

East Anglia ONE North Offshore Windfarm Development Consent Order and

East Anglia TWO Offshore Windfarm Development Consent Order

National Grid Electricity Transmission PLC (NGET) response to ExA's written questions and requests for information ExQs2 issued 12th February 2021

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Qu. No.	Question	Response
2.0.1	<p>Permitted Development Rights Class B, Part 15 of Schedule 2 of the Town and Country Planning (General Permitted Development) (England) Order 2015 concerns electricity undertakings and on the face of it appears to allow a wider range of development by statutory undertakers for the generation, transmission, distributions or supply of electricity. Such rights include, subject to restrictions within Class B1, the installation of electric lines, feeder or service pillars, transforming or switching stations, the extension or alteration of buildings on operational land and the erection of buildings for the protection of plant and machinery and any other development carried out in, on, over, or under the operational land of the undertaking. a) Confirm the boundaries of what would be operational land in this context, should the applications be consented. b) Provide further justification to support your view that permitted development rights should be retained. The dDCOs Commentaries on Schedule 1 Part 1 refer.</p>	<p>a) Paragraph B.5 of Class B, Part 15 of Schedule 2 of the Town and Country Planning (General Permitted Development) (England) Order 2015 confirms that, for NGET, land is operational land if it accords with the meaning of "operational land" within Section 263 of the Town and Country Planning Act 1990. This states that operational land is (1) (a) land which is used for the purpose of carrying on their undertaking; and (b) land in which an interest is held for that purpose. It goes on to state that it does (2) ...not include land which, in respect of its nature and situation, is comparable rather with land in general than with land which is used, or in which interests are held, for the purpose of the carrying on of statutory undertakings.</p> <p>In this context, therefore, NGET consider that the land within the CSECs and substation compound fence lines would be operational land. Whereas the land upon which the overhead line towers are sited, over which the overhead line oversails and under which the cables linking the CSECs and the substation run, would not be operational land, especially if that land is not owned by NGET.</p> <p>b) The Permitted Development rights in the Town and Country Planning (General Permitted Development) (England) Order 2015 have been granted by Parliament. Accordingly these rights should not be taken away unless there is specific and relevant justification for such an approach. NGET have statutory duties set out in the Electricity Act 1989 and licence conditions to develop and maintain an efficient,</p>

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		<p>economic and co-ordinated system of electricity transmission for the benefit of electricity consumers and the PD rights granted by parliament are required to enable NGET to comply with these duties to develop and maintain the network. The definition of Operational Land is relevant for the purposes of Class B (d), (e) and (f) only of Part 15 of Schedule 2 of the Town and Country Planning (General Permitted Development) (England) Order 2015. Whilst these classes of PD rights would enable either extension or alteration of a building, erection of a building solely for plant and machinery or any other developments, these rights apply only in relation to operational land. The operational boundary of the substation will be drawn around the fence line. NGET require these PD rights within the compound fence line to maintain safe operation within a substation. Any extension of the NGET substation would require significant additional land beyond the substation boundary. NGET will not own any land beyond their substation fence line and accordingly such land would not be operational land and would not in any event benefit from PD rights. It is not therefore reasonable or necessary to take away PD rights within the proposed substation boundary.</p> <p>Furthermore, Class B (a), (b) and (c) apply whether or not land is operational land. NGET require these PD rights to carry out their statutory functions.</p> <p>Withdrawing PD rights would inhibit NGET's ability to deliver its transmission license conditions and statutory duties.</p>

