

## 1 GLVIA GUIDANCE AND INTERPRETATION

Methodology for statutory landscape visual impact assessment (LVIA) follows the methodology outlined below. This methodology is based on 'The Guidelines for Landscape and Visual Impact Assessment, 3rd Edition. (Landscape Institute with the Institute of Environmental Management and Assessment, 2013).

A key element of LVIA is that significance is clearly explained.

### ***Baseline***

The landscape baseline should be fully described highlighting all aspects of it. Reference to Character Area analysis (regional and local) are useful to contextualise the site/study area. It is useful to inventory the landscape by describing:

- Landscape characteristics';
- Elements; and
- Features.

### ***Significance***

First any effect needs to be assessed. The need for clear judgement and transparency in the way that assessments are made based around a consistent framework of factors that need to be considered, rather than a prescriptive description of different categories of significance.

What the EIA regulations require in distinguishing significant from not significant effects, rather than necessarily having a scale of levels of significance. Scale can help bolster the argument for significance, however.

Using well-argued narrative text to make clear what the significant issues and effects are with tables and matrices supporting this rather than being overly relied upon. This does not mean that tables are not helpful but should always be preceded/supported by text.

Paragraph 5.37 on page 88 states "... One of the more challenging issues is deciding whether the landscape effects should be categorised as positive or negative. It is also possible for effects to be neutral...An informed professional judgement should be made about this and the criteria used in reaching the judgement should be clearly stated. They might include but should not be restricted to:

- The degree to which the proposal fits within the existing character;
- The contribution to the landscape that the development may make in its own right, usually by virtue of good design, even if it is in contrast to existing character. ..."

Once effects are assessed, then significance needs to be defined. There are no hard and fast rules on this; however, scaled tables can be helpful and are generally accepted in all environmental disciplines.

When affects are assessed using a table, such as Table 8, below, then it is easier to argue that Significant effects are more likely to be those that lie in the upper, left side. It is still a judgement call, and professional experience and judgement needs to be applied.

### **Sensitivity to Proposed Change in Determining the Relative Effect on the Receptor**

In determining significance, it is important to evaluate the sensitivity of the receptor of any change correctly. In EIA, this value is not absolute, but is very much dependent on the nature of the development. A high value landscape (e.g., AONB, designated coastline, conservation area) can have an intrinsically high value, but have a low sensitivity to change, if the predicted change in views/landscape character are negligible/in keeping with the landscape character generally/fully mitigated by embedded elements of the proposals. This

situation is not unusual in the UK where designated sites are near to and have views of urbanised landscapes.

GLVIA Para 5.56 (p 92) is a good rule of thumb to be borne in mind when considering whether an impact is significant. "There are no hard and fast rules about what makes a significant effect, and there cannot be a standard approach since circumstances, vary with the location and landscape context and with the type of proposal. At opposite ends of the spectrum it is reasonable to say:

- Major loss or irreversible negative effects, over an extensive area, on elements and/or aesthetic and perceptual aspects that are key to the character of nationally valued landscapes are likely to be of the greatest significance;
- Reversible negative effects of short duration, over a restricted area on elements and/or aesthetic and perceptual aspects that contribute to but are not key characteristics of the character of landscape of community value are likely to be of the least significance and may, depending on the circumstances, may be judged as not significant;
- Where assessments of significance place landscape effects between these extremes, judgements must be made about whether or not they are significant, with full explanation of why these conclusions have been reached. ..."

Always review this before assigning impacts/effects.

### **Methodology**

**Table 1: Landscape Value Criteria**

<b>Landscape Value</b>	<b>Description</b>
<b>International Value</b>	The landscape has been designated at an international level (e.g. an UNESCO World Heritage site) and designation relates to the landscape and /or recreational opportunities
<b>National Value</b>	Designation is at a national level such as a National Park or Area of Outstanding Natural Beauty (AONB) or relates to a landscape feature with a statutory designation or significant time depth or cultural relevance e.g. Scheduled Monument or Listed Building
<b>County/District Value</b>	Landscape feature or area designated at a County/Borough or District level e.g. Area of Local Landscape Importance (ALLI) or Special Landscape Area (SLA) or a non-designated landscape with distinctive features or value as a setting
<b>Local Community Value</b>	An undesignated landscape with features which shows evidence of responsible management and use may be valued locally
<b>Unvalued</b>	The landscape or individual elements have been despoiled or subject to actions which show it is not valued e.g. fly tipping and vandalism

