

REPORT on the IMPLICATIONS for EUROPEAN SITES Proposed Triton Knoll Electrical System

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



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1.0 INTRODUCTION

Background

- 1.1 Triton Knoll Offshore Wind Farm Ltd (the applicant) has applied to the Secretary of State for a development consent order (DCO) under section 37 of the Planning Act 2008 (as amended) for the proposed Triton Knoll Electrical System (the proposed development). The Secretary of State has appointed an Examining Authority (ExA) to conduct an examination of the application, to report its findings and conclusions, and to make a recommendation to the Secretary of State as to the decision to be made on the application.
- 1.2 The relevant Secretary of State is the competent authority for the purposes of the Habitats Directive¹ and the Habitats Regulations² and the Offshore Marine Regulations³ for applications submitted under the Planning Act 2008 regime (as amended). The findings and conclusions on nature conservation issues reported by the ExA will assist the Secretary of State in performing their duties under the Habitats Regulations and the Offshore Marine Regulations.
- 1.3 This Report on the Implications for European Sites (RIES) compiles, documents and signposts information provided within the DCO application, and the information submitted throughout the examination by both the applicant and interested parties, up to 10 February 2016 in relation to potential effects on European sites⁴. It is not a standalone document and should be read in conjunction with the examination documents referred to in this report.
- 1.4 It is issued to ensure that interested parties including Natural England (NE) as the statutory nature conservation body are consulted formally on Habitats Regulations matters. This process may be relied on by the Secretary of State for the purposes of Regulation 61(3) of the Habitats Regulations and Regulation 25 of the Offshore Marine Regulations. Following consultation the responses will be considered by the ExA in making its recommendation to the Secretary of State and made available

¹ Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (as codified) (the 'Habitats Directive').

² The Conservation of Habitats and Species Regulations 2010 (as amended) (the Habitats Regulations).

³ The Offshore Marine Conservation (Natural Habitats, &c) Regulations 2007 (as amended) (the Offshore Marine Regulations) apply beyond UK territorial waters (12 nautical miles). These regulations are relevant when an application is submitted for an energy project in a renewable energy zone (except any part in relation to which the Scottish Ministers have functions).

⁴ The term European Sites in this context includes Special Areas of Conservation (SACs) and candidate SACs, Special Protection Areas (SPAs), potential SPAs, Sites of Community Importance (SCIs), Ramsar sites, and any sites identified as compensatory measures for adverse effects on any of the above. For a full description of the designations to which the Habitats Regulations apply, and/ or are applied as a matter of Government policy, see PINS Advice Note 10 and the Habitats Regulations Assessment Handbook (DTA Publications July 2014).

to the Secretary of State along with this report. The RIES is not revised following consultation.

- 1.5 The applicant has not identified any potential impacts on European sites in other European Economic Area States. Only UK European sites are addressed in this report.

Documents used to inform this RIES

- 1.6 The applicant provided a HRA report entitled 'Report to Inform Appropriate Assessment' (RIAA) (April 2015) [**APP-017**] with the DCO application, together with screening and integrity matrices for the Inner Dowsing, Race Bank and North Ridge (IDRBNR) Site of Community Importance (SCI).
- 1.7 The applicant submitted further screening and integrity matrices for other European sites at Deadline 1 [**REP1-052**] and Deadline 3 [**REP3-055**].
- 1.8 All other documents used to inform this RIES are listed in Annex 1 of this report.

Structure of this RIES

- 1.9 The remainder of this report is as follows:
 - **Section 2** identifies the European sites that have been considered within the DCO application and during the examination period, up to the date of publication of this RIES on 10 February 10 2016; effectively up to Deadline 5 (1 February 2016) of the examination timetable. It provides an overview of the issues that have emerged during the examination.
 - **Section 3** identifies the European sites and qualifying features screened by the applicant for potential likely significant effects (LSEs), either alone or in-combination with other projects and plans. The section also identifies where interested parties have disputed the applicant's conclusions.
 - **Section 4** identifies the European sites and qualifying features which have been considered in terms of adverse effects on site integrity, either alone or in-combination with other projects and plans.

2.0 OVERVIEW

European Sites Considered

- 2.1 The project is not directly connected with or necessary to the management of any of the European sites considered within the applicant’s assessment [**APP-017**].
- 2.2 A summary of all European sites considered in the application documents and during the examination is provided in Table 2.3 of this RIES.
- 2.3 The applicant’s RIAA identified eight European sites for which the UK is responsible and that are located within a regional study area of 40km (see Table 2.1 of this RIES). The 40km study area was considered by the applicant to be a conservative initial filter based on the *“nature of the proposed development, the associated nearfield nature of the cable itself and associated secondary protection, and the low level of disturbance associated with increases in suspended sediment”* (Q HRA 1.19 of **REP1-044**). The qualifying features of these sites are provided in the RIAA [**APP-017**].

