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Introduction

- 7.1 This Chapter of the EIA Report presents the landscape and visual impact assessment (“LVIA”) for the proposed West Scales Energy Park (“the Proposed Development”). It has been prepared and reviewed by Chartered Members of the Landscape Institute at SLR Consulting Ltd (“SLR”), a registered practice with the Landscape Institute.
- 7.2 The Proposed Development comprises up to four wind turbines (up to 200m to blade tip), solar photovoltaic (PV) arrays covering up to 11.1 hectares, a Battery Energy Storage System (BESS) up to 12 Megawatts (MW), and associated infrastructure, as described in **Chapter 3: Description of Development**. The wind turbine layout consists of four wind turbines of up to 200m to blade tip height, with a hub height of 119m and a rotor diameter of up to 162m, while for the purposes of this assessment the solar PV array and BESS/substation compound are considered to have uniform heights of 4.5m and 5.0m respectively. These dimensions are reflected in the visualisations and evaluated in the assessment as this is considered to depict the likely worst-case scenario in relation to landscape and visual effects.
- 7.3 The LVIA considers the potential effects of the Proposed Development on the fabric of the Site, on landscape character of the surrounding study area and visual amenity. An assessment of cumulative effects in conjunction with other wind farms (which are at application stage, consented, under construction or operational) and also night-time effects is integrated into the assessment of individual landscape and visual receptors contained within this Chapter (rather than within separate appendices). This Chapter includes the following sections:
- Scope and Consultation;
 - Approach and Methods;
 - Baseline Conditions;
 - Assessment of Physical Landscape Effects;
 - Assessment of Effects on Landscape Character;
 - Assessment of Visual Effects;
 - Visible Aviation Lighting; and
 - Summary of Predicted Effects and Statement of Significance.
- 7.4 The Chapter is supported by:
- GIS Figures (**Figures 7.1-7.16** and **7.34-7.38**) contained in EIA Report Volume 3a;
 - Viewpoint visualisations (**Figures 7.17-7.33**) contained in EIA Report Volume 3b;
 - **Technical Appendix 7.1: Landscape and Visual Impact Assessment Methodology**; and
 - **Technical Appendix 7.2: Residential Visual Amenity Assessment**.

Scope and Consultation

Consultation

7.5 Consultation with regards to potential landscape and visual effects was undertaken with the organisations shown in **Table 7-1**.

Table 7-1: Scoping and Consultation Responses

| Consultee and Date | Issues Raised | Response / Action Taken |
|---|--|---|
| Dumfries & Galloway Council Scoping Opinion 2 July 2025 | No response from the Council's Landscape Architect included as part of Council's Scoping Opinion. | N/A |
| Cumberland Council Scoping Response 14 May 2025 | <i>"...Cumberland Council has no objection in principle to the proposed development."</i> | N/A |
| NatureScot Scoping Response 5 June 2025 | <p>NatureScot have no comments on the proposed LVIA methodology.</p> <p>NatureScot recommend not restricting the study area to 20km for landscape effects at the Scoping stage.</p> <p>NatureScot agree with national landscape designations included in the scope of the LVIA.</p> <p>NatureScot suggest that a detailed assessment of effects on Special Landscape Quality (SLQ) 2, SLQ5, and SLQ12 of the Nith Estuary NSA is provided in the LVIA.</p> <p>NatureScot advise that the Aviation Lighting Impact Assessment follows NatureScot guidance.</p> <p>NatureScot agree that Wild Land Areas (WLAs) can be scoped out of the LVIA.</p> <p>NatureScot consider that viewpoint locations in Scoping Report to the north west and west of the Proposed Development are underrepresented given the pattern of the ZTV, and they recommend that a viewpoint from Ward Law (E302443 N566737) in the Nith Estuary NSA is also included.</p> | <p>The LVIA Methodology is provided in Technical Appendix 7.1.</p> <p>A description of the larger 45km study area used for the assessment is provided in the 'Study Area' section of this LVIA.</p> <p>The scope of the assessment of effects on landscape designations is provided in the 'Baseline Conditions' section of this LVIA.</p> <p>The assessment of effects on landscape designations is provided in the 'Assessment of Effects on Landscape Designations' section of this LVIA.</p> <p>The Visible Aviation Lighting Assessment methodology is provided in Technical Appendix 7.1.</p> <p>WLAs have been scoped out of the LVIA.</p> <p>Additional viewpoints from the A75, west of Annan (Viewpoint 12), Repentance Tower, Hoddum (Viewpoint 14), and Ward Law Hill Fort (Viewpoint 15) have been included in the LVIA. The visualisations are illustrated in Figures 7.17-7.33.</p> |

| Consultee and Date | Issues Raised | Response / Action Taken |
|---|---|---|
| Natural England Scoping Response 13 May 2025 | <i>"Natural England welcome the scope of the EIA for the designated sites and landscapes within the English border potentially impacted by the scheme. We have no additional requests with regards to the scope."</i> | N/A |
| NatureScot and Dumfries and Galloway Council E-mail correspondence | E-mail sent by the author of the LVIA to NatureScot and Dumfries and Galloway Council on 27 August 2025 to confirm list of viewpoints for the LVIA. | No further comments received from both consultees. The final viewpoint list is provided in Table 7-6 . |

Scoped into the Assessment

- 7.6 This assessment covers the direct and indirect effects arising from the construction, operational phase and decommissioning of the Proposed Development. The effects associated with the construction phase would be short-term and temporary in nature, while the effects associated with the operational phase would be long-term and temporary. The decommissioning effects would be similar in magnitude to the construction effects.
- 7.7 A summary of the receptors that are scoped into the detailed assessment later in this Chapter is provided in the 'Summary of Baseline Conditions and Preliminary Assessment' section of this LVIA.

Scoped out of the Assessment

- 7.8 On the basis of the desk based and site survey work undertaken, the professional judgement of the EIA team, experience from other relevant projects, policy guidance or standards and feedback received from consultees, the following effects have been scoped out of this LVIA, as proposed in the Scoping Report (**Technical Appendix 7.1**).
- Effects on landscape character types (LCTs) lying beyond a 20km radius of the Proposed Development and also where the influence of the Proposed Development on the LCT would be limited (see **Table 7-3**).
 - Effects on National Parks.
 - Effects on Wild Land Areas.
 - The cumulative effect of the Proposed Development in the context of scoping stage or pre-application stage wind farms.
 - Effects arising from the process of decommissioning since they are of a similar nature to construction issues, but of a smaller scale and shorter duration. However, the results of decommissioning (i.e. the removal of the energy park) are taken into account in assessing on-going and operational effects where appropriate.

Approach and Methods

Study Area

- 7.9 The initial step in the LVIA is the establishment of the study area for the assessment. Guidance developed by NatureScot (Visual Representation of Wind Farms Version 2.2, February 2017) indicates that an area with a radius of 45km from the nearest turbine is appropriate for turbines of the size proposed. This study area has therefore been agreed by NatureScot in their Scoping Response, and it is shown on **Figure 7.1**. A Zone of Theoretical Visibility (ZTV) analysis has therefore been carried out for this area (see **Figures 7.6a** and **7.6c** and **7.7a** and **7.7c**), as has mapping of landscape character (**Figure 7.3a-b**), landscape related designations (**Figure 7.4**), and principal visual receptors (**Figure 7.5**).
- 7.10 Following a further review of the ZTV for the Proposed Development, it is considered that a 'detailed study area' with a shorter radius of 20km is appropriate to identify any potential significant landscape character and night-time effects. The 20km detailed study area is also shown on **Figure 7.1**.

Desk Study

- 7.11 The assessment is initiated through a desk study of the Site and the 45km radius study area. This study identifies aspects of the landscape and visual resource that may need to be considered in the landscape and visual assessment, including landscape-related planning designations (i.e. National Scenic Areas), landscape character typology, Wild Land Areas, operational and potential cumulative wind farms, and views from routes (including roads, railway lines, National Cycle Routes, long-distance walking routes and recreational sailing routes), and settlements.
- 7.12 The desk study also utilises Geographic Information System (GIS) and Resoft Windfarm software to explore the potential visibility of the Proposed Development. The resultant ZTV maps and wirelines provide an indication of which landscape and visual receptors are likely to be of most relevance in the assessment.

Field Survey

- 7.13 Field surveys are carried out throughout the 45km radius study area, although the focus is on the areas shown on the ZTV to gain theoretical visibility of the Proposed Development. The baseline field survey has four broad stages:
- A preliminary familiarisation around the study area in order to visit the aspects of the landscape and visual resource that have been identified through the desk study and verify their existence and importance. Important features and characteristics that have not become apparent through the desk study are also identified, and particularly sensitive receptors are noted in order to inform the design process.
 - A visit around the Site, in order to establish its potential for wind farm development and identify the most suitable areas for Proposed Development in landscape and visual terms, along with any constraints that may restrict the area available for development.
 - Further field survey around the study area, concurrent with the design process for the Proposed Development, to identify those receptors that are likely to be particularly

important in the assessment and inform the layout design, possible turbine height, and the extent of the Proposed Development.

- The identification of representative viewpoints to include in the landscape and visual assessment, including a wide range of receptors, landscape character, and directions and distances from the Proposed Development.

Methodology for the Assessment of Effects

- 7.14 The significance of the potential effects of the Proposed Development has been classified by professional consideration of the sensitivity of the receptor and the magnitude of the potential effect. This section summarises the methodology and guidance used to carry out the LVIA, which is described in full in **Technical Appendix 7.1**.

Categories of Effects

- 7.15 The LVIA is intended to determine the potential effects that the Proposed Development would have on the landscape and visual resource. For the purpose of assessment, the potential effects on the landscape and visual resource are grouped into three categories: landscape effects, visual effects (including daytime and night-time) and cumulative landscape and visual effects.

Assessment of Effects

- 7.16 The broad principles used in the assessment of significance of the various categories of effects are the same and are described below. The detailed methodology for the assessment of significance does, however, vary, and the specific criteria used are described in **Technical Appendix 7.1**.
- 7.17 The objective of the assessment of the Proposed Development is to predict the likely significant effects on the landscape and visual resource. In accordance with the relevant EIA Regulations, the direct and indirect significant effects of the Proposed Development are identified, described and assessed, and therefore the LVIA effects are assessed to be either significant or not significant.
- 7.18 Due to the large scale of the Proposed Development, and the transient nature of the construction and decommissioning processes, it is considered that there would be no instances where construction/decommissioning effects trigger a significant landscape and visual effect for receptors where operational effects are found to be not significant. For this reason, construction and decommissioning effects are not considered separately to the operational effects of the Proposed Development.
- 7.19 The significance of effects is assessed through a combination of the sensitivity of the landscape receptor or view and the magnitude of change that would result from the addition of the Proposed Development.

Sensitivity

- 7.20 Sensitivity is an expression of the ability of a landscape or visual receptor to accommodate the Proposed Development. Sensitivity is determined through a combination of the value of the receptor and susceptibility to change. The factors that determine these criteria are described in **Technical Appendix 7.1**.
- 7.21 Levels of sensitivity - high, high-medium, medium, medium-low and low - are applied in order that the judgement used in the process of assessment is apparent.

Magnitude of Change

- 7.22 Magnitude of change is an expression of the extent of the effect on landscape and visual receptors that will result from the introduction of the Proposed Development. The magnitude of change is assessed in terms of a number of variables, including the size and scale of the impact and the extent of the affected area. The factors that determine these criteria are described in **Technical Appendix 7.1**.
- 7.23 Levels of magnitude of change - high, high-medium, medium, medium-low, low and negligible/no change - are applied in order that the judgement used in the process of assessment is apparent.

Assessment of Significance

- 7.24 The significance and level of effects are assessed through a combination of the sensitivity of the landscape or visual receptor and the magnitude of change that would result from the addition of the Proposed Development. While this methodology is not reliant on the use of a matrix to determine a significant or not significant effect, a matrix is included in **Table 7-2** to illustrate how combinations of sensitivity and magnitude of change ratings can give rise to significant effects. On this basis potential impacts are assessed as of negligible, minor, moderate-minor, moderate, major-moderate and major. In those instances where the magnitude has been assessed as 'no change', the level of effect is recorded as 'no effect'.
- 7.25 A significant effect occurs where the Proposed Development would provide one of the defining influences on a landscape element, landscape character receptor or view; or where changes of a lower magnitude occur on a landscape element, landscape character receptor or view that is of particularly high sensitivity. A not significant effect occurs where the effect of the Proposed Development is not material, whereby the baseline characteristics of the landscape element, landscape character receptor or view continue to provide the definitive influence, or where the small scale of change experienced by a high sensitivity receptor is such as to be considered not significant.
- 7.26 For the purposes of this assessment, any effects with a significance level of major and major-moderate have been deemed significant (dark grey shaded boxes in **Table 7-2**). Moderate levels of effect have the potential, subject to the assessor's professional judgement, to be considered as significant or not significant, depending on the sensitivity and magnitude of change factors evaluated (light grey shaded boxes in **Table 7-2**). Effects within the white boxes are considered to be not significant at either a moderate/minor, minor or negligible level. In accordance with GLVIA3, experienced professional judgement is applied to the assessment of all effects and reasoned justification is presented in respect of the findings of each case.

Table 7-2: Assessment of Significance Matrix

| | Magnitude of Change | | | | | | |
|-------------|---------------------|-------------------|-------------------|----------------------------|---|--------------------------------|-----------------------|
| | | High | High-Medium | Medium | Medium-Low | Low | Negligible |
| Sensitivity | High | Major Significant | Major Significant | Major/moderate Significant | Moderate Significant or Not Significant | Moderate/minor Not Significant | Minor Not Significant |

| | | | | | | |
|--------------------|---|---|---|---|--------------------------------|----------------------------|
| High-Medium | Major Significant | Major/moderate Significant | Moderate Significant or Not Significant | Moderate Significant or Not Significant | Moderate/minor Not Significant | Minor Not Significant |
| Medium | Major/moderate Significant | Moderate Significant or Not Significant | Moderate Significant or Not Significant | Moderate/minor Not Significant | Minor Not Significant | Minor Not Significant |
| Medium-Low | Moderate Significant or Not Significant | Moderate Significant or Not Significant | Moderate/minor Not Significant | Minor Not Significant | Minor Not Significant | Negligible Not Significant |
| Low | Moderate Significant or Not Significant | Moderate/minor Not Significant | Minor Not Significant | Minor Not Significant | Negligible Not Significant | Negligible Not Significant |

Nature of Effects

- 7.27 The 'nature of effects' relates to whether the effects of the Proposed Development are positive/beneficial or negative/adverse. Guidance provided in GLVIA3 states that "...thought must be given to whether the likely significant landscape and visual effects are judged to be positive (beneficial) or negative (adverse) in their consequences for landscape or for views and visual amenity..." (para. 3.22) but does not provide an indication as to how that may be established in practice. The nature of effect is therefore one that requires interpretation and reasoned professional opinion.
- 7.28 Generally, in the development of 'new' energy parks which include wind turbines, a precautionary approach is adopted, which assumes that significant landscape and visual effects will be weighed on the adverse side of the planning balance. Unless it is stated otherwise, the effects considered in this assessment are considered to be adverse.

Duration and Reversibility of Effects

- 7.29 The duration and reversibility of effects are based on the period over which the Proposed Development is likely to exist and the extent to which it could be removed and its effects reversed at the end of that period. The effects of the Proposed Development are of variable duration, and are assessed as short-term or long-term, and permanent or temporary/reversible. It is anticipated that the operational life of the Proposed Development would be 40 years. The wind turbines, substation and access tracks would be apparent during this time, and these effects are considered to be long-term.
- 7.30 Other infrastructure and operations such as the construction and decommissioning processes and plant (including tall cranes for turbine erection) and construction compounds will be apparent only during the initial construction period of the Proposed Development and are considered to be short-term effects.
- 7.31 The reversibility of effects is variable. The most apparent effects on the landscape and visual resource, which arise from the presence of the wind turbines, are temporary/reversible as the turbines would be removed on decommissioning. The effects of the tall cranes and heavy machinery used during the construction and decommissioning periods would also be temporary.

- 7.32 Access tracks will be left in-situ, which will reduce potential environmental impacts associated with potential sediment migration into watercourses as a result of removing all tracks. Turbine foundations (except for the top 1m which will be removed) and underground cabling will be left in-situ below ground with no residual landscape and visual effects.
- 7.33 In order to avoid repetition, the duration and reversibility of effects are not reiterated throughout the assessment.

Graphic Production

- 7.34 The written LVIA is accompanied by a set of graphics contained in EIA Report Volume 3. Reference is made throughout the written text to these graphics, as they are an integral part of the overall assessment and of importance in illustrating specific matters. They should be viewed in accompaniment to the written text.
- 7.35 The graphics can be divided into two categories; maps (Volume 3a) and visualisations (Volume 3b and 3c). The maps present data of relevance to the assessment, such as the location and extent of landscape designations. ZTV maps are also included. These digitally calculate the extent and level of theoretical visibility across a given area, using Ordnance Survey Terrain 5 mapping as the basis for the calculations. As this terrain model is based only on the 'bare earth', it does not take account of potential screening by vegetation or buildings, and this is why it is referred to as theoretical and not actual visibility. Additionally, aviation lighting intensity ZTV maps show the reduction in lighting intensity that may be achieved through mitigation (e.g. design of the light fitting) and the degree of negative vertical angle of view from the light in relation to landform (further details are provided in **Technical Appendix 7.1**).
- 7.36 The visualisations (Volume 3b and 3c) are based on the 17 viewpoint locations which are representative of the visual amenity of visual receptors in the area surrounding the Proposed Development. A list of these viewpoints was sent to D&GC and NatureScot for their agreement prior to the production of the LVIA. For each viewpoint there is baseline photography, and wirelines of the Proposed Development and the 'bare earth' landform for the same extent as shown in the photography. In accordance with NatureScot's visualisation guidance, the viewpoints also have accompanying photomontages. These use the baseline photography and add onto this a computer-generated model of the Proposed Development. More detailed information on graphic production is included in the Assessment Methodology in **Technical Appendix 7.1**.
- 7.37 Where SLR has considered that the solar PV array, BESS / substation compound (including control and metering building) and Proposed Development infrastructure, including access tracks, has the potential to contribute to a significant effect, the introduction of these features has been rendered on to the photomontage for viewpoints.

Cumulative Assessment

- 7.38 NatureScot's 'Guidance – Assessing the cumulative landscape and visual impact of onshore wind energy development' (2021) is widely used across Scotland to inform the specific assessment of the cumulative effects of wind farms. This guidance provides the basis for the methodology for the cumulative assessment:

"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."

- 7.39 The outcome of this is the identification of any significant cumulative effects that may arise from the addition of the Proposed Development to the cumulative situation, in accordance with NatureScot guidance, which states that cumulative assessment should *“focus on the likely significant impacts and those which are likely to influence the outcome of the consenting process”*.
- 7.40 In relation to the significance of cumulative landscape effects, GLVIA3 notes (paragraph 7.28) that *“the most significant cumulative landscape effects are likely to be those that would give rise to changes in the landscape character of the study area of such an extent as to have major effects on its key characteristics and even, in some cases, to transform it into a different landscape type. This may be the case where the project being considered itself tips the balance through its additional effects.”*
- 7.41 GLVIA3 (paragraph 7.38) goes on to state the following in relation to the significance of cumulative visual effects:
- “Higher levels of significance may arise from cumulative visual effects related to:*
- *developments that are in closer proximity to the main project and are clearly visible together in views from the elected viewpoints;*
 - *developments that are highly inter-visible, with overlapping ZTVs – even though the individual developments may be at some distance from the main project and from individual viewpoints, and when viewed individually not particularly significant, the overall combined cumulative effect on a viewer at a particular viewpoint may be more significant.”*
- 7.42 The methodology used in the assessment of cumulative effects differs in some respects from that used in the rest of the assessment and is described in **Technical Appendix 7.1**. It is important to remember that the objective of the cumulative assessment is different from the assessment of effects of the Proposed Development itself; in the cumulative assessment, the intention is to establish whether or not the addition of the Proposed Development to various scenarios of other relevant existing and proposed wind farms may lead to wind farm development becoming a prevailing characteristic of a view. Two cumulative scenarios are considered:
- the consented scenario; and
 - the application-stage scenario.
- 7.43 Significant cumulative landscape and visual effects arise where the addition of the proposed wind turbines or other similar/large scale development to a specific baseline, leads to windfarms becoming a prevailing landscape and visual characteristic of a receptor that is sensitive to such change.
- 7.44 It should be noted that if the Proposed Development itself is assessed to have a significant effect, it does not necessarily follow that the cumulative effect will also be significant.

Aviation Lighting Assessment

- 7.45 The Civil Aviation Authority (CAA) requires that 'en-route obstacles' at or above 150m above ground level are lit with visible lighting to assist their detection by aircraft. As the turbines in the Proposed Development are more than 150m to tip height there is a requirement for the turbines to display medium intensity 'steady' red aviation lights at night. Further information in relation to these requirements is provided in **Chapter 14: Aviation**.

- 7.46 The assessment of visible aviation turbine lighting constitutes an assessment of the effects of visible aviation lighting on views experienced by people at night. The assessment of visible aviation lighting is largely a visual effect because the lighting will not be activated during daylight hours when physical aspects and characteristics of the landscape are most clearly apparent. The assessment of visible aviation lighting therefore focusses on viewpoints and visual receptors and does not apply to landscape character assessment. However, while many aspects of the landscape become indistinct or less distinct during hours of darkness, other characteristics can remain as important features or increase in importance. This is noted in the Guidance on Aviation Lighting Impact Assessment (NatureScot, 2024) (paragraph 21), which states:
- “Some characteristics are weakened by darkness and are ultimately no longer present, as they are less visible, such as evidence of cultural settlement, variations in landcover and habitats, or an appreciation of key vistas. Other perceptual characteristics can however be strengthened, such as the apparent absence of development, or the profile of an important skyline.”*
- 7.47 The assessment also considers the effect that visible aviation lighting might have on relevant designated areas where there are documented special qualities that are specific to the hours of darkness environment. In this instance, there are no specific Special Landscape Qualities (SLQs) relating to dark skies associated with nearby landscape designations, and there are no Dark Sky Park’s (including their buffer zones) in the 45km Study Area.
- 7.48 The actual effect/perception of visible aviation lights at the Proposed Development would be dependent on a range of factors, including the distance of the viewer from the Proposed Development, the model and intensity of lights used, the clarity of atmospheric visibility (including the ability to automatically dim the lights during clear visibility) and the degree of negative vertical angle of view from the light to the receptor.
- 7.49 The assessment of visible aviation lighting has been undertaken in accordance with NatureScot’s Guidance (NatureScot, 2024), in distinct steps:
- Step 1: Defining the lighting proposal;
 - Step 2: Understanding the baseline; and
 - Step 3: Assessing the effects of the lighting.
- 7.50 **Technical Appendix 7.1** describes the detailed methodology used to assess night-time effects.
- 7.51 In summary, the visual assessment of wind turbine aviation lighting is based on the following parameters:
- Red, medium intensity aviation warning lights (2,000cd) would be located on top of the nacelle of two (T1 and T3) of the four wind turbines (see **Figure 7.15**). These warning lights would conform to the ICAO specification as set out in Annex 14 Table 6-3 (ICAO, 2018).
 - The red, medium intensity aviation warning lights would be controlled with sensor-controlled dimming, such that when the visibility is greater than 5km in horizontal direction from all turbine hubs, the brightness of the lights would be reduced from 2000cd to 200cd (10% of the minimum peak intensity). As dimming is included as embedded mitigation, the assessments (and photomontage visualisations) are based on reduced 200cd intensity aviation lights only, rather than 2000cd intensity in line with guidance (NatureScot, 2024, para 82).

- Vertical directional intensity mitigation is proposed, which could also give rise to reduced lighting intensities depending on the viewpoint location (however these vertical intensity reductions are not factored into the worst-case assessed or photomontages presented). The 'lighting intensity ZTV' in **Figure 7.16** helps to illustrate the reduced lighting intensity within different parts of the study area. The figure refers to the vertical directional intensity reductions that would be experienced by one specific light model (CEL-WT-MIC) provided by the manufacturer Contarnex, but it is important to note that they are an illustrative example, and the applicant has not committed to using this specific light, as this choice is normally made at turbine procurement stage.
- The CAA have agreed that low intensity mid tower mast lights would not be required.
- The Proposed Development would also require infra-red lighting, which would not be visible to the human eye. The focus of the night-time visual assessment in this assessment is on the visible lighting requirements of the Proposed Development, and as a result infra-red lighting is not included in the scope of the detailed assessment.
- In accordance with CAA requirements, the lights would be switched on 30 minutes after official sunset and switched off again 30 minutes before sunrise;
- The CAA requires that a secondary light is fitted for use only when the primary light fails, and these would not be lit concurrently; and
- The steady red medium intensity lighting fixed to the top of the nacelles may appear to flicker on and off with blade rotation when the turbine blades pass between the lights and the observer, dependent on wind direction and the position of the observer.

Assumptions, Limitations and Confidence

- 7.52 Photographs and other graphic material such as wirelines and photomontages used in the assessment are for illustrative purposes only and, whilst useful tools in the assessment, are not considered to be completely representative of what will be apparent to the human eye. The assessment itself is carried out from observations in the field and therefore may include elements that are not visible in the photographs.

Zone of Theoretical Visibility (ZTV)

- 7.53 There are limitations in the theoretical production of ZTVs, and these should be borne in mind in their consideration and use:
- A Digital Terrain Model (DTM) based on Ordnance Survey Terrain 5 and Terrain 50 has been used to generate the ZTVs within the study area. The analysis is based on visibility at points on a 5m and 50m grid and does not take into account local, small-scale landform changes in analysing theoretical visibility.
 - The ZTVs illustrate the 'bare ground' situation, and do not take into account the screening effects of vegetation, buildings, or other local features that may prevent or reduce visibility;
 - The ZTVs do not indicate the reduction in visibility that occurs with increased distance from the Proposed Development. The nature of what is visible from 3km away will differ markedly from what is visible from 10km away, although both are indicated on the ZTVs as having the same level of visibility; and

- It is important to remember that there is a wide range of variation within the visibility shown on the ZTV. For example, an area shown on the blade tip ZTV as having visibility of all of the turbines may gain views of the smallest extremity of blade tips, or of full turbines. This can make a considerable difference in the effects of the Proposed Development on that area.

7.54 These limitations mean that while the ZTVs are used as a starting point in the assessment, providing an indication of where the Proposed Development will theoretically be visible and where there would be no visibility, the information drawn from the ZTVs is not completely relied upon to accurately represent visibility of the Proposed Development.

Visualisations

7.55 Limitations associated with the visualisations are set out in full in **Technical Appendix 7.1** and summarised here.

7.56 The visualisations are based on theoretical visibility from 1.5m above ground level. There are limitations in these theoretical productions, and these should be borne in mind in the consideration and use of the wireline images. Firstly, the wireline illustrates the 'bare ground' situation, not taking into account the screening effects of vegetation, buildings, or other local features that may prevent or reduce visibility. Secondly, the wireline is based on OS Terrain 5 DTM, so there may be local, small-scale landform variations that are not reflected in the wireline but may alter the actual visibility of the Proposed Development, either by screening theoretical visibility or revealing parts of the Proposed Development that are not theoretically visible. Thirdly, planning conditions are likely to allow the locations of the turbines to be horizontally microsituated to a small degree and the levels of the turbine bases have not yet been established in detail as this will be determined through site investigations and detailed engineering design. Both of these factors may alter the base and therefore the tip heights of the turbines above ground level from those that are assumed in the assessment and shown on **Figures 7.17 - 7.33**. Such variation may also affect ZTVs.

7.57 Where descriptions within the assessment identify the numbers of turbines visible this refers to the theoretical illustrations generated and therefore the reality may differ to a degree from these impressions. These factors are unlikely to make a material difference to the outcome of the assessment.

7.58 Not all areas of the study area are publicly accessible, and this has limited the specific assessment of views from residential and other properties, for example. Notwithstanding these limitations, the assessors consider that there is sufficient information available, from publicly accessible viewpoints, to form a competent assessment of the likely landscape and visual amenity effects.

Embedded Mitigation

7.59 Embedded mitigation, relevant to the LVIA, relates to site selection and the iterative design of the layout. For this particular proposal, this has primarily involved reducing potential landscape, visual, and residential visual amenity effects by reducing the number of turbines and increasing the separation distances of the turbines from residential dwellings. While emphasis has also been placed on designing a relatively small, compact wind farm that does not markedly impact upon the scenic and perceptual qualities of nearby NSA and NL. Additionally, mitigation measures, such as the removal of tower lighting and the reduction of aviation lighting located on hubs (from 4 to 2 lights), reduces effects. This design mitigation has notably reduced the effects of the Proposed

Development on landscape, visual and residential receptors in the study area. Further details in relation to the iterative design process area provided in **Chapter 2: Site Description and Design Evolution**.

- 7.60 Residual effects are those effects which remain after mitigation. The residual effects that the Proposed Development would have on landscape and visual receptors are assessed further in this LVIA.

Baseline Conditions

- 7.61 This section of the LVIA records the existing conditions of the Site and the study area. Establishing a baseline helps to gain an understanding of what makes the landscape distinctive and what its important components or characteristics are. The baseline is instrumental in the identification of the landscape character receptors, visual receptors and viewpoints that are included in the assessment. This section is presented under the following headings:

- Site Context;
- Landscape Baseline;
- Visual Baseline;
- Viewpoints;
- Cumulative Wind Farm Developments; and
- Night-time Environment.