**Table 2: Landscape Susceptibility (Resilience) Criteria**

Landscape Susceptibility	Description
<b>Very Susceptible</b>	Character is pristine with high scenic quality with low resilience to change. Wildness or tranquillity is particularly highly valued or promoted and views are an integral characteristic. Policies aim to achieve 'no change' and proposal would be incompatible with this aim due to the type of development, scale and location
<b>Moderate Susceptibility</b>	Key characteristics are strongly expressed and/or resilience to change is weak or views are an integral characteristic. Policies aim to conserve key elements and changes brought about by development would have poor compatibility due to the type, scale and location of the proposals.
<b>Susceptible</b>	Landscape resilience to change or views is relatively robust; and policies promote or accept limited change to key characteristics. The changes to the landscape character brought about by development is moderately compatible with the type, scale and location of proposals.
<b>Low Susceptibility</b>	Clarity of key characteristics is not strongly expressed and/or resilience to change is good and/or views are incidental. Policies accept or promote landscape evolution and the change brought about by the development is compatible due to the type, scale and location of proposals.
<b>Negligible Susceptibility</b>	Landscape characteristics are not clear and resilience to change is very strong and/or views are irrelevant to landscape character. Policies strongly promote or accept major changes to key characteristics. Development has excellent compatibility with the type, scale and location of proposals.

**Table 3: Visual Receptor Value Criteria**

Value of Location or View	Description
<b>High or National Value</b>	A scenic view in a highly valued landscape that has been designated at an International or National level. Particularly applicable to views from a National Trail or a promoted route or a recognised view to or from a culturally significant feature or statutorily designated landscape element e.g. Scheduled Monument or Listed Building

Value of Location or View	Description
<b>Moderate or County Value</b>	A view to or from a designated landscape or a view described in publications or visitor guides from promoted routes or locations of interest or limited cultural significance
<b>Low or Local Community Value</b>	A view with amenity value in an undesignated landscape with evidence of responsible use
<b>Poor or Unvalued</b>	Landscape is despoiled and there is evidence of fly tipping or vandalism that suggest users or society do not value the landscape or the views to or from it

#### Visual Receptor Susceptibility to Change

Susceptibility of the receptor relates to their location, activity and distance or angle and extent of view of development. The criteria used are detailed in Table 4.

**Table 4: Visual Receptor Susceptibility to Change**

Visual Receptor Type	Susceptibility to Change
<b>Engaged in Recreational Activity</b>	<i>High</i> – stationary or moving slowly and may be orientated towards the view or within location primarily to enjoy views of the landscape i.e. bench or picnic site <i>Moderate</i> – stationary or moving slowly and may be orientated towards the development or at the location to enjoy views of the landscape but also has other purposes for being in that location (i.e. active sports)
<b>Travellers (public and private road and rail)</b>	<i>High</i> – moving slowly primarily to enjoy views of the landscape and orientated towards view of the development <i>Moderate</i> – moving swiftly possibly orientated towards views of the development and may be in the location to enjoy views of the landscape but has other purpose for travelling (i.e. journey to work) <i>Low</i> – moving very swiftly in a direction of travel with an oblique view or glimpsed view of development but has other primary purpose for being in that location other than views of the landscape (i.e. motorway or long-distance travel)
<b>Outdoor Workers</b>	<i>Moderate</i> – outdoor workers moving slowly in locations with a view orientated towards the development and which may be experienced on a daily basis <i>Low</i> – outdoor workers moving more swiftly in a location which may or may not be orientated towards the development but have a primary focus not connected with enjoyment of the view or not experienced frequently

Visual Receptor Type	Susceptibility to Change
Indoor Workers	<i>Low</i> – limited views and in the location for activities unconnected with enjoyment of the view

**Table 5: Visual Receptor Sensitivity Criteria**

Visual Receptor Sensitivity	Description
<b>Very High Sensitivity</b>	Stationary or moving very slowly with prolonged view from a Public Rights of Way in a highly valued landscape or at a heritage asset where awareness of changes to visual amenity is acutely pronounced
<b>High Sensitivity</b>	Moving slowly or steadily and exposed to view consistently for prolonged periods and when attention or interest is focused on the landscape and visual amenity and awareness of change is likely to be elevated
<b>Moderate Sensitivity</b>	Movement is steady and receptor is going to be exposed to the view for infrequent periods or has less interest in visual amenity (e.g. people in transit)
<b>Low Sensitivity</b>	Receptor is moving swiftly through the landscape, exposure to views of the development are limited and primary focus is not on the landscape but on an activity or pursuit that does not include an appreciation of views. Outdoor workers may be included here where the setting is of some value to the quality of working life
<b>Negligible Sensitivity</b>	Receptor is predominantly indoors or focused on an activity or pursuit where setting has limited value and awareness of landscape change is likely to be seen of very low importance

