BEACON FEN ENERGY PARK

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Appendix 6.2 – Landscape and Visual Methodology

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The Planning Act 2008
The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(a)
The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (SI 2017/572) – Regulation 14

Quality information

Prepared by	Checked by	Verified by	Approved by
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1. Appendix 6.2 Landscape and Visual Methodology

1.1 General Approach

1.1.1 Landscape effects associated with a development relate to changes to the fabric, character, and quality of the landscape as a receptor and how it is experienced.

1.1.2 Visual effects relate closely to landscape effects, but they concern changes in views and visual amenity. Visual assessment concerns people's perception and response to changes in visual amenity.

1.1.3 Both landscape and visual effects can be adverse, beneficial or neutral, short, medium or long term, permanent or temporary, reversible or irreversible, direct (an effect that is directly attributable to the proposed development) or indirect (effects resulting indirectly from the development as a consequence of the direct effects), and cumulative, relating to additional changes that may arise when the proposed development is considered in conjunction with other similar developments.

1.1.4 The methodology for this Landscape and Visual Impact Assessment (LVIA) follows the recommendations and guidelines set out in the following report guidelines for Landscape and Visual Impact Assessment, Third Edition (GLVIA 3)[1]; and other guidance as listed below.

- Landscape Character Assessment Guidance2;
- Technical Guidance Note TGN 06/19 Visual Representation of development proposal3;
- An approach to landscape sensitivity assessment4;
- Assessing landscape value outside national designations, Technical Guidance Note5; and
- Residential Visual Amenity Assessment (RVAA) Technical Guidance Note6.

1.1.5 The GLVIA 3 also stresses that the approach to the assessment needs to be proportionate to the scale of the project being assessed and the nature of the likely effects.

1.1.6 With regard to use of the guidance, GLVIA 3 (paragraph 1.20) states that:

"The guidance…is not intended to be prescriptive, in that it does not provide a 'recipe' that can be followed in every situation. It is always the primary responsibility of any landscape professional carrying out an assessment to

[1] Guidelines for Landscape and Visual Impact Assessment, Third Edition, by the Landscape Institute and Institute of Environmental Management and Assessment (2013);
[2] An Approach to Landscape Character Assessment, Guidelines for Landscape and Visual Impact Assessment, Christine Tudor, Natural England (2014);
[3] Visual Representation of Development Proposals, Technical Guidance Note 06/19, The Landscape Institute (2019);
[4] An approach to landscape sensitivity assessment – to inform spatial planning and land management, Christine Tudor, Natural England (2019)
[5] Assessing landscape value outside national designations, Technical Guidance Note 02/21, The Landscape Institute (2021)
[6] Residential Visual Amenity Assessment (RVAA), Technical Guidance Note 2/19, The Landscape Institute (2019).

ensure that the approach and methodology adopted are appropriate to the particular circumstances".

The assessment has therefore, utilised a defined set of criteria to assess the potential landscape and visual effects of the proposed development that reflect the circumstances of the site and the surrounding area.

1.2 Iterative Design and Assessment

1.2.1 The LVIA is part of an iterative EIA process which aims to "design out" significant effects via a range of environmental measures including avoidance and design that aims to reduce or eliminate significant effects. Design is an integrated part of the LVIA process and environmental measures related to landscape design and management can be an important tool to mitigate significant effects. The EIA process involves also a range of environmental and technical specialists that contribute other forms of mitigation that may also bring a range of benefits to the project.

1.3 Assessment of Landscape Effects

General Approach

1.3.1 Paragraph 5.1 of the GLVIA describes the principle of landscape effects assessment:

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

1.3.2 Landscape receptors are described within GLVIA3 (para 5.34) as *"components of the landscape that are likely to be affected by the scheme"*. These can include overall character and key characteristics, individual elements or features and specific aesthetic or perceptual aspects. It is the interaction between the different components of the proposed development (as described above) and these landscape receptors which has the potential to result in landscape effects (both adverse and beneficial).

1.3.3 The landscape receptors include the landscape character of the Site, the Landscape Character Area (LCA) the Site is within, the surrounding LCAs and the designated landscapes within the study area. Potential impacts on the character and the setting of the historic parks and gardens, conservation areas, listed buildings and scheduled monuments are considered in the Cultural Heritage Chapter. The effects on ecological designations and habitats are considered in the Biodiversity Chapter.

1.3.4 The level of the landscape effects is determined by a consideration of the sensitivity of the landscape receptors and the magnitude of the change.

1.3.5 The nature or sensitivity of a landscape receptor combines judgements of their susceptibility to the type of change or development proposed and the value attached to the landscape, as defined in the GLVIA glossary and in paragraph 5.39 of GLVIA 3. Paragraph 5.39 of GLVIA 3 also states that LVIA sensitivity is similar to the concept of landscape sensitivity used in landscape planning but

is not the same as it is specific to the particular project or development proposed and its location.

1.3.6 The magnitude of change on the landscape receptors depends upon the size or scale of the changes, the geographical extent of the area influenced, and the duration and reversibility of the effects.

1.4 Landscape Susceptibility

1.4.1 The susceptibility is defined as the ability of the landscape receptor (whether it be the overall character or quality/condition of a particular landscape type or area, an individual element and/or feature, or aesthetic and perceptual aspects) to accommodate the development without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies (see paragraph 5.40 of GLVIA 3).

1.4.2 The susceptibility of a landscape to a particular kind of development depends on the characteristics of the development and the characteristics of the landscape. The following landscape characteristics are good indicators of landscape susceptibility to large-scale solar developments.

1.4.3 The assessment of the susceptibility of the landscape receptor to change is classified as high, medium, low and very low and forms the basis for this assessment using evidence and professional judgment indicators of landscape susceptibility to the type of large scale solar development and are based on the criteria outlined in Table 1.1.

Table 1.1 - Landscape Susceptibility Levels and Criteria with Indicators of Landscape Susceptibility

CRITERIA	SUSCEPTIBILITY LEVELS RANGE FROM HIGH, MEDIUM, LOW TO VERY LOW 
Scale	Large-scale landscapes (large arable fields) will likely be less susceptible to large-scale solar developments than small-scale, intimate landscapes. Landscapes in which small-scale elements are frequently found, such as dense hedgerow network, are likely to be more susceptible to large-scale solar developments.
Enclosure	Landscapes with a high degree of enclosure are likely to be less susceptible to large-scale solar developments than open landscapes.
Landform & Topography	A smooth, convex or flat landform is likely to be less susceptible to large-scale solar developments than a landscape with a dramatic rugged landform, distinct landform features or pronounced undulations and visible ridgelines.
Land Cover Pattern	Ancient and mature or long-established vegetation such as mature trees, woodland and protected hedgerows are likely to be more susceptible to development, particularly where these elements form part of a valued characteristic landscape pattern or feature. Conversely, grassland or arable crops will likely be less susceptible to large-scale solar development.
Landscapes with large-scale built form	Landscapes that contain large-scale infrastructure, major communications routes and large-scale developments are less susceptible to large-scale electrical infrastructure, although development needs to be carefully sited to minimise adverse

CRITERIA	SUSCEPTIBILITY LEVELS RANGE FROM HIGH, MEDIUM, LOW TO VERY LOW
	effects and cumulative impacts. Landscapes with little intrusion from modern development are more susceptible to large-scale electrical infrastructure.
Remoteness, Naturalness, Wildness/Tranquillity	Landscapes that are acknowledged to be particularly scenic, wild or tranquil are generally considered to be more susceptible to development in comparison to ordinary, cultivated or forested or developed landscapes where perceptions of "wildness" are less tangible. Landscapes which are either remote or appear natural may vary in their susceptibility to large-scale solar development.
Landmark features	Historic or other recognised landmarks in published information that are widely considered as important views (e.g. to distinctive church spires/towers), or views to and from historic features in the landscape increase susceptibility.
Skyline	Prominent and distinctive skylines and horizons with important landmark features that are identified in the landscape character assessments, are generally considered to be more susceptible to a large-scale solar schemes in comparison to broad, simple skylines which lack landmark features or contain other infrastructure features.

