

Land at the west of Smithy Bridge Road

Landscape and Visual Impact Assessment

Appendix F

Photomontages

September 2022

Prepared for:



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Wimpey**

Verified View Methodology

Type 3 | AVR Level 1

Overview

This document has been prepared to explain the process of generating verified views (also referred to as accurate visual representations (AVR)) for the proposed development at Smithy Bridge

Rob Lockhart Studios use a methodology that is compliant with relevant sections of The Landscape Institute/IEMA Guidelines for Landscape and Visual Impact Assessment and the Landscape Institute Technical Guidance Note 06/19 (Visual Representation of Development Proposals).

High quality digital photographs were taken from the agreed locations as instructed by Randall Thorp. Visible features were used and recorded to locate the exact location of the camera and GPS coordinates were taken. Development 3D models were imported to correct geographical co-ordinates. With a known camera position, orientation and visible features the development 3D models were accurately aligned to the photograph.

Photography

For each agreed photo viewpoint location, photographs were taken with a high resolution digital SLR camera. The locations at which the photographs were taken were recorded by supplementary photographs and the GPS coordinates were recorded. At each point, where possible, a visual feature on the ground that could be identified from geo located aerial photography was used. Where necessary, measurements were taken from visible points with a laser measure to locate the camera’s position. The camera was mounted on a tripod with a pano head and levelled horizontally and laterally by means of integrated and additional spirit levels. The camera height from ground level was measured and recorded. Panoramic photos were required by the client. A sufficient overlap of shots was used for the panoramic photography which were centred by a number of principal shots to capture the development for individual photomontage images.

- Equipment Used for Photography:
- Nikon Z6ii Digital SLR
 - Nikkor Z S-Line 50mm Lens
 - Remote shutter release
 - Tripod with indexed pano head
 - Spirit levels
 - Plumb line
 - Leica DISTO D210
 - 2nd camera to record position and setup of equipment

Post Production

Each photo viewpoint photograph was processed from a RAW data file in 16bit colour space using Adobe Camera Raw. The individual shots were stitched together using a method of cylindrical projection to form a panorama. Standard (digital) photographic post production techniques were used to create a corrected final 16bit file to be used as the basis for each photomontage.

The Proposed 3D Development Model

CAD drawings of the proposed technical layout and planting plans were provided by Pegasus Group. They also provided simplified outline 3D massing models of each property type which were suitable for producing images at a detail level in accordance with AVR Level 1. The models were aligned in the correct position and height above ordnance datum to the OSGB36 coordinate system according to the levels provided by Ironside Farrar. 3D trees for both year 1 and year 15 were selected by type and size according to the information provided by the landscape architect and placed in the relevant proposed locations. As the photography was taken in summer the 3D models of the trees were selected in season to match.

The Verification Process

LiDAR DSM topography with a 1m resolution and height accuracy of 5cm was imported into the scene with the 3D development model relative to the OSGB36 coordinate system. A geo located aerial photograph with a resolution of 12.5cm was applied to the topography. At each location a virtual camera was created based on the real lens information from the EXIF data of each photograph. The cameras were positioned in the 3D model using visual references, site measurements and known heights above the LiDAR data. The likely level of location accuracy is better than 1m. The cameras were matched by aligning the LiDAR DSM topography and aerial photograph and known features on the landscape with the photo viewpoint photographs. The 3D model of the proposed development was rendered for each viewpoint to create an image file. Verified Views have previously been produced for an older design of this scheme. These were created using outdated guidance that don’t now fit within the AVR levels of current guidance. We were asked to match the visual style of these previous images. The resulting detail level of the proposed buildings now fall somewhere between AVR 1, which would show massing outlines and AVR 2 which would show a solid single colour mass and building details. The images in this document are shown as a solid mass but without the higher detail level of AVR 2. Using a photo editing package the rendered images were photomontaged with the corresponding photographs. On each viewpoint the rendered image of the development was masked behind buildings, structures, trees and terrain where it would be obscured from sight in the photo.