Site Context

- 7.62 The Site is located approximately 1km north east of Eastriggs, between the settlements of Gretna and Annan within the Solway Basin, near the mouth of the River Esk, in Dumfries and Galloway, Scotland. It comprises an area of farmland, primarily agricultural grassland, with a gentle gradient generally rising from the south to the north, which is adjacent to Nutberry Moss to the west, the A75 to the south, a minor road to the east, and the B6357 to the north. Areas of woodland punctuate the local landscape providing some visual containment to the Site from sections of the surrounding roads and properties. Residential and farm buildings are also located intermittently along the surrounding road network, and electricity transmission lines also traverse the landscape to the north and south of the Site.
- 7.63 In relation to the Site's surroundings, the Solway Basin covers a broad area either side of the Solway Firth, extending into England across north west Cumbria, encompassing the settlements of Wigton and Carlisle to the south and south east respectively, Longtown and Gretna to the east, and Annan to the west. The landscape, particularly to the south, is flat and open, which contributes to its vast underlying scale that is only moderated at a local level by the varying landcover of the landscape. There are some important route corridors that utilise this flat landscape, including the M6/M74 to the east, north east and south east of the Site, which connects England and Scotland, the A75 to the south, east and west, which connects Gretna and Dumfries, and the A7 to the east, north east and south east, which connects Carlisle and Edinburgh.
- 7.64 The Solway Firth widens to the south west of the study area. The Scottish and English coastlines associated with much of these south western edges of the Firth are covered by nationally important landscape designations, including the Solway Coast National

Landscape (NL), the Nith Estuary National Scenic Area (NSA), and the East Stewartry Coast NSA. The Firth provides a relatively simple backdrop from the majority of these areas, with the exception of the more distant waters on the edge of the study area encompassing Robin Rigg Offshore Wind Farm.

- 7.65 Beyond the Solway Basin, the landscape gradually rises into the foothills of the Langholm hills to the north, the Northumbrian hills containing Kielder Water to the east, the North Pennines to the south east, and the Cumbrian Mountains to the south. Long range views to these various hill ranges can often be appreciated from the Solway Basin, due to its flat, expansive character. Large parts of the Cumbrian and Northumbrian hills are included within the Lake District and Northumberland National Parks.

Landscape Baseline

- 7.66 Landscape character information produced by or prepared on behalf of NatureScot forms the basis of the characterisation of the study area. In 2019, NatureScot published an update to the characterisation of Scotland's landscape as a digital resource entitled 'National Landscape Character Assessment Map and Descriptions' (hereafter referred to as 'the NatureScot LCA'). The information builds on the characterisation studies published in the 1990's. NatureScot describe the recent publication as now superseding the 1990s landscape character descriptions and mapping. The LCTs covering the study area according to the NatureScot LCA are illustrated in **Figure 7.3a**.
- 7.67 *NatureScot advise that "Where there are topic-specific landscape capacity or sensitivity studies, they would take precedence for informing that development type, e.g. windfarms".* Where coverage allows, the LCT units contained in Dumfries and Galloway Council's Wind Energy Landscape Sensitivity Study (2024) ('the DGLSS') will therefore form the basis of the character assessment that will be undertaken in the LVIA. Where parts of the study area are not covered by the DGLSS, the LVIA will also be informed by the Scottish Borders 'Update of Wind Energy Landscape Capacity and Cumulative Impact Study' (2016) ('the SBLCS'), the Cumbria Landscape Character Classification ('the CLCC'), the Lake District National Park Landscape Character Assessment ('the LDNPLCA'), and the Northumberland Landscape Character Assessment ('the NLCA'). The relevant LCTs derived from these studies contained in the study area are illustrated on **Figures 7.3c-d**.

Landscape Character of the Site

- 7.68 The landscape of the Site is defined differently by the NatureScot LCA and Dumfries and Galloway Council's appraisal contained in the DGLSS. The Site is defined by NatureScot's LCA as part of a unit of 'Coastal Flats - Dumfries & Galloway' (158) Landscape Character Type (LCT) (see **Figure 7.3a**).
- 7.69 The key characteristics of the Coastal Flats - Dumfries & Galloway LCT according to the NatureScot LCA include its:
- *"Coastal flats are generally extremely flat and low lying, although the coastal plain and coastal parkland have some gentle undulations.*
 - *More varied topography in the Nith Estuary.*
 - *Exposed with long views over the flats, as they merge with the Solway waters out to sea and distant views of opposite coastline.*
 - *A more intimate feel to coastal parkland enhanced by the minor road network, abundant trees and the generally well-managed appearance.*

- *Large to medium sized fields of improved pasture, more lush in parkland areas, with some arable cultivation. Fields enclosed by hedgerows or fences, or a combination of both, although sheep grazed salt marsh is traditionally unenclosed.*
- *Predominantly rural character with generally sparse, isolated settlements and occasional caravan/camping parks, contrasting with occasionally larger towns such as Annan.*
- *Policy landscapes around large houses and farmsteads in coastal parkland.*
- *Varied tree cover, with generally few woodlands or shelterbelts, except in coastal parkland where trees and small woodlands create intimacy. Some coastal moss areas contain large dominating coniferous forests, creating dark green bands on the skyline (others are being restored to moss moorland).*
- *Wet vegetation in areas of coastal moss*
- *Telegraph poles, power lines and farm structures are very evident as they break the flat horizon in flat estuarine areas.*
- *Major communication routes for road, rail and power lines on coastal plain.*
- *Man-made drainage features on coastal parkland.*
- *Open network of small burns dissecting merse areas."*

7.70 The DGLSS defines the Site differently as part of the Coastal/ Flow Plateau LCT (14) - see **Figure 7.3c**. The DGLSS provides the following description of this LCT:

7.71 *"This gently undulating to flat coastal plain falls gradually to the Solway coast and the broad floodplain at the mouth of the River Esk. Farmland is interspersed with low-lying mosses which are often encircled by broadleaved woodland and scrub. This is a wellsettled landscape with a number of settlements concentrated close to the Solway Firth. The field enclosure pattern becomes less distinct and settlement sparser in the northeast of this Assessment Unit at the transition with the Upland Fringe (15). These open coastal areas are highly visible from roads and settlement in the more elevated surrounding upland fringes and foothills."*

7.72 The Assessment of Effects on Landscape Character section of this LVIA considers the direct and indirect effect of the Proposed Development on the Coastal/ Flow Plateau LCT (14). Indirect effects on other LCT units are addressed in further detail in the following section.

Preliminary Assessment of LCTs

7.73 The landscape assessment considers the effect of the Proposed Development on the Landscape Character Types (LCTs) within the Site and the surrounding area. The LCTs found in the detailed study area are shown on **Figures 7.3d-e**, and together with the ZTV on **Figures 7.9b**. LCTs that are predicted to experience theoretical visibility of the Proposed Development are described in **Table 7-3**, along with an initial assessment as to whether they are likely to incur significant landscape effects and, therefore whether they require to be included in the detailed assessment in the Assessment of Effects on Landscape Character section of this LVIA.

Table 7-3: Preliminary Assessment of LCTs within the Detailed Study Area

| Landscape Character Type / Unit | Needs detailed assessment within LVIA? |
|---|---|
| 14. Coastal/ Flow Plateau - Annandale Flow Plateau | Yes - due to the location of the Proposed Development within the LCT and the extensive areas of theoretical visibility predicted, it is likely that significant effects may arise. |
| 4. Narrow Valleys - Kirtle Water | Yes - due to the location of the Proposed Development close to the LCT and the extensive areas of theoretical visibility predicted, it is possible that significant effects may arise. |
| 1. Bay and Estuary - Cardurnock Flatts and Moricambe Bay | Yes - due to the location of the Proposed Development close to the LCT and the extensive areas of theoretical visibility predicted, it is likely that significant effects may arise. |
| 15. Upland Fringe - Annandale Fringe | No – some intermittent theoretical visibility predicted across the LCT, but closest potentially affected areas are subject to some enclosure from forestry and an existing industrial influence from the intervening Chapelcross power station, and this is likely to moderate effects. While more distant areas of theoretical visibility across the LCT are situated beyond the M74 corridor and this is also likely to moderate effects. |
| 1. Bay and Estuary - Rockcliffe Marsh | Yes - due to the location of the Proposed Development close to the LCT and the extensive areas of theoretical visibility predicted, it is likely that significant effects may arise. |
| 2. Coastal Margins – Bowness-on-Solway/ Burgh by Sands/ Newton Arlosh | Yes - widespread theoretical visibility of all four wind turbines predicted over large areas of this open landscape at varying distances. The proximity of the Anthorn Radio Station moderates the susceptibility of parts of this LCT unit to effects. However, there is still potential for significant effects to arise across other parts of the LCT unit. |
| 2. Coastal Margins – Solway Moss | No – there is strong influence from the operational Beck Burn Wind Farm, which is located within this relatively small LCT unit and likely to be a degree of screening from woodland. There is no potential for significant effects to arise upon this LCT unit. |
| 2. Coastal Margins - Bowness Common/ Glasson Moss | No – while there is widespread theoretical visibility of the Proposed Development, the relatively flat landscape ensures that far-reaching views across to the Dumfries and Galloway coast are generally screened or interrupted. The proximity of the Anthorn Radio Station also moderates the susceptibility of parts of this LCT unit to effects. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 6km. |
| 1. Bay and Estuary – Burgh Marsh | Yes - widespread theoretical visibility of all four wind turbines predicted over large areas of this open landscape. There is potential for significant effects to arise. |
| 5. Lowland - Frankstown | No – there is an existing characteristic influence of closer range wind farm development associated with the nearby operational Beck Burn Wind Farm, and there is likely to be a degree of screening from woodland. There is no potential for significant effects to arise upon this LCT unit. |
| 7. Dale with Hills - Middle Dale with Hills | No – there is only some limited areas of theoretical visibility where landform is predicted to screen varying degrees of the turbines. It is also likely that visibility of the turbines would be interrupted or screened to a degree by woodland and hedgerows. It is therefore unlikely that significant effects would arise. |

| Landscape Character Type / Unit | Needs detailed assessment within LVIA? |
|--|---|
| 2. Coastal Margins - Drumburgh Moss | No – while there is widespread theoretical visibility of the Proposed Development, the relatively flat landscape ensures that far-reaching views across to the Dumfries and Galloway coast are generally screened or interrupted. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 8km. |
| 8. Main Valleys - Carwinley | No – there is some intermittent theoretical visibility predicted across the LCT unit, but there is considerable woodland coverage across the LCT unit, and as such it is unlikely that significant would arise due to the associated reduction in visibility in reality. |
| 5. Lowland - Fingland | No – while there is widespread theoretical visibility of the Proposed Development, the relatively flat landscape ensures that far-reaching views across to the Dumfries and Galloway coast are generally screened or interrupted by woodland or hedgerows. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 9km. |
| 1. Bay and Estuary - Newton Marsh | No – while there is widespread theoretical visibility of the Proposed Development, the relatively flat landscape ensures that far-reaching views across to the Dumfries and Galloway coast are generally screened or interrupted by woodland and hedgerows, and the area has a stronger association with the seascape to the west of the LCT unit. The proximity of the Anthorn Radio Station also moderates the susceptibility of this LCT unit to effects. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 9km. |
| 5. Lowland - Wigton | No – while there is widespread theoretical visibility of the Proposed Development, the relatively flat landscape ensures that far-reaching views across to the Dumfries and Galloway coast are generally screened or interrupted. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 9km. |
| 5. Lowland – Longtown/ Houghton | No – there is theoretical visibility predicted across extensive areas of this large LCT unit at distances of over 9km from the Proposed Development, but there is considerable development, including Beck Burn Wind Farm and woodland situated between the LCT unit and the Proposed Development. It is therefore unlikely that the Proposed Development would have a significant effect upon the LCT unit's character. |
| 19. Foothills - Annandale | No – there is some intermittent theoretical visibility predicted across the LCT unit, but there is considerable woodland coverage across the LCT unit and an existing characteristic influence from the Minsca and Solwaybank Wind Farms, which are located in the LCT unit, and as such it is unlikely that significant would arise. |
| 3. Coastal Flats - Nith Solway Fringe & Inner Solway | No – while there is widespread theoretical visibility of the Proposed Development, the relatively flat landscape ensures that far-reaching views across to the Dumfries and Galloway coast are generally screened or interrupted by woodland or hedgerows. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 10km. The proximity of the Anthorn Radio Station also moderates the susceptibility of this LCT unit to effects. |
| 5. Lowland - Kirkbride | No – there is intermittent theoretical visibility predicted across parts of the LCT unit, but its developed character reduces its susceptibility to effects. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 10km. |
| 5. Lowland - High Cringledyke/ Etterby | No – there is only limited theoretical visibility predicted across small areas of the LCT unit. These areas coincide with the electricity transmission line which traverses the LCT unit, and this is therefore likely to moderate the susceptibility of these parts of the landscape. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 11km. |

| Landscape Character Type / Unit | Needs detailed assessment within LVIA? |
|---|---|
| 6. Lower and Middle Dale (Valley) - Mid Eskdale | No – there is intermittent theoretical visibility predicted, but the susceptibility of the landscape is moderated by the existing influences from wind farm development in the LCT unit, such as Great Orton Wind Farm, electricity transmission lines, and the nearby city of Carlisle. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 12km. |
| 5. Lowland - Great Orton/ Dalston | No – there is intermittent theoretical visibility predicted across parts of the LCT unit, but its developed character reduces its susceptibility to effects. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 12km. |
| 5. Pastoral Valleys - Pastoral Eskdale | No – there is very limited theoretical visibility predicted, which is likely to be interrupted by extensive woodlands. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 14km. |
| 5. Lowland – School Sike | No – there is intermittent theoretical visibility predicted across parts of the LCT unit, but its developed character reduces its susceptibility to effects. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 14km. |
| 5. Lowland - Cummersdale | No – there is intermittent theoretical visibility predicted across parts of the LCT unit, but its developed character reduces its susceptibility to effects. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 14km. |
| 22. Southern Uplands with Forest - Ewe Hill | No – there is very limited theoretical visibility predicted, which is likely to be screened by extensive forestry. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 15km. |
| 21. Southern Uplands - West Langholm | No – there is theoretical visibility predicted across elevated areas of this large LCT unit at distances of over 15km from the Proposed Development, but there is an existing characteristic influence from Craig Wind Farm within the LCT, and Solwaybank Wind Farm is situated between the LCT unit and the Proposed Development. It is therefore unlikely that the Proposed Development would have a significant effect upon the LCT unit's character. |
| 15. Upland Fringe - Liddesdale Fringe | No – there is some theoretical visibility predicted, but much of this is likely to be screened by extensive forestry or woodland. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 15km. |
| 5. Lowland - Sheepmount | No – there is very limited theoretical visibility predicted across parts of the LCT unit, but its developed surroundings reduce its susceptibility to effects. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 15km. |
| 1. Bay and Estuary – Skinburness Marsh | No – while there is widespread theoretical visibility of the Proposed Development, the relatively flat landscape ensures that far-reaching views across to the Site are generally screened or interrupted by woodland and hedgerows, and the area has a stronger association with Moricambe Bay. The presence of Anthorn Radio Station also moderates the susceptibility of this LCT unit to effects. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 15km. |
| 4. Narrow Valleys - Liddel Water | No – there is some theoretical visibility predicted, but much of this is likely to be screened by woodland. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 15km. |
| 2. Coastal Margins - Moorhouse | No – there is some theoretical visibility predicted, but much of this is likely to be screened by woodland. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 15km. |
| 6. Intermediate Farmland - Scuggate | No – there is theoretical visibility predicted across some areas of this LCT unit at distances of over 16km from the Proposed Development, but there is considerable development, including Beck Burn Wind Farm, and woodland situated between the |

| Landscape Character Type / Unit | Needs detailed assessment within LVIA? |
|---|--|
| | LCT unit and the Proposed Development. It is therefore unlikely that the Proposed Development would have a significant effect upon the LCT unit's character. |
| 2. Coastal Margins - Skinburness | No – while there is widespread theoretical visibility of the Proposed Development, the relatively flat landscape ensures that far-reaching views across to the Site are generally screened or interrupted by woodland and hedgerows, and the area has a stronger association with immediate coastline surrounding it. The presence of Anthorn Radio Station also moderates the susceptibility of this LCT unit to effects. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 16km. |
| 6. Lower and Middle Dale (Valley) - Mid Annandale | No – there is very limited theoretical visibility predicted across small parts of the LCT unit. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 16km. |
| 2. Coastal Margins - Calvo | No – while there is widespread theoretical visibility of the Proposed Development, the relatively flat landscape ensures that far-reaching views across to the Site are generally screened or interrupted by woodland and hedgerows, and the area has a stronger association with immediate coastline surrounding it. The presence of Anthorn Radio Station also moderates the susceptibility of this LCT unit to effects. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 16km. |
| 15. Upland Fringe - Torthorwald Ridge | No – there is intermittent theoretical visibility predicted across parts of the LCT unit with screening to some of these areas due to intervening woodland. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 16km. |
| 5. Lowland - Rickerby | No – there is very limited theoretical visibility predicted across parts of the LCT unit, but its developed surroundings reduce its susceptibility to effects. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 16km. |
| 20. Foothills with Forest - Tinnisburn | No – there is some theoretical visibility predicted, but much of this is likely to be screened by forestry. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 17km. |
| 21. Southern Uplands - Tarras | No – there is some distant theoretical visibility, but the Proposed Development would be situated in a distinctly separate lowland landscape context. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 18km. |
| 4. Narrow Valleys - Eskdale | No – there is very limited theoretical visibility predicted across small parts of the LCT unit. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 18km. |
| 20. Foothills with Forest - Castle Oer | No – there is no theoretical visibility predicted across the LCT unit. |
| 6. Lower and Middle Dale (Valley) - Mid Nithsdale | No – there is very limited theoretical visibility predicted across parts of the LCT unit, but its developed surroundings reduce its susceptibility to effects. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 19km. |
| 5. Lowland - Upperby | No – there is very limited theoretical visibility predicted across parts of the LCT unit, but its developed surroundings reduce its susceptibility to effects. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 19km. |
| 10. Upland Glens - Ewes | No – there is very limited theoretical visibility predicted across parts of the LCT unit, but its developed surroundings reduce its susceptibility to effects. It is therefore unlikely that significant effects would arise upon the LCT at distances of over 19km. |

| Landscape Character Type / Unit | Needs detailed assessment within LVIA? |
|---------------------------------------|--|
| 21. Southern Uplands - North Langholm | No – there is no theoretical visibility predicted across the LCT unit. |
| 5. Pastoral Valleys - Dryfe | No – there is no theoretical visibility predicted across the LCT unit. |

7.74 **Table 7-3** indicates that the following LCTs have potential to be significantly affected by the Proposed Development:

- 14. Coastal/Flow Plateau LCT - Annandale Flow Plateau Unit;
- 4. Narrow Valleys LCT - Kirtle Water Unit;
- 1. Bay and Estuary LCT - Cardurnock Flatts and Moricambe Bay Unit;
- 1. Bay and Estuary LCT - Rockcliffe Marsh Unit;
- 2. Coastal Margins LCT – Bowness-on-Solway/ Burgh by Sands/ Newton Arlosh Unit; and
- 1. Bay and Estuary LCT – Burgh Marsh Unit.

Landscape Planning Designations

7.75 There are three ways in which landscape planning designations are relevant to the LVIA:

- The presence of a designation can give an indication of a recognised value that may increase the sensitivity of a landscape character receptor, viewpoint or visual receptor, and may therefore affect the significance of the effect on that receptor;
- The presence of a relevant designation can lead to the selection of a representative viewpoint within the designated area, as the viewpoint will provide a representative outlook from that area; and
- Designated areas may be included as landscape character receptors so that the effects of the Proposed Development on these features of the landscape that have been accorded particular value can be specifically assessed.

7.76 The Site itself is not subject to any national or local landscape designations intended to protect landscape quality or scenery, but it is located relatively close to some designated areas. Various designated areas are found elsewhere in the study area and these have been considered in the assessment. These designations are shown in **Figure 7.4** and described below.

7.77 Through the EIA Scoping process, it was indicated that the effects on a number of landscape planning designations could be discounted from the LVIA assessment as it is considered unlikely that the effects would be significant. In light of amendments to the Proposed Development, and also additional fieldwork undertaken by the author, a subsequent review of the current Proposed Development has been undertaken to identify whether the conclusions of the preliminary assessment remain relevant.

National Parks and National Scenic Areas/ National Landscapes

- 7.78 The Site itself is not located in any National Parks (NPs), National Scenic Areas (NSAs), or National Landscapes (NLs) (also known as Areas of Outstanding Natural Beauty (AONB)). Policy 11(b) of National Planning Framework 4 (NPF4), which relates to developments “in” NPs and NSAs, is not therefore engaged.
- 7.79 NPs and NSAs located in Scotland are areas of land considered to be important on a national level and are designated by NatureScot. NLs located in England are similarly of national importance and are designated by Natural England.
- 7.80 In accordance with Policy 11 (Energy) (d) of NPF4, development proposals that impact on national designations in Scotland will be assessed in relation to Policy 4 of NPF4 (Scottish Government, 2023). Policy 4(c) of NPF4 states that:
- “Development proposals that will affect a National Park, National Scenic Area, Site of Special Scientific Interest or a National Nature Reserve will only be supported where:*
- i. The objectives of designation and the overall integrity of the areas will not be compromised; or*
 - ii. Any significant adverse effects on the qualities for which the area has been designated are clearly outweighed by social, environmental or economic benefits of national importance.”*
- NatureScot (2018) suggests that ‘the objectives’ of the designation is “the safeguard, conservation and enhancement of the interests for which the area is designated (for NSAs this is their special qualities and character; for National Parks this is a broader range of natural and cultural heritage interests).”*
- 7.81 National landscape designations within or partially within the 45km study area are shown on **Figure 7.4**. There are two NPs (Lake District NP and Northumberland NP), two NSAs (Nith Estuary NSA and East Stewartry Coast NSA), and two NLs (Solway Coast NL and North Pennines NL). The ZTVs on **Figures 7.10a-b** show the limited extent of theoretical visibility across some of these designated areas.
- 7.82 Through the request for a Scoping Opinion, it was agreed that a detailed assessment of the effects of the Proposed Development on some of these nationally important landscape designations would not be required. This is as a consequence of the low level of visibility predicted and the large separation distance between the designated areas and the Proposed Development. It was however considered that a detailed assessment of the Proposed Development on the special qualities of the Nith Estuary NSA (~16km) and Solway Coast NL (~3km) is required. Following a review of the ZTV for the updated turbine locations of the Proposed Development, it is considered that these findings from the Scoping process remain relevant, and a detailed assessment of these two national landscape designations is included in Assessment of Effects on Landscape Character of this LVIA.

World Heritage Sites

- 7.83 Development proposals that impact on World Heritage Sites (WHS) should be assessed in relation to Policy 7 (Historic assets and places) (I) of NPF4, which states that:
- “Development proposals affecting a World Heritage Site or its setting will only be supported where their Outstanding Universal Value is protected and preserved.”*
- 7.84 There is one WHS within the 45km study area, the Frontiers of the Roman Empire (Hadrian's Wall) WHS (~5km), which is shown with the ZTV overlain in **Figures 7.10a-b**.

Through the request for a Scoping Opinion, it was agreed that a detailed assessment of effects on the WHS would be included in the EIA Report.

- 7.85 While a broader assessment of the Proposed Development's effects on the WHS's Outstanding Universal Value (OUV) is provided in **Chapter 11: Cultural Heritage and Archaeology**, an assessment of visual effects experienced by visitors to the Frontiers of the Roman Empire (Hadrian's Wall) WHS is provided in the detailed assessment of the LVIA, in combination with the assessment of visual effects upon recreational walkers following the Hadrian's Wall Path.

Gardens and Designed Landscapes/ Parks and Gardens

- 7.86 Historic Environment Scotland ("HES") is responsible for designating Gardens and Designed Landscapes ("GDLs") in Scotland. These are contained in an Inventory which can be accessed at <https://www.historicenvironment.scot/>. The descriptions contained in the Inventory identify each GDL's qualifying features which are of national importance.
- 7.87 The protection which historic assets, including GDLs, are afforded is described in Policy 7(i) of NPF4:
- "Development proposals affecting nationally important Gardens and Designed Landscapes will be supported where they protect, preserve or enhance their cultural significance, character and integrity and where proposals will not significantly impact on important views to, from and within the site, or its setting."*
- 7.88 Parts of the 45km study area reach into England where Historic England is responsible for the Register of Parks and Gardens ("PGs"), which can be accessed at: <https://historicengland.org.uk/listing/the-list/>.
- 7.89 The GDLs and PGs situated in the 45km study area are shown on **Figure 7.4**. The contribution of each GDL in the 45km study area will be considered in the evaluation of the sensitivity of landscape character, including its scenic value to visitors. A detailed assessment of GDLs that have potential to experience significant effects upon their setting and any important views is provided in **Chapter 11: Cultural Heritage and Archaeology** of the EIA Report.

Regional Scenic Areas/ Special Landscape Areas

- 7.90 A Regional Scenic Area ("RSA") or Special Landscape Area ("SLA") is an area of landscape considered to be important on a local level and are designated by councils. Policy 4(d) of NPF4 (Scottish Government, 2023) states that:
- "Development proposals that affect a site designated as a local nature conservation site or landscape area in the LDP will only be supported where:*
- i. Development will not have significant adverse effects on the integrity of the area or the qualities for which it has been identified; or*
 - ii. Any significant adverse effects on the integrity of the area are clearly outweighed by social, environmental or economic benefits of at least local importance."*
- 7.91 Local landscape designations within or partially within the 45km study area are shown on **Figure 7.4**. The ZTVs on **Figures 7.10a-b** show the limited extent of theoretical visibility across many of these designated areas.
- 7.92 Through the request for a Scoping Opinion, it was agreed that the detailed assessment of the effects of the Proposed Development in the LVIA would be limited to the Solway Coast RSA (~11km). All other local landscape designations located within the study area were

discounted from the detailed assessment in the LVIA due to a combination of absence or limited theoretical visibility and their distance from the Proposed Development.

7.93 The Special Qualities of Solway Coast RSA have been derived from the following document:

- Dumfries and Galloway Council (2018). Regional Scenic Areas. Technical Paper

Wild Land

7.94 Wild Land Areas (“WLA”) mapped by NatureScot encompass Scotland’s most extensive areas of high wilderness. Policy 4(g) of NPF4 (Scottish Government, 2023) outlines criteria that needs to be satisfied by development proposals in WLAs:

“Development proposals in areas identified as wild land in the Nature Scot Wild Land Areas map will only be supported where the proposal:

- i. will support meeting renewable energy targets; or,*
- ii. is for small scale development directly linked to a rural business or croft, or is required to support a fragile community in a rural area.*

All such proposals must be accompanied by a wild land impact assessment which sets out how design, siting, or other mitigation measures have been and will be used to minimise significant impacts on the qualities of the wild land, as well as any management and monitoring arrangements where appropriate. Buffer zones around wild land will not be applied, and effects of development outwith wild land areas will not be a significant consideration.”

7.95 There is one WLA located within the 45km study area, which is shown on **Figure 7.4**. WLA 02: Talla Hart Fell is situated approximately 44km to the northwest of the Proposed Development. Through the request for a Scoping Opinion, it was agreed that this WLA would be discounted from the LVIA owing to a combination of the limited visibility predicted, the large separation distance from the Proposed Development, and intervening development between the Proposed Development and the WLA.

Visual Baseline

7.96 A number of visual receptors such as settlements and travel routes are considered in the assessment as views from them may be affected by the Proposed Development. It is not possible to consider every potential visual receptor in the study area due to the extent of ground that it covers, and the assessment therefore concentrates on the key visual receptors that may gain visibility of the Proposed Development, such as settlements and routes. Principal visual receptors are shown on **Figure 7.5** and in conjunction with the blade tip ZTV on **Figures 7.11a-b**.

Settlements and Residents

7.97 The settlements and residents most likely to be affected by the Proposed Development are those that are shown on the ZTVs to gain higher levels of visibility and generally lie in relatively close proximity. The closest residents that are subject to theoretical visibility of the Proposed Development are located along the minor roads that circumnavigate the Site. Residential properties situated within 1.6km of the proposed turbines are included in the Residential Visual Amenity Assessment (RVAA) in **Technical Appendix 7.2**.