1.5 Landscape Value

1.5.1 As part of the baseline descriptions, the value of the potentially affected landscapes is established. The GLVIA advises that *"Value can apply to areas of landscape as a whole, or the individual elements, features and aesthetic or perceptual dimensions"* in paragraph 5.19. The value is informed by a combination of desktop studies (various published documents such as the Local Plans, available information on designations local guides and other available information) and field surveys.

1.5.2 The GLVIA (paragraph 5.28) also refers to the surveys and analysis in establishing landscape value:

"In cases where there is no existing evidence to indicate landscape value, and where scoping discussions suggest that it is appropriate, the value should be determined as part of the baseline study through new survey and analysis".

1.5.3 Within paragraph 5.28, Box 5.1 identifies a range of factors to assess landscape value such as landscape quality, scenic quality rarity and others. The list of factors to establish the value of the landscape has been also included in the more recent guidance Assessing landscape value outside national designations[7] TGN 02/21. These factors were used to assess the value of the site, the LCA where the site is located and the wider study area.

1.5.4 Table 1.2 indicates typical landscape value levels and typical descriptions, however, the rationale included in the assessment may vary from the typical descriptions.

[7] Assessing landscape value outside national designations, TGN02/21. The Landscape Institute (2021).

Table 1.2 - Landscape Value

LEVEL	TYPICAL DESCRIPTIONS
High	Landscapes or receptors are highly valued for one or more of their attributes protected by a statutory landscape designation. Landscapes with a strong sense of place, distinct geology, and a large extent of semi-natural habitats, that are important for green infrastructure. Landscape with time depth, providing a vital contribution to heritage setting. The landscape components are in very good condition and absent of detracting features. Landscapes connected with notable people, events, and the arts. Landscapes with a strong sense of identity, rare components, contribute strongly to the character of settlements. Areas highly valued for recreational purposes, with a dense network of PRoWs, National Trails or/and promoted routes. Typically landscapes of high scenic quality, striking landforms and visual diversity with strong perceptual wildness and high tranquillity.
Medium	Locally designated landscape or functionally linked to designated landscape or area of local landscape value likely to be valued by the local communities. Areas that have a positive landscape character but have perceptible signs of human influence, some degradation and erosion of features. Semi-natural habitats are present partially with some contribution to a sense of place and a green infrastructure network. The landscape of considerable time depth, contributing to some extent to the setting of heritage assets. Landscape in a very good condition but influenced by several incongruous features or landscape in good condition, such as agricultural land with some detracting features. Area with a dense network of PRoWs and other recreational opportunities but comprising of components that are typical for the wider study area with the views providing some contribution to the recreational experience. The landscape of medium scenic value and aesthetic qualities, with some distinctive features and distant views of landmarks. Tranquillity and wildness are affected by perceptible human influence.
Low	The receptor is undesignated and has little or no recognised value. Area relatively bland or neutral in character with few/no notable features and/or landscape elements/features that are commonplace or make little contribution to local distinctiveness. Landscape with a small extent of semi-natural habitats, affected considerably by human activity and with few features of heritage interest. Area of declining landscape including detracting features. Recreational value is limited to sparse PRoWs and other recreational opportunities with views providing a little contribution to recreation.
Very Low	Landscapes are detractors from value and/or a landscape that have been strongly altered and degraded with notable signs of erosion to landscape features.

1.6 Landscape Sensitivity to the Proposed Development

1.6.1 Landscape sensitivity to the proposed change is determined by employing professional judgment to combine and analyse the identified value and susceptibility and is defined with reference to the five-point scale outlined below.

Table 1.3 - Landscape Sensitivity

LEVEL	TYPICAL DESCRIPTIONS
Very High	Landscapes that are nationally designated (National Parks and Areas of Outstanding Natural Beauty) and other areas of highest landscape value with qualities that are of high susceptibility to the type of the Proposed Development. Landscapes unable to accommodate the Proposed Development without undue consequences.
High	Locally designated or not designated landscapes exhibiting the landscape elements and characteristics either defined by published landscape character assessment or assessed as constituting higher value. Landscape with limited ability to accommodate the Proposed Development.
Medium	Landscapes exhibiting some of the key characteristics, landscape elements as defined in published landscape character assessments with some elements that are detracting from the key characteristics. Landscape with some ability to accommodate the Proposed Development without undue consequences.
Low	Resilient and robust landscapes with a low susceptibility and able to accommodate the relevant type of development without undue consequences.
Very Low	Landscape is robust or degraded and are not susceptible to change. Landscapes with a high ability to accommodate the Proposed Development.

1.7 Magnitude of Landscape Effects

1.7.1 The nature of the effect that is likely to occur, i.e. its magnitude, is determined by considering size/scale; geographical extent; duration and reversibility.

Size or Scale of Change

1.7.2 The GLVIA requires judgments about the size or scale of change to be experienced as a result of each effect in paragraph 5.49:

"Judgements are needed about the size or scale of change in the landscape that is likely to be experienced as a result of each effect. This should be described, and also categorised on a verbal scale character that distinguishes the amount of change but is not overly complex. For example, the effect of both loss and addition of new features may be judged as major, moderate, minor or none, or other equivalent words".

1.7.3 The size and scale levels, criteria and typical descriptions are included in Table 1.4 below.

Table 1.4 - Size or Scale of Landscape Change

LEVEL	FEATURE/ELEMENT	AESTHETIC/ PERCEPTUAL ASPECT	KEY CHARACTERISTICS /OVERALL CHARACTER
Large	Total or substantial loss, or addition of elements that will substantially alter the existing landscape. Large-scale damage or change to landscape features resulting in the integrity of the landscape being compromised.	Change wholly or largely alters an aesthetic/ perceptual aspect, such that it becomes difficult/ impossible to appreciate when considered against the baseline.	Loss of or changes to the critical key characteristics of the landscape, resulting in a change to the overall landscape character.
Medium	Partial loss, the addition of scheme elements or medium scale damage to landscape features resulting in a partial change to the element/feature which may in some cases diminish its overall integrity.	Change is such that the development has an influence upon an aesthetic/ perceptual aspect but said aspect remains appreciable.	Partial loss or small changes to the key characteristics of the landscape but not resulting in an obvious change to the existing landscape character.
Small	Slight loss or small-scale damage or change to landscape features or the host landscape with its integrity remaining intact.	Change has little tangible effect upon an aesthetic/ perceptual aspect.	Minor changes to key characteristics which result in no or little change to the overall landscape character.
Very Small	Minimal loss to landscape features or the host landscape largely unchanged.	Change has a largely imperceptible effect upon aesthetic/perceptual aspects of the landscape receptor.	Key characteristics of the landscape remain intact with minimal change to the overall landscape character.

1.8 Geographical Extent

1.8.1 Geographical extent refers to the physical area of landscape that will be affected by the Proposed Development recorded on the scale from large, medium, small and very small. This includes the extent of loss to landscape elements and extent of the landscape that will be changed by the Proposed Development through subtraction and addition of new elements.

1.8.2 The geographical extent of landscape change is included in Table 1.5 below.

Table 1.5 - Geographical Extent

LEVEL	TYPICAL DESCRIPTIONS
Large	The effects may influence several landscape types/ character areas.

LEVEL	TYPICAL DESCRIPTIONS
Medium	The effects may influence the landscape type/character area within which the development is located.
Small	The effects may influence the immediate setting of the site.
Very Small	The effects may influence the development site only.

1.9 Duration and Reversibility

1.9.1 The duration of an effect and its reversibility are linked but separate consideration of the criteria for defining these are as below in Tables 1.6 and 1.7.

Table 1.6 - Duration

LEVEL	TYPICAL DESCRIPTIONS
Temporary	Less than 12 months
Short-term	0-5 years
Medium-term	5-10 years
Long-term	10+ years

1.9.2 The reversibility of an effect relates to the prospects and practicality of an effect being able to be reversed and is determined based on the indicative criteria set out in Table 1.7.

