East Anglia ONE North and East Anglia TWO Offshore Windfarms

Submission of Oral Case

Issue Specific Hearing 4 on 19th and 20th January 2021: Onshore Environment, Construction, Transport and Operational Effects

Applicants: East Anglia TWO Limited and East Anglia ONE North Limited
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Applicable to East Anglia ONE North and East Anglia TWO

Revision Summary				
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Description of Revisions			
Rev	**Page**	**Section**	**Description**
001	n/a	n/a	Final for Deadline 5 submission

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Glossary of Acronyms

AIL	Abnormal Indivisible Load
BEIS	Department for Business, Energy and Industrial Strategy
CfD	Contracts for Difference
DCO	Development Consent Order
ExA	Examining Authority
FoS	Factor of Safety
HVAC	High voltage alternating current
HVDC	High voltage direct current
ISH	Issue Specific Hearing
NE	Natural England
NPS	National Policy Statement
O&M	Operation and maintenance
SoCG	Statement of Common Ground
SuDS	Sustainable Drainage System

Glossary of Terminology

Applicants	East Anglia ONE North Limited and East Anglia TWO Limited
East Anglia ONE North project	The proposed project consisting of up to 67 wind turbines, up to four offshore electrical platforms, up to one construction, operation and maintenance platform, inter-array cables, platform link cables, up to one operational meteorological mast, up to two offshore export cables, fibre optic cables, landfall infrastructure, onshore cables and ducts, onshore substation, and National Grid infrastructure.
East Anglia TWO project	The proposed project consisting of up to 75 wind turbines, up to four offshore electrical platforms, up to one construction, operation and maintenance platform, inter-array cables, platform link cables, up to one operational meteorological mast, up to two offshore export cables, fibre optic cables, landfall infrastructure, onshore cables and ducts, onshore substation, and National Grid infrastructure.
National Grid infrastructure	A National Grid substation, cable sealing end compounds, cable sealing end (with circuit breaker) compound, underground cabling and National Grid overhead line realignment works to facilitate connection to the national electricity grid, all of which will be consented as part of the proposed East Anglia TWO project Development Consent Order but will be National Grid owned assets.
National Grid substation	The substation (including all of the electrical equipment within it) necessary to connect the electricity generated by the proposed East Anglia TWO / East Anglia ONE North project to the national electricity grid which will be owned by National Grid but is being consented as part of the proposed East Anglia TWO project Development Consent Order.
Projects	The East Anglia ONE North project and the East Anglia TWO project.

1 Introduction

1. This document is applicable to both the East Anglia ONE North and East Anglia TWO Development Consent Order (DCO) applications (the Applications), and therefore is endorsed with the yellow and blue icon used to identify materially identical documentation in accordance with the Examining Authority's (ExA) procedural decisions on document management of 23 December 2019. Whilst for completeness of the record this document has been submitted to both Examinations, if it is read for one project submission there is no need to read it again.

2. The Issue Specific Hearing 4 for the Applications were run jointly and took place virtually on 19th January 2021 at 2:00pm and on 20th January 2021 at 10:00am (Hearings).

3. The Hearings ran through the items listed in the agendas published by the ExA on 8th January 2021. The Applicants gave substantive oral submissions the Hearings and these submissions are set out within this note.

4. Speaking on behalf of the Applicants were:

    a. Mr Colin Innes, partner at Shepherd and Wedderburn LLP;

    b. Miss Stephanie Mill, senior associate at Shepherd and Wedderburn LLP;

    c. Mr Brian McGrellis, onshore consents manager at ScottishPower Renewables;

    d. Mr Dave Gibson, lead cables package manager at ScottishPower Renewables;

    e. Mr Nick Cooper, technical director at Royal HaskoningDHV;

    f. Ms Claire Smith, principal environmental consultant at Royal HaskoningDHV;

    g. Ms Charlotte Goodman, senior air quality consultant at Royal HaskoningDHV;

    h. Mr Alasdair Baxter, associate noise consultant at ITPEnergised;

    i. Mr Fraser McDermott, principal environmental consultant at Royal HaskoningDHV;

    j. Ms Helena Wicks, senior flood risk consultant at Royal HaskoningDHV; and

k. Mr Andrew Ross, transport planning technical director at Royal HaskoningDHV.

2 Agenda Item 2: Energy White Paper: Powering Our Net Zero Future

2.1 Introduction to the Energy White Paper

5. The Applicants consider that the Energy White Paper provides very strong policy support for the delivery of the Projects both in terms of direct policy and also economic benefits that would derive from their implementation. These matters are both front and central to the Energy White Paper in that offshore wind is given very specific status and also the economic benefits associated with the technology are singled out for both support from Government and commitment from the industry itself.

6. The Energy White Paper builds upon Government policy announcements which have emerged since the election of the current Government in December 2019.

7. At Issue Specific Hearing 5 on 21st January 2021 (ISH5), Mr Ovens, on behalf of the Applicants, explained how the Applicants' parent company had reacted to the changes in Government policy. It too has sought to intensify and bring forward the deployment of its offshore schemes and has engaged early with the supply chain through the concept of the East Anglia Hub. This response is entirely consistent with the messaging and the tone of Government policy in relation to these matters.

8. The Applicants do not propose to go through all parts of the Energy White Paper, but do wish to highlight certain key passages which are of particular relevance to the applications. The Applicants will also, where applicable, identify the extent to which the current National Policy Statements (NPS) in relation to energy are consistent with what has been promoted within the Energy White Paper.

9. Page 55 of the Energy White Paper confirms that the NPS will be updated by the end of 2021. It confirms that the current NPS remain relevant in so far as the need for energy infrastructure is concerned and therefore continue to provide a proper basis on which the planning inspectorate can examine and decisions be taken.

10. Page 4 of the Energy White Paper acknowledges that we are on the cusp of a global green revolution and that the strategy is to have an energy system that:

    a. Transforms energy

    b. Supports green recovery

c. Creates a fair deal for consumers

11. This shows the challenge and the speed of change that will be required. The Applicants would also wish to highlight the employment opportunities that offshore wind brings through the sector deal and this is reflected on page 11 of the introductory chapter of the White Paper. Key commitments are set out on pages 16 and 17. Offshore wind is the critical technology to transform energy and the economic importance of growing the green economy is reflected within the Overview of Key Commitments for the Energy White Paper as a whole.

2.2 Chapter 2 of the Energy White Paper - Power

12. This is the key policy Chapter in respect of offshore wind in that it explains the rationale for the significant increase in target that has previously been announced for the offshore wind sector. Key passages at the outset of the Chapter provide direct policy support for the Projects. This includes:

a. Our Goal "*Electricity is a key enabler for the transition away from fossil fuels and decarbonising the economy cost-effectively by 2050*"

b. The Government commits to:

i. "*accelerate the deployment of clean electricity generation through the 2020s*"

ii. "*ensure that the transformation of the electricity system supports UK jobs and new business opportunities, at home and abroad*".

