AQUIND Limited

AQUIND INTERCONNECTOR

Applicant's Transcript of Oral Submissions - ISH3 on Environmental Matters

The Planning Act 2008

Infrastructure Planning (Examination Procedure) Rules 2010, Rule 8(c)

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AQUIND INTERCONNECTOR

APPLICANT'S STATEMENT FOR HEARING

ISSUE SPECIFIC HEARING 3 - ENVIRONMENTAL MATTERS

TUESDAY 15 DECEMBER 2020

1. INTRODUCTION

1.1 On 14 November 2019, AQUIND Limited (the '**Applicant'**) submitted an application for the AQUIND Interconnector Order (the '**Order'**) pursuant to section 37 of the Planning Act 2008 (as amended) (the '**Act'**) to the Secretary of State ('**SoS'**) (the '**Application'**).

1.2 The Application was accepted by the Planning Inspectorate ('**PINS'**) on 12 December 2019, with the examination of the Application commencing on 8 September 2020.

1.3 On 9 November 2020 the Examining Authority ('**ExA'**) issued the agenda for Issue Specific Hearing 3 into Environmental Matters ('**ISH3'**). Within the agenda dated 9 November 2020 the ExA requested full transcripts of any oral submissions intended to be made at ISH3. This request in the agenda issued is understood to be a request for information by the ExA in accordance with the Rule 8 letter dated 15 September 2020, as updated on 20 November 2020.

1.4 In response to this request, this statement is submitted on behalf of the Applicant and provides a full written response of the oral submissions intended to be made on behalf of the Applicant at ISH3 in relation to the specific questions raised by the ExA in the agenda for ISH3.

1.5 It is noted in the agenda that the ExA confirm the agenda is for guidance only, that it is not intended to be exclusive or exhaustive and that the ExA may add other issues for consideration and may alter the order in which issues are considered. Any additional detailed information requested by the Examiner or further information considered to be required to help address points not raised in the agenda for ISH3, or raised by others at the ISH3 will be provided in the Applicant's post hearing submissions.

Format of this Statement

1.6 This statement provides responses to the questions raised by the ExA, and it is confirmed any other questions raised at ISH3 will be responded at ISH3 as necessary on behalf of the Applicant.

1.7 The Applicant has submitted a Core Bundle ('**CB'**) index of common documents in relation to all hearings which are to take place during December 2020 in respect of the Application. This Core Bundle has been provided in an electronic format with links to the relevant Application documents as they are contained on the PINS webpage for the Application. The Applicant has not submitted these documents to PINS again. References to the CB index follow the format "**CB-document number**".

1.8 The Applicant has also submitted a hearing specific bundle index of Application documents relevant to ISH3, in an electronic format with links to the relevant Application documents as they are contained in the PINS webpage for the Application. References to the hearing specific bundle index follow the format "**ISH3 – document number**".

1.9 In addition, and further to the request by the ExA for illustrative supporting material, this statement is accompanied by exhibits, a list of which is included in Appendix 1 to this statement, and which are referred to throughout this document by reference to "**ISH3 – Exhibit number."**

2. HEARING PARTICIPANTS ON BEHALF OF THE APPLICANT

2.1 In attendance at ISH3 from the Applicant will be:

2.1.1 Kirill Glukhovskoy (LLM, MBA, ACMA), Managing Director of AQUIND Limited

2.1.2 Vladimir Temerko, Project Manager of AQUIND Limited

2.2 The Applicant will be represented at ISH3 by Simon Bird QC of Francis Taylor Building and Martyn Jarvis, Senior Associate of Herbert Smith Freehills LLP.

2.3 In addition, the following participants will be speaking on behalf of the Applicant on their relevant specialist topics during ISH3:

2.3.1 In respect of matters relating to Habitats Regulation Assessment:

(A) Ian Ellis of WSP: Ian Ellis is an Associate Director in the Ecology Team at WSP. Ian holds a Masters in Research in Ecology and Environmental Management and is a full member of the Chartered Institute of Ecology and Environmental Management. Ian has 18 years' experience in environmental consultancy and has provided expert witness in ecological matters at both DCO Issue Specific Hearings and public inquiries. Ian has been the Ecology Lead on in relation to the Application since December 2018 which has involved the management of the ecology chapter of the Environmental Statement. Ian is also the lead author of the onshore elements of the HRA report for the Project.

(B) Ross Hodson of Natural Power: Ross Hodson is a Principal Consultant at Natural Power, with over 10 years' experience in EIA and HRA for marine development. Ross holds a BSc (Hons) in Marine Biology and MSc in Clean Technology from Newcastle University, and has been a Practitioner Member of the Institute of Environmental Management and Assessment since 2013. Ross has been the marine lead on AQUIND for over two years providing support and technical advice on marine elements of the Project and has also provided technical review for marine Environmental Statement chapters and supporting assessments such as HRA and WFD assessments.

2.3.2 In respect of landscape, visual impacts and tranquillity:

(A) Maritta Boden of WSP: Maritta is an Associate Director at WSP in the Landscape and Urban Design team. Maritta has been a Chartered member of the Landscape Institute since 1994 and an Associate member of the RTPI since 2009. Maritta holds a BA (Hons) in Landscape Architecture and a MSc in Environmental Impact Assessment (EIA) and has over 25 years' experience in environmental consultancy covering landscape planning and design as well as environmental planning. Maritta has been the landscape lead on the Project since September 2017, advising on both Onshore UK and Onshore France elements of work covering the Converter Station, Onshore Cable Route and Landfall and has attended many of the public consultation and engagement events with local planning authorities.

(B) Dr Norman MacLeod of WSP: Norman is Director of the Interconnectors department at WSP and Norman holds both a BSc degree in Electrical and Electronic Engineering and a PhD in the same discipline. Norman is a Chartered Engineer in the UK, a Fellow of the Institution of Engineering and Technology (FIET) in the UK, a Member of the Institute of Electrical and Electronic Engineers (MIEEE) in the USA, and a Distinguished Member of the International Council on Large Electric Systems (DMCIGRE), based in Paris. Norman has worked in the field of HVDC transmission for 40 years and has published over 50 technical papers on HVDC and related technologies and co-authored two books on HVDC systems. Norman is a Visiting Professor at the University of Leeds, a post sponsored by the Royal Academy of Engineering, and a Visiting Professor at the University of Cardiff. Norman was a co-author of the initial techno-economic feasibility study report for the Project in 2014 and has been

involved in the development of the Project since that time, as the lead expert on HVDC systems.

(C) Hamid Mojtabavi of WSP: Hamid is an Associate Director in the Civil and Structural Engineering team at WSP. Hamid is a Chartered Engineer, having been a member of the Institution of Structural Engineers and Engineering Council since 2013 and a Member of the Association for Project Management since 2019. Hamid holds a BSc (Hons) in Civil Engineering and MSc in Structural Engineering and his responsibilities include the role of project manager and technical design lead in relation to large capital multi-disciplinary power, energy, industrial and commercial projects. Hamid has over 18 years' experience as a consulting engineer and has worked on the Project since October 2018 as the Civil and Structural technical lead focusing on the development of the Converter Station Area.

2.3.3 In respect of marine matters:

(A) Ross Hodson of Natural Power: see paragraph 2.3.1(B) above.

2.3.4 In respect of noise matters:

(A) Tom Farmer of WSP: Tom is a Senior Consultant in the Acoustics team at WSP and an Associate Member of the Institute of Acoustics. Tom holds a MEnvSci (Hons) degree in Environmental Sciences and a Post Graduate Diploma in Acoustics and Noise Control obtained from the Institute of Acoustics in 2017. Tom has 6 years' experience in the field of environmental consultancy and has been the acoustics lead for the Application since January 2019 with responsibility for the preparation of the noise and vibration chapter of the Environmental Statement and associated submissions.

(B) Louise Beamish of WSP: Louise is Head of the Acoustics team at WSP. Louise holds a BSc (Hons) in Technology and 21 years' experience in the prediction and assessment of noise and vibration. Louise has provided leadership to many large-scale projects and given expert evidence at public inquires and hearings and has overseen the noise and vibration assessment since the start of the Project. Louise is a full member of the Institute of Acoustics, chairs the Institute's London branch and is also a board member for the Association of Noise Consultants.

2.3.5 In respect of socio-economic matters:

(A) Ursula Stevenson of WSP: Ursula is a Technical Director at WSP with 20 years' experience in EIA. Ursula holds a BA in Geography and Archaeology, and a Masters of Science in Environmental Assessment and Management. Ursula has been a full Member of the Institute of Environmental Management and Assessment (MIEMA) since 2004, a Chartered Environmentalist with the Royal Society for the Environment (CEnv) since 2005 and became a Registered Environmental Impact Assessor (REIA) with IEMA in 2007. Ursula has undertaken the role of Technical Reviewer for the EIA for the Application since late 2018, and the lead role for the Socio-economic Assessment.

2.3.6 In respect of engineering matters:

(A) Ian Robson: Ian is an Associate Director with WSP currently managing the OHL and HV Cable teams in the UK. Ian holds a First Class Honours Degree in Electrical / Mechanical Engineering and has been a chartered engineer since 2005. Ian has over 25 years' experience in the Power Transmission industry working as Project Manager and Senior Substation / HV Cable engineer in the design and specification of high voltage substations and high voltage cables. Ian has been responsible for the preparation of tenders and also review of tender documentation, compilation of technical specifications, design of various substation configurations and high voltage cable designs as well as the approval of all

design documentation during the design review phase of projects and ultimately managing and delivering the projects through to final installation and commissioning through to client handover. Prior to this, Ian worked as Project Manager for East Anglia One (EA1) Project which included onshore cabling from Bawdsey to Burstall/Bramford 400kV substations via 2 underground HV cable circuits each 37km in length as well as a number of shorter HV substation cable circuits.

3. HABITATS REGULATION ASSESSMENT

Question 3A Visual disturbance

Answers to ExQ1 ME1.10.33 suggest a difference of opinion between the Applicant and Natural England in relation to the inclusion of visual disturbance immediately adjacent to the Chichester and Langstone Harbours SPA/ Ramsar site boundary and its supporting habitat on qualifying SPA flock features as a Likely Significant Effect in the Habitats Regulations Assessment. Notwithstanding the proposed mitigation of works being avoided in such areas during the over-wintering period, should the HRA report be updated?

With references to the Works Plans, are there any construction areas that Natural England is particularly concerned about in respect of this possible Likely Significant Effect?

3.1 Within the Statement of Common Ground with Natural England submitted at Deadline 1 it was agreed that all Likely Significant Effects (LSE's) on onshore matters within the HRA had been identified appropriately. In response to the ExA's First Written Question regarding visual disturbance, Natural England subsequently revised this view and stated that effects on visual disturbance should be carried forward to stage 2 of the HRA.