Table 1.7 - Reversibility

LEVEL	TYPICAL DESCRIPTIONS
Reversible	Change can be wholly or largely reversed. For example the removal of a solar panel array following decommissioning.
Partially reversible	Change is partially reversible. For example, the restoration of a quarry to something with a different landform but similar ground cover to the baseline.
Irreversible	Change cannot realistically be reversed, i.e. it is permanent.

1.9.3 A professional judgement based on a combination of change in size/scale, geographical extent, duration and reversibility informs the assessment of the magnitude of change. Table 1.8 below explains the identified levels of magnitude and typical descriptions.

Table 1.8 - Criteria for the assessment of the magnitude of landscape effects

LEVEL	TYPICAL DESCRIPTIONS
High	Total loss of or major alteration to key features or perceptual aspects of the baseline and/or the addition of new features are considered to be totally uncharacteristic when set within the attributes of the receiving landscape. The effects would be of a large scale influencing several landscape character types/areas. The effects would be long-term and/or irreversible.
Medium	Partial loss of or alteration to key features or perceptual aspects of the baseline and/or the addition of new features that may be prominent but may not necessarily be considered to be substantially uncharacteristic when set within the attributes of the receiving landscape. The effects would be at the scale of the landscape character type/area within which the proposal lies. The effects would be medium-term and/or partially reversible.

LEVEL	TYPICAL DESCRIPTIONS
Low	Minor loss of or alteration to key features or perceptual aspects of the baseline and/or the addition of new features that may not necessarily be considered to be uncharacteristic when set within the attributes of the receiving landscape. The effects would be at the level of the immediate setting of the site. The effects would be short term and/or reversible.
Very Low	Very minor loss of or alteration to key features or perceptual aspects of the baseline and/or the addition of new features that are not uncharacteristic with the surrounding landscape - approximating the 'no change' situation. The effects would be at the site level, within the development site itself. The effects would be very short term and/or reversible.

1.10 Overall Level of the Landscape Effects

1.10.1 A consideration of the sensitivity of the landscape receptors to the development and the magnitude of the change resulting from the development, determines the level of the predicted effects.

1.10.2 Table 1.9 below explains the identified levels of landscape effects and typical descriptions.

Table 1.9 - Criteria for determining the level of landscape effects

LEVEL	TYPICAL DESCRIPTIONS
Major beneficial	The Proposed Development would considerably and distinctly improve and enhance the existing landscape character, by restoring or enhancing valued characteristic features substantially or entirely lost through other land uses
Moderate beneficial	The Proposed Development would markedly improve and enhance the existing landscape character be restoring or enhancing valued characteristics substantially lost through other land uses
Minor beneficial	The Proposed Development would slightly enhance the existing landscape character and restore valued characteristic features partially lost through other land uses.
Negligible beneficial	The Proposed Development would be compatible with the existing landscape character.
No change	The Proposed Development will alter the landscape character.
Negligible adverse	The Proposed Development will have only a limited adverse effect within the mainly local context.
Minor adverse	The Proposed Development would be slightly at variance with the existing character. The Proposed Development would likely partially remove some valued characteristic features or introduce some features that will not be entirely compatible with the receiving landscape.
Moderate adverse	The Proposed Development would be at variance with the existing character and would detract from, diminish or remove valued characteristic features, elements and/or their setting.
Major adverse	The Proposed Development would be at considerable variance with the existing character, degrading its integrity. The Proposed Development would permanently detract from, diminish or remove the integrity of valued characteristic features, characteristics, aesthetic or perceptual qualities, elements and/or their setting, particularly rare or distinctive landscapes.

1.11 Assessment of Visual Effects

General Approach

1.11.1 The visual assessment identifies people within the study area, who will be affected by changes to views and visual amenity, referred to as 'visual receptors'. Visual receptors include residents, visitors, recreational receptors, workers and people travelling through the landscape.

1.11.2 As with landscape effects, a consideration of the sensitivity of visual receptors (people) and the magnitude of the change determines the level of the predicted effect on views and visual amenity.

1.11.3 The nature or sensitivity of visual receptors considers their susceptibility to the type of change or development proposed and the value people attach to the affected views (GLVIA 3, paragraph 6.31).

1.11.4 The nature or magnitude of the effects on visual receptors depends upon the size or scale of the changes, the geographical extent of the area influenced, and the duration and reversibility of the effects. In visual assessment the magnitude is also determined by the distance from the viewer, the extent of change in the field of vision, the proportion or number of viewers affected and the duration of activity apparent from each viewpoint, or a sequence of points that may have transient views, for instance along a road.

1.12 Visual Susceptibility

1.12.1 As described in the paragraph 6.31 of the GLVIA 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 focused on the views and the visual amenity they experience at particular locations*".

1.12.2 The receptors most susceptible 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 contribute to the setting of the properties. Conversely, those considered least susceptible 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 their focus is on the work activity.

1.12.3 Table 1.10 below includes a range of criteria for identified levels of susceptibility: high, medium, low and very low. Susceptibility may be reduced in relation to the proposed development of lesser incongruity for the identified receptors.

Table 1.10 - Visual susceptibility to change

LEVEL	TYPICAL DESCRIPTIONS
High	Typical Receptors include: Residents at home; People engaged in outdoor recreation, whose attention/interest is likely

LEVEL	TYPICAL DESCRIPTIONS
	to be focused on the landscape or particular views, including strategic/popular public rights of way; Visitors to heritage assets or other attractions, where views of the surroundings are a important contributor to the experience; Communities where views contribute to the landscape setting enjoyed by residents; Travellers on identified scenic routes which people take to experience or enjoy the view.
Medium	Typical Receptors include: Travellers on road, rail, or other transport routes who anticipate some enjoyment of landscape as part of the journey but where the attention is not primarily focused on the landscape; Users of local, and less used Public Rights of Way or where the attention is not focused on the landscape; People staying at schools, hotels and healthcare institutions have periods of time when their attention may be focused on the landscape, whilst at other times attention is more likely to be focused on other activities.
Low	Typical Receptors include: Travellers on road, rail or other transport routes not focused on the landscape/particular views e.g. on motorways and "A" road or commuter routes; People engaged in outdoor sport/recreation which does not involve/depend upon the appreciation of views of the landscape.
Very Low	Typical Receptors include: People at their place of work whose attention may be focused on their work/activity and not their surroundings.

1.13 Visual Value

1.13.1 GLVIA3 paragraph 6.37 provides a list of indicators of the value of views:

- *"Appearance in guidebooks our tourist maps;*
- *Provision of facilities, such as parking places, signboards and interpretive materials; and*
- *References in literature or art".*

1.13.2 The assessment of the value of views will also be informed by the location of the viewing place and the quality or designation of the existing elements in the view, set out in Table 1.11 below.

Table 1.11 - Visual Value

LEVEL	TYPICAL DESCRIPTIONS
High	A recognised high-quality view, well-frequented and/or promoted as a beauty spot/visitor destination. A view with cultural associations (recognised in art, literature or other media). A view that relates to the experience of other features, for example, heritage assets in which landscape or visual factors are a consideration. A view that is likely to be an important part of or primary reason for the receptors being there
Medium	A view, whilst it may be valued locally, is not widely recognised for its quality or has low visitor numbers. The view has no strong cultural associations. An attractive view which is however unlikely to be the receptor's primary

LEVEL	TYPICAL DESCRIPTIONS
	reason for being there.
Low	An ordinary, but not necessarily unattractive view, with no recognised quality which is unlikely to be visited specifically to experience the views available. Although the view may be appreciated by receptors, it is typically incidental to the receptor's reason for being there.
Very low	A poor quality or degraded view which is unvalued or discordant and is unlikely to be the receptor's reason for being there. A view that detracts from the receptors experience of being there.

Visual Sensitivity

1.13.3 As stated above, the sensitivity of visual receptors combines the judgments on the susceptibility of visual receptors and the value attached to the views. The visual sensitivity levels and typical criteria are included in Table 1.12 below.

