



MINISTRY OF DEFENCE

# Defence Infrastructure Organisation

Estates - Safeguarding Department

Defence Infrastructure Organisation  
Kingston Road  
Sutton Coldfield  
West Midlands  
B75 7RL

Tel: [REDACTED]  
E-mail: [jon.wilson106@mod.gov.uk](mailto:jon.wilson106@mod.gov.uk)

[www.mod.uk/DIO](http://www.mod.uk/DIO)

06 September 2019

Your ref: EN010087

DIO ref. 10039925

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

Dear Sir/Madam,

## **The Norfolk Boreas Offshore Wind Farm**

### **Application for a Development Consent Order under Section 37 of the Planning Act 2008.**

I write to confirm the safeguarding position of the Ministry of Defence (MOD) in relation to the above application to construct and operate the Norfolk Boreas Offshore wind farm.

This scheme will comprise of up to 180 wind turbines, up to 350m in height (to blade tip) that will be located in the North Sea in a development zone situated approximately 73km east of the Norfolk coast. In addition to the turbine structures there will be an offshore service platform, up to 2 offshore electrical platforms, up to 2 met masts, subsea cabling and other associated infrastructure. The onshore element of the project includes subterranean cabling as well as, electrical substations and other associated infrastructure to transfer the generated power from the Norfolk coast to connect with the National Grid to the west of Dereham.

In relation to the onshore element of the proposed development, the route identified for the installation of the cable will pass through MOD statutory height safeguarding zones surrounding the air defence radar at RAF Trimmingham and the aerodrome at RAF Marham passing through zones in which the MOD would need to consider developments 15.2 metres and 91.4 metres in height, respectively. The cables will be installed in subterranean ducts. Taking this into account in conjunction with the scale of the associated surface infrastructure, it is not anticipated that the onshore development will adversely affect MOD interests.

The MOD has assessed the location and layout of the offshore element of the development scheme proposed. The scheme outlined will not physically impact upon MOD offshore Danger and Exercise Areas or adversely affect defence maritime navigational interests. However, the turbines and some of the tall ancillary offshore structures will affect military low flying training activities conducted in this area. As such it will be necessary for these structures to be fitted with appropriate aviation warning lighting to maintain the safety of military air traffic.

In relation to the operation of defence radars, taking account of the location and scale of wind turbines that may be utilised, it has been determined that the proposed wind farm will be in line of sight and detectable to the air defence radar located at RAF Trimmingham.

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.

Our assessments have determined that, when operational, 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. The applicant has submitted a technical mitigation concept to address the adverse impacts of the development upon the air defence radar. This has been accepted by the MOD.

The applicant has included two Requirements (12 and 13) in the draft Development Consent Order (dDCO) they have submitted in support of this application to address the safeguarding requirements of the MOD relating to: the need to attach aviation warning lighting to relevant offshore structures necessary to maintain military aircraft safety and; the provision of a technical mitigation scheme to resolve the adverse impacts of the development upon the air defence radar.

These effectively account for the safeguarding requirements of the MOD and I can confirm that the MOD is content with the wording of these two draft Requirements.

Therefore, the MOD maintains no safeguarding objection to this application subject to the inclusion of these two requirements, as detailed in Annexes A and B below in any Development Consent Order that may be granted for this scheme.

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 sincerely



Jon Wilson

Senior Safeguarding Manager

## **Annex A**

### **Aviation safety**

12 - (1) The undertaker must exhibit such lights, with such shape, colour and character and at such times as are required in writing by Air Navigation Order 2016(a) and/or determined necessary for aviation safety in consultation with the Defence Infrastructure Organisation Safeguarding and as directed by the CAA. Lighting installed specifically to meet Ministry of Defence aviation safety requirements must remain operational for the life of the authorised development unless otherwise agreed in writing with the Ministry of Defence.

(2) The undertaker must notify the Defence Infrastructure Organisation Safeguarding, at least 14 days prior to the commencement of the offshore works, in writing of the following information—

- (a) the date of the commencement of construction of the offshore works;
- (b) the date any wind turbine generators are brought into use;
- (c) the maximum height of any construction equipment to be used;
- (d) the maximum heights of any wind turbine generator, meteorological mast, offshore electrical platform and offshore service platform to be constructed;
- (e) the latitude and longitude of each wind turbine generator, meteorological mast, offshore electrical platform and offshore service platform to be constructed,

and the Defence Infrastructure Organisation Safeguarding must be notified of any changes to the information supplied under this paragraph and of the completion of the construction of the offshore works.

## **Annex B**

### **Ministry of Defence Surveillance Operations**

13.—(1) No wind turbine generator forming part of the authorised development is permitted to rotate its rotor blades on its horizontal axis until the Secretary of State having consulted with the Ministry of Defence confirms satisfaction in writing that appropriate mitigation will be implemented and maintained for the life of the authorised development and that arrangements have been put in place with the Ministry of Defence to ensure that the approved mitigation is implemented.

(2) For the purposes of this requirement—

(a) “appropriate mitigation” means measures to prevent or remove any adverse effects which the authorised development will have on the air defence radar at Remote Radar Head (RRH) Trimingham and the Ministry of Defence’s air surveillance and control operations;

(b) “approved mitigation” means the detailed Radar Mitigation Scheme (RMS) that will set out the appropriate measures and timescales for implementation as agreed with the Ministry of Defence at the time the Secretary of State confirms satisfaction in writing in accordance with paragraph (1);

(c) “Ministry of Defence” means the Ministry of Defence as represented by Defence Infrastructure Organisation – Safeguarding, Kingston Road, Sutton Coldfield, B75 7RL or any successor body.

(3) The undertaker must thereafter comply with all other obligations contained within the approved mitigation for the life of the authorised development.