



**AQUIND Limited**

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## **APPENDIX 15.1**

Detailed Methodology



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## APPENDIX 15.1 DETAILED METHODOLOGY

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### 1.1 GUIDANCE

- 1.1.1.1 The assessment methodology follows the 'Guidelines for Landscape and Visual Impact Assessment' Third Edition (GLVIA3)<sup>1</sup>. As recommended by GLVIA3, this is not a generic LVIA methodology, but has been tailored to be proportionate to the nature and location of the Proposed Development. The methodology also considers guidance within 'An Approach to Landscape Character Assessment' (Natural England, 2014)<sup>2</sup>.

### 1.2 INTRODUCTION

- 1.2.1.1 Essentially, the level of landscape and visual effect (and whether this is significant) is determined through consideration of the 'sensitivity' and 'susceptibility' of the landscape or visual receptor to the Proposed Development and the 'magnitude of change' that would be brought about by the Proposed Development, were it to be constructed.
- 1.2.1.2 The time period for the assessment covers the construction of the Proposed Development and associated infrastructure, to completion of the building works and the commencement of its operation, and for a further 15 years post construction, this is reflective of the time it will take for any mitigation planting to become established. The assessment process has involved a process of iterative design and re-assessment of any remaining, residual effects that could not otherwise be mitigated or 'designed out'. The type of effect is also considered and may be direct or indirect; temporary or permanent (reversible); cumulative; and positive, neutral or negative. The landscape and visual assessment unavoidably involves a combination of both quantitative and qualitative assessment and wherever possible a consensus of professional opinion has been sought through consultation, internal peer review, and the adoption of a systematic, impartial, and professional approach.

### 1.3 TERMINOLOGY

- 1.3.1.1 A description of the terms used in this LVIA is provided below:

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<sup>1</sup> Landscape Institute and the Institute of Environmental Assessment, 2013, Guidelines for Landscape and Visual Impact Assessment' Third Edition

<sup>2</sup> Natural England, 2014, An Approach to Landscape Character Assessment

## **1.3.2 SENSITIVITY OF RECEPTOR**

- 1.3.2.1 This is established by considering the value of the receptor and its susceptibility to change. Both these two aspects inform the sensitivity of landscape and visual receptors as set out in Tables below. For the purposes of this LVIA, receptor sensitivity is classified on a four-point scale of: negligible, low, medium, and high.

## **1.3.3 RESOURCE / RECEPTOR VALUE**

- 1.3.3.1 For the landscape resource this is related to the value that is attached to different landscapes by society. A landscape may be valued by different people for different reasons. For visual receptors this relates to the recognition attached to a particular view (for example in relation to heritage assets or through planning designations) and indicators of value attached to views by visitors (for example through appearances in guidebooks or on tourist maps and the provision of facilities such as car parking and interpretation). For the purposes of the LVIA a receptor value is classified on a four-point scale of: negligible, low, medium, and high refer to Table 1 and 5.

## **1.3.4 SUSCEPTIBILITY TO CHANGE**

- 1.3.4.1 For landscape receptors this means the ability to accommodate a proposed development without undue consequences for the maintenance of the baseline situation and/or achievement of landscape planning policies and strategies
- 1.3.4.2 For visual receptors this is a product of the occupation or activity of people experiencing the view and the extent to which their attention or interest may therefore be focused on the views and visual amenity they experience.
- 1.3.4.3 For the purposes of this LVIA, susceptibility to change is classified on a three-point scale of: low, medium, and high refer to Table 2 and 4.

## **1.3.5 MAGNITUDE OF CHANGE PREDICTED**

- 1.3.5.1 This is gauged by assessing the type and amount of change predicted to occur in relation to the landscape or visual receptor. Factors influencing the magnitude of change include: size, scale and nature of change; geographical extent; and duration and reversibility of effect. For the purposes of the LVIA, magnitude of change is classified on a four-point scale of: negligible, small, medium, and large.

## **1.3.6 LEVEL OF EFFECT**

- 1.3.6.1 The level of landscape and visual effect is gauged by considering the magnitude of change along with the sensitivity of the receptor using professional judgement. For the purposes of the LVIA, level of effect is classified on a six-point scale of: negligible, minor, minor to moderate, moderate, moderate to major and major.

1.3.6.2 In line with best practice guidance set out in GLVIA3, in addition to assessing level, effects are classified as: positive, negative or neutral as well as direct and indirect. An effect is understood to be neutral when the predicted residual change would, on balance, result in neither an improvement, nor a deterioration of the landscape and visual resource compared with the existing situation.

### **1.3.7 EFFECT SIGNIFICANCE**

1.3.7.1 The Infrastructure Planning (Environmental Impact Assessment) (England) Regulations 2017 require that a judgement is made on whether an environmental effect is 'significant' or not.

1.3.7.2 Landscape and visual effects found to be moderate or moderate to major are considered to be significant. Effects which are minor to moderate or moderate may or may not be significant depending on the context and the specific landscape resource or visual receptor in question. Effects of minor significance or lower will not be significant.

### **1.3.8 ASSESSMENT OF EFFECTS**

1.3.8.1 In accordance with GLVIA3 the assessment of landscape and visual effects are separate but linked procedures; the landscape is assessed as an environmental resource in its own right, whereas visual effects are assessed on views and visual amenity experienced by people.

1.3.8.2 Both landscape and visual effects have been assessed at construction stage, Year 1, and Year 15 from completion, allowing for the establishment of any landscape mitigation measures, if proposed.

## **1.4 LANDSCAPE ASSESSMENT**

1.4.1.1 Landscape effects are defined by the Landscape Institute in GLVIA<sup>3</sup>, paragraphs 5.1 and 5.2 as follows:

1.4.1.2 "An assessment of landscape effects deals with the effects of change and development on landscape as a resource. The concern ... is with 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 area of landscape

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<sup>3</sup> Guidelines for Landscape and Visual Impact Assessment, 3rd Edition, Landscape Institute and IEMA (May 2013)

- 1.4.1.3 that should be covered in assessing landscape effects should include the site itself and the full extent of the wider landscape around it which the proposed development may influence in a significant manner.”<sup>3</sup>
- 1.4.1.4 Landscape is characterised by dividing the study area into geographical areas which have readily identifiable characteristics in common. Landscape takes its character from a combination of elements, including: topography/landform, watercourses, patterns of land use; land cover / vegetation, open space, cultural influences, urban grain and building form. Where there are major elements of infrastructure, such as roads and railways, these often serve to divide one area from another. Character is not just about the physical elements and features of the landscape, but also embraces aesthetic, perceptual and experiential aspects.
- 1.4.1.5 Landscape effects can be defined as the changes in the fabric, character and quality of the landscape as a result of a development, through:
- Direct effects upon the landscape fabric (specific features and elements that make up the landscape), through the addition of new elements, or the removal of existing elements, such as trees, vegetation and buildings and other characteristic elements of the landscape character type;
  - Indirect effects on the overall patterns of elements and on the perceptual and aesthetic aspects that give rise to landscape character and regional and local distinctiveness. These changes to the landscape ‘qualities’, through the degradation / erosion of landscape elements and patterns, and perceptual characteristics, particularly those that form key characteristic elements of landscape character types or contribute to landscape value;
  - Cumulative addition of new features, the magnitude of which is sufficient to alter the overall landscape character type of an area, where more than one development may lead to a potential landscape effect; and
  - Effects upon valued landscapes such as public open space, statutorily designated heritage assets and designated nature conservation sites with public access.



