



Connah's Quay Low Carbon Power

Environmental Statement Volume IV Appendix 15-A: Landscape and Visual Impact Assessment Methodology

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Table of Contents

1.	Landscape and Visual Impact Assessment Methodology	1
1.1	Executive Summary	1
1.2	Introduction.....	2
1.3	Impact Assessment Methodology	2
1.4	Zone of Theoretical Visibility (ZTV) Analysis	3
1.5	Assessment Process	4
1.6	Landscape Assessment Methodology	4
1.7	Visual Assessment Methodology	11
	References	20

Tables

Table 1: Landscape Susceptibility to Change	5
Table 2: Landscape Sensitivity Criteria.....	6
Table 3: Landscape Size/Scale Criteria	8
Table 4: Geographical Extent Criteria.....	9
Table 5: Duration Criteria.....	9
Table 6: Reversibility Criteria	9
Table 7: Landscape Magnitude Criteria	10
Table 8: Significance Matrix.....	11
Table 9: Value of View Criteria.....	12
Table 10: Visual Susceptibility to Change Criteria	13
Table 11: Visual Sensitivity Criteria.....	13
Table 12: Visual Size/ Scale Criteria.....	14
Table 13: Geographical Extent Criteria.....	15
Table 14: Duration Criteria.....	15
Table 15: Reversibility Criteria	16
Table 16: Visual Magnitude Criteria (indicative).....	16
Table 17: Categories of Landscape and Visual Levels of Effect	17

1. Landscape and Visual Impact Assessment Methodology

1.1 Executive Summary

- 1.1.1 This Technical Appendix sets out the methodology for the Landscape and Visual Impact Assessment (LVIA), including the Zone of Theoretical Visibility (ZTV) of the Proposed Development.
- 1.1.2 The LVIA has been undertaken in accordance with standard industry guidance. Professional judgement is used in combination with structured methods and criteria to evaluate landscape and visual value and susceptibility, the resulting sensitivity, magnitude, and significance of effect.
- 1.1.3 Following assessment of the baseline context of the development and identification of landscape and visual receptors, the LVIA assesses the sensitivity of receptors, by combining value and susceptibility, and subsequently the magnitude of effects in order to determine the significance of effects. Geographical extent, duration, reversibility and if the effect is adverse or beneficial is stated for each assessed effect.
- 1.1.4 The objective of the assessment process is to identify and evaluate potential significant effects arising from the Proposed Development. The assessment identifies the residual effects likely to arise from the design taking into account development design, embedded mitigation measures, additional mitigation measures and change over time.
- 1.1.5 In order to provide a level of consistency and transparency to the assessment and allow comparisons to be made between the various landscape and visual receptors subject to assessment, the assessment of beneficial and adverse effects is based on pre-defined criteria. When assessing the degree of individual effects, these may fall across several different categories and professional judgement is therefore used to determine which level best fits the overall effect on a landscape or visual receptor.

1.2 Introduction

Overview

- 1.2.1 This Technical Appendix supports **Chapter 15: Landscape and Visual Amenity (EN010166/APP/6.2.15)** and sets out the LVIA Methodology.

1.3 Impact Assessment Methodology

- 1.3.1 The LVIA has been based on the following guidance:

- Guidelines for Landscape and Visual Impact Assessment, Third Edition (GLVIA3) (Ref 1);
- Landscape Institute Technical Guidance Note (TGN) 06/19 Visual Representation of Development Proposals, (Ref 2);
- Landscape Institute TGN 02/21: Assessing Landscape Value Outside National Designations (Ref 3);
- Landscape Institute TGN Infrastructure, TGN 04/2020 (Ref 4);
- Landscape Institute TGN Tranquility 01/17 (Ref 5); and
- Landscape Institute TGN Notes and Clarifications on Aspects of the 3rd Edition Guidelines on Landscape and Visual Impact Assessment. 01/24 (Ref 6).