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		<p>As additional land beyond the operational land (constrained by Requirement 12) would be required for any extension of the NGET substation and such land wouldn't benefit from PD rights, there is no justification to withdraw NGET's PD rights generally (Class B (a), (b) or (c) or NGET's PD rights which only apply within operational land.</p>
<p>2.0.10</p>	<p>Substations Design Principles Statement (SDPS) Suffolk County Council [REP5-056] strongly recommend a neutral chair is appointed for community engagement events and raise further issues relating to National Grid supply chain engagement and best endeavours. East Suffolk Council raise similar concerns [REP5-048]. Respond to the Councils, specifically on the following: ExQs2: 12 February 2021 Responses due by Deadline 6: 24 February 2021 12 ExQs 2 Question to: Question: a) Can you commit to a neutral chair for community engagement events, and if so can this included in a future revision of the SDPS? b) Respond to the view of the County Council that the approach taken by NGET to supply chain engagement is likely to slow the development of their final design solution. If this point is accepted, suggest solutions or mitigations. c) Can you commit to take all reasonable steps to explore opportunities to reduce the parameters of the substations and to using best endeavours when working with supply chains to further reduce the dimensions of all projects within the SDPS, and is so can this be included in a future revision of the SDPS? d) Confirm when a revised SDPS will be submitted.</p>	<p>a) The SDPS is a document produced by the Applicant and it is for the Applicant to confirm whether any further revisions of that document will be submitted to the Examination. NGET can confirm, however, that it has been consulted by the Applicant on the content of the current SDPS and can also confirm that it will be bound by the SDPS and will accord with the principles therein when seeking to deliver its infrastructure.</p> <p>b) In order to meet the current Connection Agreement dates for the EA1N and EA2 projects, NGET has had to accelerate its tender and design process. NGET's approach, therefore, will not slow the development of its final design solution.</p> <p>As noted in Paragraph 15 of Appendix A of the SDPS, there are a number of important and fundamental technical constraints which are inherent to the design of substations, particularly in respect to the location, form and appearance of the external electrical equipment. The layout of the substation will be determined by its functional demands, safety requirements, and practical restrictions and considerations which will result in a safe and efficient electrical layout. As such, in order to comply with</p>

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		<p>safety, maintainability and quality of supply obligations, the design criteria for substation layouts are relatively rigid.</p> <p>As explained the opportunities to reduce the parameters are constrained by the type and size of equipment within the NGET substation and the substation itself must meet electrical safety requirements. However NGET, in accordance with its statutory duties and published commitments and policies, will only build new infrastructure if it is needed and, when doing so, will seek to reduce the effect of its work.</p> <p>c) The SDPS is a document produced by the Applicant and it is for the Applicant to confirm whether any further revisions of that document will be submitted to the Examination</p>
2.0.11	<p>Substations Design Principles Statement (SDPS) The SASES D5 submission [REP5-097] state that they consider that 3.23ha is not the smallest substation footprint that can be achieved, referring to a 2.1ha benchmark advised by NGESO for BEIS and the 3.22ha footprint for the Hornsea One substation, stated to be 50% more powerful than the proposed EA1N substation. They also note that some 7ha of land is reserved for the NGET substation. a) Respond to the points above raised by SASES and justify the footprint size of the proposed substations, including the National grid substations and area. b) Can a more efficient design be proposed in terms of footprint? c) Can any further reduction in size or scale be achieved for the proposed sealing end compounds?</p>	<p>a) NGET understands that the initial comments in relation to the EA1N substation and the Hornsea One Substation are for the applicant to respond to.</p> <p>In relation to the 7ha referred to by the SASES objection the NGET substation will be 44,950sqm if it is AIS or 16,800sqm if it is a GIS substation. Those maximum footprints are restricted by Requirement 12 of the DCO and NGET cannot build anything larger than that and will only build what is required to build the substation. NGET notes that Work No. 41 area is larger than the areas stated in the requirements in order to allow for micro-siting of the substation within Work 41. The wider area around the NGET substation which we</p>

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		<p>understand to be included in the 7ha referred to by SASES is required for landscaping and other works which the Applicant will undertake and which will fall outside Work No. 41.</p> <p>b) In line with NGET's section 9 duties "to develop and maintain an efficient, co-ordinated and economical system of electricity transmission" NGET will only build the most efficient design for this project and this will be developed through the detailed design process.</p> <p>c) The detailed design of OHL works and CSEC's are not yet finalised and therefore, exact alignment, size and location subject to detailed design / micrositing. The orientation of the OHL entry can influence the orientation and footprint of the CSE Compound. Where the landscape permits and tower orientation permits, a CSE compound is typically oriented perpendicular to the incoming line to simplify the arrangement and minimise the overall footprint.</p> <p>The compound footprint is governed, in part, by the minimum horizontal design safety clearance for 400kV equipment of 4.6m plus a further allowance to provide ease of construction and maintenance.</p> <p>The overall compound size also has to provide room for the temporary accommodation of CSE testing equipment. In summary, it is unlikely that the size or scale of the sealing end compounds will change significantly but this is subject to the finalised detailed design and micrositing.</p>

