
**THREE OAKS RENEWABLE
ENERGY PARK
EXTENSION**

**Environmental
Statement Appendix 5.1: LVIA/CLVIA Method
of Assessment**

MAY 2026



LVIA/CLVIA Method of Assessment

Introduction

- 5.1.1. This appendix describes the method of assessment used to predict the likely significant effects of the proposed development on the landscape resources and visual amenity of the development site and study area.
- 5.1.2. It describes the purpose of landscape and visual impact assessments (LVIAs) and cumulative LVIAs (CLVIAs), the iterative assessment process, the key stages in the process and the assessment criteria used to predict the changes to landscape character and views in the viewpoint analyses. It also provides the definitions of “significant effects” on landscape fabric, landscape character, landscape designations and visual amenity.
- 5.1.3. The landscape and visual effects identified as “*significant effects*” using this method of assessment are those changes to the baseline resources and/or receptors that are likely to be of sufficient magnitude to be a material planning matter and which should, therefore, be taken into account in the decision-making process (see paras 5.1.18 - 5.1.20 below).

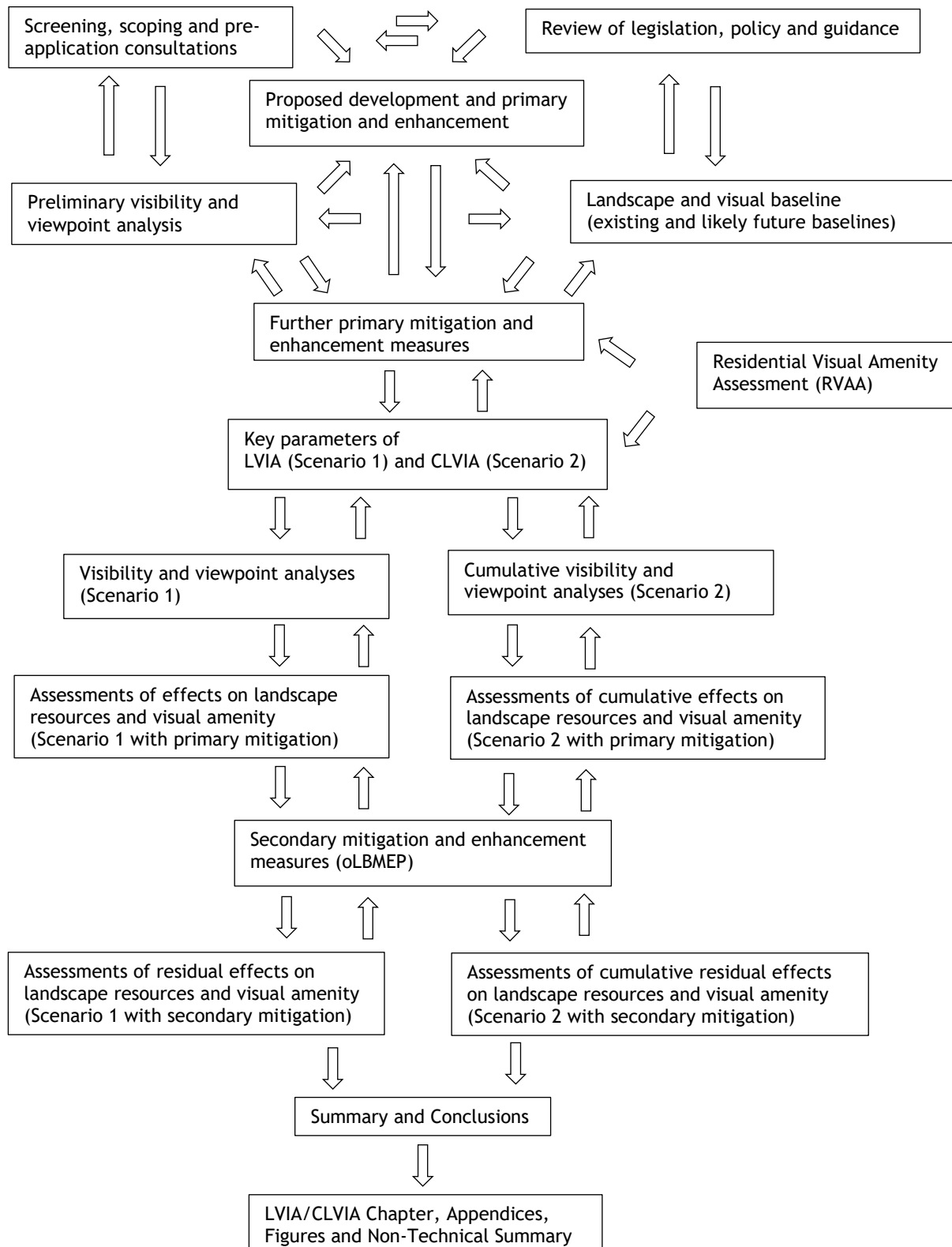
Purposes of LVIAs and CLVIAs

- 5.1.4. LVIAs and CLVIAs have several purposes:
- To identify the likely significant effects (adverse and beneficial) of the proposed development on landscape resources and visual amenity.
 - To identify the mitigation measures that would avoid, reduce or compensate for any likely adverse significant effects.
 - To identify appropriate beneficial enhancement measures.
 - To provide the environmental information (on landscape and visual amenity) needed by the decision maker to inform their planning decision.
 - To provide a non-technical summary of the assessment.
- 5.1.5. Landscape and visual mitigation and enhancement measures are normally embedded into the siting, design, construction, operation and, for time limited permissions, the decommissioning of proposed developments. Consequently, LVIAs and CLVIAs are an integral part of the design and assessment process for Environmental Impact Assessment (EIA) developments and are a useful tool for optimising the sustainability, appearance and functionality of all scales and types of development.
- 5.1.6. LVIAs and CLVIAs require both objective analysis and subjective professional judgement, and should be thorough, robust, consistent and understandable by decision makers, consultees and the public. Therefore, it is important that a structured, iterative and transparent process is adopted and that all terms are clearly explained.

Assessment Process

5.1.7. This method of assessment follows an iterative process comprising a series of stages, with each stage revisited during the assessment process (see Figure 5.1.1 below).

Figure 5.1.1: Assessment Process



- 5.1.8. This iterative process has enabled the findings of each stage, and the primary and secondary mitigation and enhancement measures identified, to be embedded into the siting, design, construction, operation and decommissioning of the proposed development in order to limit the likely significant adverse effects on the local and wider environment.

Assessment Stages

- 5.1.9. The key stages of the assessment process are described below. These draw on published documents and data, fieldwork observations and photography, computer modelling, computer-generated visibility plans and visualisations. Recognised data analysis techniques and quantifiable factors have been used wherever possible and subjective professional judgement has been used when necessary.
- 5.1.10. The photography, 3D modelling, computer-generated zone of theoretical visibility (ZTVs) and visualisations have been produced in accordance with Appendix 5.9 (Technical Methodology) - Volume 4.
- 5.1.11. The method of assessment for the Residential Visual Amenity Assessment (RVAA) is provided in Appendix 5.8 (Residential Visual Amenity Assessment) - Volume 4.
- 5.1.12. All technical terms are clearly defined within this Appendix, Appendix 5.8 (Residential Visual Amenity Assessment) and Appendix 5.9 (Technical Methodology) - Volume 4.

Screening

- 5.1.13. Under *The Town & Country Planning (Environmental Impact Assessment) Regulations 2017* (as amended) (the EIA Regulations) (see para 5.1.18 below), a screening request can be submitted to the decision maker (Local Planning Authority (LPA) or other determining authority), with the information defined in Schedule 3 of the EIA Regulations, and with a request for a screening opinion to determine whether the proposed development is a Schedule 1 or Schedule 2 EIA development (under the EIA Regulations) or a non-EIA development.
- 5.1.14. Where a proposed development is listed in Schedule 2 of the EIA Regulations and the decision maker is of the opinion that the proposed development is a “*Schedule 2 development likely to have significant effects on the environment by virtue of factors such as its nature, size or location*” (Clause 2 of the EIA Regulations), then the decision maker would request an EIA to accompany the planning application in its screening opinion. Where the decision maker states in its screening opinion that, due to the scale and nature of the proposed development and its location, the proposed development is a non-EIA development and a full EIA is not required, it may still request impact assessments on various topics including an LVIA.
- 5.1.15. In this case, the decision maker is East Riding of Yorkshire Council (ERYC or “the Council”) and the proposed development comes under sections 3(a) and 3(i) of Schedule 2 of the EIA Regulations as it is an installation for the production of

electricity and the area of the development exceeds 0.5ha (section 3(a)) and is an installation for the harvesting of wind power for energy production (wind farms) that involves more than 2 turbines or the hub height exceeds 15 m (section 3(i)). However, the applicant has not requested a screening opinion from ERYC and is volunteering an EIA for this project.

Scoping and/or Pre-Application Consultations

- 5.1.16. To ensure that the EIA (including the LVIA/CLVIA) focussed on the identification of likely significant effects and provided ERYC with the environmental information (including landscape and visual amenity) needed to inform the planning decision, a formal pre-application request was submitted to ERYC on 7 August 2025. Consultation responses were received from various ERYC officers in relation to, amongst other matters, landscape, public rights of way, the historic environment and nature conservation, and from the Council's landscape consultant (2B Landscape Consultancy Ltd). Subsequent further consultations were undertaken with the Council's planning officer and landscape consultant. These consultations are summarised in Table 5.1 in Chapter 5 (Landscape and Visual Impact) - Volume 2.

