Planning Inspectorate

REPORT on the IMPLICATIONS for EUROPEAN SITES

Proposed Sea Link

An Examining Authority report prepared with the support of the Environmental Services Team

Planning Inspectorate Reference: EN020026

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1 INTRODUCTION

1.1 Background

1.1.1 National Grid Electricity Transmission ('the applicant') has applied for a Development Consent Order (DCO) under section 37 of the Planning Act 2008 (PA2008) for the proposed Sea Link project ('the proposed development'). On behalf of the Secretary of State (SoS) for Housing, Communities and Local Government, an Examining Authority (ExA) has been appointed to conduct an examination of the application. The ExA will report its findings and conclusions and make a recommendation to the relevant SoS as to the decision to be made on the application.

1.1.2 For applications submitted under the PA2008 regime, the relevant SoS is the competent authority for the purposes of The Conservation of Habitats and Species Regulations 2017 ('The Habitats Regulations') and The Conservation of Offshore Marine Habitats and Species Regulations 2017 ('The Offshore Marine Regulations', which apply beyond UK territorial waters ie 12 nautical miles). The findings and conclusions on nature conservation issues reported by the ExA will assist the SoS in performing their duties under The Habitats Regulations and The Offshore Marine Habitats Regulations.

1.1.3 This Report on the Implications for European sites (RIES) documents and signposts the information in relation to potential effects on European sites that was provided within the DCO application and submitted during the examination by the applicant and interested parties (IPs), up to deadline 5 (DL5) of the examination (10 March 2026). It is not a standalone document and should be read in conjunction with the examination documents referred to. Where document references are presented in square brackets [ ] in the text of this report, that reference can be found in the Examination Library published on the 'Find a National Infrastructure Project' website by following the link below:

https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN020026-000502-Sea%20Link%20Examination%20Library%20PDF.pdf

1.1.4 For the purpose of this RIES, in line with The Habitats Regulations and relevant Government policy, the term 'European sites' includes Special Areas of Conservation (SAC), candidate SACs, proposed SACs, Special Protection Areas (SPA), potential SPAs, listed and proposed Ramsar sites and sites identified or required as compensatory measures for adverse effects on any of these sites. For ease of reading, this RIES also collectively uses the term 'European site' for European sites as defined in The Habitats Regulations 2017 and 'European Marine Sites' defined in The Offshore Marine Habitats and Species Regulations 2017, unless otherwise stated. The 'UK National Site Network' refers to SACs and SPAs belonging to the United Kingdom already designated under the Directives and any further sites designated under The Habitats Regulations.

1.1.5 This RIES is issued to ensure that IPs including the Appropriate Nature Conservation Body (ANCB), Natural England (NE) and the Joint Nature Conservation Committee (JNCC), are consulted formally on Habitats Regulations matters. This process may be relied on by the SoS for the purposes of regulation 63(3) of The Habitats Regulations and regulation 28(4) of The Offshore Marine Habitats Regulations.

1.1.6 The JNCC [RR-2635] advised that whilst the proposed development was within the UK inshore region, and under the jurisdiction of NE, the offshore cable would pass through the Southern North Sea SAC and the Outer Thames Estuary SPA which are jointly managed by NE and the JNCC.

1.1.7 Whilst the proposed development is in England, the Berwickshire and North Northumberland Coast SAC, which is located in both England and Scotland, was identified for consideration in the applicant's assessment. On 19 September 2025, the ExA wrote to NatureScot inviting it to participate in the examination as an 'other person' [PD-010]. NatureScot did not respond.

1.1.8 This RIES aims to identify and close any gaps in the ExA's understanding of IPs' positions on Habitats Regulations matters, in relation to all European sites and qualifying features as far as possible, in order to support a robust and thorough recommendation to the SoS. Following consultation, the responses will be considered by the ExA in making their recommendation to the SoS and made available to the SoS along with this report. The RIES will not be revised following consultation.

1.2 Documents used to inform this RIES

1.2.1 The applicant's Habitats Regulations Assessment (HRA) Report was provided in 'Habitats Regulations Assessment Report' [APP-290] at the application stage. This was superseded by [AS-007], [REP1-071], [REP2-009], [REP3-028] [REP4-057] [REP5-036] during the examination.

1.2.2 In addition to the HRA Report, this RIES refers to representations submitted to the examination by IPs, Issue Specific Hearing (ISH) documents, Statements of Common Ground (SoCG) and other examination documents as relevant. All documents can be found in the Examination Library.

1.3 RIES questions

1.3.1 This RIES contains questions predominantly targeted at the applicant, NE, the JNCC and the Royal Society for the Protection of Birds (RSPB), which are drafted in **blue, bold text.**

1.3.2 The responses to the questions posed within the RIES and comments received on it will be of great value to the ExA in understanding IPs' positions on Habitats Regulations matters. It is stressed that responses to other matters discussed in the RIES are equally welcomed.

1.3.3 Comments on the RIES are timetabled for DL6 (13 April 2026).

1.4 Change Requests

1.4.1 To date, the applicant has made the following application for a change:

- Change request 1 (26 November 2025), comprising:
  - change 1 – change to access at the former Hoverport, Pegwell Bay, Kent
  - change 2 – change to limits of deviation for Friston (Kiln Lane) substation, Suffolk
  - change 3 – change to order limits east of Friston to provide flexibility in relation to a buried heritage feature, Suffolk
  - change 4 – Benhall Railway Bridge, Suffolk
  - change 5 – increase in area for maintenance of a new hedge to south of B1119

1.4.2 The change request was accepted by the ExA [PD-015].

1.4.3 Relevant HRA matters arising from change 1 in change application 1 are detailed in sections 2 and 3 of this RIES. The applicant's Change Request: ES Addendum [CR1-055] stated that there were no HRA implications from changes 2 to 5 in change application 1. NE [REP3-116] stated that it had no further advice on changes 2 to 5 and was content there would be no environmental concerns arising from those changes.

2 LIKELY SIGNIFICANT EFFECTS

2.1 Introduction

2.1.1 The proposed development is not connected with or necessary to the management for nature conservation of any European site.

2.1.2 Sections 2 and 3 of the HRA Report [APP-290] set out the applicant's approach to the HRA. The HRA Report stated that the scope of the assessment has been primarily guided by identified impact pathways (using the source-pathway-receptor model).

2.2 European sites considered

2.2.1 Section 4 of the HRA Report [APP-290] confirmed that no European sites in European Economic Area (EEA) States or devolved administrations have been included in the applicant's HRA. Only sites within the UK National Site Network (NSN) are addressed in this RIES.

2.2.2 The HRA Report [APP-290] identified a total of 18 individual European sites within the UK NSN for inclusion within the assessment, as listed in table 3.1 of the HRA Report and detailed in table 2.1 below. The European Sites were identified using receptor-specific impact pathways, associated Zones of Influence (ZoI), and professional judgement.

2.2.3 Table 3.1 of the original HRA Report [APP-290] combined European sites designated as both a SPA and Ramsar site, and thus 14 European sites were listed by the applicant.

Table 2.1: European sites in the UK NSN identified in the applicant's HRA Report [APP-290]

Name of European site	Distance from proposed development (km)
Outer Thames Estuary SPA	0
Sandwich Bay SAC	0
Southern North Sea SAC	0
Thanet Coast SAC	0
Minsmere-Walberswick SPA	1.7
Minsmere-Walberswick Ramsar site	1.7
Thanet Coast & Sandwich Bay SPA	0
Thanet Coast & Sandwich Bay Ramsar site	0
Sandlings SPA	0.20
Alde Ore Estuary SPA	1.1
Alde Ore Estuary Ramsar site	1.1

Name of European site	Distance from proposed development (km)
Margate and Long Sands SAC	3.0
Stodmarsh SAC	6.5
Stodmarsh SPA	6.9
Stodmarsh Ramsar site	6.9
The Wash and North Norfolk Coast SAC	110
Humber Estuary SAC	160
Berwickshire and North Northumberland Coast SAC	412

2.2.4 Appendix E (Figure 1 European Sites) of the HRA Report [APP-290] identified the location of the European sites relative to the proposed development. However, the locations of Minsmere-Walberswick Ramsar site and SACs with marine mammal qualifying features located >100km from the proposed development were not identified. These were depicted on figure 6.4.4.5.2 'Relevant Designated Sites for the Protection of Ornithology' of [APP-280] and [AS-053], respectively.

2.2.5 No additional UK European sites were identified in subsequent revisions of the HRA Report or have been identified by IPs for inclusion within the assessment in the examination to date.

2.3 Potential impact pathways

2.3.1 Section 4 of the HRA Report [APP-290] identified the potential likely significant effect (LSE) pathways for consideration in the assessment, as detailed in table 2.2 below.

Table 2.2: Potential LSE pathways identified in the applicant's HRA Report [APP-290]

LSE pathway	Phase
From onshore elements of the proposed development	
Direct habitat loss	Construction and operation
Loss of functionally linked land (FLL)	Construction and operation
Air quality	Construction and operation
Disturbance (noise/visual/lighting)	Construction and operation
Pollution (terrestrial – changes in water quality)	Construction and operation
Collision risk (birds)	Operation

LSE pathway	Phase
From offshore elements of the proposed development	
Temporary physical disturbance to benthic habitats and species	Construction
Temporary increase in suspended sediment concentration (SSC) and sediment deposition	Construction
Changes to marine water quality (drilling fluids)	Construction
Underwater sound impacts	Construction
Vessel collision risk (marine mammals)	Construction
Airborne sound and visual disturbance	Construction
Indirect effects through impacts to prey species	Construction
Permanent loss of benthic habitats and species	Operation
Introduction and spread of Invasive Non-Native Species (INNS) via cable protection	Operation
Disturbance due to thermal emissions	Operation
Effects of electromagnetic field (EMF) emissions	Operation

2.3.2 The applicant considered that all potential impacts during the decommissioning phase would be similar to those outlined in the construction phase and thus construction phase impacts screened in were automatically also screened in for the decommissioning phase [APP-290].

2.4 The applicant's screening conclusions from the proposed development alone

2.4.1 The applicant's conclusions in respect of screening at the application stage were presented in sections 4 to 6 of the HRA Report [APP-290], with a summary table provided in appendix A.

Sites for which the applicant concluded <u>no LSE</u> on all qualifying features

2.4.2 The applicant concluded that the proposed development alone would not be likely to give rise to significant effects on all qualifying features of Stodmarsh SAC.

Sites for which the applicant concluded LSE on some or all qualifying features

2.4.3 The applicant concluded that the proposed development alone would be likely to give rise to significant effects on one or more of the qualifying features of all sites listed in table 2.1 of this RIES, aside from Stodmarsh SAC.

2.4.4 The qualifying features and LSE pathways screened in by the applicant were detailed in section 6 of the HRA Report [APP-090] and are identified in tables A1.1 to A1.4 in annex 1 of this RIES.

2.5 In-combination effects

2.5.1 Section 5 of the HRA Report [APP-290] detailed the applicant's approach to assessing in-combination effects. It identified the plans or projects, which when considered in-combination with the proposed development, could result in significant effects.

2.5.2 The HRA Report [APP-290] identified in-combination LSEs for:

- Outer Thames Estuary SPA
- Southern North Sea SAC
- Sandlings SPA
- Minsmere-Walberswick SPA
- Thanet Coast & Sandwich Bay SPA and Ramsar site

2.5.3 The applicant confirmed (1ECOL49, [REP3-069]) that no in-combination LSEs had been identified where a LSE had not been identified for that pathway as a result of the proposed development alone.

2.5.4 The application version of the HRA Report [APP-290] concluded a LSE from effects of the proposed development in-combination with the LionLink interconnector project. The applicant updated the HRA Report [REP5-036] following publication of the preliminary environmental information report (PEIR) for the LionLink interconnector project. It stated that the LionLink PEIR demonstrated that there would be no interaction between that project and Sandlings SPA and Minsmere-Walberswick SPA. A LSE from in-combination effects with LionLink was therefore excluded.

2.6 Pre-examination and examination matters

2.6.1 NE [RR-3920] (1MM9, [REP4-196]) initially advised that all relevant European sites had been screened in by the applicant. It also confirmed that it agreed with the applicant's conclusion of no LSE to Stodmarsh SAC (1ECOL60, [REP4-196]).

2.6.2 However, at DL5, NE [REP5-215] advised that Alde-Ore & Butley Estuaries SAC should be assessed in the HRA, noting that there was potential for effects on water quality from a proposed permanent outfall serving the Saxmundham converter station, which would be located on a tributary of the River Fromus that feeds the SAC approximately 6km downstream.

RIESQ1 – To the applicant: Submit an updated HRA Report that considers potential for LSE to the Alde-Ore & Butley Estuaries SAC arising from changes to water quality due to the presence and operation of the proposed outfall.

2.6.3 The JNCC [RR-2635] did not identify any additional European sites within its remit for inclusion in the assessment.

2.6.4 Matters raised to date in relation to the applicant's screening exercise, or those for which the ExA seeks clarity, are summarised in table 2.3 below. Note that minor omissions or clarifications which were resolved through submission of revised versions of the HRA report have not been reported below.

Table 2.3: Issues raised in the examination to date by the ExA and IPs in relation to the applicant's screening of LSEs (alone and in-combination)

ID	Potential impact pathway	Details of issue	ExA observation / question
METHODOLOGICAL ISSUES			
2.3.1	Precautionary approach	Kent Wildlife Trust (KWT) [REP1-152] considered the applicant's screening had failed to apply the precautionary approach by screening out effects where impacts were described as unlikely or not anticipated rather than ruled out. It considered that the screening minimised the significance of likely impacts by using temporal and qualitative descriptors such as "temporary", "localised", or "small in scale" without evidential justification. The applicant (table 2.6, [REP2-034]) considered this to be a point in semantics rather than a 'lower test' being applied and stated that it had quantified terms within its assessments.	The ExA notes KWT's comments.
2.3.2	Benthic receptor sensitivity to direct habitat loss	NE (E27, [RR-3290]) disagreed with the applicant's statement in [APP-075] that placement of hard substrates on the seabed would have a temporary impact resulting in benthic habitats having a medium sensitivity to direct loss. It advised the applicant to update the HRA Report with a more appropriate evidenced evaluation. The applicant [REP2-014] confirmed that the offshore scheme did not pass through any European sites designated for benthic habitats and did not consider changes to the HRA were needed. NE (E27, [REP3A-025] [REP4-197]) and [REP3A-027] recorded this matter as partially resolved but retained outstanding concerns, which primarily related to s41 habitats of principal importance.	The ExA notes the comments of the applicant and NE, and considers this matter resolved for the HRA.

ID	Potential impact pathway	Details of issue	ExA observation / question
ANNEX I HABITAT SACs			
2.3.3	**MARGATE AND LONG SANDS SAC** Impacts to important habitat near to the SAC and adequacy of mitigation	Kent and Essex Inshore Fisheries Conservation Authority (KEIFCA) [RR-2976] and KWT [RR-2980] raised concerns about impacts to habitat features along the cable corridor near Margate and Long Sands SAC, and whether sufficient mitigation was proposed. The applicant [REP2-014] stated that the offshore scheme was routed to avoid the SAC. It stated that there was no potential for direct effects from the proposed development as the cable corridor is 3km from the SAC boundary. By DL5, no further comments had been received from KEIFCA or KWT on this matter.	The ExA notes that direct effects to the SAC are not expected due to its distance from the cable corridor and considers this matter to be resolved.
2.3.4	**SANDWICH BAY SAC** Missing impact pathway relating to hydrological impacts from horizontal directional drilling (HDD) to groundwater dependent humid dune slacks	NE (B1, B9 and B21, [RR-3920]) advised that hydrological impacts are a threat in the Site Improvement Plan and had concerns that hydrological impacts from HDD were not fully considered. It (B30 to B33 [RR-3920]) noted that several impact pathways were assessed in the ES [APP-065] and described in the Landfall HDD Feasibility Report (appendix A, [APP-231] but not considered in the HRA. The applicant updated its justification in paragraphs 4.4.3 to 4.4.6 of [REP5-036], based on information in a technical note (appendix F, [REP5-036]) showing that the chalk aquifer is independent of groundwater and does not underpin the dune slack. The applicant stated that as groundwater levels are below the base of the proposed excavation (generally 1.5 to 2m) dewatering of open cut trenches close to the dune slack and landfall HDD drive pit is not anticipated. The applicant (1ECOL40, [REP3-069]) clarified that in	Issue resolved.

ID	Potential impact pathway	Details of issue	ExA observation / question
		the unlikely event dewatering is required, it would be carried out a minimum of 600m from the nearest dune slacks. It stated that the absence of a connecting impact pathway was shown through the location of HDD entry and exit points on drawing DCO/K/DE/SS/1257 [APP-037] and appendix A of [APP-321]. NE [(1ECOL59, [REP4-196]) confirmed the information was sufficient to address its concerns.	
2.3.5	**SANDWICH BAY SAC** Direct habitat loss during construction and operation from cable installation and feasibility of HDD	The application version of the HRA Report [APP-090] contained conflicting information about whether an LSE to the SAC from direct habitat loss was concluded. The applicant confirmed (1ECOL41, [REP3-069]) in response to first written questions (ExQ1) [PD-017] that LSE was screened out and removed reference to it in the adverse effect on integrity (AEoI) assessment (section 7 [REP5-036]). The rationale remained unchanged, that there would be no LSE due to absence of connectivity to dune slack (see ID 2.3.4 above). The application version of the HRA Report [APP-290] identified that HDD would avoid direct loss of habitat at the SAC. The Design Development Report [APP-321] assessed the technique as feasible. Details of the examination of HDD feasibility are presented in ID 3.3.19 of this RIES. Some IPs also raised concerns about impacts to the SAC if trenchless methods proved to not be feasible. KWT [RR-2980] [REP1-151] [REP1-152] [REP4-124] noted no commitment to revert to alternative routes. The RSPB [REP1-158] [REP1-159] [REP1-165] considered it was not possible to conclude no AEoI of the SAC, and sought assurance that open-trenching would not be pursued under any circumstances [REP5-092]. Given problems	The ExA understands that IPs' concerns relate to the feasibility of trenchless methods and notes the applicant has committed in the DML and new dDCO Requirement 16 to only use trenchless methods with no alternative. **RIESQ2 - To the applicant:** **The REAC [REP5-115] states that the securing mechanism for the Outline Offshore Construction Environmental Management Plan (oOCEMP) [REP5-066]**

ID	Potential impact pathway	Details of issue	ExA observation / question
		on Nemo Link, it stated that further evidence was needed in determining feasibility of HDD. Save Minster Marshes (SMM) [RR-4892] raised concerns that open cut trenching techniques would be used that could impact the SAC. The draft SoCG with National Trust (NT) [REP5-101] reported similar concerns. The applicant [AS-106] was confident trenchless techniques were feasible and did not consider there to be a need to assess alternative methods not within the design envelope. Requirement 16 of the dDCO and Condition 10(1) of the deemed marine licence (DML) (Schedule 16) in the dDCO [REP5-005] secured that landfall installation must only use trenchless techniques.	**would be Requirement 6 of the dDCO [REP5-005]. Requirement 6 of the dDCO does not list the oOCEMP as a plan to be approved but Condition 4(1)(b) of the DML does. Confirm if this is an error in the REAC or if Requirement 6 of the dDCO should be amended.**
2.3.6	**SANDWICH BAY SAC** Direct habitat loss during construction and operation from cable and/ or scour protection	NE (E31, [RR-3290]) advised the applicant to update the HRA where relevant regarding use of scour protection at HDD exit pits. It raised concerns [REP3A-028] about inconsistency across documentation regarding temporary and permanent cable protection in the SAC. Commenting on MPE04 in the REAC [REP5-115], NE [REP3A-028] queried why rock is proposed at HDD exit pits and no other form of protection; it advised more readily removable options should be considered. The applicant [REP4-241] confirmed that cable protection would be required in the SAC at the trenchless crossing exit but would be buried and not located in intertidal mudflats (part of the site character but not a qualifying feature of the SAC). It updated the HRA Report [REP5-036] to reflect this, confirming a requirement for 360m^2 of concrete mattresses or rock bags at landfall. It confirmed no change to the conclusion as there would be no	Issue resolved.

ID	Potential impact pathway	Details of issue	ExA observation / question
		permanent habitat loss. It clarified that MPE04 relates to protection for the offshore scheme not HDD exit pits in the SAC. The Marine Management Organisation (MMO) (1GEN60, [REP4-126]) requested that condition 13 of the DML be amended to prevent cable protection being deployed in the SAC after the construction period. The applicant (2BE13, [REP5-135]) confirmed it had updated the DML in the dDCO [REP5-005] to follow the advice from the MMO and NE, and secure that no cable protection would be deployed within the SAC after construction had ended. NE (2BE13, [REP5-135]) agreed with this approach. NE (2BE12, [REP5-199]) advised that its concerns about the SAC related to impacts to humid dune slacks, which had been resolved as described above in ID 2.3.4. Remaining concerns about cable protection related to Thanet Coast & Sandwich Bay SPA and Ramsar site.	
2.3.7	**SANDWICH BAY SAC** Trenchless landfall techniques	As described above at ID 2.3.5, the applicant stated that it would only use a trenchless landfall technique for cable installation. It did not assess use of trenchless landfall techniques as a mitigation method and screened out LSE arising from direct habitat loss. The applicant's HRA Report (paragraph 2.2.4, [REP5-036]) stated that case law qualified when measures could be taken into account at screening, including where these were properly characterised as integral features of the project.	**RIESQ3 – To the applicant.** **Explain, with reference to relevant case law (People Over Wind, Peter Sweetman v Coillte Teoranta (C-323/17) (CJEU, 2018), why use of trenchless landfall techniques are not mitigation (and**

ID	Potential impact pathway	Details of issue	ExA observation / question
			therefore assessed at Stage 2). **RIESQ4 - To NE. Provide any comments you have on the applicant's approach and LSE conclusion in the HRA Report.**
2.3.8	**SANDWICH BAY SAC** Air quality during construction at the hoverport site	The HRA Report [REP5-036] screened out LSE from air quality change due to atmospheric nitrogen deposition based on there being no sand dune qualifying features within 200m of the A256. The applicant confirmed in its Change Request: ES Addendum [CR1-055] that change 1 would not result in any change to vehicle movements at the hoverport. The ExA (1ECOL42, [PD-017]) sought clarification from the applicant about how the proposed hoverport access, which is adjacent to the SAC, was considered in the screening. It asked how the applicant proposed to limit the number of vehicles accessing the former hoverport. The applicant [REP3-069] stated that the Pegwell Bay Construction Method Technical Note (PBCMTN) [REP4-229] states a requirement for up to 40 movements per day at peak times over an approximate one year duration, which would be below the screening criteria in relevant guidance.	Issue resolved.
2.3.9	**THANET COAST SAC** Temporary physical disturbance during	The applicant [REP5-036] screened out LSE from temporary disturbance based on the footprint being limited to physical works for the proposed development, and distance between this and	Issue resolved.

