AENC-ARC-ENV-REP-0110

Norwich to Tilbury

Volume 6: Environmental Statement

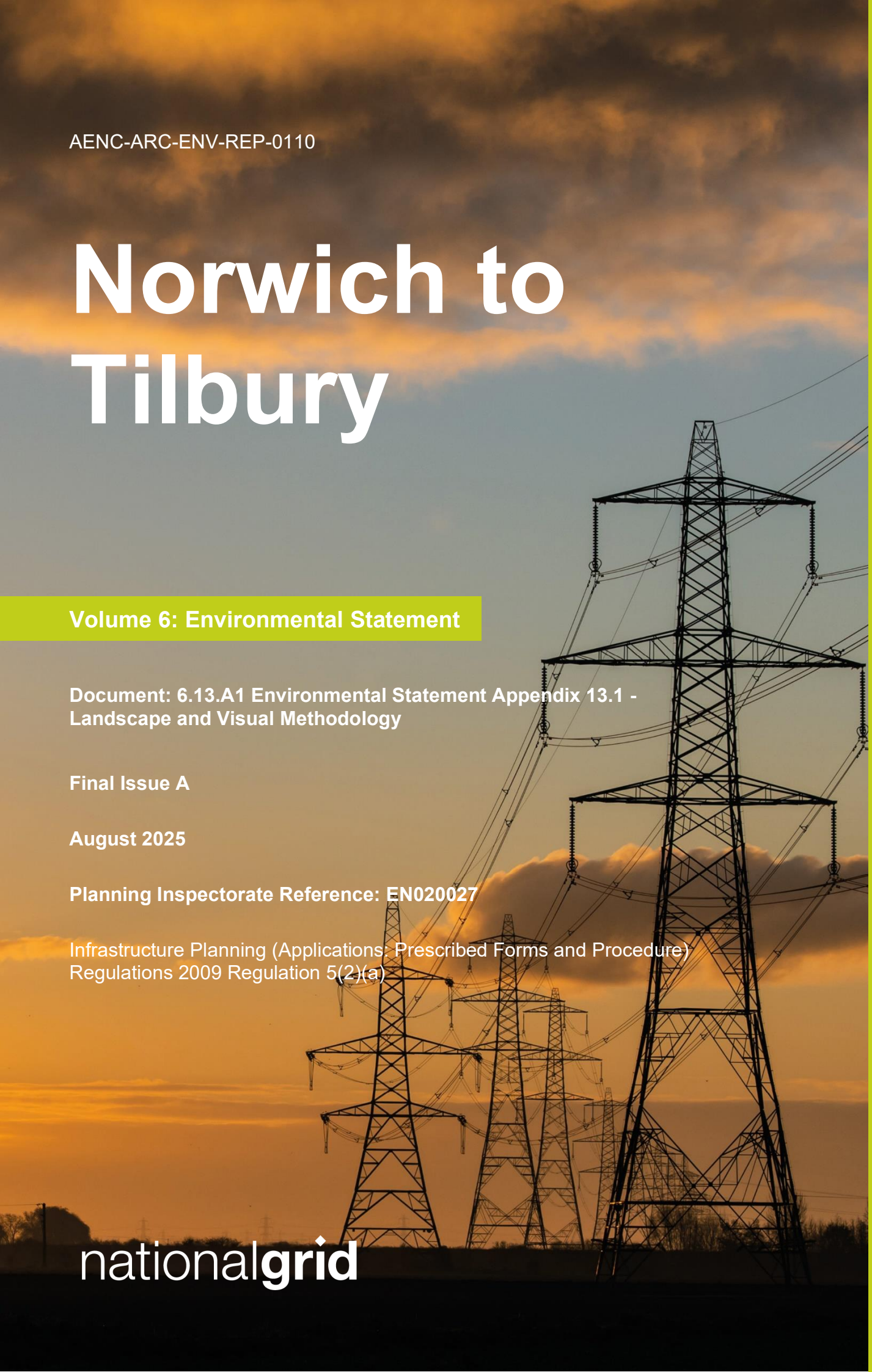
Document: 6.13.A1 Environmental Statement Appendix 13.1 - Landscape and Visual Methodology

Final Issue A

August 2025

Planning Inspectorate Reference: EN020027

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 Regulation 5(2)(a)



nationalgrid

Contents

13. Landscape and Visual Methodology

13.1 Introduction

13.1.1 This appendix has been produced to support Chapter 13: Landscape and Visual (document reference 6.13) of the Environment Statement (ES) (Volume 6 of the DCO application) for Norwich to Tilbury (the 'Project'). This appendix sets out the detailed methodology used for the Landscape and Visual Assessment (LVIA). It also describes the technical methods used to generate the Zone of Theoretical Visibility (ZTV) mapping, undertake photography and create visualisations (wirelines and photomontages). The methodology is in accordance with the Environmental Impact Assessment (EIA) Scoping Report (document reference 6.19) and EIA Scoping Opinion (document reference 6.20) and was agreed with stakeholders.

13.1.2 Landscape and visual assessments are separate, although linked, processes. LVIA therefore considers the potential effects of the Project on:

- Landscape as a resource in its own right (caused by changes to the constituent elements of the landscape, its specific aesthetic or perceptual qualities and the character of the landscape)
- Views and visual amenity as experienced by people.

13.1.3 Whilst landscape and visual effects are linked, the LVIA considers landscape and visual effects separately. Cumulative landscape and visual effects are considered in Chapter 17: Cumulative Effects (document reference 6.17).

13.1.4 The methodology for the assessment of effects on residential visual amenity is set out in Annex B of Appendix 13.4: Residential Visual Amenity Assessment (document reference 6.13.A4).

13.1.5 The assessment of effects on the special qualities of the Dedham Vale National Landscape (an Area of Outstanding Natural Beauty (AONB)) and its setting is set out in Appendix 13.5: National Landscape Assessment Study (document reference 6.13.A5), which also includes a 'setting study' for the National Landscape. The methodology for the assessment of effects on special qualities is set out in Section 13.5 of this appendix.

13.2 Guidance

13.2.1 This methodology was developed by Chartered Landscape Architects (Chartered Members of the Landscape Institute (CMLI)) at LUC.

13.2.2 The methodology was developed primarily in accordance with the principles contained within the Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3) (The Landscape Institute and Institute of Environmental Management and Assessment, 2013). The approach to the assessment of cumulative landscape and visual effects was informed by the Planning Inspectorate Advice Note: Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment (Planning Inspectorate, 2024)). Further detail is provided in Chapter 17: Cumulative Effects (document reference 6.17).

13.2.3 The methodology for the production of accompanying visualisations in Volume 7.12 of the DCO application is based on current good practice guidance as set out by the Landscape Institute (LI), 2019. Detailed information about the approach to viewpoint photography, and ZTV map and visualisation production is provided in Section 13.7.

13.3 Scope of the Assessment

13.3.1 An LVIA considers physical changes to the landscape as well as perceptual changes in landscape character. It also considers changes to areas designated for their scenic or landscape qualities, and the visual impacts of a Project on publicly available views as perceived by people. In other words, in terms of visual impacts, the focus is on public views and public visual amenity. All potentially significant landscape and visual effects are considered, during construction and operation (and maintenance) of the Project.

13.3.2 Where based on professional judgement it is established that significant effects are unlikely to occur, the assessment of potential effects on some receptors may be 'scoped out'. For an EIA development, this is usually agreed at scoping stage, or through the iterative design and assessment of the development through the EIA process. Effects assessed in full, and effects scoped out of the LVIA are detailed in Chapter 13: Landscape and Visual (document reference 6.13). This is in accordance with the EIA Scoping Opinion (document reference 6.20) and was agreed with stakeholders during the non-statutory and statutory consultation periods.

13.3.3 Effects are assessed during construction, at year 1 of operation (in winter, when deciduous vegetation is not in leaf) and at year 15 of operation (in summer, when deciduous vegetation is in leaf).

13.4 LVIA Assessment Methodology

Study Area

13.4.1 The LVIA Study Area is determined by the nature and scale of the Project and the nature of the surrounding area, and considers the landscape and/ or views that the Project may influence in a significant manner.

13.4.2 The EIA Scoping Report (document reference 6.19) proposed that the Study Area for the ES (Volume 6 of the DCO application) would comprise 3 km distance from the Order Limits for the overhead lines and Cable Sealing End (CSE) compounds / new East Anglia Connection Node (EACN) Substation, and 1 km from the underground cable route(s). The Planning Inspectorate stated in the EIA Scoping Opinion (document reference 6.20), '*...that the Study Area and ZTV should represent the extent of the likely impacts from all phases of the Proposed Development (including construction, maintenance and decommissioning) and should encompass long views from within the Dedham Vale AONB*'.

13.4.3 For the purposes of the ES (Volume 6 of the DCO application), the LVIA Study Area was reviewed in light of feedback received during non-statutory and statutory consultation, ongoing site surveys, and following the production of updated ZTVs as the Project has developed.

13.4.4 The landscape and visual Study Area is shown on Figure 13.1: LVIA Study Area and Landscape Designations (document reference 6.13.F1).

13.4.5 Table A13.1.1 describes the Study Area by Project elements and the rationale behind it.

Table A13.1.1 LVIA Study Area

Project Element	Study Area	Rationale
400 kV overhead line (including all associated third party works except 132 kV overhead line removal and undergrounding)	3 km from lateral Limits of Deviation (LoD) for the 400 kV overhead line[1] (*with some viewpoints considered up to 5 km*)	The LVIA Study Area was informed by consultation, field work and professional experience of working on other overhead line proposals. Professional experience of assessments of overhead lines (the tallest element of the Project) and field assessment have shown that there are circumstances when a steel lattice pylon approximately 50 m high can be discerned at distances up to 10 km, for example from an open and elevated viewpoint. However, in most instances the perception of overhead lines beyond 3 km is likely to be relatively limited and beyond 5 km barely perceptible and therefore unlikely to give rise to significant effects. This is because at 3 km distance, when viewed beside a ruler held at arm's length, a 50 m tall pylon would appear to be approximately 1 cm high in the landscape and at a 5 km distance approximately 6 mm high. This is known as the apparent height of the pylon. Some more distant viewpoints up to 5 km from the Project are considered where there is the potential for significant visual effects to arise beyond the 3 km Study Area. The introduction of a 400 kV overhead line may affect the perceptual qualities of the landscape and therefore have an influence on landscape character. Professional experience has determined that significant effects on landscape character are unlikely beyond 3 km.
Substation extension at Bramford	3 km from lateral / longitudinal LoD	The Project proposes to extend the existing substation at Bramford. Any

[1] The Study Area was generated from the lateral LoD in order to capture all potential effects within the LoD, as set out in Section 13.9 Sensitivity Testing in Chapter 13: Landscape and Visual (document reference 6.13)

Project Element	Study Area	Rationale
		new infrastructure would be a maximum height of 15 m. A 3 km Study Area which ties into that considered for the 400 kV overhead line is considered more than adequate.
New EACN and Tilbury North Substations	3 km from lateral / longitudinal LoD	The Project proposes a new EACN Substation and Tilbury North Substation. The tallest elements of the substations would be no higher than 15 m. A 3 km Study Area which ties into that considered for the 400 kV overhead line is considered more than adequate.
New EACN Substation access road	1 km from lateral LoD	Proposed construction of the access road would be at ground level and the majority of the proposals would involve improvements to an existing carriageway along Bentley Road. A 1 km Study Area is considered adequate to identify and report on significant landscape and visual effects.
400 kV CSE compounds	3 km from lateral / longitudinal LoD	The Project proposes a number of new CSE compounds that connect to the proposed 400 kV overhead line. The tallest elements of the CSE compound would be no higher than 15 m. A 3 km Study Area which ties into that considered for the 400 kV overhead line is considered more than adequate.
275 kV CSE compounds	3 km from lateral / longitudinal LoD	The Project proposes new 275 kV CSE compounds that connect to an existing 275 kV overhead line. The tallest elements of the CSE compound would be no higher than 15 m. A 3 km Study Area which ties into that considered for the adjacent 400 kV overhead line alterations is considered more than adequate.
Underground cable route	3 km from lateral LoD	Proposed construction of 400 kV underground cables would be at ground level. The Study Area was increased to 3 km in response to stakeholder feedback, to identify and report on significant landscape and visual effects.

