THE PLANNING ACT 2008

THE INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE) RULES 2010

Sea Link Energy Cable

Appendix K7 to the Natural England Deadline 7 Submission

Natural England's response to Rule 17 letter

For:

The construction and operation of Sea Link Energy Cable

Planning Inspectorate Reference EN020026

29th April 2026

Table 1: Natural England's response to the Rule 17 letter.

Rule 17 Ref	Question	Response
Landscape and Visual		
3.3 Acid Grassland	Natural England (NE) [REP6-248] has reiterated its advice given at previous deadlines with regards to the need for further information and commitments from the applicant, which have not been provided. The applicant is requested to provide the information and commitments set out in table 4 [REP6-248] to NE and agree and submit a position statement by the close of examination. If these matters are not addressed by the close of the examination the ExA will have to consider whether the acid grassland enhancement proposal can be taken into account in its recommendation, including in relation to the s85 duty.	Further to the Natural England's advice in REP6-248 Natural England has met with the Applicant's consultants on 21 April to discuss our position We discussed the provision of additional detail regarding soil pH to ensure site suitability and the need to reflect potential limitations of the site due to the surrounding land use. We also discussed the LVIA assessment and maintain that the additional material has not clearly reflected the impacts the special qualities of the receiving landscape, due to reliance on scale and temporality. We advise that options for trenchless crossing merit further evaluation being mindful of the s85 duty. However, we do not believe these issues will be resolved during examination. Please see Appendix A7 for our final position.
3.4 Assessment of effects on the national landscape	Natural Engand [REP6-248] has reiterated its concerns with the assessment of effects on the sub factors of the natural beauty indicators, the reliance on the temporary nature of the project and the need for trenchless crossings. The applicant is requested to engage with Natural England to agree and submit a position statement.	During our meeting on 21st April we also discussed the LVIA assessment and maintain that the additional material has not clearly reflected the impacts the special qualities of the receiving landscape, due to reliance on scale and temporality. We advise that options for trenchless crossing merit further evaluation being mindful of the s85 duty. We welcome that the applicant is in discussion with the National Landscape and Suffolk County Council regarding

		option regarding the s85 duty. Please see Appendix A7 for our final position.
Ecology and Biodiversity		
4.2 Lighting of HDD compound	NE's response to the Report on the Implications for European Sites (RIES) question 22 [REP6-250] still considers the assessment of lighting impacts to be unsatisfactory. NE and the applicant to explain what further evidence or mitigation is necessary to address this issue. In responding, NE to confirm whether it requires approval of lighting controls for the HDD compound adjacent to the Sandlings SPA, to ensure that disturbance effects on the Sandlings SPA have been avoided. If so, provide agreed REAC wording or propose requirement wording.	Natural England notes the additional information regarding lighting impacts to Sandlings SPA. We also note that '*the only features that would be above 3 m would be the top of the HDD rig, recycling system and excavator boom* and *If the lighting columns themselves are required to be above 3m in height, this would be captured by B23 which stipulates the barrier must be a minimum of 3 m height. Specific shields and additional barriers could therefore be added if needed'.* However, commitment B23 specifically cites noise mitigation and therefore we advise that lighting is specifically referenced to ensure clarity regarding this impact pathway and that correct monitoring is adopted. In providing our advice we have presumed that the haul roads will not be lit. We recommend that an additional commitment is included within the REAC which specifically relates to compound lighting and the need to increase height in response to any lit machinery or structures above 3m, and in addition that monitoring relates to lighting impacts. Please see Appendix A7 and B7 for more detail.
4. 3 Acid grassland FLL	In [REP6-242] NE comments on the definition of acid grassland suggesting 7.5ha is affected. In the	Natural England understands the quantum of acid grassland FLL which is temporarily affected is 7.5 ha

