340000 360000 380000 400000 420000 440000

480000 460000 440000

N

5 km 10 km 15 km 20 km 25 km 30 km 35 km 40 km

0 10 20
Kilometres

LEGEND

Site Boundary

Potential Turbine Location 5 - 40 km Buffers (5 km Intervals)

Viewpoint

Zone of Theoretical Visibility (ZTV): Bare Earth Turbine Tip 149.9 m

High : 65 Turbines Visible

Low : 1 Turbine Visible

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 (1.5 - 2.5m Root Mean Square Error [RMSE]) up to 15km from turbine locations, and OS Terrain 50 dataset (4m RMSE). Earth curvature has been included in the ZTV calculation and refraction of light has been applied using SNH guidance settings. The ZTV has been generated from a viewing height of 2m above ground level which falls within recommendations by "Visual Representation of Windfarms" prepared for Scottish Natural Heritage (SNH) February 2017 - Version 2.2.

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

•The ZTV has been generated using the proposed turbine locations for Calderdale Wind Farm.

•The proposed turbine tip heights of 149.9 m have 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 ZTV colour palette has been specifically developed to assist viewers with reduced sensitivity to red, green and blue light.

WWRE worldwide renewable energy

SLR
4/5 LOCHSIDE VIEW
EDINBURGH PARK
EDINBURGH
EH12 9DH

T: +44 (0)131 335 6830
www.slrconsulting.com

CALDERDALE WIND FARM

SCOPING

BARE EARTH ZTV: PROPOSED BLADE TIP HEIGHT 149.9 M

FIGURE 7.3

Scale 1:350,000 @ A3

Date JULY 2023

406.000027.00001.0026.0 Figure 7.3 Zone of Theoretical Visibility Blade Tip Height

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