicant confirms that, as presented in the revised Herring Seasonal Restriction Note (REP4-011) submitted at Deadline 4, back calculations have already been run using an 18-day egg development period as requested by the MMO.  The Applicant maintains their position (as detailed further in the Applicant's response to MMO-RR85 in REP1-049, and MMO08 in REP4-040), that an egg development period based on the lowest water temperature recorded over a 12-year period (5.5°C) does not reflect the environmental conditions within which Downs herring spawn, especially as lower water temperatures are only apparent outside of herring larval hotspots, with hotspots appearing to correlate with areas of warmer waters (the lowest temperature recorded in the hotspots in any year is approximately 10°C).  The Applicant has therefore undertaken the back calculations both in accordance with the parameters as recommended by the MMO, and those supported by the Applicant (using an egg development period of 14 days and 18 days respectively).
MMO-23	The Applicant has considered a number of peer-reviewed sources for information on yolk-sac absorption periods in newly hatched herring larvae including Russell (1976) Kiorboe et al. (1985) and Geffen (2002). The MMO highlights that the study by Kiorboe et al. used herring eggs from populations from the Firth of Clyde in the Irish Sea and Limfjord, Denmark, neither of which are Downs herring and do not spawn between November and January. The Aalborgsild herring (Limfjord area) are understood to be a spring spawning stock, however, when the Agger Tange was breached, connecting the North Sea with the fjord, the North Sea herring became the dominant race, though it is now unclear whether herring caught in Limfjord are still from the Aalborgsild stock. The study by Geffen (2002) also used herring from the Firth of Clyde which spawn in September - October.  The MMO does not support the Applicant's proposal that the most appropriate yolksac absorption period to use in the back calculations is seven days, because it is informed by results from Kiorboe et al., (1985) and Geffen (2002), neither of which are appropriate for Downs herring in the Southern North Sea. We maintain that it is most appropriate to follow the yolk-sac absorption periods by Russell (1976) who considered data from a number of studies to inform his review and presented a yolksac absorption period to account for variability. Hence, based on an average seafloor temperature of 8.3°C, the yolk absorption period will be between 7 and 20 days. Noting that the lowest temperature for yolk-development given by Russel (1976) is 10.3°C, the MMO requests that the yolk-sac absorption period is set at 20 days to account for the lower average seafloor temperature of 8.3°C recorded in the IHLS data.	The Applicant confirms that, as presented in the revised Herring Seasonal Restriction Note (REP4-011) submitted at Deadline 4, back calculations have already been run using a 20-day yolk sac absorption period as requested by the MMO.  The Applicant maintains their position (as detailed further in the Applicant's response to MMO-RR87 in REP1-049, and MMO08 in REP4-040), that the yolk absorption durations from Kiorboe et al., (1985) and Geffen (2002) are more suitable, as they are based on water temperatures that are representative of those recorded within the southern North Sea.  The Applicant has therefore undertaken the back calculations both in accordance with the parameters as recommended by the MMO, and those supported by the Applicant (using a yolk sac absorption period of 7 days and 20 days respectively).



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MMO-24	Growth rate  The MMO notes the Applicant has used an equation from Oeberst et al. (2009) to calculate a growth rate period for Downs herring larvae of 0.34 mm d-1. Whilst the MMO acknowledges that authors of this paper identified that the equation had strong agreement with values in literature at the lower temperatures, they also noted that the regression lines for the equation diverge at higher values suggesting that extrapolating from values in the literature would tend to give an artificially low estimate of growth rates. Furthermore, Oeberst et al. (2009) studied daily growth of Baltic, spring spawning herring larvae, where water temperatures vary from 5°C to 20°C. Whereas Heath's (1993) estimated growth rates came from field investigations for herring from a number of locations including the North Sea, Norwegian Sea, Baltic Sea, Firth of Clyde and West of Scotland. In fact, for Downs herring, Heath (1993) gives a growth rate of 0.165 mm d-1 based on a temperature of 8°C. As is illustrated by the Applicant in Table 2-3 of REP4-010, Heath summarised that the mean growth rate for North Sea herring larvae is between 0.2 mm d-1 and 0.3 mm d-1, hence, the MMO considers that our requested growth rate of 0.25 mm d-1 is appropriate and not overly precautionary.	The Applicant confirms that, as presented in the revised Herring Seasonal Restriction Note (REP4-011) submitted at Deadline 4, back calculations have already been run using a growth rate of 0.25 mm d-1 as requested by the MMO.  The Applicant maintains their position (as detailed further in the Applicants response to MMO-RR87 in REP1-049 and MMO08 in REP4-040), that the equation presented by Oeberst et al. (2008) (which accounts for temperature as a variable) is appropriate to estimate the growth rate for the Downs herring stock.  The Applicant has therefore undertaken the back calculations both in accordance with the parameters as recommended by the MMO, and those supported by the Applicant (using a growth rate of 0.34 mm d-1 and 0.25 mm d-1 respectively).
MMO-25	Back-calculation results  The MMO notes the Applicant has presented their back-calculation scenarios in Tables 2-4 and 2-5 of REP4-010, which considers the various parameters for hatch and catch lengths, egg-development and yolk-sac absorption periods, and growth rates. Based on the parameters the MMO has requested above, scenario 'I' is suitable for the back-calculation for determining the start of the 'peak' of herring spawning activity, and scenario 'P' is suitable for the back-calculation for determining the end of the 'peak' of herring spawning activity. Using scenarios 'I' and 'P' takes a precautionary approach and provides the largest spawning 'window', whilst still being able to reduce the overall period of the seasonal piling restriction. The MMO previously highlighted the reasons why a precautionary approach should be taken when performing a back-calculation, in points 1.2.6-1.2.9 in REP3-029.	This is noted by the Applicant, the Applicant confirms that a suitably precautionary approach has also been taken in defining the peak spawning period, based on the reasoning outlined in the Applicant's responses to MMO02-MMO13 in REP3-029 [REP4-040].
MMO-26	The dates for the start and end of the 'peak' of spawning back on the various backcalculation scenarios have been presented in Table 2-6 and 2-7 in REP4-010. Following the parameters the MMO has requested above for scenario 'I' the start date for the peak of spawning is calculated as 2 November. Following the parameters we have recommended above for scenario 'P' the end date for the peak of spawning is calculated as 17 December.	This is noted by the Applicant, the Applicant does however highlight that the use of the parameters as suggested by the MMO, which are based on the minimum temperature recorded in the IHLS data (over a 12-year period), leads to the definition of a period that reflects spawning earlier in the season (from the 2nd November to the 17th December), which is not supported by the literature. Spawning of the Downs stock in the southern North Sea occurs later in the season as the stock migrate north from the English Channel (Cushing & Bridger, 1966, and Burd, 1978).
MMO-27	Please note that the MMO does not support the Applicant's conclusion that the 'peak' of spawning occurs from 25 November until 3 January. This is because it is based on parameters which we do not support and are not considered adequately conservative.	The Applicant maintains that a pilling restriction implemented from the 25th November until 3rd January is an appropriate, and precautionary mitigation measure (as informed by suitably conservative parameters) to avoid population impacts on the Downs stock herring.
MMO-28	A 'buffer' period should be applied at the start (2 November) of the 'peak' spawning period to allow adult fish to migrate to the spawning ground without risk of injury. The MMO requests that there is a minimum period of 24 hours before piling commences. Thus, we propose that the piling restriction begins on 1 November.	As detailed in full in the Applicant's response to MMO-RR90 in REP1-049, the proposed development is positioned on the northeastern return leg of the herring migration pathway, therefore piling operations will not have any impacts on herring migration to the spawning grounds. The Applicant has however incorporated multiple measures of conservatism into the back calculations to define a peak spawning period for downs stock herring, therefore the Applicant is confident that it has implemented a sufficiently