- 1.3.2 The LVIA has been undertaken in accordance with the methodology and process set out in GLVIA3. GLVIA3 places a strong emphasis on the importance of professional judgement in identifying and defining the significance of landscape and visual effects. The assessment has been undertaken by Chartered Landscape Architects who are experienced in undertaking and reporting assessments of similar types of projects. Professional judgement is used in combination with structured methods and criteria to evaluate landscape and visual value and susceptibility, the resulting sensitivity, magnitude, and significance of effect.

- 1.3.3 Baseline data has been gathered from a desk-based assessment including study of Ordnance Survey (OS) maps and aerial photographs, publicly available documents such as landscape character assessments from local authorities within the study area and national character mapping available from NRW and Natural England. A number of site visits on the 12th January, 24th July, 7th and 8th March and 9th October 2024, have been undertaken to provide valuable background knowledge on the existing character and impact of the Proposed Development on receptor groups such as residents and to record views from representative viewpoints.

Study Area

- 1.3.4 The initial study area extended 10 km from the Order limits (excluding the Accommodation Works Areas). This was informed by consideration of the location and scale of the Proposed Development, desk-based analysis of mapping and aerial photography. ZTV mapping was used to determine the potential visibility of the Proposed Development. Refer to **Figure 15-7: Zone**

of Theoretical Visibility - 65 m max. height of other structures (excluding Absorber and HRSG stacks) and Figure 15-8: Zone of Theoretical Visibility - 150 m Absorber and HRSG Stacks plus 8 m Raised Ground Level (EN010166/APP/6.3). Fieldwork was subsequently undertaken to verify the findings of the desk study. This analysis determined the study area, defined as the extent in which the Proposed Development may influence the wider landscape around it in a significant manner.

1.3.5 With reference to **Figure 15-1: Study Area (EN010166/APP/6.3)**, the study area is described below with reference to the Main Development Area although all components within the Order limits are located within the study area:

- to the north approximately 5 to 13 km from the Main Development Area;
- to the south approximately 4 to 6 km from the Main Development Area;
- to the east approximately 10 km from the Main Development Area; and
- to the west approximately 11 km from the Main Development Area.

1.3.6 Based upon the nature of the works required within the Proposed CO₂ Connection Corridor and Water Connection Corridor (taking account of all permanent above ground structures), it is considered highly unlikely that significant effects would be experienced further than 2 km from them. Therefore, these connection corridors fall within the study area which has been applied to the Main Development Area.

1.4 Zone of Theoretical Visibility (ZTV) Analysis

1.4.1 The ZTVs have been generated by analysis of a 3D Digital Terrain Model (DTM) of the surrounding terrain and the Proposed Development using the following parameters:

- contours/terrain model based on OS Terrain 20 DTM dataset;
- eye height of viewer set at 1.6 m; and
- visibility assessed on a 50 m grid throughout the study area.

1.4.2 The output provides a graphical representation of the computer calculated inter-visibility between a viewer (at 1.6 m height) and the top of the landform based on points distributed across the study area.

1.4.3 Two ZTVs represent the tallest and median height elements of the Proposed Development in order to illustrate the worst-case and an average theoretical visibility. The first was prepared considering a maximum of 150 m Absorber Column Height plus 8 m Raised Ground Level (i.e., 158 m AOD). The second at a medium 65 m height of Main Development Area Structures (excluding absorber and HRSG stacks). Both ZTVs include buildings modelled at a height of 8 m and woodland within the National Forest Inventory modelled at a height of 12 m.

1.5 Assessment Process

- 1.5.1 Following assessment of the baseline landscape and visual context of the development the LVIA assesses the:
- sensitivity of receptors, whether landscape or viewers;
 - magnitude of effect, whether adverse or beneficial; and
 - significance of the effects based on a comparison of sensitivity of receptor to magnitude of effect.
- 1.5.2 Effects may be temporary, permanent, short-term, medium-term, or long-term. Landscape and visual effects may be further categorised as being either direct, i.e., originating from the development itself; or indirect and secondary, from consequential change resulting from the development.