Project Element	Study Area	Rationale
132 kV overhead line removal (a component of the third party works)	2 km from lateral LoD	Proposed construction activities related to the removal of 132 kV overhead lines (a component of the third party works) would involve removal of steel lattice pylons approximately 30 m high. Professional experience of assessments of overhead lines and field assessment have shown that there are circumstances when a steel lattice pylon approximately 30 m high can be discerned at distances up to 6 km, for example from an open and elevated viewpoint. However, in most instances the perception of 132 kV overhead lines beyond 1.8 km is likely to be relatively limited and beyond 3 km barely perceptible and therefore unlikely to give rise to significant effects. This is because at 1.8 km distance, when viewed beside a ruler held at arm's length, a 30 m tall pylon would appear to be approximately 1 cm high in the landscape and at a 3 km distance approximately 6 mm high. This is known as the apparent height of the pylon.
132 kV underground cable route (a component of the third party works)	1 km from lateral LoD	Proposed construction of 132 kV underground cables would be at ground level. A 1 km Study Area is considered adequate to identify and report on significant landscape and visual effects.

13.4.6 More distant viewpoints up to 5 km from the Project were considered where there is the potential for significant visual effects to arise beyond the 3 km Study Area, for example where there are particularly sensitive visual receptors and where topography allows more far-reaching views including long distance views from Dedham Vale National Landscape.

Existing Baseline

Data Collection

13.4.7 The baseline assessment was informed by a desk study which has drawn on the following key information sources:

- Mapping and data
  - Ordnance Survey (OS) Maps at 1:50,000 and 1:25,000 scales

- Aerial photography, Google Earth, and Google Maps Street View
- Open-source GIS data
- Aerial imagery (2024) - Digital surface model (DSM) tiles, Digital terrain model (DTM) tiles, Ortho-mosaic tiles and tree crown mapping were provided for the Order Limits. Imagery at a resolution of 3 cm Ground Sampling Distance was captured using fixed-wing aircraft

- Landscape Character Assessment (LCA)
  - Natural England's National Character Area profiles (Natural England, 2014)
  - Natural England's National Historic Landscape Characterisation (NHLC) Project
  - East of England Landscape Typology (Landscape East, 2010)
  - South Norfolk District LCA (LUC, 2001)
  - Breckland Landscape and Settlement Character Assessment (Tibbalds / LUC, 2022)
  - Suffolk LCA (Suffolk County Council, 2010)
  - Tendring District LCA (LUC, 2001)
  - Colchester Borough LCA (CBA, 2005)
  - Braintree, Brentwood, Chelmsford, Maldon and Uttlesford LCAs (CBA, 2006)
  - Essex LCA (CBA, 2003)
  - LCA of Basildon Borough (The Landscape Partnership, 2014)
  - Thurrock Integrated Landscape Character Assessment (LUC, 2018)
  - Land of the Fanns, LCA (Alison Farmer Associates, 2016)
  - Waveney Valley Valued Landscape Assessment (Alison Farmer Associates, 2024)
- Designated landscape publications
  - The Dedham Vale Landscape (LDA for the Countryside Commission, 1997)
  - Dedham Vale AONB Natural Beauty and Special Qualities and Perceived and Anticipated Risks (Alison Farmer Associates, 2016)
  - Dedham Vale AONB and Stour Valley Project Area Management Plan (Dedham Vale National Landscape and Stour Valley Project Area Partnership, 2021-26)
  - Dedham Vale AONB and Stour Valley Project Area State of the AONB Report 2018 (LUC, 2019).

13.4.8 Chapter 13: Landscape and Visual (document reference 6.13) was informed by baseline data gathered from other environmental topic chapters where relevant. This includes data from the following:

- Chapter 8: Ecology and Biodiversity (document reference 6.8)
- Chapter 11: Historic Environment (document reference 6.11)

- Chapter 15: Socio-economics, Recreation and Tourism (document reference 6.15)
- Chapter 16: Traffic and Transport (document reference 6.16).

13.4.9 Other information sources are referenced, including Local Plan documents, and Neighbourhood Plans including those identifying key views. Relevant data was gathered and used to support the LVIA. The East Anglia Green Energy Enablement Consultation – June 2022 Review of Consultation Documentation in Relation to Sections K (ET1) and L (ET5), (Alison Farmer Associates, 2022) is also referenced.

Site Visit and Surveys

13.4.10 Field survey work was carried out during multiple visits under differing weather conditions between 2022 and 2025 (in all seasons). Records were made in the form of field notes and photographs. Field survey work included visits to the Order Limits, viewpoints and designated landscapes, and extensive travel around the Study Area to consider likely effects on landscape character and on experiences of views seen from designated landscapes, settlements / communities, and routes. Field work was undertaken during both summer and winter months to fully understand the maximum level of visibility as part of the landscape and visual baseline.

Methodological Overview

13.4.11 The key steps in the methodology for assessing landscape and visual effects was as follows:

- The landscape of the Study Area was analysed, and landscape receptors identified, informed by desk study and field survey
- The area over which the development would potentially be visible was established through the creation of ZTV plans[2]
- The visual baseline was recorded in terms of the different receptors (groups of people) who may experience views of the Project (informed by the initial ZTV) and the nature of their existing views and visual amenity
- Potential assessment viewpoints were selected, as advocated by GLVIA3 to represent a range of different receptors and views, in consultation with stakeholders including Local Planning Authorities as set out in Chapter 13: Landscape and Visual (document reference 6.13)
  - '***Representative viewpoints**, selected to represent the experience of different types of visual receptor, where larger numbers of viewpoints cannot all be included individually and where the significant effects are unlikely to differ – for example, certain points may be chosen to represent the views 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, viewpoints in areas of particularly noteworthy visual and/or*

[2] A ZTV indicates areas from where a development is theoretically visible, but does not show what the Project would look like, nor indicate the nature or magnitude of landscape or visual impacts

recreational amenity 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*' (GLVIA3, Para 6.19, Page 109)

- Likely significant effects on both the landscape as a resource and visual receptors were identified
- The level (and significance) of landscape and visual effects was judged with reference to the nature of the receptor (commonly referred to as the sensitivity of the receptor), which considers both susceptibility and value, and the nature of the effect (commonly referred to as the magnitude of effect), which considers a combination of judgements including size/scale, geographical extent, duration and reversibility.

Description of Effects

13.4.12 As required by The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the 'EIA Regulations'), the assessment also identifies the effects as either being beneficial, adverse or neutral.

13.4.13 Landscape and visual effects (beneficial, adverse or neutral) are determined in relation to the degree to which the proposal fits with the existing landscape character or views, and the contribution to the landscape or views that a Project makes, even if it is in contrast to the existing character of the landscape or views. With regard to electricity transmission infrastructure an assessment is required to take an objective approach. Therefore, to address the 'maximum case effect' situation, potential landscape and visual effects relating to the introduction of electricity transmission infrastructure are generally assumed to be adverse. Some beneficial effects may be identified in relation to other elements of the Project, for example undergrounding of existing infrastructure or landscape mitigation.

Method for Assessing Landscape Effects

13.4.14 As outlined in GLVIA3 '*An assessment of landscape effects deals with the effects of change and development on landscape as a resource*.' (GLVIA3, Para 5.1, Page 70). Changes may affect the elements that make up the landscape, the aesthetic and perceptual aspects of the landscape and its distinctive character.

13.4.15 An assessment of landscape effects requires consideration of the nature of landscape receptors (sensitivity of receptor) and the nature of the effect on those receptors (magnitude of effect). GLVIA3 states that the nature of landscape receptors, commonly referred to as their sensitivity, should be assessed in terms of the susceptibility of the receptor to the type of change proposed, and the value attached to the receptor. The nature of the effect on each landscape receptor, commonly referred to as its magnitude, should be assessed in terms of size and scale of effect, geographical extent, duration and reversibility.

13.4.16 These aspects were considered together, to form a judgement regarding the overall significance of landscape effects (GLVIA3, Figure 5.1, Page 71).
The following sections set out the methodology which was used to evaluate sensitivity and magnitude.

Identification of Landscape Receptors

13.4.17 As set out in Appendix 13.2: Landscape Baseline and Assessment (document reference 6.13.A2), landscape character is described at the national, regional and district/county scales. The assessment considers effects on district and county level Landscape Character Types (LCTs) and Landscape Character Areas (LCAs). These are shown on Figure 13.6: Landscape Character Types and Landscape Character Areas (document reference 6.13.A6).

13.4.18 For each landscape receptor (LCT or LCA) the assessment was subdivided according to the following distances from the Order Limits (effects during construction) or LoD[3] (effects during operation and maintenance):

- Effects within 0.5 km
- Effects between 0.5 km and 1.5 km
- Effects beyond 1.5 km.

13.4.19 If an LCT or LCA did not fall within the above distance brackets, no corresponding assessment was made.

Sensitivity of Landscape Receptors

13.4.20 In accordance with GLVIA3 the sensitivity of a landscape receptor to change was based on weighing up professional judgements regarding susceptibility and value (GLVIA3, Para 5.39, Page 88). The landscape receptors considered are described in Appendix 13.2: Landscape Baseline and Assessment (document reference 6.13.A2).