Table 1.12 - Visual Sensitivity

LEVEL	TYPICAL DESCRIPTIONS
Very High	A designated view or highly promoted view of a designated landscape or international or national feature.
High	Activity resulting in a particular interest or appreciation of the view (e.g. residents with attractive views or views of recognised value, or people engaged in outdoor recreation whose attention is focused on the landscape and where people might visit purely to experience the view, such as promoted viewpoints) and/or a view of national value (e.g. within/towards a designated landscape).
Medium	Activity resulting in a general interest or appreciation of the view (e.g. residents in urban areas or people engaged in outdoor recreation that does not focus on an appreciation of the landscape, outdoor workers, people in schools or other institutional buildings and hotels and people passing through the landscape on defined scenic routes) and/or a view of local or community value (e.g. suburban residential areas, or agricultural land or urban areas).
Low	Activity, where interest or appreciation of the view is secondary to the activity or the period of exposure to the view, is limited (e.g. people at work, motorists travelling through the area or people engaged in outdoor recreation that does not focus on an appreciation of the landscape) and/or a view of limited value (e.g. featureless agricultural landscape, poor quality urban fringe).
Very Low	An activity where interest or appreciation of the view is inconsequential (e.g. people at work with limited views out, or drivers of vehicles) and/or very low value of existing view (e.g. industrial areas or derelict land).

Magnitude of Visual Effects

1.13.4 The guidance provided in GLVIA3 (para 6.38) requires that several variables, such as visual size/scale, geographical extent, duration and reversibility to be evaluated for each of the visual effects identified.

Visual Size or Scale of Change

1.13.5 An assessment is made of the size or scale of change in the view that is likely to be experienced as a result of the Proposed Development, based on the following criteria.

- Size: This criterion refers to the amount of the project that will be seen. Visibility may range from a small, partial to wholly visible Proposed Development; and
- Scale: The scale of the change in the view, with respect to the loss or addition of features in the view and changes to in its composition. The scale of the Proposed Development may appear larger or smaller relative to the scale of the receiving landscape.

1.13.6 Other parameters of the view relating to scale and size include distance, contrast and as to whether the Proposed Development will affect skyline views or where the Proposed Development is viewed against contrasting background.

1.13.7 The size and scale levels and typical descriptions are included in Table 1.13 below.

Table 1.13 - Size or scale of change in views

LEVEL	TYPICAL DESCRIPTIONS
Large	The proposed development may result in extensive changes to the existing view (including the loss of existing characteristic features and/or introduction of new discordant landscape features); and/or A change to an extensive proportion of the view; and/or Views where the proposed development would become the dominant landscape feature or contrast heavily with the current scene. Little or no scope for adequate mitigation.
Medium	Changes will result in alteration to the view but do not fundamentally change its characteristics. Changes that would be immediately visible but not be the key features of the view. Partial mitigation is present or possible.
Small	Changes which would not result in a change to the composition of the view. Changes that would only affect a small portion of the view or introduce new features that could be screened. Partial or full mitigation is present or possible.

Geographical Extent

1.13.8 The geographical extent of an effect is determined by the indicative criteria set out in Table 1.14 below. It should be noted that whether a view is at short, medium or long-range the geographical extent will vary depending upon the type of the Proposed Development.

1.13.9 The geographical extent of landscape change is included in Table 1.14 below.

Table 1.14 - Size or Scale of Landscape Change

LEVEL	TYPICAL DESCRIPTIONS
Large	Changes where the proposed development is located are in the main focus of the view; and/or at close range; and/or over a large area.
Medium	Changes where the proposed development is located obliquely to the main focus of the view; and/or at medium range; and/or over a narrow area.
Small	Changes where the proposed development is located on the periphery of the main focus of the view; and/or at long range; and/or

LEVEL	TYPICAL DESCRIPTIONS
	over a small area.

Duration and Reversibility

1.13.10 The duration of an effect and its reversibility are linked but separate consideration of the criteria for defining these are as below in Tables 1.15 and 1.16

Table 1.15 - Duration

LEVEL	TYPICAL DESCRIPTIONS
Temporary	Less than 12 months
Short-term	0-5 years
Medium-term	5-10 years
Long-term	10+ years

1.13.11 The reversibility of an effect relates to the prospects and practicality of an effect being able to be reversed and is determined based on the indicative criteria set out in Table 1.16.

Table 1.16 - Reversibility

LEVEL	TYPICAL DESCRIPTIONS
Reversible	Change can be wholly or largely reversed. For example the removal of a wind farm or solar farm development following decommissioning.
Partially reversible	Change is partially reversible. For example the restoration of land use that will be similar in nature to the existing baseline.
Irreversible	Change cannot realistically be reversed, i.e. it is permanent.

1.13.12 A professional judgement based on a combination of change in size/scale, geographical extent, duration and reversibility and informs the assessment of the magnitude of change. Table 1.17 below explains the identified levels of magnitude and typical descriptions.

1.13.13 Table 1.17 explains how criteria are applied to arrive at an assessment of the magnitude of visual effects.

Table 1.17 - Magnitude of Visual Effects

LEVEL	TYPICAL DESCRIPTIONS
High	Total loss of or major alteration to views and/or the addition of new features that would be very prominent, and/or would greatly contrast with the existing view. Full, open views, experienced for the majority of a journey or full duration of an activity. The views would be close, direct and/or totally occupied by the proposed development. The effects would be long term and/or irreversible
Medium	Partial loss of or alteration to views and/or the addition of new features that would be prominent, and/or would contrast with the existing view. Partial views, experienced for part of a journey or activity. The views would be middle distance, partially oblique and/or partially occupied by the proposed development. The effects would be medium term and/or partially reversible
Low	Minor loss of or alteration to views and/or the addition of new features that would not be prominent, and/or would not contrast with the existing view. Glimpsed views, experienced for a small part of a journey or activity.

LEVEL	TYPICAL DESCRIPTIONS
	The views would be distant, oblique and/or only a small part of the view would be occupied by the proposed development. The effects would be short term and/or reversible
Very Low	Very minor loss of or alteration to views and/or the addition of new features that would be almost imperceptible - approximating the ' no change' situation. Very brief glimpsed views. The views would be very distant, very oblique and/or only a tiny part of the view would be occupied by the proposed development. The effects would be very short term and/or reversible.

1.14 Overall Level of Visual Effects

1.14.1 As with landscape effects, a consideration of the sensitivity of the visual receptors to the development and the magnitude of the change resulting from the development, determines the overall level of the predicted impact. Table 1.18 identifies visual sensitivity levels and typical descriptions.

Table 1.18 - Criteria for Determining the Overall Level of Visual Effects

LEVEL	TYPICAL DESCRIPTIONS
Major beneficial	The Proposed Development will result in a very beneficial change in the key characteristics of a view or visual amenity or will introduce elements that notably improve the qualities of the existing view or visual amenity. The change in the views will conserve and enhance the integrity of landscape elements in the views.
Moderate beneficial	The Proposed Development will result in a notable beneficial change in the key characteristics of the view or visual amenity or will introduce elements that are largely in keeping with the qualities of the existing view or visual amenity. The Proposed Development will notably conserve or enhance the integrity of visual character.
Minor beneficial	The Proposed Development will result in some small change in the key characteristics of the view or visual amenity or will introduce elements largely characteristic of the qualities of the existing view or visual amenity such as massing, scale, pattern and some small appropriate features. The Proposed Development will marginally conserve or enhance the integrity of visual character.
Negligible beneficial	The Proposed Development will result in some very small positive changes in the key characteristics of the view or visual amenity or will introduce elements of character to the qualities of the existing view or visual amenity such as massing, scale, pattern and features that can be considered appropriate; and/or the proposals will very slightly improve or enhance the integrity of visual character in a barely perceptible way.
No change	The Proposed Development will not be visible in the views. There will be no change to baseline views.
Negligible adverse	The proposals will result in some very small adverse change in the key characteristics of the view or will introduce elements characteristic to the qualities of the existing scene such as massing, scale, pattern and features that can be considered inappropriate; and/or the proposals will very slightly reduce or degrade the integrity of view or visual amenity in a barely perceptible way; and/or the proposals and resulting effects are in

