Hornsea Project Four

Applicant's comments on National Grid Viking Link Limited's comments received at Deadline 2

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Prepared Dawn Dickinson, Orsted, April 2022
Checked Gareth Phillips, Pinsent Mason LLP, April 2022
Accepted Aparna Majmudar, Orsted, April 2022
Approved Jamie Baldwin, Orsted, April 2022

Revision Summary

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Revision Change Log

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Acronyms

Term	Definition
CBRA	Cable Burial Risk Assessment
ES	Environmental Statement
MBES	Multi Beam Echo Sounder
MCA	Maritime and Coastguard Agency
NGVL	National Grid Viking Link
NRA	Navigational Risk Assessment
RLB	Red Line Boundary
SEZ	Structures Exclusion Zone

1 Introduction

1.1.1.1 In line with the Rule 8 Letter (PD-007) and Examination Timetable outlined in Annex A of PD-007, stakeholders are invited to submit comments in relation to the submitted application documents and proposed project. At Deadline 2 there were submissions from 19 stakeholders, other than the Applicant, received by the Examining Authority.

1.1.1.2 The Applicant has reviewed and noted the content of all submissions and with this document provides comments on specific topics raised by National Grid Viking Link in (REP2-097, REP2-098 & REP2-098).

2 Viking Link Deadline 2 Submissions

2.1 Viking Link – Deadline 2 Submission - Responses to Examining Authority's First Written Questions (ExQ1) Submission ID9151 REP2-097

2.1.1.1 ***NGVL Response*** *- (Q.INF 1.6): NGVL do not agree with the conclusions of the Environmental Statement that there will not be an increased risk to the Viking Link cable throughout the operational lifetime of both projects as a result of the gap introduced and the presence of Hornsea 4 (in combination with Hornsea 2). NGVL simply wants this additional risk to be mitigated (through IMO routing measure and additional rock protection for the Viking Link cable).*

2.1.1.2 **Applicants Response** – The Hornsea Four gap was developed in consultation with shipping and navigation regulators and users, and a detailed safety case is presented in **A5.7.1 Environmental Statement Volume A5 Annex 7.1 Navigational Risk Assessment (APP-081, APP-082 and APP-083)**. The **Maritime and Coastguard Agency (MCA) Deadline 2 Submission (REP2-078)** states the MCA has reviewed the NRA and is satisfied with the conclusions for shipping transiting through the gap between the two arrays. The MCA also note that the list of proposed risk controls in section 19.3.10 in **APP-082** is accepted as appropriate. The list of proposed risk controls during construction and maintenance in section 23 of **APP-082** is also appropriate. Table 7.10 of **A2.7 Environmental Statement Volume A2 Chapter 7 Shipping and Navigation** (**APP-019**) details how the risk controls are secured through the DCO/dML process and through the Electricity (Offshore Generating Stations) (Safety Zones) (Applications Procedures and Control of Access) Regulations 2007 (SI No 2007/1948) process which is commenced post consent.

2.1.1.3 ***NGVL Response*** *- (1.2) According to the Navigational Risk Assessment (NRA) prepared for Ørsted as part of the ES, the frequency of collision is predicted to increase with 14% (page 204, paragraph 517). The NRA does not specify the possible threats to submarine assets, such as sinking after collision and anchoring, nor the possible consequences of such incidents, which in the view of NGVL is an omission. The NRA contains information that confirms that the increased frequency of collision is the (obvious) result of increased frequency of shipping due to the navigation gap between Hornsea 2 and Hornsea 4. In the opinion of NGVL this will inevitably lead to an increased frequency of events such as anchoring and sinking and as such will increased the risk to the Viking Link. NGVL there-fore disagrees with the ES conclusions that there is no impact on the risk to the Viking Link Interconnector.*

2.1.1.4 **Applicants Response** – As per paragraph 2.1.1.2, **A5.7.1 Environmental Statement Volume A5 Annex 7.1 Navigational Risk Assessment (APP-081, APP-082 and APP-083)** includes a detailed safety case for the gap which the MCA **(REP2-078)** are satisfied with. However, in answer to the specific question on collision risk, the Applicant would note that NGVL have misinterpreted the collision risk and that a 14% increase relates to the increase across all routes transiting within the Hornsea Four Array Area Shipping and Navigation Study Area (10 nautical miles around the Hornsea Four Array Area) and not specifically to the routes transiting through the gap. The Applicant would also note that based on an assessment of 28 days of marine traffic data (undertaken as part of the Navigational Risk Assessment) from both 2019 (pre Hornsea Project Two) and 2020 (post Hornsea Project Two (constructing)), traffic numbers at the northwestern tip