	executive summary of the habitats regulations assessment (HRA) [REP6 050] the applicant states this is 3.5ha. The applicant to confirm the actual area of acid grassland FLL that is affected. NE to confirm whether it agrees with the applicant's conclusion of no adverse effects on integrity (AEoI) of the Sandlings SPA, now that the HRA has been revised to remove reference to acid grassland restoration and, if not, explain what further information or mitigation is required. This should be agreed with the applicant where possible.	and trusts that the HRA will be amended to reflect this. We note that there will be a temporary loss of foraging habitat for woodlark and nightjar while the cable trenching works take place, We note that that these impacts will be short-term and reversible, and given the availability of alternative foraging sites in the area, we can concur with the conclusion of no adverse effect on site integrity on the Sandlings SPA for this project.
4.4 Alde Ore Estuary SPA, Ramsar and Alde-Ore & Butley Estuaries SAC	The applicant has updated the HRA Report [REP6-050] to confirm that the outfall at the Saxmundham converter station would carry surface water runoff, following attenuation and therefore would not be contaminated or contain pollutants. Does NE agree with the applicant's conclusion of no likely significant effects (LSE) to AOE SPA and Ramsar site and AOBE SAC and if not, explain why not? Applicant to update table 3.1 in the HRA Report [REP6-050] to include AOBE SAC, and to provide the citation in Appendix B.	As this matter has come to light late in the Examination, we recommend that an appropriately worded commitment should be added to the REAC detailing the chemical and biological parameters that the discharged water will meet and how this will be monitored and managed throughout the lifetime of the project. Please see Appendix A7.
4.6 Ecological Clerk of Works	NE to confirm whether it is satisfied with the REAC wording relating to the ECoW as set out in GM06 and if not, provide alternative REAC wording agreed with the applicant or alternative requirement wording.	Natural England notes that the REAC commitment GM06 appears to relate to *Offshore* Construction Environmental Management Plan, however, as it is an intertidal mitigation we would advise that this commitment should also be linked to the onshore Environmental Construction Plan in requirement 6. However, the wording is for the most part suitable.

		We would advise consideration of further wording to note the action that the ECoW will take in the event of a significant breach or issue. For example: "In the event of a significant breach of monitoring or mitigation the ECoW will immediately raise their concerns to the Environmental Manager who will advise the relevant enforcing bodies and the relevant SNCB who will advise on any restoration works or further monitoring and/or mitigation." Please see Appendix B7 for more detail on commitments relating to securing an appropriate ECOW.
4.8 HRA summary of concerns	NE has provided a response to RIESQ35 [REP6-250], providing its current position on the Applicant's conclusions regarding likely significant effects (LSE) and adverse effects on integrity (AEoI) for 4 sites assessed in the Applicant's HRA Report [REP6-050]. NE is requested to confirm its position on the remaining 14 sites. If the position is correctly identified in the Report on the Implications for European Sites (Annex 1, [PD-022]) please confirm accordingly. Clarify the position for Thanet Coast SAC, Berwickshire and North Northumberland Coast SAC, Humber Estuary SAC, Southern North Sea SAC and TCSB SPA and Ramsar.	Please refer to Table 2 below for a full site summary.
Noise and Vibration		
8.3 Noise Modelling – Pegwell Bay	Applicant to provide updated marine ornithology predicted L_{AFmax} plans (figures 6.4.4.5.7 and 6.4.4.5.7) [REP5-032] showing the hoverport modelled as hard ground rather than soft ground.	For information only - no response required from NE.

	Any dependent assessments should be updated where relevant.	
8.4 Hovercraft	NE to confirm whether commitment GG45 in the oCEMP [REP6-074] is sufficient to control noise emissions from hovercraft, or whether a specific requirement is required, in which case, suggest requirement wording. Applicant to comment on the need for a requirement or otherwise.	Natural England is concerned that this is the first time the use of a hovercraft has been proposed. It is also not clear what constitutes an emergency in this instance. But from experience in other coastal and estuarine systems the use of hovercrafts causes both visual and noise disturbance to birds, marine mammals and can cause impacts to intertidal habitats. Therefore, we require more information, on timings, routes, duration and extent of use etc. before we can advise further on potential impacts and requirement wording.
Marine Physical Environment		
11.1 oCEMP commitment MPE06	Noting comments about oCEMP [REP6-074] commitment MPE06 from ESC [REP6-261] and TDC [REP6-274] the ExA is considering a DCO requirement similar to that proposed by ESC. Applicant to comment on the proposed wording, propose alternative wording or explain why this is not required: "(1) No part of Work No. 6 may commence until the following have been submitted to and approved by the relevant planning authority in consultation with the relevant statutory nature conservation body and, in respect of sub paragraph (a) and to the extent that it relates to works seaward of mean high water springs, the Marine Management	Natural England welcomes the proposed wording for both the landfall construction method statement and landfall monitoring plan. We consider the landfall monitoring wording to be appropriate for the Suffolk landfall. However, we advise tailoring the wording for the Kent landfall to reflect its complex coastal geomorphological and environmental setting, for example, 'monitoring vertical elevation change and erosion rates across the intertidal to shallow subtidal (including between the hoverport and HDD working area), and River Stour mouth/ channel…'. In addition to the last sentence of the proposed wording regarding cable exposure, we advise monitoring