7.98 A preliminary assessment of settlements that require detailed assessment in the LVIA is provided in **Table 7-4**.

Table 7-4 Preliminary Assessment of Settlements within the Detailed Study Area

| Settlement | Distance | Needs detailed assessment within LVIA? |
|---------------------|----------|--|
| Eastriggs | 1.5 | Yes – due to widespread theoretical visibility across the settlement and relatively short distance from Proposed Development. |
| Kirkpatrick-Fleming | 2.3 | Yes – due to widespread theoretical visibility across the settlement and relatively short distance from Proposed Development. |
| Gretna | 4.0 | Yes – due to widespread theoretical visibility across the settlement and relatively short distance from Proposed Development. |
| Creca | 4.3 | Yes – due to widespread theoretical visibility across the settlement and relatively short distance from Proposed Development. |
| Annan | 5.2 | Yes – due to intermittent theoretical visibility across the settlement and relatively short distance from Proposed Development. |
| Port Carlisle | 6.0 | Yes – due to widespread theoretical visibility across the settlement and relatively short distance from Proposed Development. |
| Bowness-on-Solway | 6.4 | Yes – due to widespread theoretical visibility across the settlement and relatively short distance from Proposed Development. |
| Eaglesfield | 6.5 | Yes – due to intermittent theoretical visibility across the settlement and relatively short distance from Proposed Development. |
| Glasson | 7.0 | No – although theoretical visibility is predicted to arise across the village, there is extensive screening from intervening hedgerows, woodlands and buildings, which limits opportunities for uninterrupted views towards the Site. |
| Drumburgh | 7.5 | Yes – due to widespread theoretical visibility across the settlement. |
| Ecclefechan | 8.6 | No – due to very limited theoretical visibility across the settlement. |
| Boustead Hill | 8.7 | Yes – due to widespread theoretical visibility across the settlement and open views across the Solway Firth. |
| Longtown | 9.1 | Yes – due to widespread theoretical visibility across the settlement. |
| Burgh-by-Sands | 9.4 | No – although theoretical visibility is predicted to arise across the village, there is extensive screening from intervening hedgerows, woodlands and buildings, which limits opportunities for uninterrupted views across the relatively flat landscape towards the Site. |
| Kirkbride | 10.6 | No – although theoretical visibility is predicted to arise across the village, there is extensive screening from intervening hedgerows, woodlands and buildings, which limits opportunities for uninterrupted views across the relatively flat landscape towards the Site. |

| Settlement | Distance | Needs detailed assessment within LVIA? |
|-----------------------|----------|---|
| Cargo | 12.4 | No – although theoretical visibility is predicted to arise across the village, there is extensive screening from intervening hedgerows, woodlands and buildings, which limits opportunities for uninterrupted views towards the Site. |
| Harker | 12.7 | No – although theoretical visibility is predicted to arise across the village, the Proposed Development would be situated within the context of the National Grid Substation and associated electricity pylons on the edge of the village. |
| Carlisle | 12.9 | No – although theoretical visibility is predicted to arise across the settlement, there is extensive screening from intervening hedgerows, woodlands and buildings, which limits opportunities for uninterrupted views towards the Site. |
| Canonbie | 14.3 | No – there is only very limited theoretical visibility predicted to arise across the village, and there is extensive screening from intervening woodlands, which limits opportunities for uninterrupted views towards the Site. |
| Houghton (Cumberland) | 15.7 | No – although theoretical visibility is predicted to arise across the village, there is extensive screening from intervening hedgerows, woodlands and buildings, which limits opportunities for uninterrupted views towards the Site. |
| Lockerbie | 17.6 | No – due to absence of theoretical visibility across the settlement. |
| Thursby | 17.7 | No – due to absence of theoretical visibility across the settlement. |
| Skinburness | 17.8 | No – although theoretical visibility is predicted to arise across the village, the Proposed Development would be relatively distant and situated in a similar sector of views to the closer masts associated with the Anthorn Radio Station. |
| Wigton | 18.1 | No – although theoretical visibility is predicted to arise across the village, the Proposed Development would be relatively distant and situated in the context of the electricity pylons that traverse the landscape to the north of the settlement. |
| Langholm | 18.4 | No – due to absence of theoretical visibility across the settlement. |
| Abbeytown | 18.6 | No – although theoretical visibility is predicted to arise across some of the village, there is extensive screening from intervening hedgerows, woodlands and buildings, which limits opportunities for uninterrupted views towards the Site. |
| Silloth | 18.6 | No – although theoretical visibility is predicted to arise across the village, the Proposed Development would be relatively distant and situated in a similar sector of views to the closer masts associated with the Anthorn Radio Station. |
| Dalston | 18.9 | No – although theoretical visibility is predicted to arise across some of the village, there is extensive screening from intervening hedgerows, woodlands and buildings, which limits opportunities for uninterrupted views towards the Site. |
| Hightae | 19.7 | No – due to absence of theoretical visibility across the settlement. |
| Scotby | 19.9 | No – although theoretical visibility is predicted to arise across parts of the settlement, there is extensive screening from intervening hedgerows, woodlands and buildings, which limits opportunities for uninterrupted views towards the Site. |

7.99 **Table 7-4** indicates that the following settlements have potential to be significantly affected by the Proposed Development:

- Eastriggs;
- Kirkpatrick-Fleming;
- Gretna;
- Creca;
- Annan;
- Port Carlisle;
- Bowness-on-Solway;
- Eaglesfield;
- Drumburgh;
- Boustead Hill; and
- Longtown.

Roads (inc. Scenic Routes)

7.100 It is not possible, or necessary, to assess the potential effects of the Proposed Development on every route. However, some of the key routes require consideration in the assessment. Four principal criteria have been used in determining the inclusion of routes in the assessment:

- the extent to which the route traverses the study area or extends across a notable part of it;
- the importance of the route in terms of recognition, signage, traffic volume and usage;
- the extent of theoretical visibility of the Proposed Development from the route; and
- the potential for cumulative effects along the route.

7.101 The location and extent of roads in the study area reflects the topography, with the majority of roads traversing the Dumfries coastal plateau or the Cumbrian lowlands. Of most relevance to this LVIA are the A75 (forming part of the Galloway Tourist Route), B721, B6357, and the B7076 roads (see **Figure 7.11a**), which have sections nearby to the Proposed Development where there is potential for significant effects to arise. The effects of the Proposed Development on each of these roads is considered in the detailed assessment. The M6/ M74 motorway also passes through the surrounding landscape to the east of the Proposed Development but significant effects are unlikely to be experienced by road users primarily due to the extensive screening from roadside woodland/ vegetation and acoustic barriers along the majority of the route, and, where some intermittent views towards the Proposed Development can be experienced between Mossband and Gretna, these views are partially characterised by the electricity transmission line that runs alongside the motorway.

7.102 Significant effects are unlikely to occur along other more distant sections of roads across the study area due primarily to the topography of the landscape, which can often provide a degree of landform screening across upland areas, or screening from intervening woodland, hedgerows and buildings across the relatively flat lowlands. These other roads have therefore been scoped out of the assessment, and they are not assessed in any further detail.

Railways

- 7.103 There are a few railway lines situated within the study area (see **Figure 7.11a**), notably the national West Coast line connecting Preston to Glasgow and the Glasgow South Western line between Carlisle and Stranraer, the regional lines between Leeds and Carlisle and Newcastle and Carlisle, and the local line between Carlisle and Barrow-in-Furness.
- 7.104 The Glasgow South Western line passes less than 1km to the south of the Site. Theoretical visibility is predicted along some of the closest sections of the line and there railway users of this line are considered further in the detailed assessment of the LVIA.
- 7.105 The West Coast line passes closest to the east of the Proposed Development, but significant effects are unlikely to be experienced by travellers primarily due to the extensive screening from woodland/ vegetation along the majority of the route, but also, where views towards the Proposed Development can be experienced between Carlisle and Gretna, they are partially characterised by the electricity transmission line that runs alongside the railway line. The introduction of the Proposed Development is therefore unlikely to significantly alter the perceived character of these views.
- 7.106 Sections of the two regional railway lines where theoretical visibility is predicted are more distant, and due to the relatively flat topography of the landscape and woodland screening, travellers experience limited opportunities to experience uninterrupted views towards the Proposed Development. Similarly, where intermittent theoretical visibility is predicted along sections of the local line between Carlisle and Barrow-in-Furness, open views containing the Proposed Development are unlikely to be experienced for the same reasons. Railway lines are therefore discounted from the detailed assessment of the LVIA at this stage and are not assessed in any further detail.

Cycling Routes

- 7.107 There are numerous National Cycle Routes ("NCR") within the study area (see **Figure 7.11a**). Of most relevance to this LVIA are NCR7 and NCR72, which pass closest to the Proposed Development. NCR 7 connects Sunderland and Inverness passing to the south of the Site by utilising sections of nearby minor roads, including the B721. The closest sections of the NCR72, which connects Kendal to Silloth, are situated to the south of the Solway Firth in Cumbria, and also form part of the Cumbria Coast - Carlisle to Workington/ Burgh by Sands to Solway Coast/ Hadrian's Cycleway Sustrans routes. There is potential for significant effects to views experienced by cyclists along both of these routes, and as a consequence they are considered further in the detailed assessment.

Walking Routes

- 7.108 There are a large number of recognised long distance walking routes located in the study area (see **Figure 7.11a**). Of most relevance to this LVIA are the Annandale Way and the Hadrian's Wall Path, which have sections of the routes within 10-15km of the Proposed Development. However, while there is theoretical visibility predicted along long sections of the Hadrian's Wall Path, there is very limited theoretical visibility predicted along the Annandale Way due to screening from intervening landform, and woodland is predicted to interrupt views where short sections are predicted to receive theoretical visibility of the Proposed Development at distances of over 10km. As a consequence, the Hadrian's Wall Path and its relationship with the Frontiers of the Roman Empire WHS is considered in the detailed assessment of the LVIA, and the Annandale Way is not considered further.

- 7.109 There are also a large number of core paths in the study area (shown on **Figure 7.5**, and in conjunction with the ZTV on **Figure 7.11b**), as designated by the various local authorities. These are not all individually considered in the assessment due to the number of routes and the limited relevance of the majority of these to the Proposed Development. However, where there is potential for significant effects on views to arise, Core Paths that are located within 5km of the Proposed Development are considered in the detailed assessment. A preliminary assessment of these core paths is provided in **Table 7-5**.

Table 7-5: Preliminary Assessment of Core Paths

| Code | Name | Needs detailed assessment within LVIA? |
|----------|-----------------------------------|--|
| GRET/248 | Browhouses to Redkirk point | Yes – due to extensive theoretical visibility along the route. |
| EAST/531 | Dornochbrow | Yes – due to extensive theoretical visibility along the route. |
| GRET/517 | Gretna Service Area To Gretna | Yes – due to extensive theoretical visibility along the route. |
| EAST/530 | Dornoch Burn | Yes – due to some theoretical visibility predicted along the route. |
| SPRI/325 | Bensmoor Wood to Douglas Steading | No – while there is theoretical visibility predicted, there is an existing influence from wind turbine development and views would be interrupted/ screened by woodland. |
| GRET/251 | Sarkfoot to Crochmer Park | No – while there is theoretical visibility predicted, views would be interrupted/ screened by hedgerows and woodland. |
| GRET/249 | Gretna to Redkirk Point | No – while there is theoretical visibility predicted, views would be interrupted/ screened by hedgerows and woodland. |
| KIRT/270 | Kirtlebridge to Barshaw | No – while there is intermittent theoretical visibility predicted, views would be interrupted/ screened by hedgerows and woodland. |
| GRET/254 | Gretna to Gretna Green | No – while there is theoretical visibility predicted, views would be interrupted/ screened by woodland and/ or buildings. |
| GRET/250 | Sarkfoot to Redkirk Point | No – while there is theoretical visibility predicted, views would be interrupted/ screened by hedgerows and woodland. |
| EAST/315 | Battlehill | Yes – due to some theoretical visibility predicted along the route. |

Viewpoints

- 7.110 The assessment of landscape and visual effects is informed by a series of viewpoints, which are selected to represent visibility from landscape character types, landscape planning designations and principal visual receptors around the study area. These include points of specific importance such as recognised viewpoints, designated landscapes, settled areas, important routes and attractions. A variety of landscape character types and locations from different directions and distances have also been represented. It should be noted that while the majority of the viewpoints are chosen to represent receptors that have potential to undergo a significant effect this is not always the case, and some viewpoints

that are included demonstrate a lower level of visibility from certain locations. Agreement of these viewpoints was sought from D&GC and NatureScot at the Scoping stage, but no formal Scoping responses were received from either party.

- 7.111 The viewpoints included in the assessment are set out in **Table 7-6**, and detailed assessment for each of these is presented in **Section 7.8**. The viewpoint locations are shown in conjunction with the blade tip ZTV on **Figures 7.6a-c** and the hub height ZTV on **Figures 7.7a-c**.

Table 7-6: Representative Viewpoints

| No. | Viewpoint | Easting | Northing | Distance | Receptor |
|-----|---|---------|----------|----------|---|
| 1 | B721 near Rigg | 327886 | 566387 | 1.5 | Road users |
| 2 | Eastriggs – from edge of settlement* | 325567 | 566190 | 1.6 | Residents |
| 3 | Kirkpatrick Fleming – from B7076* | 327132 | 570671 | 2.7 | Residents |
| 4 | Creca – from road south of settlement | 323124 | 570019 | 3.8 | Residents |
| 5 | Coastal Path (junction of Battlehill and Dornock Burn core paths) | 322189 | 565204 | 4.9 | Recreational walkers |
| 6 | Gretna Green – Famous Blacksmiths Shop Visitor Car Park | 332137 | 568625 | 5.3 | Visitors |
| 7 | Start of Hadrian's Wall Path, Bowness-on-Solway | 322512 | 562856 | 6.1 | Recreational walkers |
| 8 | Annan – Watchill | 320454 | 566110 | 6.2 | Road users |
| 9 | Eaglesfield | 323296 | 574307 | 7.2 | Residents |
| 10 | Boustead Hill* | 329470 | 559356 | 8.5 | Road users/ recreational walkers/ residents |
| 11 | King Edward I Monument | 332561 | 560927 | 8.6 | Recreational walkers |
| 12 | A75, west of Annan | 316560 | 568183 | 9.8 | Road users |
| 13 | Longtown Bridge | 337807 | 568863 | 11.0 | Residents |
| 14 | Repentance Tower, Hoddum | 315514 | 572238 | 11.6 | Recreational walkers |
| 15 | Malcolm Monument, Whita Hill | 337929 | 584680 | 20.0 | Recreational hill walkers |
| 16 | Ward Law | 302485 | 566662 | 23.9 | Recreational walkers |

| No. | Viewpoint | Easting | Northing | Distance | Receptor |
|-----|-----------|---------|----------|----------|---------------------------|
| 17 | Criffel | 295764 | 561890 | 31.2 | Recreational hill walkers |

7.112 *The night-time visual assessment has been informed by dusk/ dawn photomontages for the following three viewpoint locations, which have been selected from the LVIA viewpoints. These viewpoints have been selected for night-time assessment on the basis that they are locations where people may be present at dawn/ dusk, and where baseline conditions are likely to be relatively dark.

- Viewpoint 2: Eastriggs – from edge of settlement;
- Viewpoint 3: Kirkpatrick Fleming – from B7076; and
- Viewpoint 10: Boustead Hill.

Preliminary Viewpoint Assessment

7.113 **Table 7-7** identifies which viewpoints require more detailed assessment in the LVIA because they have the potential to undergo significant effects (including cumulative effects), and which viewpoints do not require further detailed assessment.

Table 7-7: Preliminary Assessment of Viewpoints

| No. | Viewpoint | Needs detailed assessment within LVIA? |
|-----|---|---|
| 1 | B721 near Rigg | Yes - included in the detailed assessment due to proximity and level of theoretical visibility of the Proposed Development. |
| 2 | Eastriggs – from edge of settlement | Yes - included in the detailed assessment due to proximity and level of theoretical visibility of the Proposed Development. |
| 3 | Kirkpatrick Fleming – from B7076 | Yes - included in the detailed assessment due to proximity and level of theoretical visibility of the Proposed Development. |
| 4 | Creca – from road south of settlement | Yes - included in the detailed assessment due to proximity and level of theoretical visibility of the Proposed Development. |
| 5 | Coastal Path (junction of Battlehill and Dornock Burn core paths) | Yes - included in the detailed assessment due to proximity and level of theoretical visibility of the Proposed Development. |
| 6 | Gretna Green – Famous Blacksmiths Shop Visitor Car Park | Yes - included in the detailed assessment due to distance and level of theoretical visibility of the Proposed Development. |
| 7 | Start of Hadrian's Wall Path, Bowness-on-Solway | Yes - included in the detailed assessment due to distance and level of theoretical visibility of the Proposed Development. |

| No. | Viewpoint | Needs detailed assessment within LVIA? |
|-----|------------------------------|--|
| 8 | Annan – Watchill | Yes - included in the detailed assessment due to distance and level of theoretical visibility of the Proposed Development. |
| 9 | Eaglesfield | Yes - included in the detailed assessment due to distance and level of theoretical visibility of the Proposed Development. |
| 10 | Boustead Hill | Yes - included in the detailed assessment due to distance and level of theoretical visibility of the Proposed Development. |
| 11 | King Edward I Monument | Yes - included in the detailed assessment due to distance and level of theoretical visibility of the Proposed Development. |
| 12 | A75, west of Annan | Yes - included in the detailed assessment due to distance and level of theoretical visibility of the Proposed Development. |
| 13 | Longtown Bridge | No - not included in the detailed assessment due to the level of screening from intervening woodland, which would ensure that there is no visibility of the Proposed Development in reality. |
| 14 | Repentance Tower, Hoddum | Yes - included in the detailed assessment due to the extent of the Proposed Development that is theoretically visible. |
| 15 | Malcolm Monument, Whita Hill | Yes - included in the detailed assessment due to the extent of the Proposed Development that is theoretically visible, and the potential for cumulative effects to arise. |
| 16 | Ward Law | Yes - included in the detailed assessment due to level of theoretical visibility of the Proposed Development. |
| 17 | Criffel | No - not included in the detailed assessment due to distance and the situation of the Proposed Development within the context of operational wind farm development. |

7.114 **Table 7-7** indicates that receptors at 15 of the 17 viewpoints have potential to be significantly affected by the Proposed Development.

Night-time Environment

7.115 The theoretical baseline night-time environment is represented on a Baseline Light Pollution map (**Figure 7.14**), which illustrates baseline light pollution across the 20km detailed study area and also shows the LVIA viewpoints.

7.116 While this map provides a useful basis for gauging theoretical levels of lighting at night-time, it is important to remember that it does not indicate the presence of localised lighting

such as domestic or security lighting that can locally affect views at night-time. Personal lighting is also not represented; that is, lighting within or attached to a vehicle or train (e.g. internal lighting, headlights, dashboard etc.) that will be experienced by people travelling on roads and railway lines, which can have a considerable effect on the way that the night-time environment is experienced by people. Torches and cycle lights are also used by people walking or cycling during hours of darkness, and this light affects their environment/ dark adaptation and ability to appreciate the full intensity of other light sources.

- 7.117 Nonetheless, the map does provide a useful indication of lighting levels throughout the study area and at the viewpoints. Baseline lighting is generally concentrated in the central, south eastern, and north western parts of the detailed study area where there are a large number of settlements and key routes, with occasional pockets of lighting across the remaining parts of the detailed study area. The highest levels of baseline lighting are experienced across and around the city of Carlisle, extending across a large part of the south eastern sector of the detailed study area from Dalston in the south to Longtown in the north. There are also some large pockets where baseline lighting is experienced within 10km of the Proposed Development associated with the settlements of Eastriggs, Gretna, Annan, and Kirkpatrick Fleming, and the decommissioned Chapelcross Power Station. Elsewhere, across large parts of the detailed study area, such as the Langholm Hills to the north and the extensive areas of the Cumbrian lowlands, the map shows no light pollution.
- 7.118 Night-time visualisations are provided for three viewpoints (2 (B721 near Rigg), 3 (Eastriggs – from edge of settlement), and 10 (Boustead Hill)), and the photographs at these viewpoints illustrate the baseline night-time environment.

Cumulative Wind Farm Developments

- 7.119 Both NatureScot and GLVIA3 advise in their guidance that the assessment of the cumulative impacts associated with the Proposed Development should encompass the effects of the proposal in conjunction with existing, under construction, consented and application stage wind farms awaiting determination. Schemes that are at the pre-planning or scoping stage are generally not considered in the assessment of cumulative effects because firm information on which to base the assessment is not available. The list of proposals presented in NatureScot guidance (NatureScot, 2021) is as follows:
- *“existing development, either built or under construction;*
 - *approved development, awaiting implementation; and*
 - *proposals awaiting determination within the planning process with design information in the public domain. Proposals and design information may be deemed to be in the public domain once an application has been lodged, and the decision-making authority has formally registered the application.”*
- 7.120 In this instance, there is inadequate design information to include schemes that are at the scoping stage in the cumulative assessment, and as a result they are not considered further in the detailed assessment of the LVIA.
- 7.121 In relation to whether or not wind farms are included in the cumulative assessment, NatureScot advises in its guidance (2021, p5) that:
- “The key principle for all impact assessments is to focus on the likely significant impacts and those which are likely to influence the outcome of the consenting process.”*

- 7.122 Consequently, the detailed assessment of cumulative effects tends to focus on those wind farms located within a slightly reduced 45km radius of the Proposed Development that are likely to be subject to the most noteworthy cumulative interactions. This is largely influenced by the distances between the Proposed Development and other cumulative projects, and the extent of any intervisibility, but the scale of wind farm and other development is also of relevance to the cumulative assessment.
- 7.123 Generally, the larger the development the higher the likelihood of a significant cumulative effect. Single turbines and those below 50m tip height are not included in the detailed assessment in line with NatureScot guidance (NatureScot, 2021), which states that “*due to the very large number of small scale (three or fewer wind turbines) proposals in the planning system in some areas of Scotland it may not be practical to include all of these in the search area base plan*”.
- 7.124 The cumulative situation changes frequently as applications are made or withdrawn, and the layouts of submitted application wind farms are changed. It is therefore necessary to agree on a cut-off date when the sites and layouts to be included are fixed. This has been set at the 11 November 2025. Any changes in the cumulative situation including status after the cut-off date have not been incorporated into the assessment. In relation to whether these changes might affect the findings of the cumulative assessment, it is noteworthy that while there is theoretical visibility of the refused Scoop Hill wind farm application from many of the assessment locations, its contribution to the predicted cumulative effects in the application cumulative scenario is considered to be negligible due to a combination of the intervening distance, its situation close to more prominent wind farm development, and the varying degrees of landform screening experienced across the study area. As a result, at the date of the production of the LVIA, it is considered that its refusal does not materially alter any of the findings of the cumulative assessment.
- 7.125 Wind farms and single turbines that are over 50m to tip height that lie within a 45km radius of the Proposed Development are shown on **Figure 7.12** and listed in **Table 7-8**.

Table 7-8 Cumulative wind energy development within a 45km radius

| Name / Status | Distance to closest proposed turbine (km) | Number of turbines | Maximum blade tip height (m) |
|---------------------------------|---|--------------------|------------------------------|
| Operational/ Under Construction | | | |
| Beck Burn | 7.1 | 9 | 126.5 |
| Solwaybank | 11.1 | 15 | 126.5 |
| Todhills, Blackford | 11.5 | 1 | 67.5 |
| Minsca | 12.6 | 16 | 120.0 |
| Hallburn | 13.9 | 6 | 126.5 |
| Great Orton | 14.2 | 6 | 68.5 |
| Midtown Farm | 14.3 | 1 | 74.0 |
| Tempest Tower | 14.4 | 1 | 54.7 |
| Spital Sykes Farm | 15.6 | 1 | 67.0 |
| Ewe Hill | 16.6 | 22 | 109.6 |
| Orton Park | 16.8 | 2 | 86.5 |

| Name / Status | Distance to closest proposed turbine (km) | Number of turbines | Maximum blade tip height (m) |
|--------------------------|---|--------------------|------------------------------|
| Orton Grange Farm | 17.2 | 1 | 65.0 |
| How End Farm | 18.3 | 1 | 75.0 |
| Craig | 18.6 | 5 | 99.5 |
| Craig Extension | 19.3 | 1 | 99.5 |
| Crossdykes | 19.4 | 10 | 176.5 |
| Hellrigg | 20.6 | 4 | 121.0 |
| Prospect House | 22.9 | 1 | 67.0 |
| High Burnthwaite Farm | 23.9 | 1 | 78.0 |
| Bankdale Park | 24.6 | 1 | 79.0 |
| High Pow Farm | 24.6 | 3 | 0.0 |
| Greenlands Farm | 24.8 | 1 | 67.0 |
| Brayton Park | 26.2 | 1 | 62.0 |
| Westnewton | 27.7 | 3 | 100.0 |
| Wharrels Hill | 30.8 | 8 | 76.0 |
| Tallentire Hill | 33.6 | 6 | 100.0 |
| Harestanes | 35.6 | 68 | 125.0 |
| Minnygap | 36.1 | 10 | 125.0 |
| West House Farm | 36.9 | 1 | 77.0 |
| Dalswinton | 37.9 | 15 | 120.0 |
| Auchenlosh | 38.7 | 2 | 46.5 |
| Plascow Farm | 39.1 | 3 | 76.5 |
| Flimby | 41.0 | 3 | 115.0 |
| Robin Rigg | 43.0 | 60 | 121.0 |
| Siddick | 43.2 | 7 | 61.0 |
| Eastman Chemical Factory | 43.7 | 2 | 107.0 |
| Consented | | | |
| Hopsrig | 19.7 | 12 | 140.0 |
| Little Hartfell | 20.7 | 9 | 160.0 |
| Plascow Farm Extension | 39.0 | 1 | 99.5 |
| Application / Appeal | | | |
| Bloch | 12.2 | 21 | 230.0 |
| Callisterhall | 14.8 | 7 | 200.0 |
| Loganhead Resub | 18.4 | 9 | 200.0 |
| Hopsrig Resub | 19.6 | 13 | 200.0 |

| Name / Status | Distance to closest proposed turbine (km) | Number of turbines | Maximum blade tip height (m) |
|-----------------------|---|--------------------|------------------------------|
| Hopsrig | 19.7 | 12 | 200.0 |
| Little Hartfell Resub | 20.7 | 9 | 190.0 |
| Balgray | 21.8 | 6 | 200.0 |
| Scoop Hill | 27.5 | 75 | 250.0 |
| Teviot | 34.4 | 52 | 240.0 |
| Harestanes South | 34.5 | 8 | 200.0 |
| Harestanes West | 36.9 | 12 | 220.0 |
| Rivox | 42.9 | 29 | 230.0 |
| Daer | 44.4 | 17 | 180.0 |
| Scoping | | | |
| Millriggs Farm | 23.4 | 1 | 127.0 |
| Georgefield Farm | 24.2 | 2 | 150.0 |
| Cable Rig | 24.7 | 31 | 250.0 |
| Westerkirk | 25.2 | 20 | 220.0 |
| Liddesdale | 32.2 | 59 | 250.0 |
| Windy Edge | 36.9 | 12 | 200.0 |
| Mid Hill | 40.7 | 42 | 200.0 |
| Cliffhope | 41.4 | 47 | 200.0 |
| Kinnelhead | 41.5 | 26 | 250.0 |

- 7.126 All operational and under construction wind farms are included in the baseline assessment as they form a part of the baseline situation. Their presence has the potential to influence the assessment of effects on landscape character and the assessment of effects on views. The cumulative assessment of the consented and application wind farms is presented afterwards for each landscape and visual receptor. Due to the degree of uncertainty in relation to the progression of the scoping stage wind farms, and also elements of their design, they are not considered in the detailed assessment of cumulative effects.

Summary of Baseline Conditions and Preliminary Assessment

- 7.127 This section has described the baseline of the study area, including a review of landscape character, landscape-related planning designations, principal visual receptors (including settlements and routes), viewpoints and cumulative wind farms. It also includes a preliminary assessment of the effect that the Proposed Development would have on these various landscape and visual receptors, and the findings of this preliminary assessment are summarised below.
- 7.128 The following aspects of the landscape and visual resource have potential to undergo significant effects (including cumulative effects) as a result of the Proposed Development and require detailed assessment subsequently in this Chapter:

- Landscape elements:
 - Agricultural Grassland
- Landscape character receptors:
 - 14. Coastal/Flow Plateau - Annandale Flow Plateau;
 - 4. Narrow Valleys - Kirtle Water;
 - 1. Bay and Estuary - Cardurnock Flatts and Moricambe Bay;
 - 1. Bay and Estuary - Rockcliffe Marsh;
 - 2. Coastal Margins – Bowness-on-Solway/ Burgh by Sands/ Newton Arlosh; and
 - 1. Bay and Estuary – Burgh Marsh.
- Landscape designations:
 - Nith Estuary NSA;
 - Solway Coast NL; and
 - Solway Coast RSA.
- Principal visual receptors:
 - Settlements – Eastriggs, Kirkpatrick-Fleming, Gretna, Creca, Annan, Port Carlisle, Bowness-on-Solway, Eaglesfield, Drumburgh, Boustead Hill, and Longtown;
 - Roads - A75 (forming part of the Galloway Tourist Route), B721, B6357, and B7076;
 - Railway lines - Glasgow South Western line;
 - Cycling Routes - NCR7 and NCR72;
 - Long Distance Walking Routes - Hadrian's Wall Path (inc. the Frontiers of the Roman Empire (Hadrian's Wall) WHS); and
 - Core Paths – GRET/248, EAST/531, GRET/517, EAST/530, and EAST/315.
- Viewpoints:
 - Viewpoint 1: B721 near Rigg;
 - Viewpoint 2: Eastriggs – from edge of settlement;
 - Viewpoint 3: Kirkpatrick Fleming – from B7076;
 - Viewpoint 4: Creca – from road south of settlement;
 - Viewpoint 5: Coastal Path (junction of Battlehill and Dornock Burn core paths);
 - Viewpoint 6: Gretna Green – from Old Smithy Visitor Car park;
 - Viewpoint 7: Start of Hadrian's Wall Path, Bowness-on-Solway;
 - Viewpoint 8: Annan – Watchill;
 - Viewpoint 9: Eaglesfield;
 - Viewpoint 10: Boustead Hill;
 - Viewpoint 11: King Edward I Monument;
 - Viewpoint 12: Longtown Bridge;

- Viewpoint 13: Whita Hill;
- Viewpoint 14: Ward Law; and
- Viewpoint 15: Criffel.

Assessment of Physical Landscape Effects

- 7.129 The first category of effects covered in the assessment is physical effects, which are direct effects on the fabric of the Site, such as the removal of ground cover vegetation during construction. Physical effects are found only on the Site, where existing landscape elements may be removed or altered by the Proposed Development, for example during the construction phase. This category of effects is made up of landscape elements and, in this case, the Site comprises mixed arable and pastoral farmland (see **Figure 7.38**). More sensitive habitats near to the Site have been avoided and are therefore not considered further in this assessment.
- 7.130 It should be noted that landscape elements are assessed with reference to their contribution to the landscape character rather than in ecological terms. The methodology for the assessment of physical landscape effects is described in full in **Technical Appendix 7.1**.

Mixed Arable and Pastoral Farmland

Baseline

- 7.131 Mixed arable and pastoral farmland is the predominant landcover across the Proposed Development.