1.6 Landscape Assessment Methodology

- 1.6.1 In predicting the effects of the Proposed Development on the landscape within the study area GLVIA3 states the following steps should be undertaken to identify and describe the landscape effects:
- identify the components of the landscape that are likely to be affected by the Proposed Development (landscape receptors); and
 - identify the interactions between the landscape receptors and different components of the Proposed Development at its different stages.
- 1.6.2 Landscape effects include also seascape effects. Landscape/ seascape effects relate to changes to the landscape/ seascape as a resource, including physical changes to the fabric or individual elements of the landscape, its aesthetic or perceptual qualities, and landscape/ seascape character. Seascapes refer to marine landscapes in this assessment, and have been taken into consideration due to the estuarine setting of the Main Development Area. This methodology does not separately refer to seascape effects. The methodology for landscape effects can also be used for seascape effects.

Sensitivity of Landscape Receptors

- 1.6.3 Landscape receptors are described within GLVIA3 (para 5.34) as '*components of the landscape that are likely to be affected by the Proposed Development*'. These can include overall character and key characteristics, individual elements or features and specific aesthetic or perceptual aspects (such as wildness or tranquility).
- 1.6.4 It is the interaction between the different components of the Proposed Development and these landscape receptors which has potential to result in landscape effects (both adverse and beneficial).
- 1.6.5 The sensitivity of the landscape receptor is a combination of their susceptibility to change of the specific type of development being assessed combined with the value of the landscape.

Susceptibility to Change

- 1.6.6 The susceptibility to change is a measure of the ability of a landscape to *'accommodate the proposed development without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies'* (para 5.40, GLVIA3). The assessment of susceptibility must be tailored to the Proposed Development and considered as part of the assessment of the effects.
- 1.6.7 **Table 1** below is determined with reference to the three-point scale and provides criteria level in relation to susceptibility.

Table 1: Landscape Susceptibility to Change

Criteria Level	Susceptibility to change
High	The receptor has a low capacity to accommodate the proposed development without effects upon its overall integrity. The landscape is likely to have a strong pattern/ texture or is a simple but distinctive landscape and/or with high value features and essentially intact.
Medium	The receptor has some capacity to accommodate the proposed development without effects upon its overall integrity. The pattern of the landscape is mostly intact and/or with a degree of complexity and with features mostly in reasonable condition.
Low	The receptor is robust; it can accommodate the proposed development without effects upon its overall integrity. The landscape is likely to be simple, monotonous and/or degraded with common/ indistinct features and minimal variation in landscape pattern.

Landscape Value

- 1.6.8 Establishing the landscape value of the Proposed Development and study area is necessary to determine the landscape sensitivity at both the Proposed Development and study area scale.
- 1.6.9 The value of a landscape receptor reflects its importance in terms of any designations that may apply, or its importance in itself as a landscape or landscape resource, which may be due to its ecological, cultural, or recreational value. The following factors are provided within the TGN 02/21: Assessing Landscape Value Outside National Designations (Ref 3) and are complementary to the indicators and factors generally agreed to influence value described within GLVIA3 (GLVIA3 para 5.28):
- *'natural heritage (ecological, geological, geomorphological, or physiographic interest);*

- *cultural heritage (archaeological, historical, or cultural interest);*
- *landscape condition (physical state with regard to individual elements and landscape structure);*
- *associations (a landscape connected with notable people, events, and the arts);*
- *distinctiveness (sense of identity);*
- *recreational value (recreational opportunities where experience of landscape is important);*
- *perceptual (valued for perceptual qualities such as wildness or tranquility);*
- *functional (performs an identifiable and valuable function);*
- *conservation interests (presence of features of wildlife, earth science, archaeological, historical, or cultural interest); and*
- *recreation value (valued for recreational activity)'.*

1.6.10 Judgements on landscape value for each receptor will be informed by the following criteria:

- high: nationally designated or iconic, unspoiled landscape with few if any degrading elements;
- medium: regionally or locally designated landscape or an undesignated landscape with locally important features which may include some degrading elements; and
- low: undesignated landscape with few, if any, distinct features, or several degrading elements.