Susceptibility of Landscape Receptors

13.4.21 Susceptibility is defined by GLVIA3 as *'the ability of the landscape receptor (whether it be the overall character or quality/condition of a particular type or area, or an individual element and/or feature, or a particular aesthetic and perceptual aspect) to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies'* (GLVIA3 paragraph 5.40).

13.4.22 The susceptibility of the landscape to the Project differs depending on the component of the Project being assessed and the nature of the particular landscape in the Study Area. A series of criteria are used to evaluate the susceptibility of LCTs and LCAs to electricity transmission infrastructure as set out in Table A13.1.2. Aspects of these criteria are drawn from a range of published sources relating to electricity transmission infrastructure, including the Holford Rules (Lord Holford, 1959), The Horlock Rules (National Grid, 2009) and GLVIA3 (The Landscape Institute and Institute of Environmental Management and Assessment, 2013). The table also identifies which of the Holford Rules and Horlock Rules are applicable to each factor. Table A13.1.3 sets out the aspects influencing susceptibility in relation to underground cabling.

[3] Lateral LoD for proposed overhead line and underground cable alignment, lateral / longitudinal LoD for proposed substations, substation extensions and CSE compounds

Table A13.1.2 Aspects influencing susceptibility of Landscape receptors to electricity transmission infrastructure (overhead lines, CSE compounds and substations)

Criteria	Aspects Indicating Greater Susceptibility to Electricity Transmission Infrastructure	⟷	Aspects Indicating Reduced Susceptibility to Electricity Transmission Infrastructure
Scale	Smaller scale	⟷	Larger scale
Topography and landform Holford Rules 4 and 5 Horlock Rule 4	Presence of strong topographical variety or distinctive landform features Absence of strong topographical variety, featureless, convex or flat with little opportunity for screening and backclothing of electricity transmission infrastructure	⟷	Undulating and valley landscapes which offer opportunities for screening and backclothing of electricity transmission infrastructure
Landcover, pattern and complexity Holford Rules 5 and 6	Limited woodland/forestry cover to help reduce views of electricity transmission infrastructure (e.g. providing screening or backclothing of infrastructure) Complex Rugged and irregular	⟷	Extensive areas of woodland/forestry cover to reduce views of electricity transmission infrastructure (e.g. providing screening or backclothing of infrastructure) Simple, regular or uniform
Settlement and man-made influence Holford Rules 1 and 2	Absence of modern development Presence of small scale, historic or vernacular settlement	⟷	Presence of contemporary structures e.g. infrastructure or industrial elements
Ridges and Skylines Holford Rule 4	Distinctive, undeveloped skylines Skylines that are highly visible over large areas or exert a large influence on landscape character Skylines with important historic landmarks	⟷	Non-prominent/screened skylines Presence of existing modern man-made features (e.g. other electricity transmission infrastructure, telecommunications masts or wind turbines)
Inter-visibility with adjacent landscapes	Strong inter-visibility with sensitive landscapes Forms an important part of a view from sensitive viewpoints Visually open	⟷	Little inter-visibility with adjacent sensitive landscapes or viewpoints Visually enclosed
Perceptual aspects	Remote from visible or audible signs of human activity and development	⟷	Close to visible or audible signs of human activity and development

Table A13.1.3 Aspects influencing susceptibility of landscape receptors to underground cables

Criteria	Aspects Indicating Greater Susceptibility to Underground Cables	⟷	Aspects Indicating Reduced Susceptibility to Underground Cables
Scale	Smaller scale	⟷	Larger-scale
Topography and landform	Steep, dramatic or elevated landforms will typically be more susceptible to an underground cable. This is because they are often prominent and distinctive in character and typically require more extensive earthworks during construction. Narrow ridges are particularly vulnerable especially where the slopes of the ridgeline are well defined, steep or with rock outcrops.	⟷	Landforms that are smooth, regular and convex, or flat and uniform, are less susceptible to an underground cable, although this can depend on other factors such as tree cover.
Landcover, pattern and complexity	Landscapes with a very intricate, complex mosaic of characteristic or high frequency/density of susceptible landscape features, such as trees and woodlands, hedgerows or traditional/historic field patterns, and designed landscapes with formal patterns, are typically more vulnerable to underground cables as the scale and nature of the work may conflict with the landscape during construction.	⟷	Open and simple landscapes where there are few characteristic landscape features are less susceptible to this element of the Project, particularly where there is sparse tree cover. Where landscape complexity is due to past or current commercial/industrial influences, this indicates lower rather than higher susceptibility.
Settlement and man-made influence	Landscapes which are more highly susceptible are those which are typically more tranquil and are much less influenced by human activity and buildings, which may feel more remote and/or have a sense of naturalness.	⟷	The presence of human activity and man-made structures may reduce landscape susceptibility to an underground cable, as may the influence of quarrying, commercial forestry or landfill (in particular during the construction phase). The frequency of buildings and human intervention in more contemporary densely settled areas may also indicate a reduced susceptibility.

13.4.23 Published landscape sensitivity studies (where they exist) were reviewed to inform the evaluation of susceptibility. This review included an evaluation as to the relevance of the publication to the assessment being undertaken (e.g. consideration of the purpose and scope of the published studies).

13.4.24 Landscape susceptibility was recorded as high, medium or low.

Value of Landscape Receptors

13.4.25 The European Landscape Convention advocates that all landscape is of value, whether it is the subject of defined landscape designation or not: '*The landscape is important as a component of the environment and of people's surroundings in both town and country and whether it is ordinary landscape or outstanding landscape*' (Council of Europe, 2000). The value of a landscape receptor is recognised as being a key contributing factor to the sensitivity of landscape receptors.

13.4.26 The Landscape Institute's Technical Guidance Note (TGN) 02/21 Assessing landscape value outside national designations (Landscape Institute, 2021) defines landscape value as '*the relative value or importance attached to different landscapes by society on account of their landscape qualities*' (page 3). The guidance notes that landscape value can be assessed at different stages of the planning process, including as part of LVIA.

13.4.27 The value of landscape receptors is determined with reference to:

- Review of relevant designations and the level of policy importance that they signify (such as landscapes designated at international, national or local level), and/or
- Application of criteria that indicate value (such as natural heritage, cultural heritage, landscape condition, associations, distinctiveness, recreational, perceptual (scenic), perceptual (wildness and tranquillity) and functional) as described in Table 1 of TGN 02/21.

13.4.28 Internationally and nationally designated landscapes would generally indicate landscape of higher value whereas those without formal designation (such as a widespread or common landscape type without high scenic quality) are likely to be of lower value, bearing in mind that all landscapes are valued at some level. There is however variation across both designated and undesignated areas, and so judgements regarding value are also informed by field work.

13.4.29 Judgements regarding the value of the landscape are based on published district and county level LCAs. Where landscape character areas do not currently exist, LCTs have been used. Each unit was systematically assessed against the value factors shown in Table A13.1.4 and judgements made on a sliding scale indicating a higher or lower value. The factors have been adapted from TGN 02/21, with only those of relevance to the Study Area being included. These judgements were then considered together to inform an overall evaluation of the relative value of the landscape which was given a rating of high, medium-high, medium, low-medium or low.

Table A13.1.4 Factors contributing to landscape value

Factor	Definition Lower Value	⟷	Higher Value
Natural heritage	*Landscape with clear evidence of ecological, geological, geomorphological or physiographic interest which contribute positively to the landscape*		
	• Absence of wildlife and habitats of ecological interest that contribute to sense of place • Absence of semi-natural habitat • Absence of distinctive geological, geomorphological or pedological features • Absence of valued natural capital assets that contribute to ecosystem services • Absence of contribution to nature recovery/ green infrastructure networks	⟷	• Presence of wildlife and habitats of ecological interest that contribute to sense of place • Extent and survival of semi-natural habitat that is characteristic of the landscape type • Presence of distinctive geological, geomorphological or pedological features • Landscape which contains valued natural capital assets that contribute to ecosystem services • Landscape which makes an identified contribution to a nature recovery/ green infrastructure network
Cultural heritage	*Landscape with clear evidence of archaeological, historical or cultural interest which contribute positively to the landscape*		
	Indicators: • Absence of historic landmark structures or designed landscape elements • Absence of historic parks and gardens, and designed landscapes • Landscape does not contribute to the significance of heritage assets • Landscape does not offer a dimension of time depth	⟷	Indicators: • Presence of historic landmark structures or designed landscape elements • Presence of historic parks and gardens, and designed landscapes • Landscape which contributes to the significance of heritage assets • Landscape which offers a dimension of time depth (natural and / or cultural)

Factor	Definition Lower Value	⟷	Higher Value
Landscape condition	*Landscape which is in a good physical state both with regard to individual elements and overall landscape structure*		
	Indicators: • Poor physical condition / intactness of individual landscape elements • Poor health of elements e.g. water, soils • Weak landscape structure • Presence of detracting/ incongruous features	⟷	Indicators: • Good physical condition/ intactness of individual landscape elements (e.g. walls, parkland, trees) • Good health of elements such as good water quality, good soil health • Strong landscape structure (e.g. intact historic field patterns) • Absence of detracting/ incongruous features (or features are present but have little influence)
Associations	*Landscape which is connected with notable people, events and the arts*		
	Indicators: • No or very few associations with well-known literature, poetry, art, TV/film and music • No or very few associations with science or other technical achievements • No or very few links to notable events • No or very few associations with famous people	⟷	Indicators: • Associations with well-known literature, poetry, art, TV/film and music that contribute to perceptions of the landscape • Associations with science or other technical achievements • Links to a notable historical event • Associations with a famous person or people

Factor	Definition Lower Value	⟷	Higher Value
Distinctiveness	*Landscape that has a strong sense of identity*		
	Indicators: • Weak or negative sense of place • Absence of distinctive features • Absence of rare or unusual features • Landscape does not make an important contribution to the character of identity of a settlement	⟷	• Indicators: • Landscape character that has a strong sense of place (showing strength of expression of landscape characteristics) • Presence of distinctive features which are identified as being characteristic of a particular place • Presence of rare or unusual features, especially those that help to confer a strong sense of place or identity • Landscape which makes an important contribution to the character or identity of a settlement
Recreational	*Landscape offering recreational opportunities where experience of landscape is important*		
	Indicators: • Absence of open access land, common land and public rights of way • Absence of areas with good accessibility that provide opportunities for outdoor recreation and spiritual experience/ inspiration • Absence of town and village greens • Absence of landscapes that form part of a view that is important to the enjoyment of a recreational activity	⟷	Indicators: • Presence of open access land, common land and public rights of way (particularly National Trails, long distance trails, Coastal Paths and Core Paths) where appreciation of landscape is a feature • Areas with good accessibility that provide opportunities for outdoor recreation and spiritual experience/ inspiration • Presence of town and village greens • Other physical evidence of recreational use where experience of landscape is important