LEVEL	TYPICAL DESCRIPTIONS
	some very small part in conflict with landscape planning objectives and/or result in a very small loss, or alteration of elements features or characteristics that are perceivable but not necessarily obvious.
Minor adverse	The Proposed Development will result in some small changes in the key characteristics of the view or will introduce elements largely characteristic to the qualities of the existing scene such as massing, scale, pattern and some small inappropriate features; and/or the proposals will marginally reduce or degrade the integrity of view or visual amenity.
Moderate adverse	The proposals will result in a partial change in the key characteristics of the view or an area's visual amenity or will introduce prominent elements or partly uncharacteristic to the qualities of the scene such as scale, pattern, and some inappropriate features; and/or the proposals will notably reduce or degrade the integrity of the view or visual amenity.
Major adverse	The Proposed Development will result in a total change in the key characteristics of the view or an area's visual amenity or will introduce elements totally uncharacteristic to the qualities of the scene such as scale, pattern; and/or the proposals will destroy or permanently degrade the qualities of the visual character.

1.15 Significant Effects

1.15.1 Assessment of landscape and visual sensitivity to the proposed development are a result of combining judgments regarding value and susceptibility. The sensitivity levels are recorded on the scale of very high, high, medium, low and very low, accompanied by clear justification. Judgements about the magnitude of change for landscape effects are recorded on a verbal scale of high, medium, low and negligible, based on the principles set out in GLVIA3 paragraphs 5.48-5.52 which includes a consideration of scale, geographical extent and the duration and reversibility of the landscape effects.

1.15.2 The GLVIA references the requirement for a final judgment on whether the effects are considered significant or not in p.3.32 *"…..There are no hard and fast rules about what effects should be deemed 'significant'*", but LVIAs should always distinguish clearly between what are considered to be the significant and not significant effects.

1.15.3 The GLVIA in p3.35-3.36 emphasises the identification of significant effects through narrative text in explaining the judgments on significance. This methodology includes, however, a diagram and a matrix, both illustrating how the magnitude and nature of receptors (significance) are combined to reach the judgments on the significance of effects.

1.15.4 Figure 1.1 below gives an approximation as to how sensitivity and magnitude can be considered together to determine the significance of the effects. The diagram is indicative of a continuum of effects which are assessed by professional judgement and justification; further clarification of the type of effects which are likely within each category can be found in Table 1.8 and 1.17

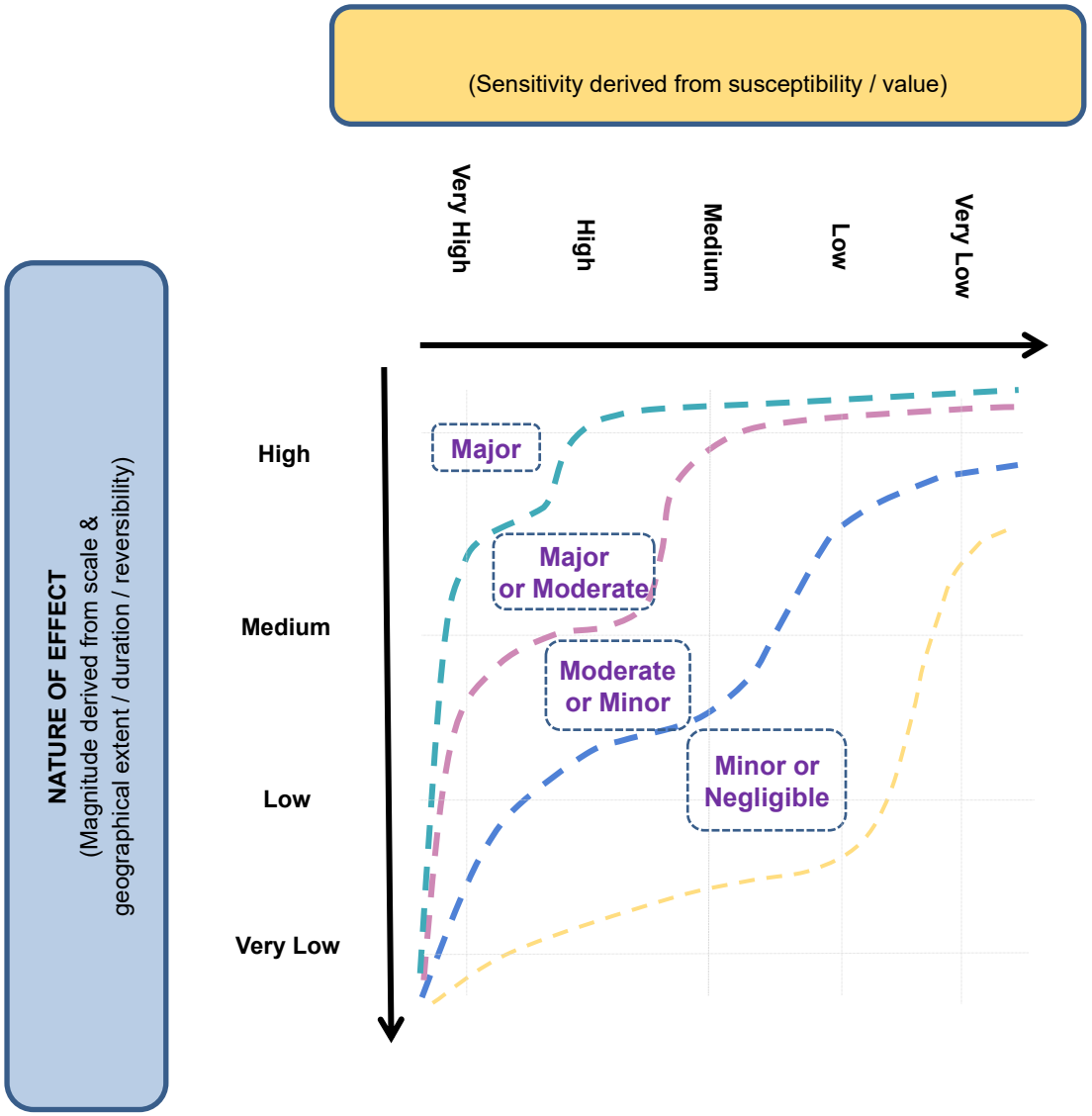

Figure 1.1: Combining Nature of Effect/Nature of Receptor to Define Indicative Importance Effect Categories

1.15.5 Effects predicted to be minor or negligible are considered to be 'non-significant'. Major and moderate effects are considered to be 'significant' and require weighing in the planning balance against other benefits of the Proposed Development.

1.15.6 The judgments on significance involve a combination of quantitative and qualitative assessment, and wherever possible, cross-references have been made to objective evidence, baseline figures and photomontages to support the conclusion. The assessment conclusions are informed by consultation, peer reviews and adopting a systematic, impartial and professional approach. The matrix presented in Table 1.19 below should therefore be considered as a guide, and any deviation from this guide will be clearly explained in the assessment.

Table 1.19 - Matrix for Evaluating the Significance

		NATURE OF RECEPTOR (SENSITIVITY)				
		Very high	**High**	**Medium**	**Low**	**Very low**
NATURE OF EFFECT (magnitude)	**High**	Major	Major	Major or moderate	Moderate or Minor	Minor
	Medium	Major	Major or moderate	Moderate or Minor	Minor	Minor or Negligible
	Low	Major or Moderate	Minor or Moderate	Minor	Minor or Negligible	Negligible
	Very low	Minor or Moderate	Minor	Minor or Negligible	Negligible	Negligible

1.16 Direct and Indirect Effects

1.16.1 Direct and indirect landscape effects are defined in GLVIA3. Direct effects may be defined as resulting *"directly from the development itself"* (paragraph 3.22). An indirect (or secondary) effect is one that results *"from consequential change resulting from the development"* (paragraph 3.22) and is often produced away from the site of a development or as a result of a complex pathway or secondary association.

