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# OAKLANDS SOLAR FARM AND BATTERY ENERGY STORAGE SYSTEM LVIA APPENDIX 7.1 - METHODOLOGY

LAND OFF FIVE MILE LANE | NEAR BONVILSTON | VALE OF GLAMORGAN



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## 1.1 INTRODUCTION

1.1.1 The methodology for this LVIA conforms to the relevant parts of the Guidelines for Landscape and Visual Impact Assessment, Third Edition (Landscape Institute and IEMA, 2013). The assessment focuses on the identification of likely significant landscape and visual effects, including those that are, positive and negative, direct and indirect, long, medium and short term, and reversible and irreversible, as well as cumulative effects.

1.1.2 For the purposes of clarity, the European Landscape Convention (ELC) (2000), the term 'landscape' is defined as:

*“An area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors”.*

1.1.3 The ELC confirms that the landscape should be considered as a resource in its own right. It provides an integrated way of conceptualising our surroundings and is increasingly considered to provide a useful spatial framework for thinking about a wide range of environmental, land use and development issues. The ELC applies to all landscapes; natural, rural, urban and peri-urban areas, including land, inland water and marine areas. It considers land landscapes that might be considered outstanding as well as every day or degraded landscapes.

1.1.4 Additional guidance has also been taken from the following publications:

- *Assessing landscape value outside national designations, Technical Guidance Note 02/21, (Landscape Institute 2021)*
- *Visual Representation of Development Proposals, Landscape Institute Technical Guidance Note 06/19, (Landscape Institute, 2019)*
- *Landscape Character Guidance for England and Scotland, Topic Paper 6 & 9, Techniques for Judging Capacity and Sensitivity & Climate change and natural forces, the consequences for landscape character, SNH/CA, 2004 ;*
- *Landscape Character Assessment: Guidance for England and Scotland (The Countryside Agency and Scottish Natural Heritage, 2002); and*
- *Council of Europe, The European Landscape Convention (2000, ratified 2006) ETS No. 176;*
- *LANDMAP Wales, 2003;*
- *Solar parks: maximising environmental benefits (TIN101) Natural England, 2011;*
- *Planning Guidance for the development of large scale solar ground mounted PV systems, BRE and National Solar Centre, 2013; and*
- *National Solar Centre Biodiversity Guidance for Solar Developments, BRE and National Solar Centre, 2014.*

1.1.5 Additional reference is made to the UK Solar PV Strategy Part 1 (2010) and Part 2 (2014) Department of Energy and Climate Change and Planning practice guidance for

renewable and low carbon energy, Department for Communities and Local Government (2013).

- 1.1.6 Glint and glare, if considered applicable to this application, will be considered outside of this LVIA, within an independent Glint and Glare assessment.

## 1.2 DATA GATHERING METHODOLOGY

### Introduction

- 1.2.1 The LVIA has been conducted across a study area of 5 km with a more detailed study area of 2.5km. The LVIA incorporates a desktop review, field study and modelling of predicted effects through visualisations including photomontages and wire frames. The evaluation of landscape and visual effects are discussed in separate sections. At the outset of the LVIA it is useful to provide a definition of the terms 'landscape effects' and 'visual effects':
- 1.2.2 **Landscape Effects:** These consist of the changes in the fabric, character and quality of the landscape which it is predicted would result from the construction and operation of the proposed Solar Farm, "assessing effects on the landscape as a resource in its own right" (GLVIA 2013). Consideration is given to how the proposal will affect the elements that make up the landscape, the aesthetic and perceptual aspects of the landscape and its distinctive character. The proposed development will have direct and indirect effects on the landscape. Direct effects physically alter landscape elements (directly attributable to the proposed development), whereas indirect effects can affect the landscape character, often away from the site. In order to establish the potential landscape effects the value of the landscape needs consideration.
- 1.2.3 **Visual Effects:** These are the predicted effects on views available from publicly accessible areas and residential dwellings i.e. visual receptors and peoples general visual amenity. Specific effects result from changing the constituent elements within an existing view. This may be caused by the construction of a feature, or the obstruction, or modification of an existing view. The visual assessment also addresses the closer related concept of visual amenity (when required). The requirement has the potential to be undermined if the proposed development would be of such a scale, design or proximity that it would represent an unpleasantly overwhelming and unavoidable presence in main views from a residential property or its garden as to turn an otherwise satisfactory residential property into one that would be unsatisfactory place to live, "assessing effects on specific views and on the general visual amenity experienced by people" (GLVIA 2013).
- 1.2.4 The significance of any landscape / visual effects is a product of the magnitude of any change and the sensitivity of the receptor, which may include the landscape, landscape receptors or people either at home, using the local roads, cycle ways and public rights of way (PROW) network, visiting viewpoints, tourist attractions, and undertaking recreational activities.
- 1.2.5 The following section outlines the stages in the assessment of the landscape and visual effects as a result of the proposed development.

### Potential Effects

- 1.2.6 The following table identifies potential landscape and visual effects of a proposed Solar

Farm development.

**Table 1.1: Potential Effects**

Phase	Specific Element	Potential Effects	Potential Sensitive Receptors
Construction	Construction plant, temporary construction compound, vehicle movements	Temporary impacts on landscape fabric. Temporary impacts on visual amenity	Landscape character types  Designated landscapes
Operation	Presence of arrays, fencing, tracks, permanent site compound and substation	Long term but reversible impacts on landscape fabric. Long term but reversible impacts on visual amenity Cumulative impacts with other solar farms	Historic gardens and designed landscapes  Visual receptors (people) including: Residents, visitors, road users, walkers, cyclists.
Decommissioning	Construction plant, temporary compound, vehicle movements	Temporary impacts on landscape fabric. Temporary impacts on visual amenity	

### 1.3 ASSESSING LANDSCAPE EFFECTS

1.3.1 The potential landscape effects, occurring during the construction and operation period, may therefore include but are not restricted to, the following:

- Changes to landscape elements;
- Changes to landscape qualities;
- Changes to landscape character;
- Effects upon nationally and locally designated landscapes (eg Registered Parks and Gardens, Country Parks; and,
- Cumulative landscape effects.

#### Establishing the value of the landscape

1.3.2 The landscape value of a site in its context needs to be assessed as part of carrying out a Landscape and Visual Impact Assessment (LVIA). The current guidance for LVIA/LVA is the third edition of Guidelines for Landscape and Visual Impact Assessment (GLVIA3; LI and IEMA, 2013) which states that the value of a landscape

should be assessed as one of two components of landscape sensitivity. Landscape value is the 'inherent' component, which is independent of the development proposal, while the other component, susceptibility, is development specific.