Sensitivity

- 7.132 The value of the mixed arable and pastoral farmland is medium. Mixed arable and pastoral farmland, managed for agricultural purposes, is a common feature in the host LCT unit, which has a relatively strong influence upon the character of the local landscape.
- 7.133 The susceptibility of mixed arable and pastoral farmland to change is low due to its ability to be re-established through common agricultural practices.
- 7.134 The combination of these factors results in a **medium-low** sensitivity being attributed to the mixed arable and pastoral farmland across the Site.

Magnitude of Change

- 7.135 All four of the turbines, the anemometer mast, the solar PV arrays, the BESS/ substation compound and the majority of the access tracks will be located in the area of mixed arable and pastoral farmland that occurs on Site (see **Figure 7.38**).
- 7.136 Changes to the mixed arable and pastoral farmland landscape element would result as a consequence of the removal of soil and vegetation from the routes of the new access tracks during construction of the Proposed Development, and along the edge of the upgraded access tracks where widening is required, in the areas of the temporary construction compounds and the longer-term substation, control buildings, crane pads, turbine foundations and anemometer mast. Subsequently, affected parts of the Site would no longer be used for agricultural production during the operational lifetime of the project.

- 7.137 The magnitude of change on the mixed arable and pastoral farmland element would be **low** as the Proposed Development would result in the removal of relatively small areas, which constitute a small proportion of this relatively widespread landscape element. This rating has also taken into account the relative ease with which this vegetation type can re-colonise.

Significance of Effect

- 7.138 The physical effect of the Proposed Development on the mixed arable and pastoral farmland would be **minor** and **not significant**. This is primarily due to the medium-low sensitivity of the landscape element and the high potential for the mitigation of any direct effects. Although the effect would be not significant, the nature of the effect would be adverse.

Assessment of Effects on Landscape Character

- 7.139 Landscape character is the distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape, and the way that this pattern is perceived. Effects on landscape character arise either through the introduction of new elements that physically alter this pattern of elements, or through visibility of the Proposed Development, which may alter the way in which the pattern of elements is perceived.
- 7.140 Landscape character receptors fall into two groups:
- LCTs; and
 - Designated areas.
- 7.141 The assessment of effects on these receptors is described in the following sections of this Chapter. The detailed methodology for the assessment of effects on landscape character is described in **Technical Appendix 7.1**.
- 7.142 It should be noted that levels of magnitude of change on landscape character receptors are generally found to be lower than the magnitude of change on viewpoints that lie within these receptors. This means, for example, that if a viewpoint is assessed to undergo a high-medium magnitude of change it does not necessarily follow that the landscape character receptor within which it lies would also undergo a high-medium magnitude of change but may undergo a medium magnitude of change instead. This is because the effects on viewpoints are assessed within the context of a specific outlook towards the Site and are usually specifically selected to gain a direct view over the Proposed Development. The Proposed Development is therefore the principal consideration in the viewpoint assessment, and influences that lie in other areas of the view are of lesser relevance to the assessment. The landscape character of a receptor is not, however, determined so specifically by the outlook over the Proposed Development, and there are many other considerations, both visual and perceptual, that combine to give an area its landscape character. This means that the degree of influence of the Proposed Development on landscape character may be lower than its influence on a specific view.
- 7.143 Viewpoints are referred to in this assessment as they do give a useful indication of the appearance of the Proposed Development from the landscape receptors, but the level of magnitude of change may vary between the viewpoint assessment and the landscape character assessment. This is particularly true of areas that lie slightly further away from the Site. In the immediate vicinity of the Site, typically up to around 2km to 3km away – the magnitude of change on viewpoints and landscape character is likely to be similar, but beyond this, the magnitude of change on landscape character is found to often diminish

more rapidly as the influence of the turbines is subsumed in the many other influences on landscape character.

Assessment of Effects on LCTs

7.144 The LCTs that cover the detailed study area are shown on **Figure 7.3d-e** and in conjunction with the ZTV on **Figures 7.9b**. The 'Preliminary Assessment of LCTs' section of this LVIA presents a review of LCTs within the detailed study area. This has found that the following LCTs have the potential to undergo significant effects and therefore require a detailed assessment in the LVIA:

- 14. Coastal/ Flow Plateau - Annandale Flow Plateau;
- 4. Narrow Valleys - Kirtle Water;
- 1. Bay and Estuary - Cardurnock Flatts and Moricambe Bay;
- 1. Bay and Estuary - Rockcliffe Marsh;
- 2. Coastal Margins – Bowness-on-Solway/ Burgh by Sands/ Newton Arlosh; and
- 1. Bay and Estuary – Burgh Marsh.

7.145 The effect on each of these LCTs is assessed below. The LCTs that cover the remainder of the study area were found through the review process to not have the potential to be significantly affected and have therefore not been assessed in any further detail.

14. Coastal/ Flow Plateau LCT - Annandale Flow Plateau Unit

Baseline

7.146 The Annandale Flow Plateau unit of the Coastal/ Flow Plateau LCT encompasses large parts of the coastal landscape to the north of the Solway Firth, but also some transitional inland areas to the north of Gretna and to the north west of Annan.

7.147 The following description of this LCT has been extracted from the DGLSS:

"This gently undulating to flat coastal plain falls gradually to the Solway coast and the broad floodplain at the mouth of the River Esk. Farmland is interspersed with low-lying mosses which are often encircled by broadleaved woodland and scrub. This is a well settled landscape with a number of settlements concentrated close to the Solway Firth. The field enclosure pattern becomes less distinct and settlement sparser in the northeast of this Assessment Unit at the transition with the Upland Fringe (15). These open coastal areas are highly visible from roads and settlement in the more elevated surrounding upland fringes and foothills."

7.148 There are no operational wind farm developments located within this LCT, but some eastern areas of the LCT around Gretna possess an influence from the nearby operational Beck Burn Wind Farm (see Viewpoint 6 (Gretna – from Old Smithy Visitor Car Park)).

7.149 The characteristics of the LCT are illustrated in the visualisations for Viewpoint 1 (B721 near Rigg) (**Figure 7.17**), Viewpoint 2 (Eastriggs – from edge of settlement) (**Figure 7.18**), Viewpoint 4 (Creca – from southern edge of settlement) (**Figure 7.20**), and Viewpoint 5 (Coastal Path (junction of Battlehill and Dornock Burn core paths)) (**Figure 7.21**), which are all located within this LCT.

7.150 There is widespread theoretical visibility predicted across the majority of this LCT with the exception of floors and lower slopes of a number of river valleys (see **Figure 7.9b**). These

river valleys that would be unaffected by the Proposed Development are associated with various tributaries of the River Sark, such as the Logan and Cadgill Burns, the River Annan, and the Pow Water. The detailed assessment therefore focusses on effects arising across more elevated areas where theoretical visibility is predicted.

Sensitivity

- 7.151 The Annandale Flow Plateau unit of the Coastal/ Flow Plateau LCT has a medium value. The LCT does not form part of a locally or nationally designated landscape, and it does not contain any Gardens and Designed Landscapes, but parts of the LCT are relatively scenic, particularly along the coast. Large parts of the LCT unit have been subject to a considerable influence from human activity, varying from relatively sympathetic agricultural practices to the development of Chapelcross Power Station, the peat works on Nutberry Moss, and Explosive Storage Depot near Eastriggs, for example. The influence of these developments across the LCT unit preclude a higher value being attributed to it.
- 7.152 The Annandale Flow Plateau unit of the Coastal/ Flow Plateau LCT generally has a high-medium susceptibility to the Proposed Development, although it varies slightly across its extents. Overall, the character of the relatively simple, man-modified landscape reduces the LCT's susceptibility to wind farm development, but the pattern of smaller scale fields (often bounded by hedgerows) and scattered settlement increase its susceptibility to the introduction of very large-scale elements, such as wind turbines. Where the more open character of the Solway Firth contributes strongly to the character of the landscape close to the coast, the susceptibility of the LCT is often slightly lower.
- 7.153 The combination of the value of the landscape and its susceptibility to the Proposed Development leads to an overall **high-medium** rating for sensitivity.

Magnitude of Change

- 7.154 The Proposed Development lies within a central area of this LCT unit, and given the coverage of the ZTV, the greatest potential for effects lies across these central parts of the LCT unit. Theoretical visibility of the proposed turbines is widespread across the surrounding landscape at distances of up to 17km (see **Figure 7.9b**), but the actual influence of the Proposed Development would be determined to a large degree by the level of screening from woodland and hedgerows, and potentially also buildings, due the relatively flat landscape. Woodland and hedgerows that often bound agricultural fields provide a sense of enclosure across many areas, which greatly moderates the influence of the Proposed Development upon large parts of the LCT unit (see **Figure 7.38**). The woodland and hedgerows that are characteristics of these areas are illustrated in many of the visualisations for the LVIA viewpoints, such as Viewpoints 1, 2, 4, 5, and 12.
- 7.155 Factors that increase the magnitude of change are:
- The widespread coverage of theoretical visibility of the Proposed Development;
 - The large scale of the proposed wind turbines;
 - The exposure of the Site due to the local landscape's relatively flat topography which provides only limited screening from landforms;
 - The Proposed Development's situation relative to the open landscape of Nutberry Moss, which facilitates some less interrupted visibility of the wind turbines across areas immediately to the west of the Site;
 - The situation of the Proposed Development within far-reaching views across the Solway Firth experienced from areas to the north of the Site;

- The modest influence of wind farms across large parts of the LCT unit; and
- The larger scale of the proposed wind turbines relative to the closest existing wind farms in neighbouring LCTs.

7.156 Factors that moderate the magnitude of change are:

- The relatively small number of wind turbines proposed which would limit the extent of direct effects on the LCT;
- The medium scale of the surrounding relatively expansive landscape;
- The localised influence of other large-scale developments in the wider area, such as the Chapelcross Power Station.
- Scattered woodland and hedgerows around fields provide some containment across parts of the LCT unit due to its relatively flat topography, and greatly reduce visibility of the proposed solar PV array and BESS/ substation compound (see **Figures 7.34-7.37**).
- The position of the Proposed Development on the more elevated slopes of the LCT to the north of the A75, which have a weaker association with the Solway Firth than those further to the south.
- The position of the Proposed Development close to the more developed transport corridor associated with the A75, which also contains electricity transmission lines spanning between Gretna and Annan.

7.157 Taking these factors into account, the magnitude of change on the closest areas of the LCT unit within 3km of the Proposed Development would be **high** where there is no screening from woodland and hedgerows. Beyond this distance, it is likely that the magnitude of change upon the LCT's landscape character would reduce to **medium** at distances of between 3-4km, and to **low** at distances of between 4-6km, where visibility is not interrupted by intervening woodland and hedgerows. At distances of beyond 6km, it is likely that the magnitude of change would vary between **negligible** and **no change** depending on the level of screening from vegetation and buildings.

Significance of Effect

7.158 The effect of the Proposed Development on the landscape character of the Annandale Flow Plateau unit of the Coastal/ Flow Plateau LCT would be **major** and **significant** across affected areas within 3km of the Proposed Development. It would reduce to **moderate** and **not significant** at distances of between 3-4km from the Proposed Development, and at greater distances effects would vary between **minor** and **not significant** where enclosure would not be present from surrounding vegetation. There would be **no change** to the character of the landscape across large parts of the LCT unit where visibility is screened by either vegetation or buildings.

Cumulative Assessment

7.159 In the consented cumulative scenario, the cumulative influence of wind farm developments upon the LCT unit would be relatively similar to the current baseline of operational wind farms, due to the distances of the consented Little Hartfell and Hopsrig Wind Farms from large parts of the LCT unit and the screening of much of the predicted visibility due to the presence of intervening hedgerows and woodlands. Where visible, the two consented wind farms would tend to consolidate these existing external influences due to their situation close to other operational wind farms, such as Ewe Hill and

Crossdykes (see **Figure 7.13i**). The Proposed Development would have a relatively weak association with these existing wind farm clusters in the foothills to the north of the LCT unit, due to its location within the lowlands of the Coastal/ Flow Plateau LCT - Annandale Flow Plateau Unit. The cumulative magnitude of change arising between the Proposed Development and operational and consented wind farms would therefore tend to be no higher than **medium** across the LCT unit, with a **negligible** cumulative magnitude of change or **no effect** predicted across large parts of the LCT unit where woodland/ hedgerow screens the external influence of operational, consented and application-stage wind farms. Areas where a higher cumulative magnitude is likely to arise are intermittently situated across the north east and south east of the LCT unit, where the landscape is closer to the external influences of the Beck Burn and Solwaybank Wind Farms.

- 7.160 The cumulative effect of the Proposed Development in the consented cumulative scenario would therefore be at worst **moderate** and **not significant** across affected parts of the LCT unit, and there would be **no change** or a **negligible** effect to the cumulative scenario across parts of the LCT where no or negligible visibility is predicted.
- 7.161 In the application cumulative scenario, the cumulative influence of wind farm developments upon the LCT unit would increase slightly relative to the current baseline of operational wind farms, due primarily to the increased vertical and horizontal scale of the application-stage Bloch Wind Farm (see **Figure 7.13k**), which would be situated close to the operational Solwaybank Wind Farm near the north eastern boundary of the LCT unit. However, the extent of any effects upon the character of the landscape would still be heavily moderated by the presence of intervening hedgerows and woodlands. The Proposed Development would therefore still have a relatively weak association with the wind farm developments situated in the foothills to the north of the LCT unit, due to its location within the lowlands. The cumulative magnitude of change arising between the Proposed Development and operational, consented and application wind farms would therefore still tend to be no higher than **medium** across the LCT unit, with a **negligible** cumulative magnitude of change or **no effect** predicted across large parts of the LCT unit where woodland/ hedgerow screens the external influence of operational, consented and application-stage wind farms. Areas where a higher cumulative magnitude is likely to arise are intermittently situated across the north east and south east of the LCT unit, where the landscape is closer to the external influences of the Bloch, Beck Burn and Solwaybank Wind Farms.
- 7.162 The cumulative effect of the Proposed Development in the application cumulative scenario would therefore be at worst **moderate** and **not significant** across affected parts of the LCT unit, and there would be **no change** or a **negligible** effect to the cumulative scenario across parts of the LCT where no or negligible visibility is predicted.

4. Narrow Valleys LCT - Kirtle Water Unit

Baseline

- 7.163 The Narrow Valleys - Kirtle Water LCT is located approximately 1km to the north of the Proposed Development, extending north to encompass the valley of the Kirtle Water between Kirkpatrick Fleming and Springkell.
- 7.164 The following characteristics of this LCT have been extracted from the NatureScot LCA:
- *“Narrow incised valleys with wooded slopes enclosing pasture floors.*
 - *Small pastures and arable fields enclosed by hedges/fences in lower reaches and drystone dykes in upper reaches.*

- *Dominant broadleaf (semi-natural) woodland character with conifers on higher slopes.*
- *Lush trough-shaped river valleys with pasture/arable floors enclosed by deciduous wooded slopes.*
- *Riparian trees and woodlands following meandering river courses in lower reaches.*
- *Narrow lanes following valleys and linking isolated houses, occasional settlements and providing access to higher moorland.*
- *Clusters of prehistoric landscapes and settlement up some valleys, notably in Eskdale.*
- *Numerous arched stone bridges over the rivers.*
- *Intimate unspoilt landscape focussing on river views with some adjacent policy landscape.”*

7.165 The characteristics of southern parts of the LCT are illustrated in the visualisations for Viewpoint 3 (Kirkpatrick Fleming – from B7076) (**Figure 7.19**).

7.166 There is relatively widespread theoretical visibility predicted across the LCT unit, with the exception of the floor of the Kirtle Water valley and a larger area around Burnfoot. The detailed assessment therefore focusses on the more elevated parts of the LCT unit where landform screening is more limited and theoretical visibility is predicted.

Sensitivity

7.167 The Kirtle Water unit of the Narrow Valleys LCT has a medium value. The LCT does not form part of a locally or nationally designated landscape, and it does not contain any historic GDLs, but parts of the LCT are relatively scenic. Large parts of the LCT unit have also been subject to a considerable influence from human activity, in particular those areas that surround the M74 motorway and the railway line. The influences from development and the absence of any formal value being attributed to the landscape preclude a higher value being attributed to it.

7.168 The Kirtle Water unit of the Narrow Valleys LCT generally has a medium-high susceptibility to the Proposed Development, although it varies slightly across its extents. The character of the interior of this relatively small scale, often man-modified landscape has a relatively high susceptibility to wind farm development. There is also only a limited influence from operational wind farm development, and wind turbines would contrast with its relatively small scale. The edges of the LCT unit have a slightly lower susceptibility due to the slightly larger scale field patterns and its more open character.

7.169 The combination of the value of the landscape and its susceptibility to the Proposed Development leads to an overall **medium-high** rating for sensitivity.

Magnitude of Change

7.170 The Proposed Development is located outwith the LCT unit and there would therefore be no direct effects upon its character. Effects of the Proposed Development would therefore be indirect and associated with its influence on its surrounding landscape.

7.171 As previously mentioned, theoretical visibility of the Proposed Development is widespread across the majority of the LCT unit with the exception of the floor of the Kirtle Water valley and a larger area around Burnfoot, while large areas to the north of Kirtlebridge are only predicted to experience theoretical visibility of the turbine blades at distances of over 5km from the Proposed Development (see **Figure 7.7a-d**). The greatest potential for

effects therefore arises across more elevated areas in the southern half of the LCT unit where a larger proportion of the wind turbines would be visible at distances of between 1-5km from the Proposed Development.

7.172 Factors that increase the magnitude of change are:

- The widespread coverage of theoretical visibility of the Proposed Development across the southern half of the LCT unit;
- The relatively short distance between the closest reaches of the LCT unit from the Proposed Development;
- The perceived large scale of the proposed wind turbines;
- The external influence of the Proposed Development within a part of the LCT unit's setting that contains expansive views across the Solway Firth that can be experienced from the valley slopes to the south of the Kirtle Water;
- The open agricultural land situated between much of the potentially affected areas of the LCT unit and the Proposed Development; and
- The limited influence of operational wind farms on the LCT unit.

7.173 Factors that moderate the magnitude of change are:

- There would be no direct physical effects on this LCT;
- The relatively compact form of the Proposed Development when experienced from this LCT due to the small number of turbines proposed (see **Figure 7.8**) and the screening of the solar PV array and BESS / substation compound by intervening hedgerows and woodland (see **Figures 7.34-7.37**);
- The absence of visibility of the Proposed Development across the more intimate unspoilt landscape that surrounds the river;
- The focus that the river commands across much of the LCT;
- The enclosure provided by the wooded slopes surrounding much of the Kirtle Water;
- The lower elevation of the Proposed Development relative to those areas where the greatest proportion of the turbines would be apparent; and
- The existing movement associated with vehicles and trains along the corridors containing the M74 motorway and the trainline.

7.174 Taking these factors into account, the magnitude of change upon the landscape character of this LCT unit would be **high-medium** across its closest reaches around Hollie and Irvington, where the turbines would be apparent above the containing ridgeline above the valley, and also from some open areas to the north of the river around Kirkpatrick Fleming that have a stronger association with the host LCT. Across other areas of the southern half of the LCT unit (south east of Kirtlebridge) where there is either a slightly reduced visibility of the Proposed Development, a weaker association with the host LCT, or a greater influence from development associated with settlement and/ or the transport network, the magnitude of change would be lower decreasing with distance to between **medium** and **low** where visibility isn't screened by intervening woodland, hedgerows or buildings. Across the northern half of the LCT unit, at greater distances, the magnitude of change would continue to reduce to between **low** and **negligible** where visibility is uninterrupted by intervening woodland, hedgerows or buildings. Across the large areas of the LCT unit where visibility is either interrupted or screened entirely it is predicted that the magnitude of change would be either **negligible** or there would be **no change**.

Significance of Effect

- 7.175 The effect of the Proposed Development on the landscape character of the Kirtle Water unit of the Narrow Valleys LCT where theoretical visibility is predicted to be highest would be at worst **major-moderate** and **significant** across the closest reaches of the LCT unit, while effects predicted across other southern parts of the LCT would vary between **moderate** and **significant** and **moderate-minor** and **not significant** depending on the degree of turbine visibility and distance. Across all other potentially affected parts of the LCT unit effects would be minor or negligible and not significant, and there would be **no change** to the character of the landscape across large parts of the LCT unit where visibility is screened by either vegetation or buildings.

Cumulative Assessment

- 7.176 In the consented cumulative scenario, the cumulative influence of wind farm developments upon the LCT unit would be relatively similar to the current baseline of operational wind farms, due to the situation of the consented Little Hartfell and Hopsrig Wind Farms close to existing wind farm development and the screening of much of the predicted visibility due to the presence of intervening landform (see **Figure 7.13h**), hedgerows and woodlands. Where visible, the two consented wind farms would tend to consolidate these existing external influences due to their situation close to other operational wind farms, such as Ewe Hill and Crossdykes. The Proposed Development would have a relatively weak association with these existing wind farm clusters in the foothills to the north of the LCT unit though, due to its location within the lowlands to the south. The cumulative magnitude of change arising between the Proposed Development and operational and consented wind farms would therefore tend to be no higher than **medium-low** across the LCT unit, with a **negligible** cumulative magnitude of change or **no effect** predicted across large parts of the LCT unit where landform, woodland or hedgerows screen the external influence of operational and consented wind farms. Areas where a higher cumulative magnitude is likely to arise are situated across the more elevated edges of the LCT unit, where the landscape is more open and subsequently more susceptible to external influences.
- 7.177 The cumulative effect of the Proposed Development in the consented cumulative scenario would therefore be at worst **moderate** and **not significant** across affected parts of the LCT unit, and there would be **no change** or a **negligible** effect to the cumulative scenario across parts of the LCT where no or negligible visibility is predicted.
- 7.178 In the application cumulative scenario, the cumulative influence of wind farm developments upon the LCT unit would increase slightly relative to the current baseline of operational wind farms, due primarily to the increased vertical and horizontal scale of the application-stage Bloch Wind Farm (see **Figure 7.13k**), which would be situated close to the operational Solwaybank Wind Farm to the north east of the northern boundary of the LCT unit. However, the extent of any effects upon the character of the landscape would still be heavily moderated by the presence of intervening hedgerows and woodlands. The Proposed Development would therefore still have a relatively weak association with the wind farm developments situated in the foothills to the north of the LCT unit, due to its location within the lowlands. The cumulative magnitude of change arising between the Proposed Development and operational and consented wind farms would therefore tend to be no higher than **medium-low** across the LCT unit, with a **negligible** cumulative magnitude of change or **no effect** predicted across large parts of the LCT unit where landform, woodland or hedgerows screen the external influence of operational and consented wind farms. Areas where a higher cumulative magnitude is likely to arise are

situated across the more elevated edges of the LCT unit, where the landscape is more open and subsequently more susceptible to external influences.

- 7.179 The cumulative effect of the Proposed Development in the application cumulative scenario would therefore be at worst **moderate** and **not significant** across affected parts of the LCT unit, and there would be **no change** or a **negligible** effect to the cumulative scenario across parts of the LCT where no or negligible visibility is predicted.

1. Bay and Estuary LCT - Cardurnock Flatts and Moricambe Bay Unit

Baseline

- 7.180 The Cardurnock Flatts and Moricambe Bay unit of the Bay and Estuary LCT is located to the south of the Proposed Development, occupying large parts of the Solway Firth between Rockcliffe Marsh and Cardurnock Flatts. The LCT generally encompasses the tidal mudflats around the English Solway Coast up to the Coastal Margins LCT which extends across the mainland coastline.
- 7.181 The following characteristics of this LCT has been extracted from the CLCC:
- *“Dynamic landscape changing rapidly with daily tides and through cycles of erosion and deposition*
 - *Mudflats, sands, shingle and pebble beaches contrast with open water*
 - *Predominantly flat and open topography*
 - *Vast uncluttered skies and horizons*
 - *Significant ecological interest – large intertidal habitat for invertebrates forms internationally important roosting and feeding grounds for wading birds and wildfowl*
 - *Cultural artifacts and historical routes or ‘waths’ across the sands enrich this landscape and strengthen a sense of the past*
 - *Cockle fishing, Haaf netting and other fishing activities provide a human presence.”*
- 7.182 The characteristics of the LCT are also illustrated in the visualisations for Viewpoint 7 (Start of Hadrian’s Wall Path, Bowness-on-Solway) (**Figure 7.23**), which is located in this LCT.
- 7.183 There are no wind farms located within this LCT, but there is an influence from some distant wind farm development (such as the Minsca, Solwaybank, and Beck Burn Wind Farms) across a few elevated locations as illustrated by cumulative ZTV **Figures 7.13a-h**.
- 7.184 Theoretical visibility is widespread across the majority of the LCT unit with the exception of some small parts of the Channel of River Wampool, south of Cardurnock. As such, the detailed assessment covers effects arising across the vast majority of the LCT unit.

Sensitivity

- 7.185 The Cardurnock Flatts and Moricambe Bay unit of the Bay and Estuary LCT has a high value. The LCT unit is partially covered by the Solway Coast NL, while parts of the LCT unit closer to the shoreline also form part of the ‘Core’ and ‘Buffer Zone’ areas of the Frontiers of the Roman Empire WHS. The relatively high scenic value of the LCT is derived from the strong naturalness qualities that the tidal mudflats and waters possess, and the role the landscape plays in the changing scenery that is experienced from within the waters or by receptors situated along the mainland coastline. Those areas closest the

shorelines that are covered by the National Landscape designation are considered to possess a slightly higher value than the deeper waters situated further from the shoreline.

- 7.186 The Cardurnock Flatts and Moricambe Bay unit of the Bay and Estuary LCT generally has a medium susceptibility to the Proposed Development. The openness, large scale, movement, strong inherent characteristics, and its weaker association with more inland landscapes reduce the susceptibility of the LCT to external development, but its susceptibility is increased due to the contrasting vertical scale of wind turbines and its strong naturalness qualities.
- 7.187 The combination of the value of the landscape and its susceptibility to the Proposed Development leads to an overall **high-medium** rating for sensitivity.

Magnitude of Change

- 7.188 The Proposed Development is located outwith the LCT unit and there would therefore be no direct effects upon its character. Effects of the Proposed Development would therefore be indirect and associated with its influence on its surrounding landscape.
- 7.189 As mentioned previously, theoretical visibility is widespread across the LCT unit at distances of between 3-16km and as a consequence the magnitude of change would vary across affected areas due to the varying distance from the Proposed Development. The greatest potential for effects arises across those parts of the LCT immediately to the south of the Proposed Development, for example around the channel of the River Esk and Bowness-on-Solway, where visibility is unlikely to be interrupted by intervening vegetation and landform. Contrastingly, effects are likely to reduce substantially across the more distant south western parts of the LCT around Moricambe and Cardurnock where there is potential for screening from some intervening landform and there is a greater influence from other closer vertical structures associated with the Anthorn Radio Station.
- 7.190 Factors that increase the magnitude of change are:
- The widespread theoretical visibility predicted across the LCT unit;
 - The perceived medium to large scale of the proposed wind turbines from across the closest reaches of the LCT unit;
 - The foreshortening that occurs where the turbines are visible across the Solway Firth due to the simplicity of the intervening waters;
 - The contrast of the proposed wind turbines with smaller scale landscape elements, such as the scattered buildings, along the Dumfries and Galloway coast;
 - The addition of tall vertical structures into a landscape containing “*vast uncluttered skies and horizons*”; and
 - The flat topography of the landform which provides very little screening of the proposed turbines.
- 7.191 Factors that moderate the magnitude of change are:
- The vast scale of the open coastal waters and mudflats;
 - The relatively compact form of the Proposed Development when experienced from this LCT due to the small number of turbines proposed (see **Figure 7.8**) and the screening of the solar PV array and BESS / substation compound by intervening hedgerows and woodland (see **Figures 7.34-7.37**);
 - The distinct boundaries between this LCT and the landscape of the Site;

- The presence of existing vertical structures associated with the Anthorn Radio Station across western parts of the LCT unit; and
- The external influence of other operational wind farms (notably Solwaybank, Craig, Ewe Hill, Minsca, and Beck Burn) in the wider landscape, albeit at greater distances, and vertical structures associated with Chapelcross Power Station.

7.192 Taking these factors into account, the magnitude of change for this LCT would be **medium** around its closest parts to the south of the Proposed Development to the south of Torduff Point, Browhouses, and Redkirk Point, and would reduce to **medium-low** further south across parts of the LCT unit between Bowness-on-Solway and Burgh Marsh. At greater distances, across western parts of the LCT unit between Bowness-on-Solway and Cardurnock Flatts, the magnitude of change would reduce to **low or negligible** at distances of between 7-13km, with a further reduction in the magnitude of change across south western parts of the LCT unit around Moricambe Bay to either **negligible or no change**.

Significance of Effect

7.193 The effect of the Proposed Development on the landscape character of the Cardurnock Flatts and Moricambe Bay unit of the Bay and Estuary LCT where theoretical visibility is predicted to be highest would be at worst **major-moderate** and **significant** around its closest parts to the south of the Proposed Development around Torduff Point, Browhouses, and Redkirk Point, and would reduce to **moderate** and **significant** further south across parts of the LCT unit between Bowness-on-Solway and Burgh Marsh. Across western parts of the LCT unit between Bowness-on-Solway and Cardurnock Flatts, effects would reduce to **moderate-minor** and **not significant**, with a further reduction in effects across south western parts of the LCT unit around Moricambe Bay to either **minor or no change** and **not significant**.