1.16.2 The direct or physical landscape effects of the proposed Development would generally be limited to within the planning application boundary. The indirect landscape effects are concerned primarily with the visual effects and relate to effects associated with the introduction of the Proposed Development seen in the context of the existing landscape and visual character of the view.

1.16.3 Visual effects are generally considered as direct effects. An indirect visual effect may however be used to define a visual effect on a view that is not in the direction of the main view e.g. views of road users or vistas available in multiple direction.

1.17 Assessing Cumulative Landscape and Visual Effects

Cumulative Effects

1.17.1 The GLVIA 3rd edition references the definition of cumulative effects from the GLVIA 2nd edition in paragraph 7.2:

"The 2002 edition of these guidelines defined cumulative landscape and visual effects as those that: result from additional changes to the landscape or visual amenity caused by the proposed development in conjunction with other developments (associated with or separate to it), or actions that occurred in the past, present or are likely to occur in the foreseeable future".

1.17.2 The assessment of cumulative effects is essentially the same as the main assessment of the Proposed Development, in that the level of landscape and the visual effect is determined by assessing the sensitivity of the landscape or visual receptor and the magnitude of change. Cumulative assessment, however, considers the magnitude of change posed by the addition of the development to other developments.

Cumulative Landscape Effects

1.17.3 Cumulative landscape effects are likely to include effects:

- On the fabric of the landscape as a result of removal of 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 – for example its scale, sense of enclosure, diversity, pattern and colour, and/or on its perceptual or experiential attributes, such as a sense of naturalness, remoteness 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 the modification of key characteristics and possible creation of new landscape character if the changes are substantial enough.

1.17.4 The assessment is focused on the evaluation of the magnitude of change in the landscape character of the study area.

1.17.5 The magnitude of change to landscape character is considered in a similar way to the magnitude of change relating to the Proposed Development and is focused on the assessment of scale/size, geographical extent, duration, and reversibility. The significance of cumulative landscape effects combines judgements of sensitivity and magnitude of change.

1.17.6 The GLVIA highlights that the most important cumulative landscape effects *"are likely to be those that would give rise to changes in the landscape character of the study area of such an extent as to have major effects on its key characteristics, and even, in some cases, to transform it into a different type"*.

Cumulative Visual Effects

1.17.7 Similarly, the assessment of cumulative visual effects combines judgments on sensitivity already established for the identified visual receptors and the magnitude of change that also considers other schemes in the study area. The magnitude of change as a result of cumulative effects requires consideration of the scale/size, geographical extent, duration and reversibility due to change caused by multiple developments.

1.17.8 The study of cumulative visual effects concerns the effects on views and visual amenity enjoyed by people, which may result either from adding the effects of the development to other developments or their combined effect. This study has considered the potential for the effects given in Table 1.19 (taken from GLVIA 3, Table 7.1).

Table 1.19 - Types of Cumulative Visual Effects

GENERIC	SPECIFIC	CHARACTERISTICS
Combined		
Occurs where the observer is able to see two or more developments from one viewpoint	In combination	Where two or more developments are or would be within the observer's arc of vision at the same time without moving her/his head
	In succession	Where the observer has to turn her/his head to see the various developments – actual and visualised
Sequential		
Occurs when 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	Frequently sequential	Where the features appear regularly and with short time lapses between instances depending on speed of travel and distance between the viewpoints
	Occasionally sequential	Where longer time lapses between appearances would occur because the observer is moving very slowly and/or there are larger distances between the viewpoints

1.17.9 The GLVIA highlights in paragraph 7.38, that higher levels of significance may arise from cumulative visual effects relating to:

- Developments that are in close proximity to the main project and are clearly visible together in views from the selected viewpoints; and
- Developments that are highly inter-visible, with overlapping ZTVs – even though the individual developments may be at some distance from the main project and from individual viewpoints, and when viewed individually, not particularly significant, the overall combined cumulative effect on a viewer at a particular viewpoint may be more significant.

1.18 Residential Visual Amenity Assessment

1.18.1 Residential amenity is a planning matter that involves a range of effects and benefits, of which residential visual amenity is just one component. The Residential Visual Amenity Assessment (RVAA) is limited to the consideration of visual effects on residential amenity and the adopted methodology corresponds with the GLVIA methodology contained within GLVIA 3 and the Landscape Institute's Residential Visual Amenity Assessment Technical Guidance Note, 2019.

1.18.2 Planning law contains a widely understood principle that the outlook or view from a private property is a private interest and therefore not protected by the UK planning system. However the planning system also recognises situations where the effects on residential visual amenity are considered as a matter of public interest.

1.18.3 As a consequence, the RVAA methodology provides a more detailed assessment of residential receptors located in close proximity to the Proposed

Development. This allows a judgment to be made as to whether the residents at these properties would be likely to sustain unsatisfactory living conditions.

1.18.4 The methodology for assessing the visual effects on views from residential properties is, therefore, different from the assessment of other visual receptors and allows for two stages of assessment as follows:

- Stage 1: Undertake a visual assessment to identify the level of effects; and
- Stage 2: Undertake a Residential Visual Amenity Assessment (RVAA).

1.18.5 A residential property included for the assessment needs to be in habitable condition and this does not include other buildings such as barns, outbuildings and other ancillary buildings.

1.18.6 The RVAA assessment can include clusters of residential properties, limited to those shown on the Ordnance Survey mapping in scale 1:25000. Residential properties in planning process and not built yet have not been included in the assessment.

1.18.7 The potential effects on the residential properties is based on the desktop studies including the assessment of the OS information and aerial photography informed by field surveys, although it is acknowledged that the curtilage of the dwellings is typically screened in many cases from roads or PRoWs in the vicinity.

1.18.8 The approach followed in this report is set out in the (TGN) 2/19 'Residential Visual Amenity Assessment'. Paragraph 4.1 of this guidance identifies the following steps of the RVAA.

"1. Definition of study area and scope of the assessment – informed by the description of the proposed development, defining the study area extent and scope of the assessment with respect to the properties to be included.

2. Evaluation of baseline visual amenity at properties to be included having regard to the landscape and visual context and the development proposed.

3. Assessment of likely change to visual amenity of included properties in accordance with GLVIA3 principles and processes.

4. Further assessment of predicted change to visual amenity of properties to be included forming a judgement with respect to the Residential Visual Amenity Threshold."

Step 1

1.18.9 GLVIA3 suggests that the study area should cover the geographical area from which the Proposed Development could be visible. The area should also be proportionate to the Proposed Development and may include professional judgment refinement.

1.18.10 Typically, the extent of the study area is defined by a combination of the ZTV, verified by field surveys. The extent of the study area can also be informed by the requirements of the Local Plan, Evidence Base Documents or informed by a stakeholder consultation.

Step 2

1.18.11 Step 2 of the assessment requires the preparation of visual baseline descriptions with reference to the residential properties identified for the evaluation. The baseline descriptions highlight key qualities of the available views, their nature and extent, alongside the presence of the features in the vicinity of the residential property that influence the visibility. The descriptions also include the domestic curtilage of residential properties, such as garden vegetation and outbuildings, the relationship of the houses with landforms, and key aspects of the views, including the visual experience of arriving or leaving the residential property.

Step 3

1.18.12 The potential visual effects are assessed in line with GLVIA3, and consider the sensitivity of visual receptors, which combines judgments on 'value' and 'susceptibility' to determine the sensitivity of visual receptors. This step also includes the assessment of the magnitude of change as a factor of scale and size, geographical extent, and reversibility. The potential effects are determined by combining the sensitivity with the magnitude of change. The detailed methodology is presented in Appendix 1.

