Appendix 6A – Landscape and Visual Impact Assessment (LVIA) Methodology and Glossary

Contents

1.1 Introduction

1.1.1 The Landscape and Visual Assessment (LVIA) identifies, predicts, and evaluates the potential landscape and visual effects that may result from the Project.

1.1.2 This appendix has been structured as follows:

- Overview of LVIA Methodology;
- Data Sources and Site Survey;
- Integrated Design and Assessment;
- Assessing Landscape Effects;
- Assessing Visual Effects;
- Evaluation of Landscape and Visual Effects;
- Nature of Effect;
- Production of Zone of Theoretical Visibility (ZTV)s and Visualisations; and
- Glossary.

1.2 Overview of LVIA Methodology

1.2.1 The LVIA assesses the likely effects of the Project on the landscape and visual resource, encompassing effects on landscape elements, characteristics and landscape character, designated landscapes, visual effects and cumulative effects.

1.2.2 Essentially, the landscape and visual effects are determined by an assessment of the nature or 'sensitivity' of each receptor or group of receptors and the nature of the effect or 'magnitude of change' that would result from the Project. The evaluation of sensitivity takes account of the value and susceptibility of the receptor to the Project. This is combined with an assessment of the magnitude of change which takes account of factors such as the size and scale of the proposed change and the geographical extent. Other factors regarding the nature of the effect such as the duration of change and whether the effect is cumulative are also noted. By combining assessments of sensitivity and magnitude of change, a level of landscape or visual effect as well as the nature of that effect can be evaluated and determined.

1.2.3 The type or nature of effect is described as either direct or indirect; temporary or permanent (reversible); cumulative; and positive, neutral or negative.

1.2.4 The time period for the assessment covers phases of development related to the construction and operation of the Project.

1.2.5 LVIA unavoidably involves qualitative and subjective 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.

Technical guidance and best practice

1.2.6 The methodology for the LVIA accords with the Landscape Institute and IEMA *Guidelines for Landscape and Visual Impact Assessment*, 3rd Edition (GLVIA 3). In addition to planning policy documents and other supporting technical guidance, the LVIA methodology includes, but is not limited to *Visual Representation of Development Proposals*, Landscape Institute Technical Guidance Note 06/19 and *Notes and Clarifications on Aspects of Guidelines for Landscape and Visual Impact Assessment Third edition,* Landscape Institute Technical Guidance Note 2024-01.

Defining the LVIA Study Area

1.2.7 Institute of Environmental Management and Assessment (IEMA) Guidance (IEMA, 2015, 2017) recommends a proportionate EIA focused on the potential likely significant effects of a development. The LVIA Study Area must therefore be large enough to capture all likely significant effects. However, not so large that it may be considered disproportionate, if it makes understanding the key effects of the Project more difficult by including extraneous baseline information, and hence receptors that are unlikely to be significantly affected by the Project.

1.2.8 This is supported by the Landscape Institute in GLVIA3 (2013) paragraph 3.16, which recommends that *"The level of detail provided should be that which is reasonably required to assess the likely significant effects". Paragraph 5.2 also states that "The LVIA Study Area should include the site itself and the full extent of the wider landscape around it which the project may influence in a significant manner"*.

1.2.9 The LVIA Study Area for is therefore proposed to be a maximum 2km radius from the alignment of the cable line, deemed as being appropriate to cover all potentially material landscape and visual effects from the Project. This is broadly defined by the visual envelope of the Site and the anticipated extent of the Zone of Theoretical Visibility (ZTV) arising from the Project itself. This judgement is based upon an understanding of the local landscape character and the scale of the construction and development proposed, as well as a review of LVIA Study Areas for similar projects.

Desk-based and site survey work

1.2.10 The LVIA is informed by desk-based studies and site and field survey work undertaken within the LVIA study area.

1.2.11 A preliminary desk-based assessment was undertaken of landscape and visual receptors using a range of map-based data and related computer and digital analysis including ZTV, digital terrain modelling and wireframe and street view software. This information was used to inform initial assessments and focus the site and field survey work and likely locations for viewpoint photography.

1.2.12 The field studies have included documented visits to all relevant landscape and visual receptors to assess the likely effects of the Project in the field, checking data, 'ground truthing' and examining landscape elements, characteristics / character and views / visual amenity.

1.2.13 Site and field survey activities include:

- Site survey verification of landscape elements within the Site Boundary where potential effects are likely;
- Field survey verification of the ZTV from landscape and visual receptor locations and transport and recreational routes through the LVIA study area;
- Micro-siting of viewpoint locations and recording of panoramic baseline photography and subsequent visual assessment from the assessment viewpoints; and
- Field survey assessment and verification of likely landscape, visual effects.

1.3 Integrated Design and Assessment

1.3.1 Design is an integrated and iterative part of the LVIA process which aims to 'design out' material effects via a design that aims to reduce or eliminate these effects. Mitigation measures related to landscape design and management, where appropriate, can be important tools to mitigate any material effects. Potentially material landscape and visual effects and the constraints and opportunities connected with their resolution are identified through the LVIA process.

Potential effects during Construction

1.3.2 A range of potential effects on the landscape and visual resource are likely during the construction of the Project. An appraisal of the potential effects helps to define the scope of the LVIA and develop an integrated design and mitigation response which can be embedded into the project. The potential effects likely to result from construction are described below.

- **Landscape Effects**:
  - Effects on landscape elements, features and patterns (including, but not limited to soils, landform, ground vegetation, hedgerows / field boundaries, trees / forestry and buildings) as a result of land preparation including site clearance and earthworks;
  - Effects on landscape character and key characteristics, including perceptual characteristics and qualities as a result of construction activities. The construction activities are likely to include the presence of construction staff and machinery, cranes, vehicle movements, contractors' facilities and site access associated with the Project; and
  - Effects on the special landscape qualities and integrity of designated landscapes as a result of the above construction activities.
- **Visual Effects**:
  - Effects on the views and visual amenity experienced by people undertaking various activities at various locations, distances and directions from the proposed land preparation and construction activities. These visual effects could be experienced from one location or sequentially as part of a route through the landscape such as a cycle route or long-distance footpath.

1.3.3 Mitigation and design responses may include a range of design decisions about the location, form, process and timing of construction related infrastructure / operations to mitigate potential landscape and visual effects (avoid, reduce or compensate) as well as reference to a range of best practice behaviours and processes undertaken as part of construction site operation.

Potential Effects during Operation

1.3.4 The potential effects during operation relate principally to the presence of the Project and its on-going maintenance during the operational period. This may lead to long-term effects on landscape and visual receptors.

1.3.5 Mitigation and design responses may include landscape design strategies which aim to control the physical appearance of the Project in terms of its scale, form, colour and number of components. Examples include Landscape Mitigation Plans. Landscape Mitigation Plans illustrate and explain a range of landscape design and management techniques that may be employed to mitigate the effects of Project by enhancing and controlling its landscape setting and visual appearance.