	Organisation— (a) a landfall construction method statement for the construction of that part of Work No. 6; and (b) a landfall monitoring plan which commits to monitoring of the beach profile and erosion rates across the nearshore and foreshore and comparison of collected data to baseline topographic surveys to ascertain whether any coastal change is taking place that could risk cable exposure if unmitigated."	should also validate EIA/HRA conclusions regarding impacts to, and recovery of, coastal receptors.
11.2 Access to Pegwell Bay	In light of TDC comments in response to AP57, AP84, AP85 [REP6-274] and in [REP4-160], which suggest that additional controls on access to Pegwell Bay should be secured, the applicant, NE, National Trust, TDC and Kent Wildlife Trust to comment on the need for a requirement as follows: "Access to Pegwell Bay (1) Vehicles and machinery must not directly traverse the edge of the concrete skirt. Access shall be via engineered ramps or temporary bridging structures designed to distribute weight and prevent direct contact with the skirt. Structures must be constructed from non-contaminating materials (e.g., geotextile-reinforced matting) and approved by an independent structural engineer prior to use. (2) The hoverport area and all access points must be pre-assessed via non invasive surveys (e.g., ground-penetrating radar) to identify weak zones. (3) Vehicle movements shall be limited to designated structurally sound pathways within the apron, avoiding proximity to the bay edge by at least 5 meters unless bridged. (4) All entry/exit	Natural England is supportive of the proposed wording. But from experience on other projects, we would ideally also like to include a requirement to agree the number of return trips undertake by each vehicle type and impose a vehicle speed limit to limit vibration.

	points must incorporate wheel-wash facilities (non-toxic to marine environment and aquatic organisms) or decontamination zones to prevent tracking of materials from the pad into the bay. (5) A monitoring program shall be submitted to the relevant planning authority for approval prior to construction. This shall include baseline surveys of the concrete skirt integrity, subsurface materials, and bay sediments prior to commencement. The monitoring program shall include details of the inspection frequency (which shall be at least monthly), techniques and sampling methods and trigger levels for action (based on Environment Agency (EA) guidelines)." TDC to also comment on the specific EA guidelines to be referenced.	
11.3 Jack-up Barge footprint	NE [REP6-245] states that the applicant has not provided evidence of depth/ footprint of leg depressions from JUBs within particular habitats and cites evidence of 2 to 10 year depression from offshore wind farms (OWF). Can NE explain the relevance of impacts from jack up barges on OWF given the different water depth and energy levels between works in marine and intertidal areas?	Natural England advises that the deployment of JUB legs can leave temporary or, in some cases, long-lasting depressions or indentations in the seabed thereby directly disturbing the seabed/habitat and altering its topography and bathymetry at those locations. Please Annex A to this response for more detail.
Benthic Ecology		
12.1 In Principle Monitoring Plan	The ExA requests that NE and MMO respond on the submitted In Principle Monitoring Plan [REP6-116] and set out any changes that they consider should be made.	Natural England will submit comments and advice on the IPMP at Deadline 7, please see cover letter and Appendix D7, E7 and K7 for more detail.
12.2 NE benthic issues	The ExA asks the applicant to clearly respond to all points raised by NE in relation to benthic ecology set	Natural England had a meeting with the Applicant on the 16th April to discuss areas of outstanding concern in