Factor	Definition Lower Value	⟷	Higher Value
			• Landscape that forms part of a view that is important to the enjoyment of a recreational activity
Perceptual (scenic)	*Landscape that appeals to the senses, primarily the visual sense*		
	Indicators: • Absence of distinctive features, or distinctive combinations of features • Absence of strong aesthetic qualities • Absence of natural lines in the landscape • Absence of visual diversity or contrasts • Absence of memorable/ distinctive views and landmarks, or landscape does not contribute to distinctive views and landmarks	⟷	Indicators: • Distinctive features, or distinctive combinations of features, such as dramatic or striking landform or harmonious combinations of land cover • Strong aesthetic qualities such as scale, form, colour and texture • Presence of natural lines in the landscape (e.g. natural ridgelines, woodland edges, river corridors, coastal edges) • Visual diversity or contrasts which contributes to the appreciation of the landscape • Memorable/ distinctive views and landmarks, or landscape which contributes to distinctive views and landmarks
Perceptual (tranquillity)	*Landscape with a strong perceptual value notably tranquillity*		
	Indicators: • Low levels of tranquillity or perceptions of tranquillity • Intrusive or inharmonious development, land uses, transport and lighting • Proximity or perceived proximity to notable habitation and / or transport routes	⟷	Indicators: • High levels of tranquillity or perceptions of tranquillity • Absence of intrusive or inharmonious development, land uses, transport and lighting

Factor	Definition Lower Value	⟷	Higher Value
	• Absence of dark night skies		• Sparsely settled or perceived as distant from notable habitation • Relatively few roads or other transport routes • Extensive areas of semi-natural vegetation • Dark night skies
Functional	*Landscape which performs a clearly identifiable and valuable function, particularly in the healthy functioning of the landscape*		
	Indicators: • Landscape and landscape elements do not contribute to the healthy functioning of the landscape • Landscape and landscape elements do not have strong physical or functional links with an adjacent national landscape designation, or are not important to the appreciation of the designated landscape and its special qualities • Landscape does not form part of a multifunctional Green Infrastructure network	⟷	Indicators: • Landscape and landscape elements contribute to the healthy functioning of the landscape, e.g. natural hydrological systems/ floodplains, areas of undisturbed and healthy soils, areas that form carbon sinks such as peat bogs, woodlands and oceans, areas of diverse landcover (benefits pest regulation), pollinator-rich habitats such as wildflower meadows • Landscapes and landscape elements that have strong physical or functional links with an adjacent national landscape designation, or are important to the appreciation of the designated landscape and its special qualities • Areas that form an important part of a multifunctional Green Infrastructure network

Sensitivity of Landscape Receptors

13.4.30 The sensitivity of a landscape receptor to change is defined as high, medium or low and is based on weighing up professional judgements regarding susceptibility and value, as set out in Table A13.1.5.

Table A13.1.5 Sensitivity of landscape receptors

	Higher	⟷	Lower
Susceptibility	Attributes that make up the character of the landscape offer very limited opportunities for the accommodation of change without key characteristics being fundamentally altered by electricity transmission infrastructure, leading to a different landscape character.	⟷	Attributes that make up the character of the landscape are resilient to being changed by electricity transmission infrastructure.
Value	Landscapes with clear evidence of natural heritage, cultural heritage and cultural associations, in good physical condition, with recreational opportunities, with a strong sense of distinctiveness, with strong perceptual qualities and which contributes to the healthy functioning of the landscape. Areas or features designated at a national level e.g. National Parks or National Landscapes or key features of these with national policy level protection.	⟷	Landscapes with no or limited evidence of natural heritage, cultural heritage and cultural associations, in poor physical condition, with few recreational opportunities, with a weak or negative sense of place, with weak perceptual qualities and which does not contribute to the healthy functioning of the landscape. In addition to the above, an absence of formally designated areas or features may also indicate lower value.

Magnitude of Landscape Effect

13.4.31 The overall judgement of magnitude of a landscape effect is based on combining professional judgements on size and scale, geographical extent, duration and reversibility. Further information on the criteria is provided below.

Size and Scale of Effect

13.4.32 For landscape elements/features this depends on the extent of existing landscape elements that would be lost or changed, the proportion of the total extent that this represents, and the contribution of that element to the character of the landscape.

13.4.33 In terms of landscape character, this reflects the degree to which the character of the landscape would change as a result of removal or addition of landscape components, and how the changes would affect key characteristics.

13.4.34 The size and scale of the effect is described as being large, medium, small, or barely perceptible.

Geographical Extent of Effect

13.4.35 The geographical extent over which the landscape effect would arise is described as being large (widespread or scale of the landscape character type), medium (more immediate surroundings) or small (localised, for example at a site level).

Duration of Effect

13.4.36 GLVIA3 states at paragraph 5.51 on page 91 that '*Duration can usually be simply judged on a scale such as short term, medium term or long term*.' For the purposes of the assessment, duration is often determined in relation to the phases of the Project, as follows:

- Short term: This is assumed to be up to 2032 which covers construction plus one year reinstatement
- Medium term: This is assumed to be 2033 to 2048 which is based on year 2-15 post construction
- Long term: This is assumed to be 2049 onwards and it used to describe effects with a duration that extends longer than 15 years post construction.

13.4.37 The duration of effect takes into account the effects of vegetation clearance during construction, which may be experienced for several years after construction is completed, before any replanted habitats have matured.

Reversibility of Effect

13.4.38 In accordance with the principles contained within GLVIA3, reversibility is reported as reversible, partially reversible or irreversible (i.e. permanent), and is related to whether the change can be reversed at the end of the phase of development under consideration (i.e. at the end of construction or at the end of the operational lifespan of the development).

13.4.39 Judgements on the magnitude of landscape effect (nature of landscape effect) are recorded as high, medium, low or barely perceptible and are guided by Table A13.1.6. Where no effect was identified, the size/scale, geographical extent, duration and reversibility of effect were not stated.

Table A13.1.6 Magnitude of Landscape effect

	Higher	⟷	**Lower**
Size/Scale	Extensive loss of landscape features and/or elements, and/or change in, or loss of key landscape characteristics, and/or creation of new key landscape characteristics	⟷	Limited loss of landscape features and/or elements, and/or change in or loss of some secondary landscape characteristics
Geographical Extent	Change in landscape features and/or character extending considerably beyond the immediate site and potentially	⟷	Change in landscape features and/or character extending contained within or local to the immediate site and affecting

	Higher	⟷	Lower
	affecting multiple landscape character types/areas		only a small part of the landscape character type/area
Duration	Changes experienced for a period of around five years or more	⟷	Changes experienced for a shorter period of up to five years
Reversibility	Change to features, elements or character which cannot be undone or are only partly reversible after a long period	⟷	A temporary landscape change which is largely reversible following the completion of construction, or decommissioning of the development

Judging Levels of Landscape Effect and Significance

13.4.40 The final step in the assessment requires the judgement of sensitivity and magnitude of effect to be combined to make an informed professional assessment on the significance of each landscape effect (GLVIA3, Figure 5.1, Page 71).

13.4.41 There may be a complex relationship between the value attached to a landscape and the susceptibility of the landscape to a specific change. Therefore, the rationale for judgements on the sensitivity of landscape receptors needs to be clearly set out for each receptor. It should be noted that whilst landscape designations at an international or national level are likely to be accorded the highest value, it does not necessarily follow that such landscapes all have a high susceptibility to all types of change, and conversely, undesignated landscapes may also have high value and susceptibility to change (GLVIA3, Page 90).

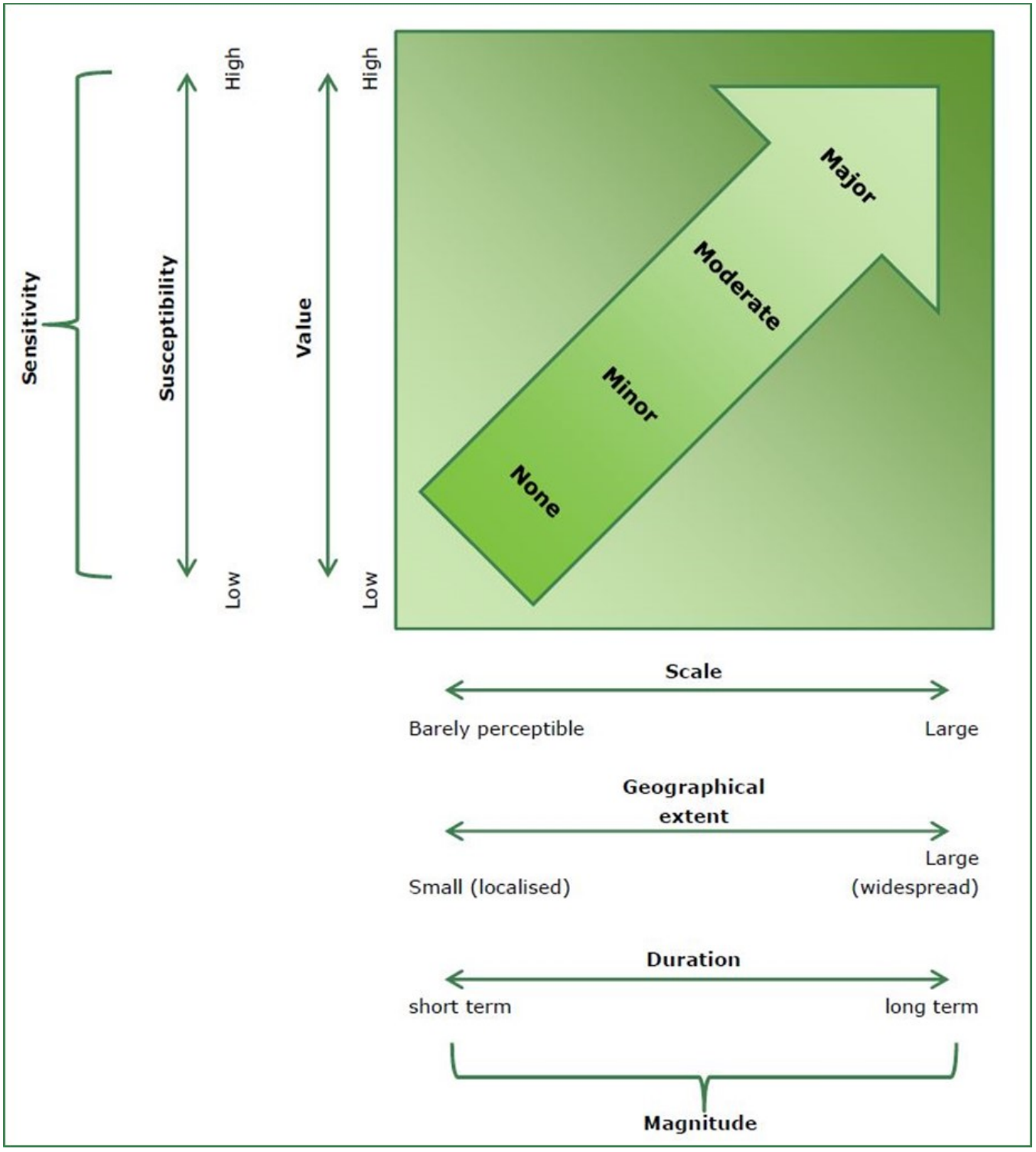
13.4.42 This determination requires the application of professional judgement and experience to take on board the many different variables which need to be considered, and which are given different weight according to site-specific and location-specific considerations in every instance. Judgements are made on a case by case basis, guided by the principles set out in Image A13.1.1 and the example descriptions/definitions detailed in Table A13.1.7. A rigid matrix-type approach, which does not take on board professional judgement and experience, and where the level of effect is defined simply based on the level of sensitivity (nature of receptor) combined with the magnitude of change (nature of effect), is not used. As such, the conclusion on the level of effect is not always the same for similar receptors or determined through a formulaic process.