of Hornsea Project Two were 5.3 vessels per day post Hornsea Project Two (current realistic values) compared with 5.9 vessel per day post Hornsea Four (future scenario) including vessels displaced from the Hornsea Four array area that may use the gap. It is noted that Hornsea Project Two was consented at the time NGVL undertook their Cable Burial Risk Assessment and therefore the assessment should have considered vessels passing close to the northwestern tip of Hornsea Project Two. The NGVL Environmental Statement (Marine License Application MLA/2017/00106/4) noted that *'The Risk Based Depth Burial Report (2016) estimated that the probability that an anchor is dropped exactly on top of the cable is on average once per 83,000 years i.e., very unlikely. The likelihood of accidental anchoring is therefore very low, and the magnitude has been assessed as negligible'* and there is no evidence to suggest that an increase of 0.6 vessel per day would increase the likelihood of anchoring from once in 83,000 years to that of a significant level.

2.2 Viking Link – Written Representations (WRs) Submission ID9151 REP2-098

2.2.1 Introduction

2.2.1.1 ***NGVL Representation*** *- (2.1) Viking Link is a 1400MW electricity interconnector between the high voltage networks of Great Britain and Denmark, and is being developed and constructed by Energinet and National Grid Viking Link Limited. Viking Link is fully permitted in all jurisdictions, and awarded contracts in 2019 for the supply and installation of equipment based on an accepted risk position along the length of the project. Cable installation for Viking Link is currently taking place in the UK Sector and the project will be operational by end 2023 with an operational life of 40 years. Interaction between Viking Link and the Project*

2.2.1.2 **Applicants Response** – The information set out by NGVL in 2.2.1.1. above is noted by the Applicant.

2.2.1.3 ***NGVL Representation*** *- (2.2) In the initial plans shared with Viking Link by the Promoter, the Viking Link cables ran through the proposed site for the wind turbines. This interaction could easily have been managed by a crossing agreement. However, Viking Link were then made aware of a Structures Exclusion Zone (SEZ) which has been introduced by the Promoter. This SEZ forms a narrow gap of approximately two nautical miles between the Project and the Hornsea 2 wind farm and has been introduced to allow marine traffic to navigate between the wind farms as a direct route to the Harbour. The SEZ is directly above the Viking Link cable and allows a constrained route for the navigation of marine vehicles.*

2.2.1.4 **Applicants Response** – In the early iterations of the RLB there was no gap between Hornsea Two and the proposed Hornsea Four array however through the pre-application period the Order Limits were revised such that the southern boundary of the array area was moved to the north of Viking Link and a gap created between Hornsea Two and the proposed Hornsea Four. The decision to revise the boundary was as a result of stakeholder consultation. As such Viking Link's relevant representation is factually incorrect in that it refers to a "Structures Exclusion Zone" when this proposal was not progressed. The gap referred to is between the southern boundary of Hornsea Four and the northern boundary of Hornsea Two. Therefore, Viking Link is outside the proposed Order Limits of Hornsea Four.

Reference to a "Crossing Agreement" is irrelevant because no infrastructure associated with Hornsea Four will cross Viking Link. As per paragraph 2.1.1.2 above, the Hornsea 4 gap was developed in consultation with shipping and navigation regulators and users, and a detailed safety case is presented in **A5.7.1 Environmental Statement Volume A5 Annex 7.1 Navigational Risk Assessment (APP-081, APP-082 and APP-083)**. The **Maritime and Coastguard Agency (MCA) Deadline 2 Submission (REP2-078)** states the MCA has reviewed the NRA and is satisfied with the conclusions for shipping transiting through the gap between the two arrays. The MCA also note that the list of proposed risk controls in section 19.3.10 in **APP-082** is accepted as

appropriate. The list of proposed risk controls during construction and maintenance in section 23 of **APP-082** is also appropriate.

2.2.1.5 ***NGVL Representation*** *- (2.3) NGVL first noted concerns in relation to the proposed SEZ in September 2020.*

2.2.1.6 **Applicants Response** – The Applicant first communicated the concept of a SEZ with NGVL in March 2020.