## 1.5 EVALUATING LANDSCAPE SENSITIVITY TO CHANGE

- 1.5.1.1 The sensitivity of the landscape to a particular development considers the susceptibility of the landscape and its value. The overall sensitivity is described as high, medium, low, or negligible. This is assessed by taking into account the existing landscape quality, landscape value and landscape capacity or susceptibility to change, which often vary in response to both the type of development proposed and the particular site location, such that landscape sensitivity needs to be considered on a case by case basis. This should not be confused with ‘inherent sensitivity’ where areas of the landscape may be referred to as inherently of ‘high’ or ‘low’ sensitivity. For example, a National Park may be described as inherently of high sensitivity on account of its designation, although it may prove to be less sensitive to particular development and/or the design of that development. Alternatively, an area or undesignated landscape may be of high sensitivity to a particular development and/or the design of that development regardless of the lack of local or national designation.
- 1.5.1.2 The main factors considered are landscape susceptibility and landscape sensitivity, discussed below.

### 1.5.2 LANDSCAPE SUSCEPTIBILITY

- 1.5.2.1 Landscape susceptibility according to GLVIA3 means “*the ability of the landscape to accommodate the proposed Development without undue consequences for maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies*”.
- 1.5.2.2 Judgements on landscape susceptibility include references to both the physical and aesthetic characteristics, and the potential scope for mitigation that would be in character with the landscape. Landscape susceptibility varies according to different areas of landscape character and whilst accepting that development is likely to lead to high levels of landscape change in most circumstances, factors that commonly indicate lower landscape susceptibility or capacity to accommodate development include landscape characteristics of larger scale, uniformity, simple landform and skylines with limited landscape features. Generally speaking, lower landscape susceptibility together with lower landscape quality and value tends to indicate lower landscape sensitivity to development. Conversely, higher landscape susceptibility, quality and value tend to indicate higher landscape sensitivity to development.

### 1.5.3 LANDSCAPE VALUE

- 1.5.3.1 This includes the consideration of a range of features which may include the presence or absence of landscape designation, landscape and scenic qualities, rarity / representativeness, conservation interests, recreational value, perceptual qualities such as tranquillity and historical or cultural associations. The importance attached to a landscape, often as a basis for designation or recognition, which expresses national or local consensus, because of its quality including cultural associations, scenic or aesthetic qualities. Landscape value may be indicated by the presence or absence of a landscape planning designation such as a National Park or Area of Outstanding Natural Beauty, or Country Parks and Registered Parks & Gardens, indicating a landscape of national or local value accordingly.
- 1.5.3.2 The absence of a landscape planning designation should not assume an area of 'low' landscape value and undesignated areas of the landscape are often of some local value and indications of this are likely to be present in the form of documented, locally valued, cultural / natural heritage and scenic or aesthetic qualities such as 'wildness' or the presence of viewing platforms or benches.
- 1.5.3.3 It should be noted that a landscape of high value may not always equate to areas of high landscape quality and that areas of low landscape value may contain areas of higher landscape quality. The state of repair or condition of the elements of a particular landscape, its integrity and intactness and the extent to which its distinctive character is apparent are also relevant. The quality of a landscape element or characteristic may also be influenced by the degree to which it may contribute to the overall landscape character, its rarity, fragility, and potential for replacement or mitigation. Landscapes of lower quality tend to include those under intensive agriculture, forestry or urban fringe situations where the landscape elements and patterns have been eroded, often creating a new landscape character.
- 1.5.3.4 The landscape receptors are identified within the assessment, including the LCA's. The sensitivity of these receptors has been arrived at by considering the landscape receptor value and the landscape susceptibility of the receptor to the change proposed, in accordance with Table 1 and 2 below. Whilst the tables below are a useful guide, professional judgement has been used as far as possible to give an objective evaluation of sensitivity.

**Table 1 – Landscape Receptor Value**

<b>Value</b>	<b>Recognition</b>	<b>Features / Quality</b>	<b>Condition</b>
<b>High</b>	Typically a landscape / feature of international or national recognition e.g.: World Heritage Sites, National Parks, Scheduled Monuments and Grade I and II* Listed Buildings, Registered	A strong sense of place with landscape / features worthy of conservation; Absence of detracting features.	A very high quality landscape / feature; attractive landscape / feature; exceptional
<b>Medium</b>	Regional recognition e.g.: Conservation Areas; Grade II Listed Buildings, Registered Parks and Gardens	A number of distinguishing features worthy of conservation; evidence of some degradation and occasional detracting features.	Ordinary to good quality landscape / feature with some potential for substitution; a reasonably attractive landscape / feature.
<b>Low</b>	Undesignated, but locally valued landscape / features	Few landscape features worthy of conservation; evidence of degradation with some detracting features.	Ordinary landscape / feature with high potential for substitution; quality that is fairly commonplace.

**Table 2 - Susceptibility to Change**

<b>Susceptibility to Change</b>	
<b>High</b>	Low ability to accommodate the specific proposed change; undue consequences for the maintenance of the baseline situation (receptor value) and/or achievement of relevant planning policies / strategies.
<b>Medium</b>	Moderate ability to accommodate the specific proposed change; some undue consequences for the maintenance of the baseline situation (receptor value) and/or achievement of relevant planning policies / strategies.
<b>Low</b>	High ability to accommodate the specific proposed change; little or no undue consequences for the maintenance of the baseline situation (receptor value) and/or achievement of relevant planning policies / strategies.
<b>Negligible</b>	Very high ability to accommodate the specific proposed change; no undue consequences for the maintenance of the baseline situation (receptor value) and/or achievement of relevant planning policies / strategies

## **1.5.4 LANDSCAPE SENSITIVITY**

### **1.5.4.1**

GLVIA3 indicates that combining susceptibility and value can be achieved in a number of ways and needs to include professional judgement. However, it is generally accepted that a combination of high susceptibility and high value is likely to result in the highest sensitivity, whereas a low susceptibility and low value is likely to resulting in the lowest level of sensitivity. A summary of the likely characteristics of the different levels of sensitivity is described below in Table 3. It should be noted that the levels are indicative and in practice there is not a clear distinction between criteria levels.