1.4 Assessing Landscape Effects

1.4.1 Landscape Effects are defined by the Landscape Institute in GLVIA 3, paragraphs 5.1 and 5.2 as follows:

> *"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 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 development may influence in a significant manner."*

Landscape character

1.4.2 GLVIA 3, paragraph 5.4, advises that Landscape Character Assessment should be regarded as the main source for baseline studies and identifies the following factors which combine to create areas of distinct landscape character:

- *"the elements that make up the landscape in the study area including:*
  - *physical influences – geology, soils, landform, drainage and water bodies;*
  - *landcover, including different types of vegetation and patterns and types of tree cover;*
  - *the influence of human activity, including land use and management, the character of settlements and buildings, and pattern and type of fields and enclosure;*
  - *the aesthetic and perceptual aspects of the landscape – such as, for example, its scale, complexity, openness, tranquillity or wildness; and*
  - *the overall character of the landscape in the study area, including any distinctive Landscape Character Types or Areas that can be identified, and the particular*

combinations of elements and aesthetic and perceptual aspects that make each distinctive, usually by identification as key characteristics of the landscape."

Landscape effects

1.4.3 The potential landscape effects, occurring during the construction and operation periods of the Project may therefore include, but are not restricted to the following:

- **Changes to landscape elements**: The addition of new elements or the removal of existing elements such as trees, vegetation and buildings and other characteristic elements or valued features of the landscape character;
- **Changes to landscape qualities:** Degradation or erosion of landscape elements and patterns and perceptual characteristics, particularly those that form key characteristic elements of the landscape character or contribute to the landscape value;
- **Changes to landscape character:** Landscape character may be affected through the incremental effect on characteristic elements, landscape patterns and qualities (including perceptual characteristics) and the addition of new features, the magnitude of which is sufficient to alter the overall landscape character within a particular area; and
- **Changes to designated landscapes:** Including nationally and locally designated landscapes that would affect the special landscape qualities underpinning these areas and their integrity.

1.4.4 The Project may have a direct effect on the landscape as well as an indirect effect which would be perceived from the wider landscape, outside the immediate site area and its associated landscape character/ designation. Landscape effects also need to be recognised in terms of natural and man-made processes which can change or alter the landscape over time.

Evaluating landscape sensitivity to change

1.4.5 The assessment of sensitivity takes account of the landscape value and the susceptibility of the receptor to the Project.

1.4.6 Landscape sensitivity often varies in response to both the type and phase of the development proposed and its location, such that sensitivity needs to be considered on a case-by-case basis. It 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 and value, although it may prove to be less sensitive or susceptible to particular development, and of variable sensitivity across its geographical area. Alternatively, an undesignated landscape may be of high sensitivity to a particular development regardless of the lack of local or national designation.

Value of the Landscape Receptor

1.4.7 The value of a landscape receptor reflects the value that society attaches to that landscape. The assessment of the landscape value is classified as 'High', 'Medium', 'Low' or 'Negligible', and the basis for this assessment is made clear using evidence and professional judgement, based on the following range of factors below and as set out in **Table 6A-1**:

- **Landscape designations:** A receptor that lies within the boundary of a recognised landscape related planning designation will be of increased value, depending on the proportion of the receptor that is affected and the level of importance of the designation which may be international, national, regional or local. The absence of designation does not however preclude value, as an undesignated landscape receptor may be valued as a resource at a local level;
- **Landscape quality:** The quality of a landscape receptor is a reflection of its attributes, such as scenic quality, sense of place, rarity and representativeness and the extent to which its valued attributes have remained intact. A landscape with consistent, intact, well-defined and distinctive attributes is considered to be of higher quality and, in turn, higher value, than a landscape where the introduction of elements has detracted from its character; and
- **Landscape experience:** The experiential qualities that can be evoked by a landscape receptor can add to its value. These responses relate to a number of factors including cultural associations that may exist in art, literature or history; the recreational value of the landscape, or the iconic status of the landscape in its own right; and its contribution of other values such as nature conservation or archaeology.

Table 6A-1 – Landscape Receptor Value

Value	Recognition	Features	Quality / Condition
High	Typically, a landscape or feature of international or national recognition: Areas of Outstanding Natural Beauty, National Parks, World Heritage Sites (where designated for landscape reasons), designated landscapes on the Cadw Register.	Typically, a strong sense of place with landscape/features worthy of conservation; no or few detracting features.	A very high-quality landscape/ feature; attractive landscape/ feature; exceptional/ distinctive.
Medium	Regional recognition or undesignated, but locally valued landscape/features: Special Landscape Areas, locally listed designed landscapes and Regional Parks.	Typically, contains distinguishing features worthy of conservation; evidence of some degradation and / or some detracting elements.	Ordinary to good quality landscape/ feature with some potential for substitution; a reasonably attractive landscape/ feature; fairly typical and commonplace.

Value	Recognition	Features	Quality / Condition
Low	Typically, an undesignated landscape/feature.	Few landscape features worthy of conservation, evidence of degradation with many detracting features.	Ordinary landscape/ feature with high potential for substitution; quality that is typically commonplace and unremarkable; limited variety or distinctiveness.
Negligible	Typically, an undesignated landscape/feature.	No landscape features worthy of conservation; evidence of degradation with many detracting features.	Low quality landscape/ feature with very high potential for substitution; limited variety or distinctiveness; commonplace.

Landscape Susceptibility to Change

1.4.8 The susceptibility of a landscape receptor to change is a reflection of its ability to accommodate the changes that will occur as a result of the Project without undue consequences for the maintenance of the baseline situation and / or the achievement of landscape planning policies and strategies. Some landscape receptors are better able to accommodate development than others due to certain characteristics that are indicative of capacity to accommodate change. These characteristics may or may not also be special landscape qualities that underpin designated landscapes.

1.4.9 The assessment of the susceptibility of the landscape receptor to change is classified as 'High', 'Medium', 'Low' or 'Negligible', and the basis for this assessment is made clear using evidence and professional judgement. Indicators of landscape susceptibility to the type of development proposed are based on the following criteria and as set out **Table 6A-2**:

- **Overall Strength and Robustness:** Collectively the overall characteristics and qualities of a particular landscape result in a strong and robust landscape that is capable of reasonably accommodating the Project without undue adverse effects on the special landscape qualities (in the case of a designated landscape) or the key characteristics for which an area of landscape character or a particular element it is valued.
- **Landscape Scale and Topography:** The scale and topography are large enough to physically accommodate the development footprint without the requirement of invasive earthworks or drainage. Topographical features such as narrow valleys or more complex and small-scale landforms such as drumlins, incised river valleys / gorges, cliffs or rock outcrops are likely to be more susceptible to this type of development than broad, homogenous topography.
- **Openness** in the landscape may increase susceptibility to change because it can result in wider visibility of the Project, however open landscape may also be larger in scale and simple, which would decrease susceptibility. Conversely enclosed landscapes can offer more screening potential, limiting visibility to a smaller area,

however they may also be smaller scale and more complex which would increase susceptibility.

