



Defence Infrastructure Organisation

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Mr Mark Ashton
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5 Atlantic Quay
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Directorate for Energy and Climate Change
Scottish Government

Application Ref. ECU00002002

Our Reference: DIO 10039732

14th February 2020

Dear Mr Ashton,

Electricity Act 1989 - Section 36 Wind Farm Application For The Proposed Clashindarroch II Wind Farm In The Clashindarroch Forest, Near Huntly, Aberdeenshire, Comprising 14 Turbines With A Ground To Blade Tip Height Of Up To 180 Metres And Associated Infrastructure

I write to confirm the safeguarding position of the Ministry of Defence (MOD) in relation to the proposed Clashindarroch II wind farm. The proposed development will consist of 14 wind turbines 180 metres in height to blade tip and associated infrastructure including a permanent meteorological monitoring mast 112 metres high.

The MOD has assessed this proposed wind farm development using the locations and dimensions of the turbines and the meteorological mast as defined in the application submitted. The turbine locations are detailed in the table below.

Turbine	Easting	Northing
1	344,086	833,617
2	343,640	831,705
3	343,415	832,583
4	344,357	832,735
5	344,076	831,659
6	344,821	833,268
7	344,002	832,977
8	343,603	833,107
9	344,460	833,440
10	344,118	832,206
11	343,713	832,298
12	342,964	832,151
13	343,286	831,912
14	344,533	832,177

It has been identified that this development will have the following impacts upon defence operations:

Military Low Flying Training

The airspace over the UK land mass is used to provide the UK Military Low Flying System to deliver essential military low flying training. The proposed development will occupy Low Flying Area 14 within which military fixed wing aircraft are permitted to fly down to 250 feet (76.2 metres) above terrain features. The development will cause a potential obstruction hazard to these military low flying training activities. Therefore, it will be necessary for the turbine structures to be fitted with appropriate aviation lighting to maintain the safety of military aircraft.

The turbines will have to be fitted with aviation lighting in accordance with the requirements of the Air Navigation Order (2016) as directed by the Civil Aviation Authority (CAA). The applicant has proposed fitting the wind farm with medium intensity, 2000 candela, visible, red aviation warning light which the MOD considers will also be suitable for the purposes of maintaining military aviation safety. However, it is noted that the applicant has identified their intention to review the possible use of radar controlled visible lighting (currently not approved in the UK) which would activate the lighting when an aircraft is detected in the vicinity. It is not known whether this would be suitable for maintaining the safety of military aircraft engaged in low flying training. In the event that radar controlled lighting was to be used, it may be necessary for MOD accredited 25 candela omni-directional red lighting with an optimised flash pattern of 60 flashes per minute of 200ms to 500ms duration or equivalent infrared lighting to be fitted as well.

Air Defence (AD) radar

The turbines will be 67.5 km from, detectable by, and will cause unacceptable interference to the AD radar at Remote Radar Head (RRH) Buchan.

Wind turbines have been shown to have detrimental effects on the operation of radar. These include the desensitisation of radar in the vicinity of the turbines, and the creation of "false" aircraft returns. The probability of the radar detecting aircraft flying over or in the vicinity 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 deter aircraft in United Kingdom sovereign airspace, thereby preventing it from effectively performing its primary function of Air Defence of the United Kingdom.

An operational assessment has been completed which has considered the position of the proposed turbines against a number of factors including: the position of the development; the number of turbines featured in the proposed development; other wind farms in the locality; the detectability of the turbines and the loss of radar coverage that would be caused by the proposed development.

Close examination of the proposed development has identified that the turbines will have a significant and detrimental effect on AD operations.

The applicant has recognised the impact the windfarm will have upon the effective operation of the AD radar and has been in dialogue with the MOD about possible means of providing a suitable technical mitigation.

Previously the applicant had put forward a different version of this development scheme featuring 16 wind turbines 149.9 metres in height (to blade tip). The applicant submitted a technical mitigation that was prepared specifically for that development proposal which was accepted by the MOD. However, at this stage, a technical mitigation for the wind farm for which consent is now sought has not been provided. Therefore, I can confirm that the MOD maintains an objection to this application.

MOD Safeguarding wishes to be notified about the progression of this application and consulted upon further submissions relating to this scheme.

I trust this adequately explains our position on the matter.

Yours sincerely

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Jon Wilson
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