Cumulative Assessment

- 7.194 In the consented cumulative scenario, the cumulative influence of wind farm developments upon the LCT unit would be relatively similar to the current baseline of operational wind farms, due to the situation of the consented Little Hartfell and Hopsrig Wind Farms close to existing wind farm development. The two consented wind farms would often tend to consolidate these existing external influences due to their situation close to other operational wind farms, such as Minsca, Ewe Hill and Crossdykes. The Proposed Development would be situated within the lowlands beneath the foothills containing these other distant wind farms, situated at closer distance with a larger perceived vertical scale, and there would be a degree of visual coalescence which would strengthen the association between the wind farms. As a result, the Proposed Development would increase the external influence of wind farm development upon the character of the LCT unit. The cumulative magnitude of change upon the character of the LCT unit would however be moderated by the separation between the LCT unit and the wind farms, which is emphasised by the Solway Firth. The cumulative magnitude of change arising between the Proposed Development and operational and consented wind farms would therefore tend to be **medium-low** across the majority of the LCT unit, with effects reducing to **negligible** around Moricambe Bay where landform, woodland or hedgerows interrupt the external influence of operational and consented wind farms and the Proposed Development.
- 7.195 The cumulative effect of the Proposed Development in the consented cumulative scenario would therefore be at worst **moderate** and **not significant** across affected parts of the

LCT unit, and there would be a **negligible** effect to the cumulative scenario across parts of the LCT where negligible visibility is predicted due to screening.

- 7.196 In the application cumulative scenario, the cumulative influence of wind farm developments upon the LCT unit would increase slightly relative to the current baseline of operational wind farms, due primarily to the increased vertical and horizontal scale of the application-stage Bloch, Callisterhall, Loganhead Resubmission and Hopsrig Resubmission Wind Farms (see **Figure 7.13k**), which would be situated at distances typically over 20km from the LCT unit, close to operational wind farms in the Dumfries and Galloway foothills. The Proposed Development would be situated within the lowlands beneath the foothills containing these other distant wind farms, situated at closer distance with a larger perceived vertical scale, and there would be a degree of visual coalescence which would strengthen the association between the wind farms. As a result, the Proposed Development would further increase the external influence of wind farm development upon the character of the LCT unit. The cumulative magnitude of change upon the character of the LCT unit would however be moderated by the separation between the LCT unit and the wind farms, which is emphasised by the Solway Firth. The cumulative magnitude of change arising between the Proposed Development and operational and consented wind farms would tend to be **medium-low** across the LCT unit, across the majority of the LCT unit, with effects reducing to **negligible** around Moricambe Bay where landform, woodland or hedgerows interrupt the external influence of operational and consented wind farms and the Proposed Development.
- 7.197 The cumulative effect of the Proposed Development in the application cumulative scenario would therefore be at worst **moderate** and **not significant** across affected parts of the LCT unit, and there would be a **negligible** effect to the cumulative scenario across parts of the LCT where negligible visibility is predicted due to screening.

1. Bay and Estuary LCT - Rockcliffe Marsh Unit

Baseline

- 7.198 The Rockcliffe Marsh unit of the Bay and Estuary LCT comprises a relatively small area surrounding the mouth of the River Esk, which is situated approximately 5km to the south east of the Proposed Development.
- 7.199 The following characteristics of this LCT has been extracted from the CLCC:
- *“Salt marshes in sheltered parts of estuaries and bays*
 - *Hedge topped sea dykes*
 - *Closely grazed fine sward*
 - *Creeks and channels form a dendritic pattern*
 - *Higher marshes dissected by streams*
 - *Sporadic scrub and remnant field hedges”*
- 7.200 There are no wind farms located within this LCT, but there is an influence from some distant wind farm development (such as the Minsca, Solwaybank, and Beck Burn Wind Farms) across a few elevated locations as illustrated by cumulative ZTV **Figures 7.13a-h**.
- 7.201 Theoretical visibility is widespread across the LCT with the exception of some small areas of the River Esk near Mossband Hall Marsh. As such, the detailed assessment covers effects arising across the vast majority of the LCT unit.

Sensitivity

- 7.202 The Rockcliffe Marsh unit of the Bay and Estuary LCT generally has a high value. The majority of the LCT unit is covered by the Solway Firth NL and also forms part of the 'Buffer Zone' for the Frontiers of the Roman Empire WHS, and it possesses some recreational and scenic value. The scenic value of the LCT is derived from the strong naturalness qualities of the marsh, its intricate network of watercourses, and its openness, which enables expansive views of the surrounding area. The north and north eastern extremities of the LCT unit have a slightly lower value due to the absence of any landscape designation coverage.
- 7.203 The Rockcliffe Marsh unit of the Bay and Estuary LCT generally has a medium susceptibility to the Proposed Development. The openness, large scale, strong inherent characteristics, and its closer association with the waters of the Solway Firth reduce its susceptibility to wind turbine development, but its susceptibility is generally increased due to the contrasting vertical scale of wind turbines and its strong naturalness qualities. Across the northern and north eastern extremities of the LCT unit, the susceptibility is reduced to a greater degree by the presence of electricity transmission lines and the areas proximity to settlement.
- 7.204 The combination of the value of the landscape and its susceptibility to the Proposed Development leads to an overall **high-medium** rating for sensitivity.

Magnitude of Change

- 7.205 The Proposed Development is located outwith the LCT unit and there would therefore be no direct effects upon its character. Effects of the Proposed Development would therefore be indirect and associated with its influence on its surrounding landscape.
- 7.206 Theoretical visibility of a large proportion of the Proposed Development (including turbine hubs) is predicted across the vast majority of the LCT unit (see **Figures 7.7d** and **7.9b**) at distances of between 5-8km, with the exception of a couple of sections of the River Esk in the east of the LCT unit, and also areas that experience screening from the embankment to the south east of the Esk Boathouse. In general, given the flat topography of this LCT unit and the absence of trees, woodland, and buildings, it is considered that this extensive visibility would be uninterrupted in reality, with the exception of potentially affected areas in the very north of the LCT (north of Sarkfoot Point), which may experience a degree of screening from the buildings associated with the settlement of Gretna.
- 7.207 Factors that increase the magnitude of change are:
- The widespread theoretical visibility predicted across the LCT unit;
 - The perceived medium to large scale of the proposed wind turbines from across the closest reaches of the LCT unit;
 - The foreshortening that occurs where the turbines are visible across the Solway Firth due to the simplicity of the intervening waters;
 - The contrast of the proposed wind turbines with smaller scale landscape elements, such as the scattered buildings, along the Dumfries and Galloway coast;
 - The addition of tall vertical structures into a landscape containing uninterrupted, expansive views that emphasise the broad horizon; and
 - The flat topography of the landform which provides very little screening of the proposed turbines.

7.208 Factors that moderate the magnitude of change are:

- The vast scale of the marshland;
- The relatively compact form of the Proposed Development when experienced from this LCT due to the small number of turbines proposed (see **Figure 7.8**) and the screening of the solar PV array and BESS/ substation compound by intervening hedgerows and woodland (see **Figures 7.34-7.37**).
- The distinct boundaries between this LCT and the landscape of the Site
- Electricity pylons traversing the northern and eastern fringes of the LCT unit; and
- The external influence of other operational wind farms (notably Solwaybank, Craig, Ewe Hill, Minsca, and Beck Burn) in the wider landscape, albeit at greater distances, and vertical structures associated with Chapelcross Power Station.

7.209 Taking these factors into account, the magnitude of change for this LCT would generally be **medium-low** across the majority of the LCT unit, with some intervening landform screening moderating effects across the closest northern reaches of the LCT unit and a greater proportion of the wind turbines visible at greater distances. The only exception to this would be across the two small protrusions to the north and east of the LCT unit, where the magnitude of change would reduce further to between **low** and **no change** depending on the influence of the nearby electricity pylons and buildings.

Significance of Effect

7.210 The effect of the Proposed Development on the landscape character of the Rockcliffe Marsh unit of the Bay and Estuary LCT where theoretical visibility would generally be **moderate** and **significant** across the majority of the LCT unit. Across the two small protrusions to the north and east of the LCT unit, effects would reduce to between **moderate-minor** and **minor** and **not significant**.

Cumulative Assessment

7.211 In the consented cumulative scenario, the cumulative influence of wind farm developments upon the LCT unit would be relatively similar to the current baseline of operational wind farms, due to the situation of the consented Little Hartfell and Hopsrig Wind Farms close to existing wind farm development. The two consented wind farms would often tend to consolidate these existing external influences due to their situation close to other distant operational wind farms, such as Minsca, Ewe Hill and Crossdykes. The Proposed Development would be situated within the lowlands situated to the south of the foothills containing these other distant wind farms, situated at closer distance with a larger perceived vertical scale, and as a result it would extend the external influence of wind farm development to the north east of the LCT unit slightly. The cumulative magnitude of change upon the character of the LCT unit would however be moderated by the separation between the LCT unit and the wind farms, which is emphasised by the Solway Firth. The cumulative magnitude of change arising between the Proposed Development and operational and consented wind farms would therefore be **medium-low** across the LCT unit.

7.212 The cumulative effect of the Proposed Development in the consented cumulative scenario would therefore be at **moderate** and **not significant** across affected parts of the LCT unit.

7.213 In the application cumulative scenario, the cumulative influence of wind farm developments upon the LCT unit would increase slightly relative to the current baseline of operational wind farms, due primarily to the increased vertical and horizontal scale of the

application-stage Bloch, Callisterhall, Loganhead Resubmission and Hopsrig Resubmission Wind Farms (see **Figure 7.13k**), which would be situated at distances typically over 15-20km from the LCT unit, close to operational wind farms in the Dumfries and Galloway foothills. The Proposed Development would be situated within the lowlands situated to the south of the foothills containing these other distant wind farms, situated at closer distance with a larger perceived vertical scale, and as a result it would extend the external influence of wind farm development to the north east of the LCT unit slightly. The cumulative magnitude of change upon the character of the LCT unit would however be moderated by the separation between the LCT unit and the wind farms, which is emphasised by the Solway Firth. The cumulative magnitude of change arising between the Proposed Development and operational, consented, and application-stage wind farms would therefore be **medium-low** across the LCT unit.

- 7.214 The cumulative effect of the Proposed Development in the application cumulative scenario would therefore be at worst **moderate** and **not significant** across affected parts of the LCT unit.

2. Coastal Margins LCT – Bowness-on-Solway/ Burgh by Sands/ Newton Arlosh Unit

Baseline

- 7.215 The Bowness-on-Solway/ Burgh by Sands/ Newton Arlosh unit of the Coastal Margins LCT encompasses an extensive area to the south of the Solway Firth, between Cardurnoch and Longtown. The closest parts of the LCT unit are situated around Bowness-on-Solway and also to the east of Gretna at distances of approximately 5-6km from the Proposed Development.
- 7.216 The following description of this LCT have been extracted from the CLCC:
- *“Flat and slightly undulating coastal plain*
 - *Long and narrow fields in undulating areas with larger fields in flat areas*
 - *Intersected by shallow rivers and watercourses*
 - *Hedges form main field boundaries*
 - *Scarce tree cover*
 - *Predominantly pasture with some arable in drier areas*
 - *Frontiers of the Roman Empire - Hadrian’s Wall World Heritage Site is a significant archaeological feature in the Solway*
 - *Historic field pattern strongly linked to settlements”*
- 7.217 The characteristics of the most easternmost parts of the LCT are illustrated in the visualisations for Viewpoint 12 (Longtown Bridge) (**Figure 7.29**), which is located on the edge of this LCT.
- 7.218 There are no operational wind farm developments located within this LCT, but some eastern areas of the LCT around Longtown possess an influence from the nearby operational Beck Burn Wind Farm, and there is visibility of some distant wind farm development (such as the Minsca, Solwaybank, and Beck Burn Wind Farms) across parts of the LCT unit (see **Figures 7.13a-h**).
- 7.219 Theoretical visibility is widespread across the majority of the LCT with the exception of some scattered localised depressions in the landscape which are primarily located to the north west of Carlisle, close to the River Eden (see **Figures 7.6d** and **7.7d**). Given the

extensive theoretical visibility predicted, the detailed assessment covers the entire LCT unit.

Sensitivity

- 7.220 The Bowness-on-Solway/ Burgh by Sands/ Newton Arlosh unit of the Coastal Margins LCT has a medium to high value. The LCT unit is partially covered by the Solway Coast NL, while parts of the LCT unit closer to the shoreline also form part of the 'Core' and 'Buffer Zone' areas of the Frontiers of the Roman Empire WHS. The relatively high scenic value of the LCT is primarily derived from its coastal setting. Those areas of the LCT unit closest the shorelines that are covered by the National Landscape designation are considered to possess a slightly higher value than areas situated further inland.
- 7.221 The Bowness-on-Solway/ Burgh by Sands/ Newton Arlosh unit of the Coastal Margins LCT generally has a medium to low susceptibility to the Proposed Development. The coastal parts of the LCT unit generally have a higher susceptibility to external development due to the openness of the Solway Firth, while areas inland tend to possess a relatively flat topography and a strong degree of enclosure due to a prevalence of hedgerow lined fields and occasional trees and small woodlands.
- 7.222 The combination of the value of the landscape and its susceptibility to the Proposed Development leads to an overall **high-medium to medium-low** rating for sensitivity.

Magnitude of Change

- 7.223 The Proposed Development is located outwith the LCT unit and there would therefore be no direct effects upon its character. Effects of the Proposed Development would therefore be indirect and associated with its influence on its surrounding landscape.
- 7.224 Theoretical visibility of the Proposed Development is widespread across the LCT unit at distances of between 5-18km, and as such the effects of the Proposed Development would vary across different parts of the LCT unit. The principal difference in the nature of the predicted effects is likely to be whether an area is situated close to the more open shoreline of the Solway Firth or further inland where visibility is often interrupted by intervening vegetation due to the flat topography of the LCT unit. Areas of the LCT unit along sections of the shoreline of the Solway Firth, such as those around Bowness-on-Solway and Port Carlisle, would have a stronger association with the host LCT due to the absence of intervening landform and the ability to experience views across the Solway Firth. Areas further inland, such as those around Wodholme Flow and the River Eden, are likely to have a weaker association with the host LCT due to intervening screening. The majority of eastern parts of the LCT unit are also likely to have a weaker association with the host LCT due to the more diverse landcover, which contains electricity transmission lines, the M6 corridor, woodlands, and buildings associated with MoD facility at Blackbank.
- 7.225 In summary, factors that increase the magnitude of change are:
- The widespread theoretical visibility predicted across the LCT unit;
 - The perceived medium to large scale of the proposed wind turbines from across the closest reaches of the LCT unit;
 - The foreshortening that occurs where the turbines are visible across the Solway Firth due to the simplicity of the intervening waters;
 - The contrast of the proposed wind turbines with smaller scale landscape elements, such as the scattered buildings, along the Dumfries and Galloway coast;

- The addition of tall vertical structures into a landscape containing uninterrupted, expansive views that emphasise the broad horizon; and
- Limited intervening landform such that a large proportion of the proposed wind turbines would be visible.

7.226 Factors that moderate the magnitude of change are:

- The vast scale of the Solway Firth, which forms part of the setting of the LCT and the Proposed Development;
- The relatively compact form of the Proposed Development when experienced from this LCT due to the small number of turbines proposed (see **Figure 7.8**) and the screening of the solar PV array and BESS/ substation compound by intervening hedgerows and woodland;
- The distinct boundaries between this LCT and the landscape of the Site;
- The intervening hedgerows, woodlands and tree belts that are present across the interior and east of the LCT unit;
- The existing influence of development and movement that characterises large parts of the east of the LCT unit;
- The presence of existing vertical structures associated with the Anthorn Radio Station across western parts of the LCT unit; and
- The external influence of other operational wind farms (notably Solwaybank, Craig, Ewe Hill, Minsca, and Beck Burn) in the wider landscape, albeit at greater distances, and vertical structures associated with Chapelcross Power Station.

7.227 Taking these factors into account, the magnitude of change for this LCT would be **medium-low** across the coastline between Bowness-on-Solway and Easton, and around Mossband Hall, at distances of between 6-8km. At greater distances, across all other parts of the LCT unit, the magnitude of change would reduce to between **low** and **no change** depending on the following factors: the level of intervening screening from hedgerows and woodland, the distance from the Proposed Development, and the degree to which the area is influenced by existing development.

Significance of Effect

7.228 The effect of the Proposed Development on the landscape character of the Bowness-on-Solway/ Burgh by Sands/ Newton Arlosh unit of the Coastal Margins LCT where theoretical visibility is predicted across the coastline between Bowness-on-Solway and Easton, and around Mossband Hall, would be **moderate** and **significant**. Across all other parts of the LCT unit effects would vary between **moderate-minor** and **no change for the reasons stated above**, and these effects would be **not significant**.

Cumulative Assessment

7.229 In the consented cumulative scenario, the cumulative influence of wind farm developments upon the LCT unit would be relatively similar to the current baseline of operational wind farms, due to the situation of the consented Little Hartfell and Hopsrig Wind Farms close to existing wind farm development. The two consented wind farms would often tend to consolidate these existing external influences due to their situation close to other operational wind farms, such as Minsca, Ewe Hill and Crossdykes. The Proposed Development would be situated within the lowlands beneath the foothills

containing these other distant wind farms, extending the arc of external wind farm development, but situated at closer distance with a larger perceived vertical scale. As a result, the Proposed Development would increase the external influence of wind farm development upon the character of the LCT unit. The cumulative magnitude of change upon the character of the LCT unit would however be moderated by the separation between the LCT unit and the wind farms, which is emphasised by the Solway Firth. The cumulative magnitude of change arising between the Proposed Development and operational and consented wind farms would therefore be **medium-low** across coastal areas of the LCT unit, where the open character of the landscape possesses a stronger influence from the wider Solway basin. Within the interior of the LCT unit, the cumulative magnitude of change is likely to reduce to between **no change** and **low** due to the more limited contribution of the wider landscape to the character of these areas.

- 7.230 The cumulative effect of the Proposed Development in the consented cumulative scenario would therefore be at worst **moderate** and **not significant** across coastal parts of the LCT unit, but would reduce to between **moderate-minor** and **no change** across the interior of the LCT unit.
- 7.231 In the application cumulative scenario, the cumulative influence of wind farm developments upon the LCT unit would increase slightly relative to the current baseline of operational wind farms, due primarily to the increased vertical and horizontal scale of the application-stage Bloch, Callisterhall, Loganhead Resubmission and Hopsrig Resubmission Wind Farms (see **Figure 7.13k**), which would be situated at distances typically over 20km from the LCT unit, close to operational wind farms in the Dumfries and Galloway foothills. The Proposed Development would be situated within the lowlands beneath the foothills containing these other distant wind farms, extending the arc of external wind farm development, but situated at closer distance with a larger perceived vertical scale. As a result, the Proposed Development would further increase the external influence of wind farm development upon the character of the LCT unit. The cumulative magnitude of change arising between the Proposed Development and operational and consented wind farms would be **medium-low** across coastal areas of the LCT unit, where the open character of the landscape possesses a stronger influence from the wider Solway basin. Within the interior of the LCT unit, the cumulative magnitude of change is likely to reduce to between **no change** and **low** due to the more limited contribution of the wider landscape to the character of these areas.
- 7.232 The cumulative effect of the Proposed Development in the application cumulative scenario would therefore be at worst **moderate** and **not significant** across coastal parts of the LCT unit, but would reduce to between **moderate-minor** and **no change** across the interior of the LCT unit.

1. Bay and Estuary LCT – Burgh Marsh Unit

Baseline

- 7.233 The Bay and Estuary - Rockcliffe Marsh LCT is a relatively small LCT unit situated to the north of the village of Burgh by Sands, approximately 7km to the south east of the Proposed Development.
- 7.234 The following characteristics of this LCT has been extracted from the CLCC:
- *“Salt marshes in sheltered parts of estuaries and bays*
 - *Hedge topped sea dykes*
 - *Closely grazed fine sward*

- *Creeks and channels form a dendritic pattern*
- *Higher marshes dissected by streams*
- *Sporadic scrub and remnant field hedges*

- 7.235 There are no wind farms located within this LCT, but there is an influence from some distant wind farm development across a few elevated locations as illustrated by cumulative ZTV **Figures 7.13a-g**.
- 7.236 The characteristics of the LCT are also illustrated in the visualisations for Viewpoint 10 (Boustead Hill) (**Figure 7.26**) and Viewpoint 11 (King Edward I Monument) (**Figure 7.27**), which are located in this LCT.
- 7.237 There are no wind farms located within this LCT, but there is an influence from some distant wind farm development (such as the Minsca, Solwaybank, and Beck Burn Wind Farms) across a few elevated locations as illustrated by cumulative ZTV **Figures 7.13a-h**.
- 7.238 Theoretical visibility is widespread across the LCT and as such, the detailed assessment covers those effects that would arise across all parts of the LCT unit.

Sensitivity

- 7.239 The Burgh Marsh unit of the Bay and Estuary LCT generally has a high value. The majority of the LCT unit is covered by the Solway Firth NL and also forms part of the 'Buffer Zone' for the Frontiers of the Roman Empire WHS, and it possesses some recreational and scenic value. The scenic value of the LCT is derived from the strong naturalness qualities of the marsh, its intricate network of watercourses, and its openness, which enables expansive views of the surrounding area.
- 7.240 The Burgh Marsh unit of the Bay and Estuary LCT generally has a medium susceptibility to the Proposed Development. The openness, large scale, strong inherent characteristics, and its closer association with the waters of the Solway Firth reduce its susceptibility to wind turbine development, but its susceptibility is generally increased due to the contrasting vertical scale of wind turbines and its strong naturalness qualities.
- 7.241 The combination of the value of the landscape and its susceptibility to the Proposed Development leads to an overall **high-medium** rating for sensitivity.

Magnitude of Change

- 7.242 The Proposed Development is located outwith the LCT unit and there would therefore be no direct effects upon its character. Effects of the Proposed Development would therefore be indirect and associated with its influence on its surrounding landscape.
- 7.243 Theoretical visibility of a large proportion of the Proposed Development (including turbine hubs) is predicted across the vast majority of the LCT unit (see **Figures 7.7d** and **7.9b**) at distances of between 7-9km. In general, given the flat topography of this LCT unit and the absence of trees, woodland, and buildings, it is considered that this extensive visibility would be uninterrupted in reality.
- 7.244 Factors that increase the magnitude of change are:
- The widespread theoretical visibility predicted across the LCT unit;
 - The perceived medium to large scale of the proposed wind turbines from across the closest reaches of the LCT unit;

- The foreshortening that occurs where the turbines are visible across the Solway Firth due to the simplicity of the intervening waters;
- The contrast of the proposed wind turbines with smaller scale landscape elements, such as the scattered buildings, along the Dumfries and Galloway coast;
- The addition of tall vertical structures into a landscape containing uninterrupted, expansive views that emphasise the broad horizon; and
- Limited intervening landform such that a large proportion of the proposed wind turbines would be visible.

7.245 Factors that moderate the magnitude of change are:

- The vast scale of the Solway Firth, which forms part of the setting of the LCT and the Proposed Development;
- The relatively compact form of the Proposed Development when experienced from this LCT due to the small number of turbines proposed (see **Figure 7.8**) and the screening of the solar PV array and BESS/ substation compound by intervening hedgerows and woodland;
- The distinct boundaries between this LCT and the landscape of the Site;
- The existing influence of development and movement that characterises large parts of the east of the LCT unit;
- The presence of existing vertical structures associated with the Anthorn Radio Station across western parts of the LCT unit; and
- The external influence of other operational wind farms (notably Solwaybank, Craig, Ewe Hill, Minsca, and Beck Burn) in the wider landscape, albeit at greater distances, and vertical structures associated with Chapelcross Power Station.

7.246 Taking these factors into account, the magnitude of change for this LCT would be **medium-low** across the entire LCT unit.

Significance of Effect

7.247 The effect of the Proposed Development on the landscape character of the Burgh Marsh unit of the Bay and Estuary LCT would be **moderate** and **significant**.

Cumulative Assessment

7.248 In the consented cumulative scenario, the cumulative influence of wind farm developments upon the LCT unit would be relatively similar to the current baseline of operational wind farms, due to the situation of the consented Little Hartfell and Hopsrig Wind Farms close to existing wind farm development. The two consented wind farms would often tend to consolidate these existing external influences due to their situation close to other operational wind farms, such as Minsca, Ewe Hill and Crossdykes. The Proposed Development would be situated within the lowlands beneath the foothills containing these other distant wind farms, but there would be a degree of visual coalescence which would strengthen the association between the wind farms. As a result, the Proposed Development would increase the external influence of wind farm development upon the character of the LCT unit. The cumulative magnitude of change upon the character of the LCT unit would however be moderated by the separation between the LCT unit and the wind farms, which is emphasised by the Solway Firth. The cumulative magnitude of change arising between the Proposed Development and

operational and consented wind farms would therefore be **medium-low** across the LCT unit.

- 7.249 The cumulative effect of the Proposed Development in the consented cumulative scenario would therefore be at **moderate** and **not significant** across affected parts of the LCT unit.
- 7.250 In the application cumulative scenario, the cumulative influence of wind farm developments upon the LCT unit would increase slightly relative to the current baseline of operational wind farms, due primarily to the increased vertical and horizontal scale of the application-stage Bloch, Callisterhall, Loganhead Resubmission and Hopsrig Resubmission Wind Farms (see **Figure 7.13k**), which would be situated at distances typically over 20km from the LCT unit, close to operational wind farms in the Dumfries and Galloway foothills. The Proposed Development would be situated within the lowlands beneath the foothills containing these other distant wind farms, but there would be a degree of visual coalescence which would strengthen the association between the wind farms. As a result, the Proposed Development would further increase the external influence of wind farm development upon the character of the LCT unit. The cumulative magnitude of change upon the character of the LCT unit would however be moderated by the separation between the LCT unit and the wind farms, which is emphasised by the Solway Firth. The cumulative magnitude of change arising between the Proposed Development and operational and consented wind farms would be **medium-low** across the LCT unit.
- 7.251 The cumulative effect of the Proposed Development in the application cumulative scenario would therefore be at worst **moderate** and **not significant** across affected parts of the LCT unit.

Assessment of Effects on Landscape Designations

- 7.252 The assessment of effects on landscape designations is based on the effect that the Proposed Development may have on their 'special qualities' (or 'Special Landscape Qualities'). This is a separate assessment from that of the likely effects on landscape character.
- 7.253 The scoping process and LVIA preliminary assessment has identified the Nith Estuary NSA (~16km), Solway Coast NL (~3km), and Solway Coast RSA (~11km) as the only landscape planning designations which have potential to be significantly affected as a result of the Proposed Development. The effect on these landscape planning designations is assessed below. The other designated areas that cover the study area were found through the scoping process and subsequent field and desk studies to not have the potential to be significantly affected and have therefore not been assessed in any further detail.

Nith Estuary NSA

Introduction

- 7.254 The assessment of effects on SLQs follows technical guidance prepared by NatureScot and both of Scotland's National Park Authorities aimed at landscape professionals to inform siting and design of development and land use change that is sensitive to the SLQs of NSAs or National Parks:
- NatureScot (2025). Special Landscape Qualities - Guidance on assessing effects.

- 7.255 In relation to development management, the Guidance sets out an approach to gather evidence to inform an assessment against national policy. The assessment should focus on likely significant effects on relevant SLQs, be proportionate to the scale and nature of the Proposed Development and provide a clear explanation of the reasoning underpinning judgements so they can be understood.
- 7.256 The guidance sets out a four-step approach under the following four headings:
- *“Step 1 – Review and describe the proposal*
 - *Step 2 – Identify the SLQs that may be affected by the proposal*
 - *Step 3 – Assessment of effects on SLQs and design objectives*
 - *Step 4 – Summary of significant effects on SLQs”*
- 7.257 The SLQs of the Nith Estuary NSA are set out in NatureScot documentation:
- Scottish Natural Heritage (now NatureScot) (2010). The special qualities of the National Scenic Areas. Scottish Natural Heritage Commissioned Report No.374.
- 7.258 The following viewpoints are located within the NSA: Viewpoint 14 (Ward Law) and Viewpoint 15 (Criffel).
- 7.259 There are no operational, under construction or consented wind farms within the NSA. Of the wind farms that are included in the detailed cumulative assessment for the Proposed Development, there are a number of operational and under construction wind farms within 25km of the boundary of NSA (see **Table 7-8**). The Proposed Development would be located at just over 16km distance, with the closest operational wind farms in the study area, Auchenlosh and Plasgow Farm, located approximately 5km and 7km to the west of the western NSA boundary respectively. While larger operational wind farms at Dalswinton and Minsca are located at distances of 16km and 17km from the northern and eastern NSA boundaries respectively. Theoretical visibility of these wind farms is found across much of the coastal landscape surrounding the Nith Estuary, and they may therefore often potentially be theoretically visible together with the Proposed Development.
- 7.260 The following sections assess the effects of the Proposed Development on the SLQs using the four steps described in NatureScot guidance.

Step 1: ‘The Proposal’ (the Proposed Development)

- 7.261 The aim of Step 1 is to “gain a full understanding of the nature of the proposal” by setting out the key aspects of the Proposed Development that have potential to affect the SLQs. A detailed description of the Proposed Development is provided in **Chapter 3 (Description of Development)** of the EIA Report. The key parts of the Proposed Development that are relevant in the assessment of effects on SLQs are the four proposed turbines (with a maximum blade tip height of 200m) and the anemometer mast (122.5m tall), although the solar PV arrays, BESS / substation compound, associated infrastructure and visible aviation lighting may contribute to effects. During construction and commissioning there would also be temporary works and plant including, construction compounds, and tall cranes.
- 7.262 The Proposed Development is located entirely outwith the NSA, with the nearest turbine lying just over 16km from the eastern boundary. Any effects on SLQs would therefore be indirect in nature, arising as a result of visibility of the Proposed Development and the way it affects the perception of SLQs as experienced from within the NSA boundary.

Step 2: SLQs that may be affected by the Proposed Development

7.263 The aim of Step 2 is to establish the scope of the assessment, including the extent of the study area and the specific SLQs likely to be sensitive to the Proposed Development.