- **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 the Project, particularly where these elements form part of a valued characteristic landscape pattern or feature. Conversely grassland / or forestry are likely to be less susceptible to this development.
- **Skyline:** Prominent and distinctive skylines and horizons with important landmark features that are identified in the landscape character assessment, are generally considered to be more susceptible to this development in comparison to broad, simple skylines which lack landmark features or contain other infrastructure features.
- **Relationship with other Development and Landmarks:** Contemporary landscapes where there are forms of development (industry, wind farms, mineral extraction or electrical grid connections) that already have a characterising influence result in a lower susceptibility to development in comparison to areas characterised by smaller scale, historic development and landmarks (historic villages with dense settlement patterns and associated buildings such as church towers).
- **Rationale:** Some site locations have an obvious visual rationale for the Project in terms of the available space, access, simplicity and relationship to other similar forms of development. Conversely a site may appear overly constrained and require greater engineering or additional construction activity to accommodate the Project with lower design quality and few embedded environmental measures.
- **Remoteness, Naturalness, Wildness / Tranquillity**: Notably 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 / developed landscapes where perceptions of ‘wildness’ are less tangible. Landscapes which are either remote or appear natural may vary in their susceptibility to development.
- **Landscape Context and Adjacent Landscapes:** The extent to which the Project will influence landscape receptors across the study area relates to the associations that exist between the landscape receptor within which the Project is located and the landscape receptor from which the Project is being experienced. In some situations, this association will be strong, where the landscapes are directly related. For example, adjacent areas of landscape character may share or ‘borrow’ a high number of common characteristics. Landscape elements may be linked to or associated with wider landscape patterns such as individual trees forming part of an avenue or pattern of woodland corpses, for example. In other situations, the association between adjacent landscapes will be weak. The context and visual connection to areas of adjacent landscape character or designations has a bearing on the susceptibility to development.

Table 6A-2 – Susceptibility of the landscape receptor to change

Susceptibility to proposed change	
High	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.
Medium	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.
Low	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.
Negligible	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.

Landscape Sensitivity Rating

1.4.10 An overall sensitivity assessment of the landscape receptor is made by combining the assessment of the value of the landscape character receptor and its susceptibility to change. The evaluation of landscape sensitivity is described as ‘High’, ‘Medium’, ‘Low’ or ‘Negligible’, or by combining individual assessments of the value of the landscape receptor and its susceptibility change. The basis for the assessment is made clear using evidence and professional judgement in the evaluation of sensitivity for each receptor.

1.4.11 Criteria that tend towards higher or lower sensitivity are set out in **Table 6A-3**.

Table 6A-3 – Sensitivity of the landscape receptor to change

Level of sensitivity	Typical characteristics
High	Areas of landscape character that are highly valued for their scenic quality (including most statutorily designated landscapes). Elements/features that could be described as unique or are nationally scarce. Mature vegetation with provenance such as ancient woodland or mature parkland trees. 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. No or limited scope for substitution or positive enhancement.

Level of sensitivity	Typical characteristics
Medium	Areas that have a positive landscape character but include some areas of alteration/degradation/or erosion of features. Perceptual/aesthetic aspects have some vulnerability to unsympathetic 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. Some scope for substitution or positive enhancement.
Low	Damaged or substantially modified landscapes with few characteristic features of value. Capable of absorbing major change. Landscape elements/features that might be considered to detract from landscape character such as obtrusive man-made artefacts (e.g. power lines, large scale developments, etc.). Scope for substitution or positive enhancement.
Negligible	Areas that are relatively bland or neutral in character with few/no notable features. A landscape that includes areas of alteration/degradation or erosion of features. Landscape elements/features that are commonplace or make little contribution to local distinctiveness. Opportunities for the restoration of landscape through mitigation measures associated with the proposal.

Landscape Magnitude of Change

1.4.12 The magnitude of change affecting landscape receptors is an expression of the scale of change that would result from the Project. In assessing the magnitude of change the assessment has focused on the size or scale of change and its geographical extent. The duration and reversibility are stated separately in relation to the assessed effects (i.e. as short / medium / long-term and temporary or permanent).

Size or Scale of Change

1.4.13 This criterion relates to the size or scale of change to the landscape that would arise as a result of the Project, based on the following factors:

- **Landscape Elements**: The degree to which the pattern of elements that makes up the landscape character would be altered by the Project, through the loss, alteration or addition of elements in the landscape. The magnitude of change would generally be higher if the features that make up the landscape character are extensively removed or altered, and / or if many new components are added to the landscape.
- **Landscape Characteristics**: The extent to which the effect of the Project change, (physically or perceptually) the key characteristics of the landscape which may be important to its distinctive character. This may include, for example, the scale of the landform, its relative simplicity, complexity or irregularity, the nature of the landscape context, the grain or orientation of the landscape, the degree to which the receptor is

influenced by external features and the juxtaposition of the Project in relation to these key characteristics.

- **Landscape Character / Designation**: The degree to which landscape character receptors would be changed by the addition of the Project. If the Project is located in a landscape receptor that is already affected by other similar development, this may reduce the magnitude of change if there is a high level of integration, and the developments form a unified and cohesive feature in the landscape. In the case of designated landscapes, the degree of change is considered in light of the effects on the special landscape qualities which underpin the designation and the effect on the integrity of the designation.

  All landscapes change over time and much of that change is managed or planned. Often landscapes will have management objectives for 'protection' or 'accommodation' of development. The scale of change may be localised, or occurring over parts of an area, or more widespread affecting whole landscape character areas and their overall integrity. Developmental change may be time limited or permanent.

- **Distance**: The size and scale of change is also strongly influenced by the proximity of the Project to the receptor and the extent to which the development can be seen as a characterising influence on the landscape. Consequently, the scale or magnitude of change is likely to be lower in respect of landscape receptors that are distant from the Project and / or screened by intervening landform, vegetation and built form to the extent that the scale of their influence on landscape receptors is small or limited. Conversely, landscapes closest to the Site are likely to be most affected. Host landscapes (where the Project is located within a 'host' landscape character unit) would be directly affected whilst adjacent areas of landscape character would be indirectly affected.

Geographical Extent

1.4.14 Landscape effects are described in terms of the geographical extent or physical area that would be affected (described as a linear or area measurement). This should not be confused with the scale of the development or its physical footprint. The manner in which the geographical extent of the landscape effect is described for different landscape receptors is explained as follows:

- **Landscape Elements**: The geographical extent of landscape elements may be objectively measured in terms of numbers, area or linear measurement. For example, the number of trees, area of woodland / or length of hedgerow affected may be recorded.

- **Landscape Character / Characteristics**: The extent of the effects on landscape character will vary depending on the specific nature of the Project. This is not simply an expression of visibility or the extent of the ZTV. It is a specific assessment of the extent of landscape character that would be changed by the Project in terms of its character, key characteristics and elements.

- **Landscape Designations**: In the case of a designated landscape, this refers to the extent the special landscape qualities of the designation, are affected and whether this can be defined in terms of area or linear measurements, or subjectively (with the

support of panel and / or peer review) and whether the integrity of the designation is affected.

