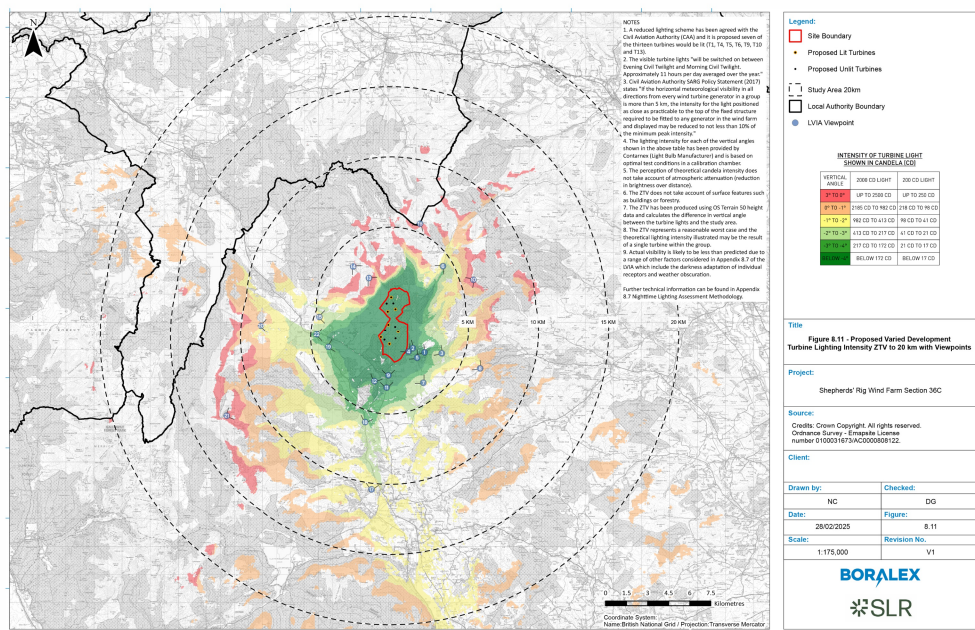


# THE PROPOSED VARIED DEVELOPMENT



## Lighting

In accordance with current guidance from the Civil Aviation Authority wind turbines taller than 150 m require visible aviation lighting. A reduced aviation lighting scheme has been agreed with the CAA and seven of the proposed turbines will be fitted with medium intensity (minimum 2000 candela at horizontal) steady red, night-time, aviation warning lights on their nacelle hubs.

Visibility sensors would be installed on the wind turbines and the lights would operate at 200 candela when meteorological visibility is greater than 5 km. The lights would also be perceived at reduced intensity at different angles above and below the horizontal. The reduction in intensity of the lit turbines at different elevation angles would be substantial, for example, at -10 degrees the recommended maximum intensity is only 75 candela but is likely to be lower and is dependent on the final choice of aviation light.

Meteorological observations suggest that the turbine hubs/lights will be obscured on over 750 occasions a month by cloud.

When not obscured by cloud, the visibility in the area of the turbines can be expected to exceed 5km for 98% of the time and the 2000cd lights will be switched down to 200cd. In addition, perceived light intensity also diminishes with distance.

## Grid Connection Arrangements

The connection will be made into the proposed 132kV line from Lorg Wind Farm to Holm Hill (north of Carsphairn) which is being progressed by Scottish Power Energy Networks (SPEN). This proposed line would run through the central part of the Shepherds' Rig site. There would be a short overhead connection between the wind farm substation and this proposed line.

The grid connection date for Shepherds' Rig is reliant on the timescale for wider upgrades in area and in particular the Kendoon to Tongland Reinforcement (KTR) project. The KTR scheme has recently been approved, however the timescale for this took longer than originally planned which has resulted in the connection date for Shepherds Rig being delayed until 2029 at the earliest.

## Route to Site

Should the Proposed Varied Development be consented, construction would not be expected to commence until 2027.

The potential effects of revised construction traffic will be assessed throughout the Environmental Impact Assessment (EIA) process, in consultation with Dumfries and Galloway Council.

An updated swept path analysis (required due to the changes in abnormal indivisible loads associated with the proposed taller turbines) has been prepared for the Proposed Varied Development and this will be included in an appendix to the EIA Report. Where mitigation works are required, details of these road works will be provided. An updated assessment of the potential impacts of access improvements along the B729 will also be carried out for the Proposed Varied Development, and this will also be included as an EIA Report appendix.