13. In terms of the Power Chapter, the text supporting the "key commitments" is set out on page 45 and again highlights the critical nature of the Government's commitment to the offshore sector:

"*Our actions are a strong signal to project developers and the wider investment community about the government's commitment to delivering clean electricity. This should stimulate the continued deployment of key low-carbon technologies in the near term*."

14. It then reflects the ambition for offshore, but also the particular role of Contracts for Difference (CfDs) and the importance of the forthcoming CfD auction rounds in 2021 and beyond. The critical issue for those rounds is having sufficient consented generation to ensure competition within those auction rounds. As we can see, the critical aspect to this is that we will need sustained growth in the capacity of these sectors in the next decade to ensure that we are on the pathway that allows us to meet the net zero emissions in all demand scenarios.

15. In terms of the economic benefits, this is particularly highlighted on page 55 of the Energy White Paper under the heading, "The Economic Benefits of Clean

Electricity". This sets the challenge to the industry of achieving a target of 60% UK content on offshore wind projects by 2030 and that this will be delivered through requirements for the CfD supply chain plan process. It identifies also that the Government will seek to invest in the growth of the UK's manufacturing infrastructure to help support jobs and identifies the key role in growing employment and skills and again this will be delivered through the CfD supply chain plans. The Government's commitment to investment in the sector is further set out on page 56. This discloses that the Government have committed further funds to support the offshore wind manufacturing sector.

16. These key passages of the Energy White Paper deliver strong support for the Projects and are also consistent with relevant sections of NPS EN-1. This sets out at paragraph 3.3.10 the specific role of renewable energy generation set out in section 3.4. In terms of the employment benefits, paragraph 4.1.3 of EN-1 confirms the need to take account of the potential benefits in meeting the contribution to need, the need for energy infrastructure and job creation and longer term wider benefits. This is also reflected in section 5.12 of EN-1 and in particular, the fact that parts 2 and 3 of EN-1 set out national level socio-economic impacts.

17. At ISH5, Mr Jordan, for the Applicants, set out the clear benefits that had already accrued to the local and national economy arising from the delivery of the East Anglia ONE (EA1) offshore windfarm project. He explained how the EA1 project had developed skills, opportunity and stimulated the supply chain in the East of England. He demonstrated how the Applicants had also worked with their O&M operator, Siemens, to provide direct apprenticeships in the O&M sector.

18. Mr Ovens, on behalf of the Applicants, confirmed that he had been appointed the project director of the East Anglia Hub. In response to Government announcements, it had been proposed to establish the East Anglia Hub which brings together the three projects; East Anglia Three offshore windfarm (already consented) and the Projects into a single procurement and delivery programme. The purpose of this was to deliver the projects whilst also seeking to reduce the overall cost of offshore wind and associated benefits to the consumer. In addition, by bringing forward the projects in this manner, it would provide a stimulation to the UK supply chain thereby creating employment and opportunity both locally and within the wider UK supply chain.

19. During the course of the Examination, the Applicants have made reference to the fact that they have had ongoing engagement with the supply chain. This has already resulted in the reduction of a number of the Rochdale Envelope parameters and these in turn have reduced the environmental effects of the Projects. This is one of the by-products of an early engagement with the supply

chain, but also the Applicants are seeking to support the development of the wider supply chain.

20. At Deadline 4, the Applicants submitted a ***letter from Siemens Gamesa Renewable Energy Limited*** (REP4-030) which confirmed that they had been selected as the preferred bidder to supply and install the turbines for the East Anglia Hub projects. Siemens Gamesa had previously been involved in the delivery of EA1 and their involvement in the Projects would further build upon the local network which already exists. Siemens Gamesa are a major investor in the UK and have over 2,000 employees based across various sites in the UK. It has invested over £310m to develop the Green Port Hull facility. This is directed towards the production of turbine blades and this allows Siemens Gamesa to maximise the UK supply chain. As they conclude in their letter, the opportunity developed through the East Anglia Hub would enable it to build upon their wider investment in the UK and also to further development at their local base within East Anglia. This demonstrates how the Applicants are seeking to deliver their projects in a way that maximises the benefits to the UK supply chain and to provide competitive schemes which are required for effective auction rounds.

21. All the above matters are supported both by policy contained in EN-1 and EN-3 and gain support from the Energy White Paper as well (page 55-Economic Benefits).

2.3 Grid Connection

22. The Applicants do not propose to rehearse their submissions on the BEIS review which have already been submitted in respect of the Rule 17 Letter. A key part of the BEIS review is anticipated to redesign the current regime in the 2030s.

23. In terms of the Hearings, there was considerable focus on one sentence from the Energy White Paper, "*In order to start delivering these benefits, we will encourage projects already in development, where early opportunities for coordination exist, to consider becoming pathfinder projects*". The intention is this will help them form the design of the enduring regime. There has been some discussion as to exactly what "*in development*" means. On one level it could easily be projects that are currently being formulated. In that regard, the Government will be aware that the Crown Estate leasing round is currently proceeding and that there are also extension sites being progressed. These projects could easily be described as being 'in development'. An alternative interpretation is that any development that has not commenced could be perceived as 'in development'. No doubt the Government, when considering the outcome of the BEIS review and the formulation of the NPS later in the year, may give a clearer indication of this.

24. However, there are already indications from a number of sources that it is not anticipated that the BEIS review could automatically be applied to projects in an

advanced stage of the planning process. In that regard, the Applicants would refer the ExA to the ***Applicants' Comments on Written Representations, Volume 3, Individual Stakeholders*** (REP2-017) – the letters from the then Minister to SASES and SEAS. In addition, the Applicants also refer to the advice from Ofgem provided in response to the Rule 17 Letter (***Response to ExA's Further Written Questions 16 December 2020*** (REP4-096). In addition, the Secretary of State in the Hornsea Project Three decision letter[1] at paragraph 18.23 (there are two paragraphs with the same numbering and this is a reference to the later one) provides further confirmation that the existing policy will continue to apply and the review is looking to connection opportunities post 2025.

25. Another key part of the sentence is that it applies "*where early opportunities for coordination exist*". The Applicants have already addressed the ExA on the various technology issues associated with grid connection. The Projects have been assessed through the CION process and, given their proximity to landfall, these Projects squarely fit within the HVAC technology preference. Mr Green, for the Applicants, has already explained at Issue Specific Hearing 2 on 2nd December 2020, the very significant cost differential between the two grid technologies. The Government, in the Energy White Paper on page 80 and in other papers, illustrate the potential for hybrid/multipurpose interconnectors. Their references to such technologies acknowledge that they are more likely to be relevant to offshore windfarms which are located further from shore and which are more likely to potentially utilise HVDC technology.

26. The Applicants therefore do not consider that the Projects are likely to be suitable for an early opportunity for co-ordination. Some interested parties have characterised this as the Applicants being unwilling to participate in "pathfinder" opportunities. This is not accurate. The Applicants have set their view as to whether the projects are likely to be suitable candidates. The NGESO confirmed in their Rule 17 response that the optioneering and scope of the early response has yet to take place and was unlikely to be completed by the end of the examination. The Applicants' response on this matter is based on a careful review the material considered and presented through ONTR process and the Government's responses.