Legislation, Policy and Guidance

- 5.1.17. Current legislation, national and local policy and good practice guidance have been reviewed to ensure that the LVIA/CLVIA address the legal requirements and policy context for the development type and follow the latest good practice guidance.

Legislation

- 5.1.18. Planning applications for developments in England that come under *The Town and Country Planning Act 1990*, are subject to the requirements of *The Town and Country Planning (Environmental Impact Assessment) Regulations 2017* (as amended) (the EIA Regulations). Amongst other matters, the EIA Regulations define the EIA process, describe the nature and scale of "EIA developments" (in Schedules 1 and 2), list the selection criteria for screening Schedule 2 developments (in Schedule 3) and the information for inclusion in an Environmental Statement (ES) (in Schedule 4).
- 5.1.19. Where the decision maker has confirmed in its screening opinion that the proposed development is an EIA development, the ES needs to provide the information in Schedule 4 paragraphs 1 - 10 which, in relation to LVIAs, is as follows:
- Paragraph 1 (a), (b) and (c): A description of the location, physical characteristics of the proposed development and the main characteristics of the operational phase, that could have a significant effect on landscape and/or visual amenity (see Appendix 5.5 (Characterisation of Proposed Development) - Volume 4).

- Paragraphs 3 and 4: A description of the relevant aspects of the current environmental baseline, in terms of landscape resources and visual receptors (see Chapter 5 (Landscape and Visual Impact) - Volume 2 and Appendix 5.3 (Baseline Landscape Character Analysis) - Volume 4).
 - Paragraph 5: A description of the likely significant effects of the development on the landscape and visual aspects of the environmental baseline resulting from the construction and operation of the proposed development, including effects that would be direct or indirect, discrete or cumulative, short, medium or long-term, permanent or temporary and beneficial (positive) or adverse (negative) (see Chapter 5 (Landscape and Visual Impact) - Volume 2). This site is not sufficiently close to any other EU country or territory for there to be any transboundary effects.
 - Paragraph 6: A description of the forecasting methods or evidence, used to identify and assess the significant effect on landscape and visual amenity, including details of difficulties encountered and any uncertainties involved (see Chapter 5 (Landscape and Visual Impact) - Volume 2 and this Appendix 5.1 (LVIA/CLVIA Method of Assessment) - Volume 4).
 - Paragraph 7: A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on landscape and visual amenity and, where appropriate, any proposed monitoring arrangements (see Chapter 5 (Landscape and Visual Impact) - Volume 2).
 - Paragraph 9: Non-technical summary of the information provided (see Non-Technical Summary - Volume 1).
 - Paragraph 10: Reference list detailing the sources used for the descriptions and assessment (see Chapter 5 (Landscape and Visual Impact) - Volume 2).
- 5.1.20. The EIA Regulations do not define “*likely significant effects*”, hence, as noted in para 5.1.3 above, landscape and visual effects identified as “significant effects” using this method of assessment are those changes to the baseline resources and/or receptors that are likely to be of sufficient magnitude to be a material planning matter and which should, therefore, be taken into account in the decision-making process.

National Policy and Guidance

National Policy Statements

- 5.1.21. Planning applications for renewable energy schemes in England may be subject to the *Overarching National Policy Statement for Energy (EN-1)* (DESNZ December 2025a) (NPS EN-1) and the *National Policy Statement for Renewable Energy Infrastructure (EN-3)* (DESNZ December 2025b) (NPS EN-3). Both of these National Policy Statements (NPSs) set out national policy for energy infrastructure under the Planning Act 2008 (ie National Infrastructure Projects (NSIPs)). However, as noted in section 1.2 of EN-1, paras 1.2.1 and 1.2.2:

1.2.1 “In England, this NPS, in combination with any relevant technology specific NPSs, may be a material consideration in decision making on applications that fall under the Town and Country Planning Act 1990 (as amended).”

1.2.2 Whether the policies in this NPS are material and to what extent, will be judged on a case-by-case basis and will depend upon the extent to which the matters are already covered by applicable planning policy. ...”

National Planning Policy Framework and Planning Practice Guidance

- 5.1.22. Planning applications for developments in England that come under *The Town and Country Planning Act 1990*, are subject to the policies in the *National Planning Policy Framework* (NPPF, MHCLG December 2024) and guidance in the online *Planning Practice Guidance* (PPG). These set out the Government’s planning policies for England and how these should be applied.
- 5.1.23. The policies in the NPPF and topics within the *Planning Practice Guidance* that have influenced the scope and approach of this LVIA/CLVIA and the landscape measures proposed in the Outline Landscape and Biodiversity Mitigation and Enhancement Plan (oLBMEP) in Appendix 7.11 - Volume 4 are summarised in Appendix 5.2 (LVIA/CLVIA Planning Context) - Volume 4.

Local Policy and Guidance

- 5.1.24. Local planning policy produced by the ERYC has been consulted to guide the scope of the LVIA/CLVIA, in particular:
- *East Riding Local Plan Update 2025-2039: Strategy Document Update Adopted April 2025* (ERYC April 2025a).
 - *East Riding Local Plan Update 2020 - 2039: Allocations Document Update Adopted April 2025* (ERYC April 2025b).
- 5.1.25. The ERYC and North Yorkshire Council also have supplementary planning documents which have been consulted including:
- *East Riding Design Code* (ERYC April 2025c).
 - *The East Riding of Yorkshire Landscape Character Assessment Update 2018* (AECOM October 2018).
 - *North Yorkshire and York Landscape Characterisation Project* (Chris Blandford Associates May 2011).
- 5.1.26. None of the Neighbourhood Plans in ERYC area apply to the location of the development site. The policies and guidance in these Local Plan documents that are relevant to the LVIA/CLVIA and the landscape measures proposed in Appendix 7.11 (OLBMEP) - Volume 4 are summarised in Appendix 5.2 (LVIA/CLVIA Policy Context) - Volume 4.

Good Practice Guidance for LVIA and CLVIA

- 5.1.27. Several good practice guidance documents have been published by the Landscape Institute, Natural England, Nature Scot, Natural Resources Wales and other

statutory consultees to provide good practice guidance on LVIA and/or CLVIA for EIA developments. Some are specific to particular aspects of LVIA and/or CLVIA (eg landscape character assessment, visualisations or cumulative impact assessment), to particular development types (eg wind farms), to particular locations (eg to urban, rural or coastal environments) or to particular jurisdictions (eg to England, Scotland, Wales or Northern Ireland). Others are generic and provide more general guidance on LVIA and/or CLVIA and so are relevant for all development types in most locations within the UK.

- 5.1.28. Guidance on undertaking landscape character assessments in England is provided in *An Approach to Landscape Character Assessment* (Natural England 2014) and TIN 08/15 (see paras 5.1.29 and 5.1.35 below).
- 5.1.29. Good practice guidance documents produced by the Landscape Institute (LI) which are relevant for this LVIA/CLVIA are:
- *Guidelines for Landscape and Visual Assessment* 3rd edition (LI/IEMA 2013), known as GLVIA3.
 - *Notes and Clarifications on Aspects of Guidelines for Landscape and Visual Impact Assessment Third edition (GLVIA3)*: Technical Guidance Note LITGN-2024-01 (LI August 2024), known as LITGN-2024-01.
 - *Landscape Character Assessment*: Technical Information Note 08/2015 (LI February 2016), known as TIN 08/15.
 - *Assessing Landscape Value Outside National Designations*: Technical Guidance Note 02/21 (LI 2021), known as TGN 02/21.
 - *Visual Representation of Development Proposals*: Technical Guidance Note 06/19 (LI September 2019), known as TGN 06/19.
 - *Residential Visual Amenity Assessment (RVAA)*: Technical Guidance Note 02/19 (LI March 2019), known as TGN 02/19.

GLVIA3

- 5.1.30. GLVIA3 provides guidance on landscape and visual impact assessment for all development types throughout the UK. It notes (para 1.17, LI/IEMA 2013) that the European Union Directive on EIA (enacted in England by the EIA Regulations 1988 - 2017) places an emphasis on the identification of **likely significant** environmental effects. It advises that this requires an approach that is in proportion to the scale of the project being assessed and the nature of its likely effects and that judgement needs to be exercised at all stages to ensure that the scale of the assessment is appropriate and proportional. It notes that this applies to appraisals of landscape and visual effects for sub-EIA developments as well as those that are part of a formal EIA assessment.
- 5.1.31. GLVIA3 sets out a staged approach to the separate but parallel assessments of effects on landscape and visual amenity. This approach involves an assessment of the value and susceptibility of the landscape resource (or visual receptor) in

the baseline in order to determine its sensitivity, and combining this sensitivity with a judgement on the magnitude of change (that would be brought about by the proposed development) in order to determine the overall effects of the proposed development on each landscape resource (or visual receptor) and whether or not this effect would be significant. This is the approach adopted in the viewpoint analysis (see paras 5.1.72 - 5.1.102 below).

LITGN-2024-01

- 5.1.32. This document provides a compilation of clarifications on GLVIA3 and includes statements of clarification previously provided on the LI website and answers provided by the LI GLVIA Panel in response to questions raised during the LI December 2020 webinar “*GLVIA Misconceptions and Best Practice*” and the LI 2021 GLVIA3 survey.
- 5.1.33. It states that “*GLVIA3 is guidance aimed at experienced practitioners to ensure a degree of consistency in what is taken into account in reaching professional judgements and how those judgements are documented. It is not a textbook to teach the inexperienced, a detailed recipe for the perfect assessment, nor intended to describe exactly how assessments should be undertaken and presented. Overly restrictive guidance would prevent improvement and innovation, and variation and debate are to be expected rather than discouraged*”.
- 5.1.34. The five typographical errors in GLVIA3, as set out in the Errata (Section 2), and the numerous questions and clarifications in the Notes and Clarifications (Section 3) are taken into account in this Method of Assessment.