	out within [REP6-245], [REP6-249] and the benthic tab within [REP6-258]. Where necessary, work with NE prior to DL7 to resolve remaining issues, particularly point E1 of [REP6-258] relating to potential pathways of effects.	relation to Benthic Ecology. Please see our advice in Appendix E7 from our Deadline 7 response for detailed advice and our Risk and Issues Log at Deadline 7 for a summary of the outstanding issues.
12.3 Thanet Coast SAC	NE has indicated [REP6-258] that it remains concerned about deposition impacts within Thanet Coast SAC. The ExA requests NE to provide a detailed submission to explain its position on this matter. The ExA asks NE to explain if it is its position that there would be AEoI of the SAC from this LSE pathway, taking into account previous submissions from the applicant who has set out further analysed sensitivity of the reef biotypes and retained a conclusion of no AEoI. On this issue the ExA requires that the applicant and NE work together prior to their DL7 submissions to resolve remaining issues on this matter or explain why this cannot be achieved and what the ramifications of this would be.	Natural England had a meeting with the Applicant on the 14th and 16th April to discuss areas of outstanding concern in relation to Physical Processes and Benthic Ecology. Please see our advice in Appendix D7, Table 3 and Appendix E7 from our Deadline 7 response for detailed advice and our Risk and Issues Log at Deadline 7 for a summary of the outstanding issues.
12.11 Screened out MCZs	The ExA asks NE to confirm if you agree with the applicant's conclusion in [REP6-016] to screen out Foreland MCZ, The Swale Estuary MCZ and Blackwater, Crouch, Roach and Colne Estuary MCZ. If not, explain your outstanding concerns.	We note that Foreland MCZ, The Swale Estuary MCZ, and Blackwater, Crouch, Roach and Colne Estuary MCZ are all located beyond the 17km precautionary buffer for impacts associated with Project-related activities. We, therefore, agree that indirect impacts on these MCZs are unlikely to occur. (However, these sites should be added to Figure 1 in the MCZA [REP6-017].
12.12 MCZ conservation objectives	The ExA asks NE to confirm if you agree with the applicant's Stage 1 assessment conclusions [REP6-016] of there being no hindrance to the conservation objectives of Dover to Deal MCZ, Orford Inshore	We note that Dover to Deal MCZ, and Orford Inshore MCZ, are all located beyond the 17km precautionary buffer for impacts associated with Project-related activities. We, therefore, agree that indirect impacts on

	MCZ and for smelt of the Medway Estuary MCZ. If not, explain your outstanding concerns.	these MCZs are unlikely to occur. (However, these sites should be added to Figure 1 in the MCZA [REP6-017]. However, whilst we do not believe that smelt within the Medway Estuary MCZ are likely to be impacted these are a migratory features which are likely to be susceptible to underwater noise pressures due to the presence of a swim bladder. However, there is no evidence that we are aware of on this matter, but conclude that mitigation for marine mammals would also mitigate for impacts to this feature.
12.13 External Cable protection adjacent to Goodwin Sands MCZ	The applicant has submitted an updated Marine Conservation Zone Assessment (MCZA) [REP6-016] setting out additional evidence in paragraphs 1.5.31 to 1.5.43 to justify why there would be no potential operational phase impacts from placement of external cable protection adjacent to Goodwin Sands MCZ, confirming there would be no impact on physical processes that could result in sediment transport change. The ExA asks NE to confirm if this addresses your outstanding concerns for Goodwin Sands MCZ in terms of sediment transport disruption leading to morphological change. If not, explain your remaining concerns. Does NE advise that this impact pathway should be assessed at Stage 1 in the MCZA?	Natural England welcomes the updates made to the MCZA [REP6-016/REP6-017]. However, these do not address our concerns. There is the potential for indirect effects on the MCZ due to the placement of cable protection measures directly adjacent to Goodwin Sands MCZ (for up to 3.2km). This would locally elevate the seabed, potentially constituting a blockage to sediment transport paths/processes, and impacting seabed morphology in the MCZ. We, therefore, consider that this impact pathway should be assessed at Stage 1 in the MCZA. Please see Appendix D7 for more detail.
12.14 Indirect effects to Thanet Coast SAC and Kentish Knock East MCZ	Regarding NE's outstanding concerns about placement of cable protection resulting in indirect effects to Thanet Coast MCZ and Kentish Knock East MCZ, the ExA notes NE's response in (2BE19, [REP5-199]) that the applicant's updated information in [REP4-241] was not sufficient and that appendix E5	Natural England is satisfied that the placement of cable protection would not hinder the conservation objectives of Thanet Coast MCZ or Kentish Knock East MCZ.