1.6.11 In combining susceptibility to change and value GLVIA3 indicates that combining susceptibility and value can be achieved in a number of ways and needs to include professional judgement. However, it is generally accepted that a combination of high susceptibility and high value is likely to result in the highest sensitivity, whereas a low susceptibility and low value is likely to result in the lowest level of sensitivity. A summary of the likely characteristics of the different levels of sensitivity is described in **Table 2** below. It should be noted that these are indicative and in practice there is not a clear distinction between criteria levels.

Table 2: Landscape Sensitivity Criteria

Criteria Level	Characteristics
High	• Areas of landscape character that are highly valued for their scenic quality (including most statutorily designated landscapes); and/or • elements/features that could be described as unique; or are nationally scarce; or • mature vegetation with provenance such as ancient woodland or mature parkland trees; or • mature landscape features which are characteristic of and contribute to a sense of

Criteria Level	Characteristics
	place and illustrate time-depth in a landscape and if replaceable, could not be replaced other than in the long term.
Medium	• Areas that have a positive landscape character but include some areas of alteration/degradation/or erosion of features; and/or • perceptual/aesthetic aspect has 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.
Low	• Areas that are relatively bland or neutral in character with few/no notable features; and/or • a landscape that includes areas of alteration/degradation or erosion of features; and/or • landscape elements/features that are common-place or make little contribution to local distinctiveness.
Very Low	• Damaged or substantially modified landscapes with few characteristic features of value, capable of absorbing major change; and/or • landscape elements/features that might be considered to detract from landscape character such as obtrusive human-made artefacts (e.g., power lines, large scale developments, etc.).

Nature of Landscape Effects (Magnitude)

1.6.12 The nature of the effect that is likely to occur, i.e., its magnitude, is determined by considering four separate factors, namely:

- size/scale;
- geographical extent;
- duration; and
- reversibility.

Size or Scale

1.6.13 Judgements regarding the size or scale of the changes to the landscape need to be made for each potential effect. GLVIA3 (para 5.49) specifies that these judgements should take into account the following:

- *'the extent of existing landscape elements that will be lost, the proportion of the total extent that this represents and the contribution of that element to the character of the landscape – in some cases this may be quantified;*
- *the degree to which aesthetic or perceptual aspects of the landscape are altered either by removal of existing components of the landscape or by addition of new ones; and*
- *whether the effect changes the key characteristics of the landscape, which are critical to its distinctive character'.*

1.6.14 The criteria should be presented in a verbal scale, which '*distinguishes the amount of change without being overly complex*' (GLVIA3 para 5.49).

1.6.15 The size and scale of an effect is determined by considering the amount of change experienced by a receptor, based on the indicative criteria set out in **Table 3** below.

Table 3: Landscape Size/Scale Criteria

Criteria Level	Feature/ Element	Aesthetic/ perceptual aspect	Key characteristics/ overall character
Large	Total or substantial loss or large-scale damage 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 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 overall character of the area.
Small	Slight loss or small-scale damage to landscape features with its integrity	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.

Criteria Level	Feature/ Element	Aesthetic/ perceptual aspect	Key characteristics/ overall character
	remaining unchanged.		

Geographical Extent

- 1.6.16 The criteria for defining geographical extent of the landscape effects are shown in **Table 4**.