**Table 3 – Landscape Sensitivity**

<b>Landscape Resource Sensitivity</b>	<b>Characteristics</b>
<b>High</b>	<p>Landscape character, characteristics, and elements where, through consideration of the landscape resource and characteristics, there would generally be a lower landscape capacity or scope for landscape change or positive enhancement, and higher landscape value and quality. Often includes landscapes which are highly valued for their scenic quality, including most statutorily (nationally / internationally designated landscapes).</p> <p>Elements/features that could be described as unique or are nationally scarce.</p> <p>Mature vegetation with provenance such as ancient woodland or mature parkland trees, and/or mature landscape features which are characteristic of and contribute to a sense of place and illustrates time-depth in a landscape and if replaceable, could not be replaced other than in the long term.</p>
<b>Medium</b>	<p>Landscape character, characteristics, and elements where, through consideration of the landscape resource and characteristics, there would be a medium landscape capacity or some scope for landscape change. Often includes landscapes of medium landscape value and quality which may be locally designated.</p> <p>Areas that have a positive landscape character but include some areas of alteration/degradation/or erosion of features.</p> <p>Perceptual/aesthetic aspects has some vulnerability to unsympathetic</p>

	<p>development; and/or features/elements that are locally commonplace; unusual locally but in moderate/poor condition; or mature vegetation that is in moderate/poor condition or readily replicated.</p>
<b>Low</b>	<p>Landscape character, characteristics and elements where, through consideration of the landscape resource and characteristics, there would be higher landscape capacity or scope for landscape change or positive enhancement.</p> <p>Damaged or substantially modified landscapes with few characteristic features of value.</p> <p>Capable of absorbing major change, and landscape elements/features that might be considered to detract from landscape character such as obtrusive man-made features (e.g. power lines, large scale developments, etc.).</p>
<b>Negligible</b>	<p>Landscape character, characteristics and elements where there is a high landscape capacity or a planned desire for landscape change. Usually applies to landscapes with a lower landscape susceptibility or higher landscape capacity for the development. May also apply to derelict landscapes, spoil heaps, and de-graded urban fringe areas that require restoration or re-development / re-planting.</p> <p>Areas that are relatively bland or neutral in character with few/no notable features.</p> <p>A landscape that includes areas of alteration/degradation or erosion of</p>

	<p>features, and/or landscape elements/features that are common place or make little contribution to local distinctiveness.</p> <p>Opportunities for the restoration of landscape through mitigation measures associated with the proposal.</p>
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## 1.6 VISUAL ASSESSMENT

- 1.6.1.1 Visual effects are concerned wholly with the effect of the development on views, and the general visual amenity and are defined by the Landscape Institute in GLVIA 3, paragraphs 6.1 as follows<sup>4</sup>:
- 1.6.1.2 *“An assessment of visual effects deals with the effects of change and development on views available to people and their visual amenity. The concern ... is with assessing how the surroundings of individuals or groups of people may be specifically affected by changes in the context and character of views.”*
- 1.6.1.3 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 effect: a change to an existing static view, sequential views, or wider visual amenity as a result of development or the loss of particular landscape elements or features already present in the view.
  - Cumulative visual effects: the cumulative or incremental visibility of similar types of development may combine to have a cumulative visual effect.
- 1.6.1.4 The visual assessment aims to determine from which points the Proposed Development can be seen in the surrounding landscape; this is known as the visual envelope. Once determined, a series of key representative viewpoints are chosen (i.e. areas within the visual envelope from where it may be possible to see the proposed development from publicly accessible viewpoints), such as residential areas, public open spaces, PRow / public footpaths and roads.
- 1.6.1.5 Visual effects relate to changes in available views of the landscape and the effect of those changes on people, including:

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<sup>4</sup> Guidelines for Landscape and Visual Impact Assessment, 3rd Edition, Landscape Institute and IEMA (May 2013).

- The direct effects of the Proposed Development on the content and character of views through the intrusion or obstruction and/or the change or loss of existing elements.
- The overall effect on visual amenity, be it degradation or enhancement.

1.6.1.6 In predicting the effects of the proposed Development on the visual receptors from specific viewpoints being assessed, GLVIA3 (para 6.27) states that it is helpful to consider (but not restricted to) the following issues:

- Nature of the view (full, partial or glimpsed);
- Proportion of the proposed development visible (full, most, part or none);
- Distance of the viewpoint from the proposed development and whether it would be the focus of the view or only a small element;
- Whether the view is stationary, transient or sequential; and
- The nature of the changes to the view.

1.6.1.7 Additionally, the seasonal effects of vegetation are to be considered, in particular the varying degree of screening and filtering of views.

## 1.6.2 ZONE OF THEORETICAL VISIBILITY (ZTV)

1.6.2.1 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 proposed 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.

1.6.2.2 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.

## 1.6.3 VIEWPOINT ANALYSIS

1.6.3.1 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.

1.6.3.2 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.



1.6.3.3 The assessment involves visiting the viewpoint location and viewing wireframes and photomontages prepared for each viewpoint location. The fieldwork is conducted in periods of fine weather and good visibility and also considers seasonally reduced leaf cover.

**1.6.4 EVALUATING VISUAL SENSITIVITY TO CHANGE**

1.6.4.1 To determine visual effects both the sensitivity of the visual receptor and the magnitude of change must be considered. Determining visual sensitivity is the combination of susceptibility to change and value of a view. It is considered that a combination of high susceptibility to change and high value is likely to result in the highest sensitivity, whereas a low susceptibility and value is likely to result in the lowest level. The value, susceptibility to change and resultant sensitivity of a visual receptor are broadly categorised based on the following Tables 4 and 5 below. It should be noted that the levels are indicative and in practice there is not a clear distinction between criteria levels.

1.6.4.2 The susceptibility of visual receptors to changes in the view and visual amenity is related to activity they are engaged in and the extent to which their attention is focussed on the views and visual amenity at that location. As such those receptors most sensitive to change are likely to include people engaged in outdoor activities where an appreciation of the landscape is the focus or residents in areas where the landscape setting contributes to the setting of the properties.

1.6.4.3 Conversely, those considered least sensitive to change include (but are not restricted to) people engaged in outdoor sports or recreation where there is no focus on the surrounding landscape/views and people at their place of work where the focus is on the work activity. See Table 4 below for a full description of the criteria used to assess the susceptibility of viewpoints.

