



Defence Infrastructure Organisation

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By email only

Dear Sir/Madam

This letter sets out the Ministry of Defence (MOD) Safeguarding position with regard to the proposed Five Estuaries Wind Farm project. A previous letter, dated 12 July 2024, setting out the MOD position was provided to the applicant and has been accepted at the discretion of the Examining Authority. That letter was published on the Five Estuaries Offshore Wind Farm web site on 23 July 2024, with reference AS-008.

The Defence Infrastructure Organisation (DIO) Safeguarding Team represents the MOD as a consultee in UK planning and energy consenting systems to ensure that development does not compromise or degrade the operation of defence sites such as aerodromes, explosives storage sites, air weapon ranges, technical sites or maritime defence assets and interests.

The development proposed is effectively an extension to the existing Galloper Offshore Wind Farm and would comprise up to 79 wind turbine generators distributed across two linked areas of the southern North Sea, up to 200km of inter-array cables, up to two offshore substation platforms, and up to 196km of offshore export cables.

A design envelope for the wind farm is provided within Volume 6, Part 2, Chapter 1: Offshore Project Description of the applicant's Environmental Statement (Application Reference No. 6.2.1, Rev. A, dated March 2024). A design envelope for the turbines is set out in table 1.8, the maximum dimensions within that table indicate a turbine with a maximum blade tip height of up to 395m above Mean High Water Spring (MHWS) and a rotor diameter of up to 360m.

Air Defence Radar.

The applicant addresses the impact of the proposed development on Military and Civil Aviation through Volume 6, Part 2, Chapter 13 of the submitted Environmental Statement (Application Reference No. 6.2.13, Rev. A, dated March 2024). At paragraphs 13.4.15 and 13.4.16 the applicant identifies the potential for the development to be visible to, and detectable by Air Defence (AD) Radars deployed at Remote Radar Head (RRH) Neatishead. It should be noted that the AD Radar previously deployed at RRH Trimmingham has been redeployed at RRH Neatishead, and as such RRH Trimmingham may be omitted from assessments.

The MOD has carried out assessments based on Rochdale Envelope boundary co-ordinates provided by the applicant and accounting for a maximum blade tip height of 395m MHWS. These assessments

concluded that turbines within both the southern and northern array areas will be detectable to the AD Radar at RRH Neatishead.

Wind turbines have been shown to have detrimental effects on the operation of AD 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.

This impact is acknowledged by the applicant in paragraphs 13.11.6 to 13.11.14. The impact of the turbines on the operation and capability of the AD radar at RRH Neatishead must be addressed through a suitable technical mitigation. It is the applicant's responsibility to provide a suitable technical mitigation solution to the MOD. At paragraph 13.11.14 the applicant identifies that an agreed mitigation is required.

Until such time as a mitigation for the impact on AD radar has been submitted to MOD and has been assessed as being both technically and operationally viable, the MOD must maintain an objection to the proposed wind farm development.

Military Low Flying Training.

The construction, operation, and decommissioning of a wind farm introduces a physical obstruction to aviation which could limit or otherwise affect military low flying training that may be conducted in this area. The applicant has identified this potential impact through paragraphs 13.10.1 to 13.10.7, 13.11.1 to 13.11.5, and 13.12.1 to 13.12.3 of Volume 6, Part 2, Chapter 13 of the submitted Environmental Statement (Application Reference No. 6.2.13, Rev. A, dated March 2024)

The MOD would normally stipulate that this impact is mitigated through requirements within any Development Consent Order that might be produced that required the submission, approval, and implementation of an Aviation Lighting Scheme, and the submission of sufficient data to ensure that the development is accurately charted.

With regard to the Aviation Lighting Scheme, it should be noted that, in addition to any requirements under the Air Navigation Order 2016, the use of MOD accredited aviation safety lighting should be necessary.

Export cables.

The applicant has provided details of a cable routeing corridor which runs from the proposed wind farm to make landfall between Holland-on-Sea and Frinton-on-Sea on the Essex coast. Onshore cables would then run to a new substation on land to the east of Ardleigh and north of Great Bromley.

The potential presence of unexploded ordnance (UXO) has been identified as being relevant to offshore cable installation and intrusive works in paragraphs 1.4.10 to 1.4.13 of Volume 6, Part 2, Chapter 1: Offshore Project Description of the applicant's Environmental Statement (Application Reference No. 6.2.1, Rev. A, dated March 2024). The applicant has proposed that detailed pre-construction surveys would be employed to identify and then address the potential presence of UXO prior to the installation of cables and other intrusive works that may be undertaken in the maritime environment.

With regard to the onshore element, the MOD has identified that the onshore cable route will pass through a Statutory Safeguarding Zone associated with a technical asset which contributes to Air Traffic Management designated East 2 Wide Area Multilateration (WAM) Network.

Whilst it is acknowledged that onshore cables are to be routed through underground ducts, the potential exists for works to install the ducts to impact on the operation and capability of the statutorily safeguarded technical asset. As such the MOD should be consulted on the specific implementation method and machinery/equipment/plant that will be used to install the proposed underground ducts. The submission and approval of this information should form the subject of a requirement in any future draft Development Consent Order

Summary.

In summary, the MOD must object to the proposed development on the basis that a wind farm in the location proposed and with the dimensions specified in Volume 6, Part 2, Chapter 1: Offshore Project Description of the applicant's Environmental Statement (Application Reference No. 6.2.1, Rev. A, dated March 2024) would be visible to and detectable by the AD radar deployed at RRH Neatishead and would have an unmanageable, and therefore unacceptable, impact on the operation and capability of that AD radar.

I trust this is clear however should you have any questions please do not hesitate to contact me.

Yours faithfully,

James Houghton
Senior Safeguarding Manager