TIN 08/2015

- 5.1.35. TIN 08/2015 provides information on the process of landscape character assessment and the guidance documents and landscape character assessments provided in England, Scotland, Wales and Northern Ireland. The author of *An Approach to Landscape Character Assessment* (Natural England 2014), Christine Tudor, wrote both the introduction and the section on landscape character in England in TIN 08/2015 and both documents apply for landscape character assessments undertaken in England.

TGN 02/21

- 5.1.36. TGN 02/21 provides information and guidance for landscape professionals and others who need to make judgements about the value of a landscape outside of national landscape designations in the context of the UK Town and Country Planning system and also for those who review those judgements. It identifies the stages in the planning process at which landscape value might be assessed, reviews the tools available to enable practitioners to assess landscape value and, in Table 1 (pp 7 - 11, TGN 02/21), presents a list of factors that could be considered when identifying landscape value, their definitions, examples of indicators of landscape value and of evidence/sources of information for each of

these factors.

5.1.37. These factors and their definitions are:

- Natural heritage - landscape with clear evidence of ecological, geological, geomorphological or physiographic interest which contribute positively to the landscape.
- Cultural heritage - landscape with clear evidence of archaeological, historical or cultural interest which contribute positively to the landscape.
- Landscape condition - landscape which is in a good physical state both with regard to the individual elements and overall landscape structure.
- Associations - landscape which is connected with notable people, events and the arts.
- Distinctiveness - landscape that has a strong sense of identity.
- Recreational - landscape offering recreational opportunities where experience of landscape is important.
- Perceptual (scenic) - landscape that appeals to the senses, primarily the visual sense.
- Perceptual (wildness and tranquillity) - landscape with a strong perceptual value notably wildness, tranquillity and/or dark skies.
- Functional - landscape which performs a clearly identifiable and valuable function, particularly in the healthy functioning of the landscape.

5.1.38. These factors have been taken into account in the baseline landscape character analysis, when assessing the value of each of the landscape character types in the study area (see paras 5.1.55 - 5.1.58 below and Appendix 5.3 - Volume 4).

TGN 06/19

5.1.39. TGN 06/19 aims to help landscape professionals, planning officers and other stakeholders to select the types of visualisations that are appropriate to the circumstances in which they will be used. It defines four types of visualisations (Types 1 - 4) where Type 1 is an annotated viewpoint photograph, Type 2 is a wireline (wireframe) based on a 3D model, Type 3 is a photomontage and photowire (wireframe overlaid on a photograph), and Type 4 is a photomontage and photowire using surveyed locations and reproduced at verifiable scales.

5.1.40. Table 1 in TGN 06/19 sets out recommendations for the appropriate visualisation types to use for four categories of purposes and users (categories A - D). However, the guidance also states (para 1.2.9) that *“visualisations should provide the viewer with a fair representation of what would be likely to be seen if the proposed development is implemented and should portray the proposal in scale with its surroundings. In the context of landscape/townscape and visual impact assessment, it is crucial that visualisations are objective and sufficiently accurate for the task in hand. In short, visualisations should be fit for purpose”*.

- 5.1.41. With regards to the recommendations in TGN 06/19, this LVIA/CLVIA is illustrated with type 4 visualisations. A Technical Methodology is provided in Appendix 5.9 - Volume 4 to explain how the photography has been undertaken and how the 3D model, ZTVs and visualisations have been constructed.

TGN 02/19

- 5.1.42. TGN 02/19 was prepared to help landscape professionals and other appropriately qualified professionals who are engaged in RVAA. It states that it is not prescriptive but aims to improve standards and promotes a logical approach to RVAA which should contribute to well informed decision making.
- 5.1.43. It describes RVAA as a stage beyond LVIA that focusses exclusively on private views and private visual amenity. The approach advocated in TGN 02/19 is a set of four steps:
- Step 1: define study area and properties to be assessed.
 - Step 2: evaluate baseline visual amenity of properties.
 - Step 3: assess change to visual amenity of properties and identify properties requiring further assessment.
 - Step 4: detailed assessment of properties identified with the greatest magnitude of change in Step 3 in order to examine whether the Residential Visual Amenity Threshold is engaged, ie is likely to be reached.
- 5.1.44. It does not define the Residential Visual Amenity Threshold in terms of a magnitude of effect but states that this is a judgement that *“should be communicated in a coherent manner, using text with clear descriptions, employing terminology which is commonly understood and descriptors which may have previously been used. Assessors should ensure that their judgements are unambiguous and have a clear, rational conclusion. Some examples of descriptions and descriptors that might be used include: ‘blocking the only available view from a property’, or ‘overwhelming views in all directions’; and ‘unpleasantly encroaching’ or being ‘inescapably dominant from the property’. It may also be useful to employ bespoke graphics such as annotated aerial photographs and wireframe visualisations to aid this further assessment in Step 4”* (TGN 02/19, para 4.19).
- 5.1.45. The RVAA Method of Assessment that has been followed is set out in the RVAA (Appendix 5.8 (Residential Visual Amenity Assessment) - Volume 4).

Good Practice Guidance for CLVIA

- 5.1.46. GLVIA3 (para 7.13) states that existing schemes and those under construction should be included in the baseline for the LVIA and the baseline for the cumulative assessment should also include schemes with planning consent (permitted) and those subject to a valid planning application (submitted). However, GLVIA3 does not provide any detailed guidance on how to undertake a CLVIA.

- 5.1.47. Nature Scot (and its predecessor Scottish Natural Heritage) have produced a series of guidance documents for undertaking CLVIAs for wind farms in Scotland. The proposed development is in England, not Scotland but, in the absence of specific guidance on undertaking CLVIAs for wind farms in England, the Nature Scot guidance has been consulted. The current version of this guidance document is:
- *Guidance - Assessing the cumulative landscape and visual impact of onshore wind energy developments* (Nature Scot 2021).
- 5.1.48. This states that “*The aim of the cumulative assessment is to identify the magnitude of additional cumulative change which would be brought about by the proposed development when considered in conjunction with other wind farms*” and that “*The purpose of a Cumulative Landscape and Visual Impact Assessment (CLVIA) is to describe, visually represent and assess the ways in which a proposed wind farm would have additional impacts when considered with other consented or proposed wind farms. It should identify the significant cumulative impacts arising from the proposed wind farm.*” (pages 10 and 12, Nature Scot 2021)
- 5.1.49. Therefore, the approach taken to assess the cumulative impacts of this proposed development has been to:
- Define a likely future baseline that includes all existing operational wind farms (and solar farms), those under construction and those likely to be constructed and operational during the lifetime of the proposed development (such as the permitted Three Oaks Renewable Energy Park (TOREP)) plus schemes with planning consent (permitted but not yet built) and those subject to a valid planning application (submitted).
 - Assess the additional cumulative effects of the proposed development against this likely future baseline in order to identify any likely significant cumulative impacts arising from the proposed development.

Preliminary Visibility and Viewpoint Appraisal

- 5.1.50. At an early stage in the design and assessment process, a “bare earth” zone of theoretical visibility (ZTV) was generated, extending a defined distance from the site (taking into account the nature of the topography and the likely visibility of the site), and overlaid onto the Ordnance Survey (OS) 1:25,000 Explorer map. This was generated using OS terrain 5 data and LIDAR data to create a digital terrain model (DTM), several target points across the site (at the locations and tip heights of the proposed wind turbines) and an observer eye height of 1.6 mAGL.
- 5.1.51. This ZTV indicated the locations in the study area where the terrain would screen the wind turbine tips (no colour over the base map), and the locations where the terrain would permit views of one or more wind turbine tips, ie the likely zones of theoretical visibility for the proposed development based on screening by terrain only.

- 5.1.52. In addition to the terrain, a further degree of screening would be provided by surface features such as built development and vegetation in the study area and so, based on the ZTV and fieldwork observations, preliminary viewpoints were selected and appraised and a suitable study area identified for the more detailed assessments.

Landscape and Visual Baseline

- 5.1.53. The site and study area have been analysed to identify the existing landscape resources (fabric, character and designations) and visual receptor types and locations within the study area. This analysis has focussed on the resources and receptors within zones of theoretical visibility on the ZTVs. Resources and receptors outside the ZTVs have been noted but not analysed in detail as these would not be affected by the proposed development.

Landscape Fabric

- 5.1.54. The landscape features and elements on the site have been identified and described from fieldwork observations, Ordnance Survey maps, aerial photography, the Phase I habitat survey, the cultural heritage survey and other relevant published information in order to identify any important landscape features that could be affected by the proposed development.