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	Excerpt of Deadline 3 submission	precautionary approach in defining a piling restriction that will accommodate the migration of herring away from the spawning grounds.
MMO-29	A 'buffer' period should also be applied at the end (17 December) of the 'peak' spawning period to allow developing larvae which lack mobility to drift away from the spawning grounds in their early developmental stages without injury. We request that this period is no less than seven days. Thus, we propose that the piling restriction ends on 24 December.	The Applicant directs the MMO to the Applicant's response to MMO-28 above.
MMO-30	The MMO's request for a refined seasonal piling restriction from 1 November to 24 December inclusive, reduces the overall period by 38 days (the Downs herring spawning season is from 1 November to 31 January). It is also worth noting that a similar exercise was carried out to refine the seasonal piling restriction using IHLS data for the original Galloper offshore wind farm development.	The Applicant maintains that a pilling restriction implemented from the 25th November until 3rd January is an appropriate, and suitably precautionary mitigation measure to avoid population impacts on the Downs stock herring.
MMO-31	A piling restriction between 1 November and 31 December was recommended for Galloper and conditioned on the marine licence, which suggests that our requested restriction for Five Estuaries Offshore Wind Farm of 1 November to 24 December inclusive, is not only proportionate to that of Galloper, but that the IHLS data reviewed during the application stage in 2011 indicated a similar spawning period.	The Applicant reiterates, that as evidenced by 10 full years of IHLS data (across a 12-year period), areas of high densities of herring larvae for the Downs herring stock occur consistently in the English Channel. The presence of larvae within the vicinity of the proposed development and across the wider southern North Sea are comparatively much lower. This was also noted within the Galloper offshore windfarm environmental statement, which interrogated IHLS data from 2000 to 2011, and concluded that the spawning grounds in the southern North Sea were not being used by the main Downs spawning stock. The Galloper environmental statement also noted that high densities of yolk sac larvae were present in the English Channel (as opposed to the southern North Sea) which evidenced the passive transportation of larvae from the English Channel into the southern North Sea by the hydrodynamic regime in the region and meteorological forcing.
		Therefore, there is no evidence that high intensity spawning is occurring in the vicinity of the Proposed Development, nor has occurred in the area since the year 2000. In fact, as shown by the IHLS data (from 2000-2024), the majority of the Downs stock herring are spawning in the English Channel, and not in the southern North Sea. The Applicant has therefore already taken a highly precautionary approach in proposing a piling restriction during the Downs stock spawning period, to mitigate against the potential for impacts from piling on spawning herring (albeit of low intensity) in the vicinity of the proposed development.
MMO-32	The MMO also notes there are some typing errors under Section 2.8.4 for the hatch lengths for scenarios K and L, M and N, and O and P. The larval hatch lengths should be written as 6 mm, 7.5 mm and 11 mm respectively for these scenario groups, instead of 5 mm.	The Applicant thanks the MMO for noting this, the Herring Seasonal Restriction Note has subsequently been amended to reflect these changes and has been submitted into examination at Deadline 6 (6.5.6.4 Herring Seasonal Restriction Note - Revision D).
MMO-33	While the MMO understands that the Applicant stands by their predictions of underwater noise as presented (point MMO36 in REP4-040), our primary concern remains unaddressed. The MMO requires actual evidence to justify the source levels assumed in the modelling. Simply standing by the predictions without providing supporting data is insufficient for a transparent and thorough assessment.	The Applicant would point out that this request is in practice impossible to provide. Point MMO-040 suggests evidence "be presented in the form of existing measurements from similar projects and environments". On one hand the source level is only a theoretical value in piling noise, and does not and cannot exist in measurements. There are no similar projects at the scale of Five Estuaries for which underwater noise data is available. The underwater noise assessment for every offshore wind project is necessarily a



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		prediction using modelling based on the best available predictions at the time of assessment.
MMO-34	In response to point MMO22 in Rep4-040, the MMO has no further comments to make at this time. The MMO does however maintain our original position. We do not disagree with the Applicant that the assessment represents the realistic worst-case scenario, and this is appropriate. However, the MMO notes the various claims throughout the Environmental Statement that the noise modelling and predictions are "highly precautionary" are unjustified, especially when the current version of INSPIRE should produce more realistic predictions. There are also uncertainties (such as animal fleeing assumptions, propagation loss and predicted source levels) that may counteract some of the precautionary or conservative assumptions built into the noise modelling.	The Applicant accepts that, as already documented in the response to MMO-RR97, this rests on the definition of 'highly precautionary'. Many of the parameters used in the modelling are very unlikely to occur in practice and thus considered 'highly precautionary', although others could be more realistic, thus, as noted by the MMO, mitigating a degree of exactly how 'highly precautionary' the overall assessment is. The Applicant is confident that the realistic worst case as presented is sufficient and is pleased that the MMO agrees that the assessment reflects this.
MMO-35	With regards to point MMO24 in REP4-040, the MMO provides clarity that the request for including the weighted noise contours showing 5 dB increments of the single strike sound exposure level (alongside the unweighted 5 dB noise contours) would aid in the verification of the modelled predictions is for marine mammals.	The Applicant acknowledges the MMO's novel request for 5 dB weighted contours; however this data is not required for the assessment and is thus not modelled, or available.
MMO-36	With regards to points MMO28-MMO34 in REP4-040, the MMO has no further comments to make. The MMO raised the comments for awareness and to highlight recent findings in the peer-reviewed literature.	This is noted by the Applicant.
MMO-37	The MMO has no major comments to raise at this time regarding REP4-023. The MMO notes the Marine Mammal Mitigation Protocol (MMMP) is relatively high level at this stage. The main change/update to the MMMP is Section 4.7 which states that in addition to the mitigation approach set out in Section 4.1, contingency measures may be specified that could be used in the unlikely event that the monitored noise levels exceed those assessed in the Environmental Statement after the approved mitigation has been applied. The MMO notes the approach to contingency measures will be set out in the Final Piling MMMP, which the MMO will maintain a watching brief for. The MMO welcomes that Table 3.1 has been amended and it now states the correct predicted cumulative sound exposure level (SELcum) Permanent Threshold Shift (PTS) impact range for harbour porpoise (S-SW modelling location).	This is noted by the Applicant.
MMO-38	The MMO notes that Annex 6.2.1: Landfall Impact Piling Modelling lacks information on the environment where piling will occur. Figure 1-1 for example, shows the landfall area as well as the representative modelling location used for this study. The MMO requests this figure to also show the bathymetry of the domain. There is no indication of the water depths at the piling source. The report simply states: "as the furthest from land and therefore deepest location, this represents the location likely to lead to the largest potential impact ranges".	For reference, the modelling was undertaken at a depth of 5.3m (high tide) and 0.8m (low tide). An updated version of this report including bathymetry in the figure noted has been submitted at Deadline 6.
MMO-39	The MMO welcomes that the Applicant will endeavour to provide the raw data in the required format. The MMO has provided the link to the MMO excel template for the raw data to be submitted in in REP3-029. The MMO is maintaining a watching brief for the raw data from the Applicant.	The Applicant will provide this data to the MMO.
MMO-40	The MMO notes that the Applicant clarified the use of a 6% threshold to determine whether a sample should be included for contaminant analysis in point MMO44 of REP4-040. However, it does re-open the question as to what threshold was used to determine which samples should be tested for contaminants. The MMO requests clarification on this.	As stated in point MMO44 of REP4-040, the Applicant did not apply a threshold of 6% to determine whether a sample should be included for contaminant analysis.  Instead, the Applicant referred to the MMO Relevant Representation comment RR50 within 10.4 Applicant's Response to Relevant Representations – Revision B [REP1-049]. Here, the Applicant provided comment that those array area samples which were analysed for contaminants incidentally all contained a mud fraction higher than 6%.