3.2 While the Applicant believes that its position in relation to visual disturbance is robust and quoted evidence that in an urban / industrial environment such as Portsmouth that visual effects from a development are made indistinguishable from the baseline, it has continued discussions with Natural England on this matter. In the interest of reaching agreement, the Applicant has agreed to update the HRA with visual disturbance (as part of the 'disturbance and displacement' effect) to be assessed in stage 2. This position is reflected in the updated Statement of Common Ground with Natural England submitted at Deadline 4. The SoCG also notes agreement that due to existing proposed mitigation of a winter works restriction at parts of the Onshore Cable Route that could interact with Chichester and Langstone Harbours SPA or functionally linked Solent Waders and Brent Goose Strategy (SWBGS) sites, there is no prospect of an adverse effect on site integrity.

3.3 The updated HRA is to be submitted at Deadline 5 and is subject to final consultation with Natural England.

Question 3B

Can the Applicant and Natural England provide an update on the HRA and the extent of progress towards common ground. The Statement of Common Ground submitted at Deadline 1 suggests all matters have been resolved, but the document is still labelled 'draft'.

3.4 Two Statements of Common Ground (SoCG) between the Applicant and Natural England have been submitted at Deadline 4. REP4-016 covers marine aspects and REP4-015 covers onshore aspects.

3.5 In relation to marine HRA matters, as stated in Table 3.7 of the SoCG between the Applicant and Natural England and Joint Nature Conservation Committee (REP4-016), all marine matters have been resolved and all matters are agreed.

3.6 In relation to onshore HRA matters, in light of Natural England's response to the ExA's written question that visual disturbance should be concluded to be a Likely Significant Effect, further discussions have been held. As detailed under references 4.2.11 and 4.2.11a of the Statement of Common Ground with Natural England (REP4-015), the Applicant has agreed to take forward visual disturbance on relevant terrestrial ecological features to stage 2 of the HRA. The Applicant is to submit the updated HRA at Deadline 5. It is noted that Natural England agree that there is no prospect of an adverse effect on site integrity as a result of visual disturbance.

Question 3C

In ExQ1 HAB1.1.18, the Examining Authority asked Natural England to provide electronic copies of the conservation objectives and, where relevant, the supplementary advice on conservation objectives for a list of European sites. We were referred in the answer to links to external websites. This raises a concern that the information is not in the Examination, that links could break, or the objectives might change during or after the Examination. Is it possible for the Applicant and Natural England to agree the information and for the Applicant to submit it into Examination, perhaps as an Annex to the HRA report, the Statement of Common Ground or in any other suitable submission?

3.7 The Applicant has engaged with Natural England onshore and marine teams to try and provide a solution to this request.

3.8 However, with regard to the request to submit copies of the electronic conservation objectives, the Designated Sites View website (i.e. the link that Natural England provided in their response to the ExQ1 HAB1.8.18) is largely interactive and attempts at printing or downloading material does not produce discrete documents that could be usefully placed in an appendix for example. We understand Natural England have contacted the Planning Inspectorate regarding this matter.

3.9 The Applicant's HRA Report (REP1-081) **(ISH3-3)** contains links to conservation objectives on Natural England's website, with details of the date the information was accessed. If further action is required to address the ExA's request, this will be provided at Deadline 6.

4. LANDSCAPE, VISUAL IMPACTS AND TRANQUILLITY

Question 4D Lighting

For clarity, can the Applicant confirm the number, height and construction of lighting columns and lightning masts at the Converter Station site, including any on the roofs of the buildings?

We note the Applicant's comment at Deadline 2 that, 'The Applicant can confirm that there will be no flashing lights on the lightning masts.' Could the Applicant please confirm whether this refers to aviation safety lighting, and if any part of the Proposed Development, including the cranes and other plant to be used during the construction at the Converter Station, will require aviation safety lights?

What lighting will be used at the proposed telecommunications building and compound near to the Converter Station and will it be limited to emergency use only? If this building is intended is to be accessed by third party commercial companies using the surplus fibre-optic cable capacity, what control will the Applicant have over its use and lighting?

What are the various parties' conclusions with regards to the Proposed Development's likely effects on the International Dark Skies Reserve, and can common ground be confirmed between the Applicant and the relevant local authorities?

Lighting columns and lightning masts

4.1 Lighting columns will be installed along the perimeter road of the converter station, inside the perimeter fence and in the outdoor switchyard area. The lighting columns will be spaced at intervals along the road and each column will be 6m in height. In the outdoor high voltage switchyard, each of the lighting columns will be 15m in height. In total there will be 40 lighting columns within the Converter Station. The lighting columns will be of a steel construction, using Light Emitting Diode (LED) bulbs which will minimise glare, flicker and stroboscopic effects. No separate lighting will be provided along the access road to the Converter Station.

4.2 A maximum of eight lightning masts will be up to 30m in height and of a slender steel construction. They will be erected within the outdoor high voltage switchyard at suitable locations to protect the equipment from direct lightning strikes. In addition, lightning spikes, circa 4m in height, will be installed on the roof of the buildings to protect them from direct lightning strikes. The final location of the lightning masts and spikes on the building are subject to a detailed design, which will be undertaken by the supplier of the converter station. However, the maximum height of the lightning masts and spikes is secured by requirement 5 of the draft DCO (REP3-003) **(CB-1).**

Aviation Safety Lighting

4.3 The comment on "flashing lights" does refer to aviation safety lights. As the lightning masts will be up to 30m in height, no aviation safety lights will be required. This also applies to the lightning spikes on the roof of the buildings.

4.4 The telescopic cranes used during the construction of the converter station buildings will not require to be fitted with aviation lights. The telescopic arms are not left elevated overnight, when the cranes are not in use. Cranes will be retracted when outside of working hours and this is secured by para 6.3.2.3 of the OOCEMP submitted at Deadline 4 (REP4-005) (**CB-24**).

Lighting at the Telecommunications Building

4.5 No external lighting will be installed at the telecommunications buildings and compound. The exception will be a courtesy light above the single access doors, which will operate on a proximity motion sensor. This will automatically switch off after a time delay when no motion is detected. No windows are being considered for these buildings to improve their security and to avoid unnecessary spill of light from the buildings if it is accessed during the hours of darkness.

4.6 The Applicant will be responsible for the design and installation of the telecommunications buildings and compound, including all building services such as exterior lighting. During commercial operation the buildings will remain under the operational control of the Applicant, although authorised third party companies will have un-supervised access to the buildings.

Applicant's understanding of the agreed position in relation to likely effects on the International Dark Skies Reserve

4.7 The Applicant states in the Applicant's Response to Written Representations (REP2-014) (**CB-5**) that the Onshore Outline CEMP has been updated to state at paragraph 5.2.2.1 that the appointed contractor will develop a Lighting Scheme for the Construction and Operational Stages of the Converter Station Area (REP4-005) **(CB-24).** The section includes general principles drawn from SDNPA Technical Advice Note 2018, Dark Skies.

4.8 In discussions with the local planning authorities (WCC, SDNPA and EHDC) at a design group meeting held in October 2020, the Applicant agreed that the wording in the OOCEMP will be revised to read: "*The Lighting Scheme will be developed in accordance to the SDNPA Technical Advice Note 2018, Dark Skies" rather than "reference to*". This has now been amended and an updated OOCEMP has been submitted at deadline 4 (REP4-005) (**CB-24**).

4.9 Requirements are included in the draft DCO (REP3-003) (**CB-1**) in relation to external construction lighting (Requirement 16) and operational lighting (Requirement 23), the latter of which confirms there will be no external lighting of Works No.2 during the hours of darkness save for in exceptional circumstances, including in the case of emergency and where urgent maintenance is required. These requirements have specifically been included in response to the International Dark Sky Reserve designation. The permanent lighting will be approved as part of the detailed design approval in accordance with Requirement 6 by the relevant local planning authority, in consultation with the South Downs National Park Authority.

4.10 The Applicant notes that at the October design group meeting the local planning authorities requested clarification in relation to requirement 23 and the term "exceptional circumstances" in the draft DCO. The Applicant has explained that this cannot be exclusively defined as it covers a wide range of unforeseen events and to seek to do so would not be a sound drafting approach as it could lead to valid circumstances giving rise to a breach.

4.11 The Applicant intends on submitting an updated Statement of Common Ground with the SDNPA at Deadline 5, reflecting that point 4.5.4 in the SoCG with regard to the General Environmental Control Measures in the OOCEMP is now agreed.

Question 4E.1 Landscape and Visual Impact Assessment

Please could the Applicant summarise why the South Downs National Park is said to be of medium sensitivity for the landscape and visual assessment, and in particular how this relates to the usual EIA tenet that 'importance' is an inherent quality of the receptor irrespective of the potential effect that they are exposed to. Please explain how the approach taken accords with the guidance set out in GLVIA2, or, if it has been modified, how and why. Given the 'nationally important' status of the National Park and the purposes behind its designation, does the medium sensitivity rating undervalue its overall importance?

4.12 The Applicant does not find the South Downs National Park (SDNP) to be of medium sensitivity. In accordance with GLVIA3, judgements on sensitivity are derived by combining judgements on the value of the receptor with judgements on the susceptibility of that receptor to the changes arising from the Proposed Development. The LVIA considers the landscape value of the SDNP to be high (APP-401 Methodology, Appendix 15.2, Table 2) (**ISH3-5**), a reflection of its importance.

4.13 The LVIA considers the impact of the Proposed Development on the potentially affected parts of the SDNP (in terms of the character areas identified by the SDILCA (see Table 2 of Appendix 15.4, APP-402) (**ISH3-6**). In all cases, in drawing conclusions on significance (e.g. at paragraphs 15.8.4.4 and 15.8.4.6) the LVIA finds them to be of high sensitivity.

4.14 The LVIA (Appendix 15.5 South Downs National Park (APP-403) (**ISH3-7**) considered the Converter Station Area in terms of the criteria used in the South Downs Landscape Background Paper to the Local Plan and found it to be of mixed value and therefore of medium sensitivity in terms of the setting of the South Downs National Park.

4.15 This finding of medium sensitivity in terms of the setting of the National Park does not undervalue the overall importance of the SDNP, rather it reflects the fact that the area is outside the SDNP, because in terms of the criteria and Special Qualities used to define the National Park it does not meet the standards required for designation. The LVIA finds that

there would be significant effects on the setting of the SDNP during construction and during the operational period until the mitigation planting reaches a reasonable degree of maturity (see paragraphs 15.8.4.2, 15.8.4.5 and 15.8.4.7 APP-130) (**ISH3-4**).

Question 4E.2 Landscape and Visual Impact Assessment

Can South Downs National Park Authority confirm the relevance and importance of the additional viewpoints requested in answer to ExQ1 LV1.9.1? What additional benefits would there be in understanding the Proposed Development from those representative viewpoints? Is there an update on common ground with the Applicant on this matter?

4.16 The Applicant refers its Comments on Responses to the ExA's First Written Questions (REP2-008) (**CB-6**) which confirms that that the viewpoints were previously agreed with the local planning authorities and the SDNPA (see LV1.9.1).