[1] Hornsea Project Three's Secretary of State Decision Letter dated 31 December 2020 is available at: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010080/EN010080-003265-EN010080%20Hornsea%20Three%20-%20Secretary%20of%20State%20Decision%20Letter.pdf

3 Agenda Item 3: Landfall and Coastal Processes

3.1 Outline Landfall Construction Method Statement

27. Requirement 13 of the draft DCO (APP-023) requires the preparation of a Landfall Construction Method Statement and states:

"*(1) No part of Work Nos. 6 or 8 may commence until a method statement for the construction of that part of Work No. 6 or Work No. 8 has been submitted to and approved by the relevant planning authority.*

(2) The method statement referred to in paragraph (1) must be implemented as approved."

28. An ***Outline Landfall Construction Method Statement*** (REP1-042) was submitted to the Examinations at Deadline 1 which provided information on geotechnical investigations to be undertaken. The Applicants will be submitting an updated outline landfall construction method statement at Deadline 6 to reflect the parallel ducting commitment, to confirm that HDD is the selected installation method to be used at the landfall and to incorporate any other necessary updates.

3.2 Proposed Method(s) of Installation

29. The HDD solution is now common practice for installation of cables and pipelines at landfalls worldwide and is very suited for the works proposed at the landfall in respect of the Projects. It is an established and reliable solution for cable and pipeline landfalls. There are a small number of specialised contractors who carry out this work due to the specialist nature of the work. These contractors work on a global basis delivering high quality installations through a variety of ground conditions.

3.2.1 Selection of HDD

30. Prior to submission of the Applications, the Applicants, supported by Wardell Armstrong and Riggall and Associates as specialist advisors, identified HDD as the most likely form of trenchless technique for bringing the offshore cables ashore. In order to maintain optionality, the DCO Applications were made on the basis of a trenchless technique at the landfall which allowed for HDD and a small number of HDD variants. Since then, the Applicants have further progressed the preliminary design and undertaken further supply chain engagement and, at Deadline 3 confirmed that a HDD solution would be progressed at the landfall. This commitment has been secured within the draft DCO submitted at Deadline 5.

31. Further preliminary designs were progressed by the Applicants in 2020 which confirms the feasibly of the HDD installation as being an effective and deliverable solution whilst also minimising the potential for impacts.

32. HDD has been used as the landfall solution by the Applicants' parent company and other developers in respect of other offshore wind projects in the area, including East Anglia ONE, East Anglia THREE, Greater Gabbard and Galloper offshore wind projects, and are comparable in nature or in extent.

33. As part of the Applicants' supply chain engagement, LMP, a world leading landfall Contractor considered the HDD solution and concluded that there is no reason to state that it would not be possible to undertake landfall HDDs of the scale envisaged on the Project and that there is a good deal of information regarding the potential geology with which drills would have to contend.

3.2.2 Design

34. The Applicants have further progressed the preliminary design in 2020 utilising specialist consultants Arup and Riggall and Associates. This preliminary design indicates that a HDD bore depth of approximately 10 meters below the beach level, would ensure the integrity of the cliff is maintained throughout the HDD drilling. With this analysis, the Applicants are satisfied that the integrity of the cliffs will be maintained.

35. The Applicants will submit further details at Deadline 6 demonstrating the viability of HDD at the landfall.

36. The final HDD design will be undertaken post consent and will rely on inputs from onshore and offshore pre-construction site investigations as well as information from the detailed cable system design. The Applicants will use these site investigations to provide the detailed geological and soil property information required to undertake the detailed design of the HDD, influencing such matters as the precise HDD entry point; HDD bore alignment; HDD punch-out point; HDD rig specification; HDD drill bit specification; and bentonite mix, all of which will be selected to best suit the ground conditions and mitigation measures to ensure the stability of the cliffs on the shoreline, ensure protection of the aquifer, and protection of the Coralline Crag.

3.2.3 HDD Length

37. The HDD is anticipated to be approximately 1.5km but could be up to 2km in length and will be designed to reflect the outcome of site investigations and detailed design. In either case, an HDD of this length would be viable.

38. The Applicants will submit further details at Deadline 6 demonstrating the viability of a HDD up to 2km in length.

3.2.4 Benefits of HDD

39. The Applicants committed to a HDD at the landfall to avoid potential impacts on the Suffolk coastline as part of the embedded mitigation of the Projects. HDD allows the offshore export cables to be installed under the cliffs, beach and intertidal area without breaking open the ground and digging an open trench through these features. HDD technology is a low impact, well proven technology. The HDD entry pit will also be set back a distance of at least 85m from the cliff top to ensure the integrity of the cliff is not compromised and to allow for natural coastal erosion.

40. Specifically, the HDD is designed to:

    a. Avoid direct physical disruption to the nearshore Sizewell Bank;

    b. Avoid direct physical disruption to the visible extent of the Coralline Crag;

    c. Avoid direct physical disruption to the ness at Thorpeness;

    d. Avoid interruption of circulatory sediment transport pathways;

    e. Avoid disturbance to the alongshore sediment transport processes;

    f. Reduce the risk of suspended sediment (during construction) affecting the Sizewell B Nuclear Power Station's cooling water infrastructure;

    g. Avoid the need for cable protection measures in the intertidal and shallowest nearshore zones;

    h. Remove the need for cable protection measures on the seabed above the HDD;

    i. Avoid interaction with the beach at Thorpeness.

3.3 Coastal Change and the Integrity of the Cliffs

3.3.1 Coastal Change

41. Coastal change was considered at the outset of site selection and was a key matter for the Councils and the operators of the Sizewell B nuclear power station (Sizewell B) in particular. The Applicants have considered this matter through ***Chapter 4 – Site Selection and Assessment of Alternatives*** (APP-052), ***Chapter 7 – Marine Geology, Oceanography and Physical Processes*** (APP-055) and ***Appendix 4.6 Coastal Processes and Landfall Site Selection*** (APP-447).

42. Information on the Coralline Crag was provided by Sizewell B in Autumn 2017 from their survey work. The Applicants also held multiple meetings with Sizewell Band the Councils on coastal matters.

43. In addition, the Applicants held several meetings and workshops with members of the Expert Topic Group, Suffolk Coast Forum and the Council coastal engineers between November 2017 and April 2019.

44. Key considerations at the landfall are covered in ***Appendix 4.6 Coastal processes and Landfall Site Selection*** (APP-447) and are:

    a. The influence of coastal management and coastal change in relation to the proposed landfall site, specifically in relation to potential future erosion (which led to set-back distances);

    b. The construction-related effect of cable burial within the Sizewell-Thorpeness cable corridor on turbidity and erosion/ sedimentation at the cooling water intake and outfall of the Sizewell B nuclear power station;

    c. The effect of export cable burial (or protection) within the Sizewell-Thorpeness cable corridor on the baseline sea bed and shoreline morphology and physical processes.

45. The Applicants' understanding of the coastline is underpinned by consideration of the Shoreline Management Plan, which was produced by Royal HaskoningDHV in 2010.

3.3.2 Cliff Stability

46. The HDD operation is a slow process and does not cause significant vibration. This, coupled with installation at a depth of approximately 10 meters at the cliff toe, will ensure that the structure of the cliff is maintained.