- 1.3.3 The National Planning Policy Framework references 'valued landscapes' at part a) of Para 174 of NPPF 2019 (July Edition) where it states:

*"Planning policies and decisions should contribute to and enhance the natural and local environment by:*

*a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);"*

Although it does not define what a 'valued landscape' is or the factors which would contribute towards a landscape being valued.

- 1.3.4 GLVIA3 recognises that landscape value is not always signified by designation: 'the fact that an area of landscape is not designated either nationally or locally does not mean that it does not have any value' (paragraph 5.26). GLVIA3 recommends that when undertaking a LVIA/LVA in an undesignated area, landscape value should be determined through a review of existing assessments, policies, strategies and guidelines and, where appropriate, by new survey and analysis (paragraphs 5.27 and 5.28). It is recommended that the process for identifying landscape value outside nationally designated areas is based upon a structured and transparent assessment process including community-based evidence where practical to do so.

- 1.3.5 Reference is also made to recent new guidance the Landscape Institute's Technical Guidance Note 02/21 on assessing landscape value outside of national designations which provides a list of value factors and indicators used to determine the value of landscapes. The factors are broadly similar to those taken from Box 5.1 on page 84 of GLVIA3 with the following changes:

- 'Conservation interests' is separated into natural heritage and cultural heritage factors (reflecting the approach in Nature Scot's guidance on local landscape designations and Natural England's
- Guidance for assessing landscapes for designation as National Park or Area of Outstanding Natural Beauty in England);
- The term 'landscape condition' is used in place of 'landscape quality (condition)';
- 'Rarity' and 'representativeness' are combined into a newly-named factor 'distinctiveness'; and
- A new factor, 'function' is included which addresses the value attached to landscapes which perform a clearly identifiable and valuable function.

- 1.3.6 The value of the landscape potentially affected by a proposed development is evaluated when establishing the landscape baseline and is judged as being High, Moderate or Low. This is in accordance with paragraph 5.44 of GLVIA3. Landscape value is also referred to in the following section as part of the method for 'Assessing the Level of Landscape Effects'.



1.3.7 Factors that can help (but are not limited to) in the identification of valued landscapes are listed in **Table 1.2**.

**Table 1.2: Range of Landscape Value Factors and Susceptibility Criteria**

Factor	Definition	Examples of Indicators of landscape value
<b>Natural heritage</b>	Landscape with clear evidence of ecological, geological, geomorphological or physiographic interest which contribute positively to the landscape.	<p>Presence of wildlife and habitats of ecological interest that contribute to sense of place.</p> <p>Extent and survival of semi-natural habitat that is characteristic of the landscape type.</p> <p>Presence of distinctive geological, geomorphological or pedological features</p> <p>Landscape which contains valued natural capital assets that contribute to ecosystem services, for example distinctive ecological communities and habitats that form the basis of ecological networks.</p> <p>Landscape which makes an identified contribution to a nature recovery/ green infrastructure network</p>
<b>Cultural heritage</b>	Landscape with clear evidence of archaeological, historical or cultural interest which contributes positively to the landscape	<p>Presence of historic landmark structures or designed landscape elements (e.g., follies, monuments, avenues, tree roundels)</p> <p>Presence of historic parks and gardens, and designed landscapes Landscape which contributes to the significance of heritage assets, for example forming the setting of heritage assets (especially if identified in specialist studies)</p> <p>Landscape which offers a dimension of time depth. This includes natural time depth, e.g., presence of features such as glaciers and peat bogs and cultural time depth e.g., presence of relic farmsteads, ruins, historic field patterns, historic rights of way (e.g., drove roads, salt ways, tracks associated with past industrial activity)</p>

Factor	Definition	Examples of Indicators of landscape value
<b>Landscape Condition</b>	Landscape which is in a good physical state both regarding individual elements and overall landscape structure	<p>Good physical condition/ intactness of individual landscape elements (e.g., walls, parkland, trees)</p> <p>Good health of elements such as good water quality, good soil health</p> <p>Strong landscape structure (e.g., intact historic field patterns)</p> <p>Absence of detracting/ incongruous features (or features are present but have little influence)</p>
<b>Associations</b>	Landscape which is connected with notable people, events and the arts	<p>Associations with well-known literature, poetry, art, TV/film and music that contribute to perceptions of the landscape.</p> <p>Associations with science or other technical achievements</p> <p>Links to a notable historical event</p> <p>Associations with a famous person or people</p>
<b>Distinctiveness</b>	Landscape that has a strong sense of identity	<p>Landscape character that has a strong sense of place (showing strength of expression of landscape characteristics)</p> <p>Presence of distinctive features which are identified as being characteristic of a particular place.</p> <p>Presence of rare or unusual features, especially those that help to confer a strong sense of place or identity.</p> <p>Landscape which makes an important contribution to the character or identity of a settlement</p> <p>Settlement gateways/approaches which provides a clear sense of arrival and contribute to the character of the settlement (may be ancient/historic)</p>

Factor	Definition	Examples of Indicators of landscape value
<b>Recreational</b>	Landscape offering recreational opportunities where experience of landscape is important.	<p>Presence of open access land, common land and public rights of way (particularly National Trails, long distance trails, Coastal Paths and Core Paths) where appreciation of landscape is a feature.</p> <p>Areas with good accessibility that provide opportunities for outdoor recreation and spiritual experience/ inspiration.</p> <p>Presence of town and village greens</p> <p>Other physical evidence of recreational use where experience of landscape is important.</p> <p>Landscape that forms part of a view that is important to the enjoyment of a recreational activity</p>
<b>Perceptual (Scenic)</b>	Landscape that appeals to the senses, primarily the visual sense	<p>Distinctive features, or distinctive combinations of features, such as dramatic or striking landform or harmonious combinations of land cover.</p> <p>Strong aesthetic qualities such as scale, form, colour and texture Presence of natural lines in the landscape (e.g., natural ridgelines, woodland edges, river corridors, coastal edges)</p> <p>Visual diversity or contrasts which contributes to the appreciation of the landscape.</p> <p>Memorable/ distinctive views and landmarks, or landscape which contributes to distinctive views and landmarks.</p>
<b>Perceptual (Wildness and tranquillity)</b>	Landscape with a strong perceptual value notably wildness, tranquillity and/or dark skies	<p>High levels of tranquillity or perceptions of tranquillity, including perceived links to nature, dark skies, presence of wildlife/ birdsong and relative peace and quiet.</p> <p>Presence of wild land and perceptions of relative wildness (resulting from a high degree of perceived naturalness, rugged or otherwise challenging terrain, remoteness from public mechanised access and lack of modern artefacts)</p> <p>Sense of remoteness, seclusion or openness</p> <p>Dark night skies</p>