Duration and Reversibility

1.4.15 The duration and reversibility of landscape effects is based on the period over which the Project is likely to exist (during construction and operation), and the effects reversed at the end of that period. Long-term, medium-term and short-term landscape effects are defined as follows:

- Permanent Development: No decommissioning, removal or reinstatement is planned.
- Temporary Development: This includes time limited development, such as a longer period of operation where decommissioning for example forms part of the Project or temporary phases of the development such as construction or decommissioning works:
  - Long-term – more than 10 years – essentially assessed as though 'permanent';
  - Medium-term – 6 to 10 years; and
  - Short-term – 1 to 5 years.

1.4.16 Reversibility is a separate, but linked consideration concerning the prospects and practicality of a particular effect being reversed. Some forms of development, such as housing can be considered as permanent, whereas other forms of development may be considered as reversible if they have a limited operational life and after their removal the land would be restored. Mineral workings for example may be partially reversible with the landscape restored, although not completed to the same state as the original.

Landscape Magnitude of Change Rating

1.4.17 The 'magnitude' or 'degree of change' resulting from the Project is described as 'High', 'Medium', 'Low', 'Negligible' or 'Zero'. In assessing the magnitude of change the assessment has focused on the size or scale of change and its geographical extent. The duration and reversibility are stated separately in relation to the assessed effects (i.e. as short / medium / long-term and temporary or permanent). The basis for the assessment of magnitude for each receptor is made clear using evidence and professional judgement.

1.4.18 The levels of magnitude of change that can occur are defined in **Table 6A-4.**

Table 6A-4 – Landscape Magnitude of Change Ratings

Value	Size, Scale and Nature	Geographical Extent	Duration and Reversibility
High	• Considerable change to key features or many existing elements of the landscape. • Introduces elements considered totally uncharacteristic to the existing landscape. • A very noticeable change to the character of the landscape.	Ranging from notable change over extensive area to intensive change over a	Long term; permanent/non-reversible or partially reversible

Value	Size, Scale and Nature	Geographical Extent	Duration and Reversibility
		more limited area.	
Medium	• Some considerable change to existing landscape elements and/or landscape character; discernibly changes the surroundings of a receptor, such that its baseline is partly altered. • Readily noticeable.	Moderate changes in a localised area.	Medium term; semi-permanent or partially reversible.
Low	• 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.	Minor changes in a localised area.	Short term/temporary; partially reversible or reversible.
Negligible	• Hardly noticeable. • Limited or no change in existing landscape elements and/or landscape character. • Barely distinguishable change from baseline conditions.	No change discernible.	Short term/temporary reversible.

Evaluating landscape effects

1.4.19 The level of landscape effect is evaluated through the combination of landscape sensitivity and magnitude of change. This process is assisted by the matrix illustrated in **Table 6A-9** which is used to guide the assessment. The factors considered in the evaluation of the sensitivity and the magnitude of the change resulting from the Project and their conclusion, will be presented in a comprehensive, clear and transparent manner.

1.5 Assessing Visual Effects

1.5.1 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:

- *"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."*

1.5.2 Visual effects are identified for different receptors (people) who would experience the view at their place of residence, within their community, 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; and

1.5.3 The level of visual effect is determined through consideration of the sensitivity of each visual receptor (or range of sensitivities for receptor groups) and the magnitude of change that would be brought about by the construction, operation and decommissioning of the Project.

Zone of Theoretical Visibility (ZTV)

1.5.4 Plans mapping the Zone of Theoretical Visibility (ZTV) are used to analyse the extent of theoretical visibility of development or part of a development, across the LVIA Study Area and to assist with viewpoint selection. The ZTV does not however, take account of the screening effects of buildings, localised landform and vegetation, unless specifically noted (see individual figures). As a result, there may be roads, tracks and footpaths within the study area which, although shown as falling within the ZTV, are screened or filtered by built form and vegetation, which would otherwise preclude visibility.

1.5.5 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.

Viewpoint Analysis

1.5.6 Viewpoint analysis is used to assist the assessment and is conducted from selected viewpoints within the LVIA Study Area. The purpose of this is to assess both the level of visual effect for particular receptors and to help guide the design process and focus the assessment. A range of viewpoints are examined in detail and analysed to determine whether visual effects would occur. By considering the viewpoints in order of distance it is possible to define a threshold or outer geographical limit, beyond which it would be reasonable to assume that visual effects would be unlikely.

1.5.7 The assessment involves a landscape architect visiting each of the viewpoint locations. The fieldwork is conducted in periods of fine weather with good visibility and considers seasonal changes such as reduced leaf cover or hedgerow maintenance.

1.5.8 Viewpoint analysis prepared for each viewpoint is presented as supporting evidence in the LVIA. A summary table of the findings is also provided in order of distance from the development site. This summary table assists in defining the direction, elevation, geographical spread and nature of the potential visual effects and identifies areas where visual effects are likely to occur. This approach seeks to provide clarity and confidence to consultees and decision makers by allowing the detailed judgements on the magnitude of visual change to be more readily scrutinised and understood.

Evaluating Visual Sensitivity to Change

1.5.9 In accordance with paragraphs 6.31-6.37 of GLVIA 3, the sensitivity of visual receptors is determined by a combination of the value of the view and the susceptibility of the visual receptors to the change likely to result from the Project on the view and visual amenity.

Value of the view

1.5.10 The value of a view or series of views reflects the recognition and importance attached either formally through identification on mapping or being subject to planning designations, or informally through the value which society attaches to the view(s). The value of a view is classified as 'High', 'Medium' or 'Low' and the basis for this assessment is made clear using evidence and professional judgement, based on the following criteria:

- **Formal recognition**: The value of views can be formally recognised through their identification on OS or tourist maps as formal viewpoints, sign-posted and with facilities provided to add to the enjoyment of the viewpoint such as parking, seating and interpretation boards. Specific views may be afforded protection in local planning policy and recognised as valued views. Specific views can also be cited as being of importance in relation to landscape or heritage planning designations, for example the value of a view would be increased if it presents an important vista from a designed landscape or lies within or overlooks a designated area, which implies a greater value to the visible landscape.
- **Informal recognition**: Views that are well-known at a local level and / or have particular scenic qualities can have an increased value, even if there is no formal recognition or designation. Views or viewpoints are sometimes informally recognised through references in art or literature and this can also add to their value. A viewpoint that is visited and appreciated by a large number of people would generally have greater importance than one gained by very few people.

Table 6A-5 – Values associated with views (which may raise the receptor sensitivity)

Value	Recognition	Indicators of value
High	Recognised views from nationally or internationally important landscape or heritage resources, Scheduled Monuments; may be identified in planning policies or statutory documents.	High value/celebrated view; referred to in national or international guidebooks, tourist guides etc.; literary and art references; presence of interpretive facilities (e.g. visitor centre).
Medium	Recognised views from local or regionally important landscape or heritage resource, such as Local Landscape Areas or Conservation Areas; may be identified in local planning policies or supplementary planning documents.	Moderately valued view; referred to in local or regional guidebooks, tourist maps etc.; local literary and art references; presence of some interpretive facilities (e.g. parking places or sign boards)
Low	View has no informal recognition and is not known as having particular scenic qualities. View is not recognized in references in art of literature.	Viewpoint not identified in OS maps or tourist information and signage. No facilities provided at viewpoint to aid enjoyment of the view.