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		The Applicant would like to reiterate, as acknowledged by the MMO in point MMO44 of REP4-040, that the contaminant survey strategy within APP-119 was designed to target those sediments with the greatest predicted mud content.
MMO-41	The MMO notes the Applicant has clarified that the target burial depth will be defined post-consent, and more detail will be included in the Cable Specification and Installation Plan. This document will inform the minimum acceptable cable depth, and the proposed remedial actions should this not be achieved e.g., potential for re-burial attempts or installation of cable protection. Furthermore, the data available and work carried out to date indicate that the ground conditions within the export cable corridor and the Margate and Long Sands Special Area of Conservation are conducive to effective cable burial (REP4-021 and REP4-022).	The comment is noted by the Applicant.
MMO-42	The MMO wants to highlight that recent research has indicated that there may be an increase in microplastic emissions from offshore wind farms (e.g., flaking of antifouling paint and erosion of turbine blade leading-edge protection materials) which could subsequently impact upon benthic receptors (Tagg et al., 2024; Piarulli et al., 2024). The MMO's advice to other similar developments regarding this impact was to ensure adequate sampling of the pre-construction condition of sediment bound microplastic load and we maintain our position and ask the Applicant to seek opportunities for collaboration between researchers and industry to ensure that the opportunity to investigate this potential impact to benthic ecology is not missed at the Five Estuaries Offshore Wind Farm.	Whilst the Applicant acknowledges the recent research, the Applicant maintains its position that the scale of any material released will be extremely small and is unlikely to clearly show any trend or impact associated with Five Estuaries, not least due to the proximity to other existing offshore wind farms. We believe that a more strategic study lead by a relevant industry group would have greater benefit.
MMO-43	The MMO's advice in REP3-029 raised that that it would be best practice to consider monitoring the fishing activity of the potting fleet during the operational phase. This would allow a comparison against the baseline (pre-construction) to ensure that the impacts on the potting fishery are in line with the expected impacts (minor adverse).  Furthermore, the MMO notes the Applicant mentions that significant impacts on fishing fleets during the operational phase of the Project are not anticipated. A monitoring during operational phase would reduce the uncertainty around the anticipated impacts on the potting fishing fleet.  The MMO notes the Applicant has commented that "fishing, inclusive of potting methods, will be able to resume during the operational phase across both the offshore Export Cable Corridor and Array Areas. This is supported by evidence that more widely in the North Sea, resumption of potting across operational subsea cables and within operational offshore wind farm arrays has occurred." And concludes that "in relation to commercial fisheries, monitoring is not considered to be required."	The Applicant maintains that during the operational phase of Five Estuaries, no significant effects on fishing fleets are predicted reflecting the assumption that fishing can resume within the project area. Minimum turbine spacing is 830 metres for the purposes of the commercial fisheries assessment. Interarray and export cables will be buried where possible. However, in recognition of and proactive response to the MMO advice, the Applicant proposes that vessel traffic monitoring by Automatic Identification System (AIS) be undertaken during and post-construction, with reporting submitted to the MMO. AIS monitoring will detect activity by all vessels over 15 m length and can be filtered to identify fishing vessels. It is understood that the majority of fishing vessels operating in the array areas (i.e. beyond the 12 nautical mile limit) will fall within this category. Gathered fishing vessel data can therefore be supplied to the MMO to inform understanding of the resumption of fishing in the operational phase. AIS data may be supplemented by other evidence as appropriate, such as Fisheries Liaison Officer records. This approach to monitoring is described in the updated Outline In Principle Monitoring Plan – Revision D and within the Fisheries Liaison and Co-existence Plan – Revision D.
MMO-44	The MMO highlights that the evidence the Applicant refers to, for the resumption of potting across operational subsea cables and within operational offshore wind farm arrays across the North Sea, has not been presented in the documents. The MMO requests the evidence is presented and included in the Environmental Statement as best practice and for transparency. If the Applicant provides the evidence that potting activity can resume to levels prior to the construction of the offshore wind farm, then the MMO can look to agree no monitoring is required.	During the operational phase of Five Estuaries, some methods of fishing can be expected to resume in the array area, and this assumption is reflected in the commercial fisheries impact assessment. The Applicant acknowledges that experiences in resumption of fishing within operational UK wind farms vary based on local fishing practices and conditions within the array area (this is also recognised in an NFFO publication, NFFO, 2021). Regionally, and based on anecdotal information, it is understood by the Applicant that fishers are deploying static gear (e.g. pots) within existing operational wind farm array areas. The commercial fisheries impact assessment notes that individual decisions made by the skippers of fishing vessels with their own



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MMO-45	The MMO notes the applicant has identified "no disposal zones" which could have impacted the "Deep water shipping routes" along the disposal area. The MMO expects more use of existing or historic disposal sites especially where considerable effort has gone into restoring the habitats in these areas	perception of risk will determine the likelihood of whether their fishing will resume within the array area during the operational phase.  In recognition of and proactive response to the MMO advice, the Applicant proposes to undertake vessel traffic monitoring by AIS; the approach to this is explained in the Applicant response above and in the updated Outline In Principle Monitoring Plan – Revision D submitted at Deadline 6.  NFFO. 2021. Can Fisheries Co-exist with Offshore Wind in the Race to Carbon Net Zero? - NFFO  The Applicant notes the MMO's suggestion to consider use of existing or historic disposals sites and will including to this effect in an updated version of the Sediment Disposal Management Plan at Deadline 6.
	e.g. Roughs Tower Disposal site being used for clay deposits and thus potentially enhancing lobster habitat.	The Applicant recognises that under certain circumstances, targeted disposal of specific types of dredged material may enhance habitats for some species. This is especially the case with clay deposits, and should disposal of this material type be required, the Applicant would welcome the opportunity to discuss options for beneficial use with MMO. However, the Applicant notes that the majority of the material which will be dredged or displaced during Project construction works will be sands and gravels which currently form part of the active sediment transport regime. As set out in the Environmental Statement, 6.2.2 Marine Geology, Oceanography and Physical Processes [APP-071] and as noted by the MMO (MMO-046 below)), the aim with this material should be to dispose of it in close proximity to the location of disturbance, thereby keeping the material within the local sediment transport system.
MMO-46	The MMO would expect to see an assessment of the fate of the relatively large volume of sediment. Whilst the MMO concurs with the statement that "keeping sediments local is the aim", and as sediment transport rates and directions are well known in this area – see the Southern North Sea Sediment Transport study (sns2.org) and the on going ORE Catapult seabed mobility project, what is the longer term fate of these sediments? The MMO requests that a paper-based exercise be undertaken to identify the short term and long term fate of the relatively large volume of materials (33.7 million cubic metres (m3)).	The Applicant recognises that a relatively large volume of (predominantly sandy) material will potentially be displaced during the Project construction phase and as such, has undertaken detailed numerical modelling to explore the short-term and long-term fate of the disturbed material:  - In terms of the short-term fate of material, numerical sediment plume modelling has been undertaken which describes the fate of sediments energetically resuspended during construction activities [REP1-057]. This modelling work (along with the spreadsheet-based assessments presented in 6.2.2 Marine Geology, Oceanography and Physical Processes [APP-071]) also describes potential changes in local seabed level which may arise as a result of material put into suspension re-settling to the seabed (most of which will be in relatively close proximity to the activity causing disturbance).  - In terms of the long-term fate of material, this assessment has been directly informed by numerical sediment transport modelling which describes the spatial and temporal variability in rates of tidally driven sediment transport throughout the study area. As described by the assessment of short term fate (described above), sands and gravels will be redeposited nearby to the point of disturbance. Once back on the seabed, these sediments will



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		immediately rejoin the natural sedimentary environment and transport system. The long term 'fate' of this material will be no different to that of the naturally present material already on the seabed, with the net rate and direction of onward transport the same as for the wider baseline environment which is described by the sediment transport modelling. (It is noted that the baseline sediment transport model developed to inform the assessment is consistent with regional-scale sediment transport mapping studies including the Southern North Sea Sediment Transport Study (sns2.org). The ORE Catapult seabed mobility project is seeking to develop guidance for the consideration of seabed mobility issues in development projects and, to the best of our knowledge, won't be published until 2026 at the earliest).
		The Applicant notes that whilst the Project may disturb a relatively large total volume of material during the construction phase, the majority of this material will be predominantly sandy in nature and will only be locally displaced rather than removed from the local system. Whilst the preference is to dispose of sediment in close proximity to the construction activity, should dredging be required into the more consolidated sedimentary units which underly the surficial sands and gravels within the array area and along the export cable corridor, it may be necessary to explore the suitability of existing disposal sites outside of the ECC. This might include, for instance, disposal site TH056 (Inner Gabbard East) - a non-dispersive disposal site which has previously been used for disposing of consolidated clay material. However, a decision regarding this would be made closer to the time, in line with the Sediment Disposal Management Plan and alongside, where required, relevant marine licence applications.
		Unlike deposits of unconsolidated sands and gravels, deposits of consolidated clay material can realistically be expected to remain largely in situ, with disposal mounds becoming semi-permanent features on the seabed. Small amounts of fine-grained material may, over time, be eroded or abraded from the disposal mounds but this would be rapidly diluted and widely dispersed, and is not expected to accumulate anywhere in measurable quantities. The long-term fate of any clay deposits will therefore largely be for the material to remain in situ, at the point of disposal.
MMO-47	In Table 2.1 of REP4-041, the MMO requests that the Applicant explains the figure of 31.588 million m³, as the MMO calculates this to be approximately 33.7 million m³.	The Applicant notes that this is an error and there has been some double counting when calculating the totals. The figure associated with potential cables between the north and south array areas (2,182,239 m²) has been added to totals for both the array disposal site and the ECC disposal site. As such the figure of 31.588 million m³ is correct but the individual totals for the array and ECC sites are not, and will be updated in 10.30 Outline Sediment Disposal Management Plan [REP4-041] and 9.8 Dredge Disposal Site Characterisation Report – Revision B [REP4-017] and where relevant in the DML at Deadline 7.