47. The Applicant recognises the importance of ensuring the integrity of cliffs under which the HDD drill lines are routed, during construction and operation of the Project, and have therefore selected a HDD solution to bring the offshore cables ashore. The HDD technique avoids direct interaction with the coastal cliffs and will bore at such a depth under the coastal cliffs to control vibration within an acceptable tolerance.

48. The key measures to protect cliff stability are:

    a. The HDD entry pit locations onshore setback distance of at least 85m from the cliff top to ensure the integrity of the cliff is not compromised and to allow for natural coastal erosion during operation of the Projects;

b. Transition bays will be located a setback distance of at least 85m from the current mapped top of the cliff line;

c. Depth of the HDD below the cliff (outline design is approximately 10m below the beach level of the cliff);

d. Use of rotary rather than percussive drilling during HDD drilling;

e. Vibration monitoring at the coastal cliffs as part of the site investigation works to establish a baseline condition, followed by vibration monitoring during HDD drilling and adoption of HDD controls in the event of elevated vibration levels being detected.

3.3.3 Geotechnical Investigations

49. Given the information considered at the outset of the project, such as the published ground conditions and HDD contractor experience of similar projects, the Applicants have the utmost confidence on the viability and deliverability of the HDD at this location. Further information on this will be submitted by the Applicants at Deadline 6.

50. The final HDD design will be undertaken post consent and will rely on inputs from onshore and offshore pre-construction site investigations as well as information from the detailed cable system design. The Applicants will use these site investigations to provide the detailed geological and soil property information required to undertake the detailed design of the HDD, influencing such matters as the precise HDD entry point; HDD bore alignment; HDD punch-out point; HDD rig specification; HDD drill bit specification; and bentonite mix, all of which will be selected to best suit the ground conditions and mitigation measures to ensure the stability of the cliffs on the shoreline, ensure protection of the aquifer, and protection of the Coralline Crag.

3.4 The Potential Impact on the Coralline Crag Outcrop and Leiston-Aldeburgh SSSI

51. HDD avoids both the visible extent of the Coralline Crag (as published in ***Figure 7.7 – Offshore Cable Corridor and Landfall*** of the ***Environmental Statement*** (APP-109) and Leiston-Aldeburgh SSSI. The punch out area gives an arc of flexibility to achieve clearance of the visible extents of the Coralline Crag feature and depth of sand. The Environment Agency and Councils are content with this approach.

3.5 Potential Exposure of Structures and Remediation

3.5.1 Offshore Export Cables

52. In selecting a HDD solution to bring the offshore cables ashore, the Applicants have avoided the issues reported on other projects which used trenching

methods or short HDD/trenching methods at their respective landfall locations, which on occasion has resulted in exposure of their cables within the offshore cable route. This is due to the shallower depth of the cables installed by (or in part by) trenching. This is avoided on the beach and intertidal zone by the Applicants' use of HDD at the landfall.

3.5.2 Transition Bays

53. The Applicants have undertaken coast erosion studies as part of the Environmental Statement, and as stated in ***Chapter 4 of the Environmental Statement*** (APP-052) the Applicants have committed to setting back the landfall transition bays to (at least) the potential 100-year erosion prediction line (i.e. 85m from the cliff top).

54. Furthermore, in consultation with the Councils, the Applicants included Requirement 37 within the ***draft DCO*** (REP3-011) which specifically addresses the permanent infrastructure within Work No. 8 and the effects of coastal erosion, and states that:

> *"(1) After a period of 24 years but before the expiration of a period of 25 years following completion of construction of Work No. 8, the undertaker must submit a report to the relevant planning authority detailing the following—*
>
> *a) the extent of coastal retreat experienced following completion of construction;*
>
> *b) whether any remedial works or mitigation measures to protect Work No. 8 from coastal retreat have been required during this period, what these works comprised and an assessment of their impacts on coastal processes;*
>
> *c) the length of the anticipated remaining operational lifespan of the authorised project;*
>
> *d) the extent of the likely coastal retreat during the timeframe of the anticipated remaining operational lifespan of the authorised project and the likely need for, and nature of, any proposed remedial works or mitigation measures to protect Work No. 8 from coastal retreat and an analysis of their predicted impact on coastal processes; and*
>
> *e) any proposed remedial works or mitigation measures identified under paragraph (d).*
>
> *(1) If it cannot be demonstrated to the reasonable satisfaction of the relevant planning authority that, taking into account any proposals for such remedial works or mitigation measures, Work No. 8 will not have a significant impact*

on coastal processes then Work No. 8 must be decommissioned in accordance with Requirement 30 (onshore decommissioning).”

55. The Applicants have agreed in principle to undertake periodic monitoring at the landfall and are currently discussing the detail with East Suffolk Council. In the event that agreement is reached, the Applicants will consider the most appropriate way to secure this and will provide an update at Deadline 6.

4 Agenda Item 4: Onshore Construction and Operational Effects

4.1 Air Quality

4.1.1 Traffic and Transport

4.1.1.1 Mitigation and Controls on HGV Numbers and Euro Standards

56. The Councils consider that the Applicants should commit to either specifying a minimum percentage of HGVs to operate at a Euro VI standard or entering a Construction Traffic Management Group with suitable controls and monitoring of construction traffic and air quality.

57. The Applicants confirm that the ***Outline Construction Traffic Management Plan*** (REP3-032) and the ***Outline Travel Plan*** (REP3-036) include controls and monitoring to limit traffic flows to that assessed within ***Chapter 26 - Traffic and Transport*** (APP-074) and these outline plans provide detail on how such controls will be implemented in practice.

58. The Applicants are discussing how to progress this matter with the Councils.

4.1.1.2 Non-Road Mobile Machinery

59. The assessment presented in the Deadline 3 ***Air Quality Clarification Note*** (REP3-061) was based on the use of Stage IV plant. The note stated that the vast majority of plant used during construction would have an engine size between 130 and 560 kW. The Stage V emission standards provide regulation for engines <130 kW and >560 kW, and more stringent particulate emission factors for all plant. For plant in the engine size range 130 – 560 kW, there is no change to the NOx emission factor with the introduction of Stage V. Therefore, there would be few items of plant which would benefit from the reduced NOx emissions from Stage V standards. As such, the use of Stage V plant would not materially affect the predicted NOx concentrations or nutrient nitrogen or acid deposition values as a result of HDD works presented in the assessment, and therefore the commitment to Stage V plant is not considered to be required. With regard to plant deterioration, the calculation of emissions from Stage IV plant took into account the effect of engine deterioration on emissions; as such, this has already been considered within the predicted results. The assessment was based on a very conservative scenario with regard to the duration of plant usage, plant engine sizes and the location of emission sources in relation to ecological receptors. The Applicants will review the available information to identify possible updates to the ecological assessment in response to the points raised by ESC's

verbal comments in the oral hearing and Natural England's written rep at Deadline 3. If updates are required, these would be included in a Deadline 6 onshore ecology clarification note.