**Table 6: Magnitude of Landscape Effects**

Magnitude of Change	Description of Expected Change
<b>Very Major Adverse or Beneficial</b>	Proposal would become defining characteristic or dominant feature of the landscape and would be in extreme contrast or substantially enhance the existing landscape context through re-instating valued features that have been degraded or lost in the locality. Development will introduce an entirely new feature into the landscape with no similar developments in the locality

Magnitude of Change	Description of Expected Change
<b>Major Adverse or Beneficial</b>	Development proposal would be a key characteristic of the landscape and would detract or enhance existing landscape context. Contains features of a similar nature to a few existing features in the landscape or will reinstate valued features previously lost or degraded which will be a prominent feature in the landscape.
<b>Medium Adverse or Beneficial</b>	Development proposals would become a characteristic of the landscape and would contrast or enhance the existing landscape context. A few similar developments are already in the landscape and proposals will re-instate several features that have been lost or degraded and would be a noticeable additional feature.
<b>Small Adverse or Beneficial</b>	Development proposals would become a characteristic of the landscape and would contrast with or enhance the existing landscape context. A few similar developments are already in the landscape and proposals will re-instate a few features that have been lost or degraded and would be a visible additional feature.
<b>Negligible Adverse or Beneficial</b>	Development proposals would become a characteristic of the landscape and would contrast or enhance the existing landscape context. Several similar developments are already in the landscape and proposals will re-instate minor features that have been lost or degraded but these would be a barely discernible additional feature.

**Table 7: Magnitude of Visual Effects Criteria**

Magnitude of Change	Description
<b>Very Major</b>	The proposed development is close to receptor viewpoint and full extent is openly visible. Proposals are in stark contrast to the existing landscape context and would become a dominant adverse/ beneficial feature
<b>Major</b>	Proposed development is located close or middle distance to receptor viewpoint and is perceived in its full extent or partially screened. The development contrasts with the existing landscape context and would stand out as a prominent adverse/ beneficial feature

Magnitude of Change	Description
<b>Moderate</b>	Proposed development is in the middle distance and the full extent is visible or partially screened or close to receptor viewpoint and more moderately screened. The development contrasts less with the existing landscape context and would be a noticeable adverse/beneficial feature
<b>Small</b>	Proposed development would be perceived in the distance or far distance. Full extent of development may be visible or partially screened or at closer distance and substantially screened. Development may contrast with the existing landscape context but would be a visible adverse/ beneficial feature
<b>Negligible</b>	Proposed development would be perceived in the far distance (3km +) or partially or substantially or completely screened. Development may contrast with the existing landscape context but would be a negligible or barely discernible adverse/ beneficial feature

Overall Assessment of Landscape and Visual Effects Criteria Significance

Diagonal line across graph represents line at which impacts become significant. Darker tone shows significant adverse or beneficial impact with a gradation in impact down to negligible below.

**Table 8 Predicted Level (i.e., Weight) of Impacts of Different Type and Magnitudes Upon Receptors of Different Degrees of Importance or Sensitivity**

Impact Type and Magnitude	Value / Importance of Receptor				
	<i>Inter-national (very high)</i>	<i>National (high)</i>	<i>County (moderate)</i>	<i>Local (Low)</i>	<i>Unvalued (Poor)</i>
<b>High</b> (e.g., large scale, long-term, irreversible)	Major	Major	Moderate	Minor	Negligible
<b>Medium</b>	Major	Moderate	Moderate	Minor	Negligible
<b>Small</b> (e.g., small scale, short term, recoverable impact)	Moderate	Minor	Minor	Negligible	Negligible
<b>Negligible</b> (e.g., small impact on the unlikely to affect the landscape or visual receptor)	Negligible	Negligible	Negligible	Negligible	Negligible

## 2 VISUAL ASSESSMENT OF RESIDENTIAL PROPERTIES

Planning law contains a widely understood principle that individuals (i.e. visual receptors at a single residential property) have no 'right to a view' and that the outlook or view from a private property is a private interest and not therefore protected by the UK planning system.

However, the planning system also recognises situations where the effects on residential visual amenity are considered as a matter of public interest. This matter has been examined at a number of public inquiries where the key determining issue was not the identification of significant effects on views, but whether a Development would have an overbearing effect and/or result in unsatisfactory living conditions, leading to a property being regarded, objectively, as an unattractive (as opposed to a less attractive) place in which to live.

As a consequence, the visual assessment methodology provides for a much more detailed assessment of the closest residential properties. This allows the assessor, and consequently the determining authority, to make a judgement as to whether the residents at these properties would be likely to sustain unsatisfactory living conditions which it would not be in the public interest to create. Reviews of decisions demonstrate that significant changes to the views available from a residential property, and its curtilage, are not the decisive consideration.