1.18.13 The aim of Step 3 is to identify those properties requiring further assessment in Step 4 in relation to the Residential Visual Amenity Threshold judgement. Typically, the residential receptors where the largest potential effects were identified in step 3 are carried forward into the assessment in section 3. The evaluation is based on the Methodology outlined in Appendix 8.1 and the criteria listed below:

- Distance from the Proposed Development;
- Scale and location of the Proposed Development relative to the property;
- Type and nature of the available views;
- Direction of view/aspect of property affected;
- Extent to which the Proposed Development will be visible;
- Scale of change (loss or addition of features);
- Compositional changes (the extent of the change in the views);
- Degree of contrast or integration of new features;
- Duration (long term, short term, temporary);
- Reversibility (reversible or irreversible); and
- Mitigation opportunities.

Step 4

1.18.14 In step 4, only residential receptors for which major or moderate adverse effects were identified in step 3 are being assessed further to establish whether the Residential Visual Amenity Threshold has been reached. The consideration of the criteria listed above leads to the identification of two types of judgment in respect of the assessed residential properties:

- Residential properties where the Residential Visual Amenity Threshold has been reached; and
- Residential properties where the Residential Visual Amenity Threshold has not been reached.

1.18.15 Factors considered as part of this judgement require consideration as to whether development is 'overwhelming in views in all directions', 'inescapably dominant' or 'unpleasantly encroaching'. If the threshold is reached, it becomes a matter of relevance to the 'Residential Amenity' of the property and, therefore, a matter for consideration in the planning process.

1.19 Methodology for the Production of the Zones of Theoretical Visibility (ZTVs)

1.19.1 Zones of Theoretical Visibility (ZTVs) are also referred to as Zones of Visual Influence diagrams (ZVIs) or Visual Envelope Maps (VEMs); however, ZTV is the preferred term as it emphasises the key factors of the plans – that they are theoretical and that they indicate potential visibility by coloured shading overlain on an Ordnance Survey background to illustrate the theoretical visibility of the Proposed Development.

1.19.2 ZTVs are a desk-based technique and provide a framework to inform the subsequent fieldwork. They do not convey the nature or significance of the effects.

1.19.3 For this project, the theoretical visibility is based on the bare ground topography mapped using the Digital Terrain Model (DTM). The location and height data for the proposed solar panels and associated structures within the site were then added to the DTM. Arc GIS software was used to compute theoretical inter-visibility, which takes into account the curvature of the Earth. The screened ZTV also included the height of buildings included within OS MasterMap Data Set and vegetation mapped using National Tree Map (NTM) data to a maximum height. The NTM mapping includes all tree over 3m in height with the accuracy up to 1m A bare-ground ZTV takes into account only landform within the limitation of the baseline data.

1.19.4 The ZTV is indicative of general areas from which the whole or part of the Development could be potentially visible, within the limits of accuracy of the data used. The ZTV analysis does not indicate the magnitude of impact, merely the presence of a theoretical line of sight. They also do not address the impact of distance on the effects.

1.19.5 The results of the analysis are mapped by colour shading onto the OS base map to indicate if any of the development is theoretically visible.

1.19.6 The ZTV analysis uses a test height from the normal eye level of a standing person (at approximately 2m above ground level).

Viewpoint Selection

1.19.7 Viewpoints are chosen to illustrate the potential visual effects of a scheme. The principal criterion is that they must be representative of the range of views and viewer types likely to experience the development (paragraphs 6.19 and 6.20 of GLVIA 3). Specific points may also be chosen because they are important existing viewpoints in the landscape. Where a inaccessible receptor was selected e.g. residential property, the viewpoint photography was taken from a nearby road or PRoW and the assessment was informed by field surveys and desktop studies.

1.19.8 View types can include:

- Areas of high value such as designated landscapes, long distance footpaths and cycle routes, etc.;
- Illustrations of different LCTs, rather than specific receptors;
- Viewpoints that may have wide panoramic views or, by contrast, focused views;
- Viewpoints at different distances from the site;
- Viewpoints at different elevations; and
- Viewpoints from different aspects.

1.19.9 Viewer types can include:

- Views from residences, roads or recreational points where visitors may experience the landscape; and
- Viewpoints where viewers would be likely to be stationary, as well as those where they would be moving through the landscape.

1.19.10 A series of photographs were taken during a site visits. The photographs were taken with a full-frame digital SLR camera with a 50mm fixed length, mounted on a stable, levelled tripod with a professional panoramic head attached. This positions the focal centre of the camera lens above the pivot of the tripod and allows the photographs to be stitched together accurately using the PTGui Pro software.

1.20 Methodology for the Production of the Photomontages

1.20.1 The photographs and photomontages produced for this LVIA are in accordance with Landscape Institute Technical Guidance Note 06/19[8] on the visual representation of development proposals. The photomontages are Type 3 photomontages.

1.21 Use of Photomontages

1.21.1 Photomontages are intended to provide an indication of how a photograph from a chosen viewpoint would look if the development were already operational. Therefore, they must be constructed accurately in order that they can be demonstrated to be a fair representation.

1.22 Photography

1.22.1 The photographs were taken with a full frame digital SLR camera (Nikon D750) with a fixed 50mm lens, mounted on a stable, levelled tripod with a professional panoramic head attached. This positions the focal centre of the camera lens above the pivot of the tripod and allows the photographs to be stitched together accurately using software. The position of the viewpoint location was recorded using a GPS receiver.

[8] Visual representation of development proposals, Landscape Institute Technical Guidance Note 06/19 (17 September 2019)

1.23 Photomontage

1.23.1 A correctly dimensioned 3D model of the development was generated by the computer software. This was placed onto the DTM to scale, and in the correct position, along with existing features from the Digital Terrain Model (DTM).

1.23.2 For each photomontage viewpoint, the detailed model was rendered to a digital image using a lighting model in the computer software consistent with conditions within the photograph of that viewpoint. The rendered image used the same viewpoint, bearing and field of view parameters as the baseline photograph.

1.23.3 The photomontages were produced by overlaying the rendered image on the photograph. Final adjustments were then made to the brightness and contrast of the rendered image to match it to the photograph. Any rendered items that would be obscured by foreground detail within the photograph were then digitally removed or screened by the proposed mitigation illustrated on the Photomontages for years 1 and 15 using Photoshop. The resulting photomontage was then saved as high-resolution full-colour digital images.

1.23.4 For this LVIA, the photomontages have been presented with a horizontal field of view of 90 degrees to illustrate the full extent of the Proposed Development in the context of the surrounding landscape, along with single-frame images.

1.24 Interpretation

1.24.1 When printed at the correct size, the photographs, wireframes and photomontages should be viewed at a comfortable arm's length.

1.24.2 Where photomontages have been produced, there is an inevitable element of judgement inherent in the representation of the changes shown in the finished image. The process relies upon the judgement of an experienced professional.

1.24.3 Because a photomontage is based upon an actual photograph, it represents the lighting conditions at the time that it was taken. This obviously changes with weather, time of day and season. Therefore, the perceptibility of the changes represented and the visual character of the development could vary from the image created. However, if carefully constructed, the photomontages can provide a very good guide of the position in the view and likely appearance.

1.24.4 Like a photograph, a photomontage is, at best, a representation of a view and, as such, cannot reproduce the actual experience of being at the location depicted.