Table 2.1: European Sites identified in the applicant’s RIAA

Name of European site
IDRBNR SCI
Greater Wash future Special Protection Area (SPA)
Humber Estuary Special Area of Conservation (SAC)
Humber Estuary SPA
Humber Estuary Ramsar site
Wash and North Norfolk Coast SAC
Saltfleetby-Theddlethorpe Dunes and Gibraltar Point SAC
North Norfolk Coast Ramsar site

- 2.4 Part of the offshore section of the application site overlaps with the boundary of the IDRBNR SCI, as shown on Figure 1 of the applicant’s RIAA [**APP-017**].
- 2.5 The RIAA does not contain a figure identifying the locations of the remaining seven European sites. However, these can be identified using a combination of Figure 7.1: Offshore and Intertidal Designated Sites

Scoped into the Assessment of ES Volume 2 Chapter 7: Offshore Nature Conservation [APP-034] and Figure 2-2: Marine Physical Environment Receptors of ES Volume 2 Chapter 2: Marine Physical Environment [APP-029]. The boundary of the North Norfolk Coast Ramsar site is assumed to overlap with that of the North Norfolk Coast SPA, which is visible on Figure 7.1 of [APP-034].

- 2.6 In its relevant representation [RR-175], NE confirmed that all of the European sites identified by the applicant were relevant to the application (with the exception of the Greater Wash future SPA). NE also identified a further six European sites as being relevant to the application (see Table 2.2 of this RIES). The qualifying features of these sites are provided in [REP3-055].

Table 2.2: Additional European sites identified in NE’s relevant representation [RR-175] as being relevant to the application

Name of European site
North Norfolk Coast SPA*
Flamborough Head and Bempton Cliffs SPA**
Gibraltar Point SPA***
Gibraltar Point Ramsar site
The Wash SPA***
The Wash Ramsar site

* The location of this European site is identified on Figure 7.1: Offshore and Intertidal Designated Sites Scoped into the Assessment of ES Volume 2 Chapter 7: Offshore Nature Conservation [APP-034].

** The location of this European site is not identified on any figures within the application documents however the applicant’s HRA matrices [REP1-052] state the distance from the proposed development is 83km. (Note: The location of the Flamborough and Filey Coast pSPA is shown on Figure 1 of REP3-055)

*** The locations of these European sites are identified on Figure 1 of [REP3-055]. It is assumed that the locations of the equivalent Ramsar sites overlap with the SPA boundaries.

- 2.7 In addition to the European sites identified in the RIAA and by NE, the applicant’s ES assessed the potential effects of the proposed development on Hornsea Mere SPA and the Outer Thames Estuary SPA. In response to the ExA’s first written questions [question HRA 1.4 of PD-009], the applicant produced screening matrices for these European sites in [REP1-052].

- 2.8 The applicant's Deadline 1 screening matrices [**REP1-052**] also noted that two additional European sites were mentioned within Volume 2 Chapter 6 of the ES (Marine Mammals) [**APP-033**]; these were Haisborough, Hammond and Winterton SCI and the Dogger Bank SCI which at the time of submission of the application were cSACs with a potential marine mammal interest. The applicant explained that since submission of the application for the proposed development, these cSACs were adopted by the European Commission to become SCIs and neither had marine mammals as a qualifying feature of the SCI; as such they were not considered further by the applicant [**REP1-052**]. No comments were received from other interested parties in relation to these European sites.
- 2.9 During the examination, the ExA also noted that a formal consultation was held by NE in January 2014 on the designation of Flamborough and Filey Coast pSPA and requested the applicant considered the site. NE confirmed [**REP3-026**] that the site had been appropriately considered within the screening matrix provided by the applicant for the Flamborough Head and Bempton Cliffs SPA; however a separate screening matrix for the Flamborough and Filey Coast pSPA was provided by the applicant [**REP3-055**].
- 2.10 It should be noted that for European sites considered within the ES but not the RIAA, not all qualifying features were explicitly identified by the applicant. For example, within the Marine Physical Environment chapter [**APP-029**] European sites were considered as a whole without identifying individual qualifying features. In other cases, only certain features were explicitly considered, for example the Marine and Intertidal Ornithology chapter [**APP-030**] considered only certain bird species; where this is the case, this is noted in Table 2.3 of this RIES.