Factor	Definition	Examples of Indicators of landscape value
		A general absence of intrusive or inharmonious development, land uses, transport and lighting
<b>Functional</b>	Landscape which performs a clearly identifiable and valuable function, particularly in the healthy functioning of the landscape	<p>Landscapes and landscape elements that contribute to the healthy functioning of the landscape, e.g., natural hydrological systems/ floodplains, areas of undisturbed and healthy soils, areas that form carbon sinks such as peat bogs, woodlands and oceans, areas of diverse landcover (benefits pest regulation), pollinator-rich habitats such as wildflower meadows.</p> <p>Areas that form an important part of a multifunctional Green Infrastructure network</p> <p>Landscapes and landscape elements that have strong physical or functional links with an adjacent national landscape designation or are important to the appreciation of the designated landscape and its special qualities.</p>

1.3.8 Following consideration of the value indicators, landscape value is classified as either, High, Medium or Low, based on the criteria set out in **Table 1.3**.

**Table 1.3: Landscape Value Classification**

Value	Sub Value	Typical criteria, scale and examples.
High	Exceptional	Very high importance and rarity, no or limited potential for substitution. International, national importance. World Heritage Site, National Park, AONB.
	High	<p>High importance and rarity, limited potential for substitution. National importance. National Park, AONB, AGLV. Important to the setting of a registered historic park and garden.</p> <p>Presents locally important landscape characteristics or scenic value; or</p> <p>Presents important public amenity value by way of views, access, biodiversity, cultural or opportunity for quiet enjoyment (relative tranquillity).</p>

Medium	Medium	<p>Medium importance and rarity, limited potential for substitution. Regional and local scale. Undesignated but value expressed through nonofficial publications or demonstrable use. Lies wholly or partially within a designated landscape but where localised character and scenic value is less distinctive or has become degraded. Lies adjacent to a designed landscape. Presents locally distinctive landscape characteristics with some scenic interest.</p> <p>Presents some public amenity value by way of views, access, biodiversity, cultural or opportunity for quiet enjoyment (relative tranquillity).</p>
Low	Low	<p>Low importance and rarity at local scale. Areas identified as having some redeeming feature(s) and possibly identified for improvement. Does not lie within or adjacent to a designated landscape. Does not present locally important / distinctive landscape characteristics or scenic interest / value. Does not present important public amenity value by way of views, access, biodiversity, cultural or opportunity for quiet enjoyment (relative tranquillity).</p>
	Very Low	<p>Low importance and rarity at local scale. Areas identified for recovery, restoration and enhancement.</p>

#### Assessing the significance of landscape effects

- 1.3.9 Landscape effects, for each identified landscape receptor, are established through combination of (i) the sensitivity of the landscape receptor and (ii) the magnitude of effect.

#### Landscape Sensitivity

- 1.3.10 Landscape receptors are assessed in terms of their sensitivity combining judgements of their susceptibility to the type of change or development proposed and the value attached to the landscape. Sensitivity is specific to the particular project or development that is being proposed and to the location in question.

#### Susceptibility to change

- 1.3.11 Susceptibility in considering landscape sensitivity considers the ability of a defined landscape (or visual receptor) to accommodate the specific proposed development without undue negative consequences. This means:

*“the ability of the landscape receptor (whether it be the overall character or quality / condition of a particular landscape type or area, or an individual element and/or feature, or a particular aesthetic and perceptual aspect) to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies”. (GLVIA 2013).*

- 1.3.12 Susceptibility to change should not be recorded as part of the landscape baseline but

it should be considered as part of the assessment of effects.

1.3.13 Susceptibility to change is guided by the following criteria:

- High – Undue consequences are to be expected, little scope to accommodate change without effect upon overall integrity
- Medium – Undue consequences may be possible, receptor has some capacity to accept change
- Low – Undue consequences are unlikely, receptor can accommodate the proposed type of change, with little/no effect upon its overall integrity

1.3.14 Landscape capacity, existing studies, and specific capacity relating to the proposed development is considered at the baseline stage. Consideration is given to the capacity of a particular type or area of landscape to accommodate the proposed development without unacceptable effects on its character. Common factors relating to higher capacity for renewable development may include large to medium landscape scale and topography, presence and pattern of woodland cover, patterns of landscape change, and the nature of views/visibility.

#### Value of the Landscape Receptor

1.3.15 The value of the landscape receptors is established during the baseline covering:

- The value of the landscape character types / areas or landscape receptor that may be affected, based on a review of designations at both a national and local levels, and, where there are no designations, judgments based on criteria that can be used to establish landscape value;
- The value of individual contributors to landscape character, especially the key characteristics, which may include individual elements of the landscape, particular landscape features, notable aesthetic, perceptual or experiential qualities, and combinations of these contributors.

1.3.16 There can be complex relationships between the value attached to landscape receptors and their susceptibility to change. This is especially important when considering change within or close to designated landscapes. For example:

- An internationally, nationally or locally valued landscape does not automatically, or by definition, have high susceptibility to all types of change. It is possible to have a low susceptibility to change resulting from a particular type of development, by virtue of the characteristics of the landscape and nature of the proposal.
- The particular type of change or development proposed may not compromise the specific basis for the value attached to the landscape.

1.3.17 The evaluation of landscape sensitivity is described in the following table.

**Table 1.4: Landscape Sensitivity**

Landscape Sensitivity Categories
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High	<p>Landscape character, elements, and associated land uses where through consideration of the landscape resource and value they would be unable to accommodate change of the type proposed. Generally, this would be:</p> <ul style="list-style-type: none"><li>• High value landscapes, protected at an international or national level (World Heritage Site/Areas of Outstanding Natural Beauty). However, aspects which underpin such value may also be present outside designated areas, especially at a local scale.</li><li>• Areas of special recognised value through use, perception or historic and cultural associations.</li><li>• Likely to contain features that are rare and could not be replaced.</li><li>• Landscape elements with a high susceptibility to change, unable to accommodate proposed development without undue consequences.</li></ul>
Medium	<p>Landscape character, elements, and associated land uses which by nature of their character would be able to partly accommodate change of the type proposed. Generally, this would be:</p> <ul style="list-style-type: none"><li>• Medium value landscape protected at a local level (Area of Important Landscape Value) or at a non-designated local level.</li><li>• Where there is evidence of local value and use (non-statutory local publications) through use, perception or historic / cultural associations.</li><li>• Comprised of commonplace elements and features creating generally unremarkable character, but some sense of place.</li><li>• Likely to contain some features and elements that could not be replaced.</li><li>• Landscape elements with a medium susceptibility to change, partly able to accommodate the proposed development without undue consequences.</li></ul>

Low	<p>Landscape character, elements, and associated land uses which by nature of their character would be able to accommodate change of the type proposed. Generally, this would be:</p> <ul style="list-style-type: none"><li>• Lower value and non-designated landscapes.</li><li>• Comprised of features and elements that are discordant, derelict or in decline, indistinct character with little or no sense of place.</li><li>• Containing few, if any, features of value through use, perception or historic / cultural associations.</li><li>• Likely to contain few, if any, features or elements that could not be replaced.</li><li>• Landscape elements with a low susceptibility to change, able to accommodate the proposed development without undue consequences.</li></ul>
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#### Magnitude of Landscape Effect

- 1.3.18 Effects of development upon landscape receptors need to be assessed in terms of its scale of effect, the geographical extent of the area influenced, and its duration and reversibility.