ID	Potential impact pathway	Details of issue	ExA observation / question
	construction and permanent habitat loss of chalk reef qualifying feature	SAC qualifying features. The applicant confirmed there would be no cable protection in the SAC and no permanent habitat loss. NE [REP3A-028] noted continuous chalk in the SAC, which could be damaged or lost during cable installation and operation activities. It requested an assessment of impacts, including from measures to ensure cable remains buried. It also (D36 [REP4-197]) requested detail about how impacts would be avoided. The applicant [REP4-241] provided mapping to show that the limits of deviation of the proposed development also avoid chalk reef located outside of the SAC. The Benthic Characterisation Report [APP-196] identified chalk as a geological feature not supporting benthic communities. NE (new issue 36, appendix D, [REP5-217]) confirmed that this matter was resolved.	
2.3.10	**THANET COAST SAC** Impacts from physical process change or ecological halo effects from placement of cable protection	NE (E44, [RR-3920]) advised that placement of cable protection should be avoided in benthic supporting habitats. It stated that if there is potential for cable protection to impact physical supporting processes or result in ecological halo effects, its placement adjacent to designated sites should be avoided where possible. The applicant [REP4-241] confirmed that there would be no cable protection in sites designated for benthic and sediment features. It [REP4-085] stated that whilst colonisation of marine structures does occur, halo effects arise under specific environmental condition typically where tall, complex structures (3 to 4 metres in height) create depth gradients that support filter-feeding communities. It considered that the type of colonisation that would	Issue resolved.

ID	Potential impact pathway	Details of issue	ExA observation / question
		occur on cable protection would not lead to the development of complex communities. The applicant [REP2-014] stated that there was little evidence in literature that ecological halo effects would arise. It stated that the structure used did not sit high above the seabed and would not have vertical depth gradient to support development of diverse filter feeding communities. It referenced studies by OSPAR (2023) and Reeds (2017) in support. Marine Chapter 1, Physical Environment [REP5-019] considered the potential for sediment transport change at Kent landfall and in the offshore scheme. It concluded that there would be a negligible effect due to the profile and distribution of the cable protection. NE (E44, [REP5-222]) recorded this matter as resolved noting that it considered impacts to supporting habitat for mobile features would be considered in a separate marine licence for UXO clearance, which is considered to have a greater impact than placement of cable protection.	
ANNEX I HABITAT SACs AND TERRESTRIAL ORNITHOLOGY (SPAs and RAMSAR SITES)			
2.3.11	**THANET COAST SAC and THANET COAST & SANDWICH BAY SPA AND RAMSAR** Changes to marine water quality from release of contaminants and debris at the hoverport site	NE [REP4-189] raised a new issue of release of contaminants and debris from use of the hoverport for access to the intertidal area. It elaborated its concerns in (point 2 [REP4-191]) (J31, [REP4-197]). It stated that evidence from Vattenfall Wind Power's Thanet OWF and Thanet OWF Extension projects indicated a risk of groundwater contamination discharging into coastal waters and affecting qualifying features of the designated sites. NE (2ECOL26, [REP5-199]) [REP5-217] stated that it was unclear how the structural integrity of the hoverpad would be affected by	**RIESQ5 – To the applicant:** **If mitigation (in the form of a structural integrity assessment and monitoring) is proposed, should this LSE impact pathway be**

ID	Potential impact pathway	Details of issue	ExA observation / question
		vehicular traffic. It advised that heavy plant and vehicle movement could result in release of contaminants, which required further investigation. It stated that coal contamination could affect water acidity and that there was risk of releasing toxic heavy metal that could affect features of the Thanet Coast SAC and Thanet Coast & Sandwich Bay SPA and Ramsar site. KWT [REP4-124] echoed these concerns. The applicant (2ECOL26, [REP5-135]) explained that the Thanet OWF Extension identified the former hoverport as a potential contamination source due to the presence of colliery spoil used to raise site levels, and historic fuel storage. It stated that Kent Onshore Geology and Hydrogeology ES chapter [APP-065] acknowledges the potential contamination source but concludes that it does not represent a LSE as the site would only be used for access and there would be no ground disturbance. It committed to a structural integrity assessment of the hardstanding to ensure suitability for the access, which it proposed to include in a future iteration of the Outline Construction Traffic Management and Travel Plan – Kent [APP-338]. It inserted a commitment to monitor the condition of the hoverport during construction in the Outline Onshore CEMP (oCEMP) (W37, [REP5-068]).	**considered at Stage 2 of the HRA?** **RIESQ6 – To NE:** **Does the applicant's commitment to further assessment and monitoring address your concerns about this impact pathway? If not, advise what further information you consider is needed.**
2.3.12	**THANET COAST & SANDWICH BAY SPA AND RAMSAR SITE and SANDWICH BAY SAC** Operational air quality	NE (B24 and B37, [RR-3920]) noted operational traffic emissions within Kent, whilst likely to be minimal, had not been considered in the HRA Report [APP-290]. The applicant revised the HRA Report [REP4-057] to confirm that during the operational and maintenance phase, there would be up to 4 daily car/LGV trips associated with staff members for the proposed Minster Converter Station, and occasional maintenance and inspection. It	Issue resolved.

ID	Potential impact pathway	Details of issue	ExA observation / question
		concluded a LSE could be ruled out. NE [REP3-117] confirmed it agreed no LSE.	
MARINE MAMMAL SACs			
2.3.13	**ALL SITES** Indirect effects from availability of prey species during construction	The applicant concluded no LSE to all sites with marine mammal qualifying features because of indirect effects from prey availability. With regards to the Southern North Sea SAC, the JNCC [RR-2635] [REP1-210] queried how conservation objective 3 (relating to condition of supporting habitats and availability of prey) was considered in the LSE conclusion for this impact pathway. It noted [REP3-090] that the applicant identified potential for disturbance to prey, but no evidence was provided to support the assumptions made. Furthermore, the JNCC advised that the format of the in-combination assessment does not allow consideration of potential impacts at a site or conservation objective level. SMM [REP4-144] queried the applicant's screening conclusion and stated that there were deficiencies in the HRA Report [REP5-036]. The applicant provided further explanation in (1MM12, [REP4-083]) (table 1.3, [REP4-094]), noting that an area of 2.8km^2 could be affected by the proposed development, which is <0.01% of the habitat of the Southern North Sea SAC. It concluded that the impact pathway could be screened out. It considered that the negligible footprint had no potential to add to any in-combination effects. NE (F26, [RR-3920]) deferred to Centre for the Environment, Fisheries and Aquaculture Science (CEFAS) on impacts	The ExA notes that the MMO is satisfied with the applicant's LSE conclusion based on advice from CEFAS.

ID	Potential impact pathway	Details of issue	ExA observation / question
		associated with prey availability impacting marine mammal species. The MMO (1MM14, [REP4-126]) subsequently confirmed that it had reviewed the matter alongside its scientific advisors at CEFAS and agreed with the conclusion of no LSE for all European sites with marine mammal qualifying features. The JNCC (2MM5, [REP5-194]) acknowledged the MMO's position but stated that it would provide a response on whether it agreed with the applicant's LSE conclusions after review of the HRA Report planned for submission at DL5.	
TERRESTRIAL ORNITHOLOGY (SPAs and RAMSAR SITES)			
2.3.14	**ALDE-ORE ESTUARY SPA AND RAMSAR** Pollution of the water environment	The applicant [REP5-036] concluded no LSE to the Alde-Ore Estuary SPA and Ramsar site from pollution to the water environment. NE [REP5-215] advised that there was potential for effects from a proposed permanent outfall serving the Saxmundham converter station, which would be located on a tributary of the River Fromus that feeds into the SPA and Ramsar site approximately 6km downstream. It stated that LSE could not be screened out based on best practice pollution management alone and requested assessment in the HRA.	The ExA understands that NE's advice is this matter should be considered at Stage 2 and has included it in table 3.3 of the RIES.
2.3.15	**STODMARSH SPA AND RAMSAR SITE** Loss of FLL for hen harrier	The RSPB [REP1-158] considered there to be insufficient clarity to exclude potential for impacts to hen harrier due to habitat loss as a result of inconsistencies of the interpretation of species records. It [REP5-092] considered that surveys should have been carried out. The applicant (table 2.10, [REP2-034]) considered that given the 6.9km distance between the SPA and the Order Limits and as	**RIESQ7 – To NE:** **Does NE agree with the applicant's conclusion of no LSE for loss of FLL for hen harrier from Stodmarsh SPA?**

ID	Potential impact pathway	Details of issue	ExA observation / question
		hen harriers are not purely found in SPAs, there was a low likelihood these birds were from Stodmarsh SPA.	
2.3.16	**THANET COAST & SANDWICH BAY SPA/ RAMSAR SITE** FLL used by golden plover	NE (B19, [RR-3920]) noted that the applicant had considered the loss of FLL used by golden plover as an operational impact on the basis it is a permanent impact. It advised that, as the impact occurs during the construction phase, it should be considered a construction phase impact. The applicant (B19, [REP2-014]) explained it had included this impact under operation to make it clear this would be a permanent impact and to separate it from the temporary habitat loss due to construction compounds. NE [REP3-117] advised the change is not essential to the outcome of the assessment as the impact has been considered and satisfactorily mitigated.	The ExA acknowledges the differing opinions on this matter.
2.3.17	**THANET COAST & SANDWICH BAY SPA/ RAMSAR SITE** Temporary increases in SSC and sediment deposition	NE [REP4-191] advised that increases in SSC and sediment deposition should be considered for the SPA and Ramsar site, as the intertidal reef, mudflats and sandflats provide valuable feeding grounds and roosting areas. It considered changes to supporting processes could hinder conservation objectives to maintain or restore the supporting habits upon which the features rely. The applicant (table 8.3, [REP4-241]) stated that the upper intertidal habitat at Pegwell Bay is predominantly mud, which is relatively insensitive to smothering. It considered that sediment disturbed during cable burial would remain in suspension for a limited period before being deposited back onto the intertidal surface rather than being more widely dispersed. It concluded that natural sediment transport driven by tidal action is sufficient	The ExA notes that this matter is in progress and further information is expected at DL6.

ID	Potential impact pathway	Details of issue	ExA observation / question
		to 'smooth-out' any variations in the seabed caused by all nearshore temporary activities, returning the bed to equilibrium conditions. NE [REP5-217] acknowledged the applicant's analysis but advised that further detail was needed to provide confidence in its conclusions. It stated that either the maximum dispersion extent and concentration should be provided, or supporting evidence from other projects. The applicant [REP5-132] committed to submitting further sediment dispersion modelling at DL6.	
2.3.18	**THANET COAST & SANDWICH BAY SPA/ RAMSAR SITE** Coastal and marine process impacts during operation	The applicant committed to a target cable depth of lowering (DoL) of 1.5m at Kent landfall (MPE02, [REP4-235]) to allow for potential future lowering of intertidal bed levels. The REAC securing mechanism would be the Outline Offshore Construction Environmental Management Plan (oOCEMP) [REP5-066] and Requirement 6 of the dDCO [REP5-005]. NE [REP3-118] highlighted risks to cable burial from migration of the River Stour channel towards the cable route, coastline erosion, changes to sediment transport and climate change. It sought assurance that landfall activities would not be affected by morphological change or lead to interruption of coastal processes. It confirmed (2PE4, [REP5-199]) that its concerns related primarily to impacts on intertidal /shallow subtidal mudflats and saltmarsh providing supporting habitat to the Thanet Coast & Sandwich Bay SPA and Ramsar. It requested [REP5-217] monitoring of the cable route through Pegwell Bay over the project lifetime.	**RIESQ8 – To NE:** **Are the applicant's commitments to DoL of 1.5m at the Kent landfall and monitoring of the River Stour channel migration and coastal erosion sufficient to address your concerns about this matter?**

ID	Potential impact pathway	Details of issue	ExA observation / question
		The Environment Agency (EA) [REP4-185] [REP5-088] retained concerns about cable burial depth not being sufficient to avoid exposure from the northwards migration of the River Stour. It requested the applicant to further update its commitments in the REAC (MPE02, [REP5-115]) for the depth to be deeper than the mouth of the low flow Stour channel. Alternatively, it stated [REP5-173] that a commitment to ongoing maintenance dredging in combination with the port authority would be a suitably low impact method to control movement of the mouth. The applicant [REP4-241] provided further interpretation of its Landfall Sediment Modelling Report [PDA-038] to support its position that future variability would not pose a problem to the cable. It stated that remedial action would be carried out if the cable was exposed to avoid wider scale effects. The applicant (AP75, [REP4-086]) provided details of the proposed remedial measures. It stated that a preliminary inspection, maintenance and repair (IMR) programme for preventative maintenance would involve bathymetric surveys to identify any localised exposed lengths of cable including in Pegwell Bay. The REAC (MPE08, [REP5-115]) included a commitment to analysis of potential coastal erosion in line with the final Offshore CEMP. The oOCEMP [REP5-066] and Outline Cable Specification and Installation Plan (oCSIP) [REP5-117] included provision for an IMR programme with baseline as-built DoL survey followed by initial monitoring survey after 12 months and regular monitoring every 12 to 24 months, potentially reducing to every 5 years, where DoL hotspots may develop.	

ID	Potential impact pathway	Details of issue	ExA observation / question
		The applicant updated the Marine Chapter 1, Physical Environment (paragraph 1.7.65, [REP5-019]) to further explain the uncertainty regarding future migration of the river channel and stated that this could not be reduced by additional modelling or surveys of present day conditions. In response to the ExA [EV6-033], the applicant (AP74 [REP4-086]) confirmed that a 3m cable burial depth below the River Stour bed level (to between 6.5m and 3.7m beneath the seabed) (rather than the target 1.5m DoL) would result in an increased magnitude of disturbance that could have implications for the HRA. It stated that for these reasons and given the findings of the Landfall Sediment Modelling Report [PDA-038], a 1.5m cable depth below seabed was reasonable. The ExA (2ECOL25, [PD-021]) asked the applicant to explain how remedial actions were considered in its HRA work, or if not considered justify why it was not required. The applicant [REP5-135] confirmed that it had updated the DML in the dDCO [REP5-005] to follow the advice from the MMO and NE, and secure that no cable protection would be deployed within the SAC after construction has ended. It (2ECOL25, [REP5-135]) stated that a separate marine licence would be sought for any additional rock protection in the SAC if required and that no assessment was required in the HRA as this did not form part of the proposed development. The EA [REP5-088] welcomed MPE08 but asked if this would include survey for erosion where cables make landfall. NE (NE11, [REP5-222]) also welcomed MPE08 but stated that cable exposure risk, including risk associated with climate change, required consideration in shoreline management plans. The	

ID	Potential impact pathway	Details of issue	ExA observation / question
		applicant inserted MPE09 in the REAC [REP5-115] to include a commitment to annual monitoring for the first 5 years from installation to detect northerly migration towards the cable. MPE09 would be secured through the oOCEMP [REP5-066].	
MARINE ORNITHOLOGY			
2.3.19	**OUTER THAMES ESTUARY SPA** Impacts on supporting habitats	NE (E43, [RR-3920]) advised that impacts to features of the Outer Thames Estuary SPA arising from the permanent loss of subtidal sediments due to cable protection placement had not been assessed. It acknowledged that the total extent of loss was likely to be small compared with habitat available. In response, the applicant revised the HRA Report (paragraphs 4.3.41 to 4.3.42, [REP5-036]) confirming that up to 7.35km of cable might require cable protection within the SPA, resulting in a loss of 0.0515km^2 of supporting habitat; this would equate to 0.0013% of the SPA. It concluded this would not result in a LSE. NE (ECOL61, [REP4-196]) agreed that the impacts on the supporting habitats were likely to be sufficiently temporary to not engage the SPA conservation objectives.	Issue resolved.
IN-COMBINATION ASSESSMENT			
2.3.20	Approach to LSE in-combination assessment	The HRA Report [APP-290] stated that in-combination LSEs could arise from the LSE pathways identified for the proposed development alone. However, NE (B25, [RR-3920]) advised that only appreciable effects that are not significant alone should be included in the in-combination assessment. The applicant (B25, [REP2-014]) considered its approach would not meaningfully affect the HRA. It explained that it had thought it	The ExA notes the applicant's response.

ID	Potential impact pathway	Details of issue	ExA observation / question
		useful to discuss the other projects that may also lead to losses of FLL, so that the context of the losses is clear.	
2.3.21	**THANET COAST & SANDWICH BAY SPA AND RAMSAR SITE and SANDWICH BAY SAC** In-combination construction phase air quality emissions	NE (B18 and B26, [RR-3920]) agreed there would be no LSE from construction phase traffic emissions from the proposed development alone. However, it requested further explanation as to whether there could be LSE from in-combination construction phase emissions. NE did not specify for which European sites its concern related to. The applicant (B25, [REP2-014]) explained that the predicted project alone effects are too small to show in the model, and it considered there would be no in-combination effect. NE (ECOL64, [REP4-196]) subsequently advised that air quality related aspects could be addressed using its standard advice (included in [REP3-117]). The applicant provided a technical note (appendix A, [REP4-241]) detailing how the assessments complied with the standard advice. It confirmed a process contribution of 0.0 µg/m^3 in oxides of nitrogen concentrations at all assessed designated sites, which is less than NE's standard advice threshold of 1% of critical level/load (Step 4a). Consequently, there would be no meaningful increment to aggregate with other plans or projects (Step 4b).	The ExA notes the applicant's response.

2.7 Summary of examination outcomes in relation to screening

2.7.1 The ExA has noted inconsistencies between the LSE conclusions stated in the main text and those within appendix A of the HRA Report [REP5-036]. It has produced Tables A1.1 to A1.4 at annex 1 to this RIES to detail the ExA's understanding of the applicant's screening exercise based on the conclusions stated in the main text of the HRA Report and examination submissions. The tables also include the ExA's understanding of NE's and the JNCC's positions in relation to LSEs at the point of publication of this RIES.

2.7.2 IPs are requested to confirm whether the ExA's understanding is correct.

3 ADVERSE EFFECTS ON INTEGRITY

3.1 Applicant's assessment at the application stage

3.1.1 The European sites and qualifying features for which the applicant identified a LSE were further assessed by the applicant to determine if they could be subject to AEoI from the proposed development, either alone or in combination. The outcomes of the applicant's assessment of effects on integrity were summarised in sections 7 and 8 of the HRA Report [APP-290].

Conservation objectives

3.1.2 The conservation objectives for each European site for which a LSE was identified by the applicant at the point of the DCO application were included in the HRA Report at Section 3 [APP-290]. Conservation objectives for Thanet Coast SAC were corrected in version C of the HRA Report [REP1-071].

3.1.3 Information on pressures to and threats on the European sites were provided in Section 3 to the HRA Report [APP-090]. The condition of marine features was included in version E of the HRA Report [REP3-028], following ExQ1.

Mitigation measures proposed at application stage

3.1.4 The applicant's HRA Report [APP-290] identified mitigation measures in sections 7 and 8. These were taken into account in the applicant's assessment of effects on integrity.

In-combination effects

3.1.5 Section 8 of the HRA Report [APP-290] provided the applicant's assessment of effects on integrity from the proposed development in combination with other plans or projects. The projects assessed comprised those for which a LSE was identified in section 5, and Hanson Aggregate Marine Ltd Area 528/2.

The applicant's conclusions

3.1.6 The applicant concluded that the proposed development would not adversely affect the integrity of any European site, either alone or in combination with other projects or plans.

3.2 Pre-examination and examination matters

Initial positions of SNCBs

3.2.1 In its relevant representation (RR), NE (cover letter, [RR-3920]) stated it was not satisfied that it can be excluded beyond reasonable scientific doubt that the project would have an adverse effect alone or in-combination on the integrity of the following sites:

- Outer Thames Estuary SPA
- Sandlings SPA
- Sandwich Bay SAC

- Southern North Sea SAC
- Thanet Coast SAC
- Thanet Coast & Sandwich Bay SPA and Ramsar site

3.2.2 NE (E46, [RR-3920]) advised that despite its request for further transparent assessment of certain impact pathways, commitments to mitigation were possible and as such it was unlikely that compensatory measures would be necessary.

3.2.3 In its RR, the JNCC [RR-2635] advised that insufficient information had been provided to support the conclusion of no AEoI for harbour porpoise of the Southern North Sea SAC. It initially agreed with the applicant's assessment for red-throated diver of the Outer Thames Estuary SPA, although subsequently raised concerns about the site during the examination, as detailed in table 3.4 below.

Matters discussed in the examination

3.2.4 Site specific matters raised in the examination to date, or for which the ExA seeks clarity, in relation to AEoIs are summarised in tables 3.1 to 3.4 below. Overarching matters raised are briefly summarised below.

Alternatives and the mitigation hierarchy

3.2.5 The RSPB [RR-4651] [REP1-210] considered there to have been insufficient consideration of alternatives to avoid impacts on designated sites. KWT [RR-2980] [REP1-152] was concerned that less damaging onshore cable route options had not been included, specifically in relation to the permanent loss of land functionally linked to the Thanet Coast & Sandwich Bay SPA. The Campaign to Protect Rural England (CPRE) Kent [REP1-147] [REP1-148] [REP1A-044] similarly considered the applicant had bypassed the primary step of avoidance and sought to retrofit mitigation to an unsuitable location; it did not agree there would be no alternative routes to going through Pegwell Bay. This was disputed by the applicant (table 6.12, [REP1-115]) [REP3-067] [REP5-092] who asserted it had followed the mitigation hierarchy and identified opportunities to avoid and mitigate constraints whenever possible.

Baseline surveys

3.2.6 Suffolk Energy Action Solutions (SEAS), KWT, the RSPB and RSPB Thanet all raised concerns regarding the applicant's bird survey effort. Specific concerns are discussed in table 3.3 below. East Suffolk Council (ESC) [RR-1420] also highlighted a generic concern about bird survey coverage, noting these would have implications for both the HRA and the ES. The applicant [REP1A-043] considered it had good coverage of the site and a good knowledge of the ornithological interest of the area. ESC [REP5-184] subsequently reported this matter as closed, stating it did not consider that further surveys would change the assessment outcome.

Assessment approach

3.2.7 KWT [REP1-152] noted that impact pathways on sites had been considered separately but if addressed together there could be greater effects. The

applicant (table 2.6, [REP2-034]) disputed KWT's assertion, noting it was not aware of any HRA that does not present its assessment by impact pathway.

3.2.8 SMM [REP5-167] raised general concerns about the applicant's assessment of impacts to Thanet Coast & Sandwich Bay SPA, and Sandwich Bay SAC stating that there were deficiencies that raised doubt about whether a legally compliant appropriate assessment could be undertaken. It referred to detail in [REP4-144], where it raised concerns about little tern and turnstone of the Thanet Coast & Sandwich Bay SPA but did not specify for which impacts.

3.2.9 The draft SoCG with the NT [REP5-101] recorded that the NT was seeking a commitment to an intertidal HRA in respect of potential impacts from HDD to intertidal mudflats affecting birds subject to ecological designations on NT land at Pegwell Bay. It was concerned about restoration of mudflat following cable laying. The applicant stated that the HRA Report [REP5-036] considered the whole project and a separate intertidal HRA was not required.

