Appendix 8.3 Technical Methodology for Type 3 Visualisations (Photomontages)

Introduction

8.1 The Photomontages have been prepared in accordance with the latest guidance published by the Landscape Institute; 'Visual Representation of Development Proposals - Technical Guidance Note 06/19' (September 2019), (subsequently referred to as TGN 06/19). Photomontages are referred to in TGN 06/19 as 'Type 3 Visualisations'.

8.2 The aim of these visualisations is to represent appearance, context, form, and extent of development. It should be noted that however accurate these visualisations are, there are limitations on what can be conveyed by a 2D image, as explained in para 1.2.13 of TGN 06/19:

'Two-dimensional visualisations, however detailed and sophisticated, can never fully substitute what people would see in reality. They should, therefore, be considered an approximation of the three-dimensional visual experiences that an observer might receive in the field.'

Technical Photography

8.3 A Canon EOS 6D full-frame SLR camera with fixed 50mm lens was mounted onto a Manfrotto 360 VR panoramic tripod head and tripod and levelled with Benro Levelling Adjustment Base. A series of adjoining photographs were taken in landscape format for each viewpoint. The camera was set with the centre of the lens at approximately 1.6 metres above ground level (varied between locations). The panoramic head was set to a 20º angle of rotation to achieve a 50% horizontal overlap between frames. At each viewpoint location the camera was set up to take photographs centred around a nodal point. The nodal point was set to avoid any problems of foreground parallax.

8.4 The photos were cylindrically stitched using Adobe Photoshop software, thus illustrating the full horizontal extents of each view. While the horizontal field of view for each Photomontage varies, it is based upon the landscape context for each view.

Surveying

8.5 Phone GPS has been used to record the location of each photograph location, and these locations have been verified further using OS Maps, geo-references aerial photography and a topographical survey of the Site, providing sub-3 metre accuracy. OS Maps, geo-references aerial photography and a topographical survey of the Site have been used to ascertain the locations of reference features/ marker points. DTM 5 topographical data has been used to determine the level of viewpoints and markers.

3D Modelling (LSS)

8.6 Proposals for the Development have been modelled in 3D using LSS software. The Development shown in the model is geo-referenced and based upon the Parameters Plan and Illustrative Masterplan. The topography of the Development is based on the Engineer's Proposed Levels Drawings. The topography of the surrounding landform has been generated from DTM 5 data. Several surveyed vertical markers have also been modelled.

8.7 Proposed planting has been modelled at two different heights (based on Year 0 and Year 15 scenarios). Trees with 15 years growth are shown at 9m, and shrubs with 15 years growth are shown at 6.5m in height, to indicate the typical nature of the screening/ softening effects they will provide.

8.8 The proposed view from each viewpoint has been exported from LSS software in cylindrical projection, then overlaid on the panoramic photographs using Adobe Photoshop software. The 3D model has been accurately positioned within the photographs using surveyed reference markers and landform. This enabled both the horizontal and vertical alignment of the 3D models and photographs to be cross-checked and verified. After setting the 3D models accurately into each photograph the model has been rendered in Adobe Photoshop, with photo-realistic textures used to generate Photomontages that appear as realistic as possible.

Presentation

8.9 Photomontages have been presented in accordance with TGN 06/19. The visualisations have been prepared to be printed at A1 wide by A4 high (841mm x 297mm). The visualisations should be viewed at comfortable arm's length. Specific information on each viewpoint is provided alongside the relevant visualisations.

Summary

8.10 The table below summarises the technical methodology for Type 3 Visualisations, as required by TGN 06/19:

Photography	
Method used to establish camera location	Phone (Maverick app). Locations have verified further using OS Maps, geo-references aerial photography and a topographical survey of the Site.
Likely level of accuracy of location	Better than 3m

If lenses other than 50mm have been used, explain why a different lens is appropriate	N/A
3D Model / Visualisation	
Source of topographic height data and its resolution	Engineer's Proposed Levels Drawing DTM 5 (Accurate to 5m)
How have the model and the camera locations been placed in the software?	Based oosn survey coordinates
Any limitations in the overall methodology for preparation of the visualisations?	During visits to the Site and surrounding area, weather conditions, the time of day and seasonal factors have influenced the photographic record of the environment. The visualisations are illustrative and are not intended to replace the experience of visiting the viewpoint in person.