#### Scale of effect

- 1.3.19 Judgements on the scale of change in the landscape that is likely to be experienced as a result of each effect. The effect of both loss or addition of new features may be judged as major, moderate, minor or none, taking account of:

- The extent of landscape elements that will be lost, proportion of total extents and contribution of elements to the landscape character;
- The degree to which aesthetic or perceptual aspects of the landscape are altered either by removal of existing components of the landscape or addition of new ones; and
- Whether the effect changes the key characteristics of the landscape, which are critical to its distinctive character.

- 1.3.20 The scale of effect is considered with regard to the following classifications:

- Major – Total loss or large scale change of existing landscape elements, features, qualities, or characteristics
- Moderate – Partial change of existing landscape elements, features, qualities, or characteristics.
- Minor – small change of existing landscape elements, features, qualities, or



characteristics.

- None – Negligible (if any) change to existing landscape elements, features, qualities or characteristics.

### Geographical Extent

1.3.21 This is distinct from the size / scale of effect, there may, for example, be moderate loss of landscape elements over a large geographical area, or a major addition affecting a very localised area. In general, effects may have an influence at the following scales, although this varies due to the nature of the project, and all are not always relevant on every occasion:

- At the site level, within the development site itself;
- At the level of the immediate setting of the site;
- At the scale of the landscape type or character area within which the proposal lies;
- On a larger scale, influencing several landscape types or character areas.

### Duration of Landscape Effect

1.3.22 Duration can be judged on the scale such as short term, medium term or long term, where, for example, short term might be zero to five years, medium term five to ten years and long term ten to twenty-five years. There is no fixed rule on this definition however (GLVIA 2013). In the case of solar farms, these are judged temporary structures, but within a planning life time of generally twenty five to thirty years. Due to the scale of the development landscape effects are likely to be very similar from year one through to year twenty five. When duration is included in an assessment of effects, the assumptions behind the judgement must be made clear.

1.3.23 The duration of effect is considered with regard to the following indicative classifications:

- Permanent – The change is intended to be permanent without the intention for it to be reversed.
- Long term – The change is expected to have an effect upon the receptor for 15 – 30 years, thereafter it will be fully reversed or mitigated such that the baseline conditions are restored.
- Medium term – The change is expected to have effect upon the receptor for a period of 5 – 15 years, thereafter, will be fully reversed or fully mitigated such that the baseline conditions are restored. Considered a limited duration.
- Short term – The change is expected to have an effect upon the receptor for a period of up to 5 years. Thereafter, will be fully reversed or fully mitigated such that the baseline conditions are restored. Considered as temporary in nature.

### Reversibility of effect

1.3.24 Reversibility is a judgement about the prospects and the practicality of the particular effect being reversed in, for example, a generation. Some forms of development, like

housing, can be considered permanent however other developments such as solar farms and wind turbines are considered to be reversible since they have a limited and defined life span (c.25 years) and they can be removed and land reinstated.

1.3.25 The reversibility of effect is considered with regard to the following classifications:

- Reversible – change can be wholly or largely reversed, e.g. the removal of a wind turbine.
- Partially reversible – Change is partially reversible, e.g. following the restoration of a landfill or quarry to something similar to the landscape baseline.
- Irreversible – cannot be realistically reversed, permanent feature, e.g. residential housing estate.

### Landscape Magnitude

1.3.26 Consideration of the effect of the development upon the landscape resource is assessed through professional judgment, based on (i) the sensitivity of receptors and (ii) the magnitude of the predicted effects. (GLVIA 2013).

1.3.27 The evaluation of landscape magnitude is described in the following table and the level of an effect is determined by the consideration of sensitivity and magnitude of change.

**Table 1.5: Landscape Magnitude**

Magnitude of Change Categories	
High	Total loss or substantial alteration to key landscape elements/features/characteristics of the baseline or introduction of uncharacteristic elements which would give rise to a fresh characterising effect.
Medium	Partial loss or moderate alteration to one or more key landscape elements/features/characteristics of the baseline and/or introduction of elements that may be prominent but not necessarily substantially uncharacteristic with the attributes of the receiving landscape, but which could co-characterise parts of the landscape.
Low	Minor loss or alteration to one or more key landscape elements/features/characteristics of the baseline and/or introduction of elements that may not be uncharacteristic with the surrounding landscape or may not lead to a characterising or co-characterising effect.
Negligible	Very minor loss or alteration to one or more key landscape elements/features/characteristics of the baseline and/or the

	introduction of elements that are not uncharacteristic of the surrounding landscape. Change would be barely distinguishable approximating to no change.
No Change	No noticeable loss, damage or alteration to character or features or elements.

### Significance of Landscape Effect

- 1.3.28 The significance of effect is determined by consideration of landscape sensitivity and the magnitude of change.
- 1.3.29 In accordance with paragraphs 3.34 and 3.35 of GLVIA 3rd Edition it is acknowledged that the historic use of a matrix, a formulaic approach, led to the same weighting of significance levels which were not always appropriate. The following criteria are therefore provided to assist in determining the level of significance. The table applies typical criteria to each level of effect however it should be noted that different scenarios of landscape value, sensitivity, susceptibility to change, scale of effect, geographical extent, reversibility of effects could apply to influence significance as discussed in the assessment. The criteria are typical examples, intermediate levels (e.g. Moderate - Minor) may apply and all effects are clearly explained.