	[REP5-218] set out additional evidence needed. The ExA requests a response on the following: Noting that cable protection at the HDD exit would be buried, and that additional justification for no change in sediment transport process has been provided in paragraph 1.5.29 of the updated MCZA [REP6-016] based on the applicant's Additional Sediment Dispersion Modelling (doc 9.144) [REP6-120], the ExA asks NE to confirm if it is satisfied that placement of cable protection would not hinder the conservation objectives of Thanet Coast MCZ. If not, confirm for which protected features you are concerned and if this impact pathway should be assessed at Stage 1 in the MCZA. The ExA also asks NE to confirm if the applicant's updates to the Marine Conservation Zone Assessment (paragraphs 1.5.22, [REP6-016]) address your concerns about impact pathways to Kentish Knock East MCZ. If not, confirm your specific concerns and what is required to address them, as the ExA is unclear from the advice provided in appendix E5 [REP5-218] given it refers to Goodwin Sands MCZ.	
12.15 Monitoring and adaptive management at Goodwin Sands MCZ	The ExA asks NE, if the applicant commits to monitoring of any potential residual effects from placement of cable protection adjacent to Goodwin Sands MCZ and sandwave levelling recovery, together with identified adaptive management through an IPMP, is NE satisfied that this would be sufficient to avoid hindrance of the conservation objectives of Goodwin Sands MCZ.	Natural England agrees that monitoring and an adaptive management strategy should be developed to identify, assess, and address impacts on the seabed morphology (and protected features) of the MCZ adjacent to the cable route. However, these measures would not necessarily avoid hindrance of the conservation objectives. We propose a number of

		options to help reduce impacts and avoid hindrance of the conservation objectives, as follows: (a) Assess the pattern and magnitude of change to sediment transport pathways based on the WCS cable protection measures adjacent to the MCZ (b) Evaluate potential mitigation measures (e.g. a buffer, reduce WCS parameters, commit to no cable protection etc) (c) Monitoring plan (d) Adaptive management strategy, if needed.
Marine Mammals		
13. Marine Mammals	The applicant has provided a revised in-combination assessment in paragraphs 8.3.81 to 8.3.91 of the HRA Report [REP6-050]. The daily disturbance threshold would be exceeded when the sub-bottom profiling works are taking place. The applicant states that this is based on a precautionary un-mitigated assessment of piling at offshore windfarms. The applicant states the contribution from the proposed development is negligible and would be for 6 days only. It has committed to participating in the Development Co-ordination Forum to manage effects (MM03 of the REAC) [REP6-134] and would undertake works where practicable in the summer period (MM04 of the REAC) [REP6-134]. Can the applicant engage with NE and the Joint Nature Conservation Committee (JNCC) to agree a position statement as to whether it is possible to conclude that there would be no adverse effects on integrity of	Natural England and JNCC had a meeting on the 27th April to agree a position statement to propose to the Applicant. Please see Appendix F7 for detail.

	the Southern North Sea SAC due to the in-combination effect of underwater sound?	
Marine Ornithology		
14.2 Lighting of cofferdams in Pegwell Bay	The applicant [REP4-241] confirmed that lighting would only be required during construction of the cofferdams, which would be for a maximum of 28 days. The ExA ask NE to confirm whether it considers that any further measures are necessary to avoid impacts from lighting on birds foraging, nesting and roosting in Pegwell Bay? NE (RIESQ28, [REP6-250]) notes that for other works in SPAs, there is a commitment to undertake these outside the sensitive period to avoid potential disturbance impacts. The ExA ask NE to confirm what the sensitive period is for visual disturbance from lighting. The ExA ask the applicant to comment on what the implications for the project would be to place seasonal restrictions on cofferdam construction works in Pegwell Bay.	Please see Appendix B7 where lighting is discussed. Please note that this is not just an issue for SPA birds but protected bat species. It is not clear if cofferdam construction will occur in the hours of darkness but if not then lighting shouldn't be a concern. The sensitive period for foraging bats is March- October and for birds it is March to September inclusive. Therefore, we do not believe that this period can be avoid for landfall works. However, the height of lighting and use of cowling can be used to reduce the impacted areas. Due to the stage in the examination, we advise that a strongly worded REAC is required to secure the provision and sign off of a Lighting Management Plan to tendering DC and MMO pre-construction in consultation with relevant SNCB which provide commitments to implement appropriate mitigation measures.