Consideration of conservation objectives

3.2.10 KWT [REP1-151] raised concerns that the applicant had failed to assess effects against site conservation objectives. The applicant (table 2.6 [REP2-034]) stated that legislation does not stipulate how the conservation objectives must be referenced in the report. It considered that the impact pathways discussed in the HRA Report [REP5-036] were directly relatable to the conservation objectives and that the assessment had been made in view of site conservation objectives.

Coastal and marine processes' impacts at the Kent landfall

3.2.11 NE [REP4-191] [REP5-217] raised concerns that coastal and marine processes' impacts on Sandwich Bay SAC, Thanet Coast SAC and Thanet Coast and Sandwich Bay SPA & Ramsar site were not fully identified or quantified in Marine Chapter 1, Physical Environment (version D, [REP3-020]). It acknowledged that impacts may be assessed in the HRA Report [REP4-057] but advised it was first necessary to clearly set out the impacts on marine physical processes and environment to inform the HRA. It requested that the applicant update the ES chapter with the maximum design scenario (MDS) for construction impacts including:

- seabed disturbance due to cable installation
- dispersion and settling of disturbed sediment due to cable installation
- changes to sediment type
- changes to hydrodynamics, sediment transport and morphology due to physical infrastructure, including HDD exit pits and cofferdams

3.2.12 NE highlighted [REP4-191] that MDS information for construction activities was inconsistent across documentation. For example, the MDS cofferdam dimensions used in the PBCMTN (version B, [REP2-011]) were greater than those assessed in Marine Chapter 1, Physical Environment [REP3-020]. It noted inconsistencies about cofferdam options (new issue J30, [REP4-197]) but confirmed that it was satisfied by the additional explanation provided by the applicant in [REP4-027] (new issue 30, appendix D, [REP5-222]).

3.2.13 NE [REP4-191] was also concerned that no update was made to the marine physical environment assessment arising from the proposed order limit change at the former hoverport, advising that the applicant should consider the implications to saltmarsh habitat including from change in topography. The applicant [REP5-132] confirmed there would be no change to any of the WCS assessed and was unclear what further information NE sought.

3.2.14 The applicant updated Marine Chapter 1, Physical Environment (table 1.19 and section 1.9, [REP5-019]) and HRA Report [REP5-036] with further details about, and assessment of, the matters raised. These matters are discussed further as they relate to individual European sites and LSE pathways in tables 3.1 and 3.3 of this RIES.

Mitigation at the Kent landfall

3.2.15 NE [RR-3920] [REP4-197], KWT [REP1-152] (1ECOL26, [REP3-092]), the RSPB [RR-4651] [REP1-158] and the NT [REP5-101] raised concerns about the applicant's proposals for management of construction phase impacts at the Kent landfall, raising the potential for the Sandwich Bay SAC, Thanet Coast SAC and Thanet Coast and Sandwich Bay SPA & Ramsar site to be affected by HDD installation and frac out. The EA [RR-1586] noted a risk that possible mobilisation of contaminants in Pegwell Bay could reduce water quality and damage saltmarsh (used by SPA and Ramsar site qualifying features). It stated that clean up procedures should be included in a management plan.

3.2.16 The applicant committed to producing an HDD landfall method statement (LMS) and drilling fluid management plan (DFMP) prior to commencement of any HDD activities in the REAC (B59, [REP4-235]). The HDD LMS would be prepared in consultation with NE, KWT, the RSPB, NT and Thanet District Council, and approved by the MMO. It (B60, [REP4-235]) committed to notifying and consulting NE and the RSPB on methods, locations and routes for spotters in the event of frac out. A high level plan was provided in appendix A of [APP-321]. The applicant (1ECOL27, [REP3-069]) committed to submitting an outline DFMP. It updated the oOCEMP [REP5-066] to include several principles that would be set out in a DFMP, which it stated would be prepared by the HDD contractor in accordance with measure GH10 of the REAC [REP5-115].

3.2.17 The ExA [PD-021] sought clarification from the applicant as to why consultation on the plans committed under B59 was caveated with the term "as appropriate". The applicant (2ECOL51, [REP5-135]) confirmed that this term had been removed from the REAC (B59, [REP5-115]).

3.2.18 NE [REP3A-028] [REP4-195] requested the REAC commitments to be secured in the DCO or DML. It stated that final HDD depth and exit pit locations should be specified to ensure impacts remain in assessed parameters. It advised that the specification of surveys to inform a final HDD management plan should be agreed with regulators in consultation with the relevant SNCB.

3.2.19 The applicant made changes to the REAC [REP5-115] to clarify how measures would be secured through the DCO in response to IP concerns. It listed some measures in section 1 of the REAC, to be secured through Requirement 5 of the dDCO [REP5-005] and others within section 2, which

would be secured through specified management plans linked to other requirements in the dDCO.

3.2.20 The applicant [APP-290] identified methods for dealing with frac out using pumps and seawater, or freshwater, or a small sump. In response to NE's request (B29, [RR-3920]), the applicant [REP2-014] agreed that pumps would be operated at low pressure, and committed to this in the REAC (B61, [REP5-115]. NE [REP4-195] also requested that pumps should be handheld.

3.2.21 The applicant (1GEN9, [REP3-069]) conservatively assumed losses of 40m^3 of drilling fluid. It stated that there would not be an AEoI of the Sandwich Bay SAC, Thanet Coast SAC and Thanet Coast and Sandwich Bay SPA & Ramsar site because of water quality change due to use of drilling fluids, based on the small volume, temporary duration, use substances from the OSPAR list and regular tidal movement in the intertidal zone. The REAC (LVS05, [REP5-115]) identifies that biodegradable drilling fluids would be used where practicable.

3.2.22 The MMO (AP71, [REP5-175]) advised that a condition could be included in the DML to explicitly include the OSPAR PLONOR list and committed to providing a suggested wording at a subsequent deadline.

3.2.23 NE (B29, [REP3A-025] [REP4-197]) [REP3A-028], (1ECOL28, [REP4-196]) maintained concerns, including about access to saltmarsh in the event of a frac out. It requested an outline intertidal management plan. NT [REP5-101] echoed NE's concerns and request for an intertidal management plan. The applicant did not consider that such a plan was required given its commitments in other management plans including the oOCEMP [REP5-066] and REAC [REP5-115].

3.2.24 The applicant also committed in the REAC (B68, [REP5-115]) to produce a Pegwell Bay landfall construction method statement (PBLCMS), and to consult on the final method statement with NE and KWT. The ExA [PD-017] sought views on whether the PBLCMS should include coverage of cable excavation and laying in the intertidal area, as well as the marine area. KWT (1ECOL33, [REP3-092]) considered it should given the presence of internationally designated habitats.

Mitigation for bats

3.2.25 NE (2ECOL27, [REP5-199]) requested mitigation measures to reduce disturbance to bats that may be using coastal areas from lighting of the cofferdams in Pegwell Bay between April and October. It did not specify if this related to bat qualifying features of a European site.

RIESQ9 – To NE: Confirm if your response (2ECOL27. [REP5-199]) relates to bat qualifying features of a European site, and if so to which site.

Table 3.1: Annex I habitat SACs - Issues raised in the examination to date by the ExA and IPs in relation to the applicant's assessment of effects on integrity (alone and in-combination)

ID	Issue	Details of issue	ExA observation / question
GENERAL			
3.1.1	Spread of INNS due to placement of cable protection	NE [REP3-118] [REP3A-025] (appendix E new issue point 39, [REP4-197]) raised concerns about introduction and spread of INNS at Sandwich Bay SAC and Thanet Coast SAC from concrete mattresses at trenchless entry and exit points in the upper and intertidal mud and sandflat areas at Kent landfall, and use of a moonpool or prefabricated cofferdam. The applicant [REP4-241] stated that the Outline Offshore INNS Management Plan (oOIMP) [REP5-078] sets out measures to minimise introduction and spread of INNS. It stated that a moonpool or cofferdam is unlikely to be constructed from a material that would be suitable for spread of INNS but any materials would have to be compliant with the final OIMP. It noted that the structures would be in place for a short time (four months), which is unlikely to be sufficient for the establishment and spread of INNS. It submitted an updated Marine Biosecurity Plan [REP4-071], which included a framework for dealing with INNS. The applicant (2BE14, [REP5-135]) confirmed that the oOIMP [REP5-078] had been updated to include reference to INNS measures during operation for cable protection at the trenchless crossing exits in Sandwich Bay SAC. NE (appendix E new issue point 39, [REP5-222]) confirmed that this matter was resolved.	Issue resolved.

ID	Issue	Details of issue	ExA observation / question
SANDWICH BAY SAC			
3.1.2	Intertidal ground investigation and drilling activity risk	Referring to the Design Development Report (appendix A, [APP-321]), NE (B7, [RR-3920]) noted potential for risks from drilling activity at the Thanet Beds to result in impacts on the SAC. It requested interpretation of the intertidal ground investigation to understand the risks. NE [REP1-154A] advised that this should inform an outline HDD management plan. The applicant [REP2-014] confirmed that hydrofracture modelling would be undertaken by the HDD contractor, who would determine if further ground investigation was needed. Initial hydrofracture modelling reported in [APP-321] showed a 2.8 factor of safety against frac-out, which it described as a very low risk. It added commitments in the REAC (B59, [REP5-115]) to share hydrofracture modelling with NE. The applicant (AP19, [REP1A-037]) responded to the ExA's request for further explanation of the additional ground investigation required and where this was assessed in the HRA. It confirmed that surveys would be covered by a self-service marine licence sought from the MMO and prepared in consultation with NE. Intrusive ground investigation would be expected at each landfall where HDD is proposed comprising deep boreholes and/ or cone penetration tests. NE (B7, [REP3A-025] [REP4-197]) [REP3A-028] maintained its concerns. It [REP4-195] highlighted that ground investigation could result in AEoI and this would be subject to a separate permission or marine licence. NE (AP17, [REP5-221]) stated that mitigation for impacts arising from ground investigation would be bespoke but	The ExA notes that whilst NE is not able to advise on the scale and significance of ground investigation due to an absence of detail on the proposals, it is satisfied that there would be a separate consenting process for the works, which would be subject to HRA.

ID	Issue	Details of issue	ExA observation / question
		that it was likely agreement could be reached on measures once details of the ground investigation were known. The ExA [PD-021] sought clarification from the applicant if any separate permission(s) for ground investigation would be required from NE, noting provision in the dDCO (schedule 1, part 1, section 2, [REP4-217] that would enable it to undertake surveys. It also asked NE [PD-021] if it was satisfied that AEoI could be excluded from ground investigation based on the activity falling outside of the DCO, and to clarify its outstanding concerns on drilling activity for the SAC. The applicant (2ECOL6, [REP5-135]) responded that in its view a separate SSSI assent would be required from NE. NE (2ECOL6, [REP5-199] stated that based on application information it could not advise on scale and significance of potential ground investigations but was satisfied that there would be a separate licensing process with HRA, upon which it would be consulted.	
3.1.3	AEoI conclusions – changes to water quality from drilling fluid	As described in section 3.2 of this RIES, IPs raised concerns about frac out and the applicant's conclusion of no AEoI of the SAC. The applicant committed to mitigation measures and retained its conclusion of no AEoI. The ExA (2ECOL53, [PD-021]) asked NE, the RSPB and KWT if they considered that the applicant's proposed measures in the REAC [REP5-115] were sufficient to avoid AEoI. The RSPB [REP5-203] confirmed it was satisfied if NE's concerns were alleviated. It recorded the matter as agreed in the draft SoCG [REP5-092]. KWT [REP5-196] noted that measures proposed reflected standard industry practice but stated that information was too high level without clear operational triggers or response procedures. It stated	The ExA notes that this matter is resolved for the RSPB and that it may be resolved for NE, subject to the applicant's mitigation commitments being adequately secured. **RIESQ10 - To the applicant:**

ID	Issue	Details of issue	ExA observation / question
		that to ensure AEoI can be excluded, additional commitments should be secured including a detailed contingency plan, real-time monitoring, water quality monitoring, buffers for sensitive habitats and approval of a DFMP by the SNCB. NE [REP3A-028] [REP5-199] considered that the final CSIP, LMS and DFMP should be agreed in consultation with NE prior to construction.	**What is the applicants response to NE's request to be consulted on the final CSIP, LMS and DFMP prior to construction?**
THANET COAST SAC			
3.1.4	Conservation objectives, threats and pressures	In response to NE's (B22 and B23, [RR-3920]) comment that the HRA Report [APP-090] did not include a complete list of identified threats and pressures, and request for an updated assessment incorporating these, the applicant provided an updated report at DL1 [REP1-071]. NE (B22 and B23, [REP3A-025]) recorded this issue as resolved. The ExA (1ECOL52, [PD-017]) requested the applicant to update the HRA to demonstrate how the conservation objectives, and identified threats and pressures were considered in reaching conclusions. In respect of the temporary increase in SSC and sediment deposition pathway, the applicant updated Version E of the HRA Report [REP3-028] to note that disturbance and change in species' distribution is a vulnerability of the SAC but that this pathway does not result in significant change to these.	Issue resolved
3.1.5	AEoI conclusions – changes to water quality	As described in section 3.2 of this RIES, IPs raised concerns about frac out and the applicant's conclusion of no AEoI of the SAC. The applicant committed to mitigation measures and retained its conclusion of no AEoI.	See ID 3.1.3.

ID	Issue	Details of issue	ExA observation / question
	from drilling fluid	ID 3.1.3 of this RIES sets out the position of IPs on this matter.	
3.1.6	AEoI conclusions – SSC and subsequent sediment deposition	NE [RR-3290] was concerned that effects from HDD exit pits or cofferdam installation during construction had not been assessed and requested the applicant to update the HRA Report. The applicant updated the Benthic Ecology ES chapter [REP1-053], which partially resolved NE's concerns (E31, [REP3A-025]). However, it still considered there was uncertainty about the worst case scenario (WCS) for increases in SSC and sediment deposition (and increased turbidity and smothering) from construction activities [REP3-118]. It requested that the HRA was informed by the most up-to-date construction information in the PBCMTN [REP4-229]. It also [REP3A-028] advised that without further consideration of coastal process change it could not support the applicant's AEoI conclusions on smothering. The applicant updated its Marine Chapter 1, Physical Environment [REP5-019] to incorporate detail from the PBCMTN. It stated [REP4-241] that the Landfall Sediment Modelling Report [PDA-038] showed peak current velocities in Pegwell Bay to be less than 0.1m/s with any increase in SSC appearing as a short duration like natural disturbance in storm conditions. The HRA Report [REP4-057] was updated and the conclusion of no AEoI was retained. The EA [REP4-185] advised that, following review of the PBCMTN [REP4-229], temporary scour protection and use of cofferdams would not have a long-term impact on coastal processes. The ExA (2PE4, [PD-021]) asked NE if the applicant's updates were sufficient to enable it to advise that AEoI could be excluded from pathways arising from coastal and marine process impacts.	Issue resolved.

ID	Issue	Details of issue	ExA observation / question
		NE (2PE4, [REP5-199]) indicated that its outstanding concerns related to Thanet Coast & Sandwich Bay SPA and Ramsar site, not Thanet Coast SAC.	
3.1.7	AEoI conclusions – deposition in the rock and sea cave qualifying features	NE (E1, E41 and E45, [RR-3920]) advised that several impacts were not adequately assessed and that updates were required before it could agree the applicant's conclusions of no AEoI. It advised that SSC and predicted levels of deposition within the rock and sea cave qualifying features should be considered against thresholds in the Marine Evidence Based Sensitivity Assessment (MarESA). It (E6 and E35, [RR-3290]) was concerned that the applicant had given no consideration to biotypes that are components of qualifying features of the SAC. The applicant updated the HRA Report [REP5-036] to clarify that sea caves were encompassed in the reef feature, for which there would be minor and not significant effects from a short-term increase in SSC and undetectable levels of sediment deposition. It stated that sea caves are recorded as having no to low sensitivity to deposition. NE (E1, E41 and E45, [REP3A-025] [REP4-197]) [REP3A-027] recorded this matter as partially addressed but advised that sensitivity for reef features should be medium for SSC and sediment deposition unless further evidence was presented of specific biotypes present. The applicant (AP33, [REP4-086]) stated that on a highly precautionary basis it updated the sensitivity for reef biotypes to medium in the Benthic Ecology ES chapter [REP5-021]. It stated that the significance conclusion did not change. It considered the approach to be robust given the sensitivity benchmark for this	The ExA notes that the applicant updated the assessment in Marine Chapter 2, Benthic Ecology to categorise reef features as medium sensitivity and that there was no change to the conclusion.

ID	Issue	Details of issue	ExA observation / question
		habitat in relation to SSC would be a change in 1 rank on the Water Framework Directive (WFD) scale. NE [REP5-218] and (2BE3, [REP5-199]) recorded this matter as partially resolved but requested that the assessment be updated based on the revised sensitivity.	
3.1.8	Sandwave levelling	NE (E7, [RR-3920] [REP1-154A]) [REP3A-027] advised that the ES and where relevant the HRA should be updated to consider all potential pathways of effect from sandwave levelling and sediment deposition. The applicant [REP2-014] [REP4-241] confirmed that the MDS for sandwave levelling (pre-sweeping) is set out in the ES Project Description Chapter [AS-093], with locations described in an updated version (table 4.13, [REP1A-003]) as being KP96.32 to KP113.883. It [REP2-014] confirmed that dredged material would be redistributed along the cleared section of cable route in the offshore scheme boundary, and that [REP4-241] potential effects of deposition would be minor, with no sandwave levelling required in sites designated for benthic features.	The ExA notes the applicant's response on this matter.
MARGATE AND LONG SANDS SAC			
3.1.9	AEoI conclusions – SSC and subsequent sediment deposition	As described at ID 3.1.6 of this RIES, NE raised concerns about SSC and sediment deposition, which appear primarily to relate to Thanet Coast SAC. However, noting its comments referred to a section of the applicant's HRA [REP5-036] that also discussed this LSE pathway for Margate and Long Sands SAC, the ExA (2BE15, [PD-021]) sought clarification on NE's advice about the applicant's conclusion of no AEoI. NE (2BE15, [REP5-199]) confirmed that there was no impact pathway to the SAC.	Issue resolved.

Table 3.2: Marine mammal SACs - Issues raised in the examination to date by the ExA and IPs in relation to the applicant's assessment of effects on integrity (alone and in-combination)

ID	Issue	Details of issue	ExA observation / question
ALL IDENTIFIED SITES WITH MARINE MAMMAL QUALIFYING FEATURES			
3.2.1	Underwater noise modelling methodology	NE (F15, [RR-3920) [REP4-197] noted an absence of information on the underwater noise modelling and requested further details as the outputs inform the predicted impact ranges. The applicant (F15, [REP2-014]) confirmed that modelling used the standard National Marine Fisheries Service (NMFS) acoustic tools, as detailed in [APP-077] [AS-049]. It considered [REP5-132] its approach proportionate to the nature of the proposed development and its likely underwater effects. It stated that an interconnector would generate underwater sound, but that it would be significantly less intense than an OWF. NE (2MM4, [REP5-199]) stated that use of the NMFS Use Spreadsheet Tool was not a robust substitute for empirical modelling but advised that the effective deterrent range (EDR) approach used in the HRA Report [REP5-036] is the most appropriate method for designated sites. However, NE was not clear which activities had been assessed.	The ExA understands that NE's outstanding concerns relate to the modelling methodology used in the Marine Mammals ES chapter and that it is satisfied with the EDR approach used in the HRA Report.
3.2.2	Underwater noise – auditory injury assessment	The applicant's assessment of the potential for auditory injury (as indicated by permanent threshold shift (PTS)) was based on sound pressure level ($SPL_{peak)}$. NE (F29, [RR-3920]) advised that the sound exposure level (SEL) (SEL_{cum}) metric from the noise modelling should also be used to inform impacts to designated sites, particularly impacts from PTS. The JNCC [RR-2635] [REP1-	Issue resolved.

ID	Issue	Details of issue	ExA observation / question
		210] echoed this advice with regards to the Southern North Sea SAC. The applicant (table 3.8, [REP1-112]) (table 2.3, F18, [REP2-014]) advocated the application of the SPL metric. It explained that SEL calculations are based on cumulative exposure over a 24 hour period which, for PTS, results in distance of >10km. It noted that such calculations do not allow for directionality of the acoustic beam, do not reflect the effect of the observation zone or soft start, do not allow for high levels of mobility in marine mammals and assume exposure would be as long as 24 hours. NE (1MM15, [REP4-196]) subsequently confirmed the matter as resolved.	
3.2.3	Underwater noise mitigation zone	Section 7.3 of the HRA Report [APP-290] stated that standard JNCC measures for minimisation of injury from underwater sound generated from geophysical surveys would be employed. NE (F18, [RR-3920]) advised that the predicted zone of PTS as described by the SEL_{cum} metric should inform the mitigation zone rather than the 500m buffer specified in the 2017 JNCC guidance, which had been superseded by guidelines published in 2025. The applicant (table 3.8, [REP1-112]) (F18, [REP2-014]) acknowledged the 10km estimated by the SEL_{cum} metric (see ID 3.2.2 above), however considered an observation zone of 500m to be appropriate given the very high directionality of the sound produced by a sub-bottom profiler (SBP). In relation to the Southern North Sea SAC, the JNCC [RR-2635] [REP1-210] noted that the applicant had predicted injury ranges for harbour porpoise greater than the standard 500m mitigation zone, and that injury could occur up to 10km from the source. However, it	Issue resolved.

ID	Issue	Details of issue	ExA observation / question
		acknowledged that an unrealistic WCS was assessed and was satisfied that standard mitigation measures would sufficiently reduce the risk of injury from SBPs. It agreed that injury from continuous sound sources such as support vessels and cable lay operations was highly unlikely and would not require mitigation. NE (1MM15, [REP4-196]) subsequently confirmed the matter as resolved. The applicant (2MM2, [REP5-135]) reran its modelling to include a refinement in relation to SBP to address the narrow beam width of the acoustic source. It stated that this removed the significantly overestimated auditory injury zone for all marine mammals, and particularly for harbour porpoise.	
3.2.4	Noise mitigation	The JNCC [RR-2635] [REP1-210] noted that there was no clear distinction between construction and operational activities, with no distinction of how impacts from sound would be mitigated at different stages. The applicant (table 3.8, [REP1-112]) confirmed that mitigation measures would be implemented for any stage where SBPs were used.	The ExA notes the applicant's response.
3.2.5	In-combination effects	NE (F32, [RR-3920]) noted that there was no consideration of in-combination impacts to marine mammals in section 8 of the HRA Report [APP-090]. In response, the applicant updated the in-combination assessment in version E of the HRA Report [REP3-028]. NE [REP5-219] stated that the key outstanding issue was in-combination assessment of underwater noise on harbour porpoise of the Southern North Sea SAC.	The ExA understands that NE's concerns primarily relate to the in-combination assessment for the Southern North Sea SAC.