13.4.43 Although a numerical or formal weighting system was not applied, consideration of the relative importance of each aspect was made to inform the overall decision as to the likely effect. Levels of effect are identified as no effect, negligible, minor, moderate or major as set out in Table A13.1.7, where moderate and major effects are considered significant in the context of the EIA Regulations. Intermediate judgements (e.g. minor-moderate or moderate-major) are made where appropriate.

Table A13.1.7 Level and significance of landscape effects

Level and Significance of Landscape Effects	Description/Definition
Major	The Project would result in an obvious change in landscape features and character, and is likely to affect a landscape with a medium or high susceptibility to that type of change. This level of effect may also occur when a medium or large scale of effect acts on a nationally valued landscape. The effect is likely to be long-term and affect a relatively large area.
Moderate	The Project would result in a noticeable change in landscape characteristics and character and is likely to affect a landscape with a medium susceptibility to that type of change. This level of effect may also occur when a smaller scale of effect acts on a more widely valued landscape, or a larger scale of effect acting on a landscape valued at a more local level. This level of effect may also occur when a large scale of effect occurs over a relatively short period or over a small area.
Minor	The Project would result in a small change in landscape characteristics and character over a long-term duration. This level of effect may also occur when a larger scale of effect is of short-term duration or confined to a small part of the site.
Negligible	The Project would result in a barely perceptible change in landscape characteristics/character.
No Effect	The Project would result in no change in landscape characteristics/character.

Image A13.1.1 Judging levels of effect – Landscape or Visual



Method for Assessing Visual Effects

13.4.44 As outlined in GLVIA3 *'An assessment of visual effects deals with the effects of change and development on views available to people and their visual amenity*' (GLVIA3, Para 6.1, Page 98) changes in views may be experienced by people at different locations within the Study Area including from static locations (normally assessed using representative viewpoints) and whilst moving through the landscape (normally referred to as sequential views, e.g. from roads and walking routes).

13.4.45 Visual receptors are individuals or groups of people who may be affected by changes in views and visual amenity. They are usually grouped by their occupation or activity (e.g. residents, motorists, recreational users, tourists visiting a specific location or area) and the extent to which their attention is focused on the view (GLVIA3, Paras. 6.31 – 6.32, Page 113).

13.4.46 GLVIA3 states that the sensitivity of visual receptors should be assessed in terms of the susceptibility of the receptor to change in views and/or visual amenity and the value attached to particular views. The magnitude of effect should be assessed in terms of the size and scale, geographical extent, duration and reversibility of the effect.

13.4.47 These aspects were considered together, to form a judgement regarding the overall significance of visual effect (GLVIA3, Figure 6.1 Page 99). The following sections set out the methodology which was used to evaluate sensitivity and magnitude.

Identification of Visual Receptor Areas

13.4.48 For the purposes of this assessment, visual receptors were arranged into 'Visual Receptor Areas' (VRAs) as shown on Figure 13.7: Visual Receptors and Viewpoints (document reference 6.13.F7). These VRAs were identified based on geographical location, shared landscape characteristics and a similarity in the anticipated nature of views towards the Project. Visual receptors within the main settlements, on the main road routes and using recreational resources within each VRA are assessed in Appendix 13.3: Visual Baseline and Assessment (document reference 6.13.A3). An assessment of effects on people at representative viewpoints is also provided.

Sensitivity of Visual Receptors

13.4.49 In accordance with GLVIA3 the sensitivity of a visual receptor to change is based on weighing up professional judgements regarding susceptibility and value (GLVIA3, Para 6.31, Page 113). The receptors considered are described in Appendix 13.3: Visual Baseline and Assessment (document reference 6.13.A3).

Susceptibility of Visual Receptors

13.4.50 The susceptibility of visual receptors to changes in views/visual amenity is a function of the occupation or activity of people experiencing the view and the extent to which their attention is focused on views (GLVIA 3, para 6.32). This is recorded as high, medium or low informed by Table A13.1.8.

Table A13.1.8 Susceptibility of visual receptors

Susceptibility	Description/Definition
High	Viewers whose attention or interest is focussed on their surroundings, including: • Settlements and communities where views contribute to the landscape setting enjoyed by residents • People engaged in outdoor recreation (including users of cycle routes, footpaths, public rights of way and Quiet Lanes / Protected Lanes whose interest is likely to be focused on the landscape)

Susceptibility	Description/Definition
	• Visitors to heritage assets or other attractions where views of surroundings are an important contributor to experience • Visitors to formal or promoted stopping places on scenic or tourist routes
Medium	• People travelling in vehicles on scenic routes and tourist routes, where attention is focused on the surrounding landscape, but is transitory • People engaged in outdoor sport or recreation whose attention is likely to be focused on the surroundings, including users of golf clubs • People at their place of work whose attention is focused on the surroundings and where setting is important to the quality of working life
Low	• People travelling more rapidly on more major roads, rail or transport routes (not recognised as scenic routes) • People engaged in outdoor sport or recreation which does not involve or depend upon appreciation of views of the landscape • People at their place of work whose attention is not on their surroundings (and where setting is not important to the quality of working life)

Value of View or Visual Amenity

13.4.51 GLVIA3 also requires evaluation of the value attached to the view or visual amenity and relates this to planning designations and cultural associations (GLVIA3, Para. 6.37, Page 114).

13.4.52 Recognition of the value of a view is determined with reference to:

- Planning designations specific to views
- Whether it is recorded as important in relation to designated landscapes (such as views specifically mentioned in the special qualities of a National Landscape)
- Whether it is recorded as important in relation to heritage assets (such as designed views recorded in citations of Registered Parks and Gardens (RPG) or views recorded as of importance in Conservation Area Appraisals or Neighbourhood Plans)
- The value attached to views by visitors, for example through appearances in guidebooks or on tourist maps, provision of facilities for their enjoyment and references to them in literature and art.

13.4.53 A designated viewpoint or scenic route advertised on maps and in tourist information, or which is a significant destination in its own right, is likely to indicate a view of higher value. High value views may also be recognised in relation to the special qualities of a designated landscape or heritage asset, or it may be a view familiar from photographs or paintings.

13.4.54 Views experienced from viewpoints or routes not recognised formally or advertised in tourist information, or which are not provided with interpretation or, in some cases, formal access, are likely to be of local / community value.

13.4.55 Judgements on the value of views or visual amenity are described as being national/regional, regional/local, local/community or limited, as set out in Table A13.1.9.

Table A13.1.9 Value of views and visual amenity

Value	Description/Definition
National/Regional	Views may be recorded in management plans, guidebooks, and/or which are likely to be experienced by large numbers of people. Views may be associated with internationally or nationally designated landscapes; designed views recorded in citations for RPGs/scheduled monuments etc. Views from long distance walking or cycle routes.
Regional/Local	Views may be associated with designed views recorded in citations for historic parks and gardens designated at a regional or local level or documented in local planning policy (e.g. landmark hills/views, promoted viewpoints and those identified within Neighbourhood Plans or Valued Landscape studies).
Local/Community	Views which are not documented or protected but may be valued at a local level. Views which are more incidental, and less likely to be associated with somewhere people travel to or stop, or which may be experienced by smaller numbers of people.
Limited	Views within an area of very low landscape quality (e.g. industrial estate/busy main road) that has very few positive characteristics and numerous or dominant detracting features.

Sensitivity of Visual Receptors

13.4.56 The sensitivity of a visual receptor to change is defined as high, medium or low and is based on weighing up professional judgements regarding susceptibility and value, and each of their component considerations, as set out in Table A13.1.10. The types of receptors considered are described in Appendix 13.3: Visual Baseline and Assessment (document reference 6.13.A3).

Table A13.1.10 Sensitivity of visual receptors

	Higher	⟷	Lower
Susceptibility	Viewers whose attention or interest is focused on their surroundings, including settlements / individual residential receptors[4] / people engaged in outdoor recreation/ visitors to heritage assets or other attractions where views of surrounding area an important contributor.	⟷	People whose attention is not on their surroundings (and where setting is not important to the quality of life) such as commuters/ people engaged in outdoor sports/ people at their place of work.

[4] Consideration of changes in views experience from private residencies informed by the approach detailed in Technical Guidance Note 2/19 Residential Visual Amenity Assessment (RVAA) (Landscape Institute, 2019)

	Higher	⟷	Lower
Value	Views may be recorded in management plans, guidebooks, and/or which are likely to be experienced by large numbers of people. Views may be associated with internationally or nationally designated landscapes; designed views recorded in citations for RPGs/Scheduled Monuments etc.	⟷	Views which are not documented or protected. Views which are more incidental, and less likely to be associated with somewhere people travel to or stop, or which may be experienced by smaller numbers of people.

Magnitude of Visual Effect

13.4.57 The overall judgement of magnitude of visual effect (nature of visual effect) is based on weighing up professional judgements on size and scale, geographical extent, duration and reversibility. Further information on the criteria is provided below.

Size and Scale

13.4.58 The size and scale of a visual change depends on:

- 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, including the proportion of the view occupied by the Project
- The degree of contrast or integration of any new features or changes in the landscape with the existing or remaining landscape elements and characteristics in terms of form, scale and mass, line, height, colour and texture
- The nature of the view of the Project, in terms of the relative amount of time over which it would be experienced and whether views would be full, partial or glimpsed.

13.4.59 All changes are assumed to be during winter, representing a 'maximum case effect' scenario with minimal screening by deciduous vegetation and trees.
The methodology and data used to inform the production of ZTV mapping is detailed in Section 13.6.

13.4.60 In this assessment size/scale of visual change is described as being large, medium, small or barely perceptible.

Geographical Extent

13.4.61 For the viewpoint assessment, the geographical extent of a visual change records the extent of the area over which the changes are visible e.g. whether this is a unique viewpoint from where the Project can be glimpsed, or whether it represents a larger area from which similar views are gained.