Study Area

- 7.264 The assessment of effects on viewpoints and landscape character types – including those that lie within NSA - indicates that significant landscape and visual effects would be contained within approximately 20km of the Proposed Development. These findings, combined with site visits and the preliminary assessment of effects on the SLQs of the NSA, indicate that significant effects on the SLQs of the NSA would also be contained within a similar radius from the Proposed Development.
- 7.265 Furthermore, the study area considered in the assessment is dependent to a large degree on the visibility of the Proposed Development, the distance from the Proposed Development, and the area's relationship to the relevant SLQs. **Figures 7.10a-b** show the blade tip ZTV for the Proposed Development in relation to the NSA boundaries. These figures show that theoretical visibility of the Proposed Development is found primarily along coastal areas of the NSA, excluding those surrounding the mouth of the River Nith, with the greatest potential for significant effects likely to arise across the few elevated coastal areas located to the east of the Nith estuary, such as Ward Law. Less elevated coastal areas, such as the merse, would generally receive visibility of a lower proportion of the turbines, and due to the intervening distance, the compact design of the Proposed Development, and screening from vegetation and buildings aided by the relatively flat topography are unlikely to be significantly affected.
- 7.266 However, in this instance the study area for this assessment has been extended as a result of the SLQs that NatureScot consider to be susceptible to significant effects, which are expressed across a larger area of the NSA. The study area therefore covers all areas of the NSA that are predicted to experience theoretical visibility in **Figures 7.10a-b**.

Relevant SLQs

- 7.267 **Table 7-9** includes the baseline descriptions of each of the SLQs relevant to the NSA Study Area and whether or not these are required to be assessed in detail (based on whether they are considered to be sensitive to the Proposed Development and may potentially be significantly affected).
- 7.268 Whilst the order and naming of listed SLQs has been maintained as they appear in each section of the NatureScot report (No.374), the SLQs have been numbered in this report for ease of reference.

Table 7-9 Preliminary Assessment of Nith Estuary NSA SLQs

| SLQ | Detailed Assessment of SLQ Required? |
|--|---|
| SLQ1: A working, farmed landscape against a backdrop of hill and estuary | No – the Proposed Development would not interfere with the juxtaposition of these two characteristics of the NSA, due to its location approximately 16km to the east of the NSA. |
| SLQ2: Criffel, a Border landmark rising above the coastal flatlands | Yes - while theoretical visibility of the wind turbines and anemometer mast are predicted across parts of the hill including the summits (see Viewpoint 17), significant effects upon this SLQ are unlikely to arise at distances of approximately 31km. The Proposed Development would not be perceived in views to and from Criffel to markedly impinge upon the character of the hill itself |

| SLQ | Detailed Assessment of SLQ Required? |
|--|--|
| | or the surrounding 'coastal flatlands' landscape to the east of the hill, primarily encompassing the Nith Estuary, which form the principal parts of its landscape setting. The relatively small and compact wind farm, while larger in vertical scale than other operational wind farms, would also be perceived to be located in a part of the wider landscape that has an existing influence from operational developments (specifically from Beck Burn and Hallburn). Included in the detailed assessment at the request of NatureScot in their Scoping response. |
| SLQ3: The meeting of land, sea and sky | No – the Proposed Development would not adversely affect how this SLQ is expressed within the NSA. |
| SLQ4: The tide coming in at the 'speed of a galloping horse' | No – the Proposed Development would not adversely affect how this SLQ is expressed within the NSA. |
| SLQ5: The interplay of natural and cultural landscapes | Yes – while theoretical visibility is absent or limited across Kirkconnell Flow NNR, and the settlements of New Abbey, Carsethorn, and Glencaple, there is theoretical visibility of the wind turbines and anemometer mast predicted across Caerlaverock sands at distances of around 17-25km. Given the modest proportion of the turbines that would be visible from these low-lying locations and the intervening distance, there are unlikely to be significant effects upon this SLQ. Included in the detailed assessment at the request of NatureScot in their Scoping response. |
| SLQ6: A great diversity of habitats and wildlife | No – the Proposed Development would not adversely affect how this SLQ is expressed within the NSA. |
| SLQ7: The detailed patterns merge and estuary | No – the Proposed Development would not adversely affect how this SLQ is expressed within the NSA due to its location approximately 16km to the east of the NSA. |
| SLQ8: A landscape of movement | No – the Proposed Development would not adversely affect how this SLQ is expressed within the NSA due to its location approximately 16km to the east of the NSA |
| SLQ9: A rich variety of colour, light, texture and scale | No – the Proposed Development would not adversely affect how this SLQ is expressed within the NSA. |
| SLQ10: A landscape of distinctive sounds and smells | No – the Proposed Development would not adversely affect how this SLQ is expressed within the NSA. |
| SLQ11: A peaceful landscape but with a long and troubled history | No – the Proposed Development would not adversely affect how this SLQ is expressed within the NSA. |
| SLQ12: Landmarks, contributing to the identity of the area | Yes – theoretical visibility of the wind turbines and anemometer mast is predicted across Criffel, Ward Law, and the ruins of Caerlaverock Castle. Although significant effects are unlikely to arise across the slopes and summit of Criffel at distances of over 31km, there is potential for significant effects upon how this SLQ is expressed at Ward Law and Caerlaverock Castle. While there is a higher level of theoretical visibility predicted across Ward Law, effects experienced across the lower lying location of Caerlaverock Castle are likely to be limited by the reduced visibility and intervening distance. |
| SLQ13: The use of locally distinctive stone | No – the Proposed Development would not adversely affect how this SLQ is expressed within the NSA. |

| SLQ | Detailed Assessment of SLQ Required? |
|---|--|
| SLQ14: The view out to the Cumbrian Fells | No – the Proposed Development would be located perpendicular to the direction of these views, situated within a clearly separate landscape context, which is separated from the Cumbrian Fells by the broad landform of the northern Pennines. |

7.269 The following SLQs are considered to be sensitive to the Proposed Development and as such require further detailed assessment to identify any potential significant effects:

- SLQ2: Criffel, a Border landmark rising above the coastal flatlands;
- SLQ5: The interplay of natural and cultural landscapes; and
- SLQ12: Landmarks, contributing to the identity of the area.

Sensitivity

The Nith Estuary NSA is designated at the national level in relation to its scenic qualities and consequently in accordance with GLVIA it is considered to have a high value in the context of this assessment. Given the scale of the proposed wind turbines, and the role that historical landuse practices have played in characterising the landscape of the NSA, it is considered that the SLQs 2, 5 and 12 have a high susceptibility to the Proposed Development. The combination of the value of the NSA and the susceptibility of the SLQs to the Proposed Development leads to an overall **high** rating for sensitivity.

Step 3: Assessment of Effects on SLQs

7.270 Step 3 sets out the assessment of effects that may arise on the study area as a result of the Proposed Development, but also elements of the design process that have minimised adverse effects on the SLQs.

Design Objectives and Embedded Mitigation

7.271 **Table 7-10** provides a summary of the Proposed Development's design objectives to minimise landscape and visual effects upon the relevant SLQs.

Table 7-10 Design Objectives Relevant to NSA SLQs

| SLQ | Design Objectives |
|---|---|
| SLQ2: Criffel, a Border landmark rising above the coastal flatlands | To design a relatively small, compact wind farm that would not be perceived in views to and from Criffel to markedly impinge upon the character of the hill itself or the surrounding 'coastal flatlands' landscape to the east of the hill, primarily encompassing the Nith Estuary, which forms the principal parts of its landscape setting. |
| SLQ5: The interplay of natural and cultural landscapes | To design a relatively small, compact wind farm that does not markedly impact upon how the perceived naturalistic character of upland parts of the NSA and the traditional farmed, settled and designed landscapes around the Nith Estuary are experienced from across the NSA. |
| SLQ12: Landmarks, contributing to the identity of the area | To design a relatively small compact wind farm that does not have a markedly adverse impact upon the contribution of key landmarks, such as <i>"the summits of Criffel and Ward Law, the ruins of Caerlaverock Castle and Sweetheart Abbey, and the policy woodlands around the big houses"</i> to the character of the NSA. |

Assessment of Effects on SLQs

- 7.272 The assessment of the effects of the Proposed Development on the relevant SLQs is described in **Table 7-11**. While the information in the table generally accords with the NatureScot guidance (2025), information relating to the duration of effect and further suggested mitigation is omitted. This is because all design mitigation is embedded in the final layout of the Proposed Development, and the duration of the effects can be assumed to be the lifetime of the Proposed Development (unless stated otherwise).
- 7.273 The assessment is informed by desk study, site visits, the NSA citation, landscape character information, wirelines and relevant LVIA visualisations, and ZTVs.

Table 7-11: Assessment of the Effects of the Proposed Development on the SLQs

| Relevant SLQ | Detailed SLQ Description | Landscape and visual effects of the Proposed Development on SLQ, inc. cumulative and night-time effects | Level of Effect and Significance |
|---|---|---|----------------------------------|
| SLQ2: Criffel, a Border landmark rising above the coastal flatlands | <i>"Rising steeply above the surrounding lowland is the heather-covered mass of Criffel. This hill has a dramatic and dominant impact on the whole Nith Estuary. It is the most southerly major hill in Scotland and is an important landmark around the Solway coast."</i> | <p>The proposed wind turbines and anemometer mast would be apparent in views from the eastern facing slopes and summit of Criffel (see Viewpoint 17), but due to its location over 16km to east of the NSA, they would not impinge upon views of the hill experienced from the coastal lowlands across eastern parts of the NSA where the hill's "dramatic and dominant impact on the whole Nith Estuary" can be experienced.</p> <p>In the 360° panoramic views that can be experienced during the daytime from the upper slopes and summit of Criffel, the Proposed Development would occupy a very narrow horizontal field of view (1°) (see Figure 7.8), located in a distinctly separate landscape context within the wider coastal flatlands, due to the separation between the Site and the boundary of the NSA (>16km) and also the Site and the summit (>31km). At these distances, the effects of the Proposed Development's aviation lighting would be moderated considerably during night-time hours, with lighting associated with the closer Anthorn Radio Station already an existing characteristic of the wider landscape.</p> <p>Wind farms form a characteristic of the surrounding landscapes, albeit occupying distant parts of it, notably the Dumfries and Galloway hills, the outer Solway Firth, and the Solway basin. The wind farm would be perceived to be located in one of these affected parts of the wider landscape that has an existing influence from operational wind farm development (due to its strong association with the Beck Burn and Hallburn cluster). The perceived difference in vertical scale between the proposed wind turbines and existing wind farms diminishing slightly as a result of the intervening distance.</p> <p>Overall, a negligible magnitude of change is predicted to arise upon this SLQ.</p> | Minor and not significant |
| SLQ5: The interplay of natural | <i>"The Nith Estuary contains large uninhabited, wilder areas clothed</i> | The Proposed Development would not affect the physical aspects of this SLQ; the natural vegetation, bog and merse, or the farms, | Minor and not significant |

| Relevant SLQ | Detailed SLQ Description | Landscape and visual effects of the Proposed Development on SLQ, inc. cumulative and night-time effects | Level of Effect and Significance |
|--|---|--|----------------------------------|
| and cultural landscapes | <p><i>in natural vegetation of hill, bog and merse.</i></p> <p><i>Sandwiched between these lie the inhabited, settled and working landscapes of well-established farms, traditional villages and designed landscapes. The countryside here consists of green pastures, bounded by dykes and hedges, and parkland of copses and boundary trees.</i></p> <p><i>This interplay of human activity and nature results in a landscape of great appeal."</i></p> | <p>traditional villages and designed landscapes. It could however indirectly affect the perception of how these landscapes are experienced if visibility of the Proposed Development has a marked impact on the landscape's current "<i>interplay of human activity and nature</i>".</p> <p>Theoretical visibility of the proposed wind turbines and anemometer mast is widespread across the eastern and south western parts of the NSA, including large parts of the Arbigland GDL, at distances of between 16-32km, where the valued interplay of human activity and nature can be experienced. Across these areas there is a relatively weak characteristic influence from operational wind farm development outside of the NSA, for example from Beck Burn, Minsca, and Solway Bank. From the eastern and south western parts of the NSA, during daytime hours the Proposed Development due to its distance, its compact form, and varying levels of screening from intervening landform would comprise another group of small elements situated beyond the immediate landscape context. During night-time hours, the effects of the Proposed Development's aviation lighting on the SLQ would be moderated considerably due to distance, with lighting associated with the Anthorn Radio Station already an existing characteristic of the wider landscape. Overall, a negligible magnitude of change is predicted upon how this SLQ is expressed across the NSA.</p> | |
| SLQ12: Landmarks, contributing to the identity of the area | <p><i>"Several landmarks, both natural and cultural, are particularly distinctive and contribute to the identity of the area. These include the summits of Criffel and Ward Law, the ruins of Caerlaverock Castle and Sweetheart Abbey, and the policy woodlands around the big houses."</i></p> | <p>Effects upon the landmark of Criffel are assessed earlier in relation to SLQ 2, while visual effects experienced at Ward Law are assessed in the 'Assessment of Visual Effects' section of the LVIA in relation to Viewpoint 16. Given the distance between the Proposed Development and these two landmarks, the Proposed Development's compact form, and varying levels of screening from intervening landform, the proposed wind turbines and anemometer mast would comprise a group of small distant elements beyond the immediate landscape context, which would have a negligible magnitude of change upon this SLQ. During night-time hours, the effects of the Proposed Development's aviation lighting on the SLQ would be moderated considerably due to</p> | Minor and not significant |

| Relevant SLQ | Detailed SLQ Description | Landscape and visual effects of the Proposed Development on SLQ, inc. cumulative and night-time effects | Level of Effect and Significance |
|--------------|--------------------------|---|----------------------------------|
| | | distance, with lighting associated with the Anthorn Radio Station already an existing characteristic of the wider landscape. Where visibility is either reduced further or absent altogether from Caerlaverock Castle, Sweetheart Abbey, and the various policy woodlands, the magnitude of change would again be limited to either negligible or no change . | |

Step 4 Summary of significant effects on SLQs

- 7.274 This assessment has identified that none of the 12 SLQs of the Nith Estuary NSA would be significantly affected by the Proposed Development, with no greater than a minor level of effect predicted to arise upon SLQs 2, 5, and 12.
- 7.275 Effects upon the ‘integrity’ of the NSA is referred to in NPF4 (Policy 4), which notes that:
“c) Development proposals that will affect a National Park, National Scenic Area, Site of Special Scientific Interest or a National Nature Reserve will only be supported where:
i. The objectives of designation and the overall integrity of the areas will not be compromised; or
ii. Any significant adverse effects on the qualities for which the area has been designated are clearly outweighed by social, environmental or economic benefits of national importance.”
- 7.276 In these terms, it is considered that the *“objectives of designation and the overall integrity of the areas will not be compromised”* by the Proposed Development for the reasons set out in **Table 7-11**.
- 7.277 In summary, the Proposed Development lies a considerable distance outwith the NSA and would have no direct effects on its physical attributes, so that all effects would be perceived. This ensures that SLQs that are dependent upon physical attributes of NSA– of which there are a number - would not be affected by the Proposed Development. Indirect effects associated with the Proposed Development would be limited due to the compact form of the wind farm affecting a very narrow horizontal field of view (~1°) and the Proposed Development’s distinctly separate landscape context within the wider coastal flatlands, due to the separation between the Site and the boundary of the NSA (>16km). These effects would also occur within the existing visual context of operational wind farm development that can be seen from the same parts of the NSA as the Proposed Development.

Solway Coast NL

Introduction

- 7.278 The assessment of effects on the Solway Coast NL is based on the effects that the Proposed Development would have on the Special Landscape Qualities (SLQs) of the NL. The SLQs of the NL are set out in the following documentation:
- Brian Irving and Rose Wolfe (2014). Solway Coast AONB Management Plan 2015 – 2020. “A shared responsibility for a very special place”. Public and Stakeholder Consultation Draft.¹
- 7.279 The assessment of effects on NL SLQs follows the same technical guidance prepared by NatureScot (and both of Scotland’s National Park Authorities) to inform siting and design of development and land use change that is sensitive to the SLQs of Scotland’s NSAs or National Parks:

¹ While not explicitly referenced in the current AONB Management Plan, the SLQs listed in this document are also referenced on the current ‘Special Characteristics’ webpage of the Solway Coast NL’s website: www.solwaycoast-nl.org.uk/a-special-place/landscape/special-characteristics/

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

- 7.280 There are no operational, under construction or consented wind farms within the NL, but there is a strong influence from vertical structures associated with the Anthorn Radio Station. The radio station comprises a 228m central mast with wires connecting to 12 supporting masts, which extend across an area that is approximately 1km wide.
- 7.281 Of the wind farms that are included in the detailed cumulative assessment for the Proposed Development, there are a number of operational wind farms within 20km of the boundary of NL, including operational wind farms in England at Hellrigg, Great Orton, and Beck Burn, and Scotland at Dalswinton and Minsca. Theoretical visibility of these wind farms is relatively widespread across the NL, and they would often be visible in combination with the Proposed Development.
- 7.282 The following viewpoints are located within or close to the boundary of the NL: Viewpoint 7 (Start of Hadrian's Wall Path, Bowness-on-Solway), Viewpoint 10 (Boustead Hill) and Viewpoint 11 (King Edward I Monument).
- 7.283 The following sections assess the effects of the Proposed Development on the SLQs using the four steps described in the NatureScot guidance.

Step 1: 'The Proposal' (the Proposed Development)

- 7.284 The aim of Step 1 is to "*gain a full understanding of the nature of the proposal*" by setting out the key aspects of the Proposed Development that have potential to affect the SLQs. A detailed description of the Proposed Development is provided in **Chapter 3: Description of Development**.
- 7.285 The Proposed Development is located entirely outwith the NL, with the nearest turbine lying just over 3km from the water-based north eastern reaches of the NL. Any effects on SLQs would therefore be indirect in nature, arising as a result of visibility of the Proposed Development and the way it affects the perception of SLQs as experienced from within the NL boundary.

Step 2: SLQs that may be affected by the Proposed Development

- 7.286 The aim of Step 2 is to establish the scope of the assessment, including the extent of the study area and the specific SLQs likely to be sensitive to the Proposed Development.

Study area

- 7.287 The study area considered in the assessment is dependent to a large degree on the visibility of the Proposed Development and its relationship to the relevant SLQs. **Figures 7.10a-b** show the blade tip ZTV for the Proposed Development in relation to the NSA boundaries. These figures show that theoretical visibility of the Proposed Development is widespread across the majority of the NL at distances of between 3-20km, due its relatively flat topography. There are only a few areas where theoretical visibility is not predicted, including the less elevated banks of the River Wampool and some small, scattered areas situated to the south of some of the more elevated landforms.
- 7.288 The assessment of effects on viewpoints and landscape character types – including those that lie within NL - indicates that significant landscape and visual effects would be contained within approximately 20km of the Proposed Development. These findings, combined with site visits and the preliminary assessment of effects on the SLQs of the NL, indicate that significant effects on the SLQs would also be contained within a similar

radius from the Proposed Development, and therefore the study area for this part of the assessment comprises the whole of the NL.

Relevant SLQs

- 7.289 **Table 7-12** includes the baseline descriptions of each of the SLQs relevant to the NL study area and whether or not these are required to be assessed in detail (based on whether they are considered to be sensitive to the Proposed Development and may potentially be significantly affected).
- 7.290 Whilst the order and naming of listed SLQs have been maintained as they appear in the 'AONB Management Plan', the SLQs have been numbered in this report for ease of reference.

Table 7-12 Preliminary Assessment of Solway Coast NL SLQs

| SLQ | Detailed Assessment of SLQ Required? |
|--|---|
| SLQ1: Large flat expanses of coastal terrain | No – the Proposed Development would not adversely affect how this SLQ is expressed within the NL. |
| SLQ2: The sky is a dominant feature | No – while the proposed wind turbines and anemometer mast may be visible above the broad section of the Dumfries and Galloway skyline that is visible from the Solway Coast, its compact form is unlikely to significantly affect the underlying attributes of this SLQ, which are strongly expressed due to the open character of the landscape contained within the boundaries of the NL. |
| SLQ3: Dynamic and large intertidal estuary | No – the Proposed Development would not adversely affect how this SLQ is expressed within the NL. |
| SLQ4: Vast unbroken vistas across the estuary to Scotland | Yes – the Proposed Development would be apparent within views across the Solway Firth to Scotland at short to medium range distances and therefore there is potential for significant effects to arise upon this SLQ. |
| SLQ5: Extensive areas of traditionally grazed saltmarsh | No – the Proposed Development would not adversely affect how this SLQ is expressed within the NL. |
| SLQ6: Large but fragmented areas of lowland raised mire | No – the Proposed Development would not adversely affect how this SLQ is expressed within the NL. |
| SLQ7: Long narrow linear tract of coastal sand dune and dune heath | No – the Proposed Development would not adversely affect how this SLQ is expressed within the NL. |
| SLQ8: Large areas of exposed sand and mud with gravel storm ridges and sandy beaches | No – the Proposed Development would not adversely affect how this SLQ is expressed within the NL. |
| SLQ9: Culture of dairy, beef and sheep farming on medium grade improved grassland | No – the Proposed Development would not adversely affect how this SLQ is expressed within the NL. |
| SLQ10: Small hedge bound fields with sunken lanes and narrow roads | No – the Proposed Development would not adversely affect how this SLQ is expressed within the NL. |
| SLQ11: Very scarce woodland cover | No – the Proposed Development would not adversely affect how this SLQ is expressed within the NL. |
| SLQ12: Rich archaeological and historical heritage | Yes – there is potential for the Proposed Development to adversely affect the setting of historic features, such as the Frontiers of the Roman Empire WHS. |

| SLQ | Detailed Assessment of SLQ Required? |
|--|---|
| SLQ13: High levels of biodiversity associated with a wide range of intertidal, coastal and inland habitats | No – the Proposed Development would not adversely affect how this SLQ is expressed within the NL. |
| SLQ14: Internationally important area for birdlife | No – the Proposed Development would not adversely affect how this SLQ is expressed within the NL. |

7.291 The following SLQs are considered to be sensitive to the Proposed Development and as such require further detailed assessment to identify any potential significant effects:

- SLQ4: Vast unbroken vistas across the estuary to Scotland; and
- SLQ12: Rich archaeological and historical heritage.

Sensitivity

The Solway Coast NL is designated at the national level in relation to its scenic qualities and consequently in accordance with GLVIA it is considered to have a high value in the context of this assessment. Given the scale of the proposed wind turbines, and the open views towards the Dumfries and Galloway coast that are available from across large parts of the NL, it is considered that the SLQs 4 and 12 have a high susceptibility to the Proposed Development. The combination of the value of the NL and the susceptibility of the SLQs to the Proposed Development leads to an overall **high** rating for sensitivity.

Step 3: Assessment of Effects on SLQs

7.292 Step 3 sets out the assessment of effects that may arise on the study area as a result of the Proposed Development, but also elements of the design process that have minimised adverse effects on the SLQs.

Design Objectives and Embedded Mitigation

7.293 As part of the assessment process, NatureScot suggests that information relating to the design mitigation embedded in the Proposed Development in response to the relevant SLQs is also included in this Step. **Table 7-13** provides a summary of the Proposed Development's design objectives and responses to the relevant SLQs.

Table 7-13 Design Objectives Relevant to NL SLQs

| SLQ | Design Objectives |
|---|---|
| SLQ4: Vast unbroken vistas across the estuary to Scotland | To design a relatively small, compact wind farm that when viewed from within the NL can be accommodated by the expansive landscape surrounding the Solway Firth. To ensure the composition of the wind turbines generally reflects the simplicity of large parts of the view, while being mindful that it is difficult to achieve this balance from every direction. To ensure the vertical scale of the turbines is subsumed by the larger scale of the surrounding landscape. |
| SLQ12: Rich archaeological and historical heritage | Given the very limited potential for screening from intervening landform, vegetation and buildings, similar design objectives to those proposed in relation to SLQ4 are suggested to minimise effects upon this SLQ. |

Assessment of Effects on SLQs

7.294 The assessment of the effects of the Proposed Development on these SLQs is described in **Table 7-14**. While the information in the table generally accords with the NatureScot

guidance (2025), information relating to the duration of effect and further suggested mitigation is omitted. This is because all design mitigation is embedded in the final layout of the Proposed Development, and the duration of the effects can be assumed to be the lifetime of the Proposed Development (unless stated otherwise).

- 7.295 The assessment is informed by desk study, site visits, landscape character information, wirelines and relevant LVIA visualisations, and ZTVs.

Table 7-14: Assessment of the Effects of the Proposed Development on the SLQs

| Relevant SLQ | Landscape and visual effects of the Proposed Development on SLQ, inc. cumulative and night-time effects | Level of Effect and Significance |
|---|---|---|
| SLQ4: Vast unbroken vistas across the estuary to Scotland | <p>These vistas can generally be best appreciated from along the majority of the coastline and to a lesser extent from some of the interior of the NL when views are not interrupted by screening from intervening vegetation. Views experienced from the interior of the NL are unlikely to possess the same simple characteristics as those along the coastline though, due to the more complex landcover patterns that characterise these interior areas.</p> <p>The Proposed Development is most likely to affect those vistas that can be appreciated along north facing sections of the coastline, which primarily occur between Bowness-on-Solway and Sarkfoot Point. The character and depth of the views varying slightly depending on the extent of any marshland. Examples of these vistas are illustrated by Viewpoints 7 (Start of Hadrian's Wall Path, Bowness-on-Solway), 10 (Boustead Hill), and 11 (King Edward I Monument). An assessment of visual effects from these three locations is provided in the 'Assessment of Visual Effects' section of this LVIA, where a medium-low magnitude of change is predicted. Effects from the coastal areas in between these viewpoints are likely to be of a similar magnitude.</p> <p>Effects from the closest areas of sand and mud flats to the north west of Rockcliffe Marsh are likely to be of a slightly higher magnitude, varying between medium at the closest reaches of the NS to the south of Torduff Point, Browhouses, and Redkirk Point, and reducing to medium-low across more distant parts of the Marsh. Effects of a medium magnitude of change predicted across the closest reaches of the NL would be localised in extent and only experienced occasionally primarily by those using water-borne transport.</p> <p>Effects across the interior of the NL are likely to experience a magnitude of change of between low and no change depending on the level of screening from intervening hedgerows, buildings and woodland.</p> | At worst moderate-major and significant |
| SLQ12: Rich archaeological and historical heritage | <p>A detailed assessment of effects upon the cultural and heritage aspects of the landscape surrounding the Proposed Development is provided in Chapter 11 Archaeology and Cultural Heritage.</p> <p>In relation to landscape and visual effects upon the NL's "<i>Rich archaeological and historical heritage</i>", and given the absence of a formal citation, it is considered that the Hadrian's Wall Path/ Frontiers of the Roman Empire WHS is of most relevance to this assessment. While the Statement of OUV does not explicitly refer to landscape and visual sensitivities, an assessment of visual effects that would be experienced from the Hadrian's Wall Path/ Frontiers of the Roman</p> | At worst moderate and significant |

| Relevant SLQ | Landscape and visual effects of the Proposed Development on SLQ, inc. cumulative and night-time effects | Level of Effect and Significance |
|--------------|---|----------------------------------|
| | <p>Empire WHS, which is partially located within the NL, is provided in the 'Assessment of Effects on Visual Receptors' in this LVIA. The assessment of visual effects upon the WHS concludes that a medium-low magnitude of change would arise upon views from some of the closest open sections of the WHS.</p> <p>An assessment of visual effects that would be experienced by visitors to the King Edward I Monument has also been undertaken is provided in the 'Assessment of Effects on Visual Receptors' in this LVIA. The assessment of visual effects concludes that a medium-low magnitude of change would arise upon views from the monument.</p> <p>Visual effects experienced by visitors to other notable cultural heritage features, such as Holme Cultram Abbey and Milefortlet 21, would be subject to no greater than a negligible magnitude of change.</p> | |

Step 4 Summary of significant effects on SLQs

- 7.296 This assessment has indicated that of the 12 SLQs of the NL, 10 do not have potential to be affected by the Proposed Development. Of those that do have potential to be affected by the Proposed Development, significant effects would arise upon the two following SLQs:
- SLQ4: Vast unbroken vistas across the estuary to Scotland; and
 - SLQ12: Rich archaeological and historical heritage.
- 7.297 Across large parts of NL where these SLQs can be perceived, for example western and southwestern parts of the NL, these SLQs are unlikely to be significantly affected.
- 7.298 This does not, however, imply a significant effect on the overall ‘integrity’ of NL. ‘Integrity’ is referred to in NPF4 (Policy 4), which notes that:
- “c) Development proposals that will affect a National Park, National Scenic Area, Site of Special Scientific Interest or a National Nature Reserve will only be supported where:*
- i. The objectives of designation and the overall integrity of the areas will not be compromised; or*
- ii. Any significant adverse effects on the qualities for which the area has been designated are clearly outweighed by social, environmental or economic benefits of national importance.”*
- 7.299 In these terms, in relation to the NL, it is considered that the *“objectives of designation and the overall integrity of the areas will not be compromised”* by the Proposed Development, for the reasons described below:
- The Proposed Development lies outwith the NL and would have no direct effects on its physical attributes, so that all effects would be perceived. This ensures that SLQs that are dependent upon the physical attributes of the NL – of which there are a number - would not be affected by the Proposed Development.
 - The assessment of effects has indicated that significant effects will arise on two SLQs, with all other SLQs having a not significant effect. In relative terms, this represents a very limited effect.
 - While theoretical visibility of the Proposed Development is widespread across the NL, there would be very limited visibility in reality from the interior of the designation due to a combination of its flat topography and screening from intervening hedgerows and trees, which would ensure that effects on the SLQs across large parts of the NL are minimal or unaffected altogether.
 - The Solway Firth provides a distinct border (or buffer) between the NL and the landscapes of Dumfries and Galloway, which weakens the association between the two parts of the local landscape. There would be no effects upon this border (or buffer) that would reduce its effectiveness.
 - The Proposed Development would be seen in a part of the setting to the NL that is already affected by a number of baseline wind farms, ensuring that the Proposed Development will not introduce a new characteristic external influence on NL.

