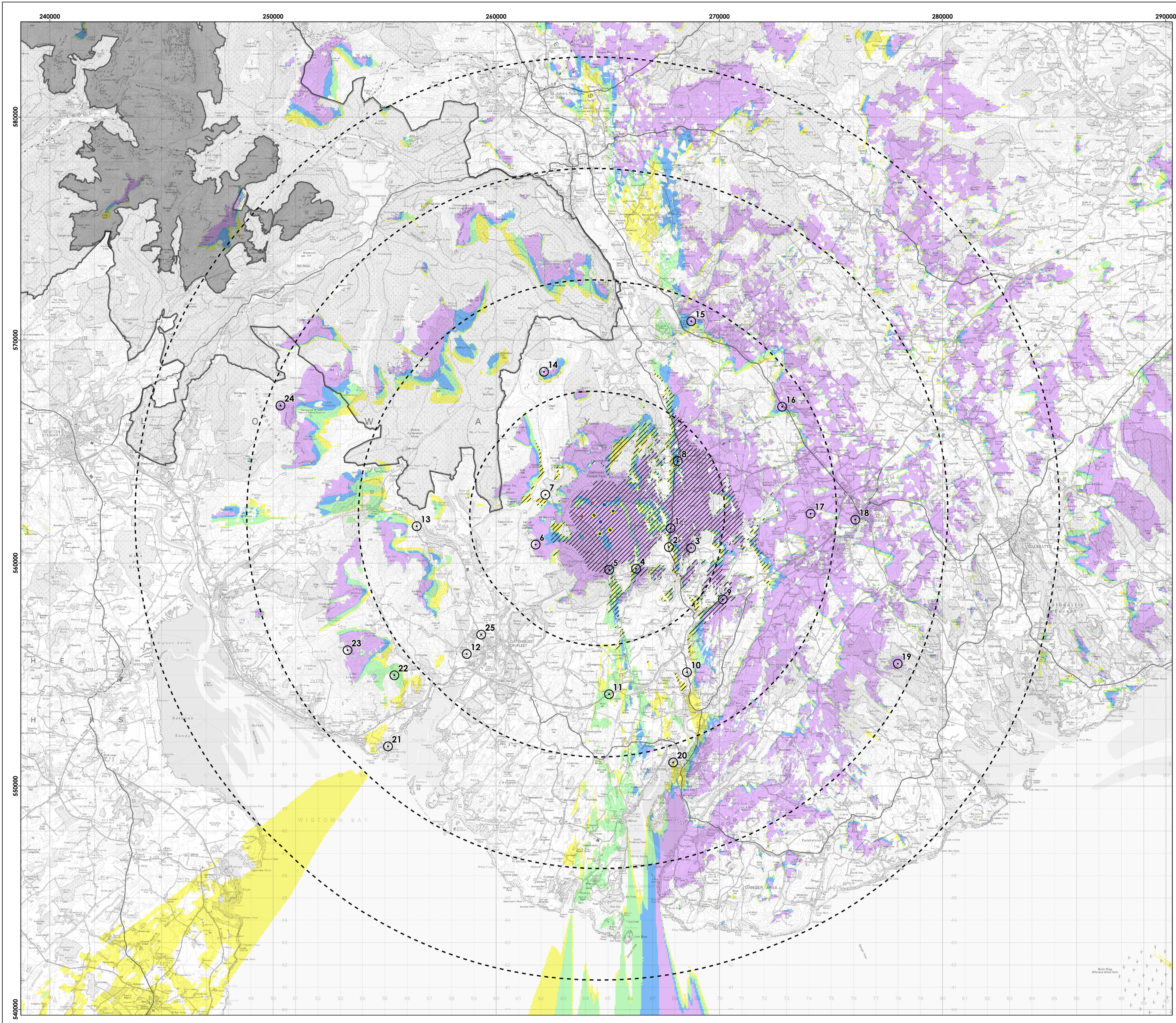




Lairdmannoch Energy Park



AI Figure 5-8
Zone of Theoretical Visibility -
Aviation Lighting

Key

- Proposed Development - 80.9m to Hub Height
- Proposed Development - 98.5m to Hub Height
- Turbines to be lit with Nacelle Lights
- Distance Radii from Outermost Turbine (5, 10, 15, 20 km)
- Viewpoints
- Galloway Dark Skies - Buffer Area
- Galloway Dark Skies - Core Area

Zone of Theoretical Visibility to Nacelle Light

- 1 light may be visible
- 2 lights may be visible
- 3 lights may be visible
- 4 lights may be visible

Minimum -2° angle or greater, below the nacelle lights of all visible lit turbines. This area indicates where intensity of the aviation lights could be reduced to less than 42cd/420cd due to the vertical directional intensity mitigation of the light design. See Figure 4 and Table 4 of Appendix 3 of Guidance on Aviation Lighting Impact Assessment by NatureScot 2024

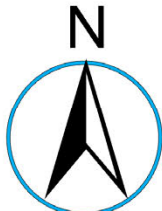
Figure Data:
This figure has been based on the following data:
Layout file: D006-obvs-HL-T5-15km.shp; D006-obvs-HL-T50-45km.shp
Terrain data: T5-DTM.asc; T50-DTM.asc
Viewer's eye height: 2m
Calculation grid size: 5m (to 15km from turbines) / 50m (beyond)

Notes:
This drawing is based upon computer generated Zone of Theoretical Visibility (ZTV) studies produced using the Viewshed routine in the Visibility Analysis plugin for QGIS.

The areas shown are the maximum theoretical visibility, taking topography into account.

This visibility map is based on a 'bare earth' model of the landform and does not show any effects of screening from obstacles such as buildings and vegetation.

The ZTV includes an adjustment that allows for Earth's curvature and light refraction. It is based on a derived DTM and has a 5m² (to 15km from turbines) / 50m² (beyond) resolution.



Scale @ A1:
1:80,000



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