**Table 4 – Susceptibility to Change**

<b>Susceptibility to Change</b>	
<b>High</b>	<ul style="list-style-type: none"> <li>• Residents at home.</li> <li>• Views from well used public rights of way including strategic footpaths / long distance trails and cycle routes (where the attractive nature of the countryside is a significant factor in the enjoyment of the walk).</li> <li>• Visitors along scenic routes and to recognised viewpoints.</li> <li>• Visitors to protected landscapes or heritage assets where views of the surroundings are an important contributor to the experience.</li> </ul>

	<ul style="list-style-type: none"> <li>• The location, numbers, frequency of use and visual context of the viewpoint would be high.</li> </ul>
<b>Medium</b>	<ul style="list-style-type: none"> <li>• Views experienced from boats, public rights of way / footpaths</li> <li>• / disused airfields used locally and passing through the landscape and well used footpaths within settlements.</li> <li>• Views from places of worship and associated grounds, schools, country parks and golf clubs.</li> <li>• Views experienced by users of local roads where there are clear / open views across the landscape and low levels of traffic.</li> <li>• The location, numbers, frequency of use and visual context of the viewpoint would be medium.</li> </ul>
<b>Low</b>	<ul style="list-style-type: none"> <li>• Views experienced from places of work where workers and visitors are concentrating on their day to day activities.</li> <li>• Views experienced by on near to motorways, major roads</li> <li>• Views experienced by users of the rail network and main roads travelling at speed or local roads where the focus is upon the road ahead owing to traffic conditions and the context / composition of the view.</li> <li>• Views experienced from less well used public rights of way which pass through less attractive landscapes or townscapes and are not used for enjoyment of the scenery.</li> <li>• Views experienced by those playing or spectating at outdoor sports or utilising outdoor sports facilities.</li> <li>• The location, numbers, frequency of use and visual context of the viewpoint would be low.</li> </ul>

1.6.4.4 In making judgements about the value of each view, the assessment should take into account the following:

- Recognition of the value to a particular view, e.g. in relation to heritage assets or planning designations.
- Indicators of the value attached to views by others, e.g., in guide books, tourist maps, literary references, painting etc.

1.6.4.5 Table 5 below shows a full description of the criteria used to assess the value of the view.

**Table 5 – Value of view criteria**

<b>Value of View Criteria</b>	
<b>High</b>	<ul style="list-style-type: none"> <li>• Views from designated landscapes (National Parks, AONBs, important Local Landscape Areas, Parks / Gardens, Scheduled Monuments, Listed Buildings and Conservation Areas.</li> <li>• Recognised /important views including from tourist destinations and marked on maps</li> </ul>
<b>Medium</b>	<ul style="list-style-type: none"> <li>• Views from within medium quality non-designated but locally valued landscapes which has no strong cultural associations.</li> </ul>
<b>Low</b>	<ul style="list-style-type: none"> <li>• Views from within unattractive non-designated landscapes of local importance and unlikely to be visited specifically to experience the view available.</li> </ul>

1.6.4.6 In combining susceptibility to change and value visual sensitivity criteria are summarised in the Table 6 below.

**Table 6 – Visual Sensitivity Criteria**

<b>Visual Sensitivity</b>	
<b>High</b>	<ul style="list-style-type: none"> <li>• A well-balanced view containing attractive features and notable for its scenic quality.</li> </ul>

	<ul style="list-style-type: none"> <li>• A view which is an important reason for receptors being there.</li> <li>• A view which is experienced by a large number of people and/ or recognised for its qualities.</li> </ul>
<b>Medium</b>	<ul style="list-style-type: none"> <li>• An otherwise attractive view that includes some attractive or discordant features or visual detractors.</li> <li>• A view which plays a small part in the reason why a receptor would be there.</li> <li>• A view which is locally recognised.</li> </ul>
<b>Low</b>	<ul style="list-style-type: none"> <li>• A view that is unattractive, discordant and/or contains many visual detractors.</li> <li>• A view which is unlikely to be part of the receptor's experience.</li> </ul>

## 1.6.5 MAGNITUDE OF CHANGE

### 1.6.5.1

The magnitude of landscape and visual change depends upon a combination of factors including the size, scale and nature of change in relation to the context; the geographical extent of the area influenced and its duration and reversibility, as summarised in Table 7 below.

**Table 7 – Magnitude of Landscape and Visual Change**

<b>Magnitude</b>	<b>Size, scale and nature</b>	<b>Geographical Extent</b>	<b>Duration and Reversibility</b>
<b>Large</b>	Occupies an extensive proportion of the view and may even obstruct a significant portion of the view. Views may become the dominant feature. Considerable change to the majority / many existing landscape elements and/or landscape character; fundamental changes the surroundings and	Ranging from notable change over extensive area to intensive change over a more limited area.	Long term; permanent / non- reversible or partially reversible.

	baseline to a large extent; very noticeable		
<b>Medium</b>	<p>Occupies much of the view but would not fundamentally change its characteristics. Changes would be immediately visible but not a key feature of the view.</p> <p>Some change to existing landscape elements and /or landscape character; discernible changes the surroundings of a receptor, such that its baseline is partly altered; readily noticeable.</p>	Moderate changes in a localised area.	Medium term; semi-permanent or partially reversible.
<b>Small</b>	<p>Occupies a small portion of the view and therefore would not result in a change to the view's composition.</p> <p>Small change to existing landscape elements and/or landscape character; slight, but detectable impacts that do not alter the baseline of the receptor materially not readily noticeable</p>	Minor changes in a localised area.	Short term / temporary; partially reversible or reversible.
<b>Negligible / No Change</b>	<p>Occupies little or no portion of the view.</p> <p>Little or limited /no change in existing landscape elements and/or landscape character, barely distinguishable change from baseline</p>	No change discernible.	Short term / temporary

	conditions; not noticeable.		
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## 1.6.6 SIGNIFICANCE OF EFFECT AND CRITERIA

1.6.6.1 The level of landscape and visual effect and whether it is significant or not has been assessed based on the sensitivity of the affected resource / receptor, and the magnitude of change caused by the Proposed Development, as set out for each above in the preceding tables.

1.6.6.2 The combined sensitivity and magnitude used to determine the level of effect and whether significant or not is summarised within Table 8 below. Note that effects can be either positive or negative and, in some cases, neutral (neither positive, nor negative).

**Table 8 – Matrix for Determining Significance of Effect**

		Sensitivity (value/ importance)			
		High	Medium	Low	Negligible
Magnitude of Change	Large	Major	Moderate - Major	Minor – Moderate	Negligible
	Medium	Moderate – Major	Moderate	Minor	Negligible
	Small	Minor – Moderate	Minor	Negligible – Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

1.6.6.3 The dark grey shaded cells are generally considered to be significant in the context of the Infrastructure Planning (Environmental Impact Assessment) (England) Regulations 2017. The light grey shaded cells denote effects which may be significant, or not significant, depending on the factors relating to the context and the specific landscape or visual receptor in question.

1.6.6.4 Unshaded cells denote effects that would be ‘not significant’ and therefore ones which are generally considered to be not material to the planning decision.