Susceptibility to Change

1.5.11 Susceptibility relates to the nature of the viewer experiencing the view and how susceptible they are to the potential effects of the Project. A judgement to determine the level of susceptibility therefore relates to the nature of the viewer and their experience from that particular viewpoint or series of viewpoints, classified as 'High', 'Medium', 'Low' or 'Negligible' and based on the following criteria:

- **Nature of the viewer**: The nature of the viewer is defined by the occupation or activity of the viewer at the viewpoint or series of viewpoints. The most common groups of viewers considered in the visual assessment include residents, motorists, and people taking part in recreational activity or working. Viewers, whose attention is focused on the landscape, or with static long-term views, are likely to have a higher sensitivity. Viewers travelling in cars or on trains would tend to have a lower sensitivity as their view is transient and moving. The least sensitive viewers are usually people at their place of work as they are generally less sensitive to changes in views.
- **Experience of the viewer**: The experience of the visual receptor relates to the extent to which the viewer's attention or interest may be focused on the view and the visual amenity they experience at a particular location. The susceptibility of the viewer to change arising from the Project may be influenced by the viewer's attention or interest in the view, which may be focused in a particular direction, from a static or transitory position and over a long or short duration. For example, if the principal outlook from a settlement is aligned directly towards the Site, the experience of the visual receptor would be altered more notably than if the experience relates to a glimpsed view seen at an oblique angle from a car travelling at high speed. The visual amenity experienced by the viewer varies depending on the presence and relationship of visible elements, features or patterns experienced in the view and the degree to which the landscape in the view may accommodate the Project.

Table 6A-6 – Susceptibility of the visual receptor to change

Susceptibility to proposed change	
High	• Residents at home; • Walkers on long distance trails and mountain access routes; • Users of footpaths where the attractive nature of the countryside is a significant factor in the enjoyment of the walk; • Cyclists on national and local cycle routes designed to provide an attractive experience; • Road users on recognised tourist routes; and • Visitors to landscape and heritage resources and other attractions where views of the surroundings are an important contributor to appreciation, experience and/or enjoyment.
Medium	• General road users;

Susceptibility to proposed change	
	• Passengers on rail lines where the trains run at low or moderate speeds; • Users of public open space and footpaths where the nature of the surroundings is not a significant factor in the enjoyment of the activity; and • Visitors to landscape and heritage resources and other attractions where views of the surroundings are a minor contributor to appreciation, experience and/or enjoyment.
Low	• People at their place of work or shopping; • Users of high-speed roads and passengers in trains running at high speed; • People engaged in recreational activities where the view of the surroundings is secondary to the enjoyment of the activity (such as playing or spectating at outdoor sports facilities); and • Users of public open space and footpaths where the nature of the surroundings is irrelevant to the enjoyment of the activity.
Negligible	• Users of indoor facilities where the view is irrelevant to their activity.

Visual Sensitivity Rating

1.5.12 An overall level of sensitivity is applied for each visual receptor or view, classified as 'High', 'Medium', 'Low', 'Negligible' or by combining individual assessments of the value of the view and the susceptibility of the visual receptor to change. Each visual receptor, meaning the particular person or group of people likely to be affected at a specific viewpoint, is assessed in terms of their sensitivity. The basis for the assessments is made clear using evidence and professional judgement in the evaluation of each receptor. Criteria that tend towards higher or lower sensitivity are set out in **Table 6A-7.**

Table 6A-7 – Visual sensitivity to change

Level of sensitivity	Typical characteristics
High	A view or overall visual amenity which is an important reason for receptors being there (and therefore most views or overall visual amenity for highly susceptible receptors). A well-balanced view containing attractive features and notable for its scenic quality. A view which is experienced by a large number of people and/ or recognised for its scenic qualities.
Medium	A view or overall visual amenity which plays a relatively small part in the reason why a receptor would be there (and therefore most views or overall visual amenity for receptors of medium susceptibility).

Level of sensitivity	Typical characteristics
	An otherwise attractive view that includes noticeable discordant features or overall visual amenity where there are noticeable visual detractors.
Low	A view or overall visual amenity which is unlikely to be part of the receptor's experience or reasons for being there (and therefore most views or overall visual amenity for receptors of low susceptibility). An unattractive view or overall visual amenity where there are many visual detractors.
Negligible	A view or overall visual amenity which is irrelevant to the receptor's experience or reasons for being there.

Visual Magnitude of Change

1.5.13 The visual magnitude of change is an expression of the scale of change that would result from the visibility of the Project. In assessing the magnitude of change the assessment has focused on the size or scale of change and its geographical extent. The duration and reversibility are stated separately in relation to the assessed effects (i.e. as short / medium / long-term and temporary / permanent).

Size or Scale of Change

1.5.14 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 Project, based on the following criteria:

- **Distance**: The distance between the visual receptor / viewpoint and the Site. Generally, the greater the distance, the lower the magnitude of change, as the Project would constitute a smaller-scale component of the view due to the effects of perspective.
- **Size**: The amount and size of the Project that would be seen. Visibility may range from small or partial to whole visibility of the Project. Generally, the larger and greater number of elements of the Project that appear in the view, the higher the magnitude of change.
- This is also related to the degree to which development may be wholly or partly screened by landform, vegetation (seasonal) and / or built form. Conversely open views are likely to reveal more of a development, particularly where this is a key characteristic of the landscape.
- **Scale**: The scale of the change in the view, with respect to the loss or addition of features in the view and changes in its composition. The scale of the Project may appear larger or smaller relative to the scale of the receiving landscape.

- **Field of View** The vertical / horizontal field of view (FoV) and the proportion of view that is affected by the Project. Generally, the more of the proportion of a view that is affected, the higher the magnitude of change would be. If the Project extends across the whole of the view, the magnitude of change would generally be higher as the full view would be affected. Conversely, if the Project extends over a narrow part of an open view, the magnitude of change is likely to be reduced as the Project would not affect the whole view or outlook. This can in part be described objectively by reference to the horizontal / vertical FoV affected, relative to the extent and proportion of the available view.
- **Contrast**: The character and context within which the Project would be seen and the degree of contrast or integration of any new features with existing landscape elements, in terms of scale, form, mass, line, height, colour, luminance and motion. Developments which contrast or appear incongruous in terms of colour, scale and form are likely to be more visible and have a higher magnitude of change.
- **Consistency of image**: The consistency of image of the Project in relation to other developments. The magnitude of change for the Project is likely to be lower if it appears broadly similar to other developments in the landscape in terms of its scale, form and general appearance. New development is more likely to appear as logical components of the landscape with a strong rationale for their location.
- **Skyline / Background**: Whether the Project would be viewed against the skyline or a background landscape may affect the level of contrast and magnitude. For example, skyline developments may appear more noticeable, particularly where they affect open and undeveloped horizons. Conversely, development may also appear more noticeable when viewed against a darker background landscape, such as forestry. In these cases, the magnitude of change would tend to be higher. If the Project adds to an already developed skyline the magnitude of change would tend to be lower.
- **Number**: Generally, the greater the number of separate development components seen simultaneously or sequentially, the higher the magnitude of change and this may lead to whole project effects. Further cumulative effects would occur in the case of separate, existing developments and their spatial relationship to each other would affect the magnitude of change. For example, development that appears as an extension to an existing development would tend to result in a lower magnitude of change than a separate, new development.
- **Nature of Visibility**: The nature of visibility is a further factor for consideration. The Project may be subject to various phases of development change and the manner in which the development may be viewed could be intermittent or continuous and / or seasonally, due to periodic management or leaf fall.