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Table 2.3: Signposting to application and examination documents identifying relevant European sites and features

European site	Considered in the RIAA?	Considered in the ES? (Where appropriate, specific features considered are identified in brackets)	Ref to most up-to-date screening matrix	Identified by NE [RR-175] as relevant to application?
Inner Dowsing, Race Bank and North Ridge SCI	✓	ES Vol 2 Chapter 2: Marine Physical Environment [APP-029] ES Vol 2 Chapter 7: Offshore Nature Conservation [APP-034]	[REP1-052]	✓
The Greater Wash future SPA	✓	ES Vol 2 Chapter 3: Marine and Intertidal Ornithology [APP-030] (red-throated diver, common scoter and little gull)	[REP1-052]	x ⁵
Humber Estuary SAC	✓	ES Vol 2 Chapter 2: Marine Physical Environment [APP-029] ES Vol 2 Chapter 6: Marine Mammals [APP-033] (grey seal) ES Vol 2 Chapter 7: Offshore Nature Conservation [APP-034]	[REP1-052]	✓
Humber Estuary SPA	✓	ES Vol 2 Chapter 2: Marine Physical Environment [APP-029] ES Vol 2 Chapter 3: Marine and Intertidal Ornithology [APP-030] (cormorant) ES Vol 2 Chapter 7: Offshore Nature Conservation [APP-034]	[REP1-052] (note this is merged with the Humber Estuary Ramsar site matrix)	✓

⁵ The Greater Wash future SPA was not identified in NE's relevant representation [**RR-175**] as relevant to the application, however it was acknowledged in the SoCG with NE [**REP5-044**]. The SoCG notes that red throated divers may be a qualifying feature for the Greater Wash region; that the assessment of potential impacts on red throated diver [**APP-057**] is appropriate; and that significant effects on the future Greater Wash SPA can be ruled out.

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European site	Considered in the RIAA?	Considered in the ES? (Where appropriate, specific features considered are identified in brackets)	Ref to most up-to-date screening matrix	Identified by NE [RR-175] as relevant to application?
Humber Estuary Ramsar site	✓	x	[REP1-052] (note this is merged with the Humber Estuary SPA matrix)	✓
The Wash and North Norfolk Coast SAC	✓	ES Vol 2 Chapter 2: Marine Physical Environment [APP-029] ES Vol 2 Chapter 6: Marine Mammals [APP-033] (harbour seal) ES Vol 2 Chapter 7: Offshore Nature Conservation [APP-034]	[REP1-052]	✓
Saltfleetby to Theddlethorpe Dunes and Gibraltar Point SAC	✓	ES Vol 2 Chapter 2: Marine Physical Environment [APP-029]	[REP1-052]	✓
North Norfolk Coast SPA	x	ES Vol 2 Chapter 3: Marine and Intertidal Ornithology [APP-030] (sandwich tern, common tern) ES Vol 2 Chapter 7: Offshore Nature Conservation [APP-034]	[REP3-055] (note this is merged with the North Norfolk Coast Ramsar matrix)	✓
North Norfolk Coast Ramsar site	✓	x	[REP3-055] (note this is merged with the North Norfolk Coast SPA matrix)	✓

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European site	Considered in the RIAA?	Considered in the ES? (Where appropriate, specific features considered are identified in brackets)	Ref to most up-to-date screening matrix	Identified by NE [RR-175] as relevant to application?
The Wash and North Norfolk Coast SPA	x	ES Vol 2 Chapter 3: Marine and Intertidal Ornithology [APP-030] (common scoter, cormorant)	Matrix not provided, however no significant effects were identified on common scoter or cormorant within [APP-030]	x
The Wash SPA	x	ES Vol 2 Chapter 2: Marine Physical Environment [APP-029] ES Vol 2 Chapter 3: Marine and Intertidal Ornithology [APP-030] (common scoter) ES Vol 2 Chapter 7: Offshore Nature Conservation [APP-034]	[REP3-055] (note this is merged with the Wash Ramsar matrix)	✓
The Wash Ramsar site	x	x	[REP3-055] (note this is merged with the Wash SPA matrix)	✓
Gibraltar Point SPA	x	ES Vol 2 Chapter 2: Marine Physical Environment [APP-029]	[REP3-055] (note this is merged with the Gibraltar Point Ramsar matrix)	✓
Gibraltar Point Ramsar site	x	x	[REP3-055] (note this is merged with the Gibraltar Point SPA matrix)	✓

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European site	Considered in the RIAA?	Considered in the ES? (Where appropriate, specific features considered are identified in brackets)	Ref to most up-to-date screening matrix	Identified by NE [RR-175] as relevant to application?
Outer Thames Estuary SPA	x	ES Vol 2 Chapter 3: Marine and Intertidal Ornithology [APP-030] (red throated diver)	[REP1-052]	x
Flamborough Head and Bempton Cliffs SPA	x	ES Vol 2 Chapter 3: Marine and Intertidal Ornithology [APP-030] (gannet, kittiwake and contributing to the integrity of the SPA; guillemot, puffin and herring gull)	[REP1-052]	✓
Flamborough and Filey Coast pSPA	x	x	[REP3-055]	x
Hornsea Mere SPA	x	ES Vol 2 Chapter 3: Marine and Intertidal Ornithology [APP-030] (little gull)	[REP1-052]	x