Solway Coast RSA

Baseline

- 7.300 The Solway Coast RSA encompasses a long stretch of the Dumfries and Galloway coastline between Sandgreen in the west and Powfoot in the east, with its closest reaches approximately 11km to the west of the Proposed Development. As a consequence, the RSA extends across the majority of the Nith Estuary and East Stewartry Coast NSAs, and therefore the earlier assessment of effects upon the Nith Estuary NSA is of relevance to some of the closer parts of the RSA.
- 7.301 The citation in Dumfries and Galloway Council's 'Regional Scenic Areas Technical Paper' (2018) provides the following description of the RSA:
- 7.302 *"This area embraces the varied coastlines of western Dumfriesshire and the Stewartry, stretching from the Fleet Valley and the Galloway Hills RSA in the west to Powfoot in the east. It encompasses the estuaries of the Fleet, Dee, Rough Firth/Auchencairn Bay and Nith and the contrasting intervening rugged shores and associated coastal uplands. It is based on an amalgam of the Kirkcudbright Bay and Stewartry Coast ARSS, and the southern part of the Nith Estuary and Criffel Upland ARSS. It encompasses the Stewartry Coast and Nith Estuary NSAs.*
- 7.303 *At its western extremity, the designated landscape continues northwards as the Galloway Hills RSA. Meanwhile in the east, the area to the north of Criffel abuts the Terregles Ridge RSA. In each case there is no distinct division between the different areas but they have been considered separately because their core characters and reasons for designation vary.*
- 7.304 *In the west the inland boundaries were amended to reflect the visual influence of the sea, and to incorporate all the seaward facing valleys of the Criffel uplands. All the upper slopes of Criffel itself have been included, as have both flanks of the long low ridge of Ward Law hill, because they are important to the wider views of the estuary and uplands and the local setting of these views, and to the wider recreational landscape. Meanwhile the eastern boundary has been extended as far as Powfoot, where the influence of the Nith estuary recedes and is gradually overtaken by the differing character of the inner Solway and the Eden/Esk estuary.*
- 7.305 *The area exhibits a diverse and attractive mixture of coastal landscape types. In the west the Peninsulas and Peninsulas with Gorsey Knolls create rocky coastlines of cliffs, raised beaches and isolated coves, backed by smooth undulating open landscapes of improved pastures interspersed with knolly, gorsey areas. These coastlines show similarities to the northern Rhins and the Machars RSAs, but are dissected by the major inlets of Kirkcudbright Bay, Auchencairn Bay and Rough Firth. The Coastal Granite Uplands of Criffel and Bengairn are characterised by steep sided, rocky granite hills with heather moorland, bracken and gorse on the higher and more rugged areas, contrasting with areas of smoother topography and improved pastures, plus considerable, generally sympathetically designed forestry. These uplands are dramatically juxtaposed with the flat, exposed landscapes of the Coastal Flats around the Nith estuary. These lowland landscapes include the gently undulating pasture and arable lands of the Coastal Plain, the more intimate, wooded landscape of the Coastal Parkland around New Abbey, plus the flat pastures, saltmarsh and mudflats of the Estuarine Flats and Merse along the shore. Views across the Solway to the Cumbrian Mountains and the Isle of Mann contribute to the scenic quality of this area.*
- 7.306 *The area is readily accessible from the more populated south eastern part of the region and the M74. As well as the harbour town of Kirkcudbright, it includes a number of villages*

plus scattered farms and hamlets located on the main coast road or reached via a network of lanes. There are a number of fairly large caravan sites and chalet parks as well as numerous tourist facilities. The area is subject to continued pressure for further tourist developments, and sees continued interest in forestry.”

- 7.307 In addition to the summary of the Solway Coast RSA's characteristics provided above, the Nith Estuary NSA's SLQs (detailed in the NatureScot citation (2010)) are also of relevance to those areas of the RSA situated within the NSA, and given the absence of formal SLQs in D&GC's 'Regional Scenic Areas Technical Paper', it is considered that the NSA's SLQs should be relied upon for those areas of the RSA located within the NSA boundary. In light of this, the earlier analysis provided relating to the nature of the Proposed Development's effects across parts of the Nith Estuary NSA within the RSA are relevant to this assessment of effects upon the Solway Coast RSA.
- 7.308 The greatest potential for effects beyond those predicted to arise across the parts of the RSA situated within the NSA are likely to be those experienced across the closest reaches of the RSA along the coast between Powfoot and Ruthwell at distances of between 11-17km from the Proposed Development.
- 7.309 There are no operational, under construction or consented wind farms within the RSA, apart from the small Auchenlosh development near Dalbeattie. However, there are a number of distant operational and under construction wind farms within 25km of the boundary of RSA, which have a relatively weak influence upon the wider setting of the RSA. Theoretical visibility of these wind farms is found across much of the coastal landscape surrounding the Nith Estuary, and they may therefore often potentially be theoretically visible together with the Proposed Development.

Sensitivity

- 7.310 The Solway Coast RSA has a medium-high value. This value is attributed to its local level designation in Dumfries and Galloway and its medium to high level of scenic quality. The Solway Coast RSA has a relatively high susceptibility to the Proposed Development, although it varies slightly across its extents. The combination of the LLA's medium-high value and its high susceptibility to change results in a **medium-high to high** sensitivity for the Solway Coast RSA.

Magnitude of Change

- 7.311 The Proposed Development is located outwith the RSA and there would therefore be no direct effects upon its character. Effects of the Proposed Development would therefore be indirect and associated with its influence on its surrounding landscape.
- 7.312 Theoretical visibility of the proposed wind turbines is intermittent across the RSA at distances of between 11-34km (see **Figure 7.10a-b**), but the actual influence of the Proposed Development would be determined to a large degree by the level of screening from intervening landform and vegetation, due the relatively flat topography of some parts of the local landscape. The influence of these moderating factors and the extent of theoretical visibility predicted in relation to parts of the Nith Estuary is described earlier in relation to the assessment of effects upon the NSA. Theoretical visibility is also predicted across the closest parts of the RSA between Powfoot and Ruthwell at distances of between 11-17km from the Proposed Development, some elevated areas to the east of the River Nith at distances of between 16-27km, some elevated forested areas to the east of the River Nith at distances of between 31-34km, and across some of the furthest reaches of the RSA around Southernness Point at distances of between 29-34km.

7.313 Factors that increase the magnitude of change are:

- The intermittent coverage of theoretical visibility of the Proposed Development;
- The relatively weak influence of wind farm development across some parts of the RSA.
- The exposure of the Site due to the local landscape's relatively flat topography which provides only limited screening from landforms;
- The smaller scale of some of the more settled and farmed parts of the landscape;

7.314 Factors that moderate the magnitude of change are:

- The Proposed Development would affect a narrow sector of the views experienced from across affected parts of the RSA (see **Figure 7.8**).
- The considerable screening from intervening landforms that would arise from the majority of affected areas of the RSA.
- The screening of the solar PV array, BESS/ substation compound and other infrastructure by intervening hedgerows, woodland and buildings;
- The proposed wind turbines would appear to be relatively small landscape elements due to the intervening distance.
- The presence of other operational wind farm developments, albeit of smaller vertical scale, including Beck Burn and Hallburn in the same sector of the surrounding landscape.
- The enclosure provided by forested parts of the RSA, for example to the west of the River Nith.

7.315 Taking these factors into account, the magnitude of change upon the RSA would be **low** where uninterrupted visibility of the Proposed Development is predicted to arise, and there would be **no change** over the extensive areas that do not fall within the Proposed Development's ZTV.

Significance of Effect

7.316 The effects of the Proposed Development on the Solway Coast RSA would be at worst **moderate-minor** and **not significant**, and there would be **no change** across extensive areas that do not fall within the Proposed Development's ZTV. As a consequence, the Proposed Development would also not have significant adverse effects upon the integrity of the RSA.

Cumulative Assessment

7.317 In the consented cumulative scenario, the cumulative influence of wind farm developments upon the RSA would be relatively similar to that predicted for the current baseline of operational wind farms, due to the distances of the consented Little Hartfell and Hopsrig Wind Farms from large parts of the RSA and the screening of much of the predicted visibility due to the presence of intervening hedgerows and woodlands. Where visible, the two consented wind farms would tend to slightly intensify these existing external influences due to their situation close to other operational wind farms, such as Crossdykes (see **Figure 7.32c** (Viewpoint 16: Ward Law)). The Proposed Development would therefore have a relatively weak association with these existing wind farm clusters in the Dumfries and Galloway foothills, due to its location within the Solway basin. Instead,

the Proposed Development would be situated within the immediate context of the smaller scale, operational Beck Burn Wind Farm, and as a result it would maintain the existing separation between wind farm clusters. Given the intervening distance between areas of the RSA where cumulative visibility is predicted, the cumulative magnitude of change associated with the introduction of the Proposed Development would be **low**.

- 7.318 The cumulative effect of the Proposed Development in the consented cumulative scenario would therefore be at worst **moderate-minor** and **not significant** across affected parts of the RSA, and there would be **no change** or a **negligible** effect to the cumulative scenario across parts of the RSA where no or negligible visibility is predicted.
- 7.319 In the application cumulative scenario, the cumulative influence of wind farm developments upon the RSA unit would increase slightly relative to that predicted for the current baseline of operational wind farms, due primarily to the increased vertical and horizontal scale of the application-stage Bloch, Callisterhall, Loganhead Resubmission and Hopsrig Resubmission Wind Farms (see **Figure 7.13k**), which would be situated in the elevated foothills to the north east of the RSA. The Proposed Development would therefore have a relatively weak association with these existing wind farm clusters in the Dumfries and Galloway foothills, due to its location within the Solway basin. Instead, the Proposed Development would be situated within the immediate context of the smaller scale, operational Beck Burn Wind Farm, and as a result it would maintain the existing separation between wind farm clusters. Given the intervening distance between areas of the RSA where cumulative visibility is predicted, the cumulative magnitude of change associated with the introduction of the Proposed Development would be **low**.
- 7.320 The cumulative effect of the Proposed Development in the application cumulative scenario would therefore be at worst **moderate-minor** and **not significant** across affected parts of the RSA, and there would be **no change** or a **negligible** effect to the cumulative scenario across parts of the RSA where no or negligible visibility is predicted.

Assessment of Visual Effects

- 7.321 Effects on views are the changes to views that result from the introduction of the Proposed Development. The assessment of effects on views includes the 17 viewpoints which represent visibility of the Proposed Development, and effects on principal visual receptors such as settlements and routes (see **Figure 7.5**). Cumulative effects are considered in the assessment.
- 7.322 The viewpoint locations are shown in conjunction with the ZTV on **Figures 7.6a-c**. The viewpoints are illustrated on **Figures 7.17-7.33** where a photograph of each view is accompanied by a computer-generated wireline and a photomontage (with the exception of Viewpoint 17). The photographs and cumulative wirelines have a 90° field of view, whereas photomontages are presented with a 53.5° field of view. In the wirelines, the Proposed Development turbines are shown in red, operational wind farms are shown in black, under construction wind farms are shown in purple, consented wind farms are shown in green, and application wind farms are shown in blue.
- 7.323 Night-time photomontages that illustrate the theoretical visibility of aviation light fittings on the turbine nacelles have also been included for three of the viewpoints: Viewpoint 2: Eastriggs – from edge of settlement (**Figure 7.18**).; Viewpoint 3: Kirkpatrick Fleming – from B7076 (**Figure 7.19**).; and Viewpoint 10: Boustead Hill (**Figure 7.26**).
- 7.324 The assessment of night-time visual effects is based on clear night-time conditions, and on the use of 2,000cd and 200cd lights. In reality, it is unlikely that 2,000cd would be experienced at its full intensity as the 2000cd lights would only be in operation when

visibility is less than 5km, and in this situation, they would appear less intense due to the poor visibility around the Proposed Development. The worst-case intensity experienced at viewpoints beyond 5km from the Proposed Development is therefore likely to be represented by the 200cd scenario. It is also important to remember that for the majority of visual receptors, the effect arising from aviation lighting is likely to be gained over a relatively short period. Views from within properties are likely to be restricted by the use of window coverings, particularly in winter, and properties within settlements are likely to be affected by baseline lighting of streetlights. As a result, people who experience views at night are frequently those using the road network, whose adaptation to darkness is compromised by dashboard and car headlights such that this group of receptors will not perceive the turbine lighting at its highest intensity. Remote rural locations, hilltops and footpaths are generally visited infrequently at night and the number of people affected would be low.

Assessment of Effects on Viewpoints

Viewpoint 1: B721 near Rigg

Baseline

- 7.325 This viewpoint is located on the B721 road at its junction with the minor road to the north connecting to Hollee, in between the settlements of Rigg and Eastriggs. The location provides open views across the rural landscape to the north of the B721 road, which are likely to be representative of those experienced by local road users when travelling along one of the closest sections of the road. There is no provision for motor vehicle parking at this location so the views would be experienced by road users when moving at varying speeds, while the residential property situated close by to the south of the road is surrounded by a mature hedge, so the residents do not experience this particular view.
- 7.326 The viewpoint is located in an area that is characterised by the Annandale unit of the Coastal/ Flow Plateau LCT, with the gently sloping landscape comprising of farmland, Nutberry Moss, and forestry prevalent within the view. Dwellings and agricultural buildings appear relatively infrequently in the views, with occasional dwellings situated along the roadside and close to the fringes of the nearby forestry. In the distance, the remnant buildings and towers of the power station at Creca are visible on the horizon to the north west of the viewpoint, while a transmission line traverses the landscape to the west of the viewpoint.
- 7.327 Although there is theoretical visibility of multiple operational wind farms from this location, there is currently no influence from wind farm development within the view due to the relatively flat topography and screening from vegetation and forestry.

Sensitivity

- 7.328 The value of this view is low for the majority of road users and medium for cyclists. There is no formal or informal viewpoint at this location, it is not located within an area designated for its scenic value, and the view is moderately scenic. However, the road forms part of NCR7, which increases the route's value to cyclists.
- 7.329 The susceptibility of road users would generally be medium-low to high-medium. Road users, except for cyclists, would be travelling moderately fast along a relatively straight stretch of road, which does not form part of a recognised scenic route, so views are likely to be transient in nature, and the views do not generally form an integral reason for travel

along the road. The susceptibility of cyclists would be higher due to their slower speed and ability to stop and appreciate the views.

- 7.330 The combination of the value of the view and the susceptibility of viewers leads to an overall **medium-low to high-medium** rating of sensitivity for road users.

Magnitude of Change

- 7.331 All four of the proposed wind turbines, the anemometer mast, and the majority of the solar PV arrays and BESS/ substation compound would be theoretically visible to the north west of this viewpoint from a minimum distance of 1.4km, with all hubs and towers theoretically visible. The proposed wind turbines would be contained within approximately 19° of the available Horizontal Field of View (HFOV). In reality, there would be screening to some of the lower sections of the towers and the entire solar PV array and BESS/ substation compound due to the intervening Redroad Woods. Site infrastructure would be screened by woodland, although tall cranes would be visible during the short-term construction and decommissioning phases. The magnitude of change on this view would be **high**, for the following reasons:

- The Proposed Development is situated at close proximity beyond an open part of the view.
- The large-scale wind turbines would form a new characteristic element within the view.
- The scale of the wind turbines would appear large relative to the scale of the existing landscape elements within the view.
- The Proposed Development would bring movement and contrasting colour and texture to the affected section of the view.
- The anemometer mast would add some further complexity to the visual composition of the Proposed Development.
- The influence of Chapelcross Power Station upon the character of the view is limited.

- 7.332 The factors that restrict the magnitude of change to a high level are as follows:

- The Proposed Development is situated obliquely to the direction of road users travelling east and west.
- The screening of short sections of the turbine towers by woodland slightly reduces the overall visibility of the Proposed Development.
- The presence of vertical structures, such as telegraph poles within the view.
- The screening of turbine bases by woodland gives a slight perception of increased separation between travellers and the proposed wind turbines.
- The wind turbines would affect a relatively limited proportion (around 19° HFOV) of the view that is available from this viewpoint.
- The relatively simple design of the wind turbines, with few instances of blades overlapping occurring in this view.
- The absence of visibility of infrastructure reduces the potential clutter associated with the Proposed Development.
- In some instances, the view would be experienced by moving viewers, travelling on the road, such that it would be experienced for short durations.

Significance of Effect

- 7.333 The effect of the Proposed Development on road users would vary between **moderate** and **major** but they would be **significant** at both levels. This is due to a combination of the factors that lead to the high magnitude of change on the view and the medium-low to high-medium sensitivity of road users.

Cumulative Effects

- 7.334 In relation to the consented and application cumulative scenarios, in reality there is no visibility of any consented or application wind farm developments from this viewpoint, and as a result there would be no cumulative interaction with the Proposed Development under these scenarios. There would therefore be no cumulative magnitude of change and **no cumulative visual effect** in either scenario.

Viewpoint 2: Eastriggs – from edge of settlement

Baseline

- 7.335 This viewpoint is located close to the B721 road on the eastern edge of the settlement of Eastriggs in between the easternmost (recently constructed) buildings and the hedgerow that lines the road further east. The viewpoint is representative of similar views that might be experienced by residents at nearby dwellings around the eastern perimeter of the village. Road users on the B721 are unlikely to experience similar views though due to the hedgerows that line the majority of the roadside nearby. These roadside hedgerows limit wider views from this location such as those to the south west, south and south east, while the buildings within the village occupy short range views and screen longer range views to the west.
- 7.336 The viewpoint is located in an area that is characterised to a degree by the typical features of the Annandale unit of the Coastal/ Flow Plateau LCT, which forms a gently sloping landscape comprising of farmland and woodland, but at this location also considerable earth workings. The earth workings within the foreground and midground of the view moderate the scenic quality of the view, while telegraph poles, electricity pylons, and container units also visible across the view influence the apparent naturalness of the landscape. It is assumed that these features are associated with the growing housing development, and as such the quality of the view would increase following landscape restoration. Overall, the view towards the Proposed Development possesses a relatively modest scenic quality.
- 7.337 Some wind farm development associated with Beck Burn is discernible within the view, although visibility is limited to blades at distances of 8.9km. Other wind farms to the north of the viewpoint are screened by intervening buildings and woodland.

Sensitivity

- 7.338 The value of this view is low. There is no formal viewpoint at this location, and the view is neither formally nor informally recognised at a local level, and it does not encompass a designated landscape. The view is also of modest scenic quality.
- 7.339 The susceptibility of residents would be high. Residents would be able to appreciate the view for long periods from the curtilage of nearby properties, and as such their susceptibility is high.

- 7.340 The combination of the value of the view and the susceptibility of viewers leads to an overall **high** rating of sensitivity for residents. This is because the high susceptibility of the residential viewers outweighs the low value of the view

Magnitude of Change

- 7.341 All four of the proposed wind turbines, the anemometer mast, and the majority of the solar PV array and BESS/ substation compound would be theoretically visible to the north east of this viewpoint from a minimum distance of 1.6km, with all hubs and towers theoretically visible. The proposed wind turbines would be contained within approximately 22° of the available HFOV. In reality, there would be screening to some of the lower sections of the towers and the entire solar PV array and BESS/ substation compound due to the intervening woodlands surrounding the A75 road. Site infrastructure would be screened by woodland, although tall cranes would be visible during the short-term construction and decommissioning phases. The magnitude of change on this view would be **high** for the following reasons:
- The four wind turbines are situated at close proximity within a relatively open section of the views experienced by residents of nearby properties.
 - The large-scale wind turbines would form a new characteristic element within the view.
 - The scale of the wind turbines would appear large relative to the scale of the existing landscape elements within the view.
 - The Proposed Development would bring movement and contrasting colour and texture to the affected section of the view.
 - The anemometer mast would add some further complexity to the visual composition of the Proposed Development.
 - Some residents may experience views towards the Proposed Development for long durations.
- 7.342 The factors that restrict the magnitude of change to a high level are as follows:
- The screening of short sections of the turbine towers by woodland slightly reduces the overall visibility of the Proposed Development.
 - The presence of vertical structures, such as electricity pylons and telegraph poles within the view.
 - The screening of turbine bases by woodland gives a slight perception of increased separation between the viewpoint and the proposed wind turbines.
 - The wind turbines would affect a relatively limited proportion (around 22° HFOV) of the view that is available from this viewpoint.
 - The relatively simple design of the wind turbines, with only some limited instances of blades overlapping occurring in this view.
 - The absence of visibility of infrastructure reduces the potential clutter associated with the Proposed Development.

Significance of Effect

- 7.343 The effect of the Proposed Development on residents would be **major** and **significant**. This is due to a combination of the factors that lead to the high magnitude of change on the view and the high sensitivity of residents.

Cumulative Effects

- 7.344 In relation to the consented cumulative scenario, there would be only very limited visibility of the distant consented Hopsrig (21.6km) and Little Hartfell (22.3km) wind farm developments from this viewpoint, and as a result there would be a negligible additional cumulative interaction with the Proposed Development under this scenario. Nevertheless, the introduction of the Proposed Development into a baseline that already contains visibility of the operational Beck Burn development would increase the cumulative influence of wind farms upon the view. These effects would be moderated by the screening of large parts of Beck Burn (and other operational wind farms) by intervening vegetation. A **low** cumulative magnitude of change is therefore predicted in the consented cumulative scenario, which would result in a **moderate-minor** and **not significant** cumulative visual effect.
- 7.345 In relation to the application cumulative scenario, there is some theoretical visibility of the distant Bloch (14.4km), Loganhead Resubmission (20.5km), Callisterhall (16.8km), Hopsrig Resubmission (21.4km), and Little Hartfell Resubmission (22.4km) application stage wind farms situated in the foothills, but their influence upon the view is moderated by a combination of screening from vegetation and buildings. The additional visibility of the Bloch turbines in the distant foothills would however increase the cumulative influence of wind farms within the view, with the Proposed Development reducing the separation between these turbines and Beck Burn. A **medium** cumulative magnitude of change is therefore predicted in the application cumulative scenario, which would result in a **major-moderate** and **significant** cumulative visual effect.

Viewpoint 3: Kirkpatrick Fleming – from B7076

Baseline

- 7.346 The viewpoint is located at an elevated location within the village of Kirkpatrick Fleming on the pavement that runs alongside the B7076, approximately 260m north west of Elmside. Given the absence of housing, trees and hedgerows to the south of this section of the road, the location (next to a bench) provides open views to the south towards the Proposed Development. The viewpoint is therefore representative of views that might be experienced by residents who live nearby, or those walking along the pavement through this part of the village who may stop to sit on the bench to appreciate the views. Given the sloping topography and varying vegetation cover around the village, similar views are not necessarily experienced from all parts of the settlement.
- 7.347 The viewpoint provides far reaching views across the Annandale unit of the Coastal/ Flow Plateau LCT in the foreground and mid-ground, which is characterised by the gently sloping landscape of farmland, woodland and scattered small scale settlements, that decreases in elevation towards the coastline. Beyond the immediate landscape, the view extends beyond across the relatively narrow section of the Solway Firth to the Cumbria coast, and then further south to the prominent mountains of the Lake District. The outline of Skiddaw is particularly discernible from this location.

- 7.348 There is a relatively indiscernible influence from operational wind farm development within the view due to their distance from the viewpoint, with the majority of the visible wind farms located across the Solway Firth in Cumbria. The 13 masts associated with the Anthorn Radio Station are more discernible across the Solway Firth due to their heights of over 200m, but they are still relatively distant features within the large-scale panorama.

Sensitivity

- 7.349 The value of this view is high-medium. There is no formal viewpoint at this location, but it is apparent from the location of the nearby bench that the view is informally recognised at a local level. The view is of relatively high scenic quality and encompasses part of the Lake District National Park, albeit from a great distance.
- 7.350 The susceptibility of residents would be high. Residents would be able to appreciate the view for long periods from the curtilage of nearby properties, and as such their susceptibility is high.
- 7.351 The combination of the value of the view and the susceptibility of viewers leads to an overall **high** rating of sensitivity for residents.

Magnitude of Change

- 7.352 All four of the proposed wind turbines, the anemometer mast, and the majority of the solar PV array and BESS/ substation compound would be theoretically visible in their entirety to the south of this viewpoint from a minimum distance of 2.7km. The proposed wind turbines would be contained within approximately 12° of the available HFOV. In reality, there would be screening to some of the lower sections of the towers and the entire solar PV array and BESS/ substation compound due to the intervening vegetation. Site infrastructure would be screened by trees and hedgerows, although tall cranes would be visible during the short-term construction and decommissioning phases. The magnitude of change on this view would be **high-medium** for the following reasons:
- The four wind turbines are situated at close proximity within part of an open, far-reaching view experienced by residents of the village.
 - The Proposed Development would be situated within a scenic part of the view that encompasses the distant Lake District fells beyond the Solway Firth.
 - The large-scale wind turbines would bring wind energy development closer to the viewpoint than other operational wind farms.
 - The scale of the wind turbines would appear large relative to the scale of some of the existing landscape elements within the view, such as the scattered farmsteads and houses.
 - The Proposed Development would bring movement and contrasting colour and texture to the affected section of the view.
 - The anemometer mast would add some further complexity to the visual composition of the Proposed Development.
- 7.353 The factors that restrict the magnitude of change to a high-medium level are as follows:
- The wind turbines would affect a relatively limited proportion (around 12° HFOV) of the view that is available from this viewpoint.
 - The relatively simple and compact design of the wind farm, with only some limited instances of blades overlapping occurring in this view.

- The absence of visibility of infrastructure reduces the potential clutter associated with the Proposed Development.
- The screening of turbine bases by trees and vegetation gives a slight perception of increased separation between the viewpoint and the proposed wind turbines.
- The presence of distant vertical structures of a similar height associated with the Anthorn Radio Station.

Significance of Effect

- 7.354 The effect of the Proposed Development on residents would be **major** and **significant**. This is due to a combination of the factors that lead to the high-medium magnitude of change on the view and the high sensitivity of residents.

Cumulative Effects

- 7.355 In relation to the consented and application cumulative scenarios, in reality there is no visibility of any consented or application wind farm developments from this viewpoint, and as a result there would be no cumulative interaction with the Proposed Development under these scenarios. There would therefore be no cumulative magnitude of change and **no cumulative visual effect** in either scenario.

Viewpoint 4: Creca – from road south of settlement

Baseline

- 7.356 The viewpoint is located in a field entrance, approximately 300m south east of the hamlet of Creca, close to Creca Hall. While there are hedgerows lining the sides of the road, there are far reaching open views available from the field entrance to the south east across the coastal plateau, extending as far as the North Pennines. The views are therefore representative of those experienced by road users along certain sections of the road, but also from the edges of the hamlet where some houses also experience uninterrupted views. Given the intervening buildings, similar views are not necessarily experienced from houses located in more central locations within the hamlet or further to the north west.
- 7.357 The view of the surrounding landscape to the south east primarily comprises a mixture of livestock and arable farmland in the foreground and midground, which occasionally features bands of woodland and hedgerows that follow the broad alignment of field boundaries, as well occasional rural dwellings and farmsteads. Beyond the rural Dumfries and Galloway landscape and the coastal margins and lowlands of Cumbria, there are also views of the distant North Pennines in England, which form a smooth ridgeline in the background of the view.
- 7.358 While the overriding character of the landscape is rural, the character of the landscape in the foreground and midground has been strongly influenced by agricultural practices, with the combination of woodland and hedgerows containing the influence of much of the settlement that exists across the broader landscape. The presence of some wind farm development associated with the operational Beck Burn Wind Farm (10.8km) and Solwaybank (10.8km) is clearly discernible in the wider landscape, and to a lesser degree there is also visibility of the distant operational Hallburn (17.8km) and Todhills (16.1km) developments.

Sensitivity

- 7.359 The value of this view is medium-low. There is no formal viewpoint at this location, and it is not located within an area designated for its scenic value, but the view is moderately scenic. While distant parts of the view across northern England encompass part of the North Pennines NL, the majority of the surrounding landscape is not designated at the local or national level.
- 7.360 The susceptibility varies between high for residents and medium-low for road users. Residents would be able to appreciate the view for long periods from the curtilage of nearby properties, and as such their susceptibility is high. While local road users would experience the views transiently with views typically not forming an integral reason for travel along the road
- 7.361 The combination of the value of the view and the susceptibility of viewers leads to an overall **high** rating of sensitivity for residents and **medium-low** for road users.

Magnitude of Change

- 7.362 All four of the proposed wind turbines, the anemometer mast, and the majority of the solar PV array and BESS/ substation compound would be theoretically visible in their entirety to the south east of this viewpoint from a minimum distance of 3.8km. The proposed wind turbines would be contained within approximately 8° of the available HFOV. In reality, there would be screening to some of the lower sections of the towers and the entire solar PV array and BESS/ substation compound due to the intervening vegetation. Site infrastructure would be screened by trees and hedgerows, although tall cranes would be visible during the short-term construction and decommissioning phases. The magnitude of change on this view would be **medium** for the following reasons:
- The four wind turbines are situated at a relatively close proximity to the viewpoint within part of a relatively open, far-reaching view.
 - The large-scale wind turbines would bring wind energy development closer to the viewpoint than other operational wind farms.
 - The scale of the wind turbines would appear slightly large relative to the scale of some of the existing landscape elements within the view, such as the scattered farmsteads and houses.
 - The Proposed Development would bring movement and contrasting colour and texture to the affected section of the view.
 - The anemometer mast would add some further complexity to the visual composition of the Proposed Development.
- 7.363 The factors that restrict the magnitude of change to a medium level are as follows:
- The Proposed Development would affect a small proportion (around 8° HFOV) of the view that is available from this viewpoint.
 - The simple and compact design of the wind farm.
 - The screening of some of the lower turbine sections by trees and vegetation gives a slight perception of increased separation between the viewpoint and the proposed wind turbines.
 - The absence of visibility of infrastructure reduces the potential clutter associated with the Proposed Development.