Table 4: Geographical Extent Criteria

Criteria Level	Description
Large	The effects may influence several landscape types/character areas.
Medium	The effects may influence the landscape type/character area within which the Proposed Development is located.
Small	The effects may influence the immediate setting of the Proposed Development.
Negligible	The effects may influence the site of the Proposed Development only.

Duration and Reversibility

- 1.6.17 The duration of an effect and its reversibility are linked but separate consideration of the criteria for defining these are in **Table 5** and **Table 6** below.

Table 5: Duration Criteria

Criteria Level	Description
Short-term	0-5 years
Medium-term	5-10 years
Long-term	10+ years

- 1.6.18 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 6** below.

Table 6: Reversibility Criteria

Criteria Level	Description
Reversible	Change can be wholly or largely reversed. For example, the removal of a wind farm development following decommissioning.

Criteria Level	Description
Partially reversible	Change is partially reversible. For example, the restoration of a quarry to something similar to the baseline.
Irreversible	Change cannot realistically be reversed, i.e., it is permanent.

Magnitude of Change Criteria

- 1.6.19 The factors above are considered in combination to provide an overall magnitude of change for each receptor, the magnitude of change for landscape receptors may be interpreted as per the indicative scales in **Table 7**.

Table 7: Landscape Magnitude Criteria

Criteria Level	Description
High	Introduction of incongruous development which would result in noticeable change over an extensive area, affecting many key characteristics and the experience of the landscape.
Medium	Introduction of uncharacteristic development which would result in noticeable change over a large area, or more intensive change over a limited area, affecting some key characteristics and the experience of the landscape.
Low	Introduction of development that is not uncharacteristic which would result in a small change over a limited area affecting few characteristics.
Very Low	Little perceptible change to the landscape characteristics.

Assessing the Significance of Landscape Effects

- 1.6.20 The overall significance of landscape effects is a combination of the sensitivity of the landscape receptor and the magnitude of the effects. GLVIA3 (para 5.56) states that *'there is no definitive rule regarding what defines a significant effect, but in making the judgement it is reasonable to say that:*

'Major loss or irreversible negative effects, over an extensive area, or element and/or aesthetic and perceptual aspect that are key to the character of nationally valued landscape are likely to be of the greatest significance; [and]

Reversible negative effects of short duration, over a restricted area, on elements and/or aesthetic and perceptual aspects that contribute to but are not key characteristics of landscape value are likely to be the least significant and may depending upon the circumstance, be judged as not significant'.

- 1.6.21 An indication of how Nature of Receptor (Sensitivity) and Nature of Effect (Magnitude) has been combined is presented in **Table 8** below. This is

intended as a guide on possible outcomes and, as set out in GLVIA3, is not a prescriptive process leading to a pre-determined conclusion on likely significance of effects.

Table 8: Significance Matrix

Receptor sensitivity / value	Magnitude of Impact				
		High	Medium	Low	Very Low
	High	Major	Major	Moderate	Minor
	Medium	Major	Moderate	Minor	Negligible
	Low	Moderate	Minor	Negligible	Negligible
	Very Low	Minor	Negligible	Negligible	Negligible

1.7 Visual Assessment Methodology

- 1.7.1 *'An assessment of visual effects deals with the effects of change and development on the views available to people and their visual amenity'* (GLVIA3, para 6.1).
- 1.7.2 In predicting the effects of the Proposed Development on the viewpoints being assessed, GLVIA3 states it is helpful to consider (but not restricted to) the following issues:
- nature of the view (full, partial, or glimpsed);
 - proportion of the Proposed Development visible;
 - distance of the viewpoint from the Proposed Development and whether it would be the focus of the view or only a small element;
 - whether the view is stationary, transient, or sequential; and
 - the nature of the changes to the view.
- 1.7.3 Additionally, the seasonal effects of vegetation are to be considered, in particular the varying degree of screening and filtering of views.

