Land North of Little Cheveney Farm, Sheephurst Lane, Marden
Review of Photography and Visual Material

Basis for Review

- AWScape Proposed Mitigation, Landscape & Ecology enhancements – with Appeal Documents AW0143-PL-003(April 23)

- AndyMawDesign (AMD) Photography, Verified Views and Methodology Appeal Scheme with Amendments (19 April 2023)

- AndyMawDesign Viewpoint Location Plan ZTVSSF-ZTV-001 (02 22)

Zone of Theoretical Visibility (ZTV)

The ZTV is a bare earth ZTV, considered best practice for identifying the extents of the study area.

AMD have used LIDAR 2m DTM. This is considered the correct data to use.

The only criticism is that the ZTV should have been centred on the site, rather than located in the north-eastern corner of the ZTV. It would be helpful to understand visibility to the north and east of the site, which is only shown at 1km and 1.5km respectively. There may be other sensitive L&V viewpoints that have not been picked up.

Viewpoints and Visualisations

Technical Methodology

AMD demonstrate good technical knowledge in their approach to photography.

The use of 3DS Max as software means that OSGB36 cannot be used and all co-ordinates need to be moved to locations close to the origin (0,0,0). Whilst this is not an inherent problem, it simply means that a secondary calculation is required for all viewpoint locations and 3D points.

No evidence is presented that the full model has been built and used in the visualisations. A series of aerial perspectives would show this.

The site is not completely flat - LIDAR DTM will have variations in finished level, but it is not clear from the technical methodology whether this has been used in the 3D model.

One area of concern relates to ‘re-projection from cylindrical to planar’. There are no reasons why there needs to be any re-projection from cylindrical to planar projection. This requirement is a historic requirement of those working on windfarm visualisations in Scotland, as a result of the work carried out by SNH and the Highland Council.

Windfarm visualisations have no place in solar farm visualisations for obvious reasons, since the latter need to accommodate 3m tall, rather than 150m+ tall, development.

Solar farm visualisations require the full extents of the development to be presented - not a 53.5 degree planar portion as presented by AMD. This was not necessary and is a fundamental flaw in the visualisation work.

The visualisation images are presented at 90degrees on A3 wide sheets, which fail to comply with LI TGN 06/19 - the visualisations should have been presented at 90 degrees on a series of A1 wide sheets to illustrate the full site extents.

AMD present their landscaping visualisations at both Year 1 and Year 10, which is considered good practice. However, since there is no 3D model to explain how these have been prepared, it is unclear what heights have been used. It is also unclear as to whether the full site model has been built and presented in the visualisations.

Viewpoint 1

According to the red-line plan, the full site extents cover over 270 degrees of the view from this viewpoint, with the panel layout covering at least 120 degrees of the view. However, only 90 degrees of the view is shown in the context view and visualisation.

The landscaping shown on the visualisation appears too tall at Year 10. Mature tree cover is shown, at least 10 metres tall, which is highly unlikely to be achieved in this timeframe.

It is considered standard practice to present and identify the full site extents in the baseline view (Figure 1), and the full panorama identifying site extents should be presented. However, AMD have failed to do this.

The 90 degree images are presented at A3, a size that is not recognised in any guidance. These are too small on an A3 sheet, with insufficient detail visible. These should all be re-presented on A1 wide sheets, to contain the full site extents.

Viewpoint 2

According to the red-line plan, the full site extents cover over 360 degrees of the view from this viewpoint, with the panel layout covering at least 180 degrees of the view. However, only 90 degrees of the view is shown in the context view and visualisation.

It is considered standard practice to present and identify the full site extents in the baseline view (Figure 6), and the full panorama identifying site extents should be presented. However, AMD have failed to do this.

The 90 degree images are presented at A3, a size that is not recognised in any guidance. These are too small on an A3 sheet, with insufficient detail visible. These should all be re-presented on A1 wide sheets, to contain the full site extents.

Viewpoint 3

According to the red-line plan, this viewpoint is located between 50 and 75 metres to the east of the site and the full site extents cover over 180 degrees of the view. However, only a small portion of the view is shown. No visualisation has been prepared.