4.17 Whilst the Applicant has agreed to take additional viewpoint photography based on SDNPA's response to the ExA's first written questions LV1.1.9 (REP1-179), the Applicant still considers that the additional viewpoints are not required for the reasons outlined below, and it does not propose to present wirelines from these viewpoints.

4.17.1 Additional viewpoint from PRoW southeast of Prew's Hanger: Representative viewpoints 1, 12 and 17 cover the same angle of view as additional viewpoint 1 (Prew's Hanger) from the north east at varying distances and elevations.

4.17.2 Additional viewpoint from land near Monarch's Way near Scotland Cottage/Farm: Representative viewpoint 13 and 15 cover a similar angle of view from the north / northwest at varying distances and elevations. It should be noted that this additional viewpoint is on private land and therefore not from a publicly accessible location. The Applicant has agreed access with the landowner to take the viewpoint photo; and

4.17.3 Viewpoints around the proposed entranceway off Broadway Lane and Day Lane: The Applicant is reviewing opportunities to integrate the access entranceway and "gateway link" into the surrounding landscape. There is no need, for the reasons outlined in the second paragraph above, to take further viewpoints at this location.

4.18 The Applicant considers that the current set of agreed, representative viewpoints provide sufficient information to inform a judgement on the size and scale of the Proposed Development and therefore its visual impacts.

Question 4E.3 Landscape and Visual Impact Assessment

Can the Applicant explain why the cranes (including two 84-metre high telescopic cranes) to be used in the construction of the proposed Converter Station were not included in the LVIA? What effect will these have on landscape and views, and over what extent and period? Is an additional assessment necessary? Why does the Applicant consider that the significance of construction stage effects at would not change as a result of their presence, and do the South Downs National Park Authority and other relevant local planning authorities agree?

4.19 The presence of large machinery was factored into the construction stage assessment. The description of specific construction impacts in ES Chapter 15 (Landscape and Visual Amenity) mentions the "visual presence of large machinery" (APP-130, paragraph 15.3.6.2) (**ISH3-4**). This was written with the scale of the construction operation in mind. HDD equipment is then specifically mentioned to draw attention to large machinery in places where this might not immediately be expected.

4.20 Although potentially tall items, the mobile cranes would be relatively small when considered against the scale of the Converter Station Area construction site works and activity as a whole. The Applicant considers that the presence of mobile cranes likely to be utilised would have no effect on the landscape beyond that assessed for the Construction Stage (that being a moderate adverse (significant) effects during construction on the two character areas that cover the Converter Station Area and on the setting of the SDNP).

4.21 The Applicant likewise considers that the visual effect of mobile cranes would not increase the significance of visual effects beyond those already found significant (and primarily

moderate-major or major) in the LVIA. There may be times when a mobile crane would be visible more widely but this is anticipated to be transient – during specific large lifts for example, and not sufficient to cause a significant effect.

4.22 For these reasons, the Applicant does not consider an additional assessment would benefit the decision-makers.

Question 4E.4 Landscape and Visual Impact Assessment

In the answer to OW1.12.16 in ExQ1, the Applicant notes that an indicative location and surface finish for the proposed car park in Work No. 3 has now been identified and that the capacity has been increased from 150 to 226. How was this feature assessed in the LVIA? Does this new information alter the assessment in any way?

4.23 In the Construction Stage assessment of the Converter Station Area, the LVIA did not consider the individual components of the construction works and then aggregate these into an overall assessment: it considered the effect of a large construction site that would change over time as the works progressed. The confirmation of surface materials of the car park mentioned would not materially change the significance of the landscape or visual effects of such a large construction site as a whole.

4.24 It is not correct to state the capacity has been increased. As was explained in the ES Addendum (REP1-139) (**CB-13**) at Table 3.3, the LVIA assumed this area would be used for temporary car parking as part of the Construction Stage landscape and visual amenity assessment.

Question 4F.1 Landscape Mitigation Proposals

Could the South Downs National Park Authority provide an update on its suggestion in its Local Impact Report that some land required for landscape mitigation appears to be out of the Applicant's control? Has common ground been reached with the Applicant over this matter?

4.25 As stated in the question, the SDNPA has queried how maintenance of landscaping will be secured, especially where the Applicant is not acquiring the freehold over land required for landscaping. The Applicant has responded that a deed of grant of easement (a precedent of which has been provided to the SDNPA) is being sought with the appropriate landowners for the long-term maintenance and management of existing planting and retained hedgerows, and powers of compulsory purchase acquisition are sought to acquire the rights and impose restrictions to do so for in the event a voluntary agreement is not reached with those persons.

4.26 The approach being taken is set out in the Statement of Reasons (REP1-025) (**CB-12**). The Applicant is satisfied that the necessary rights for the Applicant and restrictions to landowners to secure the maintenance of landscaping will be secured through the Order. The draft Order should be read in conjunction with the Land Plans (REP1-011a) (**CB-18**) and the Book of Reference (REP4-003) **(CB-10)**, which confirm the rights sought over each plot of land. The coloured shading of the plots as shown on the Land Plans identifies the purpose for which the land is required in connection with the Proposed Development and is outlined under Paragraph 2.1.1.5 of the Book of Reference.

4.27 The SDNPA has queried how compliance following potential breaches of landscaping requirements will be enforced. The Applicant has explained that enforcement of DCO requirements is a matter addressed in Part 8 of the Planning Act 2008, and it would be an offence for the Applicant not to comply which would be actionable as such. The deed of grant of easement and/or rights and restrictions to be compulsorily acquired ensure the Applicant has a legally enforceable position to ensure compliance with the relevant requirements.

4.28 With regard to the SDNPA's concerns over the proposed landscape mitigation proposals, as referred to in the Applicant's response to Deadline 3 Submissions (REP4-027) (**CB-9**) the Applicant has proposed a comprehensive landscape mitigation package to minimise the impacts of the Proposed Development in the location adjacent to the National Park, including both new planting and the management and reinforcement of parts of the existing vegetation

around the site where this is considered necessary. This is considered adequate mitigation to respond to the visual impacts of the Proposed Development.

4.29 Nonetheless, the Applicant is discussing matters relating to planning obligations with SDNPA and notes that any planning obligation needs to relate to deliverable mitigation which is directly related to the impact of the Proposed Development. It was agreed that the SDNPA would review potential projects that could improve the landscape in the proximity of the Proposed Development for the Applicant to consider.

Question 4F.2 Landscape Mitigation Proposals

Following the Applicant's submission of further information and detail at Deadline 1, does the South Downs National Park Authority have any remaining concerns or objections in relation to the updated landscape mitigation proposals for the Converter Station? Has common ground been reached with the Applicant over this matter?

4.30 With regard to the SDNPA's concerns over the proposed landscape mitigation proposals, as referred to in the Applicant's response to Deadline 3 Submissions (REP4-027) (**CB-9**) the Applicant has proposed a comprehensive landscape mitigation package to minimise the impacts of the Proposed Development in the location adjacent to the National Park. This includes both new planting and the management and reinforcement of parts of the existing vegetation around the site where this is considered necessary. This is considered adequate mitigation to respond to the visual impacts of the Proposed Development.

Question 4G Tranquillity

Can the Applicant demonstrate how the predicted effects on tranquillity have been taken into account in the EIA for users of the South Downs National Park, including the potential effects of construction traffic, movements of HGVs, movement of AILs, car parking provision, access and haul roads?

Please provide an update on any common ground between the Applicant and the South Downs National Park Authority on the predicted effects of the construction and operation of the Proposed Development in relation to tranquillity and any mitigation that has been proposed.

4.31 The ES Chapter 15 (Landscape and Visual Amenity) (APP-130) (**ISH3-4**) identifies (at para 15.3.6.2) specific construction impacts which may generate a landscape and visual amenity effect, including movement and activity of construction vehicles. At paras 15.8.3.7 and 15.8.7 it finds that there would be a moderate to minor localised (significant) effect on tranquillity during the construction period and on decommissioning arising from construction activity and traffic.

4.32 Appendix 15.5 (APP-403, Section 4) (**ISH3-7**) reviews tranquillity and identifies that the Converter Station Area and immediate surroundings fall between an intermediate to low value for tranquillity. Section 5, which reviews the value of the Converter Station Area to the setting of the SDNP (within a 3 km study area) in terms of the criteria used by the SDNPA (South Downs Landscape Background Paper to the Local Plan ("Guidance for assessing landscapes for designations as National Park or Areas of Outstanding Natural Beauty in England", Natural England 2011) finds tranquillity associated with the Converter Station Area to be mixed, with a number of positive factors but also a number of negative factors.

4.33 Effects on tranquillity (which the LVIA defined as a landscape feature) fall within landscape character areas covering the Converter Station and both WCC Hambledon Downs 17 (LCTW2) and EHDC LCT 3 Downland Mosaic (LCA 3f).

4.34 Appendix 15.8 Assessment of Landscape and Visual Effects (APP-406) (**ISH3-8**) notes that effects on tranquillity are perceptual and experiential giving consideration therefore to receptor's perceptions of tranquillity within the above character areas (at section 1.3). This includes receptors within the SDNP. For receptors in the wider area it is considered that the impact on tranquillity will not generate a significant effect. However for those in the vicinity of the Converter Station Area (which includes the edges of the SDNP) significant effects would be experienced and such effects would vary depending on the nature and focus of activities as well as programme. (Appendix 15.8 - paragraph 1.3.1.34 (APP-406) (**ISH3-8**)).

4.35 During operation the Converter Station is enclosed and unmanned; there would be only very occasional visible activity during operation. The Assessment of Landscape and Visual Effects in ES Appendix 15.8 (APP-406) (**ISH3-8**) therefore found that the simple presence of the building would not disturb the calm and therefore could not affect tranquillity generating a neutral permanent long-term effect (paragraph 1.4.1.21).

4.36 There may be a degree of disagreement between the Applicant and the SDNPA arising from differing interpretations of the nature of tranquillity.

4.37 The ES was based on GVLIA3 which (in the glossary) defines tranquillity as a "*state of calm and quietude associated with peace, considered to be a significant asset of landscape*".

4.38 However, the criteria used in the SDNPA tranquillity study introduce concepts of wildness and naturalness in their definition, in a way that could be interpreted to mean that the simple presence of a large unmanned building would have an adverse effect on tranquillity. It is noted this documentation applies to development within the South Downs National Park.

4.39 The Applicant understands the reasoning for the SDNPA definitions but disagrees with the way that the criteria is used. For example, the inside of a town centre chapel or a quiet urban courtyard, cut off from the hum of the city, which an ordinary member of the public would find tranquil, would score low in the SDNPA study.

4.40 In terms of an update of the SoCG, no further changes have been proposed in relation to the predicted effects of the construction and operation of the Proposed Development.

4.41 The general environmental control and location specific construction environmental control measures are listed at 4.5.4 of the SoCG with SDNPA. Additional text on tranquillity has been added to the SoCG at 4.3.6 (REP3-009).