**Table 1.6: Typical Criteria for Determining the Overall Level of Landscape Effects**

Significance of Landscape Effect	Typical Criteria
Severe	<p>The proposal would:</p> <ul style="list-style-type: none"> <li>• Be at complete variance with the character (landform, scale, and pattern) of the landscape, both locally and at a wider scale.</li> <li>• Permanently degrade, diminish or destroy the integrity of valued characteristic features, elements and/or their setting.</li> <li>• Cause a high value / high susceptible to change landscape to be permanently changed.</li> <li>• Cause a sense of place to be lost.</li> </ul> <p><i>Indicates an effect that is very important in the planning decision making process.</i></p>
Major	<p>The proposal would:</p> <ul style="list-style-type: none"> <li>• Be at considerable variance with the character (landform, scale, and pattern) of the landscape.</li> <li>• Degrade or diminish the integrity of valued characteristic features, elements and /or their setting.</li> </ul>

	<ul style="list-style-type: none"> <li>• Cause a high value / high susceptible to change landscape to be markedly changed.</li> <li>• Large effect within the context of the wider area.</li> <li>• Cannot be fully mitigated and may cumulatively amount to a 'significant' effect.</li> <li>• Damage a sense of place.</li> </ul> <p><i>Indicates an effect that is, in itself, material in the planning decision making process.</i></p>
Moderate	<p>The proposal would:</p> <ul style="list-style-type: none"> <li>• Conflict with the character (including quality and value) of the landscape.</li> <li>• Have an adverse impact on characteristic features or elements.</li> <li>• Cause a medium value / medium susceptible to change landscape to be markedly changed.</li> <li>• Noticeable effect within the context of the wider area.</li> <li>• Diminish a sense of place.</li> </ul> <p><i>Indicates a noticeable effect that is not, in itself, material in the decision making process.</i></p>
Minor	<p>The proposal would:</p> <ul style="list-style-type: none"> <li>• Not quite fit into the landform and scale of the landscape.</li> <li>• Affect an area of recognised landscape character of medium to low value / susceptibility to change.</li> <li>• Limited effect within the local context.</li> <li>• Affect an area of undistinctive sense of place.</li> </ul> <p><i>Indicates that effect that is trivial in the planning decision making process.</i></p>
Neutral	<p>The proposal would:</p> <ul style="list-style-type: none"> <li>• Complement the scale, landform and pattern of the landscape.</li> <li>• Maintain / un-affect existing landscape policy.</li> <li>• Result in a degree of change so small as to have little or no effect upon landscape receptors of low sensitivity.</li> </ul> <p><i>Indicates an effect that is akin to no change and is thus not relevant to the planning decision making process.</i></p>

1.3.30 For this assessment, significant landscape effects resulting from the proposed

development would be those effects that result in a '**Severe**' or a '**Major**' effect and any exceptions would be clearly explained. There may, for example, be exceptions in the case of lower magnitudes of change affecting receptors of higher landscape and or visual sensitivity leading to a Major effect. Significant effects are not necessarily adverse effects or unacceptable and, often, effects may be of a temporary nature (e.g. in the construction phases) and / or reversible through the decommissioning of the development.

- 1.3.31 Where intermediate ratings are given, e.g. Moderate-Minor, this indicates an effect that is both less than Moderate and more than Minor, rather than one which varies across the range. In such cases the higher range is always given first but this does not mean the impact is closer to that higher rating, but done to facilitate the identification of effects within tables. A Major-Moderate effect can be either 'significant' or 'not significant' and dependent upon locally specific factors which will be clearly explained.
- 1.3.32 The conclusion that some effects are 'significant' must not be taken to imply that the development should warrant refusal. As with many aspects of landscape and visual assessment, the level of the effect also needs to be qualified with respect to the scale over which it is felt and the type or nature of the effect. An effect may be locally significant, or significant with respect to a small number of receptors, but not significant when judged in a wider context, considered with other potential effects and benefits.
- 1.3.33 A final statement summarising the significant effects will be provided distinguishing between significant effects that are likely to influence the eventual decision and those that may be of a lesser concern.

#### Scale of the Development

- 1.3.34 It is also worth noting that renewables development is in a different category to other forms of development such as mineral extraction or housing development. Generally solar farm development will have a large development footprint, and entails the addition of numerous standard sized arrays following the topography of the landscape, usually without removing other physical elements of the landscape, although the site area may be large. Solar development also includes aspects of visual permeability, and reversibility, although generally visual effects are most likely to form the greater part of the assessed effects.

#### Nature of Landscape Effect

- 1.3.35 The effect of the development on each identified landscape receptor is classified according to its ability to accommodate the consequent effect of the construction, operation and de-commissioning of the proposed development. This LVIA does not state explicitly whether the effects of the development on landscape and visual amenity is adverse, neutral or beneficial, however it is acknowledged the GLVIA 2014 states that professional opinion should be applied, and a positive or negative judgement applied (Para 5.37 and 6.29).
- 1.3.36 It is commonly accepted that the nature (or valency) of effects of a development are subjective based upon the attitude of the individual and public opinion should also be considered. If one regards the development as industrial features then it is understandable to perceive their influence as adverse. Likewise, those who worry about climate change may welcome renewables development as a physical

expression of action being taken. All responses are equally valid and will affect the perceptual aspects of landscape character. In examining landscape effects, it is not realistic to ignore public opinion (nor the likelihood that professionally qualified landscape architects may have differing positions).

- 1.3.37 In accordance with GLVIA a precautionary approach is taken so although the nature of effects is not stated within the assessment, effects would be negative unless stated otherwise. The precautionary approach of negative effects should be considered with the caveat that the valency of effect must always be considered by the decision makers, the approach should not be concluded to be the final judgement and it should be acknowledged that many people would see the development as either a positive or neutral addition.

## 1.4 ASSESSING VISUAL EFFECTS

- 1.4.1 The assessment of visual effects deals with the effects of change and development on the views available to people and their visual amenity. Consideration is given to assessing how the surroundings of individuals or groups of people may be specifically affected by changes in the content and character of views as a result of the change or loss of existing elements of the landscape and/or introduction of new elements.

- 1.4.2 The visual effects are identified for different receptors (people) who will experience the view; at their places of residence, during recreational activities, at work, or when travelling through the area. The visual effects may include the following:

- Visual obstruction: Physical obstruction or blocking of a view, only likely to occur close to the development or within the development site boundary;
- Visual effect: a change to an existing view, views or wider visual amenity as a result of development or the loss of particular landscape elements or features already present in the view;
- Visual amenity: The overall visual amenity of an area may be affected to the extent that the visual appearance of a particular visual setting, or 'sense of place' of a particular location, such as a settlement or individual property, could be altered by a development. Effects on visual amenity of key locations are considered in the context of landscape change and may also be either negative or positive; and
- Cumulative visual effects: the cumulative or incremental visibility of similar types of development may combine to have a cumulative visual effect.