13.4.62 When considering effects on VRAs, the geographical extent of effects is described partly through explanation of the location of potential effects, referencing specific place names or areas, and partly through the consideration of distance from the Project. Distances are approximate, and for consistency are banded as follows:

- Close views: within approximately 0.5 km from the Order Limits (construction) or from the Limits of Deviation (LoD)[3] (operation and maintenance)
- Close to medium distance views: between approximately 0.5 km and 1.5 km from the Order Limits (construction) or from the LoD[3] (operation and maintenance)
- Medium to longer distance views: beyond approximately 1.5 km from the Order Limits (construction) or from the LoD[3] (operation and maintenance).

Duration

13.4.63 The duration of visual effects is reported as short-term, medium-term or long-term, as defined for the duration of landscape effects (see above).

Reversibility

13.4.64 Reversibility is reported as irreversible (i.e. permanent), partially reversible or reversible, and is related to whether the visual change can be reversed at the end of the phase of development under consideration (i.e. at the end of construction or at the end of the operational lifespan of the development). Operation (and maintenance) visual effects associated with the proposed overhead lines, CSE compounds and substation / substation extensions have been considered to be irreversible due to the operational lifetime of the infrastructure and long-term network requirements.

Magnitude of Visual Effect

13.4.65 Judgements on the magnitude of visual effect are recorded as high, medium, low or barely perceptible guided by Table A13.1.11, based on combining professional judgements on size and scale, geographical extent, duration and reversibility.

Table A13.1.11 Magnitude of visual effects

	Higher	⟷	Lower
Size/Scale	A large visual change resulting from the Project is the most notable aspect of the view, perhaps as a result of the development being in close proximity, or because a substantial part of the view is affected, or because the development introduces a new focal point and/or provides contrast with the existing view and/or changes the scenic qualities of the view.	⟷	A small or some visual change resulting from the Project as a minor or generally unnoticed aspect of the view, perhaps as a result of the development being in the distance, or because only a small part of the view is affected, and/or because the development does not introduce a new focal point or is in contrast with the existing view and/ does not change the scenic qualities of the view.
Geographical Extent	The assessment location is clearly representative of similar visual effects over an extensive geographic area.	⟷	The assessment location clearly represents a small geographic area.

	Higher	⟷	Lower
Duration	Visual change experienced over around five years or more.	⟷	Visual change experienced over a short period of up to five years.
Reversibility	A permanent visual change which is not reversible or only partially reversible following decommissioning of the Project.	⟷	A temporary visual change which is largely reversible following the completion of construction or decommissioning of the Project.

Judging the Level of Visual Effect and Significance

13.4.66 As for landscape effects, the final step in the assessment requires the judgements on sensitivity of visual receptor and magnitude of visual effect to be combined to make an informed professional assessment on the significance of each visual effect.

13.4.67 The evaluations of the individual aspects set out above (susceptibility, value, size and scale, geographical extent, duration and reversibility) were considered together to provide an overall profile of each identified visual effect. An overview was then taken of the distribution of judgements for each aspect to make an informed professional assessment of the overall level of effect, drawing on good practice guidance provided in GLVIA3.

13.4.68 The sensitivity of visual receptors may involve a complex relationship between a visual receptor's (e.g. people's) susceptibility to change and the value attached to a view. Therefore, the rationale for judgements of sensitivity is clearly set out for each receptor in relation to both its susceptibility to the type of change proposed, and its value.

13.4.69 A rigid matrix-type approach, where the level of visual effect is defined simply based on the level of sensitivity combined with the magnitude of effect was not used. As such, the conclusion on the level of effect was not always the same for similar receptors. Although a numerical or formal weighting system was not applied, consideration of the relative importance of each aspect made was fed into the overall decision. Levels of visual effect are identified as no effect, negligible, minor, moderate or major, where moderate and major visual effects are considered significant in the context of the EIA Regulations. Intermediate judgements (e.g. minor-moderate or moderate-major) were made where appropriate.

13.4.70 This determination requires the application of professional judgement and experience to take on board the many different variables which need to be considered, and which are given different weight according to site-specific and location-specific considerations in every instance. As such, the conclusion on the level of effect was not always the same for similar receptors. Judgements were made on a case by case basis, guided by the principles illustrated in Image 1, and the example descriptions/definitions detailed in Table A13.1.12.

Table A13.1.12 Level and significance of visual effects

Level and Significance of Visual Effects	Description/Definition
Major	The Project would result in an obvious change in view and is likely to affect a visual receptor with a medium or high susceptibility to that type of change. This level of effect may also occur when a medium scale of change acts on a nationally valued view and/ or a high susceptibility receptor. The effect is likely to be long-term and affect a relatively large area or relatively large number of people.
Moderate	The Project would result in a noticeable change in a view and is likely to affect a viewer with a medium susceptibility to that type of change and/ or locally valued view. This level of effect may also occur when a smaller scale of change acts on a higher susceptibility receptor or affects a large number of people, or a larger scale of effect acting on a lower susceptibility receptor or affecting fewer people. This level of effect may also occur when a large scale of effect occurs over a relatively short period or over a small area/ affects few people.
Minor	The Project would result in a small change in view over a long-term duration and is likely to affect a smaller geographic extent and/ or fewer people. This level of effect may also occur when a larger scale of effect is of short-term duration or is confined in its geographical extent.
Negligible	The Project would result in a barely perceptible change in views or visual amenity.
No Effect	The Project would result in no change in views or visual amenity.

13.5 Assessment of Effects on Dedham Vale National Landscape

Introduction

13.5.1 The assessment of effects on Dedham Vale National Landscape is set out in Appendix 13.5 (document reference 6.13.A5). The assessment was undertaken separately to the LVIA in Chapter 13: Landscape and Visual (document reference 6.13) and supporting appendices, but draws upon its findings.

13.5.2 The assessment was undertaken with reference to NatureScot's Special Landscape Qualities - Guidance on assessing effects (NatureScot, 2025), the principles of which can be applied to developments outside of Scotland.

13.5.3 The assessment was informed by a review of key legislation and planning policy of relevance to the National Landscape.

Methodology

13.5.4 The key steps in the methodology for assessing effects on the National Landscape was as follows:

Review and describe the proposal

13.5.5 The aim of this step was to gain a full understanding of the nature of the Project and draw out relevant information to inform the assessment of effects on special qualities. Reference was made to the Project description in Chapter 4: Project Description (document reference 6.4), Figure 4.1: Proposed Project Design (document reference 6.4.F1) and Figure 4.2: Proposed Project Design – Permanent Features (document reference 6.4.F2).

Identify the special qualities that may be affected by the proposal

13.5.6 This step established the scope of the assessment including the extent of the Study Area and the specific special qualities likely to be sensitive to the Project. A review of the landscape and visual baseline of the National Landscape was undertaken, including landscape character and key views / visual amenity.

13.5.7 Reference was made to the Dedham Vale AONB and Stour Valley Project Area Management Plan 2021 – 2026 (Dedham Vale National Landscape and Stour Valley, 2021) and the Dedham Vale AONB Natural Beauty and Special Qualities and Perceived and Anticipated Risks Final Report (Alison Farmer Associates, 2016), which summarises the special qualities of the National Landscape.

13.5.8 Site visits were undertaken in all seasons to inform the assessment.

Assessment of effects on special qualities and mitigation measures

13.5.9 The final step presents the predicted significant residual effects on identified special qualities within the National Landscape and its setting during construction and operation (and maintenance).

13.5.10 Potential mitigation measures in order to seek to further the purpose of conserving and enhancing the natural beauty of the National Landscape, in accordance with policy requirements, are set out in National Landscapes – Duty to Seek to Further the Purposes Report (s85 Countryside and Rights of Way Act 2000) (document reference 5.10).

Setting of the National Landscape

13.5.11 The ‘setting’ of the National Landscape was identified through an analysis of landscape and visual receptors and initial ZTV plans. The setting study is in Annex A of Appendix 13.5: National Landscape Assessment Study (document reference 6.13.A5).

13.6 ZTV Mapping and Visualisation Methodology

13.6.1 This section sets out the approach to the production of the ZTVs and visualisations which accompany the LVIA in Chapter 13: Landscape and Visual Amenity (document reference 6.13).

13.6.2 The methodology used for the production of visualisations is based on current good practice guidance produced by the Landscape Institute (Landscape Institute, 2019). Further information about the approach is provided below.

Data Sources

- Ordnance Survey Maps
  - Landranger 1:50,000 Scale
  - Explorer 1:25,000 Scale
- Online map search engines
  - Bing, mapping website (Online - Available at: www.bing.com/maps)
  - Google, mapping website (Online - Available at: www.maps.google.com)
- Data Used for Digital Terrain Modelling
  - LiDAR DTM data (2 m resolution with ±15 cm root-mean-square error (RMSE))
  - Screening objects were incorporated into the DTM using National Inventory of Woodland and Trees for England and OS Vector Map Building data
  - OS Terrain® 5 mid-resolution height data (DTM) (5 m grid spacing, 2.5 m RMSE)
  - OS Terrain® 50 mid-resolution height data (DTM) (50 m grid spacing, 4 m RMSE)
  - OS 1:25,000 raster data (to provide detailed maps for viewpoint locations)
  - OS 1:50,000 raster data (to show surface details such as roads, forest and settlement detail equivalent to the 1:50,000 scale Landranger maps)
  - OS 1:250,000 raster data (to provide a more general location map).

Zone of Theoretical Visibility Mapping

13.6.3 An appraisal of the theoretical extent to which the Project would be visible was informed by establishing a ZTV, using specific computer software designed to calculate the theoretical visibility of the above ground elements of the Project including pylons, CSE compounds and substations.

13.6.4 The ZTV was used as a starting point in the assessment to provide an indication of theoretical visibility. The ZTV outputs were ground truthed in the field so that the assessment conclusions better represent the potential visibility of the Project.

13.6.5 The DTM used for the ZTV analysis was LiDAR 2 m DTM data which was obtained from Defra (Defra, 2025).

13.6.6 Woodland blocks were modelled into the ZTVs, using the National Forest Inventory mapping dataset which was assigned a height of 15 m. This was considered a conservative approach to represent the likely screening/filtering effects of mature woodland. However, the ZTVs do not consider the additional screening and filtering effects of hedgerow and field trees, small copses or more recently planted trees, woodland and hedgerows which are found in many places throughout the Study

Area. The ZTVs also do not account for any proposed landscape planting around permanent features, around CSE compounds, substations and substation extension, labelled 'Environmental Areas' (shown on 4.2: Proposed Project Design – Permanent Features (document reference 6.4.F2)).