Question 4H Design

In terms of the design of the Converter Station building and the corresponding elements of the LVIA, is there any update on the design meetings held between the Applicant and the relevant local planning authorities and progress towards agreeing the design principles? What matters, if any, remain unresolved between the parties in terms of the design and colour palette proposed for the Converter Station buildings?

Please could the Applicant briefly summarise how these design principles would be secured to ensure that the final building design would be in accordance with them, such that the views of each of the local planning authorities that participated in the process are taken into account?

4.42 Three design group meetings have been held with relevant local planning authorities (WCC, EHDC and SDNPA) during August, October and November 2020.

4.43 The current status of the design principles in discussion is summarised below:

General Design Principles:

4.43.1 General Design Principle 7 - access: local planning authorities have raised concerns that this principle is too vague. However, the Applicant considers that this Design Principle is sufficient and continues to seek agreement with the local planning authorities on this principle.

4.43.2 The remaining General Design Principles (1, 2, 3, 4, 5, 6 and 8) were agreed at the design group meeting on 25 November 2020.

Building Design Principles:

4.43.3 New Building design principle – orientation and colour: WCC has suggested that a new building design principle is introduced stating "*Recognition should be given to the orientation of each particular view, when proposing the colour palette of the external material, for each elevation of the proposed building*." The Applicant disagrees and does not think this is required since Building Design Principle 3 will be revised following more detailed review of colour for each elevation of the Converter Station.

4.43.4 New building design principle – quality and curved corner: WCC has suggested a new building design principle which states "*All materials proposed should be of*

high quality standards and allow for a curved corner detail." The Applicant disagrees. As outlined above the detailed design will be subject to detailed design approval by the relevant planning authority in consultation with the South Downs National Park (Schedule 2 Requirement 6(1)) and reference to the curved corner detail is covered under Building Design Principle 6.

4.43.5 Building Design Principle 1 - external cladding: WCC has suggested that Building Design Principle 1 should be revised to state "*External cladding and roofing to the buildings will be pre-coated metal, or equivalent durable low-maintenance material subject to approval by WCC Council*." The Applicant has revised the design principle to read "*External cladding and roofing to the buildings will be pre-coated metal, or equivalent durable low-maintenance material which is of a high quality standard"* and this was agreed at the design group meeting on 25 November 2020.

4.43.6 Building Design Principle 2 – wall cladding: Subsequent to the design group meeting on 25 November 2020 WCC has suggested amendments to the principle as follows "*The wall cladding be comprised of narrow vertical elements of varied colours to break up the mass of the building and reduce its visual prominence*". The Applicant has agreed to this amendment.

4.43.7 Building Design Principle 3 - colour: A contextual colour palette was presented at the design group meeting in October and the Applicant subsequently presented a refined set of colours for each elevation at the design group meeting on 25 November 2020. At the latest meeting it was agreed that the elevations should reflect darker, more recessive colours. It is the intention that the Applicant presents these revised elevations and refined colour palette at a further design group meeting before the hearings for agreement. The Applicant suggested the following revised wording: "*Colours will be selected from a palette of contextual colours (which are primarily dark recessive colours) derived from those listed below, chosen to complement the surrounding landscape:*

(A) *RAL (to be confirmed in ongoing discussions with the relevant Local Planning Authorities)*

(B) ~~*Colour variations around the building from dark to light will be considered and relate to adjoining land usage and visual context of views from surrounding areas including the Monarch's Way long distance footpath to the north of the site.*~~

(C) *The roofing will be in a dark recessive non-reflective colour to minimise visual impact.*

(D) *In any replacements the same colours will continue to be used for the life of the building**.

*This additional clause has been included in response to sustainability principle 3.

4.43.8 Aside from the specific RAL numbers the remainder of the text under this principle was agreed at the design group meeting on 25 November 2020.

4.43.9 Building Design Principle 6 - curved corners to the building: WCC request that the term "where practicable" is removed from Building Design Principles 6. "*Curved corners will be included, where practicable, to soften the visual impact and attention will be applied to relationships between the component parts of the main structures to add interest and further reduce the perceived mass of the building*." The Applicant agrees but has suggested the following: "*Curved corners of the Converter Buildings will be included, to soften the visual impact and attention will be applied to relationships between the component parts of the main structures to add interest and further reduce the perceived mass of the building*." This was agreed at the design group meeting on 25 November 2020.

4.43.10 Building Design Principle 7 - type of lightning masts, the number and height: The local planning authorities are seeking clarification of the two different types of lightning masts and images. The Applicant explained that the layout and connection would be developed at detailed design. Whilst images were not presented it was agreed that the lightning masts would be of a slender steel construction. The Applicant presented a revised design principle at the November

design group meeting: "*Lightning masts will be up to 30m in height (4.0m higher than the highest point/ridge of the Converter Building) and of a slender steel construction. They will be erected within the outdoor high voltage switchyard at suitable locations to protect the equipment from direct lightning strikes. In addition, lightning spikes, about 4m in height, will be installed on the roof of the Converter Buildings to protect them from direct lightning strikes. The final location of the lightning masts and spikes on the building are subject to a detailed design, which will be undertaken by the supplier of the Converter Station*." This was agreed at the design group meeting on 25 November 2020. Subsequent to the meeting WCC has suggested that the first sentence is altered to read "*Lightning masts will be up to 30m in height (4.0m higher than the highest point/ridge of the Converter Building) and of a slender steel construction and suitably coloured to minimise the visual prominence*". The Applicant disagrees with this suggestion, the masts will be galvanised to minimise maintenance.

4.43.11 Building Design Principle 8 - material on roof: The Applicant has confirmed that there will be no material plant on the roof of the highest buildings, namely the Converter Buildings. Further to comments made at the design group meeting on 25 November 2020, the Applicant has reviewed this principle and omitted reference to the following: "*heating and ventilation air conditioning will be located within the buildings or at ground level within the defined building site plan*". The remainder of this principle, "*There will be no plant on the roofs of the highest buildings*" remains unchanged. The Applicant seeks agreement with the Local Planning Authorities over the changes to this principle.

4.43.12 Building Design Principle 9 - operational noise: The Applicant further to comments made at the design group meeting on 25 November 2020 has reviewed this principle and confirmed that this can be removed. The Applicant seeks agreement with the Local Planning Authorities over the removal of this principle.

4.43.13 Building Design Principle 10 - lighting: Further to comments at the design group meeting on 25 November 2020 it was agreed with the Applicant that the wording "exceptional" should be included in the text to read: "*The Converter Station will not be illuminated other than in exceptional circumstances such as upon activation of an intruder alarm for maintenance or repair operations*." This was agreed at the design group meeting on 25 November 2020.

4.43.14 All remaining building design principles (4 and 5) have been agreed.

Landscape Design Principles:

4.43.15 WCC requested a new landscape principle which outlines the purpose of visually screening and concealing the Converter Station: The Applicant has suggested the following "*The primary purpose of the proposed landscaping is to integrate screen as far as possible and soften the impact of the Converter Station on its surroundings*." This was agreed at the design group meeting on 25 November 2020.

4.43.16 Landscape Design Principle 6 – new woodland, scrub and hedgerow planting: Following the design group meeting on 25th November 2020 it was suggested that further consideration should be given to green infrastructure, and more specifically connectivity. The Applicant has proposed the following revisions to the landscape principle: "*New woodland, scrub and hedgerow planting, within locations broadly indicated upon the indicative landscape mitigation plans, will be introduced within the Order Limits to provide appropriate screening from sensitive receptors, enhance landscape character, increase landscape and ecological connectivity and improve biodiversity*." The Applicant is waiting on comments from the relevant Local Planning Authorities that they agree to the suggested change.

4.43.17 Landscape Design Principle 7 – detailed landscape design proposals: The Applicant under Table 2.10 of the Applicant's Reponses to Deadline 2 Submissions (REP3-014) (**CB-8**) agreed that landscape design principle 7 can be revised as follows "*Detailed landscaping proposals will include appropriate measures to maintain and enhance wildlife habitats and corridors where feasible*". This aligns with the updated Outline Landscape and Biodiversity Strategy (REP1-034) (**CB-26**)

submitted at Deadline 1 which refers to the delivery of enhancement measures. This was agreed at the design group meeting on 25 November 2020.

4.43.18 All remaining Landscape Design Principles (1, 2, 3, 4, 5, 8 and 9) have been agreed.

Sustainability Principles:

4.43.19 Sustainability Principle 3 – design life: The LPAs have sought clarification of the design life of 20 years to first major maintenance and more specifically colour maintenance. The Applicant has confirmed that the colours presented and agreed post consent would continue to be used throughout the operational life of the Proposed Development. No change is proposed to this design principle as it is now reflected in Building Design Principle 3 and this was agreed at the design group meeting (25 November 2020).

4.43.20 Sustainability Principle 5 - lighting: Further to comments at the design group meeting on 25 November 2020 it was agreed with the Applicant that the wording "exceptional" should be included in the text to read: "*The Converter Station will not be illuminated at night other than in exceptional circumstances such as upon activation of an intruder alarm or for maintenance or repair operations*". This was agreed at the design group meeting on 25 November 2020.

4.43.21 All remaining Sustainability Principles (1, 2, 4 and 6) have been agreed.

The Telecommunication Buildings and Optical Regeneration Stations Principles:

4.43.22 Principle 7 – operational noise: Further to comments made at the design group meeting on 25 November 2020, and for consistency with Building Design Principle 9, the Applicant has removed this principle. The Applicant is waiting on comments from the relevant Local Planning Authorities that they agree to the suggested change.

4.43.23 All of the remaining Telecommunication Buildings and Optical Regeneration Stations Principles of relevance to the Converter Station Area have been agreed.

4.44 The draft Development Consent Order (REP3-003) (**CB-1**) states that in relation to detailed design, approval details must accord with the Design Principles for the converter station (6(1)) and the optical regeneration stations (6(4)). Views on the Design Principles are being confirmed now so that they have been appropriately taken into account in the Design Principles to be secured.

5. MARINE MATTERS

Question 5l The Deemed Marine Licence

Can the Marine Management Organisation (MMO) and Natural England confirm if the methods of non-burial protection for the cable are acceptable and adequately secured in the DCO and Deemed Marine Licence? Following the Applicant's response at Deadline 2, do you still consider that further detail needs to be added to the design parameters to confirm maximum amount of cable protection required?

MMO previously noted that it was unclear and had concerns about the purpose of proposed Deemed Marine Licence Part 1, 4(5) that permits 'any other works as any be necessary or expedient.' Is there any progress to report on achieving common ground on this matter? If not, what is the basis of outstanding differences?

Are all the necessary Deemed Marine Licence conditions in place to satisfy the MMO that all of the mitigation required for the Proposed Development can be secured?

Further to the Deadline 2 submissions from the parties, have the Applicant and MMO progressed discussions over the outstanding differences between them in relation to the assessment of the AQUIND Interconnector/ Atlantic Crossing interaction and protection? If not, what are the implications if agreement cannot be reached?

