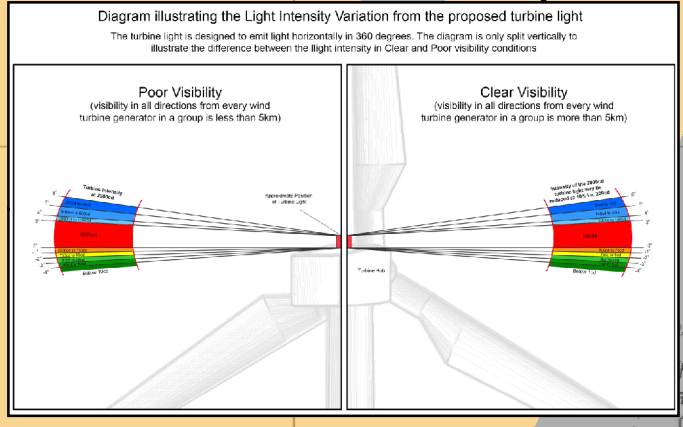
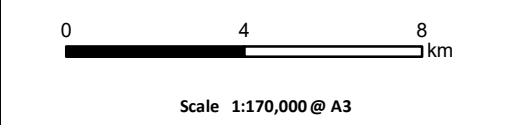


- KEY**
- Proposed Turbine
  - 5km Radii
  - Viewpoints
1. A966, Loch of Swannay
  2. A966, Hundland Road junction
  3. Vinquin Hill, Costa
  4. Mid Hill
  5. Kirbuster, Loch of Hundland
  6. Brough of Birsay
  7. A967, Birsay Community Hall
  8. A967, Twatt
  9. A967, near Rosemire
  10. A967, near Queena
  11. Ring of Brodgar
  12. Vishall Hill, Point of Hellia
  13. B9067 north-west of Dounby
  14. Skarra Brae
  15. Vestra Field
  16. A966 Abunc-the-Hill
  17. Westside, Rousay
  18. Hillock Road, Shapinsay
  19. Ward Hill, Hoy
- Intensity of Turbine Light shown in Candelas (cd)

Vertical	Turbine Lighting Intensity	
	2000cd light	200cd light
0° to 3°	2000cd	200cd
0° to -1°	2000cd to 750cd	200cd to 75cd
-1° to -2°	750cd to 80cd	75cd to 8cd
-2° to -3°	80cd to 40cd	8cd to 4cd
-3° to -4°	40cd to 10cd	4cd to 1cd
Below -4°	Below 10cd	Below 1cd

**Notes**

1. Reduced intensity turbine lighting (200cd) based on 'Air Navigation Order 2016 (CAP393) Article 223 (8)' which allows the 2000cd turbine light to be 'reduced to not less than 10% of the minimum peak intensity specified' i.e. 200cd 'if visibility in all directions from every wind turbine generator in a group is more than 5km'.
2. The lighting intensity for each of the vertical angles shown is based on information provided by an aviation warning light bulb manufacturer. See Appendix 6.2.
3. Perception of theoretical candela intensity does not take account of distance.
4. ZTV calculations do not take into account surface features such as forestry or buildings.
5. ZTV calculations for turbine lighting intensity based on visible aviation lighting mounted on the turbine hub.
6. The ZTV calculates the degree of vertical angle from the study area shown to each of the proposed Development turbines.
7. ZTV calculations represent a worst case situation where predicted lighting intensity may be as a result of only one turbine in the layout.
8. No landform within the study area is above 3 degrees from the height of the turbine lighting.



Hub height:	102.5m	Observer height:	2m
DTM:	OS T5 DTM	Surface features:	Excluded
DTM resolution:	10m	Earth curvature:	Included