60. SEAS' air quality representative, Mr Redmore, queried that the assessment of emissions from NRMM on ecological receptors assumed that exhausts would be vertical and not horizontal, which may affect the results. The full written response from Mr Redmore will be reviewed following submission at Deadline 5.

4.1.2 Cumulative Impacts

61. The Applicants are in ongoing discussions with the Councils on this matter, particularly in relation to the contribution of the proposed Sizewell C project and the Projects to impacts within the Stratford St Andrew Air Quality Management Area (AQMA).

62. The Councils and their consultants are looking into the cumulative impacts to determine what level of mitigation may be required by each of Sizewell C and the Projects based on their respective contributions to cumulative impacts.

4.2 Noise

4.2.1 Construction

63. The construction works for the Projects will be undertaken in accordance with a Code of Construction Practice which will set out considerate construction practices to be adopted throughout construction to avoid noise and vibration impacts for nearby residents.

64. The Applicants maintain, strongly, their position that the construction noise assessment has been undertaken robustly.

4.2.2 Operation

65. Operational noise will be controlled, through appropriate mitigation, to levels where no significant impacts will be felt at any receptor. The Applicants have reduced the proposed limit to 32 LAeq (5 min) at any time at a free field location immediately adjacent to Woodside Cottages (SSR2) and Woodside Barn Cottages (SSR5 NEW), and 31 LAeq (5 min) at any time at a free field location immediately adjacent to Little Moor Farm (SSR3),

66. The in-phase combination effect (constructive interference) would occur in a vanishingly small number of cases, even the slightest offset between similar noise sources would destroy the effect. It is incorrect to say that this is particularly an issue with electrical infrastructure only; it can equally apply to any set of identical noise sources. This is reflected in the fact that no other Development Consent Order application has been required to assess such an effect, simply as it is highly improbable. The Applicants will ensure this matter is designed out through the detailed design process.

4.3 Light

4.3.1 Construction

67. The Artificial Light Management Plan is to be included in the final Code of Construction Practice approved by the relevant local authority before commencement of the works (Requirement 25 of the ***Draft DCO*** (to be submitted at Deadline 5, document reference 3.1)). It will include details of location, height, design and luminance of all floodlighting to be used, together with measures to limit obtrusive glare to nearby residential properties.

68. The site lighting will be positioned and directed to minimise nuisance to footpath users and residents, to minimise distractions to passing drivers on adjoining public highways and to minimise sky glow. Lighting spillage will then avoid or minimise impacts on ecological receptors, including nocturnal species.

69. Lighting will be limited to permitted working hours in low light conditions, with lower-level security lighting outside of these times.

4.3.2 Operation

70. Based on the mitigation described in Table 29.3 of ***Chapter 29 – Landscape and Visual Impact Assessment*** (APP-077), it is considered that any potentially significant visual effects relating to lighting at the onshore substations will have been mitigated through design.

71. Operational lighting requirements at the onshore substations would entail:

- The onshore substations would not normally be lit during hours of darkness;
- Security lighting around perimeter fence of compound: manually controlled;
- Car park lighting: as per standard car park lighting, manually controlled and possibly motion sensitive; and
- Repair / maintenance: task related flood lighting will be necessary for times of repair and maintenance.

72. No additional lighting is proposed along Grove Road or along the additional access roads within the onshore substation location.

73. An Operational Artificial Light Emissions Management Plan will be developed for the final design for the permanent infrastructure, as secured under the requirements of the draft DCO. The plan will detail any sensitive receptors, and describe the Operational Artificial Light Emissions Management Plan which will be implemented, including lighting requirements, positioning and hours of operation, alongside any monitoring and reporting which might be required.

74. External lighting would also be installed at the National Grid substation which would entail:

- General lighting around the perimeter fence and within the National Grid substation for the purposes of security and to provide adequate lighting levels for access and inspection of equipment; and
- Task related flood lighting within the National Grid substation which will be necessary from time to time during repair/maintenance activities.

75. The Applicants confirm that at night the onshore substation lighting will be switched off as the substations will be unmanned. The lights will only be used during periods where work is to be carried out, for example during maintenance and repair.

4.4 Flood Risk and Drainage

4.4.1 Flood Risk

76. The Applicants consider that the overall flood risk to the Projects is limited. At the landfall the Projects have committed to HDD. Therefore, there is no impact on flood risk above ground and no impact on the continued function of any coastal defences. Along the onshore cable route, the Projects are primarily located below ground once constructed and therefore there is minimal flood risk to or from the Projects.

77. Representation relating to flood risk relate primarily at the onshore substations and National Grid substation.

78. The Projects are not located at risk from fluvial flooding at the onshore substations or the National Grid substation as shown on Figure 20.3.1 of the Flood Risk Assessment (***Appendix 20.3 – Flood Risk Assessment*** (APP-496)).

79. The Level 1 Strategic Flood Risk Assessment (SFRA)[2] noted that British Geological Survey Susceptibility to Groundwater Flooding map shows the vast majority of the SFRA study area has a designation of "*Limited potential for groundwater flooding to occur*", except in some concentrated areas surrounding the watercourses where the designation given is "*Potential for groundwater flooding to occur at surface*". The onshore substations and National Grid infrastructure are located within the area shown as having a "*Limited potential for groundwater flooding to occur*".

80. On this basis the main flood risk in this location was identified as being associated with surface water flooding which also affects the village of Friston downstream

[2] East Suffolk Council (April 2018), Level 1 Strategic Flood Risk Assessment, available at: https://www.eastsuffolk.gov.uk/planning/planning-policy-and-local-plans/waveney-local-plan/local-plan-background-studies/strategic-flood-risk-assessment-level-1-april-2018/

(Figure 20.3.3 of the Flood Risk Assessment (***Appendix 20.3 – Flood Risk Assessment*** (APP-496)).

4.4.2 Recent Flooding Events

81. The Applicants are aware of the recent surface water flooding in Friston and the Applicants have been provided with photos, videos and description of the event by Suffolk County Council. A site walkover was carried out shortly after the event with Suffolk County Council and the Applicants, on 19th November 2019. This included a review of the areas that had been subject to flooding as well as a general site walkover. Information on the recent flooding events in winter 2019 is presented in a Surface Water Management Plan (SWMP) produced by BMT and commissioned by Suffolk County Council, in its role as the Lead Local Flood Authority (LLFA), and this report was reviewed by the Applicants. Section 4.1 (Flow Routes) of the SWMP provides a detailed description of flow routes that affect Friston, focusing on those that were observed in the winter 2019 events.

82. As noted in the SoCG with the Councils, flood events in the Friston area, resulting from overland flow that occurred during late 2019 – early 2020 was a result of multiple flow paths and not a direct result of surface water runoff from land associated with the proposed site of the onshore substation or the National Grid infrastructure.

4.4.3 Existing Watercourses

83. It was detailed in the Hearings that the watercourse in the vicinity of the National Grid substation would be routed to the north of the National Grid substation, within the Order limits. The dimensions and precise location will be confirmed during the detailed design of the substations and submitted as part of the Operational Drainage Management Plan.