# 7. COBRA MIST LIMITED [REP5-104]

Ref	Summary of Deadline 5 submission OR Excerpt of Deadline 5 submission	Applicant's comments
CML-01	CML has been clear for some while that it has been happy for the Applicant to acquire the necessary area on Orford Ness to create a predator proof nesting site for LBBG.	The Applicant has engaged with both Cobra Mist Limited and The National Trust For Places Of Historic Interest Or Natural Beauty ('National Trust').
	Unfortunately, as it stands, the proposal is at risk of dispute, unnecessary expense and delay in the short and long term. While there has been some discussion in general terms on the appropriate size and location of the site, the Applicant has surprisingly yet to engage and consult meaningfully with CML and others (including the National Trust) on the details of what is required to make the proposal workable. Instead, after being repeatedly pressed by CML over many weeks, the Applicant sent some proposed Heads of Terms for a lease having entirely unacceptable covenants and restrictions, together with financial terms which were very materially worse than those applicable to the immediately adjacent wind farm nesting site of equal size. The Applicant's provisions appeared to have been lifted from standard terms, which may be relevant for the construction of large pylons to carry high voltage cables over farmland but which are totally inappropriate for the construction of a fence to surround a bird reserve within a commercial site	The Applicant is pleased that commercial discussions have moved on positively since the submission from Cobra Mist Limited.  The Applicant hopes that outstanding points are resolved at the next face to face meeting with Mr Gold of Cobra Mist Limited, scheduled for 6 <sup>th</sup> February 2025.
	manoeuvre now appears to be part of a tactical ploy to forego meaningful consultation in favour of seeking sweeping compulsory powers via the ExA contrary to how the Planning Act	
CML-02	Lack of consultation  Apart from being irritating and wasting an inordinate amount of time, and despite their legal obligation to consult appropriately, the Applicant has conspicuously failed to do so. Such lack of consultation is also contrary to the impression given in several submissions to the ExA. For instance, none of the plans submitted to the ExA and referred to by the Applicant in connection with the LBBG or CPO proposals were shown to or discussed with CML before formal submission.  An important consequence is that, instead of working with CML and the National Trust (the main landowners on Orford Ness) to find out what is necessary or appropriate in the circumstances, the Applicant appears to have taken the idle approach. Instead, it is asking the ExA to hand it a legal blunderbuss allowing the Applicant to impose unnecessary legal rights and restrictions that are wholly unjustified.  For example, there had been no prior hint that the Applicant required the right to impose very wide restrictive covenants and other rights over land and facilities that have little, if any, connection with the proposed nesting site. Significant difficulties are foreseen as a result. By needlessly impinging on CML's ability to use its property fully, efficiently and safely, including its obligations to other parties, the likelihood is that there will be a material adverse restriction on the long term operations of both CML and the National Trust and their management of Orford Ness as a whole. In addition, the lack of consultation about what is actually necessary, combined with the misguided nature of some of its proposals, means that a number are likely to backfire on the Applicant (including its main investors, such as RWE and Macquarie) including, most critically, the objective of achieving a successful LBBG nesting site. Instead,	The Applicant is satisfied that Cobra Mist Limited was properly consulted as required as noted in the Consultation Report [APP-031] and Change Request Consultation Report [REP5-087].  The Applicant has undertaken to amend the Land Plans [AS-019] to provide greater clarity on the areas proposed to be subject to access rights, and the area proposed to be subject to mitigation works. The latter to reflect the area shown on page 14 of the Lesser Blacked Back Gull Implementation and Monitoring Plans Rev C [REP5-021]. The 2.5 Works Plan – Onshore, in respect of Works No. 18B, has been updated to Revision D and submitted at Deadline 6.  The rights sought are only those necessary for the establishment and maintenance of the mitigation area, as set out in the Statement of Reasons [AS-037]. The Applicant has no intention of impairing or constraining the existing (or other reasonable future) activities and operations carried out by Cobra Mist Limited or other authorised users, including the existing antenna facilities.



# Ref Summary of Deadline 5 submission OR Excerpt of Deadline 5 submission

### Applicant's comments

the tactic will foster legal and safeguarding issues, adverse publicity, operational difficulties and the creation of unnecessary continuing tensions between all the key parties.

CML and others can readily understand that the Applicant wishes to protect its position by ensuring that it has the necessary long term rights to construct, monitor and maintain the proposed nesting site. However, on the access front, it has already been proven in the case of both (i) the existing wind farm nesting site and (ii) the significant National Trust area, that all that is required to achieve these objectives is to have a simple right of way over (a) the foot pontoon, (b) the slipway and (c) the roadway and track leading to the nesting site. No more.

Generally, it would also be entirely disproportionate and wrong for the Applicant to be granted a plethora of other wide-ranging powers to the long term detriment of the existing legal rights, business and other activities of CML and others – merely because, unlike the other wind farm nesting site owners, the Applicant has chosen not to be bothered to consult properly and explain to (let alone seek agreement with) those affected what is actually necessary in the particular circumstances. As a result, the granting of many of the powers sought by the Applicant would not be lawful.

Orford Ness is a complex semi-offshore site with an existing array of infrastructure facilities blended with a host of important SSSI protected natural features. It is wholly different to a bare strip of Essex farmland. Thoughtlessly running roughshod over such matters is not a wise move.

Several of the proposals submitted by the Applicant therefore need to be either materially amended or deleted.

In particular, a host of critical considerations affecting CML's operations need to be protected or enhanced - not overlooked or ignored. These include health and safety, flood defences, the provision of local internet, broadband and telephone services, commercial broadcasting, support to the National Trust and matters of national security. Such matters are important in their own right. In materiality terms one has to recognise:

- i. that the Applicant's proposed nesting site of 6 hectares must not be allowed seriously to impair or even destroy some of the activities and operations managed by CML and the National Trust over a total area of c.1600 acres. It would be wholly disproportionate; and
- ii. most critically, that CML is already providing, totally harmoniously and without the need for unnecessary impinging restrictive covenants and the like, a largely identical LBBG site on an adjacent area of Orford Ness for four other wind farms. The settlement of the voluntary agreement with them was achieved within three months. In this case, as a consequence of the lack of consultation and the Applicant's ploy to achieve their objective by abuse of the CPO regime, no end is in sight after nine months.

In short, it is essential that the provision and use of any CPO powers by the Applicant be limited only to those which are required i.e. necessary and sufficient to enable the



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	construction, monitoring and maintenance of a LBBG nesting site for the Five Estuaries (and maybe North Falls) wind farm. No more.	
CML-03	Health, Safety and General Security  The proposed nesting site is next to a significant facility which dates from the Cold War. It was originally an over-the-horizon radar station built by the U.S. at a cost in today's money of approx \$1billion. It included a large secure aerial field of c.200 acres with a complex web of sophisticated antennae which were subsequently replaced by the Foreign Office with a smaller number of telecommunication towers ranging in height from 210ft to 340ft. These have a variety of uses, including national security, broadcast radio and the internet. Next to the aerial field is a building approx 120ft high and 95,000 sq ft capacity ("the Main Building") with further telecoms and other facilities. The need for appropriate security of such assets is paramount. Not only are the towers and the main building physically dangerous structures, with accompanying statutory and civil liabilities, they are also important infrastructure assets in their own right. The need for their physical, commercial and operational security is essential. The ExA will hopefully readily appreciate that there can be no question of the Applicant having any right (i) to enter or conduct any business on or within either the aerial field or within the immediate surroundings of the Main Building which are, for good reason, currently protected by high security fencing or (ii) to constrain any present or future activity by CML within such facilities.  The solution is straightforward. To maintain the current and necessary level of security if access to the proposed nesting site is as shown on the plan shown below, the Applicant will have to ensure that any section of the aerial field that borders on to the new nesting site, and the track leading to it, is protected from entry by new high security fencing. See the second plan below.  New entrance gates into the aerial field will be needed at a few points on the track leading to the nesting site al locations to be agreed with CML. Such fencing and gates will then form part o	The rights sought are only those necessary for the establishment and maintenance of the mitigation area, as set out in the Statement of Reasons [AS-037]. The Applicant has no intention of impairing or constraining the existing (or other reasonable future) activities and operations carried out by Cobra Mist Limited or other authorised users, including the existing antenna facilities.  A meeting was held with CML on 6th February 2025 to discuss access arrangements with good progress being made.
	the strip leading South from the Martello tower at Slaughden, including the Lantern	