5.1 The Applicant has engaged with the MMO and Natural England at length on the methods of cable protection to ensure that the maximum parameters have been appropriately assessed and adequately secured in the DCO and Deemed Marine Licence. It is the Applicant's position that matters relating to cable protection are agreed in the Statements of Common Ground (SoCG) submitted at Deadline 4 (REP4-019 and REP4-016) and the remaining areas of clarification have been addressed in Table 2.4 of the Applicant's Response to the MMO's submission at Deadline 2 (REP3-014) (**CB-8**). The Applicant has very recently received feedback from the MMO and this is under review.

5.2 The Applicant responded to this query at Deadline 2 (REP2-008) (**CB-6**) stating that the amount of cable protection permissible (and that cannot be exceeded) is very clearly set out at Schedule 15, Part 2 Condition 1 and that Part 1, Paragraph 4 (5) does not override this. In any case, details of proposed cable protection need to be submitted for approval under Part 2 of the Deemed Marine Licence, articles 4(1)(c) and 11(1)(c). The Applicant notes the same wording is used for the Norfolk Vanguard Wind Farm Order 2020.

5.3 It is the Applicant's position that the only outstanding areas of discussion in regard to conditions of the Deemed Marine Licence between the Applicant and the MMO are those matters identified in the SoCG in Table 4.1, which the Applicant is engaging with the MMO on in order to resolve. A meeting was held on 19 November 2020 between the MMO and the Applicant, and the MMO has very recently provided feedback on matters under discussion within the SoCG which is under review.

5.4 It is the Applicant's position that the matters in relation to assessment of the Atlantic Cable Crossing and cable protection have been addressed in Table 2.4 of the Applicant's Response to the MMO's Deadline 2 submission (REP3-014) (**CB-8**). The Applicant has very recently received feedback from the MMO and this is under review.

Question 5J Marine habitats and assessments

In ME1.10.3 and ME1.10.23 of ExQ1, we asked the Applicant to supply figures to show the location of the WFD sensitive sites and habitat locations (Table 8.4 of the ES (APP-123) (ISH3-9)) and suspended sediment levels (Table 8.6 of the ES (APP-123) (ISH3-9)) and sensitive habitats respectively. In response, the Applicant directed us to defra's MAGIC maps website. Are MAGIC maps a suitable option for this purpose, given that maps have to be constructed by users inputting data and that non-technical Interested Parties may not be familiar with their workings. At present, we do not consider the relevant information to be in the Examination. Please could the Applicant review its previous response and consider whether illustrative representations of the necessary data on a base map could be produced?

Whilst it is stated that a precautionary approach was taken to determine the study areas for the baseline, could the Applicant provide reassurance that Figure 8.1 does not need updating

to reflect the regional boundaries used in the ES? Are the MMO and Natural England content with the extent of the study area?

With reference to the Applicant's answer to question ME1.10.6, could Natural England and the Marine Management Organisation confirm they are satisfied that the most appropriate and up-to-date environmental information has been used to inform and influence the definition of the Zone of Influence relating to benthic receptors?

5.5 In responding to ME1.10.3 and ME1.10.23, the Applicant provided a response by referring to the Defra MAGIC maps website and in so doing, also highlighted that the datasets for the WFD sensitive sites were not available for download and could not be reproduced in the map templates for the AQUIND project due to copyright terms.

5.6 It has since become possible however, to import the AQUIND project data into the Defra MAGIC maps website templates. Accordingly, a map has been produced and submitted alongside this document (**ISH3-Exhibit 1**). This map illustrates the proximity of the WFD sensitive habitats that are shown in Table 8.4 of Chapter 8 of the ES (APP-123) (**ISH3-9**) and also shows buffers that represent the inshore (KP0-KP21) Zones of Influence for suspended sediment levels at 2 km, 5 km and 10 km as outlined in Table 8.6 of Chapter 8.

5.7 The Zone of Influence for the offshore section (not so relevant to WFD habitats) is shown in Plate 16 of Chapter 6 Physical Processes (APP-121), and presents the maximum values of suspended sediments occurring from sediment disposal activities offshore. Paragraph 8.6.4.31 of Chapter 8 (APP-123) (**ISH3-9**) highlights that worst case parameters are extracted from the Chapter 6 Physical Processes assessment. It is the Applicant's position that the map produced (**ISH3-Exhibit 1**) reflects the worst case scenario information presented in Table 8.6 relevant to WFD sensitive habitats. It should be noted that the Environment Agency have confirmed they are content with the marine WFD assessment.

5.8 Figure 8.1 (APP-160) (**ISH3-10**) does represent the local and regional extents of the main Study Area and that Figures 8.2, 8.3 and 8.5 (APP-161, APP-162 and APP-164) (**ISH3-11, ISH3-12 and ISH3-13**) provide additional regional context for receptors that are further afield. The MMO and Natural England have not raised any concerns in regard to the extent of the Study Area and Table 3.3 in the SoCGs with both the MMO and Natural England (REP4-019 and REP4-016 respectively) records agreement on this.

5.9 The assessment presented in Chapter 8 of the ES (APP-160) (**ISH3-10**) has used the most appropriate and up-to-date environmental information, including project specific sediment plume dispersion modelling to inform the zones of influence relating to benthic receptors. The figure produced from MAGIC maps (**ISH3-Exhibit 1**) serves only to provide further illustration of the evidence, it does not change the assessment undertaken or the outcomes of the assessment. The MMO and Natural England demonstrate that both organisations agree with the conclusions as in Tables 3.3 of the SoCGs (REP4-019 and REP4-016 respectively).

6. NOISE

Question 6K-1 Robustness of the assessment

With reference to ExQ1 N1.11.3, could the Applicant clarify the meaning of its response: 'Within the onshore cable corridor, the relative distance between the illustrative cable route and the noise sensitive receptors influences the magnitude of noise level experienced by any receptor. The magnitude of impact and overall noise effect assigned to this magnitude of level is influenced by the duration, timing and frequency of exposure to that noise level, which is not altered by the alignment of the cable route.'

The first part suggests that the distance between the cable installation and a receptor does influence the impact perceived at the receptor, as might intuitively be expected as noise diminishes with distance from source. The second part could be taken to contradict this.

Notwithstanding the ultimate judgement of whether such an impact is significant or not, could ExQ1 N1.11.3 be reconsidered in respect of the different effects that might be perceived at sensitive receptors near those stretches of the route where it would be possible for installation to come substantially closer than the illustrative route?

How robust is the assessment of magnitude of change in the noise environment and the determination of significance in the light of this? How does it relate to the adopted EIA approach of assessing the worst case?

6.1 In response to the ExA's request for clarification of the first two sentences of the Applicant's response to ExQ1 N1.11.3, the Applicant was explaining that whilst the magnitude of noise level at any receptor could be influenced by the distance between the cable route and receptor (and therefore the exact alignment of the cable route within the Onshore Cable Corridor (OCC)), there are other important factors which require equal consideration in the determination of an overall noise effect. These include the total duration of exposure to the noise, frequency of occurrence, and time of works, which are not themselves influenced by the precise alignment of the cable route. Given the temporary and transient nature of the works in the OCC, these other factors are important in characterising the nature of the noise effects.

6.2 The illustrative cable route for the noise and vibration assessment presented in figure 24.2 of the ES (APP-336) (**ISH3-15**) represents a scenario of how the cable route could be laid within the cable corridor to facilitate a reasonable worst case and proportionate noise and vibration assessment. The route is based on the principle of preferentially following the shortest route and minimising bends in the alignment whilst also accounting for existing constraints. The Applicant has undertaken a comprehensive noise sensitivity test along the entire cable route where the Order Limits are relatively wide, which, as explained in the Applicant's response to question N1.11.3, has concluded that regardless of the exact alignment of the cable route, the conclusions of the noise and vibration assessment will be as presented in Chapter 24 of the ES (APP-139) (**ISH3-14**) and Chapter 17 of the ES Addendum (REP1-139) (**CB-13**).

6.3 In respect of the ExA's request for consideration of different effects that might be perceived at sensitive receptors near those stretches of the route where it would be possible (albeit unlikely) for installation to come substantially closer than the illustrative route, this is best illustrated by an example such as Onshore HVDC cable laying in section 2 (Sheet 2, APP-336) (**ISH3-15**).

6.4 Paragraph 24.6.3.2 of Chapter 24 of the ES (APP-139) (**ISH3-14**) concluded that at all receptors, there would be a negligible noise effect from cable and duct installation, with the exception of Hillcrest Children's Services, where a minor adverse (not significant) effect is presented. In the case of the receptors where a negligible noise effect is presented, this is because a negligible magnitude of noise level is predicted in accordance with Table 24.3 of the ES. This negligible magnitude of level would correspond to a negligible magnitude of impact (see Table 24.4 of the ES) and a negligible effect (table 24.14) based on a high sensitivity receptor. To provide context to the possible effects that might be experienced for daytime cable and duct installation over agricultural and open land such as in section 2, a negligible magnitude of level is expected when the cable route is located over 22m from a receptor. A small adverse magnitude of level is expected when the cable route is between 12m and 22m from a receptor, a medium adverse magnitude of level is expected when the cable route is between 7m and 12m from a receptor, and a large adverse magnitude of level

is expected when the cable route is within 7m of a receptor. These distances are based on construction noise calculations which have been informed by the methodologies in British Standard (BS) 5228-1:2009+A1:2014 *Code of practice for noise and vibration control on construction and open sites – Part 1: Noise*.

6.5 As demonstrated by these distances, the 'corridor' within which adverse noise effects could occur is relatively narrow (44m wide plus the 5m width of the cable trench) compared with the width of the Order Limits in Section 2. This is illustrated in **ISH3-Exhibit 2** (Illustrative magnitude of noise levels for Onshore HVDC cable laying in Section 2). The cable route would have to be installed within 22m of the edge of the Order Limits for the magnitude of noise level to be greater than negligible outside of the Order Limits. For the reasons explained above in relation to the cable installation principles, cable installation within 22m of the edge of the Order Limits in this area is considered unlikely. Furthermore, if the cable route were installed at the edge of the Order Limits, a sensitive receptor would have to be located within 22m of the edge of the Order Limits to be potentially exposed to a greater than negligible magnitude of noise level.

6.6 As explained in the Applicant's responses to N1.11.3, in the unlikely event the cable route was installed at the edge of the Order Limits in section 2, the Applicant's sensitivity test has concluded that the very worst case magnitude of noise level experienced would be large adverse (Table 24.3), which would be the case for one low sensitivity receptor used for commercial purposes (animal services) located within 7m of the Order Limits boundary. Based on the anticipated duration of exposure given the installation rate of 50m per day (REP1-151) (**CB-14**), this would equate to a medium magnitude of impact (Table 24.4) and a minor adverse (not significant) effect (Table 24.14) based on a low receptor sensitivity. All other receptors within 22m of the Order Limits at section 2 would be subject to, at worst, a small adverse magnitude of level, which would equate to a negligible magnitude of impact based on a 50m per day installation rate and a negligible effect based on a high receptor sensitivity.