84. Suffolk County Council also referred to the removal of an existing depression in the land (approximately 15 – 20m in diameter) which acts as a soakaway, due to the routing of the operational access road. The Applicants confirmed at the hearing, that in the event that this was removed (the need for such removal being established at the detailed design stage), the storage capacity offered by this depression would be replaced by the Applicants.

4.4.4 Outline Operational Drainage Management Plan

85. The Applicants submitted the most recent version of the ***Outline Operational Drainage Management Plan*** (REP4-003) at Deadline 4. Additionally at Deadline 4, the Applicants submitted an updated ***SuDS Infiltration Clarification Note*** (REP4-044). Both these documents were prepared to account for a reduction in the footprint of each of the onshore substations (as summarised in the ***Project Update Note*** (REP2-007) submitted at Deadline 2).

86. It should be noted that the Applicants will submit an updated Outline Operational Drainage Management Plan at Deadline 6 which will incorporate further detail on the consideration given by the Applicants to an infiltration based drainage scheme (superseding the ***SuDS Infiltration Clarification Note*** (REP4-044) submitted at Deadline 4). The Applicants are also reviewing the Deadline 4 comments made by SCC regarding the Outline Operational Drainage Management Plan and these will be accounted for within the updated document.

4.4.5 SuDS Hierarchy

87. Suffolk County Council consider that the onshore substations and National Grid substation should be drained by infiltration only in accordance with the SuDS hierarchy. Whilst the Applicants are committed to using infiltration as part of the surface water drainage design, where possible, it is noted that the hierarchy is based on principles to discharge as high up the SuDS hierarchy as possible. The hierarchy is not premised on a single solution, rather a set of criteria that can be combined to create an efficient and effective surface water solution. The Applicants have followed the hierarchy in the adoption of a combined infiltration and direct discharge strategy which is designed to meet the existing discharge rates to the Friston Watercourse, as reasonably practicable, and the Applicants will consider these during detailed design.

4.4.6 Ground Investigations and Infiltration Testing

88. Suffolk County Council consider that infiltration testing should be carried out before the Projects obtain consent. However, carrying out infiltration testing will comprise one element of a large programme of ground investigation surveys which are required to develop the detailed design. This suite of investigations are required to confirm detailed ground conditions and obtain infiltration rates to be carried out post-consent as this will feed into a number of elements of the design and is not necessary for the consent stage of such nationally significant infrastructure projects.

5 Agenda Item 5: Onshore Traffic and Transport

5.1 Regional Issues and Effects Including Ports and AIL

5.1.1 Friday Street Junction

89. The Applicants' have engaged with the Councils to develop a scheme that would further improve the current road safety baseline with the objective of alleviating concerns relating to the existing junction, which would also assist in managing construction traffic. This has culminated in an agreement with the Councils for the Applicants to introduce a traffic signal scheme, a commitment for which will be included within an updated Outline Construction Traffic Management Plan.

90. A Traffic and Transport Clarification Note has been submitted at Deadline 4 (***Deadline 4 Traffic and Transport Clarification Note*** (REP4-027)) that sets out the details of this traffic signal scheme.

91. Suffolk County Council and East Suffolk Council agree in principle that traffic signals at the junction would address their concerns regarding the existing junction arrangements and the Projects' use of the junction during construction.

92. The Road Traffic Regulation Act 1988, places a duty on local highway authorities to take such measures as appear to the authority to be appropriate to prevent accidents, including the dissemination of information and advice relating the use of roads. In carrying out this duty SCC currently shares accident data with the Police in the form of 'STATS 19' data. STATS 19 is a nationally agreed structure whereby a Police officer attending a road traffic injury accident notes specific data relating to highway conditions, vehicles, casualties and makes a judgement on causation factors. This data is then submitted to a national database which Police and highway authorities have access to. The data base is updated constantly and can be interrogated at any time.

93. STATS19 data for the Friday Street junction will continue to be available to the Local Highway Authority and the Applicant considers that no further general monitoring of accidents at this junction is required. In line with Section 4.2 of the ***Outline Construction Traffic Management Plan*** (REP3-032) the Applicants will adopt a 'near miss' reporting system for all highways incidents involving the Projects' construction vehicles and, with any accidents or near misses recorded and reported to the Local Highway Authority.

94. The Applicants intend to enter into a Section 278 Agreement under the Highways Act 1980 in order to deliver the traffic signal works. Discussions with the Councils are ongoing regarding the detail of these arrangements and the timing of the works.

5.1.2 AIL Strategy

95. Paragraph 80 of ***Chapter 26 – Traffic and Transport*** (APP-074) details a total of two AIL transformer deliveries per project (a total of four deliveries over both Projects). These loads are transported from the origin port to site by special order vehicles under Police Escort. ***Appendix 26.3*** - ***Abnormal Indivisible Load Access to the Proposed East Anglia TWO and Proposed East Anglia ONE North Offshore Windfarm Substation*** (APP-530) contains an AIL route strategy developed in consultation with the Ports, Highway England, Network Rail and Suffolk County Council for Port origin of either Felixstowe or Lowestoft (Lowestoft being Highways England's preferred route).

96. Highways England designates Heavy Route 100 (HR100) and includes the A12, B1122 and Lover's Lane / Sizewell Gap between Lowestoft and the Sizewell B nuclear power station. The final leg of the AIL journey from the B1122 to the Friston sub-station site (via B1069 and B1121) does not have a Heavy Route designation. The Applicants have discussed the process to extend the current grid network with Highways England, who advised that it is not currently minded to include additional routes to the highway and heavy load grid map.

97. The entire AIL routes have been subject to a detailed assessment by heavy hall specialist Wynns. ***Appendix 26.3*** - ***Abnormal Indivisible Load Access to the Proposed East Anglia TEO and Proposed East Anglia ONE North Offshore Windfarm Substation*** (APP-530) details this assessment and contains the temporary measures required to facilitate the loads.

5.1.3 Network Rail have advised that their Bridge on the A1094 (Reference ESK/B/444) is unable to accommodate the proposed loads and substantial remedial works would be required. Given the extent of works required for this option and the existence of alternative viable routes, use of this bridge has therefore been discounted.

5.1.4 Non Special Order Abnormal Loads

98. There is also potential for a number of smaller abnormal loads movements (e.g. plant movement and cable drums). This is set out in a clarification note submitted to the Examination at Deadline 1 (***Traffic and Transport Clarification Note*** (REP1-048)) and confirms a peak of three abnormal load movements per day (for two months) and average of less than one movement for the remaining Projects' duration. The majority of these loads would be transported by a 'standard' HGV (similar to static caravans). As for all abnormal loads, these movements would follow established processes known as the Electronic Service Delivery for Abnormal Loads. It is not considered these abnormal loads cause a significant delay on the highway network.

5.1.5 Operational Traffic Demand

99. The transformers are designed not to fail and should not need to be replaced during the lifetime of the Projects. Any replacement would be due to an unplanned failure / emergency only and would be a rare event. Routine maintenance would not require the replacement or removal of the transformers or cables.