Applications Used

- Adobe Photoshop CC
- Adobe Lightroom CC
- Autodesk 3ds Max 2021
- Chaos Group Vray 5
- PTGui Pro 12.13
- Google Earth Pro



Visual Receptors

Key:

-  Site Boundary
-  Viewpoint locations

Viewpoint 5.2 - Cylindrical Projection Panorama | Baseline Photographs



HFOV 80.8°

Photo Captured | 17/06/2022 @ 11:01
Camera Location | E 392343, N 414925 @ 140.191m AOD
Camera's Nodal Point Height From Ground | 1.598m
Direction of View | 313° from N
Distance to Nearest Site Boundary | 367m
Camera Model | Nikon Z6ii, Full Frame Sensor
Camera Lens | Nikon Nikkor Z S-Line 50mm

Viewpoint 5.2 - Trees Year 1 | Cylindrical Projection Panorama | Type 3 | AVR Level 1



HFOV 80.8°

Photo Captured | 17/06/2022 @ 11:01
Camera Location | E 392343, N 414925 @ 140.191m AOD
Camera's Nodal Point Height From Ground | 1.598m
Direction of View | 313° from N
Distance to Nearest Site Boundary | 367m
Camera Model | Nikon Z6ii, Full Frame Sensor
Camera Lens | Nikon Nikkor Z S-Line 50mm

Viewpoint 5.2 - Trees Year 15 | Cylindrical Projection Panorama | Type 3 | AVR Level 1



HFOV 80.8°

Photo Captured | 17/06/2022 @ 11:01
Camera Location | E 392343, N 414925 @ 140.191m AOD
Camera's Nodal Point Height From Ground | 1.598m
Direction of View | 313° from N
Distance to Nearest Site Boundary | 367m
Camera Model | Nikon Z6ii, Full Frame Sensor
Camera Lens | Nikon Nikkor Z S-Line 50mm

Viewpoint 5.2 - Trees Year 1 & 15 | Principal Photo | Type 3 | AVR Level 1



Enlargement 100% at A1 sheet size

Photo Captured | 17/06/2022 @ 11:01
Camera Location | E 392343, N 414925 @ 140.191m AOD
Camera's Nodal Point Height From Ground | 1.598m
Direction of View | 313° from N
Distance to Nearest Site Boundary | 367m
Camera Model | Nikon Z6ii, Full Frame Sensor
Camera Lens | Nikon Nikkor Z S-Line 50mm

Smithy Bridge
Verified Views
September 2022 v2.0

VFOV 27°



HFOV 39.6°



Camera Location

Viewpoint 8.1 - Cylindrical Projection Panorama | Baseline Photographs



HFOV 51°

Photo Captured | 17/06/2022 @ 11:33
Camera Location | E 392376, N 414629 @ 154.914m AOD
Camera's Nodal Point Height From Ground | 1.353m (Taken below 1.6m to avoid obscuring the site due to foreground tree)
Direction of View | 327° from N
Distance to Nearest Site Boundary | 634m
Camera Model | Nikon Z6ii, Full Frame Sensor
Camera Lens | Nikon Nikkor Z S-Line 50mm

Viewpoint 8.1 - Trees Year 1 | Cylindrical Projection Panorama | Type 3 | AVR Level 1



HFOV 51°

Photo Captured | 17/06/2022 @ 11:33
Camera Location | E 392376, N 414629 @ 154.914m AOD
Camera's Nodal Point Height From Ground | 1.353m (Taken below 1.6m to avoid obscuring the site due to foreground tree)
Direction of View | 327° from N
Distance to Nearest Site Boundary | 634m
Camera Model | Nikon Z6ii, Full Frame Sensor
Camera Lens | Nikon Nikkor Z S-Line 50mm

Viewpoint 8.1 - Trees Year 15 | Cylindrical Projection Panorama | Type 3 | AVR Level 1



HFOV 51°

Photo Captured | 17/06/2022 @ 11:33
Camera Location | E 392376, N 414629 @ 154.914m AOD
Camera's Nodal Point Height From Ground | 1.353m (Taken below 1.6m to avoid obscuring the site due to foreground tree)
Direction of View | 327° from N
Distance to Nearest Site Boundary | 634m
Camera Model | Nikon Z6ii, Full Frame Sensor
Camera Lens | Nikon Nikkor Z S-Line 50mm