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Application Reference: EN010056

Our Reference: DIO 17608

The Planning Inspectorate
National Infrastructure Directorate
Temple Quay House
Temple Quay
Bristol
BS1 6PN

30th September 2020

Dear Sir/Madam,

The East Anglia Three Offshore Wind Farm Order 2017 (as amended) Application for a Non-material Change 2020
Infrastructure Planning (Changes to, and Revocation of, Development Consent Orders) Regulations 2011 (as amended) (2011 Regulations) (Application)

I write to confirm the safeguarding position of the Ministry of Defence (MOD) in relation to the above application to make a non-material change to the Development Consent Order (DCO) granted in 2017 (as amended).

The application seeks to make changes to the parameters concerning the development of offshore substations stations (OSSs). These will entail reducing the total number of OSSs featured in the scheme from 6 to 1; increasing the number of pin piles from 1 to 4 for each OSS jacket leg and increasing the number of legs on each OSS from 4 to 6.

The proposed changes to the parameters relating to OSSs do not affect MOD safeguarding requirements and as such the MOD has no comments or concerns with respect to these specific changes.

The application also seeks to make changes to the parameters concerning the development of wind turbine generators that will feature in the development. The changes sought are to:

- Increase the maximum tip height currently defined as 247m (relative to Lowest Astronomic Tide (LAT)) to 262m;
- increase the maximum rotor diameter from 220m to 230m;
- increase the minimum air draft for all wind turbines from 22m to 24m (relative to Mean High Water Springs (MHWS));
- and reduce the maximum, total number of wind turbines that can be built in this development from 172 to 121.

The MOD has assessed the impacts of the changes proposed to the wind turbine parameters.

The changes sought will not physically impact upon MOD offshore Danger and Exercise Areas or adversely affect defence maritime navigational interests.

The turbines and some of the tall ancillary offshore structures will affect military low flying training activities that may be conducted in this area. The need for this development to be fitted with aviation warning lighting was identified in relation to the original application and the existing DCO includes a relevant Requirement (32 – Aviation Safety).

Wind turbines have been shown to have detrimental effects on the operation of air defence radar. These include the desensitisation of the radar in the vicinity of wind turbines, and the creation of "false" aircraft returns. The probability of the radar detecting aircraft flying over or in the locality of the turbines would be reduced, hence turbine proliferation within a specific locality can result in unacceptable degradation of the radar's operational integrity. This would reduce the RAF's ability to detect and manage aircraft in United Kingdom sovereign airspace, thereby preventing it from effectively performing its primary function of Air Defence of the United Kingdom.

In relation to the operation of defence radars, taking account of the increases to the maximum dimensions of wind turbines proposed in this application, it has been determined that the proposed wind farm will be in line of sight and detectable to the air defence radar located at Remote Radar Head (RRH) Trimingham ("air defence radar"). Our assessments have determined that the proposed wind farm will cause unacceptable and unmanageable interference to the effective operation of this air defence radar.

This issue has been recognised by the applicant, who has correctly determined that the development will have major and significant impacts upon the air defence radar if not mitigated. The applicant has undertaken to assess the impacts that the wind farm will have upon the air defence radar to define siting and design parameters of turbines to address this impact. However, the full performance attributes of this radar type are not available in the public domain. Therefore, whilst the radar modelling undertaken on behalf of the applicant serves to provide an approximate indication of the impacts the wind farm is likely to have, it is not able to accurately account for the full extent to which the air defence radar will be able to detect the wind turbines. The applicant has sought to make amendments to sub-paragraph (2) (d) of Requirement 33 of the 2017 DCO relating to MOD surveillance operations.

The proposed amendments would serve to redefine the maximum heights that wind turbines deployed in specific areas of the offshore development envelope (defined in a plan appended to the 2017 DCO) could be built up to without requiring a technical mitigation. As identified above, the applicant's modelling of the radar detectability of turbines that may feature in this scheme is not suitable for precisely defining the maximum heights turbines could be built up to within specific areas of the development envelope without causing unacceptable and unmanageable interference to the air defence radar. The MOD does not consider that such precise development limitations can be prescribed in this way whilst ensuring the effective operation of the air defence radar. Since the height parameters defined in the 2017 DCO were agreed, the MOD has completed radar trials and gained a greater understanding of the regular performance attributes of the type of air defence radar system in use at RRH Trimingham. As such, this use of siting and design parameters to address air defence radar safeguarding requirements is no longer suitable.

Therefore, the MOD cannot accept the amendment of Requirement 33 as currently proposed. Instead an alternative version of this Requirement, acceptable to the MOD, is attached at Annex A. This alternative version uses wording that the MOD considers suitable for the purpose of addressing air defence safeguarding requirements, based on current information and understanding, by identifying a need for the provision of a technical mitigation. The MOD respectfully submits this for the consideration of the Examining Authority.

I can therefore confirm that, the MOD maintains no safeguarding objection to the non-material amendment application that has been made subject to the inclusion of the Requirement, as detailed in Annex A in any amended Development Consent Order that may be issued for this development.

If the Examining Authority is inclined to alter the wording of this proposed Requirement in any way, I would be grateful if you would engage with the MOD before including it in an amended order so that we can verify that it will serve to effectively support national defence interests.

I trust this clarifies our position on this consultation. Please do not hesitate to contact me should you wish to consider these points further.

Yours faithfully,



Jon Wilson

Senior Safeguarding Manager

Annex A

Ministry of Defence Surveillance Operations

1. No development of any wind turbine generator forming part of the authorised development shall commence unless and until an Air Defence Radar Mitigation Scheme (“the ADRM scheme”) has been submitted to and approved in writing by Secretary of State in conjunction with the Ministry of Defence (MOD).

For the purposes of this condition, the ADRM Scheme means a detailed scheme to mitigate the adverse impacts of the development on the air defence radar at Remote Radar Head (RRH) Trimingham and the air surveillance and control operations of the MOD. The scheme will set out the appropriate measures to be implemented to that end.

2. No wind turbine erected as part of this development shall be permitted to rotate its rotor blades about its horizontal axis, other than for the purpose of testing radar mitigation for this development for specific periods as defined in the approved ADRM scheme or otherwise arranged in accordance with provisions contained in the approved ADRM scheme, until:

- a) those mitigation measures required to be implemented prior to any wind turbine being permitted to rotate its rotor blades about its horizontal axis as set out in the approved ADRM scheme have been implemented; and
- b) any performance criteria specified in the approved ADRM scheme and which the approved ADRM scheme requires to have been satisfied prior to any wind turbine being permitted to rotate its rotor blades about its horizontal axis have been satisfied and the Secretary of State, in conjunction with the Ministry of Defence, has confirmed this in writing.

Thereafter the development shall be operated strictly in accordance with the details set out in the approved ADRM scheme for the lifetime of the development.