The camera equipment includes a cropped frame sensor and 30mm lens, which is not explained in the technical methodology. This equipment could not be used to generate visualisations, and the resultant image is presented at a different scale to other viewpoints with visualisations. For purposes of comparison, it is important that images are presented at a consistent size.

It is considered standard practice to present and identify the full site extents in the baseline view (Figure 11), but AMD have failed to do this.

Viewpoints 4-7

Viewpoints 4 to 7 are identified in the Viewpoints Figure but are not presented in the April 2023 package of visuals. It is understood that this is because these views would be unaffected by the latest amendments to the scheme. The review of these viewpoints is therefore based on the original versions.

Viewpoint 4

According to the red-line plan, this viewpoint is located approximately 500 metres to the east of the site, and the full site extents cover over 120 degrees of the view. However, only a small portion of the view is shown. No visualisation has been prepared.

The camera equipment includes a cropped frame sensor and 30mm lens, which is not explained in the technical methodology. This equipment could not be used to generate visualisations, and the resultant image is presented at a different scale to viewpoints 1 and 2. It is considered standard practice to present and identify the full site extents in the baseline view (Figure 12). However, AMD have failed to do this.

Viewpoint 5

According to the red-line plan, this viewpoint is located approximately 300 metres to the east of the site and the full site extents cover over 120 degrees of the view. However, only 90 degrees of the view is shown.

The Year 10 visualisations suggest excessive tree growth(10-12+metres), which is much more than can be realistically expected.

It is considered standard practice to present and identify the full site extents in the baseline view (Figure 13). However, AMD have failed to do this.

Viewpoint 6

According to the red-line plan, this viewpoint is located within the site, such that the full site extents cover over 180 degrees of the view. However, only 90 degrees of the view is shown. No panels are shown to the south-west, where the majority of panels are located.

The proposed site layout indicates that the perimeter fence-line appears to be within 10 metres of the viewpoint, although the visualisation suggests it is at least 20-30 metres away.

The site layout with landscaping does not show any hedgerow planting along the proposed fence-line, which suggests that the year 10 visualisation is incorrect.

It is considered standard practice to present and identify the full site extents in the baseline view (Figure 18). However, AMD have failed to do this.

Viewpoint 7

According to the red-line plan, this viewpoint is located within the site, which extends across over 180 degrees of the view. However, only a small portion of the view is shown. The proposed panels would fill the view shown, and much more to the sides. No visualisation has been prepared.

The camera equipment includes a cropped frame sensor and 30mm lens, which is not explained in the technical methodology. This equipment could not be used to generate visualisations, and the resultant image is presented at a different scale to Viewpoint 6.

It is considered standard practice to present and identify the full site extents in the baseline view (Figure 23). However, AMD have failed to do this.

Viewpoint 8

According to the red-line plan, the full site extents cover over 270 degrees of the view from this viewpoint, with the panel layout covering at least 100 degrees of the view. However, only 90 degrees of the view is shown in the context view and visualisation. As a result, most of the panels are not present in this view, even though they would be clearly visible in the near distance.

It is considered standard practice to present and identify the full site extents in the baseline view (Figure 12), and the full panorama identifying site extents should be presented. However, AMD have failed to do this.

The 90 degree images are presented at A3, a size that is not recognised in any guidance. These are too small on an A3 sheet, with insufficient detail visible. These should all be re-presented on A1 wide sheets, to contain the full site extents.

Viewpoint 9

According to the red-line plan, this viewpoint is located just beyond the south-western extents of the site, which cover over 120 degrees of the view from this viewpoint. However, only a small portion of the view is shown. No visualisation has been prepared.

The camera equipment includes a cropped frame sensor and 30mm lens, which is not explained in the technical methodology. This equipment could not be used to generate visualisations, and the resultant image is presented at a different scale to other viewpoints with visualisations. For purposes of comparison, it is important that images are presented at a consistent size.

It is considered standard practice to present and identify the full site extents in the baseline view (Figure 17), but AMD have failed to do this.

Viewpoint 10

According to the red-line plan, this viewpoint is located just beyond the southern extent of the site, which covers over 180 degrees of the view from this viewpoint. However, only a small portion of the view is shown. No visualisation has been prepared.

The camera equipment includes a cropped frame sensor and 30mm lens, which is not explained in the technical methodology. This equipment could not be used to generate visualisations, and the resultant image is presented at a different scale to other viewpoints with visualisations. For purposes of comparison, it is important that images should be presented at a consistent size.