## 1.5 SCOPE OF WORKS

### Zone of Theoretical Visibility

- 1.5.1 In order to assist with viewpoint selection and to appreciate the potential influence of the development in the wider landscape and visual receptors, Zone of Theoretical Visibility (ZTV) plans are used. ZTV plans illustrate the areas from where it may be theoretically possible to view all or part of the proposed development. The ZTV does not, however, take account of the screening effects of buildings, localised landform and vegetation. As a result, there may be receptors in the vicinity of the site and in the wider setting which, although shown as falling within the ZTV, are screened or filtered which precludes viewing opportunities.

- 1.5.2 The ZTVs provide a starting point in the assessment process and accordingly tend towards giving a 'worst case' or greatest calculation of the likely visibility.
- 1.5.3 The ZTVs are calculated using Resoft© software, through the combination of a digital terrain model (DTM) of the landscape, derived from the Ordnance Survey 'Terrain 5' 5m DTM data and a computer model of the development (in this case, a series of representative height points for the top of a solar panel located within representative and the most elevated parts of a site). In calculating inter visibility, the software incorporates earth curvature and the effects of refraction through the atmosphere. The resulting ZTV map is overlaid on OS mapping at an appropriate scale.

#### Viewpoint Selection

- 1.5.4 The viewpoints are selected on the basis that they would provide views of the proposed development from a variety of directions, a range of distances and from a variety of receptor types (residential, recreational receptors and transportation routes) thus are representative of the varying image of the development in the landscape.
- 1.5.5 It is important to note that the viewpoints relate to the specific location that they are taken from only. For example a viewpoint within or on the edge of a settlement should not be considered representative of the whole settlement. Viewpoints are selected in advance of the assessment and (where possible) agreed with the determining authority as being potentially sensitive receptor locations and/or likely places where the development would be visible. The selected viewpoints should illustrate the range of visibility and scale of the development within the study area from different receptors. The viewpoint assessment is undertaken within the visual effects section but as a separate standalone sub section. The assessment of the viewpoints is supported through the production of photomontages and wireframes.

## 1.6 ASSESSING THE SIGNIFICANCE OF VISUAL EFFECTS

- 1.6.1 Visual effects, for each identified visual receptor, are established through combination of (i) the sensitivity of the visual receptor and (ii) the magnitude of visual effect.

#### Visual Receptor Sensitivity

- 1.6.2 The sensitivity of visual receptors (people) is assessed in terms of their susceptibility to the type of change or development proposed and the value attached to the particular views. Sensitivity is specific to the particular project or development that is being proposed and to the location and view in question.

#### Susceptibility to change

- 1.6.3 The susceptibility of different visual receptors to changes in views and visual amenity is mainly a function of :
- The occupation or activity of people experiencing the view at particular locations; and
  - The extent to which their attention or interest may therefore be focussed on the views and the visual amenity they experience at particular locations.
- 1.6.4 The visual receptors most susceptible to change are generally likely to include:
- Residents at home;

- People, whether residents or visitors, who are engaged in outdoor recreation, including use of public rights of way, whose attention or interest is likely to be focused on the landscape and particular views;
  - Visitors to heritage assets, or to other attractions, whose views of the surroundings are an important contributor to the experience; and
  - Communities where views contribute to the landscape setting enjoyed by residents in the area.
- 1.6.5 Travellers on road, rail or other transport routes fall into an intermediate category of moderate susceptibility to change. Where travel involves recognised scenic routes, awareness of views is likely to be particularly high.
- 1.6.6 The visual receptors likely to be least sensitive to change include:
- People engaged in outdoor sport or recreation which does not involve or depend upon appreciation of views of the landscape; and
  - People at their place of work whose attention may be focused on their work or activity, not on their surroundings, and where the setting is not important to the quality of working life (although to be judged on case by case basis as there may on occasion be cases where views are important to the setting and quality of working life).
- 1.6.7 The division in levels of susceptibility to change is a gradual one; each project should consider the nature of the groups of people who will be affected and the extent to which their attention is likely to be focused on views and visual amenity. The susceptibility of visual receptors to change is recorded as high, medium or low. (GLVIA 2013).

**Value attached to views**

- 1.6.8 When considering the susceptibility of visual receptors to change additional judgements should be made about the value attached to the views experienced, this should take account of:
- Recognition of the value attached to particular views, for example in relation to designed landscapes, or through planning designations;
  - Indicators of the value attached to views by visitors, for example through appearances in guidebooks, tourist maps or through the provision of facilities for their enjoyment (e.g. parking / viewing areas, interpretation material and references in literature / art. (GLVIA 2013)
- 1.6.9 The evaluation of visual sensitivity is described in the following table:

**Table 1.6: Visual Sensitivity**

Definition of Visual Receptor Sensitivity (Susceptibility to change) Categories for this VIA	
High	Residents. Users of outdoor recreational facilities including footpaths, cycle ways and recreational (scenic) road users.



	People experiencing views from important landscape features of physical, cultural or historic interest, beauty spots and picnic areas.
Medium	Road users and travellers on trains experiencing views from transport routes. People engaged in outdoor sport that involves an appreciation of the landscape. Schools and other institutional buildings, and their outdoor areas.
Low	Workers, users of facilities and commercial buildings (indoors) experiencing views from buildings, where setting is not important to the quality of working life. People engaged in outdoor sport / recreation that does not involve / depend upon an appreciation of the landscape.

#### Magnitude of Visual Effects

1.6.10 Effects of development upon landscape receptors need to be assessed in terms of its scale of effect, the geographical extent of the area influenced, and its duration and reversibility.

#### Scale of effect

1.6.11 Judging the magnitude of the visual effects identified needs to take account of:

- The scale of the change in view with respect to the loss or addition of features in the view and changes in its composition, including the proportion of the view occupied by the development;
- The degree of contrast or integration of any new features or changes in the landscape with the existing or remaining landscape elements and characteristics in terms of form, scale, mass, line, height, colour and texture;
- The nature of the view of the proposed development, in terms of the relative amount of time over which it will be experienced and whether views will be full, partial or glimpses.

#### Geographical extent

1.6.12 The geographical extent of a visual effect will vary with different viewpoints and is likely to reflect:

- the angle of view in relation to the main activity of the receptor;
- the distance of the viewpoint from the proposed development;
- the extent of area over which changes would be visible.

#### Duration and reversibility of visual effects

1.6.13 As with landscape effects these are separate but linked considerations. Similar categories are used, short term, medium term or long term, provided that their meaning

is clearly stated with criteria for the lengths of time encompassed in each case. (GLVIA 2013).