13.6.7 The ZTV maps shown on Figures 13.8 to 13.19 (document reference 6.13.F8 to 6.13.F19) show theoretical visibility of different elements of the Project up to a distance of 5 km, and illustrate the following:

- Figure 13.8: ZTV of Proposed 400 kV Overhead Line (Numbers of Pylons) (document reference 6.13.F8) – heat mapping to show numbers of structures theoretically visible (within 10 km in each direction). The ZTV was prepared based on proposed pylon positions as shown on Figure 4.1: Proposed Project Design (document reference 6.4.F1) and Figure 4.2: Proposed Project Design – Permanent Features (document reference 6.4.F2). The theoretical visibility of individual pylons was limited to a maximum distance of 10 km. This is considered to be a reasonable and proportionate and worst case approach for ZTV modelling. In most instances pylons are likely to be barely perceptible beyond 5 km and therefore unlikely to give rise to significant effects. This is because at 5 km distance, when viewed at arm's length, a 50 m tall pylon would appear to be approximately 6 mm high in the landscape. This is known as the apparent height of the pylon
- Figure 13.9: ZTV of Proposed 400 kV Overhead Line (Proportions of Pylons) (document reference 6.13.F9) – mapping to illustrate proportions of structures theoretically visible, based on full pylon (100%), top half of pylon (50%) and top of pylon (10%). The ZTV was prepared based on proposed pylon positions as shown on Figure 4.1: Proposed Project Design (document reference 6.4.F1) and Figure 4.2: Proposed Project Design – Permanent Features (document reference 6.4.F2)
- Figure 13.10: ZTV of Bramford Substation Extension (document reference 6.13.F10) - mapping to illustrate the proportions of the substation extension theoretically visible based on full height (100% visibility of substation extension to the ground), top half of the substation extension (50%) and top part of the substation extension (10%). The elements of the substation extension have a maximum height of 15 m.
- Figure 13.11: ZTV of Wenham Grove CSE Compound (document reference 6.13.F11) - mapping to illustrate proportions of gantries theoretically visible (being tallest elements of the CSE compound, with a maximum height of 15 m), based on full height of gantry (100% visibility of full CSE compound to the ground) top half of gantry (50%) and top part of the gantry (10%)
- Figure 13.12: ZTV of EACN (document reference 6.13.F12) – mapping to illustrate the proportions of the substation theoretically visible based on full height (100% visibility of substation to the ground), top half of the substation (50%) and top part of the substation (10%). The elements of the substation have a maximum height of 15 m
- Figure 13.13: ZTV of Great Horkesley (EACN side) CSE Compound (document reference 6.13.F13) - mapping to illustrate proportions of gantries theoretically visible (being tallest elements of the CSE compound, with a maximum height of 15 m), based on full height of gantry (100% visibility of full CSE compound to the ground) top half of gantry (50%) and top part of the gantry (10%)

- Figure 13.14: ZTV of Great Horkesley (Tilbury side) CSE Compound (document reference 6.13.F14) - mapping to illustrate proportions of gantries theoretically visible (being tallest elements of the CSE compound, with a maximum height of 15 m), based on full height of gantry (100% visibility of full CSE compound to the ground) top half of gantry (50%) and top part of the gantry (10%)
- Figure 13.15: ZTV of Fairstead (EACN side) and Fairstead (Tilbury side) CSE Compounds (document reference 6.13.F15) - mapping to illustrate proportions of gantries theoretically visible (being tallest elements of the CSE compound, with a maximum height of 15 m), based on full height of gantry (100% visibility of full CSE compound to the ground) top half of gantry (50%) and top part of the gantry (10%)
- Figure 13.16: ZTV of Tilbury North Substation (document reference 6.13.F16) - mapping to illustrate the proportions of the substation theoretically visible based on full height (100% visibility of substation to the ground), top half of the substation (50%) and top part of the substation (10%). The elements of the substation have a maximum height of 15 m
- Figure 13.17: ZTV of Tilbury North (Warley side) CSE Compound (document reference 6.13.F17) - mapping to illustrate proportions of gantries theoretically visible (being tallest elements of the CSE compound, with a maximum height of 15 m), based on full height of gantry (100% visibility of full CSE compound to the ground) top half of gantry (50%) and top part of the gantry (10%)
- Figure 13.18: ZTV of Tilbury North (Tilbury side) CSE Compound (document reference 6.13.F18) - mapping to illustrate proportions of gantries theoretically visible (being tallest elements of the CSE compound with a maximum height of 15 m), based on full height of gantry (100% visibility of full CSE compound to the ground) top half of gantry (50%) and top part of the gantry (10%)
- Figure 13.19: ZTV within Dedham Vale National Landscape (document reference 6.13.F19) – mapping to illustrate numbers of pylons theoretically visible (within 10 km in each direction) from the National Landscape. The ZTV was prepared based on proposed pylon positions as shown on Figure 4.1: Proposed Project Design (document reference 6.4.F1) and Figure 4.2: Proposed Project Design – Permanent Features (document reference 6.4.F2)
- Figure 13.A5.3: Reverse ZTV from the National Landscape (document reference 6.13.A5) – mapping to illustrate the areas where the top half of the pylons located outside the National Landscape would be theoretically visible from a grid of viewpoints within the National Landscape. The viewer grid is evenly spaced at 250 m, only amended to account for the effects of woodland within the National Landscape. Screening outside the National Landscape boundary was not included.

13.7 Methodology for Baseline Photography and the Production of Visualisations

13.7.1 Accurate Visual Representations (AVR) or verified views of the Project were produced from 206 viewpoint locations.

13.7.2 Verified Views can be considered as technical visualisations, usually forming part of an LVIA or TVIA (Landscape or Townscape Visual Impact Assessment) and should

allow for an understanding of the Project within its context and its likely effects from specific viewpoints.

13.7.3 The Landscape Institute Technical Guidance Note 06/19 - Visual Representation of Development Proposals (The Landscape Institute, 2019) sets out the types of visualisations which are appropriate to the circumstances in which they will be used.

13.7.4 The visualisations showing the Project are Landscape Institute Type 4: Photomontage/Photowire (survey/scale verifiable) which represent scale, appearance, context, form, and extent of development.

13.7.5 The Landscape Institute guidance also refers to AVR 'Levels' as set out in the London View Management Framework (2012). This proposes four levels of AVRs from Level 0 to Level 3, with each providing an increased level of detail.

13.7.6 The visualisations showing the Project are AVR Level 3 (Photomontage indicating the location, size, degree of visibility, description of the architectural form and use of materials).

13.7.7 The methodology covering photography, locational accuracy, data sources and presentation format for the visualisations produced is set out below.

Viewpoint Photography

13.7.8 Viewpoint photography was undertaken from 206 viewpoint locations to capture the existing baseline view in compliance with Landscape Institute Advice Note 06/19 - Visual Representation of Development Proposals (The Landscape Institute, 2019).

13.7.9 Photography was undertaken between May 2023 and June 2025. Photography to illustrate the effects of the Project was taken in winter, to illustrate a 'worst case' scenario when vegetation is not in leaf. Photography was taken from publicly accessible locations.

13.7.10 A series of overlapping photographs to an extent of 360 degrees was taken with a Nikon D750 or D780 Full Frame digital SLR camera, with a fixed 50 mm focal length lens using a fully levelled tripod with Manfrotto panoramic head. The photographs were taken in portrait to ensure as much of the Project was captured as possible when in close proximity.

13.7.11 A tripod with vertical and horizontal spirit levels was used to provide stability and to ensure a level set of adjoining images. A panoramic head was used to ensure the camera rotated about the no-parallax point of the lens to eliminate parallax errors between the successive images and enable accurate stitching of the images. The camera was moved through increments of 15 degrees and rotated through a full 360 degrees at each viewpoint. 24 photographs were taken for each 360-degree view.

13.7.12 The location of each viewpoint was recorded (GPS grid reference, location map and photograph of the tripod) in accordance with Landscape Institute guidance (Landscape Institute, 2019).

13.7.13 Weather conditions and visibility were considered an important aspect of the field visits for the photography. Where practicable, visits were planned around clear days with good visibility. Viewpoint locations were visited at times of day to ensure, as far as practicable, that the sun lit the scene from behind, or to one side

of the photographer. Photography opportunities facing into the sun were avoided where practicable.

Photography Stitching, Alignment and Montaging

13.7.14 Photography stitching software (PTGui© version 12.24) was used to stitch together the adjoining images to form panoramic images in cylindrical projection. A selection of identical control points was created within each of the adjoining frames to increase the level of accuracy when stitching the 360° panoramic photography.

13.7.15 A 3D model of the overhead line was provided in DXF format. The model contained the proposed overhead line route, including proposed pylon locations and ancillary infrastructure. Shape files of the footprints of substations, substation extensions and CSE compounds were also provided alongside their maximum heights.

13.7.16 Further detail was added to the models by including insulators within the 3D software 3DS Max. The insulator models were provided in DGN format.

13.7.17 Software packages Autodesk 3DS Max© and Blender version 4.2.0.0 were used to view the Project from the selected viewpoints. 3DS Max was used as the primary modelling and render software. Blender (using the GIS add on) was used to manage, convert and render terrain models.

13.7.18 Environment Agency Composite 2 m LiDAR DTM and DSM data was used to obtain accurate z value heights for all viewpoint locations. This data has a vertical accuracy of +/-15 cm. This data provided a detailed and reliable representation of the topography for the model views.

13.7.19 The DTM and DSM were imported into Blender using the GIS Add on and exported as an FBX for use within the 3DS Max model to render only parts of the overhead line model that were not obscured from view by terrain, buildings, vegetation or any other surface elements. For wirelines, a gridded version of the DTM was rendered from Blender and overlaid on the 3DS Max renders.

13.7.20 It is important to note that the wirelines do not account for screening or filtering of views towards the Project by existing buildings and / or vegetation in baseline views nor do they reflect instances where existing electricity infrastructure would be removed by the Project, such as existing 132 kV pylons and lower voltage wood pole lines.

13.7.21 The viewpoint locations were then added to the 3DS Max and Blender environment models using the on-site photography GPS coordinate positions, cross-referenced and micro-sited with high-resolution aerial photography. The model views were created to replicate the camera lens parameters and perspective geometry of the baseline photography. Exposure settings (Aperture, ISO and Shutter speed) contained within the metadata of each photograph was also matched to the model cameras.

13.7.22 Viewer height was set to 1.5 m above ground level. On limited occasions this viewer height was increased by a small increment to achieve a closer match between the terrain data and photographic landform content.

13.7.23 Control points, including existing pylons, buildings and other notable landmarks, identified in high-resolution aerial photography were used to aid alignment of the model and photographic views.

13.7.24 90° sections of the baseline photographs were linked as a background to each model view which allowed accurate horizontal and vertical alignment of the proposed overhead line within the view.