Table 2: Full list of sites to summarise where Natural England can/cannot agree beyond scientific doubt that a risk of an AEoI can be excluded.

	Site Name	Can Natural England agree beyond scientific doubt, that a risk of an AEoI to the site can be excluded	Notes and reference to further detailed advice

1	Alde-Ore & Butley Estuaries SAC	No	Natural England is unable to rule out AEoI without further information, as the assessment of impacts has not yet been included in the HRA report by the Applicant.
2	Alde Ore Estuary SPA/Ramsar	No	Natural England is unable to rule out AEoI without further information, as the assessment of impacts has not yet been included in the HRA report by the Applicant.
3	Berwickshire and North Northumberland Coast SAC	Yes	Natural England can agree there is no risk of an adverse effect to Berwickshire and North Northumberland Coast SAC.
4	Humber Estuary SAC	Yes	Natural England can agree there is no risk of an adverse effect to Humber Estuary SAC.
5	Margate and Long Sands SAC	Yes	Natural England can agree there is no risk of an adverse effect to Margate and Long Sands SAC.
6	Minsmere-Walberswick SPA/Ramsar	Yes	Natural England can agree there is no risk of an adverse effect to this site for Minsmere-Walberswick SPA/Ramsar.
7	Outer Thames Estuary SPA	Yes	Following updates at Deadline 6 to commit to the full seasonal restriction Natural England can agree that an AEoI should be mitigated from this site during construction and planned Operation and Maintenance Activities. Please see Appendix G7 for further suggestions on how the mitigation could be extended.
8	Sandlings SPA	No	Natural England agrees with the ExAs summary. We wish to clarify that 3.1.11 states that The HRA Report [APP 090] acknowledged temporary loss of 3.5ha of acid grassland

			adjacent to Sandlings SPA due to the Formatted Table trenchless crossing construction compound and an associated section of cable trench. The figure of FLL loss in the HRA is inconsistently reported but it is our understanding that this should be 7.5 ha This reflects the remaining uncertainty regarding impacts to FLL as stated in our response to D6.
9	Sandwich Bay SAC	Yes	Natural England can agree there is no risk of an adverse effect to this site based on 1.1km distance from Offshore Scheme.
10	Southern North Sea SAC	No	Natural England welcomes the updated information provided by the Applicant with regards to the in-combination assessment and the commitment to participate in the Developers Co-ordination Forum (DCF). Although these changes do not resolve our outstanding issues with the methodology for undertaking the in-combination assessment, we are satisfied that the commitment to the DCF will ensure that there is no AEoI to the SNS SAC, provided that commitment is conditioned in the DCO/dML.
11	Stodmarsh SAC	Yes	Natural England can agree there is no risk of an adverse effect to Stodmarsh SAC.
12	Stodmarsh SPA/Ramsar	Yes	Natural England can agree there is no risk of an adverse effect to Stodmarsh SPA/Ramsar.
13	Thanet Coast and Sandwich Bay SPA/Ramsar	No	For an onshore perspective AEoI can be avoid subject to the additional REAC commitments recommended by Natural England in our Deadline 7 responses to:

			• Prepare and agree a detailed management and monitoring plan for the golden plover mitigation land • Prepare and agree the unexploded ordnance investigation and mitigation plan • Provide a surface water drainage plan including chemical and biological parameters and monitoring protocol Natural England advises that an adverse effect on the integrity of the Thanet Coast and Sandwich Bay SPA and Ramsar site from the intertidal works have not been fully excluded as set out in R&I log Tabs D, E and J. Therefore, we can't confirm there is no risk of an adverse effect.
14	Thanet Coast SAC	Yes	Based on the latest suspended sediment and cofferdam blockage modelling [REP6-120] which shows that dispersion of SSCs and associated deposition are localised and similarly cofferdam blockage effects are predicted to be minor, Natural England can agree there is no risk of an adverse effect to this site.
15	Wash and North Norfolk Coast SAC	Yes	For Wash and North Norfolk Coast SAC.