- 1.6.14 The reversibility of effect is considered with regard to the following classifications:
- Reversible – change can be wholly or largely reversed, e.g. the removal of a wind turbine.
  - Partially reversible – Change is partially reversible, e.g. following the restoration of a landfill or quarry to something similar to the landscape baseline.
  - Irreversible – cannot be realistically reversed, permanent feature, e.g. residential housing estate.
- 1.6.15 The duration of effect is considered with regard to the following indicative classifications:
- Permanent – The change is intended to be permanent without the intention for it to be reversed.
  - Long term – The change is expected to have an effect upon the receptor for 15 – 30 years, thereafter it will be fully reversed or mitigated such that the baseline conditions are restored.
  - Medium term – The change is expected to have effect upon the receptor for a period of 5 – 15 years, thereafter, will be fully reversed or fully mitigated such that the baseline conditions are restored. Considered a limited duration.
  - Short term – The change is expected to have an effect upon the receptor for a period of up to 5 years. Thereafter, will be fully reversed or fully mitigated such that the baseline conditions are restored. Considered as temporary in nature.

**Visual Sensitivity and Magnitude**

- 1.6.16 The evaluation of visual sensitivity and magnitude are described in the following table, the level of an effect is determined by the consideration of sensitivity and magnitude of change.

**Table 1.7: Visual Magnitude of Change**

Magnitude of Change	
High	Substantial change, where the proposals would have a defining influence on the view. Change very prominent leading to a substantial obstruction or complete change in character and composition of the baseline existing view.
Medium	Moderate change in view, occurs where the proposals would be clearly noticeable and an important new element in the view. It may involve partial obstruction of existing view or partial change in character and composition of the baseline existing view.

Low	The proposals would be partially visible or visible at sufficient distance to be perceptible and result in limited or minor changes to the view. The character and composition, although altered will be similar to the baseline existing situation.
Negligible	Change would be barely perceptible. The composition and character of the view would be substantially unaltered, approximating to little or no change.

## 1.7 SIGNIFICANCE OF VISUAL EFFECT

1.7.1 The significance of effect is determined by consideration of the visual receptor sensitivity and magnitude of visual change.

1.7.2 In accordance with paragraphs 3.34 and 3.35 of GLVIA 3rd Edition it is acknowledged that the historic use of a matrix, a formulaic approach, led to the same weighting of significance levels which were not always appropriate. The following criteria are therefore provided to assist in determining the level of significance. The table assigns typical criteria to each level however it should be noted that the different scenarios of susceptibility to change, value of the view, sensitivity of the receptor location, size, geographical extent and reversibility of effects could apply to influence significance to give rise to the effects as described in the assessment. The criteria in the following table are provided as typical examples only, intermediate levels (e.g. Moderate- Minor) may apply and all effects will be clearly explained.

**Table 1.8: Typical Criteria for Determining the Overall Level of Visual Effect**

Significance of Visual Effect	Typical Criteria
Severe	<p>The proposal would:</p> <ul style="list-style-type: none"> <li>• Cause the permanent loss of views from a high sensitivity / susceptibility to change receptor and / or experienced by a very large number of people, and;</li> <li>• Constitute a dominant discordant feature in the view, totally out of character with the existing situation.</li> </ul> <p><i>Indicates an effect that is very important in the planning decision making process.</i></p>
Major	<p>The proposal would:</p> <ul style="list-style-type: none"> <li>• Cause a substantial deterioration to a view from a high sensitivity / susceptible to change receptor, and;</li> </ul>

	<ul style="list-style-type: none"> <li>Constitute a major discordant feature in the view.</li> </ul> <p><i>Indicates an effect that is, in itself, material in the planning decision making process.</i></p>
Moderate	<p>The proposal would:</p> <ul style="list-style-type: none"> <li>Cause a noticeable deterioration to a view, but not dominating from a medium sensitivity / susceptible to change receptor,</li> <li>Be experienced by a medium number of people, and;</li> <li>Constitute a moderate discordant feature in the view</li> </ul> <p><i>Indicates a noticeable effect that is not, in itself, material in the decision making process.</i></p>
Minor	<p>The proposal would:</p> <ul style="list-style-type: none"> <li>Cause a barely noticeable deterioration to a view from a low sensitivity / susceptible to change receptor</li> <li>Be experienced by a small number of people, and;</li> <li>Constitute a minor discordant feature in the view</li> </ul> <p><i>Indicates that effect that is trivial in the planning decision making process.</i></p>
Neutral	<p>The proposal would:</p> <ul style="list-style-type: none"> <li>Result in no discernible deterioration (or improvement) to the existing view;</li> <li>Be experienced by a very small number of people, visual receptors would be of low sensitivity to the changes.</li> </ul> <p><i>Indicates an effect that is akin to no change and is thus not relevant to the planning decision making process.</i></p>

1.7.3 For this assessment, significant visual effects resulting from the development would be all those effects that result in a **'Severe'** or a **'Major'** effect and any exceptions would be clearly explained. There may, for example, be exceptions in the case of lower magnitudes of change affecting receptors of higher sensitivity leading to a Major effect. Significant effects are not necessarily adverse effects or unacceptable and, often, effects may be of a temporary nature (e.g. in the construction phases) and / or reversible through the decommissioning of the development.

1.7.4 Where intermediate ratings are given, e.g. Moderate-Minor, this indicates an effect that is both less than Moderate and more than Minor, rather than one which varies across the range. In such cases the higher range is always given first but this does not mean

the impact is closer to that higher rating, but done to facilitate the identification of effects within tables. A Major-Moderate effect can be either significant or not significant and dependent upon locally specific factors which will be clearly explained.

- 1.7.5 A final statement summarising the significant effects will be provided distinguishing between significant effects that are likely to influence the eventual decision and those that may be of a lesser concern.

## 1.8 NATURE OF VISUAL EFFECT

- 1.8.1 The effect of the development on each identified visual receptors is classified according to consequent effect of the construction, operation and de-commissioning of the proposed development. This LVIA does not state explicitly whether the effects of the scheme on landscape and visual amenity is adverse, neutral or beneficial, however it is acknowledged the GLVIA 2014 state that professional opinion should be applied and a positive or negative judgement applied (Para 5.37 and 6.29).

- 1.8.2 It is commonly accepted that the nature (or valency) of effects of a development are subjective based upon the attitude of the individual and public opinion should also be considered. If one regards them as industrial features then it is understandable to perceive their influence as adverse. Likewise, those who worry about climate change may welcome renewable development as a physical expression of action being taken. All responses are equally valid and will affect the perceptual aspects of visual amenity. In examining visual effects, it is not realistic to ignore public opinion (nor the likelihood that professionally qualified landscape architects may have differing positions).