1.6.6.5 It should be noted that the above matrix is intended as a framework for assessment only and that the level of effect (significance) will vary depending on the circumstances, the type and scale of development proposed, the baseline context and other factors. The gradations of magnitude of change and level of effect used in the assessment represent a continuum; the assessor has used professional judgement when gauging the level of effect and determining whether or not an effect should be considered significant.

1.6.6.6

The Table 9 below provides a more detailed summary of the categories of effect.

**Table 9 – Categories of Landscape and Visual Effect**

<b>Level of Effect</b>	<b>Description of Landscape Effect</b>	<b>Description of Visual Effect</b>
<b>Major</b>	Considerable change over an extensive area of a highly sensitive landscape, fundamentally affecting the key characteristics and the overall impression of its character.	The development would become a prominent feature and would result in a very noticeable change to an existing highly sensitive and well composed view.
<b>Moderate</b>	Small or noticeable change to a highly sensitive landscape or more intensive change to a landscape of medium or low sensitivity, affecting some key characteristics and the overall impression of its character.	The development would introduce some enhancing or detracting features to an existing highly sensitive and well composed view, or would be prominent within a less well composed and less sensitivity view, resulting in a noticeable improvement or deterioration of the existing view.
<b>Minor</b>	Small change to a limited area of landscape of high or medium sensitivity or a more widespread area of a less sensitive landscape, affecting few characteristics without altering the overall impression of its character.	Where the proposed development would form a perceptible but not enhancing or detracting feature within a view of high or medium sensitivity or would be a more prominent feature within a poorly composed view of low sensitivity, resulting in a small improvement or deterioration of the existing view.
<b>Negligible</b>	No discernible improvement or deterioration to the existing landscape character.	No discernible improvement or deterioration in the existing view.
<b>No Effect</b>	The development would not affect the landscape receptor.	The development would not affect the view

## 1.7 CUMULATIVE ASSESSMENT

1.7.1.1 The assessment of cumulative effects is essentially the same as for the assessment of the stand-alone landscape and visual effects, in that the level of landscape and visual effect is determined by assessing the combination of sensitivity of the landscape or visual receptor (ranging from high to negligible) and the magnitude of change (ranging from high to zero).

1.7.1.2 Types of cumulative effect are defined as follows:

- Cumulative Landscape Effects: Where more than one type of development may have an effect on a landscape designation or particular area of landscape character.
- Cumulative Visual Effects: Where the cumulative or incremental visibility of similar types of
  - development combined generate a cumulative visual effect.
  - These can be further defined as follows:
    - Simultaneous or combined: where two or more developments may be viewed from a single fixed viewpoint simultaneously, within the viewer's field of view and without requiring them to turn their head<sup>5</sup>.
    - Successive or repetitive: where two or more developments may be viewed from a single viewpoint successively as the viewer turns their head or swivels through 360°.
    - Sequential: where a number of developments may be viewed sequentially or repeatedly at increased frequency, from a range of locations when travelling along a route within the Study Area.

1.7.1.3 A cumulative landscape or visual effect simply means that more than one type of development is present or visible within the landscape. Other forms of existing development and land use such as woodland and forestry, patterns of agriculture, built form, and settlements already have a cumulative effect on the existing landscape that is already accepted or taken for granted. These features often contribute strongly to the existing character, forming a positive component of the local landscape. Landscapes however, will have a finite capacity for new development, beyond which further change or alteration to the existing landscape character may be unacceptable in landscape terms.

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<sup>5</sup> Note: A person's field of view is variable but is approximately 90° when facing in one direction



- 1.7.1.4 Whilst the CLVIA considers other development, it should not be considered as a substitute for individual LVIA assessment in respect of each of the other developments concerned.
- 1.7.1.5 The methodology for cumulative assessment follows that contained within GLVIA3. GVLIA3 (para 7.8) and requires that the baseline includes additional changes to the baseline landscapes or visual resources as a result of other development.
- 1.7.1.6 Existing similar types of developments are therefore included within the baseline description, and cumulative effects of consented and proposed development are considered separately.
- 1.7.1.7 Cumulative effects will be considered within the LVIA study areas for both the proposed convertor station and for the connecting cable route.

## **1.7.2 MAGNITUDE OF CUMULATIVE CHANGE**

- 1.7.2.1 Cumulative landscape and visual effects may result from additional changes to the baseline landscape or visual resources, as a result of the Proposed Development, in conjunction with other developments.
- 1.7.2.2 The principle of magnitude of cumulative change thus makes it possible for the Proposed Development to have a major effect on a particular receptor, while having only a minor cumulative effect in conjunction with other existing developments.
- 1.7.2.3 The cumulative landscape and visual magnitude of change is determined with reference to the criteria set out above and the following considerations:
- The number of visible existing and/or potentially visible proposed developments.
  - The distance to existing and/or proposed developments.

## **1.7.3 SIGNIFICANCE OF CUMULATIVE EFFECTS**

- 1.7.3.1 Determination of the significance of cumulative landscape and visual effects has been undertaken by employing professional judgement to combine and analyse the cumulative magnitude of change against the identified sensitivity to change. It should be noted that the cumulative assessment is the result of the addition of the Proposed Development to the identified cumulative baseline scenario.

## **1.8 VISUAL ASSESSMENT OF RESIDENTIAL PROPERTIES**

- 1.8.1.1 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.

- 1.8.1.2 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 proposed 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.
- 1.8.1.3 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.
- 1.8.1.4 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.
- 1.8.1.5 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.
- 1.8.1.6 The sensitivity of individual residential receptors is assessed as high in each case.
- 1.8.1.7 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 convertor station, 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.

### 1.8.1.8

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 proposed 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.

## 1.9 ACCURATE VISUAL REPRESENTATIONS

### 1.9.1.1

Field verified visualisations \ photomontages \ Accurate Visual Representations (AVRs) were prepared for three agreed viewpoints to illustrate the likely visual effects of the Proposed Development based on the Scheme design at January 2019.

### 1.9.1.2

The field verified wirelines (AVRs) demonstrate the existing view and view following completion of the Proposed Development. The AVRs were Level 3 detailing the location and size of the proposal as well as the degree of visibility of the proposal, the architectural form and use of lighting.

- 1.9.1.3 The methodology used and outlined in further detail below was compliant with relevant sections of: ‘Guidelines for Landscape and Visual Impact Assessment’ Third Edition, Landscape Institute and the Institute of Environmental Assessment, 2013 (GLVIA3).
- 1.9.1.4 Photography and photomontage in landscape and visual impact assessment’ Landscape Institute Advice Note 01/11, 2011<sup>6</sup>. A Public Consultation Draft ‘Photography and Photomontage in Landscape and Visual Impact Assessment’ published by the Landscape Institute as a Technical Guidance Note (2018-06-01) has not formally been adopted, but the principles therein have been reviewed and the figures produced within the LVIA for this scheme have accorded with the emerging advice.
- 1.9.1.5 Visual representation of development proposals | Landscape Institute Technical Guidance Note 02/17 (31 March 2017)
- 1.9.1.6 The outputs of the images are on A3 and A3 Extended Sheet PDF documents, with a location plan with baseline photography and wireline images.

