



HELIOS RENEWABLE
ENERGY
PROJECT

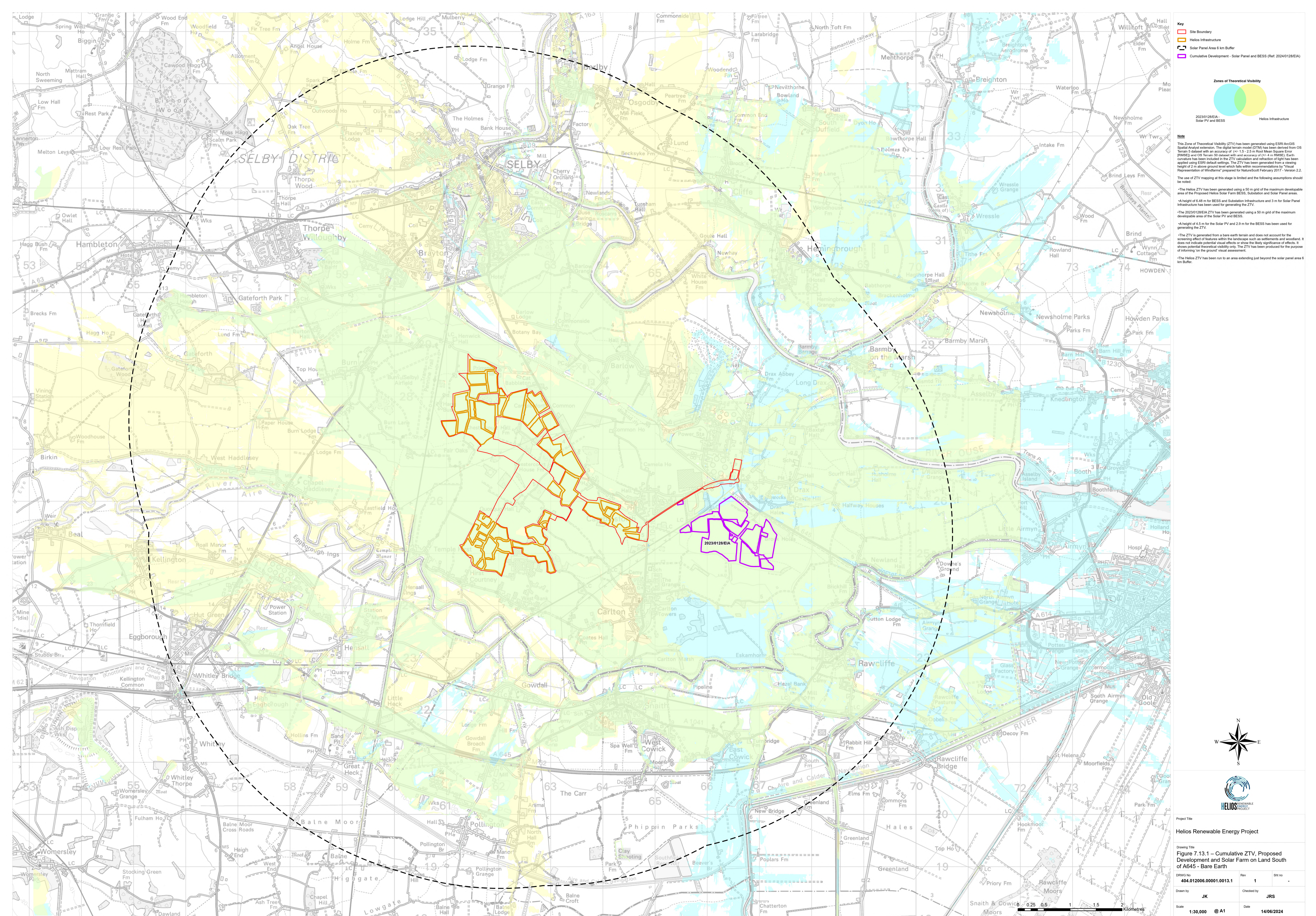
PINS Document Number:
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Pursuant to:
APFP Regulation 5(2)(a)

**Environmental Statement Figure 7.13.1:
Cumulative ZTV, Proposed Development
and Solar Farm on Land South of A645 –
Bare Earth**

June 2024





Key

- Site Boundary
- Helios Infrastructure
- Solar Panel Area 6 km Buffer
- Cumulative Development - Solar Panel and BESS (Ref. 20240128EIA)

Zones of Theoretical Visibility

20230128EIA - Solar PV and BESS

Helios Infrastructure

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) and OS Terrain 50 dataset with an accuracy of (+/-) 4 m (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 2 m above ground level which falls within recommendations by 'Visual Representation of Windfarms' 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 Helios ZTV has been generated using a 50 m grid of the maximum developable area of the Proposed Helios Solar Farm BESS, Substation and Solar Panel areas.
- A height of 6.48 m for BESS and Substation Infrastructure and 3 m for Solar Panel Infrastructure has been used for generating the ZTV.
- The 20230128EIA ZTV has been generated using a 50 m grid of the maximum developable area of the Solar PV and BESS.
- A height of 4.5 m for the Solar PV and 2.9 m for the BESS has been used for generating the ZTV.
- The ZTV is generated from a bare earth terrain and does not account for the screening effect of features within the landscape such as settlements and 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 Helios ZTV has been run to an area extending just beyond the solar panel area 6 km Buffer.



Project Title

Helios Renewable Energy Project

Drawing Title

Figure 7.13.1 – Cumulative ZTV, Proposed Development and Solar Farm on Land South of A645 - Bare Earth

DRW No	404-012006.00001.0013.1	Rev	1	Sho No	-
Drawn by	JK	Checked by	JRS	Date	14/06/2024

Scale

1:30,000 @ A1

Scale bar: 0, 0.5, 1, 1.5, 2 Kilometres