Geographical Extent

1.5.15 The geographic extent over which the visual effects would be experienced is also assessed. This is distinct from the size or scale of effect and is described in terms of the physical area or location over which it would be experienced (described as a linear or area measurement). The extent of the effects would vary according to the specific nature of the Project and is principally assessed through ZTV, field survey and viewpoint analysis of the

extent of visibility likely to be experienced by visual receptors. The geographical extent of visual effects is described as per the following examples:

- The geographical extent can be described as an area measurement or proportion of the total receptor affected. For example, effects on people within a particular area such as a golf course or area of common land can be illustrated via a 'representative viewpoint' that represents a similar visual effect, likely to be experienced by larger numbers of people within that area. The geographical extent of that visual effect can be expressed as approximately '5 hectares' or '10%' of the common land or a golf course area.
- The geographical extent can be described as a linear measurement (metres or kilometres) according to the length of route affected. For example, effects on people travelling on a route through the landscape such as a road or footpath can be illustrated via a 'representative viewpoint' that represents a similar visual effect, likely to be experienced by larger numbers of people along that route. The geographical extent of that visual effect can be expressed as approximately '2km' or '10%' of the total length of the route.
- The geographical extent of a visual effect experienced from a specific viewpoint may be limited to that location alone. (An example of a 'specific viewpoint' is a public viewpoint recommended in tourist literature such as a well visited hill summit. An example of an 'illustrative viewpoint' is a particular location within a built up or well vegetated area where an uncharacteristically open view exists).

Duration and Reversibility

1.5.16 The duration or time period over which a visual effect is likely to occur is judged on a scale of 'short', 'medium' or 'long' term and is assessed for the Project as per the method described in **paragraph 1.4.15**.

1.5.17 Reversibility is a separate, but linked consideration, also assessed for the Project as per the method described in **paragraph 1.4.16**.

Visual Magnitude of Change Rating

1.5.18 The 'magnitude' or 'degree of change' resulting from the Project is described as 'High', 'Medium', 'Low', 'Negligible', or 'Zero'. In assessing the magnitude of change the assessment has focused on the size or scale of change and its geographical extent. The duration and reversibility are stated separately in relation to the assessed effects (i.e. as short / medium / long-term and temporary / permanent). The basis for the assessment of magnitude for each receptor is made clear using evidence and professional judgement and some examples of the levels of magnitude of change that can occur on views are defined in **Table 6A-8**.

Table 6A-8 – Visual Magnitude of change

Value	Size, Scale and Nature	Geographical Extent	Duration and Reversibility
High	• Occupies much of the view.	Ranging from notable change	Long term; permanent/ non-

Value	Size, Scale and Nature	Geographical Extent	Duration and Reversibility
	• Obstructs a significant portion of the view. • Forms a large or very noticeable or discordant element in the view. • Considerable change to key features or many existing elements of the landscape. • Introduces elements considered totally uncharacteristic to the existing landscape. • A very noticeable change to the character of the landscape.	over extensive area to intensive change over a more limited area.	reversible, or partially reversible.
Medium	• Occupies a noticeable portion of the view • Obstructs a significant portion of the view. • Forms a large or very noticeable or discordant element in the view. • Some considerable change to existing landscape elements and/or landscape character; discernibly changes the surroundings of a receptor, such that its baseline is partly altered. • Readily noticeable.	Moderate changes in a localised area.	Medium term; semi-permanent or partially reversible.
Low	• Occupies a small portion of the view. • 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.	Minor changes in a localised area.	Short term/ temporary; partially reversible or reversible.

Value	Size, Scale and Nature	Geographical Extent	Duration and Reversibility
Negligible	• Occupies little or no portion of the view. • Hardly noticeable. • Limited or no change in existing landscape elements and/or landscape character. • Barely distinguishable change from baseline conditions.	No change discernible.	Short term/ temporary; reversible.

Evaluating visual effects

1.5.19 The level of visual effect is evaluated through the combination of visual sensitivity and magnitude of change. This process is assisted by the matrix illustrated in **Table 6A-9** which is used to guide the assessment. The factors considered in the evaluation of the sensitivity and the magnitude of the change resulting from the Project and their conclusion, is presented in a comprehensive, clear and transparent manner.

Weather conditions

1.5.20 The assessment of visual effects should ideally be undertaken in clear weather with good to excellent visibility. This means that the viewpoint assessment represents a fair judgement of the likely visual effects.

1.6 Evaluation of Landscape and Visual Effects

1.6.1 The matrix presented in **Table 6A-9** is used as a guide to illustrate the LVIA process. In line with the emphasis placed in GLVIA 3 upon the application of professional judgement, an overly mechanistic reliance upon a matrix is avoided through the provision of clear and accessible narrative explanations of the rationale underlying the assessment made for each landscape and visual receptor. Such narrative assessments provide a level of detail over and above the outline assessment provided by use of the matrix alone.

1.6.2 The landscape and visual assessment unavoidably involves qualitative assessment, and wherever possible cross references will be made to objective evidence, baseline figures and / or to photomontage visualisations to support the assessment conclusions. Often a consensus of professional opinion has been sought through consultation, internal peer review, and the adoption of a systematic, impartial, and professional approach. Importantly each effect results from its own unique set of circumstances and have been assessed on a case-by-case basis. The matrix should therefore be considered as a guide and any deviation from this guide will be clearly explained in the assessment.

Table 6A-9 – Evaluation of Landscape and Visual Effects

Magnitude of Change	Landscape and Visual Sensitivity		
	High	Medium	Low
High	Major	Major to Moderate	Moderate to Minor
Medium	Major to Moderate	Moderate	Minor
Low	Moderate to Minor	Minor	Minor
Negligible	Minor to Negligible	Minor to Negligible	Negligible
Zero	None / No View		

The effects within the shaded cells are generally considered to be effects that are significant.

Type or Nature of Effect

1.6.3 The type or nature of effect is also described in terms of whether it is direct or indirect; its duration (temporary / permanent or reversible); whether the effects are cumulative; and whether the effect is positive, neutral or negative.