By way of further clarification, the methodology for assessing the visual effects on views from residential properties allows for two stages of assessment as follows:

- The first stage is to identify those properties where a significant visual effect on a view from the property is likely to occur.
- The second stage is to consider the residential amenity and whether, in terms of the wider public interest, the visual effects would result in unsatisfactory living conditions, leading to a property being regarded, objectively, as an unattractive (as opposed to a less attractive) place in which to live.

A residential property, for the purposes of environmental impact assessment, should be one that was designed and built/converted for that purpose and currently (at the time of the assessment) remains in a habitable condition, of a safe construction, wind and water tight with appropriate vehicle access, and services (drinking water, sanitation, and power supply). Related buildings such as barns/outbuildings, garage, huts and derelict properties should generally be excluded from the assessment, unless they form part of the curtilage of an existing residence.

The sensitivity of individual residential receptors is assessed as high in each case.

The assessment of residential properties or groups of residential properties in this case has been limited to those properties within 1 km of the proposed solar farm, which appear on the Ordnance Survey 1:25,000 scale map. Whilst most of the properties can be viewed at close range from public roads and footpaths, some of these properties are accessed via private or gated roads and due to these access limitations, they have been assessed from the nearest public road or footpath which may be at greater distance from the property. The assessment, in this instance, should therefore be regarded as a 'best estimate' of the likely visual effects.

The assessment has been further supported by aerial and ground level photography as well as map-based data. The assessment takes account of the likely views from the ground floors of properties and main garden areas, but excludes upper floors and other land that may be connected with the property. Relevant information considered as part of the assessment may include, but is not limited to the following:

- Scale of Development:
  - Number and height of the Development;



- The horizontal extent or AOV of the visible array; and
- Separation distance (closest and furthest buildings).
- Description of Property, as far as this can be ascertained:
  - Orientation and size of property and whether views from the property towards the development would be direct or oblique;
  - Location of principle rooms and main living areas such as living/dining rooms, kitchens and conservatories, as opposed to working areas such as farm buildings and utility areas;
  - Location of principle garden areas which may include patios and seating areas as opposed to less well used areas such as paddocks or garages; and
  - The effects of any screening by landform, vegetation or nearby built development.
- Location and Context:
  - The aspect of the property in terms of the overall use and relationship to the garden areas and surrounding landscape;
  - The principle direction of main views and visual amenity; and
  - The context and nature of any intervening structures e.g. other existing development, farm buildings or forestry.

### 3 VIEWPOINT ANALYSIS

Viewpoint analysis is used to assist the LVIA and is conducted from selected viewpoints within the Study Area. The purpose of this is to assess both the level of visual impact for particular receptors and to help guide the design process and focus the landscape and visual assessment.

A range of viewpoints are examined in detail and analysed to determine whether a significant visual effect would occur. By arranging the viewpoints in order of distance it is possible to define a threshold or outer limit beyond which there would be no further significant effects.

The assessment involves visiting each viewpoint location. The fieldwork is conducted in periods of fine weather and good visibility and also considers seasonally reduced leaf cover.

Viewpoint selection followed good practice guidance and in particular paragraphs 6.18 to 6.20 of GLVIA3. The viewpoints chosen were used to aid the description of effects on both landscape and visual resources.

The selection of viewpoints was made on the basis of the following types of publicly accessible viewpoints, as follows:

- Representative viewpoints (for example, representing views of users of a particular footpath);
- Specific viewpoints (for example, a key view from a specific visitor attraction);
- Illustrative viewpoints (chosen to demonstrate a particular effect/specific issue);
- Any important sequential views, for example, along key transport routes; and
- Any additional viewpoints that have been requested by consultees at Scoping.

For the purposes of the LVIA, all of the viewpoints were taken from publicly accessible land.

Baseline photographic panoramas have been produced for each viewpoint to illustrate the nature of existing views in the direction of the solar panels. A baseline photographic survey

has been undertaken using a digital SLR camera in accordance with current good practice guidance<sup>1</sup>.

The methodology for photography follows GLVA3 and the Landscape Institute's TGN 06/19 Visual Representation of development proposals.

#### 4 ZTV METHODOLOGY

In order to assist with viewpoint selection and to appreciate the potential influence of the development in the wider landscape, preliminary ZTV plans are used. ZTV plans illustrate the area from where it may be theoretically possible to view all, or part, of the Development. The ZTV does not however, take account of the screening effects of buildings, localised landform and vegetation, unless specifically mentioned (see individual figures). As a result, there may be roads, tracks and footpaths in the vicinity of the site and in the wider setting which, although shown as falling within the ZTV, are screened or filtered by banks, walls and vegetation which would otherwise preclude viewing opportunities.

