

8 LANDSCAPE AND VISUAL

APPENDIX 8-2 TECHNICAL INFORMATION

Introduction

- 8.1 The interpretation of the magnitude of impact and the level of effect, including the significance of effect, of the proposed development was determined with the assistance of specialist computer generated information.
- 8.2 In the absence of any bespoke guidance relating to the visual representation of solar developments, the '*Visual Representation of Windfarms: Good Practice Guidance, Scottish Natural Heritage, Version 2.1, December 2014,*' was referenced for the creation and presentation of the landscape and visual technical graphic information, to accompany and inform the landscape and visual impact assessment (LVIA).
- 8.3 The Landscape Institute, *Technical Guidance Note 06/19, Visual Representation of Development Proposals*, 17th September 2019 was referenced for guidance on the use of the camera and photography.

Zone of Theoretical Visibility (ZTV)

- 8.4 The creation of a computer-generated Zone of Theoretical Visibility (ZTV) was the first step in the assessment of effects.
- 8.5 A ZTV represents a theoretical area from which the proposed development or part of the proposed development may be seen. The ZTV therefore represents potential visibility. The ZTV does not convey the magnitude of impact or level of effect, however, it forms an appropriate starting point for undertaking the LVIA
- 8.6 The ZTV was shown on a 1:50,000 map base and plotted at A3 size at 1:50,000 scale (5km radius study area – offset from proposed development boundaries) for graphic interpretation.
- 8.7 The ZTV helps to inform judgements on the effects of the proposed development and provides information on:
- Where visibility is theoretically likely to occur (calculated to the maximum height of the solar panels and service buildings/inverter heights);
 - The percentage of the proposed development that would be potentially visible; and
 - Extent and pattern of visibility.
- 8.8 Two ZTVs were produced to inform the LVIA. The ZTVs include:

- A 'bare earth' ZTV was based on land form data only with any ridgelines, plateaux and valleys reflected in the extent of predicted visibility. The bare earth ZTV does not take into account subtle variations in landform, local conditions such as built development or vegetation such as hedgerows and woodlands, which can and does significantly reduce the area and extent of actual visibility. Therefore the extent of potential visibility of the proposed development as illustrated on the bare earth ZTV will be substantially less than that predicted on the ZTV. The bare earth ZTV therefore represents a 'worse-case' scenario with regard to the visibility of the proposed development; and
 - An 'excluded' ZTV which takes into account the potential screening from existing buildings and woodland.
- 8.9 The ZTVs are also a useful basis for selecting potential viewpoints and photomontage locations.

Photographs

- 8.10 Photographs included in the assessment were taken when conducting the site survey.
- 8.11 The photographs were taken with a Nikon D610 camera with a Nikon AF-S Nikkor 50mm f/1.8g fixed lens.
- 8.12 The photographs were taken with the aid of a tripod with the head fixed on a vertical and horizontal axis also incorporating a spirit level to ensure 'level' photographs.
- 8.13 The photographs were taken in landscape format.
- 8.14 The camera was positioned at 1.5m above ground level, unless otherwise specified (such as a hedge, tree or other obstruction in the view).
- 8.15 GPS co-ordinates and height data (AOD), using a hand-held GPS device was taken at every photographic location. A compass bearing was taken to ensure the direction of view was correct. The horizontal field of view was also recorded.
- 8.16 The series of overlapping photographs were taken, with each photographic frame overlapping between 20-30% and stitched together using Adobe Photoshop software to provide panoramic views.

Viewpoints and Photomontages

Viewpoints

- 8.17 A number of viewpoints from which the proposed development may be visible were selected.
- 8.18 The viewpoint photographs were taken in fine weather with good visibility in March and April 2019. A further site survey was undertaken in July 2020.

8.19 Each viewpoint is illustrated as an annotated panoramic photograph, to be viewed at a comfortable arm's length and presented at a 60 degree angle of view.

8.20 The viewpoints meet the following criteria:

- A balance of viewpoints from the main directions of view;
- Provide a representative selection of views and receptors towards the proposed development; and
- For receptors most likely to experience the greatest change of view.

Photomontages

8.21 A photomontage is where a computer rendered image of the proposed development is superimposed onto the existing photographic view. Photomontages are a valuable tool for presenting an overall realistic impression of the proposed development in the landscape from selected agreed viewpoints (where the proposed development has the potential to be perceived).

8.22 The finished image is a representation of the likely appearance of the proposed development only.

8.23 Photomontages were produced to illustrate the view that would be experienced by the viewer at the selected viewpoint when facing towards the proposed development.

8.24 They are illustrated at significant time during the life of the proposed development and include:

- Existing view; and
- Proposed view (Year 1) – to illustrate the 'worst-case' immediately following completion of the construction of the proposed development.

8.25 For all photomontages:

- There is an element of judgement. While the base data is factual (DTM/photograph) within established parameters, the finished image is a representation of the likely appearance of the proposed development; and
- Each photograph incorporates the lighting and conditions as seen. The photomontage upon which it is based therefore only represents the appearance of the proposed development as it would have appeared at that time, on that day and at that time of year.

Presentation of the Viewpoints and Photomontages

8.26 On all viewpoint and photomontages, the following information was included:

- Figure number;
- Viewpoint number and description of viewpoint location;

- OS grid reference of viewpoint location;
- Viewpoint altitude;
- Viewing height;
- Angle of view;
- Direction of view;
- Recommended viewing distance;
- Distance to proposed development (in meters). The distance to the boundary of the proposed development (development or red line boundary) and the fence line enclosing the solar panels is also outlined;
- Date/time of photograph;
- Weather and lighting conditions;
- Extent of proposed development including development or red line boundary and the fence line enclosing the solar panels (on panoramic photographs only);
- Extent and distance to other solar energy schemes (on panoramic photographs only);
- Ordnance survey key map of viewpoint location.

8.27 Each viewpoint is also presented at the recommended 'viewing distance.' The 'viewing distance' is the distance between the eye and the image and directly relates to the image size. Each viewpoint should be viewed flat at a comfortable arm's length.