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CML-04	Marshes and the adjacent shingle strip where the freehold ownership of the turf, clay and shingle is held by CML, not the National Trust.  iv. Similarly, the National Trust needs to have the ability to access the track to Aldeburgh to monitor and manage its interests North of the aerial field if their usual track to such area is out of action, as it occasionally is due to storm damage elsewhere.  The ExA should also note that while they have been informed by the Applicant that the compensation site is not at risk of flooding, that is incorrect. The site was flooded for several years until c.2016 when CML closed a breach in the river wall to the North of the aerial field. See photo below.  In addition, for the reasons given above and despite being warned months previously not to do so, it is totally wrong for the Applicant now to include in their CPO case that they be granted an area in the main Compensation site (at the toe of the purple area on the first plan above) which blocks CML off from the essential track leading from the Main Building and the aerial field to its land holding to the North and the track leading to Aldeburgh.  Quite apart from routine and emergency monitoring and maintenance by CML and the National Trust, if there is a significant injury, there may be no ready ability to treat and remove such person from the Ness, other than by this route or by air. The difficulty of treating and/or rescuing anyone on the Ness is a material factor in ensuring that the aerial field is always kept secure from intruders and others.  General Access  After crossing the River Ore from Orford, access to the nesting site for the purpose of construction, monitoring and maintenance is achieved via a passenger pontoon, a slipway and a road/track leading to the nesting site.	The Applicant welcomes clarity provided by Cobra Mist Limited on the existing access facilities (referred to in the submission as 'foot passenger pontoon' and 'slipway').  As explained in the Statement of Reasons [AS-037], the Applicant is seeking rights to access land in plots:  • 19-001 and 19-002, referred to as the 'pontoon' by Cobra Mist Limited;  • 19-003, referred to as the 'slipway' by Cobra Mist Limited;  • 19-002, 19-004, 19-005, 19-006, 19-007 and 20-001 referred to as the 'roadway' by Cobra Mist Limited;  These rights are sought in common with any rights on the land and it is not proposed to extinguish any existing rights.  General access to the site, including the pontoon, slipway and pedestrian access paths were discussed with CML on 6th February.  The Applicant notes that Plot 20-002 and Plot 20-004 no longer form part of the Application.



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CML-05	The Pontoon  Usage of the existing foot passenger pontoon is shared between the National Trust and CML and is in continuous use throughout the year. It is approximately 20m long and has capacity for two launches of approx 8m each in length. If the Applicant wishes to use the pontoon for a launch of its own, that should not be a problem, but it will need to add an extension. Subject to the necessary Council permissions etc, that is very feasible.  Where there is serious concern regards a suggestion by the Applicant in the CPO paperwork (see the Book of Reference version D) that it wishes to impose legal restraints on the foot pontoon as well as two areas adjacent to it: (i) the mooring barge and berthing area for CML's landing craft and (ii) CML's equipment and turning yard. Apart from the acquisition of a pedestrian right of way and a possible pontoon extension, there should be no question of any other imposition being put upon these other facilities. They are essential to the efficient and safe running of CML's operations and those conducted by CML and the National Trust over the Orford Ness estate as a whole. The suggested restrictions are not necessary for the construction, monitoring or maintenance of the nesting site. Neither the National Trust nor the other wind farm operators have anything more than a pedestrian right of way over a defined safe raised pathway to and from the pontoon. Nor should the Applicant.  If the Applicant requires a vehicle of its own, a suitable space can be provided beside the roadway between the pontoon and the slipway.	The Applicant welcomes clarity provided by Cobra Mist Limited on the existing access facilities (referred to in the submission as 'foot passenger pontoon' and 'slipway').  As explained in the Statement of Reasons [AS-037], the Applicant is seeking rights to access land in plots:  • 19-001 and 19-002, referred to as the 'pontoon' by Cobra Mist Limited;  • 19-003, referred to as the 'slipway' by Cobra Mist Limited;  • 19-002, 19-004, 19-005, 19-006, 19-007 and 20-001 referred to as the 'roadway' by Cobra Mist Limited;  These rights are sought in common with any rights on the land and it is not proposed to extinguish any existing rights.  The Applicant discussed these points with CML at the meeting on 6th February.
	This is for construction materials and vehicles. It is unsafe for pedestrians. Again, the Applicant should have a right of way over it for a suitable craft and vehicles; but it must not be able to impose any restriction on its use by others.	facilities (referred to in the submission as 'foot passenger pontoon' and 'slipway').  As explained in the Statement of Reasons [AS-037], the Applicant is seeking rights to access land in plots:  • 19-001 and 19-002, referred to as the 'pontoon' by Cobra Mist Limited;  • 19-003, referred to as the 'slipway' by Cobra Mist Limited;  • 19-002, 19-004, 19-005, 19-006, 19-007 and 20-001 referred to as the 'roadway' by Cobra Mist Limited;  These rights are sought in common with any rights on the land and it is not proposed to extinguish any existing rights.
CML-07	The roadway to the Compensation site  Detailed comments have been made above regarding the roadway immediately adjacent to the aerial field and the proposed nesting site. In addition, the Applicant appears to be suggesting that it should have the right to impose further restrictive covenants and the like on the roadway and lay-bys leading to the main building and aerial field. Once again, there has been no attempt to consult with CML on this. The granting of a plethora of inappropriate rights would be entirely unnecessary for the construction, monitoring or maintenance of the nesting site. Like the wind farm operators on the adjacent nesting site, the Applicant should only have a simple right of way over such roadway. No more.	The Applicant has undertaken to amend the Land Plans [AS-019] to provide greater clarity on the areas proposed to be subject to access rights, and the area proposed to be subject to mitigation works. The latter to reflect the area shown on page 14 of the Lesser Blacked Back Gull Implementation and Monitoring Plans Rev C [REP5-021]. The Works Plan - Onshore [REP3-004] in respect of Works No. 18B will also be updated.  The rights sought are only those necessary for the establishment and maintenance of the mitigation area. The Applicant has no proposal to impair or constrain the existing



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		(or other reasonable future) activities and operations carried out by Cobra Mist Limited or other authorised users, including the existing antenna facilities.
CML-08	The ExA (and RWE and others within the main investor group) should urge or provide for the Applicant o To consult, without further delay, the Orford Ness landowners in detail on what is necessary and sufficient for the construction, monitoring and maintenance of the required nesting site – and NO more.	The Applicant is pleased that commercial discussions have moved on positively since the submission from Cobra Mist Limited.
	o To realise that the existing complex commercial and ecological interests on Orford Ness requires, in both the short and long term interest of not only Cobra Mist and the National Trust, but also the Applicant, proper consultation to achieve • the Applicant's primary objective of creating the required nesting site in a timely and cost effective manner; and • long term harmony and cooperation between all the parties for the monitoring and maintenance of the site at the least cost.  o To avoid unnecessary delay, expense and hostility, by far the best way of achieving the Applicant's objectives is to negotiate a sensible and timely voluntary agreement between the Applicant and CML. This can be readily achieved by working from the recent precedent of the agreement for the adjacent nesting site which is of an equal size with a similar purpose.	The Applicant understands that negotiations for the existing Lesser Black Backed Gull site for the benefit of other wind farm developers were carried out after those projects had gained Development Consent Orders, and were therefore likely subject to different project drivers and parameters.



