

Environmental considerations

Acoustics

Strict guidelines exist concerning sound imissions from wind turbines and these will be factored into the final wind farm design. Acoustic assessments have been undertaken in accordance with the relevant standards, current assessment methodologies and best practice as determined by the regulatory bodies, which include The Highland Council, the Scottish Government and the UK Institute of Acoustics.

After consultation with The Highland Council, it was agreed that background sound survey would not be required for this proposed development. The sound imission limits will be agreed with the Council and the wind farm will be required to comply with these as a condition of planning consent.

The acoustic impact of the wind farm will be modelled and will be presented in the acoustic chapter of the EIA Report. This will demonstrate that RES has considered all appropriate measures in the design, construction, and operation phases to minimise the acoustic impact of the wind farm.

Aviation and Radar

Radar systems can be susceptible to interference from wind turbines as the blade movement can cause intermittent detection by radars within their operating range. This is particularly relevant where there is a line of sight between the radar and the wind farm.

RES has undertaken an initial Aviation Assessment to identify any radar infrastructure which may be impacted by the proposed turbines. Further assessment is being carried out to establish any potential impacts of the proposed turbines on the instrument flight procedures at Inverness Airport. Full consultation will be undertaken with all relevant consultees including the Ministry of Defence (MOD), Civil Aviation Authority (CAA) and Inverness Airport.

Shadow flicker

Shadow flicker is a phenomenon where, under certain circumstances of geographical position and time of day, the sun may pass behind the rotors of a wind turbine and cast a shadow over neighbouring properties.

The Clune Wind Farm proposal is being designed to minimise any potential for shadow flicker. Shadow flicker monitoring software which can shut down certain wind turbines at particular times of the day, or in certain weather conditions, where a shadow flicker effect may result can also be utilised. This shadow flicker modelling work will be presented in the EIA Report which will accompany the planning application.

Aviation lighting

In accordance with the Air Navigation Order 2016, en-route obstacles at or above 150m, such as the wind turbines proposed at Clune Wind Farm, require to be lit at night with medium intensity red aviation lights. The aviation lighting is designed to focus the light across and upwards for the attention of aircraft rather than downward to those at ground level and, in some circumstances, not all wind turbines require to be lit.

The light intensity varies in response to weather conditions and visibility (via an atmospheric conditions and visibility sensor on the wind turbine) – with lighting dimmed to 10% of their intensity in good visibility (typically greater than 5km) but maximised in cloudy or foggy weather (where visibility is typically less than 5km). We have consulted with the CAA to agree a lighting strategy with them. The proposed lighting strategy will be presented in the planning application which will also include a nighttime visual impact assessment and visualisations.

Clune Wind Farm - updated proposal

www.clune-windfarm.co.uk

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