1.6.4 Transboundary effects are not relevant to this assessment as the LVIA Study Area for the Project would not overlap with the territory of another country.

Direct and indirect effects

1.6.5 GLVIA, paragraph 5.2 notes that landscape may be directly and indirectly affected by development and defines indirect effects as "*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 rime from the source of the effects*".

1.6.6 Direct landscape effects relate to the host landscape and concern both physical and perceptual effects on the receptor. Indirect landscape effects may also affect the host landscape as well as other landscapes, often separated by distance from the Project, as a consequence of views that affect the perceptual aspects of their character and key characteristics.

1.6.7 Visual effects are generally all 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 of the receptor as described by the following examples:

- Road users generally face the road directly ahead in the direction of travel and visual effects affecting those views may be described as direct effects. Where the visual effect is experienced in views oblique to the direction of travel they may be described as indirect; and
- Designed landscapes and vistas / viewpoints may be orientated in a particular direction and visual effects affecting those views may be described as direct effects.

Where the visual effect is experienced in views oblique to the direction of the designed or main / primary view they may be described as indirect.

1.6.8 Secondary effects (or effects subsequent to an initial effect) are covered in this assessment by indirect effects.

Beneficial (positive) and Adverse (negative) effects

1.6.9 Guidance provided by GLVIA 3 on the nature of effect (i.e. beneficial or adverse) states that *'in the LVIA, thought must be given to whether the likely significant landscape and visual effects are judged to be positive (beneficial) or negative (adverse) in their consequences for landscape or for views and visual amenity', but it does not provide guidance as to how that may be established in practice. The* nature of effect is therefore one that requires interpretation and, where applied, this involves reasoned professional opinion.

1.6.10 In relation to many forms of development, the LVIA will identify 'beneficial' and 'adverse' effects by assessing these under the term 'Nature of Effect'. The landscape and visual effects of large-scale infrastructure are difficult to categorise in either of these brackets as, unlike other disciplines, there are no definitive criteria by which the effects can be measured as being categorically 'beneficial' or 'adverse'. In some disciplines, such as noise or ecology, it is possible to quantify the effect in numeric terms, by objectively identifying or quantifying the proportion of a receptor that is affected and assessing the nature of that effect in justifiable terms. However, this is not the case in relation to landscape and visual effects where the approach combines quantitative and qualitative assessment.

1.6.11 As a starting point, unless stated otherwise, the effects considered in the assessment will be considered to be adverse. Beneficial or neutral effects may, however, arise in certain situations and are stated in the assessment where relevant, based on the following definitions:

- Beneficial effects contribute to the landscape and visual resource through the enhancement of desirable characteristics or the introduction of new, beneficial attributes. The Project contributes to the landscape by virtue of good design or the introduction of new landscape planting. The removal of undesirable existing elements or characteristics can also be beneficial, as can their replacement with more appropriate components.
- Neutral effects occur where the Project fits with the existing landscape character or visual amenity. The Project neither contributes to or detracts from the landscape and visual resource and can be accommodated with neither beneficial or adverse effects, or where the effects are so limited that the change is hardly noticeable (very low magnitude). A change to the landscape and visual resource is not considered to be adverse simply because it constitutes an alteration to the existing situation.
- Adverse effects are those that detract from the landscape character or quality of visual attributes experienced, through the introduction of elements that contrast, in a detrimental way, with the existing characteristics of the landscape and visual resource, or through the removal of elements that are key in its characterisation.

1.7 Production of ZTVs and Visualisations

1.7.1 Zones of Theoretical Visibility (ZTVs) and visualisations (wirelines) are graphical images produced to assist and illustrate the LVIA. The methodology used for viewpoint photography accords with the *Visual Representation of Development Proposals*, Landscape Institute Technical Guidance Note 06/19.

Methodology for Production of ZTVs

1.7.2 The ZTVs are calculated using ArcGIS© software to generate the zone of theoretical visibility of the Project at a viewing height of 1.5m. This software creates a digital model of the theoretical visibility of the Project using a series of data points set to specific heights to best represent elements of the Project and digital terrain data as follows:

- Ordnance Survey Terrain 5: this Digital Terrain Model (DTM) provides a digital record of the existing landform of Great Britain based on 5m grid squares. The DTM provides 'bare earth' terrain data only and does not take into account existing structures or vegetation. The computer model includes the central LVIA Study Area and takes account of atmospheric refraction and the Earth's curvature.

1.7.3 The resulting ZTV plots are overlaid on Ordnance Survey mapping at an appropriate scale and presented as figures.

Methodology for Baseline Photography

1.7.4 Once a view has been selected, the location is visited, confirmed, and assessed with the aid of a wireline or similar visualisation in the field. The viewpoint location is micro-sited to avoid as far as reasonable foreground clutter and photographed during fair weather and light conditions. A photographic record is taken to record the view and the details of the viewpoint location and associated data are recorded.

1.7.5 The following photographic information is recorded:

- Date, time, weather conditions and visual range;
- GPS recorded 12 figure grid reference accurate to ~5-10 m;
- GPS recorded Above Ordnance Datum (AOD) height data;
- The focal length of lens is confirmed;
- Horizontal field of view (in degrees); and
- Bearing to Target Site (Project).

1.7.6 All photographs included in this assessment were recorded with a digital SLR camera set to produce photographs equivalent to that of a manual 35 mm SLR camera with a fixed 50mm focal length lens as required.

Baseline Photograph Production

1.7.7 Each view has been illustrated with a baseline photograph indicating the Project. Definitions of each of these are described as follows:

- Baseline photograph: a photograph of the existing view recorded in fair weather conditions.

1.7.8 Photographs are then taken using a digital SLR camera in combination with a panoramic head equipped tripod. Detailed information is then recorded on site to enable the accurate alignment of the photographs with the wireline model (data such as: GPS grid co-ordinates; ground level information; compass bearings; and any other known references and viewpoint information).

1.7.9 To create the baseline panorama, the photographs from the viewpoint are then digitally joined using PTGui software to form a planar or cylindrical projection image or panorama using computer software to remove 'barrel distortion' caused by the camera lens. There are practical limitations to shooting viewpoint photographs only in very good or excellent visibility and at particular times of day or from location that avoid foreground clutter or other vertical features such as telegraph poles, particularly where this is a true representation of the view from that viewpoint area.

Printing of Maps and Baseline Photographs

1.7.10 All electronic photographs and maps should be printed out and viewed at the correct scale as noted on the document.

