

1. TECHNICAL METHODOLOGY

- 1.1 The photography and visualisations within this report have been undertaken with regards to best practice, as outlined within the following publications:
- Guidelines for Landscape and Visual Impact Assessment (3rd Edition, 2013) - Landscape Institute / Institute of Environmental Management and Assessment;
 - Technical Guidance Note 06/19 (17 September 2019) Visual Representation of Development Proposals.
- 1.2 TGN 06/19 outlines four Visualisation Types (1-4), from least to most sophisticated:
- Type 1** annotated viewpoint photographs;
Type 2 3D wireline / model;
Type 3 photomontage / photowire;
Type 4 photomontage / photowire (survey / scale verifiable)
- 1.3 The Landscape Architect has chosen the most appropriate Visualisation Type in relation to the proposed development, and where necessary, agreed this and their locations with the relevant Local Authority.
- 1.4 Pegasus carry out a consistent approach to site photography, visual presentation and visualisation production. Depending on the Visualisation Type that has been agreed, the following methodology has been undertaken:

2. VISUALISATION TYPE 1

- 2.1 Reproduced at a size which aids clear understanding of the view and context, these simply show the extent of the site within the view and annotate any key features. Type 1 is the most basic form of visual representation with a focus on the baseline information. The following techniques and methodology have been used:

METHODOLOGY

FORM OF	Annotated photos (single frame or panorama)
CAMERA & LENS	Canon EOS 750D cropped frame (35mm lens) or Canon 5D MkII full frame (fixed 50mm f1.4 USM lens).
TRIPOD	Only used where the site cannot fit within a single frame image. Manfrotto tripod, 338 levelling base, 300N pano head and 454 slide plate. Calibrated to camera. All single frame images taken handheld.
GPS EQUIPMENT	Garmin 62s or Etrex 10 (GPS & GLONASS) (accurate down to 3m) using British National Grid.
STITCHING SOFTWARE	PTGui used for accurately stitching panoramic images.
VIEWPOINT MAPPING	Dedicated Viewpoint Location Plan plus additional inset maps on image
IMAGE ENLARGEMENT	100%

3. VISUALISATION TYPE 2

3.1 This covers a range of computer-generated (CGI) images/visualisations, generally without any photographic context. Type 2 visualisations use basic graphic information to assist in describing a proposed development and its context. These can take form in several ways depending on:

- The type of proposed development;
- The required context to be shown;
- The level of detail required within the model;
- The available baseline data.

3.2 These types of visualisations may portray the development from a number of viewpoints or angles as a user would see them in the field, or alternatively show the scheme from an aerial/ non-realistic perspective.

METHODOLOGY

FORM OF VISUALISATION	Either a – 3D massing model/3D wireline/textured & rendered 3D model. All relevant context modelled within software.
BASELINE HEIGHT DATA	Either topographic survey supplied by client or NEXTMap height data purchased through online supplier.
3D MODEL	Either provided by client or built in house using CAD plans and elevations provided by client. Textures sourced and applied in house where necessary.
SOFTWARE	Modelling and rendering produced using 3D Studio Max.

4. VISUALISATION TYPE 3

- 4.1 Type 3 visualisations are photomontages or photowires (photographs with wireline overlays) where site photography forms the basis of the imagery, which is then overlaid by a 3D wireframe, massing or rendered model.
- 4.2 All Type 3 visualisations carried out by Pegasus are undertaken to the highest level of accuracy applicable for the proposed development. All visuals are aligned within the existing image using reference points via an onsite survey or using alternative locators from other sources (listed below).
- 4.3 All photography is carried out using a calibrated and levelled tripod, as well as a full frame sensor camera with fixed focal length lens.

METHODOLOGY

FORM OF VISUALISATION	Photowire/photomontage – level of rendering for photomontage dependant on proposals and agreement with client/LPA.
CAMERA & LENS	Canon 5D MkII full frame (fixed 50mm f1.4 USM lens) or Samyang 24mm f3.5 Tilt Shift lens where required in order to fit proposed development within image.
TRIPOD	Used for all photography. Manfrotto tripod, 338 levelling base, 300N pano head and 454 slide plate. Calibrated to camera.
GPS EQUIPMENT	Garmin 62s or Etrex 10 (GPS & GLONASS) (accurate down to 3m) using British National Grid, or Leica Zeno 20 with Disto S910 (accurate down to 20mm) via GNSS/RTK using British National Grid.
STITCHING SOFTWARE	PTGui used for accurately stitching panoramic images.
BASELINE HEIGHT DATA	Either topographic survey supplied by client or NEXTMap/LIDAR height data.
3D MODEL	Either provided by client or built in house using CAD plans and elevations.
SOFTWARE	Modelling and rendering produced using 3D Studio Max.
LOCATORS	Either surveyed on site with Leica Zeno 20 & disto S910, or data from topographic survey / LIDAR / GIS
VIEWPOINT MAPPING	Dedicated Viewpoint Location Plan plus additional inset maps on image
IMAGE ENLARGEMENT	100%

5. VISUALISATION TYPE 4

- 5.1 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.
- 5.2 All Type 4 visualisations carried out by Pegasus are undertaken to the highest level of accuracy using survey grade equipment. All visuals are aligned within the existing image using reference points via an onsite survey.
- 5.3 All photography is carried out using a calibrated and levelled tripod, as well as a full frame sensor camera with fixed focal length lens.

METHODOLOGY

FORM OF VISUALISATION	Photowire/photomontage – level of rendering for photomontage dependant on proposals and agreement with client/LPA.
CAMERA & LENS	Canon 5D MkII full frame (fixed 50mm f1.4 USM lens) or Samyang 24mm f3.5 Tilt Shift lens where required in order to fit proposed development within image.
TRIPOD	Used for all photography. Manfrotto tripod, 338 levelling base, 300N pano head and 454 slide plate. Calibrated to camera.
GPS EQUIPMENT	Leica Zeno 20 with Disto S910 (accurate down to 20mm) via GNSS/RTK using British National Grid.
STITCHING SOFTWARE	PTGui used for accurately stitching panoramic images.
BASELINE HEIGHT DATA	Either topographic survey supplied by client or NEXTMap/LIDAR height data.
3D MODEL	Either provided by client or built in house using CAD plans and elevations.
SOFTWARE	Modelling and rendering produced using 3D Studio Max.
LOCATORS	surveyed on site with Leica Zeno 20 & disto S910 with a minimum of 8 locator points taken.
VIEWPOINT MAPPING	Dedicated Viewpoint Location Plan plus additional inset maps on image
IMAGE ENLARGEMENT	100% - 150%

**ADDITIONAL ON SITE
DATA**

Photograph of camera location taken

**ADDITIONAL DATA
PROVIDED WITH
VISUALS**

Full list of locator points used to align each visual, relevant drawings/layouts and baseline data provided as appendix.

6. PRESENTATION OF VISUAL MATERIAL

6.1 All visualisations provided within this report follow the presentation guidelines set out within TGN 06/19. Each visualisation will display the following data on each single frame/Panoramic Photoview page:

- Camera make and model;
- Lens make & focal length;
- Date and time of photograph;
- OS grid reference;
- Viewpoint height (AOD);
- Distance from Site;
- Projection;
- Enlargement / sheet size;
- Visualisation type;
- Horizontal field of view;
- Height of camera (AGL);
- Page size / image size (mm)
- Viewpoint location map