ID	Issue	Details of issue	ExA observation / question
		See ID 3.2.11 below for in-combination effects at Southern North Sea SAC.	
BERWICKSHIRE AND NORTH NORTHUMBERLAND COAST SAC, HUMBER ESTUARY SAC AND THE WASH AND NORTH NORFOLK COAST SAC			
3.2.6	Underwater noise - grey and harbour seal	The HRA Report [APP-290] stated that grey and harbour seal are less sensitive to underwater noise than harbour porpoise, so impacts to harbour porpoise were considered representative. NE (F28 and F30, [RR-3920]) did not agree with the applicant's use of harbour porpoise as a proxy for pinnipeds. It stated that separate injury criteria are presented in the NMFS (2018) guidelines. The JNCC [RR-2635] confirmed its remit regarding marine mammals related to the Southern North Sea SAC but also advised that it was not appropriate to combine assessments of underwater noise for harbour porpoise and seals as how noise is assessed and managed differs. In response, the applicant (table 2.3, F16, [REP2-014]) confirmed that separate underwater noise modelling had been undertaken for seals and harbour porpoise. It revised the assessment in section 7.3 of the HRA Report [REP5-036] to provide clarity on the matter. NE (1MM15, [REP4-196]) subsequently confirmed the matter as resolved.	Issue resolved.
SOUTHERN NORTH SEA SAC			
3.2.7	Baseline characterisation for harbour porpoise	The proposed development would pass through the southern region of the Southern North Sea SAC. NE (F2, F8 and F12, [RR-3920]) stated that harbour porpoises are known to occupy the southern region in winter months (October to March inclusive). It	Issue resolved.

ID	Issue	Details of issue	ExA observation / question
		did not consider Small Cetaceans in the European Atlantic and North Sea (SCANS) survey data conducted in July to be representative of the greatest abundance likely to be encountered. It requested the assessment be updated to consider abundances in winter months and that peak abundances should be taken forward as the WCS. The JNCC [REP1-210] echoed this advice. NE advised that Heinanen and Skov (2015) be included in the data used in the assessment of harbour porpoise and the HRA. The applicant provided a revision to the harbour porpoise baseline with the Winter SCANS 2025 data in the HRA Report [REP5-036]. It concluded (1MM7, [REP3-069]) that the revised baseline did not change the overall assessment outcomes as numbers estimated to be disturbed were still significantly lower than the threshold criteria for impacts to harbour porpoise SACs. NE (2MM3, [REP5-199]) also confirmed it considered the matter of baseline characterisation to be resolved. The draft SoCG with KCC at DL5 [REP5-050] inserted several new items, echoing concerns raised by NE and the JNCC about survey timings and data; however, it recorded all matters as agreed based on updated information provided by the applicant.	
3.2.8	Underwater noise from SBPs - disturbance	The JNCC [RR-2635] [REP1-210] considered insufficient information was provided to support the conclusion of no AEoI to harbour porpoise because of disturbance from underwater noise. It advised that a seasonal restriction on the use of SBPs during winter months (October to March inclusive) be secured, or an assessment of their use during this period be provided considering spatial temporal thresholds (ie the published effective deterrent ranges (EDRs) for the Southern North Sea SAC). It queried why a seasonal	The ExA notes the applicant's commitment to adhering to JNCC guidance within the oOCEMP (MM02, [REP5-066]) and Outline Marine Mammal

ID	Issue	Details of issue	ExA observation / question
		restriction akin to that made for red-throated diver had not been made for harbour porpoise. The draft SoCG with KCC at DL5 [REP5-050] included a new item raising similar concerns but recorded the matter as agreed based on information provided by the applicant (as below). The applicant [REP1-112, table 3.8] did not consider a restriction necessary. It noted that activities within the site would be short term, limited in extent and temporary and would not generate high intensity impulsive sounds that cause behavioural disturbance. It stated that when applying a 5km EDR, an area of less than 2% of the total Southern North Sea SAC area could be affected which is below the threshold for significant noise disturbance to a SAC of 20%. Version G of the HRA Report [REP5-036] calculated that with a 3km EDR (reflecting JNCC 2025 guidance), 349 harbour porpoise could potentially be disturbed, within 1.14% of the Southern North Sea. NE (2MM3, [REP5-199]) sought clarification as to whether the disturbance impact area is for 1 day or across a season. It noted that nothing was included for cable laying activities. The JNCC [REP3-090] stated that by adhering to published JNCC guidance and ensuring thresholds would not be breached, there would be no adverse effect on the Southern North Sea SAC. Following the baseline update in the HRA Report (see ID 3.2.7 above), it confirmed that it agreed with the assessment conclusions for the proposed development alone.	Mitigation Plan (MMMP) [REP4-069]. **RIESQ11 – To the applicant:** **Can the applicant clarify whether the calculations made in paragraph 7.3.22 of the HRA Report [REP5-036] reflect the disturbance impact area per day or across the season?** **RIESQ12 – To the applicant:** **Can the applicant update the assessment of disturbance impacts to include those arising from cable laying activities?**
3.2.9	Outline MMMP	The JNCC [RR-2635] [REP1-210] made several comments on the Outline MMMP [APP-356]. The applicant responded with	Issue resolved.

ID	Issue	Details of issue	ExA observation / question
		amendments in the DL1 Outline MMMP [REP1-025], as explained by the applicant in (table 3.8, [REP1-112]). The JNCC [REP3-090] noted that the final mitigation plan would need to reflect the most up to date information on other activities occurring in the site at the same time. The JNCC (2MM6, [REP5-194]) confirmed that it was satisfied with the revisions to the oMMMP [REP4-069]. NE (F20, [REP5-222]) indicated that its concerns about the oMMMP were resolved.	
3.2.10	Vessel collision risk	The HRA Report [APP-090] stated that most of the offshore construction works would take place between April and October (inclusive). The JNCC [RR-2635] [REP1-210] advised that harbour porpoise would be present within the winter part of the site (through which cable would pass) all year round, albeit in lower numbers in the summer season. It noted that slow vessel speeds were anticipated but not committed to, recommending that these be defined and secured to support any conclusion of no AEoI. It queried how compliance with the International Regulations for Preventing Collisions at Sea 1972 (International Maritime Organisation, 1972) would be beneficial to marine mammals. The applicant (table 3.8, [REP1-112]) explained that to comply with these Regulations, vessels would be required to maintain a 'safe speed', with transit speeds ranging from 4 to 12 knots. The JNCC (2MM7, [REP5-194]) was satisfied by the applicant's response and advised that that the measures would be sufficient to reach a conclusion of no LSE to marine mammals.	Issue resolved.
3.2.11	In-combination effects	The JNCC [RR-2635] [REP1-210] stated, in respect of the Southern North Sea SAC, that it could not provide advice on in-combination effects as the HRA Report [APP-090] only provided a	**RIESQ13 – To NE and the JNCC:**

ID	Issue	Details of issue	ExA observation / question
		holistic review of all European sites assessed. It noted [REP3-090] that the assessment considers each project individually and does not consider the sum total of potential impacts. NE [REP3A-025] similarly advised that for harbour porpoise displacement the applicant should calculate the total area from which the harbour porpoise would be displaced using the latest EDRs. NE [REP5-219] recommended that the applicant provide a table listing each project with the worst-case percentage disturbance (daily and seasonally) from respective HRAs, which should be added with the proposed development to give a total. The applicant (2MM8, [REP5-135]) stated that it had updated the HRA Report (section 8.3, [REP5-036]) to consider updated JNCC guidance for SBP and 2024 NMFS underwater sound thresholds. It stated that the area of the Southern North Sea SAC that could be affected by the proposed development is 1.14% of the total SAC and the number of harbour porpoise affected by disturbance is 0.4% of the UK portion of the North Sea Management Unit (MU), equating to 2.18% of the SAC population. The applicant reviewed other projects including Five Estuaries and North Falls OWFs. It noted that proposed measures such as noise mitigation systems (NMS) would ensure that the daily 20% and seasonal 10% JNCC noise disturbance thresholds would not be exceeded by these projects. As the area of disturbance was not specified for Five Estuaries, the applicant stated it was not possible to undertake a summation. It did sum the disturbance areas for the proposed development, Gridlink and Lionlink, stating a total area of 2.6% would be affected, which is below the JNCC thresholds. The applicant considered it would be disproportionate to undertake the requested calculations for an interconnector as underwater sound	**Comment on the applicant's updates to the in-combination assessment. Are you satisfied that AEoI of the Southern North Sea SAC can be excluded from in-combination effects of underwater noise to harbour porpoise.** **RIESQ14 – To the applicant:** **Noting that NE advised that AEoI could not be excluded for this impact pathway, the ExA requests that the summation exercise requested by NE is provided in an updated HRA Report at DL6. Where information is not available from the HRAs for other projects considered in**

ID	Issue	Details of issue	ExA observation / question
		(from SBP as the worst element) is minor compared to OWF (such as piling) and provided precedent where this had not been requested on other DCO projects (Eastern Green Link 1 and 2). The applicant (AP107, [REP5-126]) and (appendix C, [REP5-127]) carried out a review of its in-combination assessment for the Southern North Sea SAC following publication of the LionLink interconnector project PEIR. It confirmed that there was no change to the assessment conclusions.	**the assessment, this should be stated and any implications explained.**

Table 3.3: Terrestrial ornithology (SPAs and Ramsar sites) - Issues raised in the examination to date by the ExA and IPs in relation to the applicant's assessment of effects on integrity (alone and in-combination)

ID	Issue	Details of issue	ExA observation / question
ALDE-ORE ESTUARY SPA AND RAMSAR SITE			
3.3.1	Seawater incursion	SEAS [RR-5210] considered that the landfall and cabling works could impact SPA qualifying species at and around the landfall. It raised concerns that the landfall and cables could cause seawater incursion to marshland due to the weakening of the natural storm ridge which would allow sea defences to breach. In particularly it noted that seawater incursion could have catastrophic implications for bittern of the Minsmere and Walberswick SPA. The applicant [REP1A-043] responded that a trenchless technique at the landfall would avoid physical disturbance of watercourses and areas of coastal floodplain. It stated that no plant would operate on the natural storm shingle ridge at the Suffolk landfall therefore there would be no potential for it to be weakened or for seawater incursion to occur. It confirmed that monitoring of existing flood defences would be undertaken during cable installation. Furthermore, it noted that impact on water levels in the RSPB reserve from HDD was assessed in ES Part 2 Suffolk Chapter 2 Ecology and Biodiversity [REP4-026].	The ExA acknowledges the differing opinions on this matter.
3.3.2	Water pollution	Carried forward from ID 2.3.14 of this RIES.	**RIESQ15 – To the applicant:** **Submit an updated HRA Report that includes an assessment of AEoI of**

ID	Issue	Details of issue	ExA observation / question
			the Alde-Ore Estuary SPA and Ramsar site arising from changes to water quality due to the presence and operation of the proposed outfall. Identify any mitigation required to avoid AEoI and confirm how it is secured.
ALDE-ORE ESTUARY SPA AND RAMSAR SITE and MINSMERE-WALBERSWICK SPA AND RAMSAR SITE			
3.3.3	Marsh harrier disturbance	SEAS [RR-5210] [REP2-115] [REP4-154] noted that marsh harriers can forage up to 15km from their nests, placing the proposed development within potential foraging distance of Alde-Ore Estuary SPA and Minsmere-Walberswick SPA. It considered the species could be disturbed during the breeding season whilst using FLL. It acknowledged that marsh harriers had been recorded during breeding bird surveys but noted that the species is not mentioned in the Suffolk section of the HRA. It considered the baseline survey data for the Suffolk onshore scheme to be deficient and queried why vantage point surveys were not undertaken. The applicant [REP1A-043] confirmed that marsh harrier had been recorded feeding in the wetlands of the RSPB reserve which would be crossed by trenchless methods. It considered there to be limited suitable farmland within 15km of the nest sites and that foraging birds of prey are at low risk of disturbance compared to birds on	The ExA acknowledges the differing opinions on this matter.

ID	Issue	Details of issue	ExA observation / question
		the nest or roosting. It noted that NE had not raised concerns about the matter.	
ALDE-ORE ESTUARY SPA AND RAMSAR SITE, MINSMERE-WALBERSWICK SPA AND RAMSAR SITE and SANDLINGS SPA			
3.3.4	Noise disturbance – clarity of figures	Both NE [REP1-154] and the RSPB [REP1-158] [REP1-165] sought clarity regarding 'Appendix E Figure 3 Map of 60dB average L_{Amax} contour at Suffolk' (within the HRA Report [APP-090]). NE noted it showed noise as a uniform contour throughout the working corridor regardless of activity. The RSPB queried the meaning of the 'average LAmax' contour' and requested reassurance that it represented the WCS for impulsive noise and not an average level for the duration of the project. The applicant (table 2.10, [REP2-034]) [REP4-057] confirmed that the figure presented a blended L_{Amax} contour, with the outer limits set by the noisiest activity and therefore representing a WCS. It noted that the 60 decibel (dB) contour for the average noise level (L_{Aeq}) would be closer to the works than is shown on Appendix E Figure 3 since the average noise level is always lower than the maximum noise level. NE [REP5-215] confirmed that the applicant's explanation resolved its query. The draft SoCG with RSPB [REP5-092] noted that the applicant's clarification was welcomed but the matter remained under discussion.	The ExA acknowledges the applicant's explanation and notes that NE considers this issue resolved.
3.3.5	Chronic noise	The RSPB [REP1-158] advised that chronic noise levels, represented by dB L_{Aeq}, can affect densities and distribution of breeding birds. It requested they be quantified for the drilling	The ExA acknowledges the applicant's explanation and that NE

ID	Issue	Details of issue	ExA observation / question
		process. It did not agree an AEoI could be excluded due to impacts of noise on birds using the FLL. The applicant (table 2.10, [REP2-034]) explained that it had agreed a 60dB threshold for significant disturbance with NE and the RSPB, and that this threshold can be applied to L_{Aeq} (ie chronic noise) or L_{Amax} (ie peak maximum noise). It explained that L_{Amax} is always 5 to 15dB higher than the LAeq. It confirmed that the 60dB L_{Amax} contour for HDD drilling did not extend into the RSPB North Warren Reserve. The specific matter of chronic noise remained under discussion as reported in the draft SoCG with the RSPB [REP5-092]. However, the RSPB's general concerns about use of the 60dB threshold were recorded as agreed.	did not comment on this matter. **RIESQ16 – To the RSPB:** **Noting that the draft SoCG records agreement on use of the 60dB disturbance threshold, clarify your outstanding concerns about chronic noise.**
MINSMERE-WALBERSWICK SPA AND RAMSAR SITE			
3.3.6	Noise and lighting disturbance at dawn, dusk and during the night	The RSPB [REP1-158] considered that the assessment had not fully considered the increased sensitivity of birds to disturbance from construction noise and lighting at dawn, dusk and during the night. It advised that works during these times could increase disturbance impacts on wintering bird species at the RSPB North Warren Reserve (functionally linked to Minsmere-Walberswick SPA). It did not agree an AEoI could be excluded due to impacts of noise on birds using the FLL. The applicant (table 2.10, [REP2-034]) explained that the 60dB threshold agreed with NE would apply whenever works were undertaken and is not time restricted. The REAC (B38, [REP4-235]) states that direct illumination of construction compound boundary features would be avoided.	**RIESQ17 – To the RSPB:** **Noting the applicant's confirmation regarding the noise disturbance threshold and commitment to avoid illumination of boundary features, confirm if you agree that AEoI can be excluded. If not, what further mitigation do**

ID	Issue	Details of issue	ExA observation / question
		This matter remained under discussion with no further position update as reported in the draft SoCG with the RSPB [REP5-092].	**you consider is required?**
3.3.7	White-fronted geese	The HRA Report [APP-090] reported a very small overlap of the 60dB L_{Amax} contour with the RSPB North Warren Reserve (functionally linked to Minsmere-Walberswick SPA). It stated that the reserve does not support significant numbers of SPA/Ramsar birds. However, the RSPB [REP1-158] noted that white-fronted goose use areas in proximity to the proposed construction compound and raised concerns regarding disturbance. The applicant (table 2.10, [REP2-034]) responded that the affected area is extremely small compared to the size of the RSPB Reserve and that the contour shown is L_{Amax}; the L_{Aeq} 60dB line would not extend into the reserve. This matter remained under discussion as reported in the draft SoCG with the RSPB [REP5-092].	The ExA acknowledges the applicant's explanation and notes that NE did not comment on this matter.
3.3.8	Impacts on marsh harrier	The RSPB [REP1-158] raised concerns regarding marsh harriers utilising the north of the RSPB North Warren Reserve; specifically the impacts of construction noise on auditory cues used to detect prey. This matter was not specifically addressed in the draft SoCG with RSPB at DL5 [REP5-092].	**RIESQ18 – To NE:** **What is NE's view on the RSPB's comment that construction noise could affect auditory cues of marsh harrier? Is NE content that the applicant's assessment accounts for such impacts?**

ID	Issue	Details of issue	ExA observation / question
3.3.9	In-combination effects	The RSPB [REP1-158] considered that in-combination effects on white-fronted geese of Minsmere-Walberswick SPA could be more significant than assessed. It advised that white-fronted geese associated with the SPA commute between feeding areas at RSPB North Warren Reserve and roosting sites at Minsmere around 2 to 3 hours after sunset, passing over the construction works at Sizewell C main development site. In winter, flights are likely to be exposed to levels of construction noise associated with normal working hours at both sites (and including the highest levels of noise associated with construction compound enabling works at RSPB North Warren).	The applicant did not address this matter in [REP2-034].
SANDLINGS SPA			
3.3.10	Surveys	SEAS [RR-5210] [REP4-154] noted that limitations of breeding bird surveys had been acknowledged by the applicant. Whilst not specifically referring to the HRA, it considered the woodlark surveys were inadequate to inform a proper assessment as a large proportion of cable route was unsurveyed. It also considered that the applicant's survey effort to determine the foraging areas of nightjars from the Sandlings SPA was not adequate as there had not been any use of automated acoustic detectors. It noted that nightjar routinely forage over the draft Order limits. The applicant did not respond to the suggestion of the use of automated acoustic detectors. However, it was confident it had good survey coverage and noted that NE did not raise any concerns in its relevant representation (tables 2.31 and 2.5.2, [REP1A-043]).	**RIESQ19 – To NE:** **Provide any observations you have on the concerns raised by SEAS about the applicant's survey coverage for woodlark and nightjar.**

ID	Issue	Details of issue	ExA observation / question
3.3.11	Impacts on supporting habitats within FLL	The HRA Report [APP-090] acknowledged temporary loss of 3.5ha of acid grassland adjacent to Sandlings SPA due to the trenchless crossing construction compound and an associated section of cable trench. It stated that this area showed no sign of nightjar or woodlark nesting but was FLL used for foraging; the habitat would be lost for a single nesting season. **Avoidance of impacts** NE [REP1-154] queried why the acid grassland would not be avoided through HDD as per requirements of the mitigation hierarchy. The applicant (table 2.8, [REP2-034]), explained that HDD had not been proposed to avoid the acid grassland because it would involve extending the duration of works close to Sandlings SPA and Leiston-Aldeburgh Site of Special Scientific Interest. **Assessment of impacts** NE [REP1-154] noted that acid grassland is a key supporting habitat within the Sandlings SPA and adjacent FLL. It advised that impacts to it had not been clearly assessed, with the nature, location, quantity, timing and duration of possible impacts not clearly stated and inconsistent between documents. The applicant acknowledged errors [(table 2.8, [REP2-034]) and amended the HRA Report [REP5-036] and relevant ES chapters. It confirmed [REP3-064] that the maximum duration of works in acid grassland would be six months and would affect less than 5% of available foraging and nesting habitat, with affected areas coming back into use in the next nesting season. NE [REP5-215] and (A19 and A20, [REP5-222]) maintained concerns and advised that clarification of the exact impact pathways to FLL was required, together with how	**RIESQ20 – To the applicant:** **Update the HRA Report [REP5-036] to clarify the duration over which the FLL could be affected by construction noise and lighting. Provide an assessment of these effects on qualifying features alongside**

ID	Issue	Details of issue	ExA observation / question
		these would be mitigated. It remained concerned that if reinstatement failed there could be a long-term impact. NE (2ECOL11, [REP5-199]) advised that clearer information was needed about indirect effects of noise and lighting on the FLL and a clear audit trail of the temporary nature of the impact. **Acid grassland restoration and enhancement** The HRA Report [APP-090] noted that 6ha of acid grassland restoration and enhancement was proposed to offset the temporary loss of acid grassland at the landfall because of the proposed HDD compound. It stated that this would "incidentally offset any effects from the temporary loss of such habitat adjacent to Sandlings SPA". This would be managed for 10 years. NE provided advice on the need to understand soil fertility and pH for acid grassland enhancement and creation [REP1-154]. It noted it is important to provide the information at pre-consent stage to provide enough certainty that the required mitigation/compensation is feasible within the timeframe. Suffolk Energy Action Solutions [REP4-154] noted the acid grassland would be created on an existing pig field which would have high pH and phosphorous levels and considered this could hinder the acid grassland creation. It (2LVIA11, [REP5-199]) stated that the applicant should provide more detailed evidence that the location is suitable. The applicant (table 2.8, [REP2-034]) confirmed that the acid grassland enhancement was not being proposed as mitigation for loss of FLL for Sandlings SPA and to reach the conclusion of no AEoI. It explained that the primary aim is to restore the grassland to good condition botanically and in terms of structure; this would have consequential benefits for birds. It [REP5-131] stated that pH	**details of any necessary mitigation** **RIESQ21 – To the Applicant:** **On the basis that acid grassland enhancement is not being proposed as mitigation for the loss of FLL for Sandlings SPA, should reference to the acid grassland enhancement be removed from the HRA Report to avoid confusion?**

ID	Issue	Details of issue	ExA observation / question
		testing or fertility assessment was not required as botanical surveying had confirmed it is already acid grassland. NE [REP5-215] and (A19, [REP5-222]) noted that the acid grassland was not proposed as mitigation but noted (2ECOL11, [REP5-199]) that it was used as justification for the conclusion of no AEoI. It continued to advise that the HRA Report lacked sufficient clarity to rule out AEoI. It advised the need for clearer information regarding the indirect impacts of noise and lighting on the FLL and how these would be mitigated and that impacts to nightjar are more clearly incorporated. **In-combination** NE [REP1-154] considered the HRA lacked detail on in-combination impacts with the approved application for the extension of Aldringham Golf Course. The applicant (table 2.8, [REP2-034]), confirmed these works had already been implemented.	
3.3.12	Mitigation – noise and visual screening	**Noise mitigation afforded by fencing/ screening** The RSPB [REP1-158] questioned the origin of the 10dB reduction in noise levels applied by the applicant in the assessment because of screening. The applicant (table 2.10, [REP2-034]) explained guidance on the 10dB is provided in Annex B of BS 5228-1:2009+A1:2014 'Code of practice for noise and vibration control on construction and open sites – Part 1: Noise'. This matter was reported as agreed in the draft SoCG with the RSPB [REP5-092] based on the applicant's clarification.	Issue resolved.