In-combination effects

2.11 For the in-combination assessment, the RIAA considered the following projects which all overlap with the boundary of the IDRBNR SCI (as shown on Figure 3 of **APP-017**):

- Race Bank Offshore Wind Farm (OWF) (array and export cable route)
- Lincs OWF (cable protection and maintenance impacts only)
- Lynn and Inner Dowsing (LID) OWF (cable protection and maintenance only)
- Aggregate renewal areas 515 (formerly 440 with a now reduced footprint), 107 and 439, and
- Aggregate areas 480 and 481/1 and 481/2.

2.12 There is no evidence that the applicant agreed with NE the projects that should be considered in the in-combination assessment. However, Table 3 of the RIAA [**APP-017**] notes that during pre-application, NE stated that the assessment of impacts on IDRBNR SCI should consider impacts in-combination with impacts from other proposed maintenance activities for LID, Lincs and Race Bank OWFs.

Summary of HRA Matters Considered During the Examination

2.13 HRA matters that were considered during the examination were:

- evidence to support the conclusions of no likely significant effects for all European sites except IDRBNR SCI
- the potential impacts on SACs for marine mammals
- the potential impacts of cable protection measures
- potential impacts of sediment on designated sites
- the potential impacts on the IDRBNR SCI during operation and maintenance phase (including disagreement between NE and the applicant as to whether a LSE on the IDRBNR SCI for the project alone could be excluded)

2.14 These matters are detailed further in Sections 3 and 4 of this RIES.

3.0 LIKELY SIGNIFICANT EFFECTS

Summary of the applicant's HRA Screening exercise

- 3.1 The RIAA defines a LSE as "*any effect (either alone or in-combination with other projects) that may be reasonably predicted as a consequence of a plan or project to affect the conservation objectives of the features for which the Site was designated, but excluding trivial or inconsequential effects*" [APP-017].
- 3.2 A total of 18 European sites (including The Greater Wash future SPA) were considered by the applicant (see Table 2.3 of this RIES). The applicant concluded there would be no LSE on any European sites and their qualifying features on the basis of there being no impact pathway (paragraph 1.14) with the exception of the IDRBNR SCI. Table 2 of the RIAA states that no LSE was agreed during the EIA Evidence Plan⁶ for the European sites identified within the RIAA (as identified in Table 2.1 of this RIES).
- 3.3 With regard to the IDRBNR SCI, a LSE on the "*Sandbanks which are slightly covered by seawater at all times*" qualifying feature was ruled out by the applicant based on the prediction of sediment pathways being unchanged⁷ (paragraph 1.13 of the RIAA [APP-017]).
- 3.4 The other qualifying feature of the IDRBNR SCI is *Sabellaria spinulosa* reef. The RIAA [APP-017] detailed the potential impacts of the proposed development on the *S. spinulosa* feature of the IDRBNR SCI in paragraphs 1.30-1.38 and Table 5. To summarise, they are:
- physical/direct damage during construction, operation and decommissioning
 - increased suspended sediment/smothering during construction and decommissioning, and
 - habitat loss during operation (resulting from the presence of artificial seabed infrastructure).

⁶ The EIA Evidence Plan [APP-132] was prepared by the applicant and was aimed at producing a non-legally binding agreement between the applicant and the relevant statutory bodies on EIA and HRA matters. As part of the plan, the applicant held a number of 'Review Panels' which met to discuss the sufficiency of the evidence provided and agree key topics and issues for both the EIA and HRA process. A draft RIAA was also issued to NE for comment during the pre-application stage.

⁷ Paragraph 1.12 of the RIAA [APP-017] notes that "*A LSE is defined, in this context, as any effect (either alone or in-combination with other projects) that may be reasonably predicted as a consequence of a plan or project to affect the conservation objectives of the features for which the Site was designated, but excluding trivial or inconsequential effects. On this basis the focus of this report is on S. spinulosa reefs and not the sandbank features (Table 8). As shown on Figure 1 the designated sandbank features comprise 183km² of which some 0.02km² (0.01%) of the feature extends 180m into the cable corridor.*"