Landscape Character

- 5.1.55. The baseline landscape character units have been based on those identified in the landscape character assessments for the study area - *The East Riding of Yorkshire Landscape Character Assessment Update 2018* (AECOM October 2018) and the *North Yorkshire and York Landscape Characterisation Project* (Chris Blandford Associates May 2011) which identify landscape character types (LCTs) and landscape character areas (LCAs).
- 5.1.56. Based on the definitions in GLVIA3 (Glossary p 157), these are:
- Landscape character types (LCTs) - landscape units that are generic in nature and are defined by a broadly similar combination of geology, soils, topography, drainage patterns, historic and contemporary land uses, vegetation, field, road and settlement patterns, and perceptual and aesthetic attributes. They may be relatively homogenous or may be variable in character and may occur in several locations within a study area.
 - Landscape character areas (LCAs) - single unique areas which are discrete geographical areas of a particular landscape type and are relatively homogenous in character and with a particular combination of geology, soils, topography, drainage patterns, historic and contemporary land uses, vegetation, field, road and settlement patterns, and perceptual and aesthetic attributes.
- 5.1.57. These have been examined and analysed using fieldwork observations, Ordnance Survey maps, aerial photography, the landscape character assessments, the Local

Plan and other published information to identify their:

- Locations - within the study area.
 - Key characteristics - geology and soils, topography and drainage patterns, land uses, vegetation, field, road and settlement patterns.
 - Aesthetic and perceptual factors - including scale, distinctiveness, diversity, enclosure, pattern, wildness, tranquillity, condition, scenic quality, sense of place, accessibility and rarity.
 - Other development - existing developments that are part of the character of the landscape unit.
 - Landscape designations - national and local.
 - Recreational opportunities - including National and local landscape designations, National Trails, long distance footpaths, cycle and bridle routes, local public rights of way (PROW), access land and permissive access.
 - Natural heritage - evidence of ecological, geological, geomorphological or physiographic features of interest that contribute to landscape character.
 - Cultural heritage - evidence of archaeological, historical or cultural features of interest that contribute to landscape character.
 - Associations - evidence of connections with notable people, events and the arts.
 - Function - clearly identifiable and valuable functions.
 - Views - the nature of views and the extent to which these contribute to landscape character.
 - Landscape policies and strategies - that guide landscape change.
- 5.1.58. Each landscape unit has then been evaluated to identify its value (in accordance with TGN 02/21) and susceptibility to the changes that could be brought about by a development of this nature, scale and location, in order to define its sensitivity to this type of development, using the criteria set out in the assessment of effects on landscape character in the **Viewpoint Analysis** below (paras 5.1.77 - 5.1.82 and Tables 5.1.2 - 5.1.4).
- 5.1.59. The evaluation of sensitivity has been undertaken as the *North Yorkshire and York Landscape Characterisation Project* (Chris Blandford Associates May 2011) does not assess sensitivity to wind farm development and the *Wind Turbine Sensitivity and Capacity Study* (Annex A, AECOM October 2018) assesses the sensitivity of each LCT as a host unit only (not as a non-host, ie in the context of wind turbines proposed outside of the LCT), does not assess the sensitivity of the smaller LCAs and does not assess sensitivity in relation to the scale of project being proposed for this Proposed Development. The differences in the approaches and methodologies for the assessments of landscape sensitivity in Annex A and in Appendix 5.3 (Baseline Landscape Character Analysis) - Volume 4

are explained in Table 5.2.1 in Appendix 5.2 (LVIA/CLVIA Policy Context) - Volume 4.

Landscape and Planning Designations

- 5.1.60. The locations, extents, purposes and special characteristics of the landscape designations in the study area have been identified and described based on relevant published information, fieldwork observations, Ordnance Survey maps and aerial photography.
- 5.1.61. National statutory landscape designations (eg National Parks and Areas of Outstanding Natural Beauty (AONBs)/National Landscapes) have statutory purposes and information on their special characteristics are usually available in published management plans. The purposes of national non-statutory designations (eg Heritage Coasts) are usually available from relevant websites, and the purposes and special characteristics of local landscape designations can usually be derived from relevant Local Plan policies and landscape character assessments.
- 5.1.62. The presence and extent of other land use/planning designations identified in the Local Plan have also been noted, where these have a landscape protection purpose or consequence (eg Key Open Areas).

Visual Receptors

- 5.1.63. The range of visual receptor types and locations within the study area have been identified from fieldwork observations, Ordnance Survey maps, aerial photography and any other relevant published information.
- 5.1.64. The viewpoint analysis represents a selection of the visual receptor types and locations in the study area. These have been evaluated to identify the value of the location and/or view and susceptibility of the receptors at these locations to the changes that could be brought about by a development of this nature, scale and location, in order to define the sensitivity of the receptors at each viewpoint to this type of development, as per the criteria set out in the **Viewpoint Analysis** below (paras 5.1.89 - 5.1.96 and Tables 5.1.7 - 5.1.10).

Proposed Development, Primary Mitigation and Enhancement

- 5.1.65. The construction, operational and decommissioning phases of the proposed development have been examined to identify those aspects that could bring about changes to the landscape and visual baseline, taking into account the primary mitigation and enhancement measures embedded into the siting and design of the proposed development (see Tables A5.5.1 - A5.5.3 in Appendix 5.5 (Characterisation of Proposed Development) - Volume 4).
- 5.1.66. In Tables A5.5.1 - A5.5.3, each aspect of the construction, operational and decommissioning phases have been characterised in terms of:
- Duration (the timescale during which the element or activity would be present during that phase of the development).

- Direct (a physical effect on landscape resources and/or visual amenity) or indirect (a consequential effect on landscape resources and/or visual amenity).
- Discrete (where the effects would arise as a result of the proposed development only) or cumulative (where the effects would arise in conjunction with other proposed developments of a similar type).
- Short term (less than 2 years), medium term (2 - 10 years) or long term (more than 10 years).
- Temporary (if the effects on landscape resources and/or visual amenity would cease at some time in the future) or permanent (if the effects on landscape resources and/or visual amenity would remain after the development has been decommissioned).
- Reversible (if the effects on landscape resources and/or visual amenity can be mitigated and the landscape and/or view can re-instated to its pre-development state) or irreversible (if the changes to landscape resources and/or visual amenity cannot be mitigated and reversed).
- Intermittent (if the effects on landscape resources and/or visual amenity are not always present) or continuous (if the effects on landscape resources and/or visual amenity would be present for the duration of that phase of the development).
- Beneficial (where effects would enhance landscape resources and/or visual amenity) or adverse (where effects would detract from landscape resources and/or visual amenity).
- Transboundary - if effects are likely to extend across country borders.

Further (Secondary) Mitigation and Enhancement

5.1.67. In addition, the further (secondary) mitigation and enhancement measures that could be incorporated into the proposed development, to further reduce the likelihood of significant effects on landscape and visual amenity and, where possible, enhance landscape fabric, landscape character, views and biodiversity, have been identified and presented in Appendix 7.11 (Outline Landscape and Biodiversity Mitigation and Enhancement Plan) - Volume 4.

Key Parameters

5.1.68. The pre-application consultations, the legislation, national and local policy context and good practice guidance, the nature of the landscape and visual baseline, and the scale, nature and location of the proposed development, have guided the scope of the LVIA and CLVIA and the key parameters that need to be considered in these assessments, as outlined in Tables 5.1.1a and 5.1.1b below:

Table 5.1.1a: Key LVIA Parameters

LVIA Parameters	Description
Study area(s)	A 20km radius study area, centred on the site, has been selected as this is the geographical area within which significant effects on landscape and visual amenity are likely, informed by the ZTVs and fieldwork observations.
Baselines	The predicted future landscape and visual baselines of the study area, against which the predicted changes have been assessed. All existing developments in the study area (including operational and under-construction projects) are part of the current baseline. A permitted development under the control of the applicant (TOREP) has also been included as this would be constructed and present prior to construction of the proposed development and, hence, forms part of the predicted future baseline. In accordance with the EIA Regulations, the likely evolution of the baseline due to natural changes (including climate change) has also been considered.
Landscape resources	Landscape fabric of the development site, landscape character of the site and study area and the special qualities and purposes of landscape designations in the study area.
Visual receptors	Residents in towns, villages and individual properties, walkers, cyclists and equestrians on national trails, long distance routes and the local public rights of way network, visitors to tourist attractions, motorists on the main and minor roads, and rail passengers on the Bridlington to Driffield railway line.
Viewpoints	19 viewpoint locations in publicly accessible locations at a range of distances and directions from the proposed development have been selected to represent the landscape resources and visual receptor types and locations in the study area and where there would be views of the proposed development. In accordance with GLVIA3 (para 6.19) these are representative viewpoints.
Aspects of proposed development	Those elements and activities of the construction, operational and decommissioning phases of the proposed development that could give rise to significant effects on landscape and/or visual amenity.
Temporal limits	The timescales to be taken into account in the assessment are the durations of the construction phase (8 months), the operational phase (40 years) and the decommissioning phase (8 months), and the timescale selected to illustrate the effectiveness of the mitigation measures (5 - 40 years).
Nature of effects	Discrete effects of the proposed development in the context of the existing baseline, which may be direct/indirect, short/medium/long-term, temporary/permanent, reversible/irreversible, beneficial/adverse effects. The site is not near any country borders and there will not be any transboundary landscape or visual effects.

Table 5.1.1b: Key CLVIA Parameters

CLVIA Parameters	Description
Study area(s)	A 20km radius study area, centred on the site, has been selected as this is the geographical area within which significant cumulative effects on landscape and visual amenity are likely, informed by the cumulative ZTVs and fieldwork observations.
Baselines	The likely future landscape and visual baselines of the study area, against which the predicted changes have been assessed. All existing developments in the study area (operational and under-construction projects) and the permitted development under the control of the applicant (TOREP) are included plus a permitted and not yet build wind farm (Carnaby Wind Farm) as this could be constructed and present during the operational life of the proposed development. In accordance with the EIA Regulations, the likely evolution of the likely future baseline due to natural changes (including climate change) has also been considered.

