Appendix 13.1

Methodology for producing the theoretical Zone of Visual Influence

Contents

1 Methodology for producing the theoretical Zone of Visual Influence

1.1 Introduction

1.1.1 The theoretical Zone of Visual Influence (tZVI) shows the likely (or theoretical) extent of visibility of the existing 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 Existing Alignment

1.3.1 To produce the tZVI, the existing alignment has to be to Ordnance Survey coordinates. The existing alignment was divided into small segments and the existing surface height information was added from the underlying 50m raster. A height of 4.5m was added to the z values of each element where a vehicle may be present, based upon the centre line of the road.

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 Landscape chapter, **Chapter 13**.