

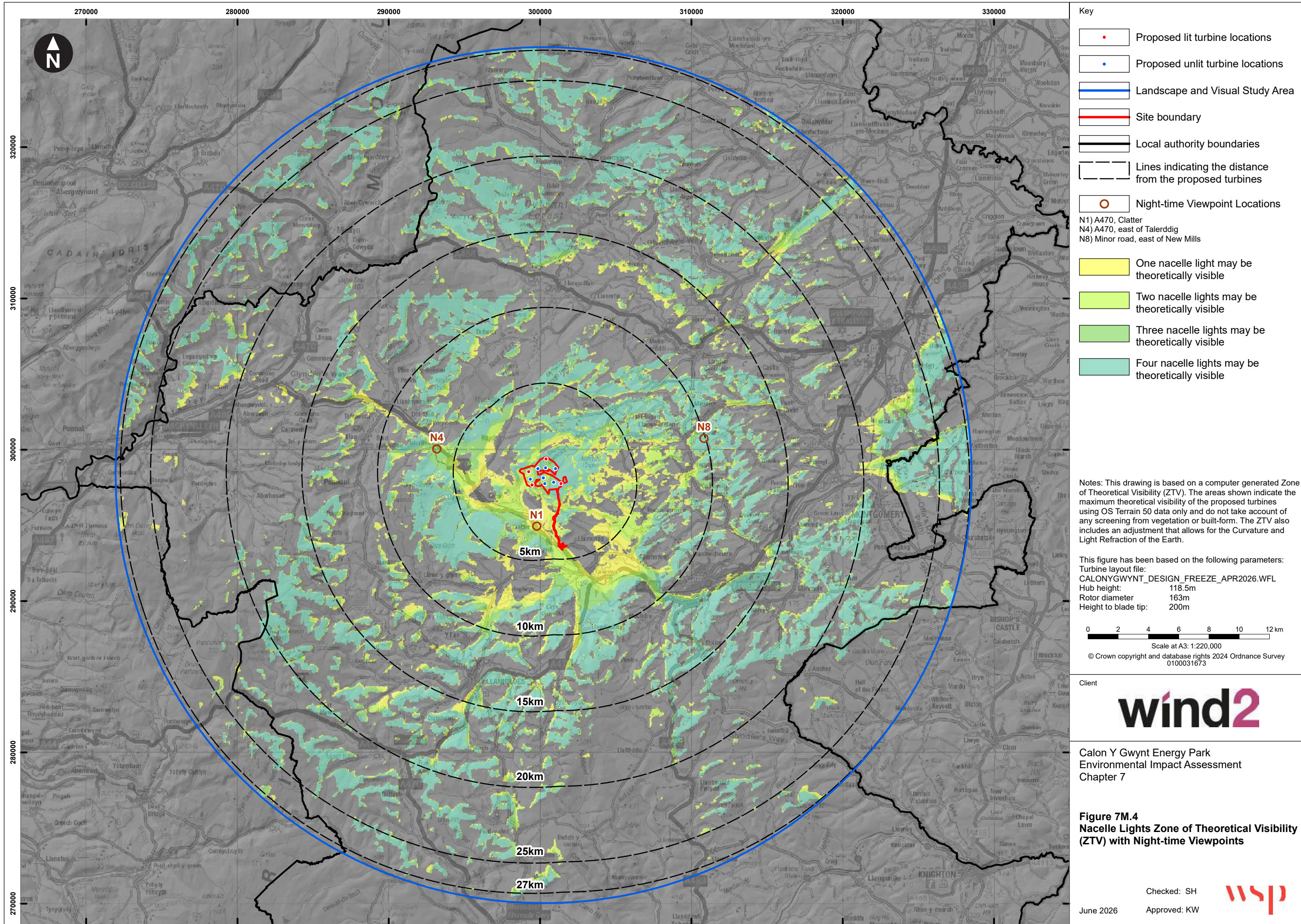
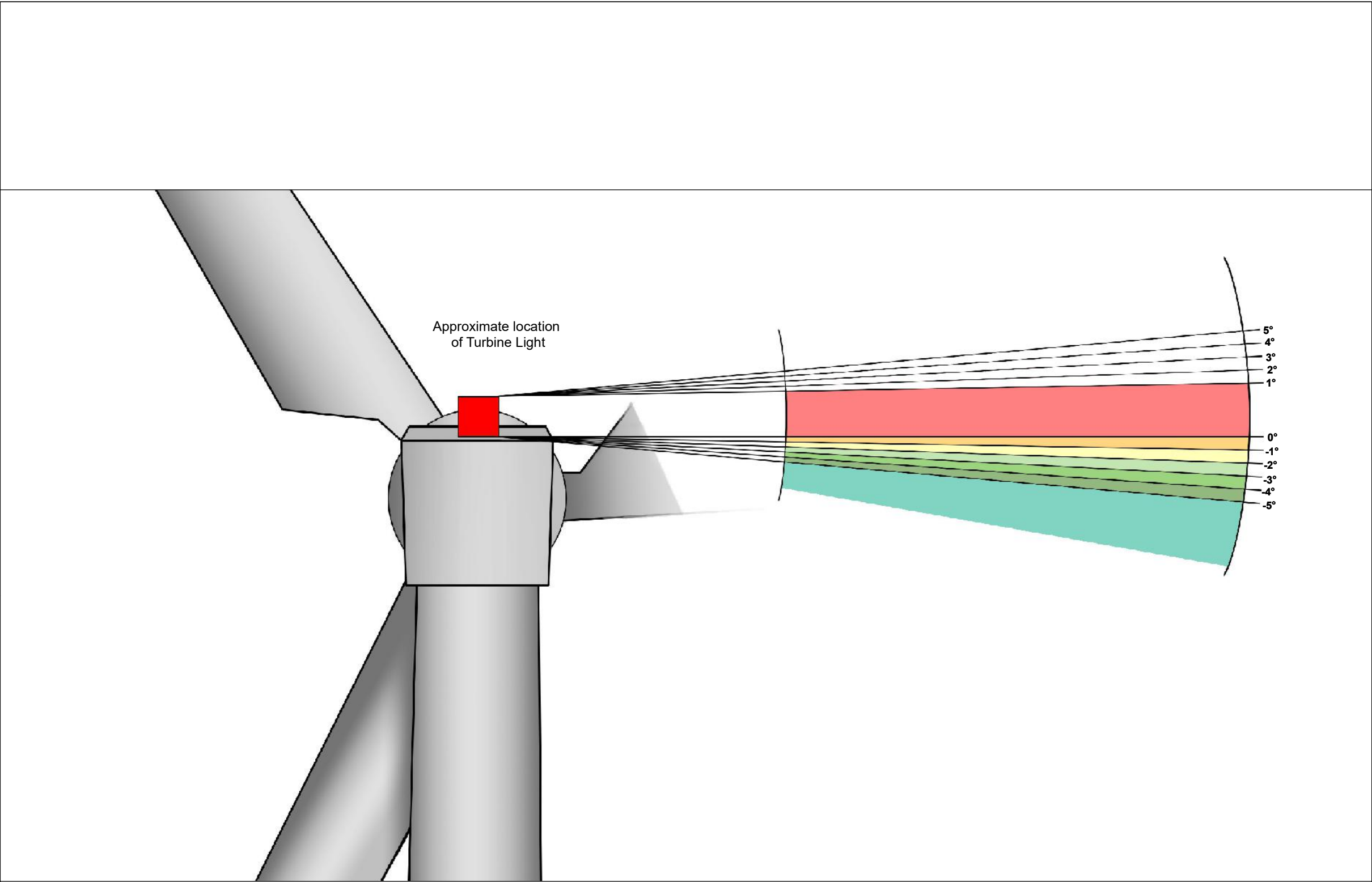


