

Appendix 14.1

Methodology for producing the
theoretical Zone of Visual Influence (tZVI)

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1 Methodology for producing the theoretical Zone of Visual Influence (tZVI)

1.1 Introduction

1.1.1 The theoretical Zone of Visual Influence (tZVI) shows the likely (or theoretical) extent of visibility of the proposed scheme. This is also referred to as a Visual Envelope.

1.2 Data

1.2.1 The base data used to produce the tZVI is Ordnance Survey Panorama data which is based on a 50m grid. The digital terrain model (DTM) is based on a bare-earth model; it does not feature buildings, vegetation or other boundaries which may have a noticeable effect on the visibility of a development. This means that the theoretical visibility results are based on a worst case scenario.

1.2.2 A height of 1.6m was added to the DTM to illustrate the eye level of a person.

1.3 The Proposed Scheme

1.3.1 To produce a tZVI, the Proposed Scheme should be designed using Ordnance Survey/ British National Grid Coordinates and have height values. All elements of the Proposed Scheme have been considered when creating the tZVI, e.g. the road, earthworks, tracks, junctions; a height of 4.5m was added to the z values of each element where a vehicle may be present, based upon the elevation of the centre line of the road (existing/ Proposed Scheme). It is important to check the z values prior to running the tZVI and where necessary remove any anomalies.

1.4 The Output

1.4.1 The results are mapped as colour shading and are illustrated on Ordnance Survey data. This can then be viewed within the surrounding context, allowing the information to be properly understood and analysed.

1.4.2 The scale of the tZVI is dictated by the extent of the scheme. Due to the linear nature and extent of the Proposed Scheme (online widening) a 10km buffer was used; therefore the results are shown on the 250,000 scale Raster Data. The tZVI was then used to inform the study area, seasonal site visits to decipher the visual envelope and to inform where of the representative viewpoints are taken.

1.4.3 The existing baseline tZVI and proposed tZVI (visual envelope) were generated as part of the Visual chapter, **Chapter 14** and is referenced within the Landscape chapter, **Chapter 13**.