2.2.1.7 ***NGVL Representation*** *- (2.4) The workshop at which the SEZ seems to have been formalised was advertised as a 'workshop for shipping stakeholders'. As NGVL is not a shipping stakeholder, and it had requested the relevant information prior to the workshop but did not receive anything, it did not attend this meeting. In-deed the email stated the Hazard Workshop will be an opportunity to discuss issues relating to the safety of navigation for shipping and navigation users (vessels and routing), with impacts affecting other users such as oil and gas platforms and helicopters being considered under separate and focused consultation. Following the meeting, NGVL asked a number of times for the proposed new red line to be provided so that it could consider its position.*

2.2.1.8 **Applicants Response** – On 15th May 2020 NGVL was invited to take part in a Hazards Workshop to discuss Shipping and Navigational Risks. The concept of a SEZ was considered by various stakeholders attending the workshop. Although invited NGVL chose not to attend the Shipping and Navigational Risk Hazard Workshop. The SEZ was not formalized at the Hazard Workshop however participants views were discussed, noted and considered. The attendees were not limited to shipping and navigation users only. The Applicant had invited all parties for which the Workshop held relevance, including NGVL. Soon after the Workshop on 3rd June 2020, the Applicant shared the notes arising out of the workshop with NGVL seeking their comments on the notes issued. The revised RLB was agreed by the Hornsea Four Steering Committee, the resulting plan was issued to NGVL on 21st July 2020.

2.2.1.9 ***NGVL Representation*** *- (2.5) There was considerable delay in providing the correct technical information to NGVL to consider. Further, in updating PINS of the change in the Project boundary, NGVL's position was misrepresented. The meeting note states that 'The Applicant confirmed that oil and gas stakeholders had been broadly in agreement on this change and that the Viking Link interconnector also supported it'. (This has since been corrected by PINS). This clearly acknowledges that NGVL is an important stakeholder in relation to this change but the decision Orsted made to adopt this boundary change was taken prior to NGVL being provided with the requested information. Viking Link Interconnector as a direct result of the presence of the Project and this SEZ which has been introduced between the Project and Hornsea 2.*

2.2.1.10 **Applicants Response** – The Applicant acknowledges that a document submitted to PINS and referring to NGVL was amended as soon as the error was identified. This was not an intentional misrepresentation made by the Applicant.

The Applicant provided NGVL an opportunity to comment on the notes arising out the Hazard Workshop on 03/06/2020 prior to the amendment of the Order Limits. As referred to above a SEZ has not been introduced but a gap created between Hornsea Two and the proposed Hornsea Four array area as a result of the revised Order Limits.

2.2.2 Increased Risk to the Viking Link Cable as a result of the Project

2.2.2.1 ***NGVL Representation*** *- (2.6) Viking Link believe that that a section of the Viking offshore cable route would be subject to a higher risk of anchor strike and vessel sinking over the design lifetime of the Viking Link Interconnector as a direct result of the presence of the Project and the SEZ which has been introduced between the Project and Hornsea 2.*

2.2.2.2 **Applicants Response** – On 7th April 2021 the Applicant first requested a copy of NGVL's Cable Burial Risk Assessment (CBRA). To date the Applicant has not seen NGVL's Cable Burial Risk

Assessment (*Risk Based Depth Burial)* regardless of numerous requests and therefore cannot comment on specific values. However as per the **Maritime and Coastguard Agency (MCA) Deadline 2 Submission (REP2-078)** the MCA have reviewed the NRA and is satisfied with the conclusions for shipping transiting through the gap between the two arrays and outputs of consultation undertake as **A5.7.1 Environmental Statement Volume A5 Annex 7.1 Navigational Risk Assessment (APP-081, APP-082 and APP-083)** do not indicate potential for significant increases in anchor strike or vessel foundering (sinking) following an anchor strike. This consultation included consultation with shipping and navigation users currently operating withing the area of the proposed gap.

2.2.2.3 ***NGVL Representation*** *- (2.7) The Promoter's Navigation Risk Assessment predicts that the risk of ship collision in the area is increased.*

2.2.2.4 **Applicants Response** - The **Maritime and Coastguard Agency (MCA) Deadline 2 Submission (REP2-078)** states the MCA has reviewed the NRA and is satisfied with the conclusions for shipping transiting through the gap between the two arrays. These include the increase in vessel collision risk which is typically for any development where routes are deviated. However as per paragraph 2.1.1.3, the Applicant would note that NGVL have misinterpreted the collision risk and that a 14% increase relates to the increase across all routes transiting within the Hornsea Four Array Area Shipping and Navigation Study Area (10 nautical miles around the Hornsea Four Array Area) and not specifically to the routes transiting through the gap. In terms of increases in collision risk the Environmental Statement noted that all impacts were within As Low As Reasonably Practicable (ALARP) or not significant level which for the gap was specifically confirmed by the **MCA in Deadline 2 Submission – Written Representation (REP2-079)** which noted '*MCA is content with the assessment and conclusions that it will not pose an unacceptable navigational risk*'.