CLVIA Parameters	Description
Landscape resources	Landscape fabric of the development site, landscape character of the site and study area and the special qualities and purposes of landscape designations in the study area.
Visual receptors	Residents in towns, villages and individual properties, walkers, cyclists and equestrians on national trails, long distance routes and the local public rights of way network, visitors to tourist attractions, motorists on the main and minor roads, and rail passengers on the Bridlington to Driffield railway line.
Viewpoints	Nine of the 19 viewpoint locations in publicly accessible locations at a range of distances and directions from the proposed development have been selected to represent the landscape resources and visual receptor types and locations in the study area and where there would be views of the proposed development. In accordance with GLVIA3 (para 6.19) these are representative viewpoints.
Aspects of proposed development	Those elements and activities of the construction, operational and decommissioning phases of the proposed development that could give rise to significant cumulative effects on landscape and/or visual amenity.
Temporal limits	The timescales to be taken into account in the assessment are the durations of the construction phase (8 months), the operational phase (40 years) and the decommissioning phase (8 months), and the timescale selected to illustrate the effectiveness of the mitigation measures (5 - 40 years).
Nature of effects	Additional cumulative effects of the proposed development in the context of the likely future baseline, which may be direct/indirect, short/medium/long-term, temporary/permanent, reversible/irreversible, beneficial/adverse effects. The site is not near any country borders and there will not be any transboundary landscape or visual effects.

Visibility Analysis

Zones of Theoretical Visibility

- 5.1.69. Computer-generated zones of theoretical visibility (ZTVs) have been generated using OS terrain 5 data and LIDAR 2m data to create a digital terrain model (DTM), the tip and hub heights of the proposed wind turbines and an observer eye height of 1.6 mAGL. These have been overlaid onto the Ordnance Survey (OS) 1:25,000 Explorer map and a Technical Methodology explaining how the 3D model of the proposed development and the ZTVs are constructed is provided in Appendix 5.9 (Technical Methodology for Photography, ZTVs and Visualisations) - Volume 4.
- 5.1.70. As the ZTVs are based on terrain data only, they do not take into account the screening effects of surface features. However, they do identify the locations in the study area where the terrain would screen the proposed development, and the locations where the terrain would permit views of at least parts of the proposed development. These have enabled the fieldwork observations to concentrate on those locations where there could be views of the proposed development.

Fieldwork Observations

- 5.1.71. Fieldwork observations from the site looking outwards to the surrounding landscape and from the surrounding area looking into the site have been

undertaken to identify current intervisibility between the site and the surrounding landscape (taking into account the screening by existing surface features such as buildings, hedgerows and woodlands) and the locations in the surrounding area where visual receptors may gain views of the proposed development.

Viewpoint Analysis

- 5.1.72. The ZTVs, fieldwork observations and landscape and visual baselines have informed the selection of viewpoint locations, which have been selected to represent the landscape resources and visual receptor locations in the study area that could be significantly affected by the proposed development. These viewpoint locations were supplied to the Council and its landscape consultant during the pre-application consultation process and the final viewpoint list includes their suggested modifications to the locations of Viewpoints 1, 2 and 4 and the inclusion of Viewpoint 5.
- 5.1.73. The viewpoint analysis is effectively a sampling exercise and does not identify all possible views of the proposed development but, together with other fieldwork observations, has informed the assessments of effects, residual effects and cumulative effects on landscape resources and visual amenity across the study area.
- 5.1.74. The viewpoint analysis has examined the changes in landscape character and views that would occur as a consequence of the construction, operational and decommissioning phases of the proposed development at the agreed viewpoint locations in the surrounding area for four scenarios:
- Scenario 1: Assessment of Effects - the discrete effects of the proposed development (construction, operational and decommissioning phases), taking into account the embedded (primary) mitigation, in the context of the predicted future landscape and visual baseline (including the operational wind turbines and the TOREP).
 - Scenario 2: Assessment of Residual Effects - the discrete effects of the proposed development (construction, operational and decommissioning phases), taking into account the embedded (primary) mitigation and the further (secondary) mitigation (which should have established and would be effective during years 6 - 40 of the operational phase and during the decommissioning phase), in the context of the predicted future landscape and visual baseline (including the operational wind turbines and the TOREP).
 - Scenario 3: Assessment of Cumulative Effects - the additional cumulative effects of the proposed development (construction, operational and decommissioning phases), taking into account the embedded (primary) mitigation, in the context of the likely future baseline (including the operational wind turbines, the TOREP, the permitted Carnaby Wind Farm and the other permitted developments in the study area).

- Scenario 4: Assessment of Cumulative Residual Effects - the additional cumulative effects of the proposed development (construction, operational and decommissioning phases), taking into account the embedded (primary) mitigation and the further (secondary) mitigation (which should have established and would be effective during years 6 - 40 of the operational phase and during the decommissioning phase), in the context of the likely future landscape and visual baseline (including the operational wind turbines, the TOREP, the permitted Carnaby Wind Farm and the other permitted developments in the study area).

5.1.75. The predicted effects on landscape character and/or views at each viewpoint has been assessed separately but has followed the same assessment process as outlined below. In accordance with GLVIA3, firstly, the sensitivity of the location has been derived from the value attached to the landscape, location or view, together with the susceptibility to change (of the landscape resource or visual receptor group). This has then been combined with the predicted magnitude of change (in landscape character or in the view) in order to predict the overall effects (on landscape character or views) and whether these predicted effects would be significant.

Effects on Landscape Character

5.1.76. The criteria used to judge landscape value, susceptibility, sensitivity, magnitude and significance of effects on landscape character are as follows:

Landscape Value

- 5.1.77. National and local landscape designations are an indication of landscape value, as they are areas that have been recognised for their particular scenic beauty and/or recreational potential. They are also usually landscapes within which a higher level of development control is in place for the purpose of protecting those qualities. However, most undesignated landscapes are also locally valued by local people.
- 5.1.78. Therefore, in order to judge landscape value, both recognised landscape designations and the factors identified in TGN 02/21 (natural heritage, cultural heritage, condition, associations, distinctiveness, recreational opportunities, perceptual factors (scenic beauty, wildness, tranquillity and dark skies), and function, see para 5.1.37 above) have been taken into account and the criteria used to judge landscape value are provided in Table 5.1.2 below.

Table 5.1.2: Landscape Value

Landscape Value	Description
International value	A landscape designated at an international level, eg a World Heritage Site, the purposes of which include landscape and/or recreational opportunities.
National value	A landscape designated at a national level, eg National Parks (England, Scotland and Wales), Areas of Outstanding Natural Beauty/National Landscapes (England, Wales and NI), National Scenic Areas (Scotland) and Heritage Coasts (England and Wales).

	Or an undesignated landscape where the landscape is very rich in natural and/or cultural heritage assets which are designated at a national level and which form highly distinctive landscape features, where the landscape is in very good physical condition, has very strong associations with famous people or historical events, offers nationally recognised recreational opportunities (eg open access land, National Trails), is very distinctive with a very strong sense of place and very strong perceptual qualities (scenic, wildness, tranquillity and dark skies) and which is essential to the healthy functioning of natural systems.
County/Borough/District value	Local landscape designations in Local Development Plans and Regional Parks. Or an undesignated landscape where the landscape is rich in natural and/or cultural heritage assets which are designated at a County/Borough/District level and which form distinctive landscape features, where the landscape is in good physical condition, may have strong associations with famous people or historical events, offers County/Borough/District level recreational opportunities (eg long distance trails), is distinctive with a strong sense of place and strong perceptual qualities (scenic, wildness, tranquillity and dark skies) and which contributes to the healthy functioning of natural systems.
Local value	An undesignated landscape that has natural and/or cultural heritage assets which form distinctive landscape features, where the landscape is in good physical condition, may have associations with famous people or historical events, offers local recreational opportunities (eg local PROW, village greens, recreational fields), has a good sense of place and perceptual qualities (scenic, wildness, tranquillity and dark skies) and displays evidence of responsible use and value.
Unvalued	Where the landscape and/or landscape features have been despoiled and there is evidence that society does not value the landscape and/or landscape features, eg fly tipping, abandoned cars, litter, vandalism, etc.

Landscape Susceptibility

5.1.79. The susceptibility of a landscape unit to change depends on:

- The key characteristics of the landscape (including physical/natural and cultural/social elements, and aesthetic and perceptual factors), and the clarity and robustness of these characteristics.
- Nature of views (visual enclosure/openness of views, and the extent to which views contribute to landscape character).
- Landscape planning policies and strategies for the landscape unit.
- The nature of the changes to landscape character and views that would be brought about by a development (based on the inherent characteristics of the development type, and the scale and location of the development proposed) and the compatibility of these changes with the above factors.

5.1.80. The criteria used to judge landscape susceptibility are provided in Table 5.1.3 below.

Table 5.1.3: Landscape Susceptibility to Proposed Development Type

Landscape Susceptibility	Description
Very susceptible	Where the clarity of the key characteristics is very strongly expressed and/or their robustness to change is fragile and/or views are an essential characteristic, and/or policies and strategies aim to achieve “no change” to landscape character, and the changes to landscape character that could be brought about by a development of the type, scale and location proposed would be incompatible with these factors.

Susceptible	Where the clarity of the key characteristics is strongly expressed and/or their robustness to change is weak and/or views are an important characteristic and/or policies and strategies aim to conserve the key characteristics, and the changes to landscape character that could be brought about by a development of the type, scale and location proposed would have limited compatibility with these factors.
Moderate susceptibility	Where the clarity of the key characteristics is clearly expressed and/or their robustness to change is moderately strong and/or views contribute to landscape character and/or policies and strategies promote or accept limited changes to key characteristics, and the changes to landscape character that could be brought about by a development of the type, scale and location proposed would have a limited degree of compatibility with these factors.
Slight susceptibility	Where the clarity of the key characteristics is vaguely expressed and/or their robustness to change is strong and/or views are incidental to landscape character and/or policies and strategies promote or accept that the landscape could evolve, and the changes to landscape character that could be brought about by a development of the type, scale and location proposed would have a degree of compatibility with these factors.
Negligible susceptibility	Where the key characteristics are muddled and/or their robustness to change is very strong and/or views are irrelevant to landscape character and/or policies and strategies promote or accept major changes to key characteristics and the changes to landscape character that could be brought about by a development of the type, scale and location proposed would have some compatibility with these factors.