Assessing the Significance of Effects

- 1.7.4 The overall significance of visual effects is a combination of the sensitivity of the visual receptor and the magnitude of the visual effects. GLVIA3 clearly states that there is no definitive rule regarding what defines a significant effect, but in making the judgement the following points should be considered (para 6.44):
- effects on people who are particularly sensitive to changes of views and visual amenity are more likely to be significant;
 - effects on people at recognised and important viewpoints or from recognised scenic routes are more likely to be significant; and
 - large-scale changes which introduce new, non-characteristic or discordant or intrusive elements into the view are more likely to be significant than

small changes or changes involving features already present within the view.

Value of Views

- 1.7.5 In making judgements about the value of each view, the assessment has taken into account the following:
- recognition of the value to a particular view, e.g., in relation to heritage assets or planning designations; and
 - indicators of the value attached to views by others, e.g., in guidebooks, tourist maps, literary references, painting etc.
- 1.7.6 **Table 9** below shows a full description of the criteria used to assess the value of the view.

Table 9: Value of View Criteria

Criteria Level	Description
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 which relates to the experience of other features, for example heritage assets.
Medium	• The 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.
Low	• A view with no recognised quality and/or is unlikely to be visited specifically to experience the views available.

Susceptibility of Visual Receptors

- 1.7.7 The susceptibility of visual receptors to changes in the view and visual amenity is related to the activity they are engaged in and the extent to which their attention is focused on the views and visual amenity at that location. As such, those receptors most sensitive to change are likely to include people engaged in outdoor activities where an appreciation of the landscape is the focus, or residents in areas where the landscape setting contributes to the setting of the properties.
- 1.7.8 Conversely, those considered least sensitive to change include (but are not restricted to) people engaged in outdoor sports or recreation where there is no focus on the surrounding landscape/views, and people at their place of work where the focus is on the work activity.
- 1.7.9 See **Table 10** below for a full description of the criteria used to assess the susceptibility of viewpoints.

Table 10: Visual Susceptibility to Change Criteria

Criteria Level	Susceptibility to Change
High	• residents at home; • people engaged in outdoor recreation, whose attention/interest is likely 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 an important contributor to the experience; • communities where views contribute to the landscape setting enjoyed by residents; and • travellers on scenic routes.
Medium	• travellers on road, rail, or other transport routes; • users of local and less used Public Rights of Way or where the attention is not focused on the landscape; and • schools and other institutional buildings and their outdoor areas, play areas.
Low	• 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 appreciation of views of the landscape; and • people at their place of work whose attention may be focused on their work/activity and not their surroundings.

Sensitivity of Viewpoints

- 1.7.10 In combining susceptibility to change and value it is generally accepted that a combination of high susceptibility and high value is likely to result in the highest sensitivity, whereas a low susceptibility and low value is likely to result in the lowest level of sensitivity. A summary of the likely characteristics of the different levels of sensitivity is described below in
- 1.7.11 **Table 11** below. It should be noted that these are indicative and in practice there is not a clear distinction between criteria levels. Where multiple receptor groups are identified at a viewpoint, then the receptor with the highest sensitivity has been assessed for that location.

Table 11: Visual Sensitivity Criteria

Criteria Level	Description
High	• a view that is well balanced, containing attractive features and notable for its scenic quality; and/or

Criteria Level	Description
	- a view which is an important part of the receptor's reason for being there; and/or - a view which is experienced by large numbers of people and/or is recognised for its qualities.
Medium	- an otherwise attractive view that includes some unattractive or discordant features, or visual detractors; and/or - a view which plays a small part in the receptors being there; and/or - a view that is recognised locally.
Low	- a view that is unattractive, discordant and/or contains many visual detractors; and/or - a view which is unlikely to be part of the receptor experience.

Nature of Visual Effects (Magnitude)

1.7.12 The guidance provided in GLVIA3 (para 6.38) requires that each of the following variables need to be evaluated for each of the visual effects identified:

- size or scale of the change of view, including loss of or additional views, degree of contrast in terms of form, mass, scale, colour and texture etc.;
- geographic extent in terms of angle of view, distance etc.; and
- duration and reversibility in terms of longevity of effects and whether reversible.