## **1.9.2 PHOTOGRAPHIC SURVEY**

- 1.9.2.1 All photography was carried out by WSP visualisation team photographer under the supervision of a chartered landscape architect. Field verified views were taken using a Canon EOS 6D SLR Camera with a Canon fixed 50mm f1:8 lens, a Manfrotto 190go tripod and MHXPRO-3W X-PRO 3-way head with a Trimble Juno Series GPS Reader. The camera viewpoint position was at a height of 1.6 m and stabilised using the tripod with 3 axis levelling bubbles. Camera settings were locked to ensure aperture and sheeter speed were consistent in each batch of photographs.
- 1.9.2.2 A log was kept of the time, date and weather conditions that the photographs were taken so that lighting conditions could be recreated in the visualisers software 3DS Max. A GPS reading was taken to mark the position of the camera and these were then converted into National Grid co-ordinates. A photograph to record the exact location of the tripod is also taken for the project record.

## **1.9.3 CREATING 3D GROUND MODEL**

- 1.9.3.1 All necessary information regarding the Proposed Development was supplied to WSP visualisation team. All of the supplied information was modelled in an appropriate professional modelling software.

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<sup>6</sup> Photography and Photomontage in Landscape and Visual Impact Assessment was issued as a consultation document (2018-06-01). This document has not been formally issued, so we are using the LI Advice Note 01/11 for this assessment.

## 1.9.4 PREPARING PHOTOGRAPHY

1.9.4.1 All baseline images were reviewed by the WSP visualisation team and the chartered landscape architect prior to the start of production. Both cameras produce a raw file and jpeg format.

1.9.4.2 In AVR's, having the camera pointing 'horizontally' (parallel with the ground) is desirable to ensure that vertical elements of the photographed scene remain perpendicular to the horizon. In reality, the eye and brain compensate for non-perpendicular verticals and it is desirable to replicate this with photography. The tripod used by WSP's visualisation team photographers has a 3-way head with built-in spirit level 'bubbles' to assist the photographer in keeping the vertical building elements 'vertical'.

## 1.9.5 CAMERA MATCHING – 3D VISUAL ALIGNMENT

1.9.5.1 For each viewpoint position, a physical camera within the software was set up in 3DS Max using the six-figure national grid reference coordinates of each viewpoint position. The physical camera (model as described in Table 10) was then set up to match the camera's sensor width, focal length and the dimensions of the photograph.

Table 10 - Camera Model

Camera Model	Sensor Size	Image Size (Width x height)	
Canon EOS 6D with Fixed 50mm f1:8 lens	35.8 x 23.9mm (full frame)	5472	3648

1.9.5.2 The following information was then used for the camera alignment process:

- Specific details of the camera and lens used to take the photograph.
- OS mapping and survey data from our database for lining up\*.
- The GPS co-ordinates (x,y,z values) of the camera position.
- The GPS co-ordinates (x,y,z values) of the proposed Development.
- OS Terrain data.
- A 3D model of the proposed Development.
- Site Layout plan of the proposed Development.

1.9.5.3 **Note:** Some small movements of the camera in the x, y and z planes are required to get a more accurate match, it is accepted that OS data and GPS coordinates have certain tolerances to which the visualiser work within.

## 1.9.6 IMAGE POST PRODUCTION

1.9.6.1 Post production was undertaken in Adobe Photoshop Creative Cloud. The rendered image of the Proposed Development combined with the original baseline photograph to create the final image.

1.9.6.2 For Level 1 2 or 3 AVR's, the render layer is placed in the scene, to make it appear behind those items in the photograph which would partially or wholly obscure it in reality. The process of bringing certain elements in the photograph to the foreground and allowing others to be obscured by the development in the background is known as 'masking'.

1.9.6.3 For Level 3 AVR's the lighting and materials may require some minor adjustments to blend the new render elements into the photograph. This is open to some artistic interpretation.

## 1.9.7 REAL SCALE VIEWING

1.9.7.1 As should be treated as an aid to visual assessment and are not a substitute to site-based assessment of an individual scene.

1.9.7.2 When assessing a development using AVRs the scale of the development in the scene should be taken into account together with what the human eye would experience at the scene.

1.9.7.3 The aim of AVRs is to represent the landscape or townscape context or proposed development that is under consideration as accurately as is practically possible.

1.9.7.4 The AVRs produced by WSP visualisation team were produced in accordance with Landscape Institute Guidelines Advice Note 01/2011, based on the following criteria that the images should:

- Be reproduced at a size and level of geometric accuracy to permit impact assessment, which must include inspection at the location where the photograph was taken.
- Be based on a replicable, transparent and structured process, so that the accuracy of the
- representation can be verified, and trust established.
- Use techniques with appropriate explanation, that in the opinion of the landscape professional best
- represent the Development under consideration and it's proposed environment as accurately as possible.
- Be easily understood, and usable by members of the public and those with a non-technical
- background.
- Be based on a good quality photographic image taken in representative weather conditions.
- In order to assess the images at a size and resolution suitable for use in assessment work in the field,
- the images were prepared with a field of view and viewing distance that accurately reconstructs the perspective and scale of elements experienced at the scene.

- As advised by the Landscape Institute Advice Note 01/2011 the method for determining the viewing
- distance was calculated using Scottish Natural Heritage's Good Practice Guide for the representation of windfarms SNH 2006, para 126.

## 1.10

## ABBREVIATIONS & GLOSSARY

<b>Please Note: Those descriptions marked with an asterisk are identical to the terminology provided in the GLVIA3 glossary</b>	
<b>AOD</b>	Above Ordnance Datum
<b>AONB</b>	Area of Outstanding Natural Beauty
<b>CLVIA</b>	Cumulative Landscape and Visual Impact Assessment
<b>Cumulative effects</b>	‘Additional changes caused by a proposed Development in conjunction with other similar developments or as a combined effect of a set of developments, taken together’ (SNH, 2012)
<b>Cumulative landscape effects:</b>	Effects that ‘can impact on either the physical fabric or character of the landscape, or any special values attached to it’ (SNH, 2012)
<b>Cumulative visual effects:</b> <b>In combination In succession</b> <b>Sequentially</b>	<p>Effects that can be caused by combined visibility, which ‘occurs where the observer is able to see two or more developments from one viewpoint’ and/or sequential effects which ‘occur when the observer has to move to another viewpoint to see different developments’ (SNH 2012)</p> <p>Occurs where the observer is able to see two or more developments from one viewpoint:</p> <p>In combination</p> <p>Where two or more developments are or would be within the observer’s arc of vision at the same time without moving his/her head (GLVIA3, 2013 Table 7.1). In succession</p> <p>Where the observer has to turn his/her head to see the various developments</p> <p>– actual and visualised (GLVIA3, 2013 Table 7.1). Sequential cumulative effect</p> <p>Occurs where the observer has to move to another viewpoint to see the same or different developments. Sequential effects may be assessed for travel along regularly used routes such as major roads or popular paths.</p> <p>Frequently sequential</p>