6.7 This sensitivity test has been completed for other sections where Order Limits are relatively wide. In the case of section 1, as explained in the Applicant's response to question N1.11.3, there are no sensitive receptors within 22m of the land to be used for cable installation (Plot 1-62 of Sheet 1, REP1-011a) (**CB-18**), and therefore there will be no adverse noise effects from cable route works regardless of where the cable route is installed. In section 3, as explained in the Applicant's response to question N1.11.3, whilst the Order Limits are relatively wide, the area to be used for cable installation (Sheet 3, REP1-011a) (**CB-18**) is much narrower. Whilst there is the potential in section 3 for the cable route to be installed marginally closer to some receptors than the illustrative route (specifically within Plots 3-08, 3-09 and 3-10), the noise assessment is considered robust for the same reasons explained for section 2 above.

6.8 There are many sections of the cable route where the route is sufficiently narrow such that the cable route would not come substantially closer than the illustrative route, and on this basis the assessment is considered robust. The revision to the Order Limits has also further reduced the width of the corridor for cable installation in a number of areas including section 2 (north of Anmore Road), section 4 (Portsdown Hill Road), section 6 (Eastern Road/Zetland Field), section 7 (near Baffins Milton Rovers) and section 9 (Furze Lane) which further reduces the potential for the constructed cable route to substantially vary from the illustrative route assessed.

6.9 As alluded to in the ExA's questions, it is important to consider the perception of different noise effects by occupiers of sensitive receptors, and the multiple factors that contribute to the overall perception, if the cable route were to come substantially closer to sensitive receptors than presented in figure 24.2 of the ES (APP-336) (**ISH3-15**). The nature of the cable installation works are highly transient, and therefore noisy activities are not expected to take place in one location and impact any individual receptor for any considerable length of time. This is particularly the case in the areas where the Order Limits are relatively wide, as demonstrated by the assumed cable installation rates (Sheets 1-3, REP1-151) (**CB-14**). In all locations, regardless of the precise alignment of the cable route, and the highest magnitude of noise level experienced at a receptor (small, medium or large adverse), the total duration of exposure to a greater than negligible magnitude of noise level would not change. BS 5228 states '*local residents might be willing to accept higher levels of noise if they know that such levels will only last for a short time*', which emphasises the importance of considering the

total duration of effect alongside the level of noise. Key to a resident's acceptance of short-term noise effects will be their attitude to the site operator/contractor, which BS 5228 says can be improved through good community liaison. This is reflected in the inclusion of community liaison commitments in the Outline Onshore CEMP (REP4-005) (**CB-24**), and specific to noise in Paragraph 5.12.2.5, a commitment to proactively notify residents of when the noisiest works will take place. The construction noise assessment has followed the adopted EIA approach of assessing the reasonable worst case. For example, where different route options are presented in sections 5, 8 and 9, the worst case options have been presented in Chapter 24 of the ES (APP-139) (**ISH3-14**) and supplemented by section 17.3 of the ES Addendum (REP1-139) (**CB-13**).

6.10 In summary, whilst there could be minor differences in the magnitude of noise level experienced at some receptors based on the difference between the illustrative and constructed cable route alignment, this is unlikely to alter the overall perception of effects by occupiers of sensitive receptors. Therefore, the adopted methodology for the determination of significance, which is based not solely on an assessment of the anticipated noise level, but also the duration of the activity, the time of day, and the sensitivity of the receptor, is a robust and proportionate approach.

Question 6K–2 Robustness of the assessment continued

Subsequent to all relevant parties' answers to ExQ N1.11.2, does the information provided in the noise assessment chapter of the Environmental Statement (APP-139) (ISH3-14) fully reflect the requirements of the stated methodology and standard BS 5288? Should it include information about daytime noise levels generated during construction? If so, does it include adequate information about this matter? Should it include details of noise levels for daytime work and relate these to a work programme for the number of days that noise-generating work will be carried out?

Would the dDCO allow the breaking and cutting of road surface or resurfacing of roads during night-time? If so, is further noise assessment necessary to determine the worst-case impact on noise sensitive receptors?

6.11 The noise assessment methodology uses the information contained in BS 5228-1 including the principles of determining the significance of noise and vibration effects. Paragraphs 24.4.2.27 to 24.4.2.37 of Chapter 24 of the ES (APP-139) (**ISH3-14**) explain how the assessment utilises the relevant sections of Annex E of BS 5228-1 to derive suitable construction noise criteria, and the relevant sections of Annex F for the noise predictions. Current sound level data on proposed construction site equipment and site activities has also been obtained from Annex C of BS 5228-1 and used in the noise predictions.

6.12 BS 5228-1 states that '*for dwellings, times of site activity outside normal weekday and Saturday morning working hours will need special consideration*.' The noise assessment has robustly considered these potential periods of work outside of core hours, as demonstrated by:

- 6.12.1 the adoption of stricter magnitude of level criteria for evening, weekend and night-time works in table 24.3 (APP-139) (**ISH3-14**);
- 6.12.2 the higher magnitude of impact assigned to a given magnitude of level for works that take place outside of core working hours in table 24.4 (APP-139) (**ISH3-14**); and
- 6.12.3 the completion of a detailed noise assessment for all areas where works outside of core hours could take place.

6.13 The above reflects a robust and proportionate approach of undertaking a more detailed assessment at locations where the noise effects have the potential to be larger given the more sensitive time period.

6.14 The predicted noise levels for construction activities during core working hours (i.e. daytime) have been provided for each section of the Onshore Cable Corridor through the provision of a magnitude of level, which corresponds with the noise level bands specified in Table 24.3 of the ES (APP-139) (**ISH3-14**) for the respective time period. For example, in the case of trenching and duct installation during core working hours in Section 10, Paragraph 17.3.2.37 of the ES Addendum (REP1-139) (**CB-13**) states:

6.14.1 29 receptors are predicted to experience a large adverse magnitude of level (i.e. a noise level of ≥76 dB $L_{Aeq,T}$);

6.14.2 80 receptors are predicted to experience a medium adverse magnitude of level (i.e. a noise level of 71-75 dB $L_{Aeq,T}$); and

6.14.3 97 receptors are predicted to experience a small adverse magnitude of level (i.e. a noise level of 66-70 dB $L_{Aeq,T}$).

6.15 Paragraph 17.3.2.37 of the ES Addendum (REP1-139) (**CB-13**) goes on to determine the noise effect from each magnitude of level based on the expected duration of impact, which has been informed by the installation rate assumptions (Sheet 10, REP1-151) (**CB-14**). This same approach is replicated for construction activities in other sections, which is a robust and proportionate approach for the assessment of construction noise during core working hours.

6.16 With respect to a works programme being referenced in relation to the duration that noise-generating work will be carried out, the noise and vibration assessment has utilised all the available programme information as detailed in Chapter 3 of the ES (APP-118) **(CB-30)** including the proposed working hours, the duration of the construction programme including HDD operations, and importantly for the OCC assessment, the assumed cable installation rates (REP1-151) (**CB-14**), to determine the expected duration of noise effects at each receptor. The duration of exposure has been embedded into the assessment methodology. This is considered a robust and proportionate assessment of the likely significant effects, and suitable for an EIA. Paragraph 5.12.1.2 of the Outline Onshore CEMP (Rev 003, REP1-087), explains that following the appointment of a contractor and the production of detailed works plans, it may be appropriate, for example, to review the construction mitigation measures. This provision in the Outline Onshore CEMP provides a commitment to review mitigation measures in the event that duration of exposure to adverse noise effect changes as a result of new programme information becoming available upon appointment of a contractor, which is an approach that is endorsed in BS 5228.

6.17 Section 6.2.8 of the Outline Onshore CEMP (REP4-005) **(CB-24)** explains that in the locations near sensitive residential receptors where cable and duct installation works outside of core hours may be required, cutting and breaking of the road surface and road resurfacing activities will not be permitted at night (22:00-07:00). These types of activities utilise equipment which may create noise with impulsive characteristics, and as explained in BS 5228, these characteristics are likely to make the noise more disturbing than a noise of the same level that does not have these characteristics. Given the night-time is the most sensitive period for residential receptors, these activities will not be permitted during this period, and this mitigation measure is secured through the Outline Onshore CEMP, which itself is secured through Requirement 15 of the draft DCO. Therefore, no further noise assessment to that contained in Chapter 24 of the ES (APP-139) (**ISH3-14**) and Chapter 17 of the ES Addendum (REP1-139) (**CB-13**) is necessary.

Question 6L Robustness of the methodology

***With reference to the Applicant's response at Deadline 2 to question ExQ1 N1.11.7, several relevant local authorities indicate that they remain unclear how magnitude of noise change has been assessed. Notwithstanding the Applicant's response that 'little reliance has been placed on the generic definitions in Table 24.13 of the ES', would the clarity of the noise assessment,* especially for non-technical readers, be improved by a clearer explanation of how the magnitude of change, sensitivity of receptors and predicted significance of effect was dealt with in the noise assessment?**

For the Applicant's Deadline 2 response, please clarify with specific references what is meant by 'The magnitude categories adopted for each assessment element are underpinned by the appropriate British Standard or guidance document'. Do parties believe that the ExA and Secretary of State can have confidence that the method and conclusions of the noise assessment are reliable and robust?

6.18 Following the Applicant's response to question ExQ1 N1.11.7 (REP1-091) (**CB-2**) and subsequent discussions with WCC, EHDC and HBC, the noise assessment methodology

has been formally agreed with these local planning authorities, as evidenced through the SoCGs submitted at Deadline 4 (REP4-010, REP4-012 & REP4-013).

6.19 To provide a clearer explanation of how magnitude of change/level, magnitude of impact, sensitivity of receptors and expected significance of effect has been dealt with in the noise assessment, it is appropriate to consider each assessment element in turn (operational noise, construction noise, and construction traffic noise). This is because each assessment element necessarily utilises a different, but entirely appropriate, British Standard or guidance document to determine the noise effect.

Operational Noise

6.20 The operational noise assessment methodology is set out in section 24.4.5 of Chapter 24 of the ES (APP-139) (**ISH3-14**). The operational noise assessment for the Converter Station and Fibre Optic Cable (FOC) infrastructure (including the Telecommunications Buildings near the Converter Station and Optical Regeneration Station (ORS) at Landfall) has followed the principles of British Standard 4142:2014+A1:2019 *Methods for rating and assessing industrial and commercial sound.* This standard describes methods for rating and assessing sound of an industrial and/or commercial nature which includes sound from fixed installations which comprise mechanical and electrical plant and equipment. This standard is long standing, and directly referenced in Paragraph 5.11.6 of the Overarching National Policy Statement for Energy (EN-1) as an appropriate standard for the assessment of operational noise.

6.21 Paragraph 24.4.5.5 of the Chapter 24 of the ES (APP-139) (**ISH3-14**) explains that the operational assessment considers the broadband noise (i.e. the overall level of noise expressed as a single value), but also the noise level across the frequency spectrum (referred to as the 'octave band assessment'). The octave band assessment is beyond the scope of BS 4142, and was completed to ensure a robust assessment of the Converter Station, in particular with respect to noise at lower frequencies.