### 8. AFFINITY WATER [REP5-102]

# Ref Summary of Deadline 5 submission OR Excerpt of Deadline 5 submission

### AW-01

Affinity provided detailed submissions in its Relevant Representation submitted on 21 June 2024 (Examination reference [RR-001]) detailing the potential impact on its assets from the DCO and the lack of engagement from Five Estuaries. In its response to this Relevant Representation [PD4-006], Five Estuaries stated that it was engaged in negotiating bespoke Protective Provisions with Affinity to resolve the concerns raised. Whilst draft bespoke Protective Provisions were provided to Five Estuaries on 13 November 2024, comments were not received from Five Estuaries until 9 January 2025 despite attempts from our legal representatives to engage in discussions. Affinity remains concerned by this late engagement. To fulfil its statutory duties, Affinity maintains a wide range of apparatus that is critical to the continuing efficacy of its services. If made, the DCO would authorise the exercise of powers over or near land in which Affinity maintains assets and/or has other rights for the purposes of discharging its statutory duties. Unchecked, the exercise of such powers in respect of Affinity's interests would cause severe detriment to it.

As currently drafted, the standard set of Protective Provisions for the benefit of all statutory undertakers contained in Part 1 of Schedule 9 to the draft DCO, fall short of providing it with the necessary protections. It is therefore essential to Affinity's undertaking that the bespoke Protective Provisions are agreed with Five Estuaries. In particular paragraph 9 of the bespoke Protective Provisions contains specific terms that require the provision of details of any potential effects on Affinity's assets from electromagnetic or high voltage effects and provides an approval mechanism to allow Affinity to require such modifications to the design for the purpose of protecting its assets. These bespoke Protective Provisions will provide the necessary protections to allay the concerns Affinity raised in its Relevant Representation regarding the Horsley Cross 21" Cast Iron water main, which supplies water to the Horsley Cross water treatment works which in turn supplies 70% of the water to the Tendring Peninsula and is therefore a critical asset to Affinity's business and the area. The bespoke Protective Provisions also provide for specific provisions, which are not provided for in the standard Protective Provisions, to address Affinity's other concerns as raised in its Relevant Representation, as follows: • Protection of and access to its assets during construction and operation – including the requirement to provide Affinity with detailed plans and to obtain approval prior to any works taking place. • Access to Affinity's operational sites during construction to ensure continued and unimpeded access to its assets at all times; and • Agreement re. the reimbursement of Affinity's reasonable costs and the scope of those costs. Affinity encourages Five Estuaries to continue its promised engagement so that the bespoke Protective Provisions can be discussed and agreed. In the absence of such bespoke Protective Provisions being agreed, Affinity is obliged to maintain its formal objection to the DCO application on the basis that the Project will cause serious detriment to Affinity's apparatus and operations.

### Applicant's comments

The Applicant acknowledges Affinity Water's position and notes that discussions are ongoing and it is hoped that Protective Provisions can be agreed shorty.



# 9. PORT OF LONDON AUTHORITY [REP5-107]

Ref	Summary of Deadline 5 submission OR  Excerpt of Deadline 5 submission	Applicant's comments
PLA-01	As highlighted in the Applicant's response to PLA06, the Applicant and the PLA have not reached agreement on the issue of approval of the Navigation and Installation Plan ("NIP"). The Applicant clearly wishes for as few parties as possible to approve the document and seem to be saying that the PLA cannot have approval over the NIP because they would be approving matters that may impact other related parties. There is no reason why, if the Applicant has this concern, or other related parties such as Harwich or Medway considered it necessary, for these other related parties to also have approval over the NIP. The PLA notes and endorses Harwich Haven Authority's comments in response to the Examining Authority's letter dated 13 December, requesting an update regarding Harwich Haven Authority's views on the Five Estuaries Offshore Wind Farm project in relation to the specific questions outlined in ExQ2 [PD014], Reference NS.2.01, in particular their observation that:  "Given the combination of challenging environmental factors, high-traffic density, the size of the vessels, and other maritime operations in the Sunk area, pilot boarding and the provision of pilotage services are inherently complex and require round-the-clock coordination, highly skilled personnel, and advanced safety measures. The integration and deconfliction of other activities, like cable laying, are crucial to maintaining safe and efficient pilotage services. Only with careful planning, constant monitoring, and effective communication between authorities and stakeholders can these operations be safely conducted, ensuring that the world's biggest container ships are safely navigated into key ports like those under the jurisdiction of Harwich Haven Authority".(our emphasis)	The Applicant has received further comments from the PLA on the NIP and will incorporate those into an updated version at Deadline 7.  The NIP does not cover any area within the PLA's jurisdiction, but applies to an area of open sea where the regulator is the MMO. The NIP sets out that consultation must be undertaken with the respective interested parties and agreement sought. Where agreement cannot be reached those areas of disagreement must be presented to the MMO. The Applicant considers this already goes beyond what would ordinarily be expected for a management plan outwith the Port's jurisdiction and maintains that approval by the MMO is the legally correct and proportionate approach.
PLA-02	Given the importance of the NIP, as an embedded mitigation for "minimising the significance of effects associated with shipping and navigation impacts" and the implications if those impacts are not minimised including delays to vessels entering and exiting the Port, the PLA considers it to be entirely appropriate for it (and the other Ports who have concerns about the construction of VE) to approve the document	The Applicant does not agree that simply because impacts to vessels mitigated by the NIP may use the ports that this plan requires their approval. The Ports are not responsible for all of sea traffic outside their areas and it is unsupportable to maintain that they are –especially where multiple Ports can claim an equal interest. This is akin to stating that a construction traffic management plan which mitigates impacts to traffic within a local authority must also be approved by all the surrounding authorities. This would be clearly unworkable and furthermore has no logical spatial extent – vessels using the area over which the NIP will apply will also travel to other UK and international ports and it is not clear at what distance the right of approval should cease, if applying the PLA's logic. If parliament intended the PLA to control 'approaches', these would be in the PLA's area of jurisdiction and control.
PLA-03	Should the PLA (or any other Port) not be content with the content of the NIP, the Applicant is still able to provide a copy of the NIP for approval to the Marine Management Organisation ("MMO") and this therefore creates the risk that the document could be approved by the MMO despite the concerns of the Port. Through protective provisions, if the PLA considered it necessary, it could refuse consent which provides for a much more robust approach to this critical issue and ensures that there is joined up consideration and effective communication between all stakeholders.	See response to PLA-01.
PLA-04	It is also unclear who, if anyone, would approve any updates to the NIP. These are clearly contemplated by the Applicant – see for example section 2.6 of the oNIP [REP1-040] but the oNIP is quiet on the submission of updated plans to the MMO for approval simply stating interested parties will be invited to review and discuss any changes, and the updated NIP will then be promulgated to relevant third parties.	The potential need to update the NIP during construction has been recognised by all IPs, however it would not be of any practical benefit were it to then require a subsequent 6 month approval by the MMO. The NIP is intended to be a live document, and therefore details of vessel activities, timings etc should be capable of update and promulgation without the need for further approval. It is therefore suggested that updates to those sections describing vessel activities could be