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2.0.14	<p>Cumulative Effects Assessment Throughout the Examination various IPs (e.g. SCC [REP4-068]; SASES [REP4-112]) have criticised the adequacy of the Applicants' cumulative impact assessment on the grounds that, while it is acknowledged that a number of planned energy generation and transmission projects (particularly, Nautilus, Eurolink, North Falls and Five Estuaries) have been offered, or are potentially to be offered, a connection to the National Grid at a location near Leiston, likely to be, on the current evidence, at Friston, if one or other of the projects under examination goes ahead, these projects have not been the subject of a cumulative effects assessment. While it has been made clear by the Applicants and NGET that the proposed NG substation at Friston will serve only EA1(N) and EA2; there is evidence that other proposals might follow in due course (e.g. [REP3- ExQs2: 12 February 2021 Responses due by Deadline 6: 24 February 2021 14 ExQs 2 Question to: Question: 112] National Grid Ventures ISHS2 Post Hearing Submission; [REP3-110] National Grid Electrical Systems Operator Ltd ISHS2 Post Hearing Submission; [REP5-115] SEAS Further Evidence of Cumulative Impact). The Applicants' assertion that, other than Sizewell C [APP-395] and [APP-569], these additional projects do not qualify to be considered in a cumulative effects assessment because there is insufficient understanding of their scale, scope and timing is understood (see e.g. [REP3-085]). Nevertheless, there is a significant degree of uncertainty and confusion over the possible implications for the area if these other projects are pursued in this location. Effectively ignoring them is not helpful to the Examination. Therefore, in the light of footnote 10 on page 2 of the PINS Advice Note 17 Cumulative effects assessment relevant to nationally significant infrastructure projects that: "For the purposes of this advice note, 'other existing development and/or approved development' is taken to include existing developments and existing plans and projects that are 'reasonably foreseeable'" And paragraph 3.4.2 that: "The assessment should be undertaken to an appropriate</p>	<p>The Applicant has undertaken all environmental assessment work in support of its applications for these DCOs. In doing so, the Applicant has considered the requirement for cumulative effects assessment and the projects to include therein, and is therefore best placed to respond to this question.</p> <p>NGET does not have any information that it can provide to assist with the assessment of cumulative effects beyond information already made available in the context of this examination or other information already made publically available by the promoters of these projects.</p>

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	<p>level of detail, commensurate with the information available at the time of assessment. Information on some proposals may be limited and such gaps should be acknowledged within the assessment. The assessment will move from a more qualitative to a more quantitative assessment as the availability and/or certainty of information ExQs2: 12 February 2021 Responses due by Deadline 6: 24 February 2021 15 ExQs 2 Question to: Question: increases. Any uncertainty in the assessments should be clearly documented." The Applicants are asked to reconsider their position and, in light of current data availability, work in consultation with NG, NGENSO and NGV to provide a more extensive cumulative effects assessment, focusing particularly on likely environmental, economic and community effects, including projects known to potentially be sited in the area affected by EA1(N) and EA2, to enable the requirements of NPS-EN-1 paras. 4.2.5 and 4.2.6 to be addressed.</p>	
<p>2.10.6</p>	<p>Proposed National Grid Substation In its response to requests for additional information from ISHs2, National Grid Electricity Transmission (NGET) [REP3-111] explained the issues around the decision to select either Gas or Air Insulation Systems (GIS/AIS) for the proposed National Grid substation and expressed a preference for AIS. However, a GIS approach requires significantly less land, although building structures for GIS are higher than for AIS. Provide a visual representation of a National Grid GIS substation from Viewpoint 5 at years 1 and 15 of operation to enable the visual effects of this alternative to be assessed and, given the character of the landscape, comment upon the merits and demerits of both GIS and AIS technology from both visual and masterplan perspectives and consider whether, a commitment should be made to one or other technical solution during the Examination, to enable the selected solution to be secured in the dDCO. If this is not possible, explain why and how the resulting uncertainty can be addressed.</p>	<p>The Applicants have undertaken all visual impact assessment work. NGET therefore feel it is for the Applicants to provide the requested visual impact assessment.</p> <p>NGET's current preference is to pursue AIS technology for the NGET substation as the AIS technology is easier to operate, maintain and repair and as such has lower operational costs which is important in meeting its s.9 duties.</p> <p>The GIS technology contains Sulphur Hexafluoride (SF6) which has the equivalent impact of ten times the carbon equivalent of AIS technology. NGET's current policy is to reduce its greenhouse gas emissions by 80% in advance of the 2030 target set by the UK government.</p> <p>Where appropriate, NGET has pledged not to carry out procurement of any 275kV or 400kV gas insulated</p>

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		<p>switchgear containing SF6 (excluding circuit-breakers) from 2024.</p> <p>However, NGET recognises that GIS technologies are evolving and there may be potential options for greener GIS in the future. As such, NGET is keeping the GIS option open to allow for its use in the future if such technologies become available.</p>