

FIGURE 6.13

**ZONE OF THEORETICAL VISIBILITY (ZTV) STUDY
- 2000 CANDELA NACELLE LIGHT VISIBILITY**

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- Proposed Turbines with Nacelle Lighting (165m for T1, T4, T5, T10 and T11, and 125m for T14)
 - Proposed Turbines without Lighting
 - Site Boundary
 - Distance from Proposed Turbines (5, 10, 15, 20km)
 - Galloway Dark Skies - Core Area
 - Galloway Dark Skies - Park Boundary
- Zone of Theoretical Visibility (ZTV) - Nacelle Lights**
- 1 - 2 lights visible
 - 3 - 4 lights visible
 - 5 - 6 lights visible
 - Viewpoints

- VP1: Drumwhim Cairn, Moor of Barclye
- VP2: Corsbie Road, Newton Stewart
- VP3: NCR73/A714 at Nether Barr
- VP4: Glenvenoch Fell / Hill of Ochiltree
- VP5: NCR7 on Minor Road North of Gientrool Village
- VP6: Cairnsmore of Fleet
- VP7: Merrick
- VP8: A75 near Creetown
- VP9: Kirkcowan
- VP10: NCR73 on Minor Road North of Wigtown
- VP11: Bennigineia Lookout
- VP12: Mochrum Lochs LLA, Moor of Drumwall
- ...
- VP20: Monigaff Parish Church
- VP21: Lamachan Hill
- VP22: Millfore
- VP23: Meikle Millieys
- VP24: Innerwell Fishery approach
- VP25: Penninghame Estate pond, Castle Stewart
- VP26: Challoch Church

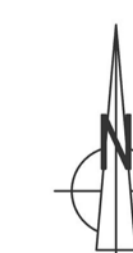
(NB. Viewpoints 13-19 are located outside the 20km study area. Refer to Figures 5.5 and 5.6 for locations.)

This drawing is based upon computer generated Zone of Theoretical Visibility (ZTV) studies produced using the viewshed routine in the ESRI ArcGIS Suite. The areas shown are the maximum theoretical visibility, taking into account topography, principal woodlands and settlements, which have been included in the model with the heights obtained from Nextmap 25. It should be noted that in some areas woodlands included within the ZTV may comprise active forestry, resulting in the felling and replanting of some areas modelling the ZTV study. The ZTV study reflects this pattern at a specific point in time, as it is based on real height information. Whilst the felling cycle will alter the heights of different areas of forestry over time, altering localised visual effects, the wider pattern will remain relatively constant.

The model does not take into account any localised features such as small copses, hedgerows or individual trees and therefore still gives an exaggerated impression of the extent of visibility. The actual extent of visibility on the ground will be less than that suggested by this plan.

The ZTV includes an adjustment that allows for Earth's curvature and light refraction. It is based on Nextmap 25 terrain data and has a 25m resolution.

The ZTV is based on the reduced lighting scheme agreed with the Civil Aviation Authority (CAA) of one medium intensity steady red (2000 candela) light mounted on the nacelle of turbines T01, T05, T06, T11, T12 and T15, automatically dimmed to 10% of peak intensity (200 candela) when visibility is in excess of 5 km. Intermediate 32 candela steady red lights mounted around the tower are not required.



SCALE - 1:85,000 @ A1

**ENVIRONMENTAL IMPACT
ASSESSMENT REPORT 2024**

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