- 3.5 Tables 6 and 7 of the RIAA [**APP-017**] detail the maximum impact scenario that was considered in the assessment based on construction, operation and decommissioning of the proposed development.
- 3.6 The RIAA screens out a LSE on the IDRBNR SCI from the project alone on the basis that the proposed development boundary avoids any known reef locations (paragraph 1.52 of **APP-017**) and given the rapid recoverability of *S. spinulosa* to short term or intermediate levels of disturbance (paragraph 1.55 of **APP-017**). Impacts on unknown reef features would be mitigated through the development of an Annex I Mitigation Plan that would be informed by a pre-construction Annex I habitat survey; this would facilitate the micro-siting of the cable and associated secondary protection (paragraphs 1.40 and 1.45 of **APP-017**). The mitigation plan and pre-construction survey are included in Conditions 7(h) and 12(2)(a) respectively of the Deemed Marine Licence [**REP5-035**]. NE confirmed there was no need for a draft mitigation plan to be provided [**REP4-025**].
- 3.7 NE disputed the applicant's conclusion of no LSE for the *S. spinulosa* reef feature of the IDRBNR SCI when considering the impacts of the proposed development alone. Further detail is provided below in this RIES.
- 3.8 The applicant did however screen in a LSE for potential in-combination operational phase impacts on the *S. spinulosa* functional biological community of the *S. spinulosa* when considered with other plans and projects (Table 2 of the RIAA **APP-017**). Footnote C of Table 8 of the RIAA concludes that "*as a result of the Operation and Maintenance phases of Lincs and LID OWFs having a likely significant effect on the S. spinulosa reef features of the SCI there is the potential for the Triton Knoll Electrical System to have a likely significant effect in-combination with those projects*".

Screening and integrity matrices

- 3.9 As noted above in this RIES, the applicant submitted screening and integrity matrices [**APP-017**], [**REP1-052**] and [**REP3-055**].
- 3.10 NE confirmed that they "*do generally agree with the screening matrices*", however noted that they consider there is the potential for a "*likely significant effect on Annex I Sabellaria spinulosa reef from operation and maintenance activities both alone and in-combination over the life time of the project*" [**REP3-026**]. This differed from the applicant's screening matrix which concluded a LSE during in-combination only and is discussed further below in this RIES. Further information on this disagreement is provided below.
- 3.11 Given NE's general agreement, the ExA has not needed to revise these screening matrices, however has detailed the matters discussed during

the examination below as these are not reflected within the applicant's matrices.

3.12 It should be noted that for the following European sites, the ExA has identified some discrepancies between the features listed in the applicant's screening matrices compared with those listed on the EC Natura 2000 Network Viewer⁸ and the relevant Ramsar citations⁹:

- Humber Estuary SAC
- North Norfolk Coast SPA¹⁰ and Ramsar site
- Hornsea Mere SPA
- Gibraltar Point Ramsar site
- The Wash Ramsar site

3.13 However, the ExA notes that NE stated that the only European site which may be affected by the proposed development is the IDRBNR SCI [**RR-175**] and that the features listed on the applicants screening and integrity matrices for this site [**REP1-052**] match those on the EC Natura 2000 Network Viewer. The ExA therefore considers that reproducing the screening matrices detailing the discrepancies for the European sites listed above is not necessary.

Issues discussed during the examination relevant to the screening exercise

Evidence to support the conclusions of no LSE for all European sites except IDRBNR SCI

3.14 The RIAA focused on the potential impacts of the proposed development on the IDRBNR SCI and provided limited evidence to support the conclusion of no LSE for all other European sites. Paragraph 1.1 of the RIAA [**APP-017**] confirms that the assessment approach was agreed during discussions and agreements with the Triton Knoll EIA Evidence Plan Offshore Ecology Technical Review Panel.

3.15 The ExA noted that consideration had been given to European sites throughout the ES and noted that NE agreed in their relevant representation [**RR-175**] and written representation [**REP1-032**] to scope out all European sites except for the IDRBNR SCI. Nevertheless, the

⁸ <http://natura2000.eea.europa.eu/#>

⁹ North Norfolk Coast Ramsar site: <http://jncc.defra.gov.uk/pdf/RIS/UK11048.pdf>

The Wash Ramsar site: <http://jncc.defra.gov.uk/pdf/ris/uk11072.pdf>

Gibraltar Point Ramsar site: <http://jncc.defra.gov.uk/pdf/RIS/UK11027.pdf>

Humber Estuary Ramsar site: <http://jncc.defra.gov.uk/pdf/RIS/UK11031.pdf>

¹⁰ The ExA assumes that additional features on the applicant's screening matrices have been identified as a result of the SPA review.

ExA sought assurances that a robust screening process had been undertaken and that all features of the identified European sites had been given due consideration within the screening process by requesting screening matrices for all European sites considered.