2.2.2.5 ***NGVL Representation*** *- (2.8) In addition, any cable repair works in the area between the projects is subject to increased risk because of the constrained area and numbers of close ship passages.*

2.2.2.6 **Applicants Response** – The International Regulations for the Prevention of Collisions at Sea (COLREGS) (International Maritime Organization (IMO) 1972 as amended) specifically deal with vessels Restricted in their Ability to Manoeuvre (RAM) including those engaged in an operation for laying, servicing or picking up a submarine cable and therefore should NGVL require operations to be undertaken their RAM vessel(s) would have priority and be able to recommend safe passing distances to other vessels navigating within the gap. It is assumed as per good seamanship and offshore operations, Notice to Mariners would also be issued in advanced of any cable servicing operations to allow those other users opportunity to passage plan effectively and safely. As per 2.2.2.3 the MCA in their **Deadline 2 Submission – Written Representation (REP2-079)** note they are '*content with the assessment and conclusions that it will not pose an unacceptable navigational risk*'.

2.2.2.7 ***NGVL Representation*** *- (2.9) Damage to the Viking Link cable route would result in major disruption to this important interconnector which is essential to meeting the UK's energy commitments and to energy security.*

2.2.2.8 **Applicants Response** - The information set out by NGVL in 2.2.2.7. above is noted by the Applicant.

2.2.3 Suggested Mitigation

2.2.3.1 ***NGVL Representation*** *- (2.10) Viking Link consider that mitigation will be required to ensure that the risk to the Viking Link cable from the Project is limited. It is considered that this mitigation could*

consist of rock placement over the Viking Link cable if this is required following survey, in addition to some form of traffic management (IMO routing measures).

2.2.3.2 **Applicants Response** – The Applicant continues to discuss NGVL's perceived requirement for rock placement over the Viking Link cable. In order to do so and in a correspondence dated 28th March 2022, the Applicant has requested more information as to assess the technical need for rock protection. Information being sought includes the average values for the three main parameters (depth, width and slope) for the burial trench for the section of Viking Link route that is located within the gap between Hornsea Four and Hornsea Two in addition to requesting MBES (Multi Beam Echo Sounder) data and images for this area.

The **Maritime and Coastguard Agency (MCA) Deadline 2 Submission (REP2-078)**, in their response to Examiner's questions 1 (ExQ1), stated the MCA has '*reviewed the NRA and is satisfied with the conclusions for shipping transiting through the gap between the two arrays'*. The MCA also note *'that the list of proposed risk controls in section 19.3.10 in APP-082 is accepted as appropriate'.*

The MCA also note in their **Deadline 2 Submission – Written Representation (REP2-079)** that 'if the project receives Ministerial development consent, MCA will give consideration for proposing an International Maritime Organisation (IMO) Recommended Route between Hornsea 4 and Hornsea 2 to show the expectations for complying with the International Regulations for Preventing Collisions at Sea (COLREG) when vessels transit through the gap. This would be marked on navigation charts to show it is a narrow channel. The process for introducing a Recommended Route in UK waters is led by the MCA who will make the appropriate consultations and proposals to the UK Safety of Navigation Committee' but that in the absence of that IMO Recommended Route that 'the recommended risk controls are accepted for ensuring the risks are As Low As Reasonably Practicable (ALARP)'. In other words, a "Recommended Route" is in effect guidance, which may assist mariners, but even in the absence of that, the MCA is satisfied with the level of risk.

2.2.3.3 ***NGVL Representation*** *- (2.11) Viking Link have been engaging with the Promoter and are keen to continue this engagement with a view to finding a mutually agreeable solution to allow both projects to come forward safely and effectively*

2.2.3.4 **Applicants Response –** The Applicant continues to engage with NGVL.

2.3 Viking Link – Responses to comments on Relevant Representations (RRs) Submission ID9151 REP2-099

2.3.1.1 ***NGVL Representation*** *- (3.1) Viking Link were pleased to note that the Applicant understands the concerns in relation to the Project and are confident in reaching a commercial agreement. Viking Link look forward to further productive negotiations with the Applicant in this regard.*

2.3.1.2 **Orsted Response** - The Applicant looks forward to receiving the technical information requested from NGVL to assist in ongoing discussions.