5.1.81. It should be noted that susceptibility depends not just on the type and scale of the proposed development but also on its location. Consequently, the susceptibility of a landscape unit can vary depending on whether it is the host landscape unit or an adjacent or more distant unit.

Landscape Sensitivity

5.1.82. In accordance with GLVIA3, the sensitivity of each landscape unit is judged on the basis of its *value* and its *susceptibility to change* (GLVIA3, paras 5.39 - 5.47, pp 88 - 90, LI/IEMA 2013). Accordingly, the judgements on value and susceptibility have been combined to give levels of sensitivity as in Table 5.1.4 below.

Table 5.1.4: Landscape Sensitivity to Proposed Development Type

Landscape Sensitivity	Description
High sensitivity	A landscape with international or national value and/or with features, elements, areas or special qualities of international or national value, that could be very susceptible to the type, scale and location of development proposed.
High/medium sensitivity	A landscape with national or County/Borough/District value and/or with features, elements, areas or special qualities of national value, that could be susceptible to the type, scale and location of development proposed.
Medium sensitivity	A landscape with County/Borough/District or local value and/or with features, elements, areas or special qualities of County/Borough/District or local value, that could have a moderate susceptibility to the type, scale and location of development proposed.
Medium/low sensitivity	A landscape with local value and/or with features, elements, areas or special qualities of local value, that could have a slight susceptibility to the type, scale and location of development proposed.
Low sensitivity	A landscape that is unvalued and/or with features, elements, areas or special qualities that are unvalued, and that could have a negligible susceptibility to the type, scale and location of development proposed.

Magnitude of Change in Landscape Character

5.1.83. The magnitude of change to landscape character depends on the scale or degree of change to the landscape resource and the nature, geographical extent, duration and reversibility of the effects that would be brought about by the proposed development (see GLVIA3, paras 5.48 - 5.52, p 90 - 91, LI/IEMA 2013). Accordingly, the judgements of magnitude have been based on the criteria in Table 5.1.5 below.

Table 5.1.5: Magnitude of Change to Landscape Character

Magnitude of Change	Description
Very substantial adverse [or beneficial]	Where the proposed development would become a defining characteristic of the landscape, would override and be in stark contrast with [or would substantially enhance] the existing landscape context, would be in the context of no similar structures [or would reinstate particularly valued features that had been previously lost or degraded] and would be a dominant additional feature(s) which would be permanent or present for a long, albeit temporary and reversible, time frame.
Substantial adverse [or beneficial]	Where the proposed development would become a key characteristic of the landscape, would compete with and detract from [or enhance] the existing landscape context, would be in the context of few similar structures [or would reinstate particularly valued features that had been previously lost or degraded] and would be a prominent additional feature(s) which would be permanent or present for a long, albeit temporary and reversible, time frame.
Moderate adverse [or beneficial]	Where the proposed development would become a characteristic of the landscape and would contrast with [or complement] the existing landscape context, may be in the context of a few similar structures [and/or would reinstate valued features that had been previously lost or degraded] and would be a visible additional feature(s) which would be permanent or present for a long, albeit temporary and reversible, time frame.
Slight adverse [or beneficial]	Where the proposed development would become a characteristic of the views from this landscape and would contrast with [or complement] the existing landscape context, may be in the context of some similar structures [and/or would reinstate features that had been previously lost or degraded] and would be a noticeable additional feature(s) which would be permanent or present for a long, albeit temporary and reversible, time frame.
Negligible adverse [or beneficial]	Where the proposed development may contrast with [or would complement] the existing landscape context, may be in the context of several similar structures [and/or would reinstate minor features that had been previously lost or degraded] and would be a barely discernible additional feature(s) which would be permanent or present for a long, albeit temporary and reversible, time frame.
No change (none)	Where the proposed development would not be visible or would not result in any discernible change in landscape character.

5.1.84. Where the combination of factors at a viewpoint fits between two of the magnitude of change levels defined above, then interim levels have been selected, ie very substantial/substantial, substantial/moderate, moderate/slight, slight/negligible and negligible/none.

Significance of Effects on Landscape Character

- 5.1.85. The effects on landscape character have then been derived by combining the sensitivity and magnitude in accordance with the matrix in Table 5.1.6 below.
- 5.1.86. In the following table, where overall effects are predicted to be major/moderate or higher, there are likely to be significant changes in landscape character. Overall effects of moderate+ may be significant if these apply to an extended area or location, and overall effects of moderate may contribute to significance if combined with greater changes in the same general location, whereas moderate/minor+ or lower changes are unlikely to result in significant changes to landscape character. Where the magnitude of change is “no change”, then the effects on landscape character are “none” for all sensitivity levels.

Table 5.1.6: Assessment of Effects on Landscape Character

LANDSCAPE SENSITIVITY	MAGNITUDE OF CHANGE									
	V sub	V sub/ sub	Sub	Sub/ mod	Mod	Mod/ slight	Slight	Slight/ neg	Neg	Neg/ none
High	Major+ +	Major+	Major	Maj/ mod+	Maj/ mod	Mod+	Mod	Mod/ min+	Mod/ minor	Minor+
High/ medium	Major+	Major	Maj/ mod+	Maj/ mod	Mod+	Mod	Mod/ min+	Mod/ min	Minor+	Minor
Medium	Major	Maj/ mod+	Maj/ mod	Mod+	Mod	Mod/ min+	Mod/ min	Minor+	Minor	Minor/ neg+
Medium/ low	Maj/ mod+	Maj/ mod	Mod+	Mod	Mod/ min+	Mod/ min	Minor+	Minor	Minor/ neg+	Minor/ neg
Low	Maj/ mod	Mod+	Mod	Mod/ min+	Mod/ min	Minor+	Minor	Minor/ neg+	Minor/ neg	Neg+

- 5.1.87. Based on Schedule 4 of the EIA Regulations, the nature of the predicted effects of the proposed development on landscape character have been described as:
- Direct (physical effects within the host landscape) or indirect (on neighbouring landscapes).
 - Discrete (where the effects on landscape character would arise as a result of the proposed development only) or cumulative (where the effects would arise in conjunction with other similar types of development proposed in the study area).
 - Short term (less than 2 years), medium term (2 - 10 years) or long term (more than 10 years).
 - Temporary (if the effects on landscape character would cease at some time in the future) or permanent (if the effects on landscape character would remain after the development has been decommissioned).
 - Reversible (if the effects on landscape character can be mitigated and the landscape re-instated to its pre-development character) or irreversible (if the changes to landscape character cannot be mitigated and/or reversed).

- Intermittent (if the effects on landscape character are not always present or would not affect an entire landscape unit) or continuous (if the effects on landscape character would be present for the duration of the development and/or would affect an entire landscape unit).
- Beneficial (where effects would enhance landscape character) or adverse (where effects would detract from landscape character).
- Transboundary - if the effects are likely to extend across country borders.

Effects on Views

5.1.88. The criteria used to judge value, susceptibility, sensitivity, magnitude and significance of effects on views are as follows.

Location Value

5.1.89. The value attached to a location or to a particular view at a location can influence the purpose and expectation of receptors at the location, and the judgement of value has taken into account:

- Recognised value - for example, by the presence of planning designations or designated heritage assets.
- Indicators of value - to individuals, communities and society generally, for example, the popularity of the location and views as indicated by visitor numbers, the inclusion in guidebooks or on tourist maps, the provision of visitor facilities and references in literature and art.

5.1.90. The value of a location and/or view will be described in terms of the definitions in Table 5.1.7 below.

Table 5.1.7: Value of Location or Particular View

Value of Location or View	Description
National value	A recognised scenic view in a landscape that has been designated at a national level, eg National Parks (England, Scotland and Wales), Areas of Outstanding Natural Beauty/National Landscape (England, Wales and NI), National Scenic Areas (Scotland) and Heritage Coasts (England and Wales), or a view of or from a distinctive landscape feature designated at the national level, eg Scheduled Monument, Grade I Listed Building, Grade I Listed Garden.
County/Borough/District value	A popular view promoted in visitor guides and/or in a landscape designated in the Local Development Plan.
Community value	A popular view in an undesignated landscape which is locally valued and displays evidence of responsible use and value.
Private value	A private view, eg from a residential property, that is likely to be valued by the occupants.
Unvalued	Where the landscape has been despoiled and there is evidence that society does not value the view or landscape, eg fly tipping, abandoned cars, litter, etc.

Receptor Susceptibility

5.1.91. Susceptibility to changes in a view will vary between receptor groups and the judgement of susceptibility has taken into account:

- Receptor location, occupation or activity - for example, relaxing at home, undertaking leisure, recreational or sporting activities, or at work, etc.
- Movement of receptor and duration and frequency of view experience - whether receptors would be stationary or moving (which influences how long they would be exposed to the change at any one time) and whether receptors are exposed to the view daily, frequently, occasionally or rarely.
- Focus of attention or interest - where their attention would be focussed at the location, which depends on their orientation and/or direction of travel, the nature of the landscape and existing views and their visual amenity.