ID	Issue	Details of issue	ExA observation / question
		Location of screening The RSPB [REP1-158] sought further detail of the locations of noise and visual mitigation screening to more fully understand the impacts on the Sandlings SPA. The applicant (table 2.10, [REP2-034]) explained that the precise positioning of plant and equipment had not been determined but they would be located within the Order Limits between the HDD compound and the SPA. Therefore, the Order Limits around the HDD compound can be taken to be the location of the fence as the WCS. **Measure B23 of the REAC - noise mitigation** The RSPB [REP1-158] considered it crucial that the mitigation required by measure B23 of the REAC be constructed at the beginning of construction works as enabling works could have the highest noise impacts on designated sites. Furthermore, it advised B23 should include identification of further mitigation should noise modelling indicate thresholds have been exceeded. The RSPB also suggested an acoustic shed enclosing the HDD equipment could be employed to reduce noise impacts. The applicant (table 2.10, [REP2-034]) explained that the wording of B23 was left open (rather than committing to specific noise reduction methods) so that the measures could be tailored on the ground, including in response to noise monitoring during works. However, in response to ExQ1 [PD017], the applicant revised the REAC at DL3 [REP3-078] to confirm that close-board fencing would be used at the trenchless compound to ensure noise levels do not exceed 60dB LA_{max}, and to prevent visual disturbance. At DL4 and following discussion at ISH2, the REAC [REP4-235] was	

ID	Issue	Details of issue	ExA observation / question
		updated to make specific provision for a minimum 3m high fence around the HDD compound in Suffolk. In response to the ExA [PD-021], the applicant (2ECOL45, [REP5-135]) identified potential additional measures such as raising the fencing height, secondary fencing, damping of equipment, selecting quieter plant and placing the plant in housing. It did not add these to B23, as it stated that the contractor should have flexibility to address noise in an appropriate way. This matter was recorded as agreed in the draft SoCG with the RSPB [REP5-092].	
3.3.13	Visual impacts	NE [REP1-154] requested an assessment of light spill from the Suffolk construction compound on the Sandling SPA and surrounding areas used by nightjar and woodlark, noting that the compounds would be in operation during the breeding season. The RSPB [REP1-158] considered that the acoustic and visual screening around the compound could have limited effects on light spill and would not screen activities taking place at night, nor would it screen activities taking place at height. It sought mapping of areas affected by visual disturbance. The applicant (tables 2.8 and 2.10, [REP2-034]) responded that the noise fence would also act as a visual screen. It explained that the use of cranes for the HDD landfall would typically be for up to a total of 8 days. It noted that equipment that could be visible above site fencing or screening would normally be the tops of the HDD rig, the recycling system and excavator boom. Lighting on the booms would be directed at the working area in front of the excavator. The applicant did not consider mapping necessary given the existing treeline and the former railway embankment	**RIESQ22 – To NE:** **What further evidence do you consider is needed in the assessment to demonstrate that the committed mitigation would be sufficient to exclude AEoI? What specific concerns do you have that the proposed mitigation would not be sufficient?**

ID	Issue	Details of issue	ExA observation / question
		separating the Sandlings SPA from the HDD compound, as well as the commitment to visually screen the works. The applicant (1ECOL57, [REP3-069]) noted the close board fencing is expected to be 3m in height. It stated that illumination above the height of the fencing would be controlled through cowling and other appropriate measures (REAC B38 and GG21). Lighting would be monitored and modified if required by the Ecological Clerk of Works. The RSPB [REP4-142] agreed that committing to a 3m high close-board acoustic fence around the HDD compound would reduce noise and light spill and visual disturbance more generally. The applicant updated B23 of the REAC [REP4-235] to commit to fencing of a minimum height of 3m at the trenchless compound. NE [REP5-215] acknowledged that an assessment of construction lighting from the compound was provided but did not consider it to be robust and requested more evidence to demonstrate the mitigation would be sufficient.	
3.3.14	Transition joint bays	The RSPB [REP1-158] sought confirmation of the location of the transition joint bay to adequately inform the assessment of impacts. The applicant (table 2.10, [REP2-034]) confirmed that the transition joint bay would be outside designated sites and a WCS noise assessment of impacts on designated sites had been presented. This matter remained under discussion in the draft SoCG with the RSPB [REP5-092], with no further position updates.	The ExA notes the differing views of the applicant and the RSPB.

ID	Issue	Details of issue	ExA observation / question
3.3.15	Potential impacts from unexploded ordnance (UXO) clearance	The RSPB [REP1-158] highlighted the potential for UXO to be present and that its removal could result in disturbance to birds within Sandlings SPA and damage to supporting habitats. The applicant (table 2.10, [REP2-034]) considered it had undertaken a detailed UXO risk assessment. It explained (1GH1, [REP3-069]) that options for disposal would be risk assessed at the time of identifying UXO and any consents/permits (including HRA) would be produced at the that time. It further confirmed (AP16, [REP4-087]) that UXO removal would not be required within the SPA as the drill depth within the Sandlings SPA would be below the maximum bomb penetration depth. However, it acknowledged (table 2.1, [REP4-085]) that an UXO survey would be required at the HDD drilling location and [REP4-087] confirmed that relevant statutory bodies would be consulted on the approach to removal should a UXO be found. The RSPB [REP4-142] was concerned about deferral of assessment until after the consenting process is complete. It highlighted concerns that intrusive UXO surveys could result in disturbance of birds in the SPA. The applicant [REP5-132] confirmed that a non-invasive UXO survey of the RSPB reserve would be carried out at a time of year to be agreed with NE through SSSI assent, and would inform calculation of whether kinetic energy from HDD would be sufficient to initiate buried UXO. This would inform proactive risk mitigation, such as taking the drill deeper or changing the alignment. The RSPB (2ECOL5, [REP5-203]) stated that whilst it was not currently agreed that the UXO approach outlined in AP16 was sufficient to mitigate effects on designated sites, it was in	The ExA notes that this matter is being actively discussed by the applicant and the RSPB with a view to agreeing an appropriate mitigation commitment in a future iteration of the REAC.

ID	Issue	Details of issue	ExA observation / question
		constructive discussions with the applicant about an additional commitment in the REAC [REP5-115] and would provide an update through the SoCG at a later date. NE (2ECOL5, [REP5-199]) noted that the Ministry of Defence's policy is to detonate terrestrial UXO in situ but would welcome opportunities to avoid this, or otherwise to be consulted on how impacts would be reduced and habitats made good.	
3.3.16	Potential for open-cut trenching at landfall	The RSPB [RR-4651] [REP1-165] was concerned that the dDCO did not exclude the possibility for the applicant to revert to open trenching for the Suffolk landfall. The applicant (table 6.12, [REP1-115]) confirmed that it was committed to the use of trenchless techniques and that there are no proposals within the DCO to allow open cut trenching, even as a fallback position. Whilst B21 of the REAC [REP4-235] committed to trenchless techniques at the Suffolk landfall, the ExA [PD-021] sought draft wording to secure the use of a trenchless landfall technique as a dDCO requirement due to the sensitivity of the environment. The applicant provided suggested wording in (2GEN17, [REP5-135]) and inserted it as Requirement 16 in the dDCO [REP5-005]. The draft SoCG with the RSPB [REP5-092] recorded this matter as agreed.	Issue resolved.
3.3.17	In-combination effects - noise	The HRA Report [APP-290] concluded that disturbance of Sandlings SPA would only arise if multiple projects were to cause noise levels exceeding the 60dB threshold during the nightjar and woodlark nesting season. However, it considered space constraints	The ExA notes the applicant's response.

ID	Issue	Details of issue	ExA observation / question
		would not allow for works for projects close to the SPA to take place simultaneously. The RSPB [REP1-158] considered the applicant's approach did not account for impacts of multiple projects disturbing multiple areas of the SPA. The applicant responded (table 2.10, [REP2-034]) that as it was reducing its impact to 'not-disturbing' (ie less than the 60dB L_{Amax} threshold agreed with NE), any in-combination effect would remain not significant.	
STODMARSH SPA AND RAMSAR SITE and THANET COAST & SANDWICH BAY SPA AND RAMSAR SITE			
3.3.18	Collision risk	The applicant provided an assessment of collision risk in the HRA Report (appendix C, [APP-090]). NE (B36, [RR-3920]) confirmed sufficient information was provided to conclude no AEoI of Thanet Coast & Sandwich Bay SPA/ Ramsar site or Stodmarsh SPA/ Ramsar site via bird collision risk. However, the RSPB [REP1-158] and RSPB Thanet [REP1A-061] considered collision and displacement risk for pylons across the River Stour had been underestimated. It queried whether 1 year of vantage point surveys, 4 months of bird corpse searches, and (in respect of Thanet Coast & Sandwich Bay SPA and Ramsar site) the low peak count (370) of golden plover was adequate to inform the collision risk assessment. KWT [REP3-092] considered that additional bird diverters should be fitted to existing overhead lines, particularly where they intersect with the FLL associated with the Thanet Coast & Sandwich Bay SPA. CPRE Kent (1ECOL10, [REP2-045]) echoed the need for diverters and considered collision and electrocution risk a matter of	The ExA notes that NE was satisfied with the information provided by the applicant, and that the applicant has proposed bird diverters on new sections of overhead line.

ID	Issue	Details of issue	ExA observation / question
		particular concern for birds of the Thanet Coast & Sandwich Bay SPA. The RSPB [REP5-092] also stated that bird diverters were needed as a precaution for both existing and new wires. NE (1ECOL10, [REP4-196]) (2ECOL50, [REP5-199]) confirmed that it did not consider there to be any need for additional diverters to be fitted to other lines in the area for the purposes of HRA. It was supportive of the ExA's suggestion that B55 of the REAC should explicitly state that bird diverters should be effective at night-time and low lighting conditions. The applicant [REP3-067] considered its survey effort to be sufficient and proportionate for the new overhead powerline. It noted (table 3.1, [REP4-085]) (1ECOL10, [REP4-083]) that birds currently interact with an existing wirescape across the River Stour. It stated that collision risk is fewer than one individual annually for most species and concluded no mitigation is required, as no significant effects are predicted. However, it confirmed that bird diverters would be fitted to the new section of overhead line. The ExA (1ECOL9, [PD-017]) queried whether the vantage point survey and collision risk assessment had taken into account the 6m vertical limit of deviation (LoD) for the proposed pylons. The applicant (1ECOL09, [REP3-069]) acknowledged that survey recording bands were based on design information available at the time, based on typical pylon tower height and corresponding line height between the towers. It considered that its assessment had broad criteria and assumptions which provided an exaggerated worst-case scenario. It stated that even with the LoD, the suspended power lines would likely be within the heights assessed and due to the precautionary nature of the assessment and	

ID	Issue	Details of issue	ExA observation / question
		concluded that the LoD would not materially change the assessment. It noted [REP4-086] that earth wires are responsible for a higher rate of collisions than other parts of the overhead line infrastructure. The applicant (2ECOL49, [REP5-135]) further clarified that accounting for sag in wires, for most flights the earth wire would still be located within the 15m to 50m survey height risk range. Applying the 6m LoD, the earth wire would only be outside this range immediately either side of the pylon. It stated that birds would visually detect the pylon and avoid the large structure and airspace around them.	
THANET COAST & SANDWICH BAY SPA AND RAMSAR SITE			
3.3.19	Potential for HDD failure	NE (B1 and B6, [RR-3920]) considered that HDD failure is likely at this location and advised that further assessment work was required to determine if HDD was a viable option. It considered that if HDD is not viable, there is a high risk of AEoI to Thanet Coast & Sandwich Bay SPA and Ramsar site. The RSPB [REP1-165] was concerned that open trenching could take place in the intertidal zone which, along with the associated haul route and vehicle movements could cause long-term damage to coastal wetland habitats which support the SPA and Ramsar site interest features. KWT [REP1-151] [REP2-054] [REP4-124] was similarly concerned and noted that Nemo Link abandoned trenchless installation within Pegwell Bay. It considered that the current state of unmitigated and irreversible damage from Nemo Link undermined the applicant's conclusion that no permanent effects would arise from intertidal works. However, in response to the ExA (AP1, [EV6-033]), National Grid Ventures (NGV) (the Nemo Link developer) [REP4-127] [REP4-	The ExA understands that IPs' concerns relate to the feasibility of trenchless methods and notes the applicant has committed in the dDCO and DML to only use trenchless methods with no alternative, confirming that a formal amendment would be required if trenchless methods were not feasible.

ID	Issue	Details of issue	ExA observation / question
		128] [REP4-133] explained that an open cut solution was always preferred at Pegwell Bay. The applicant (table 2.3, [REP2-014]) [REP2-034] confirmed that HDD feasibility was assessed in Landfall HDD Feasibility Technical Note (Appendix A, [APP-321]). It stated that the dDCO [REP5-005] does not allow open cut trenching across saltmarsh, an irreplaceable habitat, even as a fallback position and that the HDD exit point would be in the intertidal zone, avoiding direct impacts on saltmarsh. It maintained that, based on its investigation, trenchless installation would be feasible. It [REP5-132] reiterated that trenchless techniques are a common landfall installation method for subsea cables and provided example projects. With regards to HDD feasibility, the ExA (1ECOL51, [PD-017]) noted that no intrusive investigation had been undertaken for a 400m length of the Kent landfall beneath the intertidal area. The applicant [REP3-069] stated that additional boreholes would be necessary but it would not be possible to report the results into the examination. It did not consider the results would affect the HDD length. The applicant (table 2.10, [REP2-034]) confirmed that if trenchless techniques were for any reason identified as not feasible, alternative methods would require a formal amendment to the DCO, with a new assessment. This was acknowledged by NE (2ECOL6, [REP5-199]). NE (B1 and B6, [REP3A-025] [REP4-197]) REP3A-028], who continued to record concerns about this matter. It advised [REP4-191] that it would be prudent to include contingency assessment for failure of non-trenchless methods at Pegwell Bay and potential delays. It (NE4, [REP5-222]) advised	

ID	Issue	Details of issue	ExA observation / question
		that the level of comfort on HDD feasibility was not going to be available at the time of consent. Condition 10(1) of the deemed marine licence (DML) (Schedule 16) in the dDCO secured that landfall installation must only use trenchless techniques. In response to the ExA (2GEN17, [PD-021]), the applicant also secured the trenchless method in Requirement 16 in the dDCO [REP5-005].	
3.3.20	HDD activities - stuck drilling equipment	NE (B1 and B28, [RR-3920]) advised that the likely impacts of equipment becoming stuck and requiring excavation needed to be considered and detailed in a contingency plan. The RSPB [REP1-158] was not clear how the applicant's estimate of a small risk of excavating the intertidal area for stuck equipment was derived, or if other projects were comparable. ESC [REP1-128] queried that measures would be employed to avoid equipment getting stuck, noting the REAC does not include any details. The applicant updated paragraph 7.4.4 of the HRA Report [REP5-036] with a common method for retrieving equipment, comprising a second drilling string pulled out by the HDD rig. Alternatively, it would be left in situ. NE (B1 and B28, [REP3A-025]) confirmed it was satisfied with the applicant's response, noting that no excavations would be carried out beneath saltmarsh or shallow lagoon. The applicant updated B22 and B43 of the REAC [REP5-115] to confirm in general, no excavation would be undertaken to remove stuck drilling equipment. This matter remained under discussion as reported in the draft SoCG with the RSPB [REP5-092].	**RIESQ23 – To NE:** **NE has confirmed it was satisfied with the applicant's response on the basis that no excavations would be carried out beneath saltmarsh or shallow lagoon. Noting the applicant's update to the REAC [REP5-115] that no excavations would take place 'in general', are you satisfied this matter can be resolved?** **RIESQ24 – To the RSPB:** **Noting the applicant's commitments and**

ID	Issue	Details of issue	ExA observation / question
			NE's position, confirm if you are satisfied that this matter is resolved. If not, advise what further information you consider is needed to address your concerns.
3.3.21	HDD activities - frac out	As detailed in section 3.2 of this RIES, the RSPB [REP1-165] raised concerns regarding frac out beneath Pegwell Bay. NE [REP3A-028] cited East Anglia One offshore cable installation as an example where SPA birds had been affected by a bentonite frac out. It advised further consideration of the likely duration of bentonite remaining on the seabed and implications for the wider ecosystem. The applicant (table 3.6, [REP4-082]) responded that the HDD location for East Anglia One was a constrained environment with little coastal wave action, which is not comparable to the more dynamic environment of Pegwell Bay. It noted that the saltmarsh in Pegwell Bay is dry 50% of the time and frac-out could be easily removed. As recorded in ID 3.1.3, the RSPB confirmed it was satisfied with the applicant's proposed measures to manage frac out if NE's concerns were alleviated. NE (2ECOL53, [REP5-199]) explained that its reference to East Anglia One was to demonstrate potential temporal significance and stated that there is a difference between being able to remove something and removing without habitat damage. It stated that final signoff of the CSIP, LMS and DFMP	The ExA understands that this matter is resolved for the RSPB if NE are satisfied, and notes that the applicant has committed to various management plans, upon which it would consult with NE. **RIESQ25 – To the applicant:** **NE has requested revised wording in the REAC commitments to require the LMS and DFMP to be agreed with the MMO in consultation with the relevant SNCB. Update**

ID	Issue	Details of issue	ExA observation / question
		prior to construction was essential to alleviating its concerns. As described at section 3.2, the applicant made commitments in the REAC [REP5-115] to consult NE on the management plans but NE (appendix J, [REP5-222]) sought amended wording.	**the wording or otherwise justify why this is not required.**
3.3.22	Non-HDD construction activities – temporary physical disturbance to supporting habitats and indirect effects (including effects on prey)	**Intertidal mudflat disturbance** MDS NE (Appendix D3, [REP3-118]) raised concerns that the total intertidal seabed disturbance footprint for cable installation activities would exceed the 0.02km^2 of intertidal mudflat stated by the applicant in paragraph 4.3.4 of the HRA Report [AS-007]. It sought the most up-to-date information on construction activities to inform assessment of seabed disturbance impacts to designated sites/features and supporting habitat and species. The applicant updated the Marine Ornithology ES chapter (table 5.16, [REP2-003]) and the HRA Report [REP5-036] to correct the MDS for seabed disturbance to 0.072km^2. It confirmed that additional information on the construction and operation activities at Pegwell Bay was submitted in the PBCMTN [REP4-229]. However, KWT (2MO5, [REP5-196]) was unclear if the MDS used in the HRA reflected the maximum realistic spatial extent during construction. It requested clarification of the HDD working area, access routes across mudflats and any temporary infrastructure associated with duct pull-in and cable installation to provide greater confidence in the assessment. Cofferdams As noted in section 3.2 of this RIES, NE raised concerns about cofferdam dimensions and that intertidal sediment disturbance and	The ExA notes that NE (2MO5, [REP5-199]) was not content that indirect effects on Thanet Coast and Sandwich Bay SPA and Ramsar features had been fully considered against the conservation objectives. It notes that various matters remain unresolved but that the applicant has made updates and clarifications in its DL5 submissions, and a commitment to further modelling to be submitted at DL6, which may address some of NE's concerns.

ID	Issue	Details of issue	ExA observation / question
		blockage could be underreported, with potential for indirect effects. This concern was reiterated in (2PE4, [REP5-199]). The applicant submitted an updated Marine Chapter 1, Physical Environment ([REP5-019], table 1.19), which updated the MDS for temporary cofferdam dimensions to be used at Kent landfall, as well as the breakdown of seabed disturbance (total areas). It updated assessment conclusions in section 1.9 to incorporate a comparison of erosion thresholds with local hydrodynamic conditions, concluding that the temporary cofferdam would not result in any meaningful change to sediment dynamics. It also added assessment of the excavation of the intertidal trench, stating that because works would occur in the dry at low tide, disturbance would be spatially limited and manual backfilling would ensure the area is returned to pre-construction levels immediately. MPE10 was added as a commitment to the REAC [REP5-115] to confirm that natural (and if required, mechanical) backfilling would occur on removal of the cofferdam. The applicant stated [REP5-132] that the updates included consideration of the proposed order limit change at the former hoverport. It committed [REP5-132] to providing updated modelling of impacts at landfall in a further iteration of the ES chapter at DL6. <u>Seabed recovery</u> NE [REP5-217] and [REP5-221] advised that there was a lack of empirical evidence (for example, from Thanet Offshore Wind Farm or Nemo Link) to support predictions of temporary morphological change and advised the applicant to commit to a post-installation survey to demonstrate recovery of the intertidal mud and sand flats.	

ID	Issue	Details of issue	ExA observation / question
		The applicant responded (table 15.2, [REP5-132]) that post-construction monitoring of Nemo Link Interconnector showed that the loss of intertidal fauna was localised and temporary, and by 2020 faunal communities and habitats present along the cable route reflected those seen during the baseline survey. It also noted that the combined effects of episodic wave stirring tidal currents would ensure that the seabed naturally re levels and recovers from temporary construction related impacts without intervention. **Impacts on mudflats and saltmarsh from vehicle movements** The PBCMTN [REP4-229] stated there may up to 40 vehicle movements across the mudflats per day at peak times (over an approximate one year duration). NE [REP3-118] noted that the PBCMTN identified two access routes onto the intertidal mudflats via the disused hoverport, with the final location and width to be determined. It advised that impact pathways and an MDS for the access routes should be defined and assessed. It noted (table 2, [REP3A-028]) that there was no consideration of how vehicle movements for cable installation and operation activities could impact on intertidal habitats and protected species which rely on the habitat. It considered (table 6, [REP3A-028]) that repeated access along the intertidal area could cause rutting and compaction of sediment that could hinder the transition to Annex I saltmarsh and change infaunal communities of which SPA species rely. It queried the necessity of some equipment including tractors and hovercraft, and the number of 4-wheel drive vehicles required and advised that further measures should be considered to reduce impacts on intertidal habitats and sediment compaction.	

