



# Triton Knoll Offshore Wind Farm Limited Triton Knoll Electrical System

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## Appendix 21: External Electrical Infrastructure Clarification Note

Date: 30<sup>th</sup> November 2015

Appendix 21 of the Applicant's  
Response to Deadline 3

Triton Knoll Offshore Wind Farm Limited

## Triton Knoll Electrical System

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Clarification Note

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## 1. External Electrical Infrastructure

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### Lightning Rods

- 1.1 During the Landscape and Visual issue specific hearing on the 18<sup>th</sup> November the ExA queried the heights of lightning rods at the IEC and whether the figure stated in the DCO is correct, and requested clarification on this.
- 1.2 The Applicant has since checked the stated heights of lightning rods at the IEC and Substation, and can confirm that it appears the values in the draft DCO (Revision C) are the wrong way round. The Applicant therefore provides the following correction:
- The Intermediate Electrical Compound lightning rods are 18 m in height plus 1.44m AOD (current ground level) and 2.1m (flood raising). Total height is 21.54m AOD.
  - The Substation lightning rods are 18 m in height plus 1.49m AOD (current ground level) and 1.51m (flood raising). Total height is 21m AOD.
- 1.3 The Applicant therefore proposes to amend both values and this will be reflected in the draft DCO (Revision D) submitted to Deadline 3.

### External Electrical Equipment Terminology

- 1.4 During the Landscape and Visual issue specific hearing on the 18<sup>th</sup> November the ExA queried the terminology used to describe external electrical equipment. The Applicant confirmed that the wording in the DCO is accurate for the purpose of defining the above ground infrastructure elements at the IEC and that, although not the exact same wording as the terminology used in the ES the Applicant does not feel this needs amending.
- 1.5 Following the hearing the Applicant has reviewed the application documents to ensure clarity in the terminology used.
- 1.6 The term “external electrical equipment” is used in Requirement 5(7) and 5(9) of Revision C of the *draft Development Consent Order* (Appendix 21 of the Applicant’s response to Deadline 2) and paragraphs 2.16 - 2.18 and 2.22 of the *Design Principals Document* (document reference 8.6) to describe any electrical equipment not housed within any buildings.
- 1.7 Table 2-10 - 2-12 of Volume 3, Chapter 2, *Landscape and Visual* of the ES (document reference 6.2.3.2) uses the term “electrical transmission

components”. This term has the same meaning as ‘external electrical equipment’.

- 1.8 The Design Principles Document (document reference 8.6) uses the term ‘additional electrical infrastructure’. This term has the same meaning as ‘external electrical equipment’.
- 1.9 In the Design Principals Document (document reference 8.6) the term “electrical equipment” is used to describe the electrical equipment located both within buildings and externally within the compounds.

### **Above Ground Infrastructure**

- 1.10 Requirement 1 of Revision C of the draft Development Consent Order (Appendix 21 of the Applicants response to Deadline 2) defines the term “above ground infrastructure” as below:

*“above ground infrastructure” means the buildings, busbars, capacitors, reactors, reactive power compensation equipment, filters, cooling equipment, control and welfare buildings, lightning rods, security fencing and other associated equipment, structures and buildings including noise attenuation panels required for the intermediate electrical compound and the substation compound”*

- 1.11 The definition of term “above ground electrical infrastructure” (AGEI) in Volume 3, Chapter 1 *Onshore Project Description* of the ES has the same meaning as ‘above ground infrastructure’. This term is used in Figure 2-2 - 2-6, Tables 2-10 - 2-12 and paragraphs 2.130, 2.153 and 2,250 of Volume 3, Chapter 2, of the ES.
- 1.12 For complete clarity, ‘external electrical equipment’ is a type of ‘above ground infrastructure’.
- 1.13 Revision D of the draft DCO (Appendix 7 of the Applicant's Response to Deadline 3 continues to define the term ‘above ground infrastructure’ in the same manner.

### **External Electrical Equipment at the Substation**

- 1.14 During the Landscape and Visual issue specific hearing on the 18<sup>th</sup> November the ExA noted that whilst provision is made for a maximum parameter of the highest part of any external electrical equipment if air insulated switchgear (AIS) is installed, the same maximum parameter is not set out for gas insulated switchgear (GIS) under Requirement 5(9)(b).

- 1.15 Paragraph 2.18 of the Design Principles Document (document reference 8.6) sets out that the highest part of any external electrical equipment at the TKOWF Substation, if GIS is used, excluding lightning rods, shall not exceed 13.5 metres AOD.
- 1.16 The Applicant confirms that an amendment has now been included in the draft DCO (Revision D) submitted to Deadline 3 (at Appendix 7 of the Response).