5.1.92. The susceptibility of each receptor group at each location has been judged in terms of five levels of susceptibility, as provided in Table 5.1.8 below.

Table 5.1.8: Visual Receptor Susceptibility to Proposed Development Type

Receptor Susceptibility	Description
Very susceptible	Where the receptor would be stationary or moving slowly, would be exposed to the change daily and for much of each day and the focus of their attention or interest would be towards the view of the proposed development.
Susceptible	Where the receptor would be stationary or moving slowly, would be exposed to the change frequently and for sustained periods and the focus of their attention or interest would be towards the view of the proposed development.
Moderate susceptibility	Where the receptor would be moving steadily, would be exposed to the change infrequently and for short periods, and the focus of their attention or interest may be towards the view of the proposed development.
Slight susceptibility	Where the receptor would be moving swiftly, would be exposed to the change occasionally and for very short periods, and the focus of their attention or interest may be oblique to the view of the proposed development.
Negligible susceptibility	Where the receptor would be moving swiftly, would be exposed to the change rarely and for very short periods, and the focus of their attention or interest would be oblique to or away from the view of the proposed development.

Receptor Sensitivity

5.1.93. All visual receptors are people and assumed to be equally sensitive to change. However, the location and activities of visual receptors influence the way in which they experience the landscape and views, the extent to which views of the surrounding landscape may contribute to their existing visual amenity, the value they place on these views and their susceptibility to changes in these views. Accordingly, at any one location there may be different levels of sensitivity for the different receptor groups, the sensitivity may vary depending on the direction of the view, and any one receptor group may be accorded different

levels of sensitivity at different locations.

- 5.1.94. Some of the above factors for susceptibility and value will vary even within the same receptor group (eg some walkers on access land may visit only once, others may walk there every day). Therefore, the judgement on sensitivity for each receptor group at each viewpoint location has assumed a worst-case scenario in terms of both the value attached to the views at that location and the susceptibility of each receptor group to changes in those views.
- 5.1.95. In accordance with GLVIA3, the sensitivity of each visual receptor group has been judged on the basis of the *value* of the location and the *susceptibility to change* of the visual receptor group (GLVIA3, paras 6.31 - 5.37, pp113 - 114, LI/IEMA 2013). Accordingly, the judgements on value and susceptibility have been combined to give levels of sensitivity as in Table 5.1.9 below.

Table 5.1.9: Receptor Location Sensitivity to Proposed Development Type

Receptor Sensitivity	Description
High sensitivity	At a location with National value and where receptors would be very susceptible or susceptible to change. At a private location where receptors are likely to highly value the view and would be very susceptible or susceptible to change. At a location with County/Borough/District value and where receptors would be very susceptible to change.
High/medium sensitivity	At a location with National value and where receptors would be susceptible or would have a moderate susceptibility to change. At a private location where receptors are likely to value the view and would be susceptible or would have a moderate susceptibility to change. At a location with County/Borough/District value and where receptors would be susceptible or would have a moderate susceptibility to change. At a location with local community value and where receptors would be very susceptible or susceptible to change.
Medium sensitivity	At a location with National value and where receptors would have a slight susceptibility to change. At a private location where receptors are likely to place some value on the view and would have a moderate or slight susceptibility to change. At a location with County/Borough/District value and where receptors would have a slight or moderate susceptibility to change. At a location with local community value and where receptors would be susceptible or would have a moderate susceptibility to change.
Medium/low sensitivity	At a location with County/Borough/District value and where receptors would have a slight susceptibility to change. At a location with local community value and where receptors would have a moderate or slight susceptibility to change.
Low sensitivity	At a location with local community value and where receptors would have negligible susceptibility to change At a location that appears to be unvalued and where receptors are likely to have a slight or negligible susceptibility to change.

- 5.1.96. Some typical receptor location sensitivities are provided in Table 5.1.10 below.

Table 5.1.10: Receptor Location Sensitivity to Proposed Development Type

Receptor group		Location sensitivity
Zone receptors	Residents	High - would view the proposed development in the primary views from their property (eg main windows and gardens), would be stationary or moving slowly about their property, would see the development on a daily basis, could be orientated towards the development, and would value these views. High/medium - would view the proposed development in the secondary views from their property (eg driveway), would be stationary or moving slowly at these locations, would see the development on a daily basis, could be orientated towards the development, and would value these views. Medium - would view the proposed development from very limited locations on their property (eg single attic window), would be stationary or moving slowly at these locations, would see the development on a daily basis, could be orientated towards the development, and would value these views.
	Recreational receptors	High - are stationary or moving slowly (eg walking, cycling or horse riding), can be orientated towards the development, are at that location primarily in order to enjoy the view, on a nationally designated route, regional long-distance route and/or in a landscape nationally designated for its scenic value. High/medium - are stationary or moving slowly (eg walking, cycling or horse riding), can be orientated towards the development, are at that location primarily in order to enjoy the view but also for other purposes, at scenic vantage points, on access land, locally promoted route or local right of way. Medium - are stationary or moving slowly, can be orientated towards the development, may be at that location in order to enjoy the view but may have other purposes (eg playing sport), or where the main view is not in the direction of the development, on a local right of way, beach, sports field or other leisure/recreational facility.
Zone receptors	Outdoor workers and school children	Medium - outdoor workers and school children in locations where they may be moving slowly, can be orientated towards the development, may experience the view on a daily basis, may be at that location in order to enjoy the view but will have other purposes. Medium/low - outdoor workers in locations where they may be moving slowly, can be orientated towards the development, may experience the view on a daily basis, but are at that location primarily to undertake activities unconnected with the view.
	Indoor workers	Low - indoor receptors with limited views in this direction, that are in that location primarily to undertake activities unconnected with the view.
Linear receptors	Road and rail users (motorists, passengers, bus and train travellers)	High/medium - in locations where they are moving steadily/swiftly, can be orientated towards the development, are likely to be at that location in order to enjoy the view, in a landscape that is nationally designated and/or on a nationally recognised scenic route. Medium - in locations where they are moving steadily/swiftly, can be orientated towards the development, may be at that location in order to enjoy the view but may also have other purposes (eg journey to work), in a landscape that is not nationally designated for its scenic value and/or not on a nationally recognised scenic route. Medium/low - in locations where they are moving swiftly, with a direction of travel that is oblique or side on to the development, are likely to be travelling for a purpose other than in order to enjoy the view (eg journey to work), in a landscape that is not designated.

Magnitude of Change in a View

5.1.97. The magnitude of the change in a view is a judgement based on a series of measured parameters which, in order to assess the worst case, assumes that the visual receptors are being exposed to the change for the first time and in

excellent visibility (30km+). Computer-generated visualisations, fieldwork observations and professional judgement have been used to identify a largely quantifiable set of parameters, which include:

- Distance and direction of the viewpoint from the development.
- Extent/proportion of the development visible from the viewpoint.
- Field of view occupied by the development (horizontal and vertical angles of view).
- Context of the view, existing visual amenity and the degree of contrast with the existing landscape and built elements (background, composition, pattern, scale and mass, form, line, movement, colour, texture, etc).
- Scale of change with respect to the loss or addition of features in the view. This includes the scale of the development relative to the scale of the landscape, field pattern, etc and whether the development would be dominant, prominent, visible, noticeable, discernible or barely discernible.
- Nature of change, particularly in relation to existing visual amenity and the composition of the view, such as changes to skyline, creation of a new visual focus, introduction of new man-made elements, changes to visual simplicity or complexity, alteration of visual scale or changes to the degree of visual enclosure.
- Duration and nature of the effect, eg direct/indirect, discrete/cumulative (additional or combined), short/medium/long-term, temporary/permanent, reversible/irreversible, intermittent/continuous (as related to the nature of the development, not the receptor activity).

5.1.98. For each viewpoint location, the parameters in para 5.1.97 above have been examined, the findings combined and the assessment of magnitude judged using a scale of: very substantial, substantial, moderate, slight and negligible. Each level of magnitude approximates to the combinations of parameters provided in Table 5.1.11 below.

Table 5.1.11: Magnitude of Change in a View

Magnitude of Change	Description
Very substantial	Where the proposed development would be close to the viewpoint, visible in its entirety, would occupy almost the entire view, the development would be in stark contrast to the landscape context (particularly in terms of scale and an absence of similar structures), such that it would be a dominant new feature which would be permanent or present for a long, albeit temporary and reversible, time frame.
Substantial	Where the proposed development would be in the near distance, visible in its entirety or partly screened, would occupy the majority of the view, the development would contrast with the landscape context (particularly in terms of scale and few if any similar structures), such that it would be a prominent new feature which would be permanent or present for a long, albeit temporary and reversible, time frame.
Moderate	Where the proposed development would be in the middle distance, visible/conspicuous in its entirety or partly screened, would occupy up to half

	the view, the development may contrast with the landscape context (particularly in terms of scale and few similar structures) or may be in the context of similar structures but a visible additional feature which would be permanent or present for a long, albeit temporary and reversible, time frame.
Slight	Where the proposed development would be in the distance, noticeable in its entirety or partly screened, would occupy a small part of the view, the development may contrast with the landscape context (particularly in terms of scale and few similar structures) or may be in the context of similar structures but a noticeable/apparent additional feature which would be permanent or present for a long, albeit temporary and reversible, time frame.
Negligible	Where the proposed development would be in the far distance, partly or largely screened, would occupy a very small part of the view, the development may contrast with the landscape context (particularly in terms of scale and few similar structures) or may be in the context of similar structures but a barely discernible additional feature which would be permanent or present for a long, albeit temporary and reversible, time frame.
No change (none)	Where the proposed development would not be visible or would not result in any discernible change in the view.