- 3.16 In response to the ExA's questioning at the Onshore Impacts Issue Specific Hearing on 17 November 2015 [**EV-023**, **EV-024** and **EV-025**], the applicant provided additional screening matrices for additional European sites [**REP3-055**], as noted in Table 2.3 of this RIES.
- 3.17 NE [**REP3-026**] stated they "*do generally agree with the screening matrices*", specifically agreeing with the conclusions of the matrices for:
- Gibraltar Point SPA and Ramsar site
 - North Norfolk SPA
 - The Wash SPA, and
 - Flamborough and Filey Coast SPA / Flamborough Head and Bempton Cliffs SPA.
- 3.18 The SoCG between the applicant and the Marine Management Organisation [**REP5-045**] also agreed that agreed that "*there are no likely significant effects on Offshore Nature Conservation receptors arising from the construction, operation and decommissioning phases of the proposed development*". However, it is noted that this statement is made with reference to the applicant's ES and not the RIAA.

SACs for marine mammals

- 3.19 ES Vol 2 Chapter 6: Marine Mammals [**APP-033**] assessed the potential impacts of the proposed development on the grey seal qualifying feature of the Humber Estuary SAC and the harbour seal qualifying feature of the Wash and North Norfolk Coast SAC.
- 3.20 NE [**RR-175**] confirmed that, based on the ES, it had no major concerns about impacts to marine mammals from SACs. However, it highlighted the potential for sites around the UK to be designated for harbour porpoise including in the Southern North Sea. NE confirmed that JNCC and the country agencies have issued formal draft advice to all four UK governments on draft SACs (dSACs) for harbour porpoise and that a formal consultation may commence within the examination period.
- 3.21 Despite this, NE further confirmed that the "*proposed development does not involve activities that could cause a potential risk of disturbance through noise generated during any phase of the development and both Natural England and the Applicant are in agreement on the lack of any potential impact pathway based on current information arising from the proposed development on harbour porpoise in the area*" [**REP3-026**].

- 3.22 The ExA notes that the consultation for possible SACs, including the Southern North Sea, commenced on 19 January 2016 and will close on 19 April 2016¹¹.
- 3.23 The SoCG between the applicant and NE [**REP5-044**] agrees that the applicant will continue to liaise with NE and the JNCC to discuss any implications arising from the potential designations of SACs with harbour porpoise as a qualifying feature.

Cable protection and cable installation

- 3.24 The RIAA [**APP-012**] noted that seabed infrastructure (cable protection and pipeline crossings) would be deployed onto the seabed where the cable would not be buried. The RIAA acknowledged that this could lead to physical damage (i.e. crushing *S. spinulosa* reef, see paragraph 1.32) and physical habitat loss (i.e. the loss of natural substrate for *S. spinulosa* reef colonisation and the impairment of future reef formation, see paragraph 1.38). The RIAA assessed a worst case scenario for the number of cable crossings, cable installation, protection and repair and detailed this worst case scenario in Table 6.
- 3.25 However, NE's relevant representation [**RR-175**] raised concerns over the type of cable protection to be used, its removability at decommissioning and the quantity to be used (in order to establish a worst case scenario of the maximum footprint), particularly within the IDRBNR SCI. NE considered that cable protection should be used as a last resort and should be removed at decommissioning.
- 3.26 Further discussions between the applicant and NE ensued and ultimately NE agreed [**REP1-032**] that the construction method statement as secured in the draft Deemed Marine Licence (DML), Part 2, Condition 7(1)(c) and 7(1)(e) was sufficient to address their concerns. The construction method statement would include details on the type, sources, quantity and installation methods for cable armouring and the total area and volume to be installed and would need to be agreed with the Marine Management Organisation (MMO) in consultation with NE (and the Maritime and Coastguard Agency and Trinity House, as appropriate) prior to construction.
- 3.27 In its relevant representation, NE [**RR-175**] noted some discrepancies in the application documents in relation to sandwave preparation prior to cable installation. In response, the applicant provided a clarification note [**REP2-025**] clarifying the maximum adverse scenario used for the assessment within the ES and the RIAA, which NE subsequently confirmed [**REP4-025**] it was satisfied with.