- 1.8.3 In accordance with GLVIA a precautionary approach is taken so although the nature of effects is not stated within the assessment, effects would be negative unless stated otherwise. The precautionary approach of negative effects should be considered with the caveat that the valency of effect must always be considered by the decision makers, the approach should not be concluded to be the final judgement and it should be acknowledged that many people would see the development as either a positive or neutral addition.

- 1.8.4 It should be reiterated that although the LVIA has considered visual effects from a number of viewpoints, including some from residential properties, planning law confers no right of view. Accordingly, a finding that there may be adverse effect upon a view would not be, of itself, capable of justifying a decision to grant or refuse planning permission.

## 1.9 DISTANCES / DIRECTIONS

- 1.9.1 Where distances and directions are given within the assessment, these are distances between the nearest part of the property (including the domestic curtilage) and the nearest area of the development, unless explicitly stated otherwise. Distances given are rounded to the nearest 10m to account for the level of accuracy available in techniques used to measure (usually based on aerial photography within a GIS / Autocad mapping environment).

## 1.10 CUMULATIVE ASSESSMENT

- 1.10.1 Cumulative assessment considers the assessment of the effects of more than one development. The search area from the proposal site (typically of a similar scale to the

study area) is agreed with the planning authority and agreement is reached with the Planning Authority as to whether and how they should be included in the assessment.

- 1.10.2 Operational and consented developments are considered, as well as developments in planning that are deemed sensitive to the proposal, i.e., within the ZTV / close to the site area. Typically, operational and consented developments are treated as being part of the landscape and visual baseline. i.e. it is assumed that consented schemes will be built and theoretically visible.
- 1.10.3 The cumulative assessment examines the same groups of landscape and visual receptors as the assessment for the main scheme, though there can be different viewpoints used in order to better represent the likely range of effects arising from the combination of schemes.
- 1.10.4 The assessment is informed by an analysis of the cumulative schemes ZTVs (if available) and cumulative ZTVs as necessary, showing the extent of visual effects of the schemes in different colours to illustrate where visibility of more than one development is likely to arise. Cumulative schemes are shown on the photomontages, if operational and visible, or as additionally wirelines or photomontages if not visible or under construction.
- 1.10.5 Cumulative effects are defined as *“the additional changes caused by a proposed development in conjunction with other similar developments or as the combined effect of a set of developments, taken together (SNH, 2012:4)”*.

#### Cumulative Landscape Assessment

- 1.10.6 Cumulative landscape effects are described as effects that *“can impact on either the physical fabric or character of the landscape, or any special values attached to it” (SNH, 2012:10)”*.
- 1.10.7 Cumulative landscape effects are likely to include effects:
  - On the fabric of the landscape as a result of removal of or changes in individual elements or features of the landscape and/or the introduction of new elements or features;
  - On the aesthetic aspects of the landscape e.g. scale, sense of enclosure, diversity, pattern, and / or on perceptual or experiential attributes such as a sense of naturalness or tranquillity; and
  - On the overall character of the landscape as a result of changes in the landscape fabric and/or in aesthetic or perceptual aspects, leading to a modification of key characteristics and possible creation of new landscape character if the changes are substantial enough.
- 1.10.8 The magnitude of cumulative change to landscape character is the additional influence the development has on the character and characteristics of the area assuming the other schemes are already present.
- 1.10.9 The magnitude of cumulative change is determined with reference to the following table.

**Table 1.9: Definition of Magnitude of Cumulative Change to Landscape Character**

Magnitude of Cumulative Change	Definition
High	An obvious additional change, in conjunction with other developments, to landscape character.
Medium	Discernible, but not obvious additional change, in conjunction with other developments, to landscape character.
Low	Slight additional change, in conjunction with other developments, to landscape character.
Negligible	Indiscernible additional change, in conjunction with other developments, to landscape character.

1.10.10 The level of significance of cumulative effect is judged in the same way as for the prescribed LVIA methodology.

#### Cumulative Visual Assessment

1.10.11 Cumulative visual effects are defined as effects that can be caused by combined visibility, which “occurs where the observer is able to see two or more developments from one view point” and / or sequential effects which “occur where when the observer has to move to another viewpoint to see different developments” (SNH, 2012:11).

1.10.12 The cumulative visual assessment employs the same methodology described previously, but is applied to the proposed development in combination with other developments (solar farms in this case). The cumulative visual assessment incorporates other developments that have planning permission but are not yet built as well as other proposed developments currently in the planning system, where sufficient information is available i.e. proposals for which a planning application has been submitted. Existing solar farm developments that are already constructed/operational form part of the visual baseline and if visible will be visible in the viewpoints / visual receptors.

1.10.13 The cumulative assessment focuses on the additional effect of the proposal in conjunction with the other identified developments. Three types of cumulative visual effect were considered:

- **Combined Visibility – In combination:** where the receptor would be able to see two or more developments from a viewpoint in combination (where more than one solar farm would be simultaneously visible within the receptor’s arc of vision i.e. up to 90o);
- **Combined Visibility – In succession:** where the receptor is able to see two or more solar farms from one viewpoint but has to move their head through 90-180-360 o to do so; and,

- **Sequential Visibility:** the potential situation where a viewer may gain progressive views of two or more developments along a course of their route. The developments may not be inter-visible at the same time, but could combine to have a cumulative effect on the viewer as they travel through the study area.

1.10.14 The cumulative assessment only considers the effects generated during the operational period. This is because the construction period is comparatively brief and there is no way of knowing which of the identified developments in the study area would be operational or being constructed during the proposed turbine(s) construction period.

1.10.15 There has to be clear visibility of more than one development (of which one is the proposed development) for there to be an additional cumulative effect. Where the proposed development is clearly visible and other developments are not, the effect would be the same as recorded in the LVIA (not a cumulative effect).

1.10.16 The magnitude of cumulative change is determined with reference to the following table.

**Table 1.10: Definition of Magnitude of Cumulative Change to Views**

Magnitude of Cumulative Change	Definition
High	An obvious additional change, in conjunction with other developments, to the view.
Medium	Discernible, but not obvious additional change, in conjunction with other developments, to the view.
Low	Slight additional change, in conjunction with other developments, to the view.
Negligible	Indiscernible additional change, in conjunction with other developments, to the view.

1.10.17 The level of significance of cumulative effect is judged in the same way as for the prescribed LVIA methodology.

## 1.11 PHOTOMONTAGE PRODUCTION

1.11.1 See separate technical methodology (**Appendix 7.4**).