ID	Issue	Details of issue	ExA observation / question
		KWT and CPRE Kent [CR1-053] were concerned that it was unclear how modification to the hoverport access would avoid damage to the saltmarsh. The applicant [REP4-241] stated that it had assessed effects of vehicles transiting the intertidal area and the use of temporary bog mate in the Marine Chapter 1, Physical Environment [REP5-019] and Marine Chapter 2, Benthic Ecology [REP5-021], which concluded no significant impact. There was no update in the HRA Report [REP5-036] related to effects of vehicles transiting the intertidal area but the applicant (2MO5, [REP5-115]) considered it would be unlikely for these to contribute to a significant reduction in prey availability of foraging habitat. It noted that Pegwell Bay represents 0.592% of the overall intertidal mudflat foraging resource based on 12.1825km^2 of mudflat habitat identified on the Ramsar site information sheet. The applicant updated B67 and B70 of the REAC at DL3 [REP3-078] to commit to consultation with NE and the KWT, post-consent, on access routes across the hoverport and the mudflats. It committed to no vehicular or pedestrian access across the saltmarsh. The applicant explained [REP4-241] that low-pressure vehicles would be used as best practice and included this commitment in B67 of an updated version of the REAC [REP5-115]. It noted that 4-wheel drive vehicles are not expected to be frequently used and can be run with reduced tyre pressure if required. It concluded that there would be no AEoI from construction access across the intertidal mudflats. NE [REP5-217] remained concerned about movement of heavy construction plant and vehicles impacting intertidal mud and sand	

ID	Issue	Details of issue	ExA observation / question
		flats and requested further investigation. It stated (appendix J, [REP5-222]) that vehicles should have a lower pressure than a human footprint and measures to minimise rollers should be included. NE (2ECOL52, [REP5-199]) requested that the final method and mitigation was secured through a condition in the DML. **Impacts on saltmarsh from open cut trenching** The applicant (table 2.6, [REP2-034]) acknowledged that open cut trenching would be required to install the cables from Mean Low Water Springs to the trenchless crossing exit pits. It committed to locating the trenchless crossing exit pits at least 105m seaward of saltmarsh habitat, and the temporary working area a minimum of 50m from the saltmarsh (B69, [REP3-078]). It considered that open cut trenching in the intertidal mudflats would result in temporary disturbance to the habitat only, with trenching being backfilled and evidence on the surface of the mudflat rapidly disappearing due to regular tidal cycles and wave action. NE [REP3A-028] [REP4-195] (1ECOL34, [REP4-196]) was concerned that 50m was insufficient. It requested further evidence that impacts could be avoided during construction and operation. The applicant [REP5-019] provided further evidence, stating that Marine Chapter 1, Physical Environment [REP5-019] demonstrated the process of sediment redistribution is similar to the response under natural conditions such as during a storm. **Impacts from placement of cable protection** As described in ID 2.3.5 of this RIES, NE raised concerns about placement of cable protection at the Kent landfall. NE [REP5-217] remained concerned about impacts to supporting habitat of the	

ID	Issue	Details of issue	ExA observation / question
		SPA and Ramsar site, and advised that the MDS for temporary rock bags/ concrete mattresses should be quantified and impacts assessed, noting potential for modification of wave regimes and sediment transport patterns, which could result in scour and increased erosion.	
3.3.23	Loss of FLL - mitigation	The Minster Converter Station would result in the loss of functionally linked arable foraging habitat for golden plover associated with the Thanet Coast & Sandwich Bay SPA during early winter (October to December). The applicant proposed the long-term management of 10ha of arable land adjacent to Discovery Business Park to mitigate the loss. Information on the management of the land is set out within the Outline Landscape and Ecology Management Plan (oLEMP) – Kent [REP4-067]. NE (B35, [RR-3920]) confirmed sufficient information was provided to conclude the mitigation land would offset impact. Concerns were raised by other IPs. **Adherence to mitigation hierarchy** KWT [REP1-152] questioned adherence to the mitigation hierarchy, suggesting site selection was based on land availability and logistical convenience rather than ecological suitability. The applicant [table 2.8, [REP2-014]) stated that site selection avoided environmental designations where possible. **Suitability of site** KWT [RR-2980] [REP1-152] and the RSPB [REP1-158] queried whether the proposed mitigation land was already functionally linked to the SPA, in which case it could not be used for mitigation. The RSPB highlighted that golden plover was recorded in flooded fields, not dry land and therefore questioned if dry mitigation land	The ExA notes that NE was satisfied that the applicant had provided sufficient information to conclude the mitigation land would offset the impact and that the applicant has responded to concerns raised by other IPs about site suitability, quantification of land required and in-combination loss.

ID	Issue	Details of issue	ExA observation / question
		would deliver similar function. It requested justification for site choice and guarantees of appropriate management. It did not agree an AEoI could be excluded as this mitigation land was not acceptable. It (2ECOL30, [REP5-203]) requested reassurance of how the location would function as mitigation, especially given wider constraints from industry including solar farms. It stated that greater clarity was required on what would qualify as success, and that it would be open to discussing bespoke management. The RSPB agreed [REP5-092] that based on the surveys undertaken, the mitigation land does not appear to currently be FLL and accepted that seasonally flooded fields would be appropriate. The applicant stated (2ECOL30, [REP5-135]) that it had updated the oLEMP [REP4-067] to include recommendations from the RSPB, including measures related to soil and topping of crops. KWT [REP1-152] considered there to be an absence of evidence regarding the long-term viability of golden plover mitigation. It noted that golden plover depend on expansive, open, and low-disturbance landscapes (such as wet grassland, stubble fields and grazed pasture) for predator detection and flock cohesion. KWT concluded there is no scientific certainty that the proposal would maintain habitat connectivity or support the SPA's qualifying populations. RSPB Thanet [REP1A-061] also considered the land would not be a like-for-like replacement. SMM [REP2-103] stated it was not functionally linked to Pegwell Bay. CPRE Kent [REP2-045] considered the proposed development would fragment habitats functionally linked to the SPA. It considered [REP1-147] [REP1-148] the proposed mitigation site to be unsuitable being constrained by constant noise, lighting and	

ID	Issue	Details of issue	ExA observation / question
		human disturbance and that it was far from certain that golden plover would use the site as they need wide expanses of open landscape with a mix of habitat. The applicant [REP2-013] confirmed that surveys recorded golden plovers flying adjacent to the site, with 1 overflying, but no significant use of the site. The applicant (table 2.10, [REP2-034]) explained that the proposals were agreed with NE, who had proposed arable land as an acceptable alternative habitat on the basis that the habitat being lost is arable land (not wet grassland). KCC [REP1-079] initially raised concerns that insufficient information was provided to demonstrate suitability of the mitigation, and that no surveys to understand current use had been carried out, but the SoCG at DL5 [REP5-050] recorded this matter as agreed based on the applicant's information. **Noise and visual disturbance** KWT [RR-2980] and the RSPB [REP1-158] questioned the suitability of the proposed mitigation land, citing the potential noise disturbance and light pollution from the business park. SMM [REP2-103] raised similar concerns, stating it would fail for roosting and foraging as it is surrounded by industry and bordered by the A526. The applicant (table 2.8, [REP2-014]) disputed that noise disturbance is a concern; noting that there are numerous examples of wintering waterfowl and wader populations being recorded in proximity to busy roads. It stated that most of the proposed mitigation land is unaffected by lighting and that there are dense tree belts screening fields from the business park. The applicant confirmed there is no construction noise modelling for the mitigation land as no construction is proposed at that location. The	

ID	Issue	Details of issue	ExA observation / question
		SoCG with KCC at DL5 [REP5-050] inserted this as a new item but recorded it as agreed based on the applicant's response to KWT. **Quantification of land required** KWT [RR-2980] and the RSPB [REP1-158] noted discrepancies in golden plover numbers in the preliminary environmental information report (PEIR) (700) and the HRA Report [APP-090] (370) and were concerned that habitat compensation needs had been underestimated. The applicant (table 2.8, [REP2-014]) explained that the 700 golden plovers identified in the PEIR was an error; the survey recorded a flock of 370 golden plover and 700 lapwings, however this was mis-transcribed in the PEIR as 700 golden plovers. It noted that the size of the mitigation land (10ha) is greater than the area of land needed for mitigation (up to 7.2ha). It anticipated a net increase in habitat for most ecological receptors and considered there to be a high likelihood of success. The RSPB [REP5-092] acknowledged the error and recorded the carrying capacity as agreed. **In-combination loss** KWT [RR-2980] [REP1-152] and the RSPB [REP1-158] raised concerns regarding the cumulative loss of ~160ha of FLL from nearby solar farms. The applicant (table 2.8, [REP2-014]) (tables 2.6 and 2.10, [REP2-034]) confirmed that the HRA Report has included all projects identified by KWT and the RSPB. It noted that the HRA Report [REP5-036] concluded that the delivery of mitigation for loss of golden plover foraging habitat from the proposed development would ensure no net loss of habitat and thus avoid in-combination effects. The applicant noted it is the responsibility of other projects	

ID	Issue	Details of issue	ExA observation / question
		to deliver mitigation if required and that it is only required to mitigate for its own contribution to any 'in combination' effect.	
3.3.24	Noise – construction activities	At DL1, the Applicant submitted PBCMTN [REP1-108] to clarify works and activities in Pegwell Bay. It revised the HRA Report [REP5-036] to confirm that noise contours for construction activities in Pegwell Bay were shown in Figures 6.4.4.5.7 and 6.4.4.5.8 in Application Document 6.4.4.5 (B) ES Figures Marine Ornithology [REP2-007]. Version D of the HRA Report [REP2-009] confirmed that the contours represent a WCS showing the highest noise levels typically produced by the loudest plant equipment at different distances from the source. The worst-case construction activity would be vibratory piling associated with cofferdam establishment. The noisiest plant would be the tracked excavator moving between the HDD exit pit and former hoverport construction access route. At ISH2, the ExA queried the implications of moving the cable works to their southern extent within the LoD [EV6-033]. The applicant (AP21, [REP4-086]) confirmed that assessment of disturbance to roosting and feeding waterbirds presented in the HRA Report had considered a WCS of the cable pull in works occurring anywhere within the LoD (shown as hashed area on figure 6.4.4.5.8 of [REP4-051]), with the modelled noise attenuation taken from the perimeter of the LoD. The ExA also requested the applicant to clarify offset distances of works from key roost locations from airborne sounds and visual disturbance. In response to the ExA, the applicant updated the Marine Ornithology ES figures [REP5-032] to show key roost locations in Pegwell Bay and distances from work areas (inclusive of LoD).	Issue resolved.

ID	Issue	Details of issue	ExA observation / question
3.3.25	Disturbance – vehicle movements	NE (table 2, [REP3A-028]) noted that no consideration had been given to disturbance to SPA birds from vehicle movements within the intertidal area. The PBCMTN [REP4-229] stated that there may up to 40 vehicle movements across the mudflats per day at peak times. It provided noise contours in figures 6.4.4.5.7 and 6.4.4.5.8 [REP4-051] depicting predicted maximum noise levels along an illustrative access route corridor. The applicant (table 3.6, [REP4-241]) confirmed that amendments had been made to the HRA Report (version D) [REP2-009], providing clarification on such effects. In response to the ExA [PD-021], the applicant (2ECOL28, [REP5-135]) confirmed that vehicle movements, including noise generated, are considered as part of the airborne sounds and visual disturbance assessment in paragraphs 7.3.41 to 7.3.48 of the HRA Report [REP5-036].	**RIESQ26 - To NE:** **Is NE satisfied that disturbance from vehicle movements within the intertidal area has been sufficiently assessed and that a conclusion of no AEoI can be reached?**
3.3.26	Disturbance – hovercrafts	NE (table 6, [REP3A-028]) queried the need for hovercrafts, given they are particularly disturbing to SPA birds and noting that their use in other SPAs is heavily controlled. The applicant (table 3.6, [REP4-082]) confirmed that the hovercraft would be on standby, used as a last resort for emergencies. It (AP68, [REP4-087]) stated that a commitment to limiting the use of hovercraft would be included in the next update to the REAC; however, it was not provided in the DL5 version [REP5-115].	**RIESQ27 – To the applicant:** **Submit an updated REAC with a commitment to limiting the use of hovercraft to a last resort for emergencies.**

ID	Issue	Details of issue	ExA observation / question
3.3.27	Disturbance – lighting of the cofferdams	NE (table 6, [REP3A-028]) noted that lighting of the cofferdams in the intertidal area was proposed. It requested further assessment of disturbance impacts to Annex I birds. The applicant (table 3.1, [REP4-082]) responded that lighting would be required during construction of the cofferdams which would be directed inwards to the 21,600m^2 working area, with no impacts to birds in the intertidal area and no light spill to terrestrial habitats.	**RIESQ28 - To NE:** **Is NE satisfied that disturbance to qualifying features of Thanet Coast & Sandwich Bay SPA and Ramsar site from lighting of the cofferdams has been sufficiently assessed and that a conclusion of no AEoI can be reached?**

Table 3.4: Marine ornithology (SPAs) - Issues raised in the examination to date by the ExA and IPs in relation to the applicant's assessment of effects on integrity (alone and in-combination)

ID	Issue	Details of issue	ExA observation / question
OUTER THAMES ESTUARY SPA			
3.4.1	Red throated diver distribution	The RSPB [REP1-158] did not consider the applicant had substantiated its claim that most of the offshore cable route passes through areas with limited or no recorded occurrent of red-throated diver. It noted that figure 6.4.4.5.5 'Red-throated diver counts (individuals) and densities (number km^2) in the Outer Thames Estuary SPA' [APP-280] showed red-throated diver records from February 2018. The JNCC [REP1-210] similarly argued that most of the route passes through areas of medium red-throated diver density (based on Irwin et al, 2019 maps) and sought a vessel disturbance assessment and red-throated diver distribution maps. The applicant (tables 2.10 and 2.23, [REP2-034]) acknowledged limitations to data available on red-throated diver distribution within the SPA. It considered the assessment had been undertaken in line with industry standards and recognised good practice. It confirmed that available data suggests areas of higher red-throated diver densities within the SPA are outside the draft Order Limits. The applicant explained (1ECOL53, [REP3-069]) that works would avoid areas where red-throated diver densities are highest, according to NE mapped densities from 2018. It stated that Irwin et al, 2019 maps show similar density distributions as NE mapped densities and that figures in the application had not been	The ExA notes that this matter is still under discussion.

ID	Issue	Details of issue	ExA observation / question
		reproduced with this data as it had already committed to a seasonal restriction (see ID 3.4.2 below). The draft SoCG with the RSPB [REP5-092] recorded that this matter remained under discussion.	
3.4.2	Disturbance and displacement effects to red-throated diver – seasonal restriction	The applicant (1ECOL54, [REP3-069]) confirmed its objective was to install sections of the cable route passing through the Outer Thames Estuary SPA within a single season (April to October). To mitigate the potential for disturbance effects on red-throated diver, the applicant proposed a seasonal restriction for offshore cable burial activities (excluding pre-lay grapnel run activities) in the Outer Thames Estuary SPA from 1 November to 31 March. This is secured in the Red-Throated Diver Protocol [REP5-080]. **Buffer zone** NE (G2, G3 and G10, [RR-3920]) considered that red-throated diver displacement occurs out to 2km in all directions from vessels and vessel movements. NE [REP4-189] [REP4-193] advised the seasonal restriction should be applied to the SPA plus a 2km buffer from its seaward boundary. It provided evidence in annex 1 of [REP5-199], including studies showing displacement can occur at different rates within 2km and potentially extending to 5km. It stated that 100% displacement at 2km represents a pragmatic approach to uncertainty for displacement gradients for OWF. It advised that in the absence of a 2km buffer zone around the SPA it would, in all likelihood, not be able to rule out an AEoI in-combination.	**RIESQ29 – To NE:** **Studies referenced in annex 1 to (2MO3, [REP5-199]) refer to displacement gradients for OWF. Explain why these are also applicable to subsea cables.**

ID	Issue	Details of issue	ExA observation / question
		The RSPB [REP1-158] [REP5-092] advised the assessment should be based on a 5km buffer around vessel routes and related activity. The applicant [REP5-132] stated it was continuing to engage with NE on this matter. **Exclusions from the seasonal restriction** The HRA Report [APP-290] stated that pre-lay grapnel activities were not included within the seasonal restriction as they have a lower disturbance profile than installation work. Paragraph 5.9.72 of Marine Chapter 5, Ornithology [REP2-003] also stated that maintenance and surveying activities during operation would be avoided between January and March 'where practicable'. The application version of the Red-Throated Diver Protocol [APP-361] noted that if essential emergency work is required between January and March, consultation would be undertaken with the MMO and NE to ensure timely repair whilst minimising disturbance to red-throated diver as far as practicable. NE (G2, [RR-3920]) advised that this was not a sufficient commitment to avoid disturbance/displacement effects during the winter period, which is sensitive for red-throated diver. It recommended that the proposed seasonal restriction be widened to include the pre-lay grapnel run, operation and maintenance activities (including surveying), and decommissioning phases of the development. It also sought more information about the activities (including frequency, duration and extent as detailed in G9) to inform a more detailed assessment and determine the level of mitigation. NE (table 1, [REP4-193]) considered that these activities would remain unmitigated during the first half of	

ID	Issue	Details of issue	ExA observation / question
		winter and their impacts in-combination with other projects have the potential to contribute to an in-combination AEoI on the Outer Thames Estuary SPA. The JNCC [REP1-210] considered it unclear whether other pre-laying activities were excluded from the restriction. The applicant (table 2.23, [REP2-034]) responded that pre-construction activities such as geophysical surveys would be avoided between January and March where practicable. <u>Pre-construction activities</u> The applicant (table 2.23, [REP2-034]) (1ECOL54, [REP3-069]) (AP22, [REP4-086]) stated that cable installation activities would need to commence promptly at the start of the unrestricted period and that pre-lay grapnel runs would need to be conducted immediately prior to cable installation. It explained that the duration of the pre-lay grapnel run within the Outer Thames Estuary SPA would be approximately seven days with one vessel towing a 'grapnel' and potentially a support vessel/guard vessel (working as a single cluster) continuously moving at approximately 1 to 1.5 knots. It likened the activities to commercial fisheries activities which occur within the SPA. The applicant considered that including pre-lay grapnel activities in the seasonal restriction would restrict the time available outside of the restriction to complete cable installation. NE (table 1, [REP4-193]) advised that pre-lay grapnel run vessels are not small (range 40 to 70m length) and may still cause sufficient audio/visual disturbance to displace red-throated divers. It highlighted a comparatively higher diver density along and within 2km of the cable corridor. It sought further analysis from	**RIESQ30 – To NE:** **The applicant has stated that there are high levels of existing vessel traffic present along most of the cable corridor and the studies referenced in annex 1 to (2MO3, [REP5-199]) suggest that frequency/ number of movements is a factor in the displacement of Red-Throated Diver. Can NE provide evidence that displacement could occur from the**

ID	Issue	Details of issue	ExA observation / question
		the applicant to evidence that pre-lay grapnel run would not cause (or materially contribute to) significant levels of disturbance. The applicant (AP22, [REP4-086]) highlighted existing high levels of vessel traffic present along most of the cable corridor (hundreds of vessels per day including large cargo ships). It maintained that the additional one-off, short duration or pre-lay grapnel runs and geophysical activities which involve one, slow moving, operation vessel and support or guard vessel would not result in AEoI either alone or in-combination with other plans or projects. <u>Operation and maintenance activities (including surveying)</u> The JNCC [REP1-210] sought clarity on the expected vessel movements required for regular monitoring surveys during operation. The applicant (table 2.3, G2, [REP2-014]) (1MO7, [REP4-08]) (AP23, [REP4-086]) noted that the cables are designed for minimal maintenance such that a regular regime is not required and that repairs would only be required in the event of unforeseen damage or remedial works to maintain depth of burial. It identified the potential for five repairs over the 40 to 60 year lifespan of the proposed development. Some cable repairs could require immediate action which would typically take two months but could take up to six months with both a guard vessel and a cable lay vessel. It considered (table 2.3, G10, [REP2-014]) (table 2.23, [REP2-034]) that maintenance activities would not result in significant increases of vessel traffic or disturbance to red-throated diver.	**small number of vessels which would arise from pre-lay grapnel movements to such an extent that would result in AEoI?** **RIESQ31 – To the JNCC and NE:** **The applicant has extended the seasonal restriction to include non-emergency operation and maintenance activities and secured this in the Red-Throated Diver Protocol. Subject to discussion on extending the restriction to the 2km buffer, does this address your**

ID	Issue	Details of issue	ExA observation / question
		The applicant explained (table 2.3, G2 [REP2-014]) that monitoring surveys could be carried out by autonomous surface vehicles and/ or autonomous underwater vehicles, and potentially remotely operated vehicles with smaller support vessel and manning levels. It stated the frequency of surveys could not be stated now and that maintenance requirements would be based on survey results. The applicant (1ECOL55, [REP3-069]) noted that January to March coincides with periods of highest risk for completing offshore surveys and it would generally aim to complete surveys during optimum weather conditions. However, it subsequently stated (1MO7, [REP4-083]) (AP23, [REP4-086]) that there would not be a requirement for offshore vessel to undertake regular monitoring, with a focus on the reliance of land based Digital Temperature and Acoustic Sensing (DTAS) monitoring. The JNCC [REP3-090] noted no certainty autonomous vessels would be used, no details of support vessels required and what the resultant reduction in disturbance would be. It sought information on the frequency of maintenance for similar transmission assets. Furthermore, it noted that maintenance could occur for two-thirds of the most sensitive period identified by the applicant if for two months (January to March), or for two-thirds of an entire non-breeding season if for six months (October to May). It noted the applicant's assessment was not qualitative (as it had requested) and had been made relative to the impacts of construction activities. It did not consider that the applicant had taken account of the conservation objectives.	**concerns on this matter. If not, explain what further measures you consider are needed.**

ID	Issue	Details of issue	ExA observation / question
		NE (table 1, [REP4-193]) acknowledged the essential need for a rapid response time for emergency repairs precludes the possibility of applying a seasonal restriction. It advised the applicant to provide an Outline Operations and Maintenance Plan (OOMP) to make clear which activities are covered by the DCO and which would require a new consent. It (2MO2, [REP5-199]) responded to ExQ2 [PD-021] stating it assumed non-emergency operational and maintenance activities would be subject to the full seasonal restriction unless otherwise agreed with the MMO in consultation with the SNCB. It requested the Red-Throated Diver Protocol be clarified to cover the full restriction period. The MMO (2MO2, [REP5-175]) agreed that the restriction should apply but considered it could be caveated to "unless otherwise agreed in writing by the MMO (in consultation with the SNCB)." The applicant (2MO2 and 2MO4, [REP5-135]) accepted the restriction to non-emergency operational and maintenance activities during 1 November to 31 March and updated the Red-Throated Diver Protocol [REP5-080] accordingly. <u>Quantification exercise</u> The applicant (table 3.1, [REP4-085]) confirmed that a quantification exercise is underway to assess the implications of vessel movements on red-throated diver of the Outer Thames Estuary SPA. It aimed (2MO1, [REP5-135]) to provide an updated HRA Report incorporating the exercise at DL6 as by DL5 it had not been able to source the method requested by NE. **Decommissioning** The applicant (table 2.3, G2, [REP2-014]) explained the predicted operational life of the cables is between 40 and 60 years, during	

ID	Issue	Details of issue	ExA observation / question
		which regulatory requirements and industry best practice could change. It did not know whether the cable would be decommissioned or if options for extending the life would be explored. The applicant confirmed a decommissioning plan would be prepared post-consent and a programme submitted to the MMO for approval at least six months prior to decommissioning works. It confirmed that all phases of work would adhere to NE's best practice protocol, as noted in the Red-Throated Diver Protocol [REP5-080]. This was welcomed by NE (table 1, [REP4-193]) who agreed the WCS for decommissioning could be like construction and requested the Red-Throated Diver Protocol be updated to confirm mitigation for these works. The applicant (2MO2 [REP5-135]) confirmed that the approach to decommissioning would be detailed within the final Offshore Decommissioning Plan submitted to the Secretary of State for approval approximately 2 years prior to decommissioning commencing. **Extended restriction** The RSPB [REP1-158] welcomed the proposed seasonal cable laying restriction. However, referencing NE's Advice on Seasonality for the Outer Thames Estuary SPA, it noted that red-throated divers are likely to be present in significant numbers from October to May and considered that any project-related vessel movements avoid this period. It considered that should any project-related vessel movements be required between October and May, they should be subject to clearly detailed and practical bird avoidance measures to be set out in a detailed vessel management plan. It did not agree an AEoI could be	