Size and Scale

1.7.13 The size and scale of an effect is determined by considering the amount of change experienced by a receptor, based upon the indicative criteria set out in **Table 12** below.

Table 12: Visual Size/ Scale Criteria

Criteria Level	Description
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 contract heavily with the current scene.

Criteria Level	Description
Medium	- Changes would result in changes to the view but not fundamentally change its characteristics; and/ or - changes that would be immediately visible but not be the key features of the view.
Small	- Changes which would not result in a change to the composition of the view; and/ or - changes that would only affect a small portion of the view or introduce new features that could be screened.

Geographical Extent

- 1.7.14 The geographical extent of an effect is determined by the indicative criteria set out in **Table 13** below. It should be noted that whether a view is at short, medium, or long- range will vary depending upon the type of development proposed.

Table 13: Geographical Extent Criteria

Criteria Level	Description
Large	The effects may influence several landscape types/character areas.
Medium	The effects may influence the landscape type/character area within which the Proposed Development is located.
Small	The effects may influence the immediate setting of the Proposed Development.
Negligible	The effects may influence the Proposed Development Site only.

Duration and Reversibility

- 1.7.15 The duration of an effect and its reversibility are linked but separate consideration of the criteria for defining these are as shown in **Table 14** and **Table 15: Reversibility Criteria** below.

Table 14: Duration Criteria

Criteria Level	Description
Short-term	0-5 years
Medium-term	5-10 years
Long-term	10+ years

- 1.7.16 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 15** below.

Table 15: Reversibility Criteria

Criteria Level	Description
Reversible	Change can be wholly or largely reversed. For example, the removal of a wind farm development following decommissioning.
Partially reversible	Change is partially reversible. For example, the restoration of a quarry to something similar to the baseline.
Irreversible	Change cannot realistically be reversed, i.e., it is permanent.

- 1.7.17 GLVIA3 notes that magnitude is informed by combining considerations relating to the “*scale, extent and duration*” of effect. As described above, this includes the geographical extent of influence, the spatial extent of the effect, the level of integration of new features with existing elements, its duration and degree to which the effect is reversible. These factors are then considered together to derive an overall magnitude of change for each receptor, which is determined by use of professional judgement, based on the indicative criteria set out in **Table 16** below.

Table 16: Visual Magnitude Criteria (indicative)

Example	Example
High	The development, or a part of it, would become the dominant and contrasting feature or focal point in the view.
Medium	The development, or a part of it, would form a prominent feature or element of the view which is readily apparent to the receptor in the view.
Low	The development, or a part of it, would be noticeable but not alter the overall balance of features and elements that comprise the existing view.
Very Low	Only a very small part of the development would be discernible, or it is at such a distance that it would form a barely noticeable feature or element of the view and/or occupy a negligible proportion of the view.

Beneficial or Adverse Change

- 1.7.18 The magnitude also needs to be assessed as to whether it is a beneficial or adverse change. These are defined as follows:
- for beneficial change the Proposed Development, or part of it, would appear in keeping with existing landscape character and would make a

positive visual and/or physical contribution to key characteristics. Removal of uncharacteristic features would also be a beneficial change; and

- for adverse change the Proposed Development, or part of it, would be perceived as an alien or intrusive component in the context of existing landscape character and would have a negative visual and/ or physical effect.

Assessing the Significance of Visual Effects

- 1.7.19 The overall significance of visual effects is a combination of the sensitivity of the visual receptor and the magnitude of the effects. GLVIA3 (para 6.42) states that *'the significance of visual effects is not absolute and can only be defined in relation to each development and its specific location'*.
- 1.7.20 The relationship between the sensitivity of receptors and the magnitude of effects allows the effects to be classified. The significance matrix is used to describe this relationship and so allow a relative level of significance of any predicted effects on visual receptors to be categorised.
- 1.7.21 The matrix 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 17** below.
- 1.7.22 As a general rule, major and moderate effects are considered to be significant, whilst minor and negligible effects are considered to be not significant. Professional judgement will also be applied in reaching conclusions as to the significance of effects.

