



# LEWKNOR SOLAR

## CONSULTATION FIGURE 1b

Zone of Theoretical Visibility with Screening Effect of Woodland and Settlement including Screening from Proposed Mitigation

**KEY**

-  Site Boundary
-  Proposed Panel Areas
-  New Hedgerow (modelled at 3.5m)
-  Infill Existing Hedgerow (modelled at 3.5m)
-  New Trees (modelled at 6m)
-  Infill Existing Woodland (modelled at 6m)
-  New Woodland Block (modelled at 6m)
-  Distance Radii from site boundary (1, 2 and 3km)
-  Viewpoints
-  Existing Buildings (modelled at 7.5m)
-  Existing Woodland (modelled at 15m)
-  Chiltern Hills National Landscape
- Zone of Theoretical Visibility (3.1m to tops of panels)**
-  Panels may be visible

**FIGURE DATA:**

This figure has been based on the following data:

Layout file: D003-obvs-panels-3\_1m-LiDAR2m-3km.shp  
 Terrain data: LiDAR-Mitigation-DSM-2022-2m.asc  
 Viewer's eye height: 2m above ground level  
 Calculation grid size: 2m

**NOTES:**

This drawing is based upon computer generated Zone of Theoretical Visibility (ZTV) studies produced using the Viewshed routine in the Visibility Analysis plugin for QGIS.

The areas shown are the maximum theoretical visibility, taking into account topography, principal woodlands and buildings.

A digital surface model (DSM) has been derived from DEFRA National LiDAR Programme DTM height data with the locations of woodland and buildings taken from the OS Open Map Local dataset. Buildings have been modelled with an assumed height of 7.5m and woodland an assumed height of 15m, representing a conservative estimate of average heights within the study area. The screening effect of proposed mitigation is also included.

The model does not take into account some localised features such as small copses, hedgerows or individual trees and therefore still gives an exaggerated impression of the extent of visibility. The actual extent of visibility on the ground will be less than that suggested by this plan.

The ZTV includes an adjustment that allows for Earth's curvature and light refraction. It is based on a derived DSM and has a 2m<sup>2</sup> resolution.

Projected Coordinate System: British National Grid

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