ID	Issue	Details of issue	ExA observation / question
		excluded from the proposed development in-combination with other plans or projects. The applicant (table 2.10, [REP2-034]) acknowledged red-throated diver may be present in the months outside of its proposed seasonal restriction, however it considered November to March to be the core period when numbers are greatest and environmental conditions the toughest and therefore the period when disturbance would have a greater effect on individuals. It confirmed that a vessel management plan would be developed post-consent, in consultation with NE in accordance with requirements of the DML. The draft SoCG with the RSPB [REP5-092] recorded that this matter remained under discussion. **In-combination effects** Paragraph 5.9.10 of the application version of the ES Chapter 5 Marine Ornithology [APP-078] proposed that the restriction may not be necessary if the projects assessed for in-combination effects did not take place. NE (G1 and G7, [RR-3920]) advised that the timing restriction on cable construction works is required irrespective of whether in-combination projects proceed. The applicant (table 2.3, G1, [REP2-014]) subsequently accepted it was highly unlikely the other developments would not proceed and confirmed that the seasonal restriction would be adhered to regardless of other projects. It amended the ES Chapter [REP2-003] to remove paragraph 5.9.10.	
3.4.3	Emergency operation and maintenance	NE (G3, [RR-3920]) (ECOL62, [REP4-196]) advised that if operation and maintenance activities were required between November and March in the SPA and the 2km buffer, a report to	**RIESQ32 – To NE:**

ID	Issue	Details of issue	ExA observation / question
	activities between November and March	quantify potential impacts and for assessment of future in-combination effects from similar projects assessing these (including potential in-combination effects) may be required by NE. It noted that the application version of the Red-Throated Diver Protocol [APP-361] only proposed reporting between 1 January to 31 March. The applicant (table 2.3, G10, [REP2-014]) confirmed it could provide NE with a report on the event (ie an operation and maintenance activity taking place between November and March) to inform future consenting of similar projects and updated the Red-Throated Diver Protocol [REP5-080] accordingly for activities taking place within the SPA. It stated [REP5-132] that the measures that might be addressed in an outline operations and maintenance plan are described in the oCSIP [REP5-117]. NE (G3 and G10, [REP5-222]) suggested that emergency works during the sensitive season would be subject to a separate permission and that the applicant's commitment to reporting may be sufficient to address its concerns.	**Confirm if your advice is that AEoI of the SPA arising from vessel disturbance undertaking emergency operation and maintenance activities during the wintering period can be excluded based on the applicant's commitments to reporting.** **RIESQ33 - To NE:** **The applicant has updated paragraph 1.5.9 of the Red-Throated Diver Protocol [REP5-080] to provide a report to NE regarding emergency operation and maintenance activities within the Outer Thames Estuary SPA. Should this commitment be**

ID	Issue	Details of issue	ExA observation / question
			extended to a 2km buffer of the SPA?
3.4.4	Effects from offshore UXO clearance to red-throated diver	The JNCC [RR-2635], the MMO [RR-3476] and NE (F25, G8, [RR-3920]) agreed with the applicant's approach to secure consent for UXO clearance through a separate marine licence. However, NE (G8, [RR-3920]) advised that a high-level assessment of disturbance impacts to red-throated diver from UXO clearance within and outside designated sites should be made based on the WCS. It stated that information from neighbouring projects could be used as a proxy if insufficient detail is known. The applicant (table 2.3, G8, [REP2-014]) stated the need for clearance was unknown and attempting to assess potential impacts without defined parameters would result in unrealistic and unrepresentative scenarios. NE (G8, [REP4-197]) subsequently confirmed it welcomed the applicant's commitment to continue engaging with NE and the MMO regarding the consenting approach for UXO activities and to ensure the marine licence assessment would fully capture the potential effects.	Issue resolved.
3.4.5	Indirect effects from sandwave clearance (pre-sweeping)	In response to NE's concerns [REP3A-027] about the MDS for sandwave clearance and its location in relation to protected sites, the applicant [REP4-082] confirmed that this activity would be required in the Outer Thames Estuary SPA and had potential to impact benthic supporting habitats. It stated that the impacts would be short term and would occur outside the key wintering period for red-throated diver, and therefore there would be no potential for AEoI.	The ExA notes the Red-Throated Diver Protocol [REP5-080] restricts offshore cable burial activities within the wintering period.

ID	Issue	Details of issue	ExA observation / question
3.4.6	In-combination displacement impacts to red-throated diver from vessel disturbance	The JNCC [REP1-210] [REP3-090] did not consider the applicant had undertaken a robust in-combination assessment. It advised that vessel movements from all aspects of construction, including preparation activities for all projects, as well as from operation and maintenance, and decommissioning, should be considered. Furthermore, it noted the applicant had considered each project individually but not considered the sum total of potential impacts and that the NeuConnect Interconnector project had not been included. NE (G11 and G15, [RR-3920]) advised that small impacts (identified in [APP-084]) from Nemo Link, Thanet OWF and London Array OWF need to be considered in the in-combination assessment unless they are truly negligible. It disagreed with the conclusion that London Array OWF has a small, localised effect during operation only and recommended that the applicant reconsider. It advised the applicant to update its assessment to consider smaller impacts that were scoped out. It requested more detailed consideration of interaction between the proposed development, and Five Estuaries OWF and North Falls OWF through the project stages, noting the proximity of the projects. The applicant (table 2.3, G11, [REP2-034]) confirmed these projects were not screened out of the in-combination assessment, but that effects were dismissed because of the small impact of those projects and the seasonal restriction. It considered that London Array OWF has a small, localised impact and that the seasonal restriction on cable installations would remove any effects that may arise in combination. The applicant (table 2.23, [REP2-034]) considered it had presented a robust assessment of	The ExA notes that the applicant has updated the Red-Throated Diver Protocol [REP5-080] to include a full seasonal restriction for the SPA aside from pre-lay grapnel run and operational emergencies, but that currently this does not include a 2km buffer. Subject to addressing the pre-lay grapnel run and 2km buffer, the ExA understands that NE would consider this matter resolved. **RIESQ34 – To the JNCC:** **Comment on the applicant's responses regarding its in-combination assessment for red-throated diver. Does the JNCC consider an AEoI can be excluded**

ID	Issue	Details of issue	ExA observation / question
		vessel disturbance across all phases of the proposed development and in combination with other developments. NE (table 1, [REP4-193]) responded that the Tarchon Interconnector cable project had been omitted and should be considered as far as is reasonably practicable. It [REP5-220] stated that unless appropriately justified, cable laying work for North Falls OWF should also be included in the in-combination assessment. It noted that the seasonal restriction would only remove an in-combination effect if impacts from the pre-lay grapnel run can be shown to make no meaningful contribution to those effects. NE further advised [REP5-220] that mitigation planned could eliminate any contribution to red-throated diver disturbance if the seasonal restriction is adhered to in full. It (G11, [REP5-222]) advised that its concerns about the in-combination assessment could be resolved through a full seasonal restriction. The applicant [REP5-132] stated that there is limited public information about Tarchon Interconnector, such that a meaningful assessment would be very difficult. It maintained that impacts from pre-lay grapnel run would not make any meaningful contribution to in-combination effects, stating that the total duration of transit in the Outer Thames Estuary SPA would be approximately seven days with the vessel moving continuously at very slow speeds.	**from in-combination effects?**

4 DEROGATIONS

4.0.1 The applicant considered that AEoI can be excluded for all European sites. However, the ExA noted the disagreements between the applicant and NE regarding impacts on red-throated diver of the Outer Thames Estuary SPA due to pre-lay grapnel works and maintenance activities (see table 3.4 of this RIES). At ISH2 on environmental issues held on Wednesday 28 January to Friday 30 January 2026, the ExA requested that a derogation case be provided where AEoI could not be ruled out through further information and discussion with NE (AP22, [EV6-033]).

4.0.2 The applicant (AP22, [REP4-086]) did not consider there to be an AEoI (see ID 3.4.2 and ID 3.4.3 of Table 3.4 of this RIES) and therefore stated that a derogation case for these activities was not required.

ANNEX 1: EXA'S UNDERSTANDING OF POSITIONS AT POINT OF RIES PUBLICATION

A1.1 The tables in this annex summarise the ExA's understanding of the applicant's screening exercise and assessment of effects on integrity, and agreement with the relevant ANCBs (NE and JNCC) at the time of publication of this RIES.

A1.2 Concerns of other IPs are detailed in Tables 2.3 and 3.1 to 3.4 of this RIES. In summary, the RSPB [REP5-092] did not agree AEoI could be exclude for:

- Alde-Ore Estuary SPA and Ramsar site
- Minsmere-Walberswick SPA and Ramsar
- Outer Thames Estuary SPA
- Sandlings SPA
- Sandwich Bay SAC
- Thanet Coast & Sandwich Bay SPA and Ramsar

A1.3 The ExA understands that KWT does not agree AEoI can be excluded for Thanet Coast & Sandwich Bay SPA and Ramsar site or Thanet Coast SAC.

A1.4 Note that references in respect of applicant's conclusion are to version G of the HRA Report [REP5-036] unless otherwise stated.

A1.5 Note that the conclusions recorded in the table below apply to impacts from the proposed development alone or in combination.

Key to tables:

C = Construction

O = Operation

D = Decommissioning

✓ = LSE or AEoI cannot be excluded

✕ = LSE or AEoI can be excluded

Not disputed – the matter has not been explicitly discussed to date in the examination. The ExA is of the view that the ANCB agrees with the applicant's conclusion, however explicit confirmation has not been provided.

? = ANCB position unclear. Clarification is requested.

n/a = not applicable

RIESQ35. The applicant, NE and the JNCC are requested to confirm whether the ExA's understanding of their positions is correct and to provide clarifications where requested with a question mark ('?').

Table A1.1: Annex I habitat SACs – ExA's understanding of applicant and NE's positions at point of RIES publication.

European site / qualifying feature	**Potential impact (C, O, D unless otherwise stated)**	**LSE?**		**AEoI?**	
		Applicant's conclusion (alone or in combination)	**Agreement with NE?**	**Applicant's conclusion (alone or in combination)**	**Agreement with NE?**
Margate and Long Sands SAC					
Sandbanks which are slightly covered by sea water all the time	Temporary physical disturbance to benthic habitats and species (C, D)	✕ (paras 4.3.6 and 4.3.57)	**Yes** (2BE15, [REP5-199])	n/a	n/a
	Temporary increase in SSC and sediment deposition leading to increased turbidity and smothering effects (C, D)	✓ (para 4.3.11 and 4.3.57)	**No –** concludes no LSE (2BE15, [REP5-199])	✕ (paras 7.3.8, 7.3.10 and 7.3.77)	n/a (2BE15, [REP5-199])
	Permanent loss of benthic habitats and species (O)	✕ (paras 4.3.39 to 4.3.43)	**Yes** (2BE15, [REP5-199])	n/a	n/a
	Disturbance due to thermal emissions (O)	✕ (para 4.3.50)	**Yes** (2BE15, [REP5-199])	n/a	n/a
	Effects of EMF emissions (O)	✕ (para 4.3.53)	**Yes** (2BE15, [REP5-199])	n/a	n/a

European site / qualifying feature	Potential impact (C, O, D unless otherwise stated)	LSE?		AEoI?	
		Applicant's conclusion (alone or in combination)	**Agreement with NE?**	**Applicant's conclusion (alone or in combination)**	**Agreement with NE?**
Sandwich Bay SAC					
Embryonic shifting dunes Shifting dunes along the shoreline with (*Ammophila arenaria*) ("white dunes") Fixed dunes with herbaceous vegetation ("grey dunes") Dunes with Salix repens ssp. argentea *(Salicion arenariae)* Humid dune slacks	Direct habitat loss (C)	✕ (para 4.4.6)	**Yes** (1ECOL59, [REP4-196])	n/a	n/a
	Air quality (dust and exhaust emissions) (C, O, D)	✕ (paras 4.4.7, 4.4.38 and 4.4.44)	**Yes** C and D (B18 and B26, [RR-3920]) O [REP3-117]	n/a	n/a
	Pollution (terrestrial - changes in water quality) (C, O, D)	✓ **(C - for frac out)** (para 4.4.20) ✕ (O & D – paras 4.4.43 and 4.4.44)	**Not disputed**	✕ (para 7.4.14)	**No** [REP5-199] See ID 3.1.3 of RIES
	Changes to marine water quality during cable installation and cable lay from the use of drilling fluids (C)	✓ (para 4.3.16)	**Not disputed**	✕ (para 7.3.14)	**No** [REP5-199] See ID 3.1.3 of RIES

European site / qualifying feature	Potential impact (C, O, D unless otherwise stated)	LSE?		AEoI?	
		Applicant's conclusion (alone or in combination)	**Agreement with NE?**	**Applicant's conclusion (alone or in combination)**	**Agreement with NE?**
	Effects of EMF emissions (O)	✕ (para 4.3.53)	**Not disputed**	n/a	n/a
	Introduction and spread of INNS via the addition of cable protection (O)	✓ (para 4.3.47)	**Not disputed**	✕ (para 7.3.70)	**Yes** (tab E, new issue 39, [REP5-222])
Stodmarsh SAC					
Desmoulin's whorl snail (*Vertigo moulinsiana*)	Pollution (terrestrial - changes in water quality) (C, O, D)	✕ (paras 4.4.20, 4.4.43 and 4.4.44)	**Yes** (1ECOL60, [REP4-196])	n/a	n/a
Thanet Coast SAC					
Reefs Submerged or partially submerged sea caves	Temporary physical disturbance to benthic habitats and species (C, D)	✕ (paras 4.3.6 and 4.3.57)	**Not disputed**	n/a	n/a
	Temporary increase in SSC and sediment deposition leading to increased turbidity and smothering effects (C, D)	**✓ (reefs only for changes in SCC, both habitats for sediment deposition)**	**Not disputed**	✕ (paras 7.3.7, 7.3.10 and 7.3.76)	**?** See ID 3.1.7 of RIES

European site / qualifying feature	Potential impact (C, O, D unless otherwise stated)	LSE?		AEoI?	
		Applicant's conclusion (alone or in combination)	**Agreement with NE?**	**Applicant's conclusion (alone or in combination)**	**Agreement with NE?**
		(paras 4.3.10 and 4.3.57)			
	Changes to marine water quality during cable installation and cable lay from the use of drilling fluids (C)	**Y** (para 4.3.16)	**Not disputed**	✕ (para 7.3.14)	**No** See IDs 3.1.3 and 3.1.5 of RIES
	Changes to marine water quality from release of contaminants at the hoverport site (C)	**N/A** – not assessed by applicant in HRA Report.	**No** [REP4-189] [REP4-191] See ID 2.3.11 of RIES	**N/A** – not assessed by applicant in HRA Report.	**?** See ID 2.3.11 of RIES
	Permanent loss of benthic habitats and species (O)	✕ (paras 4.3.39 to 4.3.43)	**Not disputed**	n/a	n/a
	Introduction and spread of INNS via the addition of cable protection (O)	✓ (para 4.3.47)	**Not disputed**	✕ (para 7.3.70)	**Yes** (tab E, 39, [REP5-222])
	Disturbance due to thermal emissions (O)	✕ (para 4.3.51)	**Not disputed**	n/a	n/a

European site / qualifying feature	Potential impact (C, O, D unless otherwise stated)	LSE?		AEoI?	
		Applicant's conclusion (alone or in combination)	**Agreement with NE?**	**Applicant's conclusion (alone or in combination)**	**Agreement with NE?**
	Ecological halo effects and change to sediment transport process (O)	**N/A** – not assessed by applicant in HRA Report.	**Yes**, NE confirmed matter resolved. See ID 2.3.10 of RIES	n/a	n/a
Alde-Ore & Butley Estuaries SAC					
Atlantic salt meadows Estuaries Mudflats and sandflats not covered by seawater at low tide	Pollution (terrestrial - changes in water quality) (C, O, D)	**N/A** – not assessed by applicant in HRA Report.	**No** [REP5-215] (appendix A5) See section 2.6 of RIES.	n/a	**?** See para 2.6.2 of RIES

Table A1.2: Marine mammal SACs - ExA's understanding of applicant and ANCB's (NE and the JNCC) positions at point of RIES publication

European site / qualifying feature	Potential impact	LSE?		AEoI?	
		Applicant's conclusion (alone or in combination)	**Agreement with ANCB (NE unless otherwise stated)**	**Applicant's conclusion (alone or in combination)**	**Agreement with ANCB (NE unless otherwise stated)**
Berwickshire and North Northumberland Coast SAC					
Grey seal (*Halichoerus grypus*)	Underwater sound impacts (C, D)	✓ (paras 4.3.24 and 4.3.57)	**Not disputed**	✕ (paras 7.3.30 and 7.3.76)	**?** See ID 3.2.1 of RIES
	Vessel collision risk (C, D)	✓ (paras 4.3.28 and 4.3.57)	**Not disputed**	✕ (paras 7.3.39 and 7.3.76)	**Not disputed**
	Airborne sounds and visual disturbance (C, D)	✓ (paras 4.3.32 and 4.3.57)	**Not disputed**	✕ (paras 7.3.59 and 7.3.76)	**Not disputed**
	Indirect effects through impacts to prey species (C, D)	✕ (paras 4.3.37 and 4.3.57)	NE: **Defer to CEFAS** (F26, [RR-3920]) MMO (in consultation with CEFAS): **Yes** (1MM14, [REP4-126])	n/a	n/a

European site / qualifying feature	Potential impact	LSE?		AEoI?	
		Applicant's conclusion (alone or in combination)	**Agreement with ANCB (NE unless otherwise stated)**	**Applicant's conclusion (alone or in combination)**	**Agreement with ANCB (NE unless otherwise stated)**
Humber Estuary SAC					
Grey seal (*Halichoerus grypus*)	Underwater sound impacts (C, D)	✓ (paras 4.3.24 and 4.3.57)	**Not disputed**	✕ (paras 7.3.30 and 7.3.76)	**?** See ID 3.2.1 of RIES
	Vessel collision risk (C, D)	✓ (paras 4.3.28 and 4.3.57)	**Not disputed**	✕ (paras 7.3.39 and 7.3.76)	**Not disputed**
	Airborne sounds and visual disturbance (C, D)	✓ (paras 4.3.32 and 4.3.57)	**Not disputed**	✕ (paras 7.3.59 and 7.3.76)	**Not disputed**
	Indirect effects through impacts to prey species (C, D)	✕ (paras 4.3.37 and 4.3.57)	NE: **Defer to CEFAS** (F26, [RR-3920]) MMO (in consultation with CEFAS): **Yes** (1MM14, [REP4-126])	n/a	n/a
Southern North Sea SAC					
Harbour porpoise (*Phocoena phocoena*)	Underwater sound impacts (C, D)	✓ (paras 4.3.24 and 4.3.57)	NE: **Not disputed**	✕ (paras 7.3.30 and 7.3.76)	NE: **No** See IDs 3.2.1, 3.2.5, 3.2.8 and 3.2.11 of RIES

European site / qualifying feature	Potential impact	LSE?		AEoI?	
		Applicant's conclusion (alone or in combination)	**Agreement with ANCB (NE unless otherwise stated)**	**Applicant's conclusion (alone or in combination)**	**Agreement with ANCB (NE unless otherwise stated)**
			JNCC: **Yes** [RR-2635]		JNCC: Yes for project alone (2MM3, [REP5-194]) **?** for in-combination. See ID 3.2.11 of RIES
	Vessel collision risk (C, D)	✓ (paras 4.3.28 and 4.3.57)	NE: **Not disputed**	✕ (paras 7.3.36 and 7.3.76)	NE: **Not disputed**
			JNCC: **Yes** (2MM7, [REP5-194])		JNCC: **Yes** (2MM7, [REP5-194])
	Indirect effects through impacts to prey species (C, D)	✕ (paras 4.3.37 and 4.3.57)	NE: **Defer to CEFAS** (F26, [RR-3920]) MMO (in consultation with CEFAS): **Yes** (1MM14, [REP4-126])	n/a	NE: n/a

European site / qualifying feature	Potential impact	LSE?		AEoI?	
		Applicant's conclusion (alone or in combination)	**Agreement with ANCB (NE unless otherwise stated)**	**Applicant's conclusion (alone or in combination)**	**Agreement with ANCB (NE unless otherwise stated)**
			JNCC – **tbc** (see ID 2.3.13 of RIES)		JNCC – **tbc** (see ID 2.3.13 of RIES)
	Disturbance due to thermal emissions (O)	✕ (para 4.3.51)	NE: **Not disputed**	n/a	NE: **Not disputed**
			JNCC: **Not disputed**		JNCC: **Not disputed**
	Effects of EMF emissions (O)	✓ (para 4.3.54)	NE: **Not disputed**	✕ (paras 7.3.75 and 7.3.76)	NE: **Not disputed**
			JNCC: **Not disputed**		JNCC: **Yes** [RR-2635] [REP1-210
Wash and North Norfolk Coast SAC					
Harbour seal (*Halichoerus grypus*)	Underwater sound impacts (C, D)	✓ (para 4.3.24 and 4.3.57)	**Not disputed**	✕ (para 7.3.30 and 7.3.76)	**Not disputed**
	Vessel collision risk (C, D)	✓ (para 4.3.28 and 4.3.57)	**Not disputed**	✕ (paras 7.3.39 and 7.3.76)	**Not disputed**
	Airborne sounds and visual disturbance (C, D)	✓ (para 4.3.32 and 4.3.57)	**Not disputed**	✕ (paras 7.3.59 and 7.3.76)	**Not disputed**

European site / qualifying feature	Potential impact	LSE?		AEoI?	
		Applicant's conclusion (alone or in combination)	**Agreement with ANCB (NE unless otherwise stated)**	**Applicant's conclusion (alone or in combination)**	**Agreement with ANCB (NE unless otherwise stated)**
	Indirect effects through impacts to prey species (C, D)	✕ (para 4.3.37 and 4.3.57)	NE: **Defer to CEFAS** (F26, [RR-3920]) MMO (in consultation with CEFAS): **Yes** (1MM14, [REP4-126])	n/a	n/a

Table A1.3: Terrestrial ornithology (SPAs and Ramsar sites) - ExA's understanding of applicant and NE's positions at point of RIES publication