	<p>Where the features appear regularly and with short time lapses between instances depending on the speed of travel and distance between viewpoints (GLVIA3, 2013 Table 7.1).</p> <p>Occasionally sequential</p> <p>Where longer time lapses between appearances would occur because the observer is moving slowly and/or there are larger distances between the viewpoints (GLVIA3, 2013 Table 7.1).</p>
<b>Development</b>	Any proposal that results in change to the landscape and/or visual environment.
<b>Degree of change</b>	A combination of the scale extent and duration of an effect also defined as 'magnitude'.
<b>Designated Landscape*</b>	Areas of landscape identified as being of importance at international, national or local levels, either defined by statute or identified in development plans or other documents.
<b>EIA</b>	Environmental Impact Assessment
<b>Elements*</b>	Individual parts which make up the landscape, such as, for example, trees, hedges and buildings.
<b>Enhancement*</b>	Proposals that seek to improve the landscape resource of the site and its wider setting beyond its baseline condition.
<b>Environmental fit</b>	The relationship of a development to identified environmental opportunities and constraints in its setting.
<b>Feature*</b>	Particularly prominent or eye-catching elements in the landscape such as tree clumps, church towers or wooded skylines OR a particular aspect of the project proposal.
<b>FoV</b>	Field of View – the horizontal angle of the view illustrated in a visualisation.
<b>Geographical Information System (GIS)</b>	A system that captures, stores, analyses, manages and presents data linked to location. It links spatial information to a digital database.
<b>GLVIA</b>	Guidelines for Landscape and Visual Impact Assessment, Third Edition, published jointly by the

	Landscape Institute and Institute of Environmental Management and Assessment, 2013.
<b>Heritage</b>	The historic environment and especially valued assets and qualities such as historic buildings and cultural traditions.
<b>Historic Landscape Characterisation (HLC) and Historic Land-use Assessment (HLA)</b>	Historic characterisation is the identification and interpretation of the historic dimension of the present-day landscape or townscape within a given area. HLC is the term used in England and Wales, HLA is the term used in Scotland.
<b>Indirect effects*</b>	<p>Effects that result indirectly from the proposed project as a consequence of the direct effects, often occurring away from the site, or as a result of a sequence of interrelationships or a complex pathway. They may be separated by distance or in time from the source of the effects.</p> <p>Also used to describe indirect landscape effects concerning perceptual characteristics and qualities of the landscape and indirect visual effects in relation to issues such as 'setting'.</p>
<b>Iterative design process</b>	The process by which project design is amended and improved by successive stages of refinement which respond to growing understanding of environmental issues.
<b>Key characteristics</b>	Those combinations of elements which are particularly important to the current character of the landscape and help to give an area its particularly distinctive sense of place.
<b>Land cover</b>	The surface cover of the land, usually expressed in terms of vegetation cover or lack of it. Related to but not the same as land use.
<b>Landscape and Visual Impact Assessment (LVIA)</b>	A tool used to identify and assess the likely significance of the effects of change resulting from development both on the landscape as an environmental resource in its own right and on people's views and visual amenity.
<b>Landscape Character Area (LCA)*</b>	These are single unique areas which are the discrete geographical areas of a particular landscape type.

<b>Landscape Character Assessment (LCA)</b>	The process of identifying and describing variation in the character of the landscape and using this information to assist in managing change in the landscape. It seeks to identify and explain the unique combination of elements and features that make landscapes distinctive. The process results in the production of a Landscape Character Assessment.
<b>Landscape Character Types (LCTs)*</b>	These are distinct types of landscapes that are usually homogenous in character. They are generic in nature in that they may occur in different areas in different parts of the country, but wherever they occur they share broadly similar combinations of geology, topography, drainage patterns, vegetation and historical land use and settlement pattern, and perceptual and aesthetic attributes. (Topic Paper 6, Countryside Agency and SNH 2004)
<b>Landscape capacity</b>	The degree to which a particular landscape character type or area is able to accommodate change without altering the overall character of the area or its integrity. Capacity is likely to vary according the type and nature of change being proposed and the management or land use of the site area.
<b>Landscape character*</b>	A distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse.
<b>Landscape character unit</b>	A small area of distinctive or recognisable character within a wider LCA.
<b>Landscape classification</b>	A process of sorting the landscape into different types using selected criteria but without attaching relative values to different sorts of landscape.
<b>Landscape constraints</b>	Components of the landscape resource such as views or mature trees recognised as constraints to development. Often associated with landscape opportunities.
<b>Landscape effects*</b>	Effects on the landscape as a resource in its own right.
<b>Landscape fit</b>	The relationship of a development to identified landscape opportunities and constraints in its setting.

<b>Landscape patterns</b>	Spatial distributions of landscape elements combining to form patterns, which may be distinctive, recognisable and describable e.g. hedgerows and stream patterns.
<b>Landscape quality (condition)*</b>	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 individual elements.
<b>Landscape qualities</b>	A term used to describe the aesthetic or perceptual and intangible characteristics of the landscape such as scenic quality, tranquillity, sense of wildness or remoteness. Cultural and artistic references may also be described
<b>Landscape receptors</b> *	Defined aspects of the landscape resource that have the potential to be affected by a proposal
<b>Landscape resource</b>	The combination of elements that contribute to landscape context, character, and value.
<b>Landscape sensitivity</b>	The sensitivity of a landscape is defined by consideration of factors such as value, quality / condition importance, resilience, susceptibility and capacity of the landscape relative to a particular type of proposed Development.
<b>Landscape Strategy</b>	The overall vision and objectives for what the landscape should be like in the future, and what is thought to be desirable for a particular landscape type or area as a whole, usually expressed in formally adopted plans and programmes or related documents.
<b>Landscape Value*</b>	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.
<b>Level of effect</b>	Determined through the combination of sensitivity of the receptor and the proposed magnitude of change brought about by the development.
<b>Magnitude (of effect)</b> *	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 term or long term in duration’.
<b>Mitigation</b>	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. (GLVIA3, 2013 Para 3.37).
<b>NP</b>	National Park
<b>Perception</b>	Combines the sensory (that we receive through our senses) with the cognitive (our knowledge and understanding gained from many sources and experiences).
<b>Perceptual Aspects</b>	A landscape may be valued for its perceptual qualities, notably wildness and/or tranquillity. (GLVIA3, 2013 Box 5.1)
<b>Photomontage*</b>	A visualisation which superimposes an image of the proposed Development upon a photograph or series of photographs.
<b>Positive or Negative Types of Landscape Effect</b>	<p>The landscape effects may be positive, neutral, or negative.</p> <p>In landscape terms – a positive effect would require development to add to the landscape quality and character of an area. Neutral landscape effects would include low or negligible changes that may be considered as part of the ‘normal’ landscape processes such as maintenance or harvesting activities. A negative effect may include the loss of landscape elements such as mature trees and hedgerows as part of construction leading to a reduction in the landscape quality and character of an area.</p>
<b>Positive or Negative Types of Visual Effect</b>	<p>The visual effects may be positive, neutral, or negative.</p> <p>In visual terms – positive or negative effects are less easy to define or quantify and require a subjective consideration of a number of factors affecting the view, which may be positive, neutral, or negative. Opinions as to the visual effects of wind energy developments vary widely, however it is not the assumption of this assessment that all change, including substantial levels of change is a negative experience. Rather this assessment has considered factors such as the visual composition of the landscape in the view together with the design and composition, which may or may not be reasonably, accommodated within the</p>