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		undertaken by the Applicant, but where changes to the principles of the NIP are proposed, these would be subject to further approval by the MMO.
		The Applicant will set out which sections this applies to in the update of the NIP at Deadline 7, noting that it is an outline and subject to further revision post-consent in any case.
PLA-05	The NiP also does not appear to apply to pre-construction activities with paragraph 2.3.1 of the oNIP stating "The NIP will apply from the start of offshore construction activities." This means that activities such as pre-construction surveys would not be covered by the oNIP with table 3.1 advising that the vessels ability to manoeuvre during a pre-construction survey is to be confirmed and surveys may be taking place within the DWR's. The PLA considers that either the NiP needs to include pre-construction activities, or the PLA must have approval of these activities through its protective provisions	Whilst the Applicant does not accept that pre-construction activities require approval by the PLA, requirements for consultation and the provision of information ahead of surveys will be secured in the PPs.
PLA-06	In relation to PLA08, the PLA received an updated version of the offshore protective provision on 9 January 2025. The PLA's requirements go beyond 'formal approval of a plan.' As Harbour Authority the PLA is responsible for navigational safety both within its jurisdictional limits and in respect of the approaches to the limits. In compliance with the requirements of the Port Marine Safety Code, as harbour authority the PLA has to discharge its general and specific statutory duties in respect of the conservancy of the harbour and its seaward approaches. Protective provisions are required to ensure that the PLA can effectively discharge its general and specific statutory duties.	The Applicant does not believe any of its proposals would affect the PLAs duties under the Port Marine Safety Code, noting that other ports will have similar duties over this area. It is also noted that in discharging these duties the PLA does not have right of approval or control over vessels or other activities in this area. It is therefore not clear why the PPs are required to discharge these duties.
PLA-07	In particular, the PLA needs to be certain through the protective provisions that the entrance and exit to the UK's largest port, a port which handles over 50 million tonnes of freight per year, is maintained during construction and operation of the proposed development and that over the lifetime of the project the port can adapt to changing vessel sizes and accommodate deeper draught vessels. On this basis, the PLA would highlight the Applicant's response to PLA12 which refers to a cable installation depth to 22m below chart datum ("CD"). The cable must be installed at a depth that allows the Sunk and Trinity deep water routes ("DWRs") to be dredged to 22m below CD and the cable cannot be installed at 22m below CD because this would not provide any protection to the cable and should the DWRs be dredged to 22m below CD the cable would be disturbed or even damaged by the dredging process and potentially, in a worst case scenario, removed.	The Applicant accepts that the cable installation must not impeded dredging to a depth of 22m CD and wording to that effect has been suggested in response to the ExA's Rule 17 request on the matter in Appendix 1 of 20250211 Letter to the ExA (submitted at Deadline 6).
PLA-08	The matters which need to be covered by the protective provisions are set out within the PLA's Written Representations submitted at Deadline 2 [REP2-066 section 10] and if effective protective provisions are not forthcoming then the PLA will provide to the Examining Authority the preferred form of the PLA's protective provisions and invite the Examining Authority to recommend such provisions.	The Applicant, PLA and LGPL held productive discussions on the offshore PPs on 5 <sup>th</sup> February and intend to continue to work together up to Deadline 7 to resolve outstanding issues as far as possible.
PLA-09	In relation to PLA10, the PLA's issue is a specific one which relates to the DWRs. The PLA has reviewed the outline Cable Specification and Installation Plan ("oCSIP") [REP4-019] submitted at Deadline 4 and provides comments on the document in section 5 below. The PLA does note that the Applicant's response does not rule out maintenance of the cables occurring at a different depth to installation at locations outside of the DWRs which other Interested Parties may have comments on.	The CSIP has been updated at Deadline 6 to make explicit that the cables must be maintained at this depth.
PLA-10	OUTLINE MARINE WRITTEN SCHEMES OF INVESTIGATION (REP4-025)  Paragraph 6.7.17 of the Outline Marine Written Schemes of Investigation [REP4-025] has been amended at Deadline 4 with additional text added to make it clear that any archaeological relocations cannot be to the Trinity and Sunk Deep Water Routes (additional text underlined):	This is noted by the Applicant.



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PLA-11	"6.7.17 Where items are being relocated from their original find spot to ensure that direct impact during construction activities can be avoided, strategies for relocation and methodologies for avoiding damage will be clearly outlined in the relevant MSs produced and submitted to the Archaeological Curators ahead of any archaeological works. Where any archaeological relocations are deemed necessary the Trinity and Sunk Deep Water Routes (DWR), utilised for shipping and navigation, will not be used for relocation sites to ensure the navigable depth is not reduced in these areas and also there will be no disruption to traffic movements."  This additional wording, alongside additional wording in the oCSIP relating to archaeological finds (see paragraph 5.2 below) provides the PLA with sufficient comfort that archaeological finds (see paragraph 5.2 below) provides the PLA with sufficient comfort that archaeological finds (see paragraph 5.2 below) provides the PLA with sufficient comfort that archaeological finds (see paragraph 5.2 below) provides the PLA with sufficient comfort that archaeological finds will not be relocated to/within the DWRs and as such the PLA considers this issue has now been satisfactorily addressed.  DRAFT DEVELOPMENT CONSENT ORDER (REP4-004)  The PLA can confirm that the dDCO submitted at Deadline 4 contains the agreed onshore protective provisions for the benefit of the PLA on 9th January 2025 and the PLA will continue discussions with the Application as to the form of those. For this deadline the PLA simply relierates its position that it is entirely appropriate for the PLA to have offshore protective provisions and that their scope should include approval of the NIP, CSIP and any activities, including pre-construction activities where they involve or impact on the DWRs. The offshore protective provisions recently provided provide for consultation of the PLA on the CSiP and not approval and is completely silent regarding the NiP.  The purpose of protective provisions is to address technica	The parties have been engaged in constructive dialogue on the offshore protective provisions and consider that they can narrow the issues between them. It is anticipated that an agreed submission setting out the remaining points of disagreement will be submitted at deadline 7 showing each parties' preferred drafting and supported by a submission from each party on the remaining differences.



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PLA-12	Except of Deadline 5 submission  Submitting blank Protective Provisions Schedules is not acceptable and is likely to pose a serious risk to the acceptance of an application under s55 of the PA2008. 4.4 It is common for Protective Provisions to be drafted in unison with the protected party(ies) or by them first hand. Applicants should ensure that any Protective Provisions drafted by others appropriately align with the terminology and style of the draft DCO and are suitably drafted for use in an St. If Protective Provisions for more than one protected party are included in a single Schedule, SI drafting requires the numbering of the paragraphs to follow sequentially throughout the Schedule and not re-start at '1' with each part (as with all textual Schedules in several parts). This approach should be adopted in the draft DCO submitted with the application and in each amended draft submitted during the Examination where Protective Provisions are changed."  The Applicant has not provided a compelling reason why comprehensive protective provisions for the PLA that include approval of documents such as the NIP and CSIP, which are designed to manage and mitigate complex technical issues such as how the cable will be installed at the correct depth and how vessel traffic will be managed in a complex area are not required.  OUTLINE CABLE SPECIFICATION AND INSTALLATION PLAN (REP4-019)  The PLA welcomes the updates that were made to the oCSIP [RE4-019] at Deadline 4. The PLA considers that the following amendments are still required to the document:  (a) The definition of "Deep Water Route (DWR) areas" should be widened to include the full suite of commitments that relate to the DWRs. The PLA suggests (addition text in bold) 'Areas within the ECC relating to the Sunk and Trinity DWRs as shown in Figure 2.1 where specific commitments are defined in relation to matters including cable installation conditionation.  (b) 1.2.1 – it is recommended that the words "will need to be" are deleted and instead "must be" is used to prov	An update to the CSIP has been submitted at Deadline 6.  In response to the PLA's comments:  a) The requested update has been made b) The requested update has been made c) The requested update has been made d) This sentence has been removed e) The table has been updated f) This has been updated to reflect all the various commitments made in relation to the DWRs. g) Reference to maintenance has been added h) This change has not been made – the fact that undertaking a CBRA to 'enable informed judgements regarding burial depth' (Table 9.10 in the Shipping and Navigation ES Chapter [APP-078]) is a mitigation does not mean it requires approval, but simply that it should undertaken. Accordingly the need to undertake an assessment of cable burial risk to inform the CSIP is secured in the dML. The Outline CSIP is consistent with the mitigation set out in the ES chapter, stating that 'The cables will be buried below the seabed wherever possible, with a target burial depth informed post-consent by the Cable Burial Risk Assessment'. i) This section has been updated



