HELIOS RENEWABLE ENERGY PROJECT

PINS Document Number:
EN010140/APP/6.2.7.8

Pursuant to:
APFP Regulation 5(2)(a)

Environmental Statement Figure 7.8: Solar Panels ZTV – With Surface Features

June 2024

Key

- Site Boundary
- Solar Panel Area
- Solar Panel Area 6 km Buffer
- Viewpoint Location

Zone of Theoretical Visibility With Surface Features

No. of Reference Points Visible Within Solar Panel Area

Highest Number Based off a 50 m Grid - 1084

Lowest Number Based off a 50 m Grid - 1

Note

This Zone of Theoretical Visibility (ZTV) has been generated using ESRI ArcGIS Spatial Analyst extension. The digital terrain model (DTM) has been derived from OS Terrain 5 dataset with an accuracy of +/- 1.5 - 2.5 m Root Mean Square Error (RMSE)). Earth curvature has been included in the ZTV calculation and refraction of light has been applied using ESRI default settings. The ZTV has been generated from a viewing height of 2m above ground level which falls within recommendations by "Visual Representation of Wind Farms" prepared for NatureScot February 2017 - Version 2.2.

The use of ZTV mapping at this stage is limited and the following assumptions should be noted:

- The ZTV has been generated using a 50 m grid of the maximum developable area of the proposed Helios Solar Farm solar panels. This grid generates 1084 reference points distributed evenly across the solar panels, providing the maximum number of points theoretically visible from any given location.
- A height of 3 m for solar panel area has been used for generating the ZTV.
- The ZTV accounts for the screening effects of settlements and woodland blocks using a height value of 8 m for buildings and 10 m for woodland. It does not indicate potential visual effects or show the likely significance of effects. It shows potential theoretical visibility only. The ZTV has been produced for the purpose of informing 'on the ground' visual assessment.
- The ZTV colour palette has been specifically developed to assist viewers with reduced sensitivity to red, green and blue light.
- The Helios ZTV has been run to an area extending just beyond the solar panel area 6 km Buffer.

N W E S

0 0.25 0.5 1 1.5 2 Kilometres

HELIOS RENEWABLE ENERGY PROJECT

Project Title

Helios Renewable Energy Project

Drawing Title

Figure 7.8 – Solar Panels ZTV – With Surface Features

DRWG No	Rev	Sht no
404.012006.00001.0008.1	1	-

Drawn by	Checked by
JK	JRS

Scale	Date
1:30,000 @ A1	14/06/2024