Annex A - In Draft Natural England's Standard Advice - Use of Jack-up Vessels (JUVs) within Designated Sites – Version 1 April 2026

Context:

Medium to Long Term impacts in sediment habitats from the use of Jack Up Vessels (JUVs) have been observed during post consent monitoring. Depressions on the seabed created by the presence of Jack Up Vessel (JUV) legs for offshore the installation and operation and maintenance activities for wind turbines and cables have been observed in both North Sea and Irish Sea OWFs post construction monitoring reports.

There is also the risk that spudcan leg JUV depressions may penetrate through the overlying sediment veneer to subsurface layers. For example, this risk was assessed for Hornsea Project Three for potential impacts to subtidal chalk beneath a sand veneer.

Common activities JUVs used for:

- Boreholes in shallow water
- Installation of foundations, transition pieces, nacelle and blades noting that these are likely to be undertaken as separate activities with time lapses between. Please note that due to risk of sudden changes in penetration depth destabilising vessel and risk of vessel capsize as seen in the Irish sea it is unlikely that return jack ups will be in the same locations
- Operation and Maintenance of turbine components over the life time of the project
- Installation of cables in shallow water
- Cable repairs over the lifetime of the project

Scale of impacts

Spatial

Jack up vessels can extend between 3 and 6 legs down into the seabed, raising the hull above the water for a stable wave-resistant platform. The diameter of each leg is between 1.52m2 and 16m2. With most windfarm JUV having between 4 and 6 legs with a footprint per leg of between 4m2 and 16m2. Other than the available leg length (<130m) there is no limitation of depth of penetration. But most penetrations are between 1.5m and 4.5m, though deeper is required where sediment is softer (10m+). Footprint of impact per jack up is therefore likely to be between 16m2 and 96m2 depending on vessel used.

Given the number of turbine installation activities and the scale of turbine deployment, the medium- to long-term impacts are not as often contested insignificant in spatial terms. By way of illustration, for a 200-turbine wind farm, the

footprint associated with turbine installation alone could amount to approximately **76,800 m²**, equivalent to **10–11 football pitches**.

From the monitoring data we have no information on the original penetration, but monitoring shows remaining depressions are within this range [Examples to be included in version 2]

Temporal

In the North Sea, seabed depressions were observed in the Year 10 Lincs OWF benthic monitoring report, the recent Triton Knoll OWF benthic monitoring report and the Dudgeon OWF year 1 and year 5 benthic monitoring reports.

Advice

Impacts from jack-up rig legs to the seabed and subsurface layers has now become an impact which is greater than predicted in Environmental Statements, which often state recovery within two years.

These impacts creating seabed depressions and/or penetrating though to subsurface layers may result in lasting or permeant habitat change/loss, depending on recoverability of habitat. Therefore, the placement of the jack-up barge legs has the potential to hinder the conservation objectives of designated sites.

We advise appropriate mitigation would be for a commitment to not using a jack-up barge during all project phases within designated sites to avoid any adverse impact to the seabed and where that is not possible impacts are minimised as much as possible. Natural England advises consideration of all alternatives to the use of a jack-up rig is required and clear justification provided for the final choice vessel.

Monitoring

We are advising that where JUV's have been used, further monitoring is undertaken to fully understand scale of impacts, in particular recovery timeframes.

Case Examples

- Sheringham Shoal and Dudgeon Extension (SSDE) OWFs: Natural England's end of examination position was that Jack-Up Vessels should not be used within the Cromer Shoals Chalk Beds MCZ. In answer to Examiners questions, Natural England advised the onus is on the Applicant to ensure the footprint of the jack-up vessel is placed on the area of sandy clay Weybourne channel deposits where there would be a greater likelihood of habitat recovery and avoid impacts to irreplaceable outcropping or sub-cropping chalk features

of the MCZ, noting Natural England would have concerns about any jack up leg stabilisation within the MCZ.

- Outer Dowsing OWF: A commitment for no use of jack-up barge for the export cable installation within the Inner Dowsing Race Bank and North Ridge SAC was recently adopted in their Schedule of Mitigation as part of their Development Consent Order.

- Dogger Bank South OWFs: Natural England's end of examination position for the two arrays within the Dogger bank SAC, impacts from the creation of depressions from UXO clearance or jack-up operations in areas of coarse or mixed sediments should be considered as permanent habitat change/loss (rather than temporary disturbance/damage) unless it can be otherwise evidenced that they will backfill with similar sediment types.