<b>Probability Effect</b>	<p>The probability of a landscape and visual effect occurring as a result of this Development should be regarded as certain, subject to the stated project design and the continuance of the existing, baseline landscape resource, including known changes such as other permitted development.</p> <p>The probability of cumulative effects however is variable. Whereas those effects related to existing wind energy development and those under construction are considered as certain, effects related to development with planning consent is only considered as likely. Wind energy development sites for which there is a submitted planning application are considered as uncertain and other wind energy development for which no planning application has been made are considered as uncertain / unknown, as the level of uncertainty would be greater.</p>
<b>Rarity</b>	The presence of rare elements or features in the landscape or the presence of a rare Landscape Character Type. (GLVIA3 2013, Box 5.1)
<b>Receptor</b>	Physical landscape resource, special interest, or viewer group that will experience an effect.
<b>Recreation Value</b>	Evidence that the landscape is valued for recreational activity where experience of the landscape is important. (GLVIA3 2013, Box 5.1)
<b>Representativeness*</b>	Whether the landscape contains a particular character and/or features or elements which are considered particularly important examples.
<b>Residual Effects</b>	Potential environmental effects, remaining after mitigation.
<b>Scale Indicators</b>	Landscape elements and features of a known or recognisable scale such as houses, trees, and vehicles that may be compared to other objects, where the scale of height is less familiar, to indicate their true scale.
<b>Scenic Quality</b>	Depends upon perception and reflects the particular combination and pattern of elements in the landscape, its aesthetic qualities, its more intangible sense of place or 'genius loci' and other more intangible qualities. (GLVIA3 2013, Box 5.1)

<b>Seascape</b>	Landscapes with views of the coast or seas, and coasts and adjacent marine environments with cultural, historical and archaeological links with each other.
<b>Sense of Place (genius loci)</b>	The essential character and spirit of an area: 'genius loci' literally means 'spirit of the place'.
<b>Sensitivity*</b>	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 associated to that receptor.
<b>Significance</b>	A measure of the importance or gravity of the environmental effect, defined by significance criteria specific to the environmental topic.
<b>Significant Effects</b>	<p>It is a requirement of the EIA Regulations to determine the likely significant effects of the development on the environment which should relate to the level of an effect and the type of effect. Where possible significant effects should be mitigated.</p> <p>The significance of an effect gives an indication as to the degree of importance (based on the magnitude of the effect and the sensitivity of the receptor) that should be attached to the impact described.</p> <p>Whether or not an effect should be considered significant is not absolute and requires the application of professional judgement.</p> <p>Significant – 'noteworthy, of considerable amount or effect or importance, not insignificant or negligible'. The Concise Oxford Dictionary.</p> <p>Those levels and types of landscape and visual effect likely to have a major or important / noteworthy or special effect of which a decision maker should take particular note.</p>
<b>Susceptibility*</b>	The ability of a defined landscape or visual receptor to accommodate the specific proposed Development without undue negative consequences
<b>Sustainability*</b>	The principle that the environment should be protected in such a condition and to such a degree that ensures new development meets the needs of the present without compromising the ability of future generations to meet their own needs.

<b>Temporary or permanent effects</b>	Effects may be considered as temporary or permanent. In the case of wind energy development, the application is for a 25-year period after which the assessment assumes that decommissioning will occur and that the site will be restored. For these reasons the development is referred to as long term and reversible.
<b>Time Depth</b>	Historical layering – the idea of landscape as a ‘palimpsest’, a much written- over asset of landscape.
<b>Townscape</b>	The character and composition of the built environment including the buildings and the relationships between them, the different types of urban open space, including green spaces, and the relationship between buildings and open spaces.
<b>Type or Nature of Effect</b>	Whether an effect is direct or indirect, temporary or permanent, positive (beneficial), neutral or negative (adverse) or cumulative.
<b>Viewpoints</b>	<p>Selected for illustration of the visual effects fall broadly into three groups: Representative Viewpoints: selected to represent the experience of different types of visual receptor, where larger numbers of viewpoints cannot all be included individually and where the significant effects are unlikely to differ – for example certain points may be chosen to represent the view of users of particular public footpaths and bridleways;</p> <p>Specific Viewpoints: chosen because they are key and sometimes promoted viewpoints within the landscape, including for example specific local visitor attractions, such as landscapes with statutory landscape designations or viewpoints with particular cultural landscape associations.</p> <p>Illustrative Viewpoints: chosen specifically to demonstrate a particular effect or specific issues, which might, for example, be the restricted visibility at certain locations. (GLVIA3 2013, Para 6.19)</p>
<b>Visual amenity*</b>	The overall pleasantness of the views people enjoy of their surroundings, which provide an attractive visual setting or backdrop for the enjoyment of activities of the people living, working, recreating, visiting or travelling through an area.



<b>Visual Dominance</b>	A visual effect often referred to in respect of residential properties that in relation to development would be subject to blocking of views, or reduction of light / shadowing, and high levels of visual intrusion.
<b>Visual Effect*</b>	Effects on specific views and on the general visual amenity experienced by people.
<b>Visual Receptors*</b>	Individuals and/or defined groups of people who have the potential to be affected by a proposal.
<b>Visual Sensitivity*</b>	The sensitivity of visual receptors such as residents, relative to their location and context, to visual change proposed by development.
<b>Visualisation</b>	Computer visualisation, photomontage, or other technique to illustrate the appearance of the development from a known location.
<b>Wireline or Wireframe</b>	A computer-generated line drawing of the DTM (digital terrain model) and the Proposed Development from a known location.
<b>Zone of Theoretical Visibility (ZTV)*</b>	A map, usually digitally produced, showing areas of land within which a development is theoretical visible.