6.22 The BS 4142 methodology for broadband noise assessment requires the operational noise levels to be compared with baseline (i.e. existing, pre-development) noise levels. The baseline levels were quantified during the noise surveys, as described in section 24.4.1 of Chapter 24 of the ES (APP-139) (**ISH3-14**), and the operational noise levels were determined using 3D computer noise modelling. The broadband operational noise assessment criteria are presented in table 24.9 (as revised by table 17.2 of the ES Addendum (REP1-139) (**CB-13**)) for the Converter Station Area and table 24.10 of the ES (APP-139) (**ISH3-14**) for the ORS. These criteria are derived using the baseline noise survey data (summarised in table 17.1 of the ES Addendum (Converter Station Area) (REP1-139) (**CB-13**) and Table 24.20 of the ES (Landfall)) (APP-139) (**ISH3-14**), and are receptor specific. As required by BS 4142, the assessment criteria are defined using the typical background sound level (expressed as dB $L_{A90,T}$) during the daytime (07:00 to 23:00 hours) and night-time (23:00 to 07:00 hours) periods.

6.23 These assessment criteria are referenced in table 24.11 of Chapter 24 of the ES (APP-139) (**ISH3-14**) to determine the appropriate 'magnitude of level' categories for operational noise. For example, a negligible magnitude of level would occur when the predicted operational noise level is below or equal to the assessment criterion (i.e. the typical background sound level). This approach of comparing operational noise levels with background sound levels is described in BS 4142, and this explains, for the operational assessment, the Applicant's comment that 'the magnitude categories adopted for each assessment element are underpinned by the appropriate British Standard or guidance document'. Furthermore these assessment criteria were discussed and agreed with the local planning authorities, in particular with WCC and EHDC in respect of the Converter Station, as evidenced in consultation responses in Appendix 24.1 (APP-460).

6.24 The operational assessment defines the magnitude categories as a 'magnitude of level' rather than a 'magnitude of change'. This is because of a technicality in the BS 4242 assessment methodology in that the assessment criterion is derived from the background sound level parameter (expressed as dB, $L_{A90,T}$) whilst operational noise is assessed using the equivalent continuous sound pressure level (expressed as dB, $L_{Aeq,Tr}$) and in the case of the broadband assessment a rating level (expressed as dB, $L_{Ar,Tr}$). Due to the use of these two different parameters which are not directly comparable, it is a magnitude of level which is being described, rather than a magnitude of change. Notwithstanding this, the assessment

methodology follows the principles of BS 4142, which is the appropriate guidance document, and therefore the approach is most robust.

6.25 Each 'magnitude of level' is assigned a 'magnitude of impact' based on the matrix in table 24.12 of the ES (APP-139) (**ISH3-14**). When determining the magnitude of impact, consideration has been given to the duration, timing and frequency of the impact. The operational noise levels are considered to be permanent, and the duration, timing and frequency of the operational impact is considered to be relatively unchanging. As such, the permanent nature of the operational noise has primarily defined the matrix presented in Table 24.12.

6.26 The magnitude of impact is then assigned an overall noise effect based on the matrix contained in table 24.14 of the ES (APP-139) (**ISH3-14**), which accounts for the sensitivity of the receptor. The receptors included in the operational noise assessment (which were all residential) are classed as having a 'high' sensitivity to noise. Significance was assigned to each effect as described in paragraph 24.4.7.5 of Chapter 24 of the ES (APP-139) (**ISH3-14**).

6.27 As explained above, the operational assessment methodology follows the principles of BS 4142 and where applicable, has been expanded to ensure a robust assessment of all operational noise (e.g. including low frequency noise) from Converter Station and FOC infrastructure. As evidenced above, BS 4142 is the appropriate British Standard upon which the operational assessment should be based, and the methodology has been agreed with the relevant Local Planning Authorities. Therefore, the ExA and Secretary of State can have full confidence in the reliability and robustness of the method and conclusions of the assessment.

Construction Noise

6.28 The construction noise assessment methodology is set out in section 24.4.2 of Chapter 24 of the ES (APP-139) (**ISH3-14**). The construction noise assessment has followed the relevant guidance in British Standard BS 5228-1:2009+A1:2014 *Code of practice for noise and vibration control on construction and open sites – Part 1: Noise.* This standard gives recommendations for basic methods of noise control relating to construction sites, including sites where civil engineering works are being carried out, where work activities/operations generate significant noise levels, including industry-specific guidance. The standard also 'provides guidance concerning methods of predicting and measuring noise and assessing its impact on those exposed to it. It is the appropriate standard upon which the construction assessment should be based because of its intended scope, its long-standing use for the assessment of construction noise, and the direct reference in Paragraph 5.11.6 of NPS EN-1 as the appropriate standard for the assessment of construction noise.

6.29 The 'magnitude of level' categories adopted in table 24.3 of Chapter 24 of the ES (APP-139) (**ISH3-14**) have been derived from the relevant guidance in Annex E of BS 5228. For the construction noise assessment, this is what the Applicant means by 'the magnitude categories adopted for each assessment element are underpinned by the appropriate British Standard or guidance document'. A detailed explanation for the noise levels adopted is provided in Paragraphs 24.4.2.27 to 24.4.2.33 of Chapter 24 of the ES (APP-139) (**ISH3-14**). In summary, it can be seen that the magnitude of level categories selected are 10dB stricter for evening and weekend works compared with daytime (core hours) works, and a further 10dB stricter for night-time works. This reflects the guidance in BS 5228 that 'for dwellings, times of site activity outside normal weekday and Saturday morning working hours will need special consideration.'

6.30 Similarly to the operational assessment, the construction noise assessment defines the magnitude categories as a 'magnitude of level' rather than a 'magnitude of change'. This is because the magnitude of level categories are based on fixed noise criteria, the reasons for which are explained in Paragraph 24.4.2.28 of Chapter 24 of the ES (APP-139) (**ISH3-14**).

6.31 Each 'magnitude of level' is assigned a 'magnitude of impact' based on the matrix in table 24.4 of the ES (APP-139) (**ISH3-14**). The factors that determine the magnitude of impact from a magnitude of level include the time period that an activity occurs and the duration of the activity. In summary, the more sensitive the time period the works occur, and/or the longer the activity lasts, the higher the magnitude of impact. BS 5228 states that duration and hours of work are likely to affect the acceptability of noise arising from construction sites;

hence the reason for embedding these aspects into the assessment methodology. The consideration of consecutive and non-consecutive periods of works has been accounted for, which is explained in paragraphs 17.3.2.3 and 17.3.2.4 of the ES Addendum (REP1-139) (**CB-13**). In summary, the noise assessment considers the total duration of a construction activity by way of assessing the possibility for successive installation of both cable circuits (this links to the Applicant's response to item 6M).

6.32 The magnitude of impact is then assigned an overall noise effect based on the matrix contained in table 24.14 of the ES (APP-139) (**ISH3-14**), which accounts for the sensitivity of the receptor. The majority of receptors included in the construction noise assessment, including all residential properties, are classed as having a 'high' sensitivity to noise. Significance was assigned to each effect as described in paragraph 24.4.7.5 of Chapter 24 of the ES (APP-139) (**ISH3-14**).

6.33 As explained above, the construction assessment methodology followed the guidance in the relevant sections of BS 5228, which as evidenced above, is the appropriate British Standard upon which the construction noise assessment should be based. The assessment follows a proportionate approach of considering construction noise effects from all activities at all times, and undertaking a more detailed assessment in the locations where receptors are considered to be more sensitive as works may be required outside of core working hours. This follows the guidance in paragraph 5.11.4 of NPS EN-1, which states that 'the nature and extent of the noise assessment should be proportionate to the likely noise impact.' Therefore, the ExA and Secretary of State can have full confidence in the reliability and robustness of the method and conclusions of the assessment.

Construction Traffic Noise

6.34 The construction stage road traffic noise assessment methodology is set out in section 24.4.4 of Chapter 24 of the ES (APP-139) (**ISH3-14**). The noise predictions are based on the methodologies set-out in the former Department for Transport/Welsh Office memorandum Calculation of Road Traffic Noise (CRTN) 1988, which is a long standing and well-established guidance document appropriate for the prediction of road traffic noise using traffic data.

6.35 The 'magnitude of change' categories adopted in table 24.7 of Chapter 24 of the ES (APP-139) (**ISH3-14**) are based on the short-term noise change categories in the Design Manual for Roads and Bridges (DMRB) published by Highways England, which are considered the most referenceable and robust criteria for short-term construction traffic noise effects. The construction traffic noise assessment defines the magnitude categories as 'magnitude of change' because the assessment is based on a comparison of road traffic noise levels between a baseline scenario (referred to as the 'Do-Minimum') and scenarios during the construction stage (referred to as the 'Do-Something' scenarios).

6.36 Each 'magnitude of change' is assigned a 'magnitude of impact' based on the matrix in table 24.8 of the ES (APP-139) (**ISH3-14**), which is based on the understanding that road closures along the Onshore Cable Corridor are expected to be temporary and transient in nature. The magnitude of impact is then assigned an overall noise effect based on the matrix contained in table 24.14, and the significance of each effect was assigned as described in paragraph 24.4.7.5 of Chapter 24 of the ES (APP-139) (**ISH3-14**). The assessment of construction traffic noise is completed for each road link rather than individual receptors, which is a common and robust approach. As a worst case, a high receptor sensitivity has been selected on the assumption that residential properties would be situated adjacent to all roads. Where medium and large adverse magnitudes of change were predicted, aerial mapping and address data was used to identify whether there were sensitive receptors fronting the roads.

6.37 As explained above, the construction traffic noise assessment methodology has followed the guidance in CRTN and the DMRB, which are the appropriate guidance documents upon which the assessment should be based. Therefore, the ExA and Secretary of State can have full confidence in the reliability and robustness of the method and conclusions of the assessment.

Question 6L – continued

Would the alternative approach based on the Noise Policy Statement for England suggested at Deadline 1 by Portsmouth City Council in response to ExQ1 N1.11.7 be more appropriate?

6.38 The alternative approach based on the Noise Policy Statement for England (NPSE) would not be more appropriate.

6.39 The standards and guidance documents used in the construction and operational noise assessment are the most applicable and robust for use, and in the case of BS 4142 for operational noise and BS 5228 for construction noise, are directly referenced in NPS EN-1 as appropriate standards for the noise assessment of energy infrastructure. In each case the adopted assessment is multi-faceted in that more than a simple threshold level has been considered.

6.40 As explained above, the construction assessment methodology considers not only the level of noise but also the duration of exposure and time period to determine the magnitude of impact. The operational noise assessment adopts robust criteria based on BS 4142, and accounts for the noise level from the permanent installations relative to the current background noise level, as well as the frequency spectrum of the noise to ensure that any particularly characteristic components (e.g. low frequency noise) are assessed.

6.41 The NPSE approach proposed by PCC is limited in that it only considers a simple threshold level above which an effect on health and quality of life would occur.