100. It is therefore expected that once the transformers and cables are installed, there would be no requirement for AIL movements for the lifetime of the Projects. Notwithstanding, should there be a requirement for AIL movements, the routes to be used would be re-assessed and agreed with stakeholders through the established processes known as Electronic Service Delivery for Abnormal Loads. Failure of a transformer would require approximately 12 to 24 months to source and manufacture a replacement, providing adequate time for delivery arrangements to be agreed with relevant parties.

5.2 Local Issues and Effects – Construction and Operation

5.2.1 Road Safety Assessment

101. The Applicants' approach to assessing the potential impacts upon road safety was determined with the Councils and Highways England during pre-application engagement. The approach involves detailed consideration of collision clusters and collision rates utilising Police (Stats 19) records to determine user groups (including cyclists and HGVs) and causation factors. This is detailed within section 26.5.4 of ***Chapter 26 – Traffic and Transport*** (APP-074).

102. Only those sites that were evidenced as having a pattern of accident that could be exacerbated by the Projects traffic were assessed for significant impacts.

103. Suffolk County Council confirmed they are satisfied with the approach to the road safety assessment in their response to the ExA's Written Questions (ExQ1) Q1.18.9 (REP1-188).

5.2.2 Driver Delay Assessment

104. Engagement with Highways England and the Councils during the development of the application ***Environmental Statement - Appendix 26.1 – Traffic and Transport Consultation Response*** (APP-527) examined all junctions within the Traffic and Transport study area to identify junctions and roads (links) that were susceptible to driver delay (congestion) and therefore particularly sensitive to changes in traffic flow. Accordingly, these areas were subject to detailed capacity assessment as presented in sections 26.6.1.11 and 26.7.2.1.1.3 of ***Chapter 26 - Traffic and Transport*** (APP-074) and section 26.1.3.6 of ***Environmental Statement – Appendix 26.2 – Traffic and Transport Cumulative Impact Assessment with the Proposed East Anglia ONE North / East Anglia TWO Project*** (APP-528). Areas that have not been identified as sensitive to traffic flow

are considered to be of negligible sensitivity and therefore any impacts would not be significant.

5.2.3 HGV Movement Strategy

105. Section 2.1 of the ***Outline Access Management Plan*** (REP3-034) describes the Projects' 'Access Strategy'. This section of the ***Outline Access Management Plan*** (REP3-034) explains in detail the factors determining the choice of access location. In summary, The Applicants' strategy for HGV access applies a hierarchical approach utilising the Suffolk Lorry Route network for the majority of journeys (i.e. for 96% of peak demand) to reduce the impact of HGV traffic on the most sensitive communities. The assessment of highway impact is proportional, acknowledging the deemed suitability of these routes for HGV traffic and limiting detailed highway geometry assessment to those locations identified as constrained to HGV flow during consultation with the Councils (specifically the A1094/B1069, and it is noted that SCC have confirmed in their Deadline 1 ***Response to ExA's Written Questions (ExQ1)*** (REP1-188) that they are not aware of any other locations that would require physical works to be suitable to accommodate larger vehicles during construction).

106. The A1094 and the B1122 delivery routes are designated by Suffolk County Council (exercising their highway powers) as a 'Zone distributor route' within the Suffolk Lorry Route hierarchy. A Zone distributor route links the strategic routes across Suffolk to local delivery routes and therefore by definition has been assessed by the highway authority as a suitable distributor for assigning HGV traffic to local routes. In keeping with this designation there are no restrictions (height, width, or weight) on HGV movements on this link.

5.2.4 HGV Monitoring Strategy

107. The Applicants set out the HGV monitoring strategy in detail at Deadline 3 in the ***Outline Construction Traffic Management Plan*** (REP3-032). Key to this strategy are a delivery booking system to plan and record daily HGV demand and unique identifiers to enable stakeholders to distinguish the Projects traffic from other projects. The Applicant is also in discussions with Suffolk County Council as to whether technology solutions (such as GPS) can be utilised to track HGV movements.

108. HGVs will be recorded at point of access and a monthly monitoring report will be produced to review compliance with assessed daily maximums and delivery routes.

109. The Applicants would establish the role of the Transport Co-ordinator (TCo) to take responsibility for the overall implementation of the final Construction Traffic Management Plan and provide a point of contact for stakeholders.

110. The production of a final Construction Traffic Management Plan prior to construction is secured via the ***draft DCO*** (to be submitted at Deadline 5, document reference 3.1) under Requirement 28(1)(a).

5.3 Cumulative Effects

5.3.1 Sizewell C

111. The Applicants acknowledge that Sizewell C have revised their applications logistics strategy that informed their CIA assessment to move to a larger rail share and water share for the transportation of construction materials following public consultation in November and December 2020. The revised logistics strategy has recently been submitted to the ExA by Sizewell C and the Applicants' confirm that they will review and comment on this.

112. As outlined in the ***Draft SoCG NNB Generation Company (SZC) Limited*** (REP1-061), the Applicants and Sizewell C will engage regularly with each other during design and construction of their respective projects so that any interface between the projects can be considered at an early stage, recognising it is in the interests of the Applicants and Sizewell C, as well as the wider community, that all projects be coordinated as far as reasonably practicable.

5.3.2 Sizewell B

113. Within the ***Sizewell Projects Cumulative Impact Assessment (Traffic and Transport) Clarification Note*** (REP2-009), assessment 'Scenario A' considers construction of both the Sizewell B relocated facilities project and the Sizewell C project (early years), along with the Projects' construction 'Scenario 1' peak flows (assuming a 2023 reference year). The predicted construction traffic flows for the Sizewell B relocated facilities project used in the 'Scenario A' assessment were taken from the Sizewell C Transport Assessment (APP-602), which states that *"traffic associated with the Sizewell B Relocated Facilities [SZB RF] works are included in the Sizewell C early years scenario as these works would likely overlap"*.

114. As noted in ***section 5.3.1***, the Sizewell C project logistics strategy has been revised and the Applicants are reviewing the associated information that has been submitted to the ExA. The Applicants note that the Sizewell C Transport Assessment Addendum (AS-266) states that "*The proposed change to the Sizewell B relocated facilities would not alter the peak construction traffic flows or construction traffic routes considered in the Sizewell C Project's early years traffic modelling"*.

115. The Applicants and EDF Energy Nuclear Generation Limited will regularly engage with one another as their respective projects progress so that any interface can be considered at an early stage, recognising it is in the interests of

both parties, as well as the wider community, that the projects be coordinated as far as reasonably practicable.

6 Agenda Item 6: Public Rights of Way (PRoW)

6.1 Construction Effects on the PRoW Network

116. Article 11 of the ***draft DCO*** (to be submitted at Deadline 5, document reference 3.1) permits the Applicants to temporarily stop up each of the public rights of way specified in Schedule 3 of the draft DCO and shown on the ***Temporary Stopping Up of Public Right of Way Plan*** (REP3-008) provided the alternative public right of way described in the draft DCO (or as otherwise approved by the relevant local highway authority), is first provided by the undertaker to the standard defined in the final Public Rights of Way Strategy, to the reasonable satisfaction of the relevant local highway authority.