European site / qualifying feature	**Potential impact**	**LSE?**		**AEoI?**	
		Applicant's conclusion (alone or in combination)	**Agreement with NE?**	**Applicant's conclusion (alone or in combination)**	**Agreement with NE?**
Alde-Ore Estuary SPA					
Ruff *(Philomachus pugnax)* Avocet *(Recurvirostra avosetta)* Redshank *(Tringa tetanus)* Marsh harrier *(Circus aeruginosus)* Lesser black-backed gull *(Larus fuscus*) Sandwich tern *(Sterna sandvicensis)* Little tern *(Sterna albifrons)* Breeding and wintering assemblages	Direct habitat loss (C)	✕ (para 4.2.2)	**Not disputed**	n/a	**Not disputed**
	Loss of FLL (C, D)	✕ (paras 4.2.9 and 4.2.50)	**Not disputed**	n/a	**Not disputed**
	Disturbance (noise and visual) from onshore works (C, O, D)	✕ to birds at the SPA (paras 4.2.24, 4.2.41 and 4.2.50) **✓ – (C & D) due to noise for marsh harrier and curlew using FLL at RSPB North Warren Reserve and in field north of Aldeburgh Road** (paras 4.2.27, 4.2.28 and 4.2.50)	**Not disputed**	✕ (paras 7.2.17, 7.2.19 and 7.2.20)	**Not disputed**

European site / qualifying feature	Potential impact	LSE?		AEoI?	
		Applicant's conclusion (alone or in combination)	**Agreement with NE?**	**Applicant's conclusion (alone or in combination)**	**Agreement with NE?**
	Airborne sounds and visual disturbance from offshore works (C, D)	**✓ – for lesser black-backed gull, sandwich tern and little tern only** (paras 4.3.31 and 4.3.57)	**Not disputed**	✕ (paras 7.3.55 and 7.3.76)	**Not disputed**
	Indirect effects through impacts to prey species (C, D)	**✓ – for lesser black-backed gull, sandwich tern and little tern only** (paras 4.3.35 and 4.3.57)	**Not disputed**	✕ (paras 7.3.67 and 7.3.76)	**Not disputed**
	Pollution (terrestrial - changes in water quality) (C, O, D)	✕ (paras 4.2.36, 4.2.38, 4.2.49 and 4.2.50)	**No** See ID 2.3.14 of RIES	n/a	**?** See ID 3.3.2 of RIES
Alde-Ore Estuary Ramsar site					
Criterion 2 - The site supports a number of nationally-scarce plant	Direct habitat loss (C)	✕ (para 4.2.2)	**Not disputed**	n/a	n/a
	Loss of FLL (C, D)	✕ (paras 4.2.9 and 4.2.50)	**Not disputed**	n/a	n/a

European site / qualifying feature	Potential impact	LSE?		AEoI?	
		Applicant's conclusion (alone or in combination)	**Agreement with NE?**	**Applicant's conclusion (alone or in combination)**	**Agreement with NE?**
species and British Red Data Book invertebrates Criterion 3 - The site supports a notable assemblage of breeding and wintering wetland birds Criterion 6 – species/populations occurring at levels of international importance (breeding lesser black-backed gull and non-breeding avocet and redshank	Disturbance (noise and visual) from onshore works (C, D)	✕ to birds at the SPA (paras 4.2.24, 4.2.41 and 4.2.50) **✓ – (C & D) due to noise for marsh harrier and curlew using FLL at RSPB North Warren Reserve and in field north of Aldeburgh Road** (paras 4.2.27, 4.2.28 and 4.2.50)	**Not disputed**	✕ (paras 7.2.17, 7.2.19 and 7.2.20)	**Not disputed**
	Airborne sounds and visual disturbance from offshore works (C, D)	**✓ – for lesser black-backed gull only** (para 4.3.31 and 4.3.57)	**Not disputed**	✕ (paras 7.3.55 and 7.3.76)	**Not disputed**

European site / qualifying feature	Potential impact	LSE?		AEoI?	
		Applicant's conclusion (alone or in combination)	**Agreement with NE?**	**Applicant's conclusion (alone or in combination)**	**Agreement with NE?**
	Indirect effects through impacts to prey species (C, D)	✓ **– for lesser black-backed gull only** (para 4.3.35 and 4.3.57)	**Not disputed**	✕ (paras 7.3.67 and 7.3.76)	**Not disputed**
	Pollution (terrestrial - changes in water quality) (C, O, D)	✕ (paras 4.2.36, 4.2.38, 4.2.49 and 4.2.50)	**No** See ID 2.3.14 of RIES	n/a	**?** See ID 3.3.2 of RIES
Minsmere-Walberswick SPA					
Great bittern (*Botaurus stellaris*) Gadwall (*Anas strepera*) Eurasian teal (*Anas crecca)* Northern shoveler (*Anas clypeata*) Eurasian marsh harrier (*Circus aeruginosus*) Hen harrier (*Circus cyaneus*)	Direct habitat loss (C)	✕ (para 4.2.2)	**Not disputed**	n/a	n/a
	Loss of FLL (C, D)	✕ (paras 4.2.10 and 4.2.50)	**Not disputed**	n/a	n/a
	Airborne sounds and visual disturbance from offshore works (C, D)	✓**– for little tern only** (paras 4.3.31 and 4.3.57)	**Not disputed**	✕ (paras 7.3.55 and 7.3.76)	**Not disputed**
	Indirect effects through impacts to prey species (C, D)	✓ **– for little tern only** (paras 4.3.35 and 4.3.57)		✕ (paras 7.3.67 and 7.3.76)	

European site / qualifying feature	Potential impact	LSE?		AEoI?	
		Applicant's conclusion (alone or in combination)	**Agreement with NE?**	**Applicant's conclusion (alone or in combination)**	**Agreement with NE?**
Pied avocet (*Recurvirostra avosetta*) Little tern (*Sterna albifrons*) European nightjar (*Caprimulgus europaeus*) Greater white-fronted goose (*Anser albifrons albifrons*)	Disturbance (noise and visual) from onshore works (C, O, D)	**✓ – for white-fronted goose using FLL at RSPB North Warren Reserve** (C&D - paras 4.2.27, Appendix A and 4.2.50) ✕ (O - para 4.2.41)	**Not disputed**	✕ (paras 7.2.17 and 7.2.20)	**Not disputed**
	Pollution (terrestrial - changes in water quality) (C, O, D)	✕ (paras 4.2.36, 4.2.38, 4.2.49 and 4.2.50)	**Not disputed**	n/a	n/a
Minsmere-Walberswick Ramsar site					
Ramsar criterion 1 - The site contains a mosaic of marine, freshwater, marshland and associated habitats, complete with transition areas in between. Contains the largest	Direct habitat loss (C)	✕ (para 4.2.2)	**Not disputed**	n/a	n/a
	Loss of FLL (C, D)	✕ (paras 4.2.10 and 4.2.50)	**Not disputed**	n/a	n/a
	Airborne sounds and visual disturbance from offshore works (C, D)	✕ (paras 4.3.31 and 4.3.57– LSE only identified for tern and	**Not disputed**	n/a	n/a

European site / qualifying feature	Potential impact	LSE?		AEoI?	
		Applicant's conclusion (alone or in combination)	**Agreement with NE?**	**Applicant's conclusion (alone or in combination)**	**Agreement with NE?**
continuous stand of reedbeds in England and Wales and rare transition in grazing marsh ditch plants from brackish to fresh water. Ramsar criterion 2 - This site supports nine nationally scarce plants and at least 26 red data book invertebrates. Supports a population of the mollusc *Vertigo angustior* An important assemblage of rare breeding birds associated with marshland and reedbeds		gull features of the SPA/Ramsar)			
	Indirect effects through impacts to prey species (C, D)	✕ (paras 4.3.35 and 4.3.57 – LSE only identified for tern and gull features of the SPA/Ramsar)	**Not disputed**	n/a	n/a
	Disturbance (noise and visual) from onshore works (C, O, D)	**✓ – for white-fronted goose using FLL at RSPB North Warren Reserve** (C&D - paras 4.2.27, Appendix A and 4.2.50) ✕ (O - para 4.2.41)	**Not disputed**	✕ (paras 7.2.17 and 7.2.20)	**Not disputed**
	Pollution (terrestrial - changes in water quality) (C, O, D)	✕ (paras 4.2.36, 4.2.38, 4.2.49 and 4.2.50)	**Not disputed**	n/a	n/a
Sandlings SPA					

European site / qualifying feature	Potential impact	LSE?		AEoI?	
		Applicant's conclusion (alone or in combination)	**Agreement with NE?**	**Applicant's conclusion (alone or in combination)**	**Agreement with NE?**
Nightjar *(Caprimulgus europaeus)* Woodlark *(Lullula arborea*	Direct habitat loss (C)	✕ (para 4.2.2)	**Not disputed**	n/a	n/a
	Loss of FLL (C, D)	✓ (paras 4.2.5 and 4.2.50)	**Not disputed**	✕ (paras 7.2.8 and 7.2.20)	**No** See ID 3.3.11 of RIES
	Direct habitat loss (C)	✕ (para 4.2.2)	**Not disputed**	n/a	n/a
	Disturbance (noise and visual) from onshore works	✓ (C, D - para 4.2.24 for noise and para 4.2.26 for visual and 4.2.50 for decommissioning) ✕ (O - para 4.2.41)	**Not disputed**	✕ (paras 7.2.16 and 7.2.20)	**No** See ID 3.3.13 of RIES
	Air quality (dust and exhaust emissions)	✓ **(C, D) for dust only** (paras 4.2.19 and 4.2.50) ✕ (O - para 4.2.45)	**Not disputed**	✕ (paras 7.2.3 and 7.2.20)	**Not disputed**

European site / qualifying feature	Potential impact	LSE?		AEoI?	
		Applicant's conclusion (alone or in combination)	**Agreement with NE?**	**Applicant's conclusion (alone or in combination)**	**Agreement with NE?**
	Pollution (terrestrial - changes in water quality) (C, O, D)	✕ (paras 4.2.36, 4.2.38, 4.2.49 and 4.2.50)	**Not disputed**	n/a	n/a
Stodmarsh SPA					
Great bittern (*Botaurus stellaris*) (wintering) Gadwall (*Anas Strepera*) (wintering and breeding) Northern shoveler (*Anas clypeata*) (wintering) Hen harrier (*Circus cyaneus*) (wintering) Waterbird assemblage Breeding bird assemblage	Loss of FLL (O)	✕ (para 4.4.21) (table 2.10, [REP2-034])	**Not disputed**	n/a	n/a
	Disturbance (noise and visual) from onshore works (C, O, D)	✕ (paras 4.4.14, 4.4.35 and 4.4.44)	**Not disputed**	n/a	n/a
	Pollution (terrestrial - changes in water quality) (C, O, D)	✕ (paras 4.4.20, 4.4.43 and 4.4.44)	**Not disputed**	n/a	n/a
	Collision risk (O)	✓ (para 4.4.32)	**Yes**	✕ (para 7.4.34)	**Yes** (cover letter and B36, [RR-3920])

European site / qualifying feature	Potential impact	LSE?		AEoI?	
		Applicant's conclusion (alone or in combination)	**Agreement with NE?**	**Applicant's conclusion (alone or in combination)**	**Agreement with NE?**
Stodmarsh Ramsar site					
Ramsar Criterion 2 - 6 British Red Data Book wetland invertebrates 2 nationally rare plants, and 5 nationally scarce species and a diverse assemblage of rare wetland birds: gadwell (*Anas strepera*), great bittern (*Botaurus stellaris*), northern shoveler (*Anas clypeata*) and hen harrier (*Circus cyaneus*)	Loss of FLL (O)	✕ (para 4.4.21)	**Not disputed**	n/a	n/a
	Disturbance (noise and visual) from onshore works (C, O, D)	✕ (paras 4.4.14, 4.4.35 and 4.4.44)	**Not disputed**	n/a	n/a
	Pollution (terrestrial - changes in water quality) (C, O, D)	✕ (paras 4.4.20, 4.4.43 and 4.4.44)	**Not disputed**	n/a	n/a
	Collision risk (O)	✓ **– for bird species** (para 4.4.32)	**Yes**	✕ (para 7.4.34)	**Yes** (cover letter and B36, [RR-3920])
Thanet Coast & Sandwich Bay SPA					
European golden plover (*Pluvialis apricaria*) (non-breeding)	Direct habitat loss (C)	✓ (para 4.4.2)	**Not disputed**	✕ (paras 7.4.5)	Yes (noting that temporary habitat disturbance is addressed below)

European site / qualifying feature	Potential impact	LSE?		AEoI?	
		Applicant's conclusion (alone or in combination)	**Agreement with NE?**	**Applicant's conclusion (alone or in combination)**	**Agreement with NE?**
Ruddy turnstone (*Arenaria interpres*) (non-breeding) Little tern (*Sterna albifrons*) (breeding)	Loss of FLL (O)	✓ **(O) – for golden plover only** (para 4.4.26)	NE agree LSE but consider it a construction phase impact (B19, [REP4-197])	✕ (paras 7.4.29)	**Yes** (B35, [RR-3920])
	Air quality (dust and exhaust emissions) (C, O, D)	✕ (paras 4.4.11, 4.4.38 and 4.4.44)	**Yes** for operational air quality [REP3-117] C and D **not disputed**	n/a	n/a
	Pollution (terrestrial - changes in water quality) (C, O, D)	✓ **(C: for frac out -** para 4.4.20 and D - para 4.4.44) ✕ (O – para 4.4.43)	**Not disputed**	✕ (para 7.4.14)	**No** See ID 3.3.21 of RIES
	Disturbance (noise and visual) from onshore works (C, O, D)	✓ **(C, D) – noise** (paras 4.4.12 and 4.4.44)	**Not disputed**	✕ (paras 7.4.10 and 7.4.35)	**Not disputed**

European site / qualifying feature	Potential impact	LSE?		AEoI?	
		Applicant's conclusion (alone or in combination)	**Agreement with NE?**	**Applicant's conclusion (alone or in combination)**	**Agreement with NE?**
		✕ (C, D) – visual (paras 4.4.13 and 4.4.44) ✕ (O – para 4.4.35)			
	Collision risk (O)	✓ (not confirmed in screening section but assessed further in paras 7.4.30 to 7.4.34)	**Not disputed**	✕ (para 7.4.34)	**Yes** (B36, [RR-3920])
	Changes to marine water quality during cable installation and cable lay from the use of drilling fluids (C)	✓ (para 4.3.16)	**Not disputed**	✕ (para 7.3.14)	**No** See ID 3.3.21 of RIES
	Changes to marine water quality from release of contaminants at the hoverport site (C)	**N/A** – not assessed by applicant in HRA Report.	**No** [REP4-189] [REP4-191] See ID 2.3.11 of RIES	**N/A** – not assessed by applicant in HRA Report.	**?** See ID 2.3.11 of RIES
	Temporary increase in SSC and sediment	**N/A** – not assessed by applicant in HRA	**No**	**N/A** – not assessed by	**No**

European site / qualifying feature	Potential impact	LSE?		AEoI?	
		Applicant's conclusion (alone or in combination)	**Agreement with NE?**	**Applicant's conclusion (alone or in combination)**	**Agreement with NE?**
	deposition leading to increased turbidity and smothering effects (C, D)	Report in respect of the SPA.	NE advise pathway should be assessed. See ID 2.3.17 of RIES	applicant in HRA Report in respect of the SPA.	See ID 2.3.17 of RIES
	Indirect effects from coastal and marine process impacts during operation	**N/A** – not assessed by applicant in HRA Report in respect of the SPA.	**?** See ID 2.3.18 of RIES	**N/A** – not assessed by applicant in HRA Report in respect of the SPA.	**?** See ID 2.3.18 of RIES
	Temporary physical disturbance to supporting habitats (C, D)	**N/A** – not assessed by applicant in HRA Report in respect of the SPA.	**No** See ID 3.3.22 of RIES	**N/A** – not assessed by applicant in HRA Report in respect of the SPA.	**No** See ID 3.3.22 of RIES
	Airborne sounds and visual disturbance from offshore works (C, D)	✓ (paras 4.3.30 and 4.3.57)	**Not disputed**	✕ (paras 7.3.47 and 7.3.76)	**?**

European site / qualifying feature	Potential impact	LSE?		AEoI?	
		Applicant's conclusion (alone or in combination)	**Agreement with NE?**	**Applicant's conclusion (alone or in combination)**	**Agreement with NE?**
					See IDs 3.3.25, 3.3.26 and 3.3.27 of RIES
	Indirect effects through impacts to prey species (C, D)	✓ (paras 4.3.34 and 4.3.57)	**Not disputed**	✕ (paras 7.3.62 and 7.3.76)	**No** See ID 3.3.22 of RIES
Thanet Coast & Sandwich Bay Ramsar site					
Ramsar Criterion 2 - supports 15 British Red Data Book wetland invertebrates Ramsar Criterion 6 - species/ populations occurring at levels of international importance – ruddy turnstone (*Arenaria interpres*)	Direct habitat loss (C)	✓ (para 4.4.2)	**Not disputed**	✕ (para 7.4.5)	Yes (noting that temporary habitat disturbance is addressed below)
	Loss of FLL (O)	✓ **(O) – for golden plover only** (para 4.4.26)	NE agree LSE but consider it a construction phase impact (B19, [REP4-197])	✕ (paras 7.4.29)	**Yes** (B35, [RR-3920])

European site / qualifying feature	Potential impact	LSE?		AEoI?	
		Applicant's conclusion (alone or in combination)	**Agreement with NE?**	**Applicant's conclusion (alone or in combination)**	**Agreement with NE?**
	Air quality (dust and exhaust emissions) (C, O, D)	(paras 4.4.11, 4.4.38 and 4.4.44)	**Yes** for operational air quality [REP3-117] C and D **not disputed**	n/a	**Not disputed**
	Pollution (terrestrial - changes in water quality) (C, O, D)	✓ **(C: for frac out -** para 4.4.20) ✕ (O & D– paras 4.4.43 and 4.4.44)	**Not disputed**	✕ (para 7.4.14)	**No** See ID 3.3.21 of RIES
	Disturbance (noise and visual) from onshore works (C, O, D)	✓ **(C, D) – noise for Criterion 6 only** (paras 4.4.12 and 4.4.44) ✕ (C, D – visual, paras 4.4.13 and 4.4.44) ✕ (O – para 4.4.35)	**Not disputed**	✕ (paras 7.4.10 and 7.4.35)	**Not disputed**
	Collision risk (O)	✓ **for criterion 6** (not confirmed in	**Not disputed**	✕ (para 7.4.34)	Yes (B36, [RR-3920])

European site / qualifying feature	Potential impact	LSE?		AEoI?	
		Applicant's conclusion (alone or in combination)	**Agreement with NE?**	**Applicant's conclusion (alone or in combination)**	**Agreement with NE?**
		screening section but assessed further in paras 7.4.30 to 7.4.34**)**			
	Changes to marine water quality during cable installation and cable lay from the use of drilling fluids (C)	✓ (para 4.3.16)	**Not disputed**	✕ (para 7.3.14)	**No** See ID 3.3.21 of RIES
	Changes to marine water quality from release of contaminants at the hoverport site (C)	**N/A** – not assessed by applicant in HRA Report.	**No** [REP4-189] [REP4-191] See ID 2.3.11 of RIES	**N/A** – not assessed by applicant in HRA Report.	**?** See ID 2.3.11 of RIES
	Temporary increase in SSC and sediment deposition leading to increased turbidity and smothering effects (C, D)	**N/A** – not assessed by applicant in HRA Report in respect of the Ramsar site.	**No** NE advise pathway should be assessed. See ID 2.3.17 of RIES	**N/A** – not assessed by applicant in HRA Report in respect of the Ramsar site.	**No** See ID 2.3.17 of RIES

European site / qualifying feature	Potential impact	LSE?		AEoI?	
		Applicant's conclusion (alone or in combination)	**Agreement with NE?**	**Applicant's conclusion (alone or in combination)**	**Agreement with NE?**
	Indirect effects from coastal and marine process impacts during operation	**N/A** – not assessed by applicant in HRA Report in respect of the Ramsar site.	**?** See ID 2.3.18 of RIES	**N/A** – not assessed by applicant in HRA Report in respect of the Ramsar site.	**?** See ID 2.3.18 of RIES
	Temporary physical disturbance to supporting habitats (C, D)	**N/A** – not assessed by applicant in HRA Report in respect of the Ramsar site.	**No** See ID 3.3.22 of RIES	**N/A** – not assessed by applicant in HRA Report in respect of the Ramsar site.	**No** See ID 3.3.22 of RIES
	Airborne sounds and visual disturbance from offshore works (C, D)	✓ (paras 4.3.30 and 4.3.57)	**Not disputed**	✕ (paras 7.3.47 and 7.3.76)	**?** See IDs 3.3.25, 3.3.26 and 3.3.27 of RIES
	Indirect effects through impacts to prey species (C, D)	✓ (paras 4.3.34 and 4.3.57)	**Not disputed**	✕ (paras 7.3.62 and 7.3.76)	**No** See ID 3.3.22 of RIES

Table A1.4: Marine ornithology (SPAs) - ExA's understanding of applicant and ANCB's (NE and JNCC) positions at point of RIES publication

European site / qualifying feature	**Potential impact**	**LSE?**		**AEoI?**	
		Applicant's conclusion (alone or in combination)	**Agreement with ANCB?**	**Applicant's conclusion (alone or in combination)**	**Agreement with ANCB?**
Outer Thames Estuary SPA					
Red-throated diver *(G. Stellata)* Common tern *(Sterna hirundo)* Little tern *(Sternula albifrons)*	Airborne sounds and visual disturbance from offshore works (C, D)	✓ (paras 4.3.31 and 4.3.57)	NE: **Not disputed**	✕ (paras 7.3.56 and 7.3.76)	NE: **Yes** for common tern and little tern (cover letter, [RR-3920]) **No** for red-throated diver: See IDs 3.4.2, 3.4.3 and 3.4.6 of RIES
			JNCC: **Not disputed**		JNCC: **?** See IDs 3.4.2 and 3.4.6 of RIES
	Indirect effects through impacts to prey species (C, D)	✓ (paras 4.3.35 and 4.3.57)	NE: **Not disputed**	✕ (paras 7.3.67 and 7.3.76)	NE: **Not disputed**
			JNCC: **Not disputed**		JNCC: **Yes** [RR-2635]

European site / qualifying feature	Potential impact	LSE?		AEoI?	
		Applicant's conclusion (alone or in combination)	**Agreement with ANCB?**	**Applicant's conclusion (alone or in combination)**	**Agreement with ANCB?**
	Loss of FLL (C, D)	✕ (paras 4.2.6 and 4.2.50)	NE: **Not disputed**	n/a	n/a
			JNCC: **Not disputed**		n/a
	Direct habitat loss (C, O)	✕ (para 4.3.42)	NE: **Not disputed**	n/a	n/a
			JNCC: **Not disputed**		n/a
	Disturbance (noise and visual) from onshore works (C, D)	✕ (paras 4.2.29 and 4.2.50)	NE: **Not disputed**	n/a	n/a
			JNCC: **Not disputed**		n/a
	Air quality from onshore works (C, D)	✕ (para 5.2.1)	NE: **Not disputed**	n/a	n/a
			JNCC: **Not disputed**		n/a
	Impacts on supporting habitat	✕ (paras 4.3.41 to 4.3.42)	NE: **Yes** (1ECOL61, [REP4-196])	n/a	n/a
			JNCC: **Not disputed**	n/a	n/a