5.1.99. Where the combination of factors at a viewpoint has been judged to fall between two of the magnitude of change levels defined above, then interim levels have been selected, ie very substantial/substantial, substantial/ moderate, moderate/slight, slight/negligible and negligible/none.

Significance of Effects on Views

5.1.100. For each receptor group, the sensitivity of the receptor has been combined with the predicted magnitude of change to determine the overall change in the view and whether there is likely to be a significant change in the view at that location. The overall change in the view can be derived by combining the sensitivity and magnitude in accordance with the matrix in Table 5.1.12 below.

Table 5.1.12: Assessment of Effects on Views

RECEPTOR SENSITIVITY	MAGNITUDE OF CHANGE									
	V sub	V sub/ sub	Sub	Sub/ mod	Mod	Mod/ slight	Slight	Slight/ neg	Neg	Neg/ none
High	Major+ +	Major+	Major	Maj/ mod+	Maj/ mod	Mod+	Mod	Mod/ min+	Mod/ minor	Minor+
High/ medium	Major+	Major	Maj/ mod+	Maj/ mod	Mod+	Mod	Mod/ min+	Mod/ min	Minor+	Minor
Medium	Major	Maj/ mod+	Maj/ mod	Mod+	Mod	Mod/ min+	Mod/ min	Minor+	Minor	Minor/ neg+
Medium/ low	Maj/ mod+	Maj/ mod	Mod+	Mod	Mod/ min+	Mod/ min	Minor+	Minor	Minor/ neg+	Minor/ neg
Low	Maj/ mod	Mod+	Mod	Mod/ min+	Mod/ min	Minor+	Minor	Minor/ neg+	Minor/ neg	Neg+

5.1.101. In the above table, where overall effects are predicted to be major/moderate or higher, there are likely to be significant changes in the view. Overall effects of moderate+ may be significant if experienced over a sustained length of a route or over most of a zone, area or location, and overall effects of moderate may

contribute to significance if combined with greater changes at the same location, whereas moderate/minor+ or lower changes are unlikely to result in significant changes to views. Where the magnitude of change is “no change”, then the effects on views would be “none” for all sensitivity levels.

5.1.102. Based on Schedule 4 of the EIA Regulations, the nature of the predicted effects of the proposed development on views have been described as:

- Direct (when visible within the view).
- Discrete (where the effects on the view would arise as a result of the proposed development only) or cumulative (when the effects would arise in conjunction with other similar types of development proposed in the same view or in a sequence of views along a linear route).
- Short term (less than 2 years), medium term (2 - 10 years) or long term (more than 10 years).
- Temporary (if the effects on the view would cease at some time in the future) or permanent (if the effects on the view would remain after the development has been decommissioned).
- Reversible (if the effects on the view can be mitigated and/or the effects reversed and the view reinstated to its pre-development character) or irreversible (if the effects on the view cannot be mitigated and/or reversed).
- Intermittent (if the effects on the view are not always present or would be seen in some but not all views along a route) or continuous (if the effects on the view or sequence of views would be present for the duration of the development).
- Beneficial (where the effects would enhance the view) or adverse (where the effects would detract from the view).
- Transboundary - only if the effects are likely to be visible across country borders.

Residential Visual Amenity Assessment (RVAA)

5.1.103. A Residential Visual Amenity Assessment (RVAA) has been undertaken for the residential properties closest to the site to check that the proposed development would not exceed the RVAA threshold. The RVAA has been undertaken in accordance with TGN 02/19 (LI March 2019, see paras 5.1.42 - 5.1.45) and the Method of Assessment for the RVAA is provided at the beginning of the RVAA (Appendix 5.8 (Residential Visual Amenity Assessment) - Volume 4).

Assessment of Effects

5.1.104. The assessment of effects (Scenario 1) has drawn on the findings of all the previous stages and has assessed the effects of the construction, operational and decommissioning phases of the proposed development, taking into account the embedded (primary) mitigation, on landscape fabric, landscape character,

landscape designations and visual amenity, in the context of the predicted future baseline which includes the operational wind turbines in the study area and the TOREP.

Effects on Landscape Fabric

5.1.105. The assessment of effects on landscape fabric has considered the existing landscape elements and features on the site and surrounding area and the predicted direct (physical) effects of the proposed development during the construction, operational and decommissioning phases on the site landscape, and has made a judgement as to whether there is likely to be any significant beneficial or adverse effects on landscape fabric based on the following definitions:

- Significant beneficial effects on landscape fabric would occur where the proposed development would result in the improvement of existing important/mature/diverse/distinctive landscape elements on the site, or would result in the reinstatement of landscape features which have previously been lost or degraded as the result of agricultural operations or other development.
- Significant adverse effects on landscape fabric would occur where the proposed development would result in the permanent loss (or long-term temporary loss) of important/mature/diverse/distinctive components and the effects cannot be adequately mitigated.

Effects on Landscape Character

5.1.106. The assessment of effects on landscape character has considered the landscape context, the characteristics of the proposed development, the visibility and viewpoint analyses and other fieldwork observations. It has then predicted the degree and extent of the likely significant adverse or beneficial effects on landscape character as a consequence of the addition of the proposed development, either directly (into the host landscape) or indirectly (into views from the surrounding landscapes), based on the following definitions:

- Significant beneficial effects on landscape character are likely to occur where the proposed development would materially enhance the quality (condition) of the landscape, would complement the existing character and/or where particularly valued characteristics, previously lost or degraded, would be reinstated.
- Significant adverse effects on landscape character are likely to occur where the proposed development would become a key characteristic of the landscape, would contrast with the existing character, and/or where existing key characteristics would be permanently (or long term temporarily) lost or changed, and cannot be adequately mitigated.

Effects on Landscape Designations

5.1.107. The assessment of effects on landscape designations has considered the special characteristics and purposes of these designations, the characteristics of the proposed development, the visibility and viewpoint analyses, the assessments of effects on landscape fabric and character and visual amenity and other fieldwork observations, and has made a judgement as to whether there are likely to be any significant beneficial or adverse effects on the purposes of the designations based on the following definitions:

- Significant beneficial effects are likely to occur where the proposed development would bring about a significant change in the special characteristics that underpin the purposes of the designation, and that change would significantly enhance the ability of the designation to fulfil those purposes.
- Significant adverse effects are likely to occur where the proposed development would bring about a significant change in the special characteristics that underpin the purposes of the designation, and that change would significantly compromise the ability of the designation to fulfil those purposes.

Effects on Visual Amenity

5.1.108. The assessment of effects on visual amenity has drawn on the landscape and visual baseline, the characteristics of the proposed development, the visibility and viewpoint analyses and other fieldwork observations, and has made a judgement as to whether there are likely to be any significant effects on the visual amenity of the main visual receptor groups and locations in the study area, based on the following definition:

- Significant effects on visual amenity can occur where a development would result in significant changes in the primary view(s) at a location or along a route and the view(s) are valued and can be appreciated by receptors that are at that location for purposes that include the appreciation of the view(s).

5.1.109. Similar effects on visual amenity can be considered adverse by some people and beneficial by others. In order to assess a worst case, it has been assumed that all likely significant effects on visual amenity would be adverse, but the variability in public opinion should be taken into account by the decision maker in the planning decision.

Assessment of Residual Effects

5.1.110. The assessment of residual effects (Scenario 2) has drawn on the findings of all the previous stages and has assessed the residual effects of the construction, operational and decommissioning phases of the proposed development, taking into account both the embedded (primary) mitigation and the further (secondary) mitigation and enhancement measures proposed in Appendix 7.11 (Outline Landscape and Biodiversity Mitigation and Enhancement Plan) - Volume 4, on

landscape fabric, landscape character, landscape designations and visual amenity, using the definitions in paras 5.1.105 - 5.1.108 above, in the context of the predicted future baseline which includes the operational wind turbines in the study area and the TOREP.

Assessment of Cumulative Effects

5.1.111. The assessment of cumulative effects (Scenario 3) has drawn on the findings of all the previous stages and has assessed the cumulative additional effects of the construction, operational and decommissioning phases of the proposed development, taking into account the embedded (primary) mitigation, on landscape fabric, landscape character, landscape designations and visual amenity, using the definitions in paras 5.1.105 - 5.1.108 above and in the context of the likely future baseline which would also include the permitted Carnaby Wind Farm.

Assessment of Residual Cumulative Effects

5.1.112. The assessment of residual cumulative effects (Scenario 4) has drawn on the findings of all the previous stages and has assessed the residual cumulative effects of the construction, operational and decommissioning phases of the proposed development, taking into account the embedded (primary) and the further (secondary) mitigation and enhancement measures proposed in Appendix 7.11 (Outline Landscape and Biodiversity Mitigation and Enhancement Plan) - Volume 4, on landscape fabric, landscape character, landscape designations and visual amenity, using the definitions in paras 5.1.105 - 5.1.108 above and in the context of the likely future baseline which would also include the permitted Carnaby Wind Farm.

Acceptability of Significant Effects

- 5.1.113. Significant effects are not necessarily unacceptable effects. Whether the effects of a development on the environment are acceptable or unacceptable is a planning judgement made by the decision maker, taking into account the benefits of the scheme, its impacts on all environmental resources and receptors (of which landscape and visual amenity are just two aspects) and the national and local planning context.
- 5.1.114. Therefore, this assessment has not discussed whether any predicted significant effects would be acceptable or not but has been undertaken in order to provide the decision maker with the environmental information on landscape and visual impacts necessary to inform their planning decision.