PEGASUS GROUP

Camera make & model	- Canon 5D MkIII
Lens make & focal length	- Canon EF 50mm, f/10 USM
Date & time of photograph	- 11/07/2025 @ 11:44
OS grid reference	- 502041, 175642

Viewpoint height (AOD)	- 19m
Distance from site	- 400m
Projection	- Cylindrical
Sheet Size	- A1

Visualisation Type	- Type 1
Horizontal Field of View	- 90°
Height of camera AGL	- 1.5m
Page size / Image size (mm)	- 841 x 400 / 816 x 322

VIEWPOINT 9 - EXISTING

From bridge over Colne brook , Stanwell road, looking northeast

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Lens make & focal length	- Canon EF 50mm, f/10 USM
Date & time of photograph	- 11/07/2025 @ 11:44
OS grid reference	- 502041 , 175642

Viewpoint height (AOD)	- 19m
Distance from site	- 400m
Projection	- Cylindrical
Sheet Size	- A1

Visualisation Type	- Type 3
Horizontal Field of View	- 90°
Height of camera AGL	- 1.5m
Page size / Image size (mm)	- 841 x 400 / 816 x 322

KEY

- MF1
- BESS
- Substation structures

VIEWPOINT 9 – PHOTOWIRE

From bridge over Colne brook , Stanwell road, looking northeast

P24-1155_EN_26 | MANOR FARM, POYLE | QUOD

METHODOLGY

Overview

Pegasus Planning Group use methodologies compliant with relevant sections of the current guidelines for photography, photomontage and TYPE 4 production included within:

- The Landscape Institute Technical Guidance Note 06/19
- Scottish Natural Heritage (SNH) Visual Representation of Wind Farms (February 2017, Version 2.2).

The Type 4s within this document have been produced using a consistent methodology using Camera Matching techniques. Camera matching is the process of replicating real-world camera parameters (position, orientation, projection and focal length) in a 3d virtual environment, enabling the production of mass models and photo-realistic renders of development proposals to be overlaid on baseline photography to the correct scale and orientation.

Definition and Classification of TYPE 4s

Landscape Institute Technical Guideance Note: Visual Representation of Development Proposals (17 September 2019) defines an Type 4 as:

Type 4 visualisations are photomontages or photowires, produced using quantifiable data, with procedural transparency and appropriate levels of accuracy. This involves using a defined camera / lens combination and establishing the camera location with sufficient locational accuracy to enable accurate scaling and location
of the 3D model within the view. In addition, the print presentation size can be determined to provide binocular image scaling when appropriate (see Section 3.8). Note that, due to the variable nature of digital viewing devices, images cannot be assumed to provide a perception of scale unless printed at the specified size.'Type 4' should be clearly stated on all
visualisations.

Site Visit and Viewpoint Locations

Each viewpoint is carefully chosen based on a combination of information, these include; zone of theoretical visibility (ZTV) analysis, strategic importance, open dialogue with local authority, and site walkover. Once the project team had agreed the exact locations, a photograph was taken which formed the basis of the study. The surveyor established the precise location of the camera.

Brunel Sureyors Ltd were contracted to undertake site photography and survey on the **20th May 2025**. The viewpoint locations were recorded using photography and the exact position of the camera and GPS was recorded using surveying equipment.

Photography

For each agreed viewpoint location, a high resolution photograph was taken with a 35mm (full frame) digital SLR camera, The camera is set up at a height of 1.5m to replicate an eye level view from the specified position. The location at which the photograph was taken and GPS positions recorded and photographed. The camera was levelled horizontally and vertically by means of a tripod mounted levelling base and two camera mounted spirit levels.

Lens Selection

In order to capture the full extent of the proposed development and an appropriate amount of contextual built form a 24mm lens (73.7° horizontal field of view), or a 50mm lens (39.6° horizontal field of view), were used.

Photography Equipment

- Canon 5D mkIII digital SLR camera (35mm)
- Canon EF 24mm f/1.4 USM Lens
- Canon EF 50mm f/1.4 USM Lens
- Tripod indexed pan head
- Levelling base with spirit level

Field Survey Methodology as provided by Brunel Surveys Ltd

1. Viewpoints are specified by the client.
2. The model is based on a 33m AOD ground level across the site.
3. Photographs using a Canon 5d Mk III full-frame camera with a 50mm fixed focal length lens are taken. A tripod with a gradated head is used and photographs are taken every 15 degrees. Photographs may be taken either portrait or landscape depending on the field of view required.
4. Centimetre accurate GPS equipment is used to log the camera position to OS GB15. The GPS also records level AOD. Both GPS and other survey equipment is used to collect data on items within shot which may be used to anchor the computer model into the photograph.

Survey Equipment

Leica CS10 handset with a GS07 head
Trimble S3 Total Station

Survey Data Post Processing

The camera locations and reference points were exported from the native GPS format into 3d dwg point cloud for cross-referencing within the 3d environment and baseline photography.

Photography stitch

The frames are stitched in PTGUi software to the fied of view required and specified in guidance documents. The detail is documented in the footer of each presentation page.

Photography Post Production

Where necessary standard image post production techniques were used, including curves, sharpening and levels. Should post production be required to a baseline viewpoint image the details of such are included in the Viewpoint Information table.
Any exceptions to the applied policies or deviations from the methodology are clearly described.

The Development Proposal

Pegasus Planning Group created the models using 2D elevations/ site plan drawings provided by the project architect.

The model was checked and aligned to the OSGB36 co-ordinate system to correlate with the 3d survey data.

Photographic Alignment within the 3d Environment

The 3d model and point cloud data is combined into one 3d file, the whole model is then imported to 3ds Max, a 3d visualisation software.

A virtual camera is created within 3ds Max using the surveyed camera location, recorded target point and field of view (FOV) based on the camera and lens combination selected for the shot .

The annotated photograph is inserted as a background to the view, to assist the Visualiser in aligning the surveyed data to each corresponding background point, based on the Camera Matching Technique.

At this stage a 2nd member of the visualisation team cross-checks the camera alignment to verify the view is correctly set.

Using this virtual camera, a render is created of the aligned model at a resolution to match the baseline photograph. This is overlaid onto the baseline photograph to assess the accuracy of the alignment.

Final Rendering and Post-Production

The final render is exported to the same resolution as the baseline photography. Multi pass renders are exported to give the visualiser more control in enhancements of the final image. These multi passes may included but not limited to Selection Mattes, Reflections, Refractions, Shadows, Lighting, Ambient Occlusion and Global Illumination.

The multi pass renders are layered within Adobe Photoshop and blended together to produce the correct level of detail and photo-realism. Finally masking is applied to the image. Endless aesthetic effects can be applied to the rendered image to enhance the realism of the final image and/or make adjustments as a result of proposed material changes. However, the visualiser always attempts to be faithful to the proposed design within it's chosen site.

The final image is verified by a second visualiser to check the appearance, masking and form of the development.

The final images are then saved in an appropriate format for inclusion within the visual document.

Photowire Output

When shown in Photowire output, the process is the same as fully rendered with exception presentation in the photo. The 'wire' is produced using the alpha chanel of the render, this uses the most outerlying edge of the model form. This edge is marked with a solid line where it appears visible in the view, and a dashed line where the view is mitigated by foreground elements present in the view including vegetation, terrain existing and proposed structures structures.

Software Used

- AutoCAD
- 3ds Max 2024
- V-Ray 6 for 3ds Max
- PTGui 12.2
- Adobe Photoshop
- Adobe InDesign

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