13.7.25 The presentation of fully rendered photomontages involved additional stages as follows:

- 3DS Max software was used to render the pylons and associated infrastructure. A daylight system was created in the 3D model view with lighting strength and direction applied to closely represent the conditions present at the date and time when each photograph was taken
- The next stage required the rendered infrastructure to be blended into the baseline photographic view. This was carried out using Adobe Photoshop© software and allowed, where relevant, for infrastructure or parts of infrastructure to be masked (removed) where they were located behind foreground elements that appeared in the original photograph
- The 3D model views were rendered and then composited and aligned with the baseline photography using Adobe Photoshop© software
- At all viewpoints, the removal of existing overhead lines (third party mitigation works) is illustrated in the photomontages where the change to baseline views would be visible
- At selected viewpoints, mitigation planting has been included based on landscape plans, species mix and expected growth heights at Year 1 and Year 15. This was generated in 3DS Max using the plugin Forest Pack Pro
- At selected viewpoints the removal of existing vegetation has been indicated by a dashed outline and semi-transparent hatch around any vegetation planned for removal. Blue wireline overlays in these areas indicate any elements of the Project which may be visible following the vegetation removal.

Presentation of Photomontages

13.7.26 Adobe InDesign© software was used to present the figures. The dimensions for each image (printed height and field of view) are in accordance with NatureScot requirements. Photography information and viewing instructions are provided on each page.

13.7.27 All viewpoints have been presented as separate images with a cylindrically projected 90° horizontal field of view (FOV). In some viewpoints the Project extends beyond a 90-degree FOV, in which case, it has been shown across multiple pages.

13.7.28 The elongated A1 width format pages presented for each viewpoint are set out as follows:

- Viewpoint location plan – basemap with OS 50K basemapping showing viewpoint location and illustrating the 90˚ view directions shown in subsequent pages
- Baseline Photograph - 90˚ baseline photography to illustrate the wider landscape and visual context. These are shown in cylindrical projection and presented on an A1 width page. Additional pages in the same format are provided where relevant to illustrate wider cumulative visibility up to 360˚

- Photomontage - 90˚ montage at Type 4/AVR3 level of detail. The photomontage matches the same formatting as the baseline photograph above, with fully rendered models representing the proposed overhead line, substations, substation extensions and CSE compounds
- On selected viewpoints, additional photomontages may be included, presenting mitigation planting at Years 1 and 15.

Abbreviations

Abbreviation	Full Reference
AONB	Area of Outstanding Natural Beauty
CMLI	Chartered Members of the Landscape Institute
CSE	Cable Sealing End
DSM	Digital Surface Model
DTM	Digital Terrain Model
EIA	Environmental Impact Assessment
ES	Environment Statement
GLVIA	Guidelines for Landscape and Visual Impact Assessment
LCA	Landscape Character Areas
LCT	Landscape Character Types
LI	Landscape Institute
LoD	Limits of Deviation
LVIA	Landscape and Visual Impact Assessment
NHLC	National Historic Landscape Characterisation
OS	Ordnance Survey
PEIR	Preliminary Environmental Information Report
RPG	Registered Parks and Gardens
RVAA	Residential Visual Amenity Assessment
SLR	Single Lens Reflex
SQ	Special Qualities
TGN	Technical Guidance Note
ZTV	Zone of Theoretical Visibility

Glossary

Term	Definition
Backclothing	The creation of a visual background to an element by the landscape or landscape features.
GLVIA3	The Landscape Institute and Institute of Environmental Management and Assessment's Guidelines for Landscape and Visual Impact Assessment, Third Edition, Published by Routledge
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 [taken from An Approach to Landscape Character Assessment, Natural England 2014]
Landscape Character Areas	These are single unique areas which are the discrete geographical areas of a particular landscape type. Each has its own individual character and identity, even though it shares the same generic characteristics with other types [taken from An Approach to Landscape Character Assessment, Natural England 2014].
Landscape Character Assessment	This is the process of identifying and describing variation in the character of the landscape. It seeks to identify and explain the unique combination of elements and features (characteristics) that make landscapes distinctive. This process results in the production of a Landscape Character Assessment [taken from An Approach to Landscape Character Assessment, Natural England 2014].
Landscape Character Types	These are distinct types of landscape that are relatively homogeneous in character. They are generic in nature in that they may occur in different areas in different parts of the country, but wherever they occur they share broadly similar combinations of geology, topography, drainage patterns, vegetation, historical land use, and settlement pattern [taken from An Approach to Landscape Character Assessment, Natural England 2014].
Landscape effects	Effects on the landscape as a resource in its own right [GLVIA3].
Landscape value	The relative value or importance attached to different landscapes by society on account of their landscape qualities [taken from Technical Guidance Note 02/21 Assessing landscape value outside national designations, Landscape Institute, 2021]
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 or long term in duration [taken from GLVIA3].
Natural beauty	The term 'natural beauty' is enshrined in the 1949 National Parks and Access to the Countryside Act (it was also subsequently included in the Nature Conservation and Amenity Lands Order (NI) 1985), the Town and Country Planning (Scotland) Act 1997, and the Planning etc.

Term	Definition
	(Scotland) Act 2006). Natural beauty is not exhaustively defined in the legislation, but its meaning has been clarified and interpreted through a series of studies, guidance documents and public inquiries. [taken from Technical Guidance Note 02/21 Assessing landscape value outside national designations, Landscape Institute, 2021]
Order Limits	The maximum extent of land within which the authorised development may take place.
Overhead line	Conductor (wire) carrying electric current, strung from pylon to pylon.
Pylons	Structures that support the overhead line (conductors). There are two types of pylons; suspension (line), where the conductors are simply suspended from the tower and tension (angle).
Quiet Lane	Quiet Lanes are minor rural roads, typically C or unclassified routes, which have been designated by local highway authorities to pay special attention to the needs of walkers, cyclists, horse riders and other vulnerable road users, and to offer protection from speeding traffic. [taken from CPRE's Guide to Quiet Lanes, 2003]
Residual effects	The consequence of an 'impact' of construction and operation (and maintenance) of the Proposed Development after mitigation measures have been applied.
Scoping	Scoping is the process of determining the content and extent of matters that should be covered in the environmental impact assessment.
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 related to that receptor [taken from GLVIA3].
Significance (in EIA)	A measure of the importance or gravity of the environmental effect, defined by significance criteria specific to the environmental topic [taken from GLVIA3].
Special qualities	A statutory expression used in (amongst other places) sections 5 and 11A of the National Parks and Access to the Countryside Act 1949 (as amended) and section 87 of the Countryside and Rights of Way Act 2000. Paragraph 87 of the Countryside and Rights of Way Act 2000 requires a conservation board to have regard to the purpose of increasing the understanding and enjoyment by the public of the special qualities of the area of outstanding natural beauty.
Visual amenity	The overall pleasantness of the views people enjoy of their surroundings, which provides an attractive visual setting or backdrop for the enjoyment of activities of the people living, working, recreating, visiting or travelling through an area. [taken from GLVIA3]
Visual effects	Effects on specific views and on the general visual amenity experienced by people. [taken from GLVIA3]

Term	Definition
Visual receptors	Individuals and/or defined groups of people who have the potential to be affected by a proposal. [taken from GLVIA3]
Visualisation	A computer simulation, photomontage or other technique illustrating the predicted appearance of a development. [taken from GLVIA3]
Zone of Theoretical Visibility (ZTV)	A map, usually digitally produced, showing areas of land within which a development is theoretically visible. [taken from GLVIA3]

Bibliography

Alison Farmer Associates (2016a) *Dedham Vale AONB Natural Beauty and Special Qualities and Perceived and Anticipated Risks*

Alison Farmer Associates (2016b) *Land of the Fanns, Landscape Character Assessment*

Alison Farmer Associates (2022) *East Anglia Green Energy Enablement Consultation – June 2022 Review of Consultation Documentation in Relation to Sections K (ET1) and L (ET5)*

Alison Farmer Associates (2024) *Waveney Valley Valued Landscape Assessment*

CBA (2003) *Essex Landscape Character Assessment*

CBA (2005) *Colchester Borough Landscape Character Assessment*

CBA (2006) *Braintree, Brentwood, Chelmsford, Maldon and Uttlesford Landscape Character Assessments*

Council of Europe, (2000) *The European Landscape Convention – Council of Europe Treaty Series No. 176.*

Dedham Vale National Landscape and Stour Valley Project Area Partnership (2021) *Dedham Vale AONB and Stour Valley Project Area Management Plan 2021-2026*

Defra (2025) *https://environment.data.gov.uk/DefraDataDownload*

Infrastructure Planning EIA Regulations 2017

Landscape East (2010) *East of England Landscape Typology*

Landscape Institute (2019b) *Technical Guidance Note 2/19 Residential Visual Amenity Assessment (RVAA)*

Landscape Institute (2021) *Technical Guidance Note 02/21 Assessing landscape value outside national designations defines landscape value*

LDA for the Countryside Commission (1997) *The Dedham Vale Landscape*

LUC (2001a) *South Norfolk District Landscape Character Assessment*

LUC (2001b) *Tendring District Landscape Character Assessment*

LUC (2018) *Thurrock Integrated Landscape Character Assessment*

LUC (2019) *Dedham Vale AONB and Stour Valley Project Area State of the AONB Report 2018*

The Landscape Institute and Institute of Environmental Management and Assessment (2013) *Guidelines for Landscape and Visual Impact Assessment, 3rd Edition*

Landscape Institute (2019a) *Technical Guidance Note 06/19 Visual Representation of Development Proposals*

Landscape Institute (2019b) *Technical Guidance Note 2/19 Residential Visual Amenity Assessment (RVAA)*

Landscape Institute (2021) *Technical Guidance Note 02/21 Assessing landscape value outside national designations defines landscape value*

Lord Holford (1959, with NGC 1992 and SHETL 2003 Notes) *The Holford Rules: Guidelines for the Routeing of New High Voltage Overhead Transmission Lines*

National Grid (2009) *The Horlock Rules: NGC Substations and the Environment: Guidelines on Siting and Design*

Natural England (2014, with later updates) *National Character Area Profiles*. Available online at: https://nationalcharacterareas.co.uk/ Accessed on 21 Feb 2025.

Natural England (2025) *National Historic Landscape Characterisation (NHLC) Project*

NatureScot (2025) *Special Landscape Qualities - Guidance on assessing effects*

Planning Inspectorate (2024) *The Planning Inspectorate Advice Note: Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment*

Suffolk County Council (2010) *Suffolk Landscape Character Assessment*

Tibbalds / LUC (2022) *Breckland Landscape and Settlement Character Assessment*

The Landscape Partnership (2014) *Landscape Character Assessment of Basildon Borough*

National Grid plc
National Grid House,
Warwick Technology Park,
Gallows Hill, Warwick.
CV34 6DA United Kingdom

Registered in England and Wales
No. 4031152
nationalgrid.com