¹¹ <http://jncc.defra.gov.uk/page-7059>

Sediment impacts on designated sites

- 3.28 NE raised concerns over the use of cable protection and its potential to cause long-term interruption to sediment transport which could lead to a reduction in the supply of sediment to designated sites; NE did not specifically identify which sites they were concerned about. NE considered that further bathymetric monitoring should be committed to by the applicant (**REP3-026** and **REP4-025**). NE provided a paper [**REP4-025**] entitled '*The Greater Wash – Evidence of unanticipated impacts in relation to benthic and coastal processes receptors*' which suggested that the realised impacts in relation to benthic ecology and physical processes (sediment transport regimes) are greater than those assessed in the original Environmental Statements for Round Two Offshore Wind Farms in the Wash.
- 3.29 Nevertheless, NE stated that whilst they "*do not foresee that there will be an adverse effect on the integrity of the Inner Dowsing, Race Bank and North Ridge SCI or Saltfleetby-Theddlethorpe Dunes and Gibraltar Point SAC, we have advised the Applicant that the next version of the DML should be amended to incorporate the requirement to undertake bathymetric monitoring in years 1 and 3 post-construction*" [**REP4-025**].
- 3.30 The applicant subsequently agreed to undertake bathymetric survey targeted on agreed locations to demonstrate that any changes to bedforms or sediment movement are within the ranges predicted in the Environmental Statement. The surveys were secured in Conditions 13(2)(b) and 13(2)(c) of the DML [**REP5-035**]. The SoCG between the applicant and NE [**REP5-044**] agreed that these conditions were adequate.

Impacts on the IDRBNR SCI during operation and maintenance phase

- 3.31 With regard to operational impacts, the applicant's RIAA assessed the permanent loss of natural substrate for *S. spinulosa* reef resulting from the presence of artificial seabed and the potential for direct physical damage to *S. spinulosa* reef from cable repair/remediation. The RIAA screened out a LSE on the IDRBNR SCI during the operational phase for the project alone.
- 3.32 However, in its relevant representation, NE advised that "*that there remains uncertainty in relation to potential impacts to Annex I habitats such as Sabellaria spinulosa reef that have the ability to establish post-installation and may therefore be affected by maintenance operations*" (paragraph 4.3.2 of **RR-175**).
- 3.33 The applicant stated "*that it is not anticipated significant maintenance work will be required for the operational phase*" (Row 20 of **REP5-044**). It provided an outline offshore operations and maintenance (O&M) plan with

the application [**APP-114**] which requires the export cable to be periodically inspected during the operational phase to ensure cable burial and integrity. Condition 7(1)(i) of the DML [**REP5-035**] stipulates that works must not commence until an O&M plan (drafted in accordance with the outline plan) is submitted to and approved in writing by the MMO; this should be submitted to the MMO at least four months prior to the commencement of operation and will be reviewed and resubmitted every three years during operation. The SoCG between the applicant and NE [**REP5-044**] agreed that *"the outline O&M plan is appropriate and reasonable to inform the final O&MP"*.

- 3.34 The applicant stated that the cable surveys required under the O&M plan would identify repair areas that are coincidental with areas of core biogenic reef that have formed on the cable since installation and appropriate measures would be identified in consultation with the MMO and the appropriate statutory advisor (Q HRA 1.14 of **REP1-044**).
- 3.35 The SoCG between the applicant and NE [**REP5-044**] noted that *"whilst it is not possible to avoid disturbance of any such reef that has developed over a cable that requires lifting, the survey will provide information on the development of reef on the seabed post construction (cable installation) disturbance or on cable protection material, both of which would provide confidence that the re-establishment of reef over the infrastructure is likely to occur after the maintenance activities have been completed"*. The SoCG subsequently agreed that *"appropriate surveys will be undertaken prior to maintenance activities to confirm if any Sabellaria spinulosa reef has formed post-installation and will be used to inform recovery of Annex I reef from ongoing activities over the lifetime of the project"*. However there is no reference to surveys of *S. spinulosa* reef within the outline O&M plan [**APP-114**].
- 3.36 There was a disagreement between the applicant and the NE throughout the examination as to whether a LSE for impacts on the IDRBNR SCI from the proposed development alone should be screened in or not. The applicant considered that due to the scale of the potential effects on the features of the SCI from the proposed development alone, any potential for a LSE is minimal and noted that NE agreed to this during the Evidence Plan process (**APP-132**, **REP2-007** and **REP4-027**). However, NE considered that in line with advice given for other developments, there is the potential for LSE from the project alone and in-combination with other projects (**REP1-032**, **REP3-026** and **REP4-025**). This was on the basis that whilst Annex I habitats will be avoided during construction there is potential for Annex I reef to establish over the cables over the lifetime of the project that may be impacted by operation and maintenance activities; therefore NE considered there is the potential for LSE over the lifetime of the project from operation and maintenance activities alone and

in-combination with other projects. NE believed that drafting errors in the RIAA had led to confusion [**REP1-032**].

- 3.37 This remained a matter of disagreement between the two parties throughout the examination: however both NE and the applicant ultimately agreed there would be no adverse effect on site integrity (**REP4-025, REP4-027** and **REP5-044**).

4.0 ADVERSE EFFECTS ON INTEGRITY

Conservation Objectives

- 4.1 The conservation objectives for reef (biogenic; *S. spinulosa*) in the IDRBNR SCI, as recorded in the formal Regulation 35 advice for the site, were detailed in Table 4 of the applicant's RIAA [**APP-012**].