It is considered standard practice to present and identify the full site extents in the baseline view (Figure 18), but AMD have failed to do this.

Viewpoint 11

Viewpoint 11 is identified in the Viewpoints Figure but is not presented in the April 2023 package of visuals. It is understood that this is because this view would be unaffected by the latest amendments to the scheme. The location of this viewpoint also appears to have changed, and it has therefore not been reviewed at this stage.

Viewpoint 12

According to the red-line plan, the full site extents cover over 180 degrees of the view from this viewpoint, with the panel layout covering at least 110 degrees of the view. However, only 90 degrees of the view is shown in the context view and visualisation.

It is considered standard practice to present and identify the full site extents in the baseline view (Figure 12), and the full panorama identifying site extents should be presented. However, AMD have failed to do this.

The 90 degree images are presented at A3, a size that is not recognised in any guidance. These are too small on an A3 sheet, with insufficient detail visible. These should all be re-presented on A1 wide sheets, to contain the full site extents.

Viewpoint 13

Viewpoint 13 is a distant viewpoint, from over 5km to the north-east. It is difficult to identify the site in the view. This should be done using vertical lines to identify the limits of the site.

Only 90 degrees of the view is shown in the context view and visualisation. It is considered standard practice to present and identify the full site extents in the baseline view (Figure 24), and the full panorama identifying site extents should be presented. However, AMD have failed to do this.

The 90 degree images are presented at A3, a size that bare not recognised in any guidance. These are too small on an A3 sheet, with insufficient detail visible. These should all be re-presented on A1 wide sheets, to contain the full site extents.

Plates A to G

Plates A to G are identified in the Viewpoints Figure, but not presented in the April 2023 package of visuals. It is understood that this is because these views would be unaffected by the latest amendments to the scheme. The original versions of these plates have therefore been reviewed. The purpose of these plates is not clear. They do not, for example, show the location of the site, or capture its full extent - Plate B is even directed away from the site.

Seasonality

Since the original application, there has been plenty of opportunity to capture winter-time views. In fact, Viewpoints 11 and 13 were taken in February 2023. All other viewpoints should have been re-taken to capture winter time views.

3D Modelling

There is a complete lack of transparency in how the 3D modelling has been done. The results are clearly incomplete, and the visualisations are not considered to be fit for purpose. The solar farm will be much more visible in the local landscape, particularly in winter months, but this is not evident. All viewpoints fail to identify the full site extents, which is a fundamental requirement of LI TGN06/19.

There is no explanation of the accuracy or detail levels of the 3D model or how it was put together. However, a review of the visualisations (Viewpoints 1, 2, 5, 6, 8, 11 & 13) illustrates that the technical approach is poor. None of these photomontages give any degree of accuracy and cannot be relied upon.

The most basic visualisation Type according to LI TGN06/19 is a 'Type 1', which must illustrate the full site extents. None of the viewpoints capture the full site extents.

Conformity with LI TGN 06/19

The equipment used is good. The camera is full frame. The lens used is 50mm. Camera location is given, using an SP60, which provides evidence of accurate positioning.

The 3D modelling looks incomplete and it is possible that the full site has not been modelled. It is also possible that no geo-referenced 3D model has actually been used. This should be confirmed by AMD.

Conclusion and Recommendations

The ZTV should be run centred on the site with a 5km radius.

No reliance should be placed on the visualisations as currently presented, particularly in terms of judgments about the precise visibility of the development and its magnitude of impact. Winter and summer-time panoramas should be presented.

It is requested the applicant get their visualisations up to a standard which can be technically checked by myself.

This would include:

- Re-taking all photographs to include winter views;
- Presenting the cylindrical 'context' views as series of 90 degrees on A1 wide x A4 high sheet for all viewpoints capturing full site extents;
- Producing a technical methodology to explain how the 3D model has been constructed and the level of detail in the model;
- Including 'infrastructure visualisations' illustrating the full site extents on top of a terrain model; and
- Without planar re-projections.

Mike Spence
Principal | BA(Hons) , MLD, CMLI, REIA, FRGS
M: 07947 771553
O: 01535 647847
W: msenvision.co.uk