1.8 Glossary of Terms and Abbreviations

1.8.1 Note: Descriptions marked with an asterisk are repeated from the GLVIA 3 glossary.

Term/abbreviation	Definition
AOD	Above Ordnance Datum
AoV / FoV	Angle of View / Field of View
Development*	Any proposal that results in change to the landscape and/or visual environment.
Degree of change	A combination of the scale, extent and duration of an effect also defined as 'magnitude'.
Designated Landscape*	Areas of landscape identified as being of importance at international, national or local levels, either defined by statue or identified in development plans or other documents.
EIA	Environmental Impact Assessment
Elements*	Individual parts which make up the landscape, such as, for example, trees, hedges and buildings.
Enhancement*	Proposals that seek to improve the landscape resource of the site and its wider setting beyond its baseline condition.
Environmental fit	The relationship of a development to identified environmental opportunities and constraints in its setting.
Feature*	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.
FoV	Field of View – the horizontal angle of the view illustrated in a visualisation.
Geographical Information System (GIS)	A system that captures, stores, analyses, manages and presents data linked to location. It links spatial information to a digital database.
GLVIA 3	Guidelines for Landscape and Visual Impact Assessment, Third Edition, published jointly by the Landscape Institute and Institute of Environmental Management and Assessment, 2013.
Heritage	The historic environment and especially valued assets and qualities such as historic buildings and cultural traditions.

Term/abbreviation	Definition
Indirect effects*	Direct effects relate to the host landscape and concern both physical and perceptual effects on the receptor. Indirect effects relate to those landscapes and receptors which separated by distance or remote from the development and therefore are only affected in terms of visual or perceptual effects. The Landscape Institute also defines indirect effects as those which are not a direct result of the development but are often produced away from it or as a result of a complex pathway.
Iterative design process	The process by which project design is amended and improved by successive stages of refinement which respond to growing understanding of environmental issues.
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.
Land cover	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.
Landscape and Visual Assessment (LVIA)	A tool used to identify and assess the likely 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.
Landscape Character Area (LCA)*	These are single unique areas which are the discrete geographical areas of a particular landscape type.
Landscape Character Assessment	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.
Landscape capacity	The amount of specified development or change which a particular landscape and the associated visual resource is able to accommodate without undue negative effects on its character and qualities. (NE 2019)
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.
Landscape classification	A process of sorting the landscape into different types using selected criteria but without attaching relative values to different sorts of landscape.
Landscape constraints	Components of the landscape resource such as views or mature trees recognised as constraints to development. Often associated with landscape opportunities.

Term/abbreviation	Definition
Landscape effects*	Effects on the landscape as a resource in its own right. 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. (GLVIA 3 2013, Para 5.1).
Landscape fit	The relationship of a development to identified landscape opportunities and constraints in its setting.
Landscape patterns	Spatial distributions of landscape elements combining to form patterns, which may be distinctive, recognisable and describable e.g. hedgerows and stream patterns.
Landscape quality (condition)*	A measure of the physical state of the landscape. It may include the extent to which typical character is represented in individual areas, the intactness of the landscape and the condition of individual elements.
Landscape qualities	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 here.
Landscape receptors *	Defined aspects of the landscape resource that have the potential to be affected by a proposal
Landscape resource	The combination of elements that contribute to landscape context, character, and value.
Landscape sensitivity	The sensitivity of the landscape to a particular development considers the susceptibility of the landscape and its value.
Landscape strategy	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.
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. The value of the Landscape Character Types or Areas that may be affected, based on review of any designations at both national and local levels, and, where there are no designations, judgements based on criteria that can be used to establish landscape value.

Term/abbreviation	Definition
Level of effect	Determined through the combination of sensitivity of the receptor and the proposed magnitude of change brought about by the development.
Magnitude (of effect)*	A term that combines judgements about the size and scale of the effect, the extent of the area over which it occurs, whether it is reversible or irreversible and whether it is short term or long term in duration.
Mitigation	Measures which are proposed to prevent, reduce and where possible offset any adverse effects (or to avoid, reduce and if possible remedy identified effects. (GLVIA 3, 2013 Para 3.37).
Perception	Combines the sensory (that we receive through our senses) with the cognitive (our knowledge and understanding gained from many sources and experiences).
Perceptual Aspects	A landscape may be valued for its perceptual qualities, notably wildness and/or tranquillity. (GLVIA 3, 2013 Box 5.1)
Photomontage*	A visualisation which superimposes an image of the Project upon a photograph or series of photographs.
Beneficial or Adverse Types of Landscape Effect	The landscape effects may be beneficial, neutral, or adverse. In landscape terms – a beneficial 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. An adverse 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.
Beneficial or Adverse Types of Visual Effect	The visual effects may be beneficial, neutral, or adverse. In visual terms – beneficial or adverse effects are less easy to define or quantify and require a subjective consideration of a number of factors affecting the view, which may be beneficial, neutral, or adverse. Opinions as to the visual effects of developments vary widely, however it is not the assumption of this assessment that all change, including substantial levels of change is an adverse 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 scale and character of the landscape as perceived from the receptor location.
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)

Term/abbreviation	Definition
Receptor	Physical landscape resource, special interest, or viewer group that will experience an effect.
Recreation Value*	Evidence that the landscape is valued for recreational activity where experience of the landscape is important. (GLVIA 3 2013, Box 5.1)
Representativeness*	Whether the landscape contains a particular character and/or features or elements which are considered particularly important examples.
Residual effects	Likely environmental effects, remaining after mitigation.
Scale Indicators	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.
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 3 2013, Box 5.1)
Sense of Place (genius loci)	The essential character and spirit of an area: 'genius loci' literally means 'spirit of the place'.
Sensitivity*	A term applied to specific receptors, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value associated to that receptor.
Sky glow	The brightness of the night sky in a built-up area as a result of light pollution, apparent as a diffuse artificial light in the sky above major towns and cities.
Susceptibility*	The ability of a defined landscape or visual receptor to accommodate the specific Project without undue negative consequences.
Sustainability*	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.
Temporary or permanent effects	Effects may be considered as temporary or permanent.
Time depth	Historical layering – the idea of landscape as a 'palimpsest', a much written-over asset of landscape.
Townscape	The character and composition of the built environment including the buildings and the relationships between them, the different types of urban

Term/abbreviation	Definition
	open space, including green spaces, and the relationship between buildings and open spaces.
Type or Nature of effect	Whether an effect is direct or indirect, temporary or permanent, beneficial (positive), neutral or adverse (negative) solus or cumulative.
Viewpoints	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 visual effects are unlikely to differ – for example certain points may be chosen to represent the view of users of particular public footpaths and bridleways. 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. Illustrative Viewpoints: chosen specifically to demonstrate a particular effect or specific issues, which might, for example, be the restricted visibility at certain locations. (GLVIA 3 2013, Para 6.19)
Visual amenity	The overall views and surroundings, which provide a visual setting or backdrop to the activities of people living, working, participating in recreational activities, visiting or travelling through an area.
Visual dominance	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.
Visual effect*	Effects 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.
Visual sensitivity	The sensitivity of visual receptors such as residents, relative to their location and context, to visual change proposed by development.
Visualisation	Computer visualisation, photomontage, or other technique to illustrate the appearance of the development from a known location.
Wireline / Wireframe	A computer-generated line drawing of the DTM (digital terrain model) and the Project from a known location.
Zone of Theoretical Visibility (ZTV)*	A map, usually digitally produced, showing areas of land within which, a development is theoretical visible.