117. The Applicants submitted an ***Outline Public Rights of Way Strategy*** (REP3-024) at Deadline 3 which:

a. Identifies PRoWs within the onshore development area which interact with the construction of the Projects;

b. Outlines the management principles to be adopted in ensuring that PRoW are managed in a safe and appropriate manner during the construction (and operational phases) of the Projects;

c. Presents details of temporary diversions of PRoW that will be temporarily stopped-up during the construction of the Projects; and

d. Identifies the sections of PRoW that will be permanently closed during the construction (and operation) of the Projects.

118. Measures proposed within the ***Outline Public Rights of Way Strategy*** (REP3-024) were successfully deployed on the East Anglia ONE Project, and facilitated ongoing safe and convenient access to the PRoW temporarily affected by the East Anglia ONE project.

119. The Applicants have consulted with Suffolk County Council (the local highway authority) during preparation of the ***Outline Public Rights of Way Strategy*** (REP3-024) prior to, and subsequent to submission of the Applications, allowing refinement of the proposals to improve access to the PRoW network.

120. There are 26 PRoWs within the onshore development area which interact with the Projects on a temporary basis during construction and which will require temporary control measures to be put in place during construction. A number of PRoW (including the Suffolk Coast Path) fall within the onshore development

area but do not interact with the Projects and therefore are not subject to temporary control measures.

121. All PRoW that require temporary control measures will be temporarily diverted to ensure no interruption to PRoW users. Temporary diversions will typically involve a short diversion around construction works, allowing construction works to progress in the area of the original PRoW. Once this construction work (or a phase of construction works) are complete, the PRoW would be reinstated along its original route. Depending on the nature and timing of the construction works this temporary diversion arrangement may be implemented a number of times during construction.

122. Durations of temporary PRoW diversions will be discussed in advance with the relevant highway authority. Typically, PRoW along the onshore cable route will be periodically diverted for a short period of time (a number of weeks depending on the length of PRoW being temporarily closed) to allow for the safe construction of the onshore infrastructure (including haul road construction and removal). Such closure, and provision of a diversion of every PRoW temporarily stopped-up, will ensure the connectivity of the PRoW network.

123. Ensuring safe use of existing and temporarily diverted PRoW is of paramount importance to the Applicants, and safety measures will be implemented at any PRoW where haul roads or other construction related activities cross a PRoW. Depending on the frequency of use of the PRoW and the nature of construction activities being undertaken, the following control measures will be adopted:

    a. Provision of a banksman during construction hours;

    b. Provision of warning signage;

    c. Temporary fencing to denote a PRoW; and

    d. Whilst there is a presumption in favour of not gating PRoWs where they cross a working area, there may be occasions when a gate arrangement is necessary to be in place periodically for the protection of PRoW users.

124. For all temporary diversions required, the following measures will typically be followed to protect the integrity of the PRoW network:

    a. A pre-and post-construction condition survey; and

    b. Restoration of damaged PRoW to its original condition.

125. To ensure effective communication with PRoW users, relevant County, District and Parish Councils would be notified approximately 4 to 6 weeks in advance of any temporary closure. This will include:

a. A notice describing the temporary closure would be published in the press;

b. Advanced site notices would be posted which will include a map showing the extent of the temporary closure and the temporary diversion and confirmation that the temporary diversion across land in the Applicant's control is safe and fit for public use.

126. All PRoWs that require temporary closure are provided with a temporary diversion for the duration for each closure and therefore remain open at all times, allowing its ongoing use by members of the public.

6.2 Effects on the PRoW Network in the Operational Period

127. Article 10 of the ***draft DCO*** (to be submitted at Deadline 5, document reference 3.1) permits the Applicants to extinguish each of the public rights of way specified in Schedule 4 of the draft DCO and shown on the ***Permanent Stopping Up of Public Right of Way Plan*** (REP3-009) provided the alternative public right of way described in the draft DCO (or as otherwise approved by the relevant local highway authority), is first provided by the undertaker.

128. The Applicants submitted an ***Outline Public Rights of Way Strategy*** (REP3-024) at Deadline 3 which:

a. Outlines the management principles to be adopted in ensuring that PRoWs are managed in a safe and appropriate manner during the (construction and) operational phases of the Projects;

b. Identifies the sections of PRoW that will be permanently closed during the (construction and) operation of the Projects;

c. Identifies the permanent alternative rights of way that will be put in place; and

d. Presents an example specification of an alternative permanent PRoWs.

129. There are three PRoWs within the onshore development area which interact with the Projects on a permanent basis during construction and operation, which will require permanent stopping-up and diversion. All three PRoWs are located in the vicinity of the onshore substation and National Grid substation location:

a. PRoW E-354/007/0 will require an 124m section to be stopped-up and realigned to ensure effective use of existing hedgerow screening to the south of the substations and will rectify an existing anomaly whereby an unofficial footpath has replaced a designated PRoW in this area;

b. PRoW E-260/017/0 will require a 202m section to be stopped-up and realigned to restore an historic field boundary. This realigned PRoW will connect to existing PRoW E-260/015/0.

c. PRoW E-354/006/0 requires a 693m section to be permanently stopped-up to allow the construction and operation of the onshore substation and National Grid infrastructure.

130. The permanent stopping up of PRoW E-354/006/0 will be mitigated by the provision of an expanded PRoW network around the onshore substation and National Grid infrastructure location as shown on the ***Permanent Stopping Up of Public Right of Way Plan*** (REP3-009). This expanded network:

a. Connects PRoW E-354/006/0 to PRoW E-260/017/0 to the south of the onshore substation;

b. Introduces an eastern PRoW to route PRoW E-354/006/0 around the eastern edge of the onshore substation; and

c. Connects PRoW E-354/006/0 to PRoW E-260/017/0 to the north of the National Grid infrastructure.

131. As a result of the diversion of PRoW E-354/006/0 users of the PRoW network around the onshore substation and National Grid infrastructure will be given the option of a short, medium or long diversion, and the opportunity to connect to the existing PRoW by Laurel Covert which leads to the village of Knodishall.

132. As set out in the draft DCO, an existing PRoW cannot be extinguished until the relevant highway authority agree that the associated alternative PRoW has been created to the standard defined in the final PRoW. Through the Applicants' careful consideration for the ongoing provision of public access in the area of the substations, the Applicants have ensured that the PRoW network in the vicinity of the onshore substations remains accessible to members of the pubic at all times.

133. As recognised in ***Environmental Statement - Chapter 30 - Tourism, Recreation and Socio-Economics*** (APP-078) the permanent closure of the PRoWs could result in a significant impact but will be mitigated through proper consultation on a permanent diversion and landscaping to develop an attractive footpath that walkers can enjoy. Therefore, the residual impact is negligible long term and minor adverse before the landscape features mature.

134. The Applicants also highlight the Assessment of Non-Residential Amenity presented within the ***Clarification Note Noise Modelling*** (REP4-043) submitted

at Deadline 4, which addresses a request by the Councils for an assessment of the potential impact upon users of nearby PRoWs.

135. This assessment concludes that the predicted impact on non-amenity receptor locations (i.e. PRoWs) in the vicinity of the onshore substations as a result of the implementation of the Projects has been determined as being negligible