Figure 7M.4 ZTV 62282400-WSPE-FG-SA-00009_R3



Key

Intensity of Turbine Light
shown in Candelas (cd)

Vertical Angle of Lighting from Nacelle	Maximum and Minimum Luminous Intensity (Candela / cd.)	10% of Maximum and Minimum Luminous Intensity (Candela / cd.)
Above 5°	147 to 34	15 to 3
4° to 5°	247 to 134	25 to 13
3° to 4°	481 to 237	48 to 24
2° to 3°	1160 to 481	116 to 48
1° to 2°	2119 to 1170	212 to 117
0° to 1°	2206 to 1968	221 to 197
-1° to 0°	2036 to 987	204 to 99
-2° to -1°	996 to 383	100 to 38
-3° to -2°	394 to 197	39 to 20
-4° to -3°	199 to 131	20 to 13
-5° to -4°	131 to 92	13 to 9
Below -5°	94 to 38	9 to 4

Source: CEL-WT-MIC Light Specification as noted in Aviation Lighting and Mitigation Report for Calon y Gwynt Wind Farm V1.0 - <https://www.contamex.com/led-obstruction-lighting/datasheets/CEL-WT-MIC%20-%20rev1.pdf>

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.
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 5 degrees from the height of the turbine lighting.

Client

Calon Y Gwynt Energy Park
Environmental Impact Assessment
Chapter 7

Figure 7M.5
Turbine Lighting Intensity

Checked: SH
 May 2026

Approved: KW

Figure 7M.5 Turbine 62282400-WSPE-FG-SA-00010_R1