1.25 Glossary of Terms and Abbreviations

- **AOD** – Above Ordnance Datum
- **AoV** – Angle of view
- **Cumulative landscape effects** – Cumulative landscape effects may result from adding new types of change or from increasing or extending the effects of the main project when it is considered in isolation (GLVIA 3, 2013 p124)

- **Cumulative visual effects** – Cumulative visual effects are the effects on views and visual amenity enjoyed by people, which may result either from adding the effects of the project being assessed to the effects of the other projects on the baseline conditions or from their combined effect. This may result from changes in the content and character of the views experienced in particular places due to the introduction of new elements or removal of or damage to existing ones (GLVIA 3, 2013 p129)
- **Designated Landscape** – 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.
- **Environmental Impact Assessment (EIA)** - "*The process of gathering environmental information; describing a development, identifying and describing the likely significant environmental effects of the project; defining ways of preventing / avoiding, reducing or offsetting or compensating for any adverse effects; consulting the general public and specific bodies with responsibilities for the environment; and presenting the results to the competent authority to inform the decision on whether the project should proceed*". (GLVIA 3, 2013 p156)
- **Enhancement** – Refers to landscape, visual or environmental improvements beyond baseline conditions.
- **Field of view** is the horizontal and / or vertical extent of the prospect in view as depicted in the photographs, defined by the angle subtended between the extremities of view frame.
- **FoV** – Field of View – the horizontal angle of the view illustrated in a visualisation.
- **GLVIA 3** – Guidelines for Landscape and Visual Impact Assessment, Third Edition, published jointly by the Landscape Institute of Environmental Management and Assessment, 2013.
- **Indirect effects** – Effects that result indirectly from the Proposed Development as a consequence of the direct effects, often occurring away from the site, or as a result of a sequence of the relationships or a complex pathway. They may be separated by the distance or in time from the source of the effects. Also used to describe indirect landscape effects concerning perceptual characteristics and qualities of the landscape.
- **Iterative design process**
- **Green Infrastructure** - "*Networks of Green Spaces and water courses and water bodies that connect rural areas, villages, towns and cities*". (GLVIA 3, 2013 p156).
- **Key Characteristics** - "*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*". (Natural England 2014 'An Approach to Landscape Character Assessment' p54 & GLVIA 3, 2013 p156-157).
- **Landscape and Visual Assessment (LVIA)** - "*A tool used to identify and assess the likely significance of the effects of change resulting from development both on the landscape and as an environmental resource in its own right and on people's views and visual amenity*". (GLVIA 3, 2013 p157).
- **Landscape Capacity** - "*The degree to which a particular landscape character type or area is able to accommodate change without unacceptable adverse effects on its character. Capacity is likely to vary*

according to the type and nature of the change being proposed". (Natural England 2014 'An Approach to Landscape Character Assessment' p55 (derived from GLVIA 2 2002)).

- **Land cover** – The surface cover of the land, used to describe vegetation types.
- **Landscape effects** – Effects on the landscape as a resource in its own right. Assessment of landscape effects deals with the effects of change and development on landscape resource. The effects include elements that make up the landscape, the aesthetics and perceptual aspects and its distinctive character.
- **Landscape Character** - "*A distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse*". (Natural England 2014 'An Approach to Landscape Character Assessment' p54 & GLVIA 3, 2013 p157).
- **Landscape Character Areas (LCAs)** – *"These are single unique areas which are the discrete geographical areas of a particular landscape type". (GLVIA 3, 2013 p157) This definition is also by Natural England based on the previous version of GLVIA 2 where NE the following text was also included: "Each has its own individual character and identity, even though it shares the same generic characteristics with other types"*. (Natural England 2014 'An Approach to Landscape Character Assessment' p54).
- **Landscape Character Types (LCTs)** - "*These are distinct types of landscape that are relatively homogeneous 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, historical land use, and settlement pattern, and perceptual and aesthetic attributes*". (GLVIA 3, 2013 and Natural England 2014 'An Approach to Landscape Character Assessment' p54, where the NE definition is identical except for the exclusion of 'perceptual and aesthetic attributes' towards the end where the NE definition is based on GLVIA 2).
- **Landscape elements** – Individual parts which make up the landscape, such as for example, trees, hedges and buildings.
- **Landscape means** "*an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors". (European Landscape Convention 2000, para. 2.2, pg.14 (quoted in pg.5 of GLVIA3)). "Landscape is about the relationship between people and place. It provides the setting for our day-to-day lives....It results from the way that different components of our environment - both natural (the influences of geology, soils, climate, flora and fauna) and cultural (the historical and current impact of land use, settlement, enclosure and other human interventions) - interact together and are perceived by us. People's perceptions turn land into the concept of landscape*" (para. 2.2, pg.14 of GLVIA 3).
- **Landscape Quality (or condition)** - *"A measure of the physical state of the landscape. It may include the extent to which typical character is represented in individual areas, the intactness of the landscape and the condition of individual elements"*. (GLVIA 3, 2013 p157).
- **Landscape pattern** – Spatial distribution of landscape elements combining to form patterns, which may be distinctive, recognisable and repetitive.

- **Landscape receptors** - *"Defined aspects of the landscape resource that have the potential to be affected by a proposal"*. (GLVIA 3, 2013 p157).
- **Landscape susceptibility** - *"the ability of the landscape receptor…to accommodate the proposed development without undue consequences for maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies"*. (GLVIA 3, 2013 para5.40, p88-89).
- **Landscape Value** - *"The relative value that is attached to different landscapes by society. A landscape may be valued by different stakeholders for a whole variety of reasons"*. (GLVIA 3, 2013 p157). Or *"The relative value or importance attached to a landscape (often as a basis for designation or recognition), which expresses national or local consensus, because of its quality, special qualities including perceptual aspects such as scenic beauty, tranquillity or wildness, cultural associations or other conservation issues"*. (Natural England 2014 'An Approach to Landscape Character Assessment' p55 (derived from the previous version of GLVIA 2 2002)).
- **Mitigation** – Measures which are proposed to prevent, reduce and where possible offset any material adverse effect (or to avoid, reduce and if possible remedy identified effects. (GLVIA3, 2013 Para 3.37).
- **Perceptual aspects** – A landscape may be valued for its perceptual qualities, notably wildness and/or tranquillity.
- **Rarity** – The presence of rare elements or features in the landscape or the presence of a rare Landscape Character Type. (GLVIA 3,2013, Box 5.1).
- **Representativeness** – Landscapes containing a particular character and or features which are considered as important or forming part of key characteristics.
- **Residential amenity** is understood to involve a combination of sensory factors which inform the living conditions of a property, including the visual, sound / noise and olfactory (smell) environments.
- **Residual effects** – Potential environmental effects, remaining after mitigation.
- **Residential Visual Amenity Assessment –** is the assessment of the overall quality, experience and nature of views and outlook available to occupants of residential properties, including views from gardens and domestic curtilage.
- **Scenic quality** – 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. (GLVIA 2013. Box 5.1)
- **Sensitivity** - *"A term applied to specific receptor, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value to that receptor"*. (GLVIA 3, 2013 p158).
- **Susceptibility** – The ability to a defined landscape or visual receptor to accommodate the specific Proposed Development without undue negative consequences.
- **Time depth** – Historical layering of landscape, also includes settlements.
- **Townscape** – The character and composition of the built environment including the buildings and the relationship between them, the different

types of urban space, including green spaces and the relationship between buildings and open spaces.

- **Type and Nature of effect** – Whether an effect is direct or indirect, temporary or permanent, beneficial, neutral or adverse.
- **Mitigation** – Measures which are proposed to prevent, reduce and where possible offset any material adverse effects (or to avoid, reduce and if possible, remedy identified effects. (GLVIA 3, 2013 Para 3.37).
- **Visual amenity** – *"The overall pleasantness of the views people enjoy of their surroundings, which provides an attractive visual setting or backdrop for the enjoyment of activities for people, living, working, recreating, visiting or travelling through an area"*. (GLVIA 3, 2013 p158). Or Visual receptors *"Individuals and / or defined groups of people who have the potential to be affected by a proposal"*. (GLVIA 3, 2013 p158).
- **Visual effect** – Effect on specific views and on the general visual amenity experienced by people.
- **Visual receptors** - *"Individuals and / or defined groups of people who have the potential to be affected by a proposal"*. (GLVIA 3, 2013 p158). Or Zone of Theoretical Visibility (ZTV) *"A map, usually digitally produced, showing areas of land within which a development is theoretically visible"*. (GLVIA 3, 2013 p159).
- **Visual sensitivity** – The sensitivity of visual receptors – people likely to be affected by the Proposed Development, assessed as a combination of susceptibility and value attached to views.
- **Visualisation** – Computer visualisation, photomontage or other technique to illustrate the appearance of the development from a known location.
- **Zone of Theoretical Visibility (ZTV)** – *"A map, usually digitally produced, showing areas of land within which a development is theoretically visible"*. (GLVIA 3, 2013 p159).