The ZTVs provide a starting point in the assessment process and accordingly tend towards giving a 'worst case' or greatest calculation of the theoretical visibility.

Ordnance Survey Terrain 5 dataset was used as the Digital Terrain Model (DTM) for the Bare Earth ZTV. This DTM is a 5 m by 5 m raster dataset that is representative of the land form across Great Britain.

The ZTV was produced using ArcGIS Pro 2.1 software, and the calculations were based on the proposed infrastructure. The ZTV is created by highlighting areas on the DTM where a potential piece of infrastructure may be visible, based on the DTM. The height value given to the infrastructure was dependent on the flood depth value per field within the solar panels, plus the height of solar panels.

Arcus has developed additional methodology to supplement the "bare earth ZTV" which enables a more accurate representation of viewpoint assessment and a greater understanding of the visual baseline. The ZTV has been refined using the topographic survey of the site, LiDAR and DTM data, and stereo-photography modelling of trees, to enable a better understanding of the likely visual footprint of the Development. This will still represent theoretical visibility and will be considered in line with fieldwork to ground truth the findings of the data.

#### 5 GLOSSARY

**Cumulative Effects** - The additional changes caused by a proposed development when viewed in conjunction with other similar developments or as a combined effect. Cumulative effect may be sequential or combined.<sup>2</sup>

**Landscape Character Areas** - These are single unique areas which are discrete geographical areas of a particular landscape type. Each area has its own individual character and identity though it may share generic characteristics with other types.<sup>3</sup>

**Landscape Character Types** - These are distinct types of landscape that are similar in character. They are generic in that they may occur in different areas in different parts of the country, but where they occur, they share similar combinations of geology, topography, drainage patterns, vegetation, historical land use and settlement patterns'.<sup>3</sup>

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<sup>1</sup> Landscape Institute, 2019, *Technical Guidance Note 06/19 Visual representation of development proposals* [https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstitute-org/2019/09/LI\\_TGN-06-19\\_Visual\\_Representation.pdf](https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstitute-org/2019/09/LI_TGN-06-19_Visual_Representation.pdf)

<sup>2</sup> The Guidelines for Landscape and Visual Impact Assessment, 3<sup>rd</sup> Edition. Landscape Institute with the Institute of Environmental Management and Assessment, 2013

<sup>3</sup> An Approach to Landscape Character Assessment Guidance for England and Scotland, Natural England, 2014

**Landscape Effects** - Effects on the landscape as a resource in its own right.<sup>2</sup>

**Landscape Character** - A distinct and recognisable pattern of elements in the landscape that makes one landscape different from another, rather than better or worse.<sup>3</sup>

**Landscape Quality (Condition)** - A measure of the physical state of the landscape. It may include the extent to which typical character is represented in individual areas, the intactness of the landscape and the condition of the individual elements.<sup>2</sup>

**Landscape Receptor** - Defined aspects of the landscape resource that have the potential to be affected by a proposal.<sup>2</sup>

**Landscape Value** - The relative value that is attached to different landscapes by society. A landscape may be valued by different stakeholders for a whole variety of reasons.<sup>2</sup>

**Magnitude (of Effect)** - A term that combines judgements about the size and scale of the effect, the extent of the area over which it occurs, whether it is reversible or irreversible and whether it is short or long-term, in duration.<sup>2</sup>

**Mitigation** - Measures which are proposed to prevent, reduce and where possible offset any significant adverse effects (or to avoid, reduce and if possible remedy identified effects).<sup>2</sup>

**Sensitivity** - A term applied to specific receptors, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value related to that receptor.<sup>2</sup>

**Significance** A measure of the importance or gravity of the environmental effect, defined by significance criteria specific to the environmental topic.<sup>2</sup>

**Susceptibility** - The ability of a defined landscape or visual receptor to accommodate the specific proposed development without undue negative consequences.<sup>2</sup>

**Time Depth** - Historical layering – the idea of landscape as a ‘palimpsest’, a much written over manuscript.<sup>2</sup>

**Visual Amenity** - The overall pleasantness of the views people enjoy of their surroundings, which provides an attractive visual setting or back-drop for the enjoyment of activities of people living, working, recreating, visiting or travelling through an area.<sup>2</sup>

**Visual Effect** Effects on specific views and on the general visual amenity experienced by people.<sup>2</sup>

**Visual Receptor** Individuals and/ or defined groups of people who have the potential to be affected by a proposals.<sup>2</sup>