6.42 Furthermore, no numerically quantifiable values or definitions are assigned to the NOEL, LOAEL and SOAEL in the NPSE, and there is no detailed advice regarding the appropriate methodologies for their determination. It is clear that the NPSE threshold values are focussed on 'health and quality of life'. However, there is an absence of health based research available to confidently assign health effect levels for short-term construction noise and operational noise from energy infrastructure. If an attempt were made to determine effect levels such as the NOEL, LOAEL or SOAEL, it is certain that this would rely heavily, if not exclusively, on the standards and guidance documents (BS 4142 and BS 5228) that have been used in the noise assessment. This would be a superfluous exercise that would add no value to the assessment that has been undertaken, and the conclusions of the respective assessments and mitigation measures required would not change.

6.43 In summary, the construction and operational noise assessments are sufficient and robust to determine the significance of effects without the need to incorporate any additional assessment in line with the effect levels described above (i.e. the NOEL, LOAEL and SOAEL).

Question 6L – continued

Following the Applicant's submission at Deadline 2 (REP2-014) (CB-5), does CPRE Hampshire have any remaining concerns from its Written Representation (REP1-253) regarding noise generated from both construction and operation of the Converter Station, the requirements of NPS EN-1, the use of BS 4142 as the assessment standard, the incorporation of 'uncertainties' in the assessment, and the interpretation of the technical note on BS 4142:2014+A1:2019 (prepared by members of the Association of Noise Consultants Good Practice Working Group)? Is there now common ground between the parties?

6.44 A summary of the responses provided to CPRE are as follows:

6.44.1 The noise and vibration assessment follows relevant legislation, policy and guidance, including the Overarching National Policy Statement for Energy (EN-1);

6.44.2 BS 4142 is the appropriate standard for the operational noise assessment;

6.44.3 Whilst the technical note on BS 4142:2014+A1:2019, prepared by members of the Association of Noise Consultants Good Practice Working Group (WG), could be used as a resource from which the reader may access the views of the members of the WG, it must not be used as a replacement for planning policy or BS 4142 itself.

6.44.4 'Uncertainties' in the noise and vibration assessment have been robustly accounted for through the analysis of meteorological conditions during the baseline noise survey, the modelling of reasonable worst-case conditions in the operational

noise modelling, and the worst-case assumptions made about the operating conditions of the Converter Station.

6.45 Full responses to the CPRE comments were provided in the Applicant's submission at Deadline 2 (REP2-014) (**CB-5**), and no further points have been raised by CPRE on these matters since the Applicant's responses were provided. It is therefore assumed that there are no outstanding issues from CPRE with respect to the noise and vibration assessment.

Question 6M Continuous or periodic exposure to noise

In relation to ExQ1 N1.11.5, the Applicant has provided further explanation at paragraph 17.3.2.3 of the ES Addendum (REP1-139) (CB-13) to explain how successive periods of noise have been treated in the noise assessment. Havant Borough Council and East Hampshire District Council had earlier expressed concern about the methodology. Does this update satisfy these concerns and is there now common ground between the parties on this matter?

6.46 Following the Applicant's further explanation of this at paragraph 17.3.2.3 of the ES Addendum (REP1-139) (**CB-13**) and subsequent discussions held between the Applicant, Havant Borough Council and East Hampshire District Council, this matter is now agreed, as evidenced through the respective Statements of Common Ground submitted at Deadline 4.

Question 6N Optical Regeneration Stations

Does Portsmouth City Council have any further observations or concerns regarding the noise assessment presented in the Environmental Statement in respect of the construction and operation of the Optical Regeneration Station buildings at the Fort Cumberland car park? Has enough information been provided to satisfy the Council that any noise emanating from the buildings can be mitigated effectively?

6.47 The Applicant provided PCC with the location of the assessment elements in Chapter 24 of the ES (APP-139) (**ISH3-14**) relevant to the Optical Regeneration Station (ORS) in the response to N1.11.8 of the Applicant's Comments on Responses to ExA's first Written Questions (REP2-008) (**CB-6**). No further queries have been raised by PCC in respect of the noise assessment for the ORS at landfall, and therefore it is assumed that this response was satisfactory to PCC.

Question 6O DCO provisions

In relation to Winchester City Council's Local Impact Report (REP1-183) (ISH3-2), can the Applicant clarify the use and meaning of the phrase 'cannot reasonably be avoided' as incorporated into Article 9 of the dDCO, and how this could relate to any noise nuisance and any subsequent levels secured in the Requirements (for example, Requirement 20)? Could Winchester City Council please explain its concerns in relation to this, and the 'Best Practice documents' it refers to?

What 'unreasonable impediment to the delivery of the Proposed Development' could the Applicant foresee emerging if Winchester City Council's proposal to delete Article 9 was accepted by the Secretary of State?

Could the Applicant explain how its proposed Article 9 varies from the model provision and explain why the variation is considered necessary.

6.48 Article 9 of the draft DCO (REP3-003) **(CB-1)** (Defence to proceedings in respect of statutory nuisance) provides that no one is able to bring statutory nuisance proceedings under the Environmental Protection Act 1990 in respect of noise, if the noise is created in the course of carrying out construction, operation or maintenance of the Authorised Development.

6.49 For the defence which the Article provides to apply the defendant must show that the nuisance relates to matters:

6.49.1 for which notice has been given under section 60 or consent obtained under section 61 of the Control of Pollution Act 1974;

6.49.2 is in accordance with controls and measures described in an approved construction and environmental management plan or is as a consequence of noise levels set out in an approved noise management plan;

6.49.3 which cannot be reasonably avoided as a consequence of the construction, maintenance or operation of the Authorised Development; or

6.49.4 is a consequence of the use of the authorised development and that it cannot reasonably be avoided.

6.50 Article 9 is in the main a model provision, replicated in many, if not all, made DCOs.

6.51 Article 9(1) includes reference to (ga) (noise that is prejudicial to health or a nuisance and is emitted or caused by a vehicle, machinery or equipment on a street) which is an amendment to the model provision. This is included because much of the works to install the Onshore HVDC Cables will be undertaken in streets and is therefore necessary to ensure this activity is provided for.

6.52 Article 9(1)(a)(ii) is a variation from the model provision and is included so as to more clearly refer back to the control documents which must be complied with in relation to noise related matters.

6.53 Article 9(1)(b) has been included to confirm no conflict with the requirements to be imposed in relation to noise during the operation of the Authorised Development and to provide certainty operations within those assessed and approved limits will not give rise to statutory nuisance proceedings.

6.54 It would be a potential impediment to the delivery and operation of the Authorised Development where proceedings for statutory noise related nuisance could be brought and potentially prevent activities being carried on where the Authorised Development is being constructed and/or operated in accordance with the approved noise limits. The variations to the model form are therefore necessary as they align with the limits which the Authorised Development must comply with and provide that the defence shall not apply where those limits are exceeded.

7. SOCIO-ECONOMIC ASSESSMENT

Question 7P

Could the Applicant clarify the answer to ExQ1 OW1.12.12 in relation to any existing subsurface land drainage systems that may exist in the Farlington Playing Fields? Does the submission in response that 'All existing drainage systems should be identified and plotted, incorporate into new drainage designs – if new drainage required' allow for any damage and restoration of such systems? If so, what would the projected timescale be for effective restoration? What certainty can be expected that any damage will be made good when this statement is prefaced with 'should be'? Please could Portsmouth City Council describe 'its own purpose-built drainage system' mentioned in its Local Impact Report?

7.1 It is understood that Farlington Fields have a history of surface and groundwater flooding due to artificial land.

7.2 Section 6.9.2 of the updated Onshore Outline CEMP Rev 3 (REP4-005) (**CB-24**) submitted at Deadline 4 provides for a land drainage survey at the pre-construction stage, together with a reinstatement plan and further survey post construction survey to monitor any impacts and ensure that there has not been any impact on the integrity of the land drainage system.

7.3 Portsmouth City Council have stated that they have a Land Drainage Plan for Farlington Fields. The Applicant remains in discussion with Portsmouth City Council and will request that this information is shared so that temporary works can be designed as far as possible to avoid or minimise damage to land drainage.

7.4 Paragraph 1.2.2.13 of the OOCEMP states that where land is used temporarily and returned to the landowner, there will be liaison on working methods and restoration. Should remedial actions become necessary following soil reinstatement, these shall be undertaken as agreed prior to handover back to the landowner. This would include the land drainage system and additional reference can be made to this requirement at 6.9.2 of the OOCEMP if necessary.

7.5 The timescale for effective restoration if damage to drainage does occur, would depend on a number of factors, including extent of damage and methods of restoration.

7.6 Land drains will be protected from point loading pressure caused by plant and equipment with the use of track mats. For protection under stone haul roads a geogrid mesh material will be used to reinforce the underlying soil which in turn will mitigate damage caused by wheel loading pressures. Alternatively track matting may also be used as a suitable geogrid / stone haul road alternative.

7.7 Any land drains damaged by trenching activities must be repaired in the same working day ahead of subsoil back filling. Land drains damaged during construction of HDD pits and joint bays must be repaired on completion of the works ahead of back filling.

7.8 The playing fields are recognised as a Solent Waders and Brent Goose Strategy site, which are sites known to be used by wintering birds from the nearby Chichester and Langstone Harbour Special Protection Area (SPA). Therefore, periods of construction at Farlington Fields are timed for the summer periods (April to September), so that restoration for Brent Geese is undertaken as soon as possible for the wintering period, although allowing for some delay at Farlington Fields (also see ES Addendum (REP1-139) (**CB-13**), paragraphs 10.2.4.9-10.2.4.12). It is also acknowledged that restoration for use for foraging by Brent Geese is not equivocal to restoration for use as playing pitches. The approach was agreed with Natural England.

7.9 Requirement 22 at Schedule 2 to the dDCO (REP3-003) (**CB-1**) the restoration of land which is used temporarily for construction of the authorised development to be reinstated to its former condition, or such condition as the relevant local planning authority may approve but which may not be to a standard which is higher than its former condition, within not more than twelve months of the date of the completion of the construction of the authorised development. It is acknowledged that at this time this requirement is not adequate to ensure the timely reinstatement of Farlington Playing Fields, or other open space/recreational areas.

7.10 The Applicant is discussing with the relevant persons the Framework Management Plan for Recreational Impacts (REP4-026) (**CB-33**), which it is anticipated will be used to more clearly secure the reinstatement requirements in relation to open space land once the position in relation to reinstatement is agreed. Once the position is agreed, the Applicant will seek to ensure appropriate requirements or other arrangements are provided for to secure

timely and appropriate reinstatement of all such areas temporarily affected during the construction of the authorised development.

APPENDIX 1

ISH3 EXHIBITS

Document description	Exhibit
Magic Map - WFD sensitive habitats and ZOIs (Question 5J)	ISH3 - Exhibit 1
Illustrative magnitude of noise levels for Onshore HVDC cable laying in Section 2 (Question 6K)	ISH3 - Exhibit 2