Table 17: Categories of Landscape and Visual Levels of Effect

Significance of Effect	Landscape	Visual
Major Beneficial	Alterations that result in a considerable improvement of the existing landscape resource. Valued characteristic features would be restored or reintroduced.	Alterations that typically result in a pronounced improvement in the existing view.
Moderate Beneficial	Alterations that result in a partial improvement of the existing landscape resource. Valued characteristic features would be largely restored or reintroduced.	Alterations that typically result in a noticeable improvement in the existing view.
Minor Beneficial	Alterations that result in a slight improvement of the existing landscape resource.	Alterations that typically result in a limited improvement in the existing view.

Significance of Effect	Landscape	Visual
	Characteristic features would be partially restored.	
Negligible Beneficial	Alterations that result in a very slight improvement to the existing landscape resource, not uncharacteristic within the receiving landscape.	Alterations that typically result in a barely perceptible improvement in the existing view.
Neutral	No alteration to any of the components that contribute to the existing landscape resource.	No change to the existing view.
Negligible Adverse	Alterations that result in a very slight deterioration to the existing landscape resource, not uncharacteristic within the receiving landscape.	Alterations that typically result in a barely perceptible deterioration in the existing view.
Minor Adverse	Alterations that result in a slight deterioration of the existing landscape resource. Characteristic features would be partially lost.	Alterations that typically result in a limited deterioration in the existing view.
Moderate Adverse	Alterations that result in a partial deterioration of the existing landscape resource. Valued characteristic features would be largely lost.	Alterations that typically result in a noticeable deterioration in the existing view.
Major Adverse	Alterations that result in a considerable deterioration of the existing landscape resource. Valued characteristic features would be wholly lost.	Alterations that typically result in a pronounced deterioration in the existing view.

Assumptions and Limitations

- 1.7.23 Although some visual receptors may consider the Proposed Development to be visually interesting, the assessment follows standard best practice methods and therefore assumes a 'worst-case' scenario whereby significant changes to views as a result of new tall/ large structures or buildings in an existing relatively open area are generally considered to be adverse.

- 1.7.24 Although the assessment considers all structures relating to the Proposed Development, the focus of the assessment within this chapter assumes the worst-case scenario e.g., that the maximum height and number of stack(s) would be equal across both Trains as outlined in **Chapter 4: The Proposed Development (EN010166/APP/6.2.4)**.
- 1.7.25 Based upon the nature of the works required within the Proposed CO₂ Connection Corridor and Water Connection Corridor (taking account of all permanent above ground structures), it is considered highly unlikely that significant effects would be experienced further than 2 km from them. Therefore, these connection corridors fall within the study area which has been applied to the Main Development Area.

References

- Ref 1. Guidelines for Landscape and Visual Impact Assessment, Third Edition, 2013. London: Landscape Institute.
- Ref 2. Landscape Institute, 2019; Visual Representation of Development Proposals, The Landscape Institute's Technical Guidance Note 06/19.
- Ref 3. Landscape Institute, 2021; Assessing landscape value outside national designations, Technical Guidance Note 02/21.
- Ref 4. Landscape Institute, 2020; Infrastructure, Technical Guidance Note 04/2020.
- Ref 5. Landscape Institute, 2017; Tranquility – An overview, Technical Guidance Note Tranquility 01/17.
- Ref 6. Landscape Institute and Institute of Environmental Management and Assessment (2024). Notes and Clarifications on Aspects of the 3rd Edition Guidelines on Landscape and Visual Impact Assessment, Technical Guidance Note.