Summary of the applicant's assessment of effects on integrity

- 4.2 As noted in Section 3 of this RIES, the applicant identified a LSE on the *S. spinulosa* reef feature of the IDRBNR SCI when the proposed development was considered in-combination with other projects [**APP-017**]. The projects considered in the in-combination assessment are identified in section 2 of this RIES.
- 4.3 The RIAA assessed the potential for in-combination impacts on *S. spinulosa* reefs of the IDRBNR SCI from loss of habitat or disturbance to habitat (paragraphs 1.82-1.93 of **APP-017**). It concluded that *"In light of the works associated with the Operation and Maintenance phases of the Lincs and LID projects it is considered that whilst a likely significant effect cannot be ruled out there will not be an adverse effect on the Inner Dowsing, Race Bank, and North Ridge SCI features arising from the Triton Knoll Electrical System either alone or in-combination with other projects"* (paragraph 1.95 of **APP-017**).
- 4.4 The Statement of Common Ground (SoCG) between the applicant and NE confirms that the two parties agree *"that the project will not have an adverse effect on the features of the IDRBNR SCI either alone or in-combination with other projects, therefore meeting the current conservation objectives for this site feature, as described and concluded in the Report to Inform Appropriate Assessment"* (paragraph 4.239 of **REP5-044**).
- 4.5 With the exception of the debate between NE and the applicant as to whether a LSE for the project alone could be screened out (as detailed in section 3 of this RIES), there were no issues raised during the

examination in relation to the applicant's assessment of effects on integrity by any interested parties.

Conclusion

- 4.6 As detailed above, the applicant and NE have agreed that there would be no adverse effects on the integrity of any European sites.
- 4.7 No comments to the contrary have been received by any other interested parties up to the date of publication of this RIES.

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ANNEX 1: DOCUMENTS USED TO INFORM THE RIES

Triton Knoll Offshore Wind Limited Application Documents

- Report to Inform an Appropriate Assessment [**APP-017**]:
- Environmental Statement (ES):
 - ES Vol 2 Chapter 2: Marine Physical Environment [**APP-029**]
 - ES Vol 2 Chapter 3: Marine and Intertidal Ornithology [**APP-030**]
 - ES Vol 2 Chapter 6: Marine Mammals [**APP-033**]
 - ES Vol 2 Chapter 7: Offshore Nature Conservation [**APP-034**]
 - ES Vol 4 Offshore Annex: Red Throated Diver Technical Note [**APP-057**]
- EIA Evidence Plan [**APP-132**]

Procedural Decisions

- Examining Authority's first written questions and requests for information [**PD-009**]

Relevant Representations

- Natural England [**RR-175**]

Deadline 1 Documents (5 October 2015)

- Natural England – Written Representation [**REP1-032**]
- Natural England - Response to the Examining Authority's First Questions [**REP1-033**]
- Triton Knoll Offshore Wind Farm Limited - Covering Letter and Written Response to Deadline 1 [**REP1-044**]
- Triton Knoll Offshore Wind Farm Limited - Appendix 9 – HRA Screening Matrices [**REP1-052**]

Deadline 2 Documents (27 October 2015)

- Triton Knoll Offshore Wind Farm Limited – Response to Deadline 2 [**REP2-007**]
- Triton Knoll Offshore Wind Farm Limited - Appendix 25 - Clarification Note in response to Natural England's Relevant Representation, principally covering offshore cable installation techniques [**REP2-025**]

Onshore Issues Hearing – 17 November 2015

- Audio Recording 17-11-15 Part 1 [**EV-023**]

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- Audio Recording 17-11-15 Part 2 [**EV-024**]
- Audio Recording 17-11-15 Part 3 [**EV-025**]

Deadline 3 Documents (30 November 2015)

- Natural England – Written Representation [**REP3-026**]
- Triton Knoll Offshore Wind Farm Limited - Appendix 19 – Updated HRA Screening Matrices [**REP3-055**]

Deadline 4 Documents (5 January 2016)

- Natural England [**REP4-025**]
- Triton Knoll Offshore Wind Farm Limited - The Applicant's Response to Deadline 4 [**REP4-027**]

Deadline 5 Documents (1 February 2016)

- Triton Knoll Offshore Wind Farm Limited - Appendix 22 - Revised Draft Development Consent Order and Deemed Marine Licence [**REP5-035**]
- Triton Knoll Offshore Wind Farm Limited - Appendix 31 - SoCG between Triton Knoll Offshore Wind Farm Limited and Natural England [**REP5-044**]
- Triton Knoll Offshore Wind Farm Limited - Appendix 32 - SoCG between Triton Knoll Offshore Wind Farm Limited and Marine Management Organisation [**REP5-045**]