Ref	Summary of Deadline 5 submission OR	Applicant's comments
	Excerpt of Deadline 5 submission	
	(f) Table 1 – new shipping and navigation entry "Impacts to the future use of case of the	
	DWR's" should be amended to read "Impacts to the future use of the DWRs" and the mitigation	
	section should be updated to make it clear that cable installation and maintenance will be at a	
	sufficient depth to allow the DWRs to be dredged to 22m below CD. As drafted, the entry gives	
	the impression that the cables could be installed at 22m below Chart Datum and if this was to	
	occur it would prevent the DWR's from being dredged to the required depth. The text advises	
	that boulders and archaeological finds will not be relocated within the DWR. In line with the	
	commitment elsewhere in the document, the table should be clear that crossings with known	
	projects will not occur in the DWRs; planned field joints will not occur in the DWR's and	
	sediment disposal will not occur within or within a zone where disposal could reasonably impact	
	the DWRs. The fourth column of the table should be updated as necessary in line with the	
	updates to column three.	
	(a) Daragraph 2.2.2 the toyt should be clear that the commitments do not just relate to call.	
	(g) Paragraph 2.2.3 the text should be clear that the commitments do not just relate to cable installation, they also relate to maintenance and the reference to paragraph 4.44.2 needs	
	updating to 4.4.2.	
	upualing to 4.4.2.	
	(h) Paragraph 4.3.1 and Section 5 - the changes to the text appear to remove the Cable Burial	
	Risk Assessment ("CBRA") from being part of the CSIP but the CBRA is specifically identified	
	as a mitigation measure in the ES and should form part of this approved document.	
	ganori medeline in une de dina encana romi part el une appresed decament.	
	(i) Paragraph 4.3.3 "cables will be installed and maintained at a depth of at least 22m below CD	
	within the DWR areas Sunk A and Trinity. Cables will be installed at a depth of at least 19m	
	below CD in the DWR area Sunk B." Whilst the PLA has not yet been able to agree the areas	
	referred to in paragraph 4.3.3, as above, cable installation and maintenance needs to be at a	
	sufficient depth to allow dredging to 22m and 19m below. As drafted, the entry gives the	
	impression that the cables could be installed at 22m below Chart Datum and 19m below CD	
	and if this was to occur it would prevent the DWR's from being dredged to the required depth.	
PLA-13	OUTLINE SEDIMENT DISPOSAL MANAGEMENT PLAN (REP4-041)	Regarding reference to maintenance in the Sediment Disposal Management Plan –
		this is not required as the dML only licences disposal for construction activities.
	The PLA welcomes the submission of an outline Sediment Disposal Management Plan [REP4-	
	041] at Deadline 4. It is noted that the purpose and scope of the document as set out at	The reference to the tidal ellipse buffer does not imply impact, and this section only
	paragraph 1.2.1 relates to material that may arise during the construction of the offshore	considers changes to a pathway rather than an impact on a receptor. Nonetheless,
	elements of VE. It is questioned why the document is limited to construction and why the same	the chapter states at paragraph 2.10.9 'even when SSC increases occur in response
	commitments do not need to be in place for the DWRs during the maintenance period as well.	to windfarm construction activities, they are expected to be comparable to (or less
	It is assumed, but the Applicant should clarify, that sediment disposal would also be addressed	than) the increases which occur naturally under baseline conditions.' Commitments
	through the decommissioning plan at the end of the project's lifespan.	relating to the SAC are to ensure that material is kept within the same sediment cell,
	There is a clear commitment at paragraph 3.3.2 that "dredge and drilling disposal material that	not to limit sediment dispersal. The Applicant does not consider that any restriction other than that committed to in relation to the DWRs is required.
	is created from construction activities will not be disposed of within the DWRs section of the	other than that committee to in relation to the DWINS is required.
	ECC." This is linked to a plan to geographically show where this commitment applies. The PLA	The Applicant will comply with MGN654 outside of the Deep Water Routes.
	and the Applicant are still discussing the area over which deeper cable burial needs to occur.	
	However, unlike in relation to the SAC, there are no additional measures proposed at the	
	DWRs to limit the dispersion of disposal material. The PLA would expect a 50-500m tidal	
	ellipse buffer to be implemented between the location of dredging/bed disturbance or disposal	
	and the DWRs along the lines of that set out in paragraphs 2.10.7 to 2.10.11 of Vol 6 Part 2	
	Chapter 2 of the ES Marine Geology, Oceanography and Physical Processes [APP-071] to	
	mitigate for the potential dispersion of sediment.	



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	It is also unclear what depth the cables would be buried at – paragraph 3.3.3 states that the export cable would be buried to 22m below CD – the DWRs need to be dredged to 22m below CD (to allow a vessel to enter or exit the port with 20m draught and 10% under keel clearance) therefore the text at paragraph 3.3.3 needs to be updated to reflect the agreed position: that the cables are buried at a depth that provides the necessary protection of the cables to allow the DWRs to be dredged to 22m below CD.	
	The commitment in relation to disposal in proximity to the pilot boarding area is less clear and would benefit from amendments to the drafting. Paragraph 3.4.2 commits to avoiding 'where possible' disposing of dredge material within the pilot boarding area but this is subject to the measures for M&LS SAC which seeks to retain sediment locally. However, paragraph 3.5.2 goes on to say that VE has committed to not reduce navigable depth within the pilot boarding area. It should be clarified whether this is from current depths or whether up to 5% of navigable depth could be lost – with the shipping and navigation mitigation including "VE will be compliant with MGN 654 and its annexes including in relation to reductions of no more than 5% in under keel clearance and the SAR Checklist" (see for example table 9.10 of the Shipping and Navigation Chapter of the Environmental Statement [APP-078]).	



# 10. HARWICH HAVEN AUTHORITY [AS-073]

Ref	Summary of Deadline 5 submission OR Excerpt of Deadline 5 submission	Applicant's comments
HHA-01	1. Consideration of Proposed Wording for a DWRs Parameter  The suggested wording for the parameter: "The construction, operation or decommissioning of the authorised development within the Deep Water Routes, as shown on drawing/plan ?????, must at no time preclude the dredging of the Deep Water Routes to a depth of 22 metres below Chart Datum"  We broadly support the principle behind the proposed wording, as it provides a clear and enforceable commitment to safeguarding navigation and dredging within the DWRs. However, we would suggest the following amendments to ensure precision and clarity:  • Consider explicitly including "and any covering material (e.g., rock armour)" after "authorised development" to clarify that both the cables and associated materials must not impede dredging.  • Amend "preclude the dredging" to "prevent or impede dredging" to provide a broader interpretation covering operational flexibility for the harbour authorities.  Revised wording suggestion: "The construction, operation or decommissioning of the authorised development, including any covering material (e.g., rock armour), within the Deep Water Routes, as shown on [specific drawing/plan], must at no time prevent or impede the dredging of the Deep Water Routes to a depth of 22 metres below Chart Datum."	The Applicant has proposed wording in response to the ExA's Rule 17 request, which explicitly includes reference to cable protection and refers to impeding dredging. This has been set out in Appendix 1 of 20250211 Letter to the ExA (submitted at Deadline 6).
	This revised wording strengthens enforceability and avoids ambiguity, while maintaining the intended objective.	
HHA-02	<ul> <li>2. Mechanism for Incorporating the DWRs Parameter in the DCO</li> <li>In terms of how this parameter might be incorporated into the provisions of the DCO, we would consider the following to be proportionate:</li> <li>Primary Mechanism: Introduce the parameter as an express condition within the Deemed Marine Licence (DML) for the Transmission Assets (Schedule 11). This ensures the Marine Management Organisation (MMO) has direct oversight during the licensing process and in relation to ongoing compliance.</li> <li>Supplementary Mechanism: Reflect the parameter in Table 1 of Requirement 2 within Schedule 2 as a new standalone parameter. This ensures the installation depth requirement is acknowledged within the overarching project requirements, complementing the detailed DML provisions. Please note: we request depths / heights should be referenced to Chart Datum (CD), and not MHWS or HAT.</li> <li>Justification for Dual Inclusion: The dual approach ensures enforceability across both the overarching project framework and the more detailed marine licensing process, providing clarity for all stakeholders, including harbour authorities, the applicant, and the MMO.</li> </ul>	The Applicant has proposed wording that it considers would sit most appropriately in the DCO Schedule 2 Requirement – Offshore Parameters.  Including the wording in the dML would mean this commitment would be referenced in three separate locations (DCO, dML and outline CSIP) being both inefficient and introducing potential for confusion, and therefore would prefer it occurs once in the DCO and then secured in the dML through the outline CSIP.
HHA-03	3. Recommendations for Associated Drawings/Plans  We recommend that the area plan (shown below), which is based on a section of UKHO Admiralty Chart number 2052 and is currently used to illustrate pilotage concurrent activity within the Navigation Implementation Plan, be adapted to clearly depict the specific location of the requirement. This adaptation would ensure that all relevant stakeholders have a precise visual reference for the affected	The Applicant has submitted at Deadline 6 a plan entitled 'Deep Water Route Cable Installation Area (Future Dredging depths) plan' (document 10.50) as the proposed certified document for comment.



area, aiding in the effective implementation and enforcement of the requirement within the Development Consent Order. The plan should be directly referenced in the DCO Schedule 2 Requirement 2 and the Schedule 11 DML to provide clarity and ensure enforceability.



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