- Wind farms are an existing characteristic of the view due to the presence of the operational Beck Burn and Hallburn developments.

Significance of Effect

- 7.364 The effect of the Proposed Development on residents and road users would be **major-moderate** and **significant** and **moderate-minor** and **not significant** respectively. This is due to a combination of the factors that lead to the medium magnitude of change on the view and the high to medium-low sensitivity of the receptors.

Cumulative Effects

- 7.365 In relation to the consented cumulative scenario, in reality there is no visibility of any consented wind farm developments from this viewpoint, and as a result there would be no additional cumulative interaction with the Proposed Development in this scenario. The introduction of the Proposed Development into a baseline that contains the operational Beck Burn, Hallburn, Todhills and Solwaybank developments would however increase the cumulative influence of wind farms upon the view, and while maintaining a reasonable degree of separation, a **medium-low** cumulative magnitude of change is predicted. A **moderate** and **not significant** cumulative visual effect would therefore arise in the consented cumulative scenario.
- 7.366 In relation to the application cumulative scenario, there is some theoretical visibility of a number of distant application stage wind farms, but with the exception of some limited visibility of the Bloch (12.2km) and Teviot (34.5km) application stage wind farms, there influence upon the view is nullified by screening from vegetation. The additional cumulative influence of the Bloch and Teviot wind farms would therefore be negligible, and as such the cumulative magnitude of change to the view would remain **medium-low**. A **moderate** and **not significant** cumulative visual effect would therefore arise in the application cumulative scenario.

Viewpoint 5: Coastal Path (junction of Battlehill and Dornock Burn core paths)

Baseline

- 7.367 The viewpoint is located at the junction of the Battlehill (EAST/315) and Dornock Burn (EAST/530) core paths, approximately 1km south west of the village of Dornock. The viewpoint is representative of views experienced by recreational walkers following the paths close to the shoreline of the Solway Firth. Similar views towards the Site are likely to be experienced along sections of the paths where hedgerows are either absent or sufficiently low in height so as to not obstruct visibility. Views in other directions, for example, across the Solway Firth, are likely to be less interrupted due to the flat, open landscape associated with its shoreline and waters.
- 7.368 The principal views along the closest sections of the Battlehill and Dornock Burn core paths generally comprise the Solway Firth and its shoreline, especially where vegetation bordering the neighbouring fields screens views inland. These principal views offer expansive panoramas to the south west, south, and south east, with the Lake District fells visible at greater distances beyond the Firth. Views to the north west, north, and north east are characterised by the Coastal Plateau LCT, which generally comprises livestock fields that are bounded by a mixture of trees and hedgerows. The concave profile of the landform in these directions tends to contain visibility across the farmland, and as such this moderates the interest of these views relative to those encompassing the Solway Firth.

- 7.369 The landscape contained within the views from this location is generally rural in nature with some limited influences from development. These influences are largely contained to scattered residential properties and farmsteads in the foreground and midground, while at greater distance the Anthorn radio masts present a series of vertical structures across the Solway Firth. Due to a combination of screening from vegetation and their distance from the viewpoint, the influence of wind farm development in the wider views is limited.

Sensitivity

- 7.370 The value of this view is medium. There is no formal viewpoint at this location, and the viewpoint is not located within a designated landscape. Core paths are identified at the local level to provide members of the public reasonable access throughout their Council area.
- 7.371 The susceptibility of recreational walkers would be high. Recreational walkers are likely to visit the viewpoint with an expectation to experience scenic views of the Solway Firth and its surroundings.
- 7.372 The combination of the value of the view and the susceptibility of viewers leads to an overall **high-medium** rating of sensitivity for recreational walkers.

Magnitude of Change

- 7.373 All four of the proposed wind turbines and the anemometer mast would be theoretically visible to the north east of this viewpoint from a minimum distance of 4.9km, with all hubs theoretically visible, but landform would screen some of the lowest sections of the towers. The proposed wind turbines would be contained within approximately 8° of the available HFOV. In reality, there would be some additional screening to lower sections of the towers from some intervening deciduous trees. In reality, the solar PV array, BESS/ substation compound and associated infrastructure would be screened by landform, although tall cranes would be visible during the short-term construction and decommissioning phases. The magnitude of change on this view would be **medium-low**, for the following reasons:
- The Proposed Development is situated at a moderate distance with visibility of a large proportion of all four wind turbines.
 - Other operational wind farm development (e.g. Beck Burn) within the same sector of the view is screened by intervening vegetation.
 - The Proposed Development would bring movement and contrasting colour and texture to the affected section of the view.
 - The anemometer mast would add some further complexity to the visual composition of the Proposed Development.
- 7.374 The factors that restrict the magnitude of change to a medium-low level are as follows:
- The Proposed Development would affect a limited proportion (around 8°HFOV) of the view that is available from this viewpoint.
 - The simple, coherent, and compact design of the wind turbines with no blades overlapping.
 - The screening of small sections of the turbine towers by landform and trees reduces the overall visibility and vertical impact of the Proposed Development.

- The screening of some of the lower turbine sections by trees and vegetation gives a slight perception of increased separation between the viewpoint and the proposed wind turbines.
- The wind turbines are situated in a part of the view that is away from the Solway Firth, which forms the main draw in wider views from this section of the path.
- The absence of visibility of infrastructure reduces the potential clutter associated with the Proposed Development.
- The presence of distant vertical structures of a similar height associated with the Anthorn Radio Station.

Significance of Effect

- 7.375 The effect of the Proposed Development on recreational walkers would be **moderate** and **significant**. This is due to a combination of the factors that lead to the medium-low magnitude of change on the view and the high-medium sensitivity of the recreational walkers.

Cumulative Effects

- 7.376 In relation to the consented and application cumulative scenarios, in reality there is no visibility of any consented or application wind farm developments from this viewpoint, and as a result there would be no cumulative interaction with the Proposed Development under these scenarios. There would therefore be no cumulative magnitude of change and **no cumulative visual effect** in either scenario.

Viewpoint 6: Gretna Green – Famous Blacksmiths Shop Visitor Car Park

Baseline

- 7.377 The viewpoint is located close to the Visitor Car Park at the Famous Blacksmiths Shop in Gretna Green, upon a small man-made hillock next to the 'Courtship Maze'. The location provides a slightly elevated vantage point for those visiting the attraction and shops, which enables people to experience views of the wider area. Far reaching views of the wider Dumfries and Galloway landscape are available to the north west, north, north east, and east of the viewpoint, with woodland and buildings associated with the M74 and the settlement of Gretna Green respectively screening longer distance views to the south east, south, south west, and west of the viewpoint.
- 7.378 The view towards the Proposed Development in a south western direction therefore consists of a playing field and the car park associated with the Famous Blacksmiths Shop, and some livestock farmland, before the belt of woodland associated with the M74 corridor screens views of more distant parts of the surrounding landscape, including the Site. Views to the south and south east encompass the Famous Blacksmiths Shop and its associated features, while views to the north and east capture the coastal lowlands in the foreground and midground, and the upland fringes in the background.
- 7.379 Views from the viewpoint are influenced to a varying degree by the nearby development associated with the Famous Blacksmiths Shop, but also wind farm development, including the nearby operational Beck Burn development (1.8km), and more distant operational Minsca (14.9km), Solwaybank (10.4km) and Ewe Hill (16.7km) developments.

Sensitivity

- 7.380 The value of this view is medium. There is no formal viewpoint at this location, and while the small hillock provides an opportunity for visitors to experience views of the surrounding landscape, it is not clear whether it was created for either sculptural and recreational purposes, or as a viewpoint. Given that the available views are not significantly different to those experienced from the base of the hillock, it is assumed that it is probably a mixture of these three purposes. The landscape within the view does not form part of any locally or nationally designated landscapes, although it will soon encompass the Star of Caledonia, which is a planned local landmark.
- 7.381 The susceptibility of visitors would be medium. While visitors are likely to appreciate views at this location, they would not form a key reason for visiting the shop and car park, and as such this moderates their susceptibility to a degree.
- 7.382 The combination of the value of the view and the susceptibility of viewers leads to an overall **medium** rating of sensitivity for visitors.

Magnitude of Change

- 7.383 All four of the proposed wind turbines, the anemometer mast, and part of the solar PV array and BESS/ substation compound would be theoretically visible to the west of this viewpoint from a minimum distance of 5.3km, with all hubs theoretically visible, with only some very limited screening by landform to the lower sections of the towers. The proposed wind turbines would be contained within approximately 6° of the available HFOV. In reality, there would be some additional screening to a large proportion of the towers from intervening woodland, such that visibility would be limited to hubs and blades. Infrastructure, the solar PV array and BESS/ substation compound would be screened by woodland, although tall cranes would be visible during the short-term construction and decommissioning phases. The magnitude of change on this view would be **low**, for the following reasons:
- The Proposed Development is situated at a moderate distance with visibility of the hubs and blades of all four wind turbines.
 - The Proposed Development would bring movement and contrasting colour and texture to the affected section of the view.
 - The wind turbines are situated in a part of the view that will contain the Star of Caledonia sculpture following its construction.
- 7.384 The factors that restrict the magnitude of change to a low level are as follows:
- The screening of the turbine towers by trees reduces the overall visibility and vertical impact of the Proposed Development.
 - The Proposed Development would affect a limited proportion (around 6°HFOV) of the view that is available from this viewpoint.
 - The existing movement (and lighting at night-time) associated with vehicles travelling along the M74 in the same sector of the view.
 - The screening of the turbine towers by woodland gives a perception of increased separation between the viewpoint and the proposed wind turbines.
 - The compact design of the wind farm.

- The absence of visibility of infrastructure reduces the potential clutter associated with the Proposed Development.

Significance of Effect

- 7.385 The effect of the Proposed Development on visitors would be **moderate-minor** and **not significant**. This is due to a combination of the factors that lead to the low magnitude of change on the view and the medium sensitivity of visitors to the viewpoint.

Cumulative Effects

- 7.386 In relation to the consented cumulative scenario, there would be only very limited visibility of the distant consented Hopsrig (19.8km) and Little Hartfell (21.7km) wind farm developments from this viewpoint, and as a result the additional cumulative interaction with the Proposed Development under this scenario would be negligible. Nevertheless, the Proposed Development would extend visibility of wind farm development, albeit screened by woodland to a degree, into a different sector of the view, which would increase the perceived influence of wind farm development upon the wider landscape. A **low** cumulative magnitude of change is therefore predicted in the consented cumulative scenario, which would result in a **moderate-minor** and **not significant** cumulative visual effect.
- 7.387 In relation to the application cumulative scenario, there is some theoretical visibility of the Bloch (10.8km), Loganhead Resubmission (17.1km), Callisterhall (14.6km), Hopsrig Resubmission (19.3km), Little Hartfell Resubmission (21.7km), and Scoop Hill (28.7km) application stage wind farms, which intensify the influence of wind farm development in sectors of the view containing the Dumfries and Galloway foothills. The Proposed Development would be situated in a separate context to these developments so it would therefore have a relatively weak association with them. However, it would introduce wind farm development into a sector of the panoramic views that is currently unaffected by wind farm development, and this would increase the cumulative magnitude of change. Overall, a **low** cumulative magnitude of change is predicted in the application cumulative scenario, which would result in a **moderate-minor** and **not significant** cumulative visual effect.

Viewpoint 7: Start of Hadrian's Wall Path, Bowness-on-Solway

Baseline

- 7.388 This viewpoint is located close to the start of the Hadrian's Wall Path National Trail on the shore of the Solway Firth close to the north east of the village of Bowness-on-Solway. The view is therefore representative of those experienced by recreational users of the path, by residents of nearby houses, and visitors to the beach. Given the proximity to the Solway Firth, the location provides expansive views to the north, east, and west across the estuary to the Dumfries and Galloway coast and beyond to its upland fringes.
- 7.389 Views towards the Proposed Development are characterised by the landscape of the estuary in the foreground and mid-ground of the view, which is constantly changing with the tidal patterns providing an evolving landcover of extensive mudflats and/ or water. Beyond the estuary, the landscape of the Dumfries and Galloway coast is relatively flat with a variety of landcover primarily comprising arable farmland, woodland, and scattered settlement. Beyond the upland fringes of Drumfries and Galloway form a gently sloping skyline, which is punctuated by occasional wind farm development and the remnants of the Creca power station.

- 7.390 The influence of the operational Minsca (17.0km), Solwaybank (17.4km) and Beck Burn (13km) Wind Farms is relatively limited given the intervening distance, but the wind turbines are discernible and form a characteristic of the viewpoints wider setting.

Sensitivity

- 7.391 The value of this view is high. The viewpoint is located at the starting point of one of England's national trails, where views of relatively high scenic quality can be experienced by both visitors and residents. A small part of these views along the coastline to the east also comprise part of the Solway Coast NL.
- 7.392 The susceptibility of recreational walkers and residents would be high. Recreational walkers are likely to visit the viewpoint with some expectation to experience scenic views of the Solway Coast NL. While some residents would be able to appreciate the views towards the Proposed Development for long periods from the curtilage of nearby properties, or when visiting the beach.
- 7.393 The combination of the value of the view and the susceptibility of viewers leads to an overall **high** rating of sensitivity for recreational walkers and residents.

Magnitude of Change

- 7.394 All four of the proposed wind turbines, the anemometer mast, and the majority of the solar PV arrays and BESS / substation compound would be theoretically visible to the north east of this viewpoint from a minimum distance of 6.1km, with all hubs and towers theoretically visible. The proposed wind turbines would be contained within approximately 6° of the available HFOV. In reality, there would only be some very limited screening to the bottom of the turbine towers from intervening woodland. In reality, associated infrastructure, the solar PV array and the BESS/ substation compound would be screened by woodland and other vegetation, although tall cranes may be visible during the short-term construction and decommissioning phases. The magnitude of change on this view would be **medium-low** for the following reasons:
- The Proposed Development is situated at a moderate distance from the viewpoint.
 - The proposed wind turbines would be viewed in the context of the simple landscape of the Solway Firth in the foreground and midground of the view.
 - The relatively compact design of the wind farm would result in some blade overlapping.
 - The wind turbines would be larger in scale and closer than other operational wind farm development within the view.
 - While the wind turbines would be situated within a broad, expansive landscape setting, they would contrast with smaller scale landscape elements, such as the scattered buildings along the Dumfries and Galloway coast.
 - The anemometer mast would add some further complexity to the visual composition of the Proposed Development.
- 7.395 The factors that restrict the magnitude of change to a medium-low level are as follows:
- The Proposed Development would affect a limited proportion (around 6°HFOV) of the view that is available from this viewpoint.
 - The compact design of the wind farm.

- The presence of other operational wind farms (notably Solwaybank, Craig, Ewe Hill, Minsca, and Beck Burn) within the view, albeit at greater distances, and vertical structures associated with Chapelcross Power Station.
- The absence of visibility of infrastructure reduces the potential clutter associated with the Proposed Development.

Significance of Effect

- 7.396 The effect of the Proposed Development on residents and recreational walkers would be **moderate** and **significant**. This is primarily due to a combination of the factors that lead to the medium-low magnitude of change on the view and the high sensitivity of the receptors. The effect would be significant due to the relatively large scale of the turbines, the distance between the viewpoint and the receptor, and the perceived foreshortening of the view due to the simplicity of the intervening landscape.

Cumulative Effects

- 7.397 In relation to the consented cumulative scenario, there would be only very limited theoretical visibility of the distant consented Hopsrig (25.3km) and Little Hartfell (25.4km) wind farm developments from this viewpoint, which would integrate cohesively with the operational Minsca and Ewe Hill wind farms in the distant foothills. As a result, there would be no discernible change to the cumulative baseline under this scenario. Nevertheless, the Proposed Development would further intensify the influence of existing wind farm development within northern views across the Solway Firth, and it would be more apparent at closer range, possessing a larger vertical scale, and within a distinctly separate context to those other wind farms situated in the Dumfries and Galloway foothills. A **medium-low** cumulative magnitude of change is therefore predicted in the consented cumulative scenario, which would result in a **moderate** and **not significant** cumulative visual effect. Effects would be not significant due to the separation that exists between the different wind farm clusters in the landscape and their relatively weak influence upon the view due to their distance from the viewpoint.
- 7.398 In relation to the application cumulative scenario, there would be a discernible change to the baseline view primarily associated with the introduction of the larger scale turbines associated with the Bloch (10.8km), Loganhead Resubmission (17.1km), Callisterhall (14.6km), and Hopsrig Resubmission (19.3km) application stage wind farms, which would intensify the influence of wind farm development in the foothills containing the operational Solwaybank (17.4km), Ewe Hill (22.4km), Craig (25km), and Crossdykes (24.8km) Wind Farms. The Proposed Development would further intensify the influence of wind farm development within northern views across the Solway Firth, and it would be more apparent at closer range, possessing a larger vertical scale, and within a distinctly separate context to those other wind farms situated in the Dumfries and Galloway foothills. Overall, a **medium-low** cumulative magnitude of change is predicted in the application cumulative scenario, which would result in a **moderate** and **significant** cumulative visual effect. Effects would be significant due to the reduction in the separation between wind farm clusters, due to the increased horizontal extent of wider wind farm development, primarily associated with the application-stage Bloch wind farm.

Viewpoint 8: Annan – Watchill

Baseline

- 7.399 This viewpoint is located on Watchill Road, which connects Scott's Street to Seafield Road, on the south eastern edge of Annan. The precise location is situated within a field entrance approximately 200m south of the closest residential property on Watchill Road. The more open, rural context of this location enables views to be experienced to the east along the Dumfries and Galloway coastline towards the Proposed Development, but also to the south across the Solway Firth to Cumbria, where the mountains of the Lake District form a backdrop. These views are likely to be experienced by some local road users when travelling, but there are no car parking facilities along the road. Views from other parts of Annan towards the Site are generally screened by woodland and/ or buildings, and as a consequence the viewpoint is not representative of views experienced from the majority of other parts of the town.
- 7.400 The view towards the Proposed Development comprises of some settlement associated with the south eastern edge of Annan and the rural landscape to the east of the viewpoint, which forms part of the Annandale unit of the Coastal/ Flow Plateau LCT. While the landform of this landscape is relatively simple, its character appears relatively complex due to the varied landcover which includes scattered dwellings, a large number of hedgerow and fence bounded fields, scattered woodlands, the distant operational Beck Burn Wind Farm (13.8km), and the Solway Firth and distant hills in the wider setting. Views to the south are slightly simpler, comprising livestock farmland and occasional dwellings in the foreground, the Solway Firth in the midground, and the dramatic Lake District hills in the background. Views to the west and north are contained by landform and therefore consist of some livestock farmland and housing located on the edge of Annan. Given the orientation of the landform, views south across the Solway Firth provide the primary draw from this location.
- 7.401 Given the visibility of Beck Burn Wind Farm, wind turbines are a characteristic of the wider landscape, albeit it is relatively distant and of a small scale within views from this location.

Sensitivity

- 7.402 The value of this view is medium-low. There is no formal viewpoint at this location, and it is also not recognised informally at the local level. While a distant part of the views across to Cumbria encompass part of the Solway Coast NL, the majority of the surrounding landscape, particularly in the direction of the Proposed Development, is not designated at the local or national level.
- 7.403 The susceptibility of road users would be medium-low. Road users would be focussed on navigating the narrow road and they would be oriented perpendicular to the direction of the Proposed Development.
- 7.404 The combination of the value of the view and the susceptibility of viewers leads to an overall **medium-low** rating of sensitivity for road users.

Magnitude of Change

- 7.405 All four of the proposed wind turbines, the anemometer mast, and the majority of the solar PV arrays and BESS / substation compound would be theoretically visible to the east of this viewpoint from a minimum distance of 6.2km, with all hubs and towers theoretically visible. The proposed wind turbines would be contained within approximately 6° of the available HFOV. In reality, associated infrastructure, the solar PV array, and the BESS/

substation compound would be screened by a mixture of woodland, buildings and other vegetation, although tall cranes may be visible during the short-term construction and decommissioning phases. The magnitude of change on this view would be **medium-low** for the following reasons:

- The Proposed Development is situated at a moderate distance from the viewpoint.
- There would be only very limited screening of the turbines from intervening landform and vegetation.
- The proposed wind turbines would appear to be a larger scale than the existing operational Beck Burn turbines in the view, which would add a degree of visual complexity.
- The anemometer mast would add some further complexity to the visual composition of the Proposed Development.

7.406 The factors that restrict the magnitude of change to a medium-low level are as follows:

- The Proposed Development would affect a limited proportion (around 6°HFOV) of the view that is available from this viewpoint.
- The Proposed Development is situated obliquely to the direction of road users travelling north west and south east.
- The compact design of the wind farm would result in only very limited blade overlapping.
- The screening of the bottom of the turbine towers by woodland gives a perception of increased separation between the viewpoint and the proposed wind turbines.
- The absence of visibility of infrastructure reduces the potential clutter associated with the Proposed Development.
- The presence of operational wind farm development associated with the operational Beck Burn Wind Farm in the same sector of the view.

Significance of Effect

7.407 The effect of the Proposed Development on road users would be **minor** and **not significant**. This is due to a combination of the factors that lead to the low magnitude of change on the view and the medium-low sensitivity of road users.

Cumulative Effects

7.408 Visibility of any notable operational and/ or under-construction wind farms is described in the baseline description above.

7.409 In relation to the consented and application cumulative scenarios, in reality there is no visibility of any consented or application wind farm developments from this viewpoint, and as a result there would be no cumulative interaction with the Proposed Development under these scenarios. There would therefore be no cumulative magnitude of change and **no cumulative effect** in either scenario.

Viewpoint 9: Eaglesfield

Baseline

- 7.410 This viewpoint is located on the edge of the village of Eastriggs on the track that leads from the B722 road to Newlands Farm, which also provides access to the village's recreation grounds. The viewpoint is situated approximately 7.1km to the northwest of the Proposed Development and it is representative of views that may be experienced by some residents from the rear gardens of their nearby properties, where there are open views across the nearby livestock fields.
- 7.411 The village of Eaglesfield is located in an area of Upland Fringe LCT, which is characterised by its mixture of farmland, woodland/ forestry, and rough grazing land, situated in between the neighbouring lowland and upland landscapes. The landscape has a gradual gradient and as such views towards the Proposed Development while relatively open, are contained by the intervening areas of woodland and forestry. Views in other directions from this location are generally screened by both buildings and vegetation associated with development across the village.
- 7.412 There is currently no discernible influence from wind farm development in views from this location, but the landscape is subject to a broader influence from other development, including that associated with the village and also scattered farmsteads and dwellings. The landscape within the view therefore contains a degree of complexity, relative to other areas, which is reinforced by the changing landcover.

Sensitivity

- 7.413 The value of this view is medium. There is no formal viewpoint at this location, and it is not apparent that this is a location that is visited due to its scenic quality. Nevertheless, the view is valued at the local level by nearby residents and it's rural characteristics possess some scenic quality.
- 7.414 The susceptibility of residents would be high. Residents would be able to appreciate the view for long periods from the curtilage of nearby properties, and as such their susceptibility is high.
- 7.415 The combination of the value of the view and the susceptibility of viewers leads to an overall **high** rating of sensitivity for residents. This is because the high susceptibility of the residential viewers outweighs the medium value of the view.

Magnitude of Change

- 7.416 All four of the proposed wind turbines and the anemometer mast would be theoretically visible to the south west of this viewpoint from a minimum distance of 7.1km, with all hubs and approximately two thirds of the towers theoretically visible. The proposed wind turbines would be contained within approximately 4° of the available HFOV. In reality, there would also be some screening to further sections of the towers from intervening woodland. Site infrastructure, the solar PV array and BESS/ substation compound would be screened by intervening landform, although tall cranes may be visible during the short-term construction and decommissioning phases. The magnitude of change on this view would be **low** for the following reasons:
- The Proposed Development is situated at a moderate distance from the viewpoint.
 - There would only be some screening of the turbines from intervening landform and vegetation.

- The Proposed Development would introduce a new characteristic element into the view.
- The Proposed Development would bring movement and contrasting colour and texture to the affected section of the view.
- The design of the wind farm would be inconsistent with some blades overlapping.

7.417 The factors that restrict the magnitude of change to a low level are as follows:

- The Proposed Development would affect a limited proportion (around 4°HFOV) of the view that is available from this viewpoint.
- The compact design of the wind farm.
- The screening of the bottom of the turbine towers by woodland gives a perception of increased separation between the viewpoint and the proposed wind turbines.
- The absence of visibility of infrastructure reduces the potential clutter associated with the Proposed Development.

Significance of Effect

7.418 The effect of the Proposed Development on residents would be **moderate-minor** and **not significant**. This is due to a combination of the factors that lead to the low magnitude of change on the view and the high sensitivity of residents.

Cumulative Effects

7.419 Visibility of any notable operational and/ or under-construction wind farms is described in the baseline description above.

7.420 In relation to the consented and application cumulative scenarios, in reality there is no visibility of any consented or application wind farm developments from this viewpoint, and as a result there would be no cumulative interaction with the Proposed Development under these scenarios. There would therefore be no cumulative magnitude of change and **no cumulative effect** in either scenario.

Viewpoint 10: Boustead Hill

Baseline

7.421 The viewpoint is located on the minor road between Drumburgh and Burgh-by-Sands, which also forms part of NCR 72, approximately 150m north of the hamlet of Boustead Hill. The road is also occasionally used by recreational walkers following the Hadrians Wall Path, due to its close proximity to the ruins of the wall. The viewpoint provides unobstructed, expansive views across the Solway Firth estuary to Dumfries and Galloway.

7.422 The viewpoint is located in the Burgh Marsh unit of the Bay and Estuary LCT, and the foreground of the view is characteristic of this LCT. The flat landscape is dominated by relatively short grassland, which is grazed by livestock, incised by streams, and punctuated by clumps of gorse and wetter marshland. The openness of this landscape enables far-reaching views across the estuary to the Dumfries and Galloway coast and foothills, which while initially relatively flat gradually rises to form a distant undulating backdrop. Views to the west provide similar views of the Bay and Estuary LCT in the foreground, with visibility of the Anthorn Radio Station masts in the midground and the sloping ridgeline of Criffel in the background forming notable features. Views to the east

are again similar in character, before the landscape transitions in the midground into the more diverse Coastal Margins LCT, which is characterised by its mixture of arable farmland and woodland. Views to the south encompass the hamlet of Boustead Hill, which consists of a line of traditional, red stone houses, in the foreground, that screens more distant parts of the landscape in this direction.

- 7.423 There is considerable wind farm development within the view, but it is generally located at large distances from the viewpoint, beyond the Solway Firth in Dumfries and Galloway, and as such some wind turbines are relatively indiscernible. In views towards the Proposed Development, the Minsca (21.7km) and Solwaybank (19.4km) Wind Farms are clearly discernible on the hills to the north of the Site, while Beck Burn (10.4km) is apparent slightly further east.

Sensitivity

- 7.424 The value of this view is high. There is no formal viewpoint at this location, but it is located on NCR 72 and next to the Hadrians Wall Path national trail. Many of the residents of the hamlet of Boustead Hill will also experience similar views, albeit from a slightly more elevated position. The panoramic view is relatively scenic with far-reaching views across the Solway Firth to Scotland.
- 7.425 The susceptibility of receptors would vary between high for recreational walkers, cyclists and residents and medium for those driving vehicles. Recreational walkers and cyclists are likely to visit the viewpoint with an expectation to experience scenic views of the Solway Coast NL. While some residents would be able to appreciate the views towards the Proposed Development for long periods from the windows and curtilage of nearby properties.
- 7.426 The combination of the value of the view and the susceptibility of viewers leads to an overall **high-medium** sensitivity for those driving vehicles and **high** sensitivity for recreational walkers, cyclists, and residents.

Magnitude of Change

- 7.427 All four of the proposed wind turbines, the anemometer mast, and the majority of the solar PV arrays and BESS / substation compound would be theoretically visible to the north west of this viewpoint from a minimum distance of 8.5km, with all hubs and towers theoretically visible. The proposed wind turbines would be contained within approximately 4° of the available HFOV. In reality, there would only be some very limited screening to the bottom of the turbine towers from intervening woodland. Site infrastructure, the solar PV array, and the BESS / substation compound would be screened by intervening woodland and other vegetation, although tall cranes may be visible during the short-term construction and decommissioning phases. The magnitude of change on this view would be **medium-low** for the following reasons:
- The Proposed Development is situated at a moderate distance from the viewpoint.
 - The proposed wind turbines would be viewed in the context of the simple landscape of the Solway Firth and its surrounding farmland in the foreground and midground of the view.
 - The proposed wind turbines would be visible below and above the skyline.
 - The relatively compact design of the wind farm would result in some blade overlapping.

- The wind turbines would be larger in scale and closer than other operational wind farm development within the view.
- While the wind turbines would be situated within a broad, expansive landscape setting, they would contrast with smaller scale landscape elements, such as the scattered buildings along the Dumfries and Galloway coast.
- The anemometer mast would add some further complexity to the visual composition of the Proposed Development.

7.428 The factors that restrict the magnitude of change to a medium-low level are as follows.

- The Proposed Development would affect a limited proportion (around 4°HFOV) of the view that is available from this viewpoint.
- The compact design of the wind farm.
- The separation between the viewer and the Proposed Development which is emphasised by the contrasting character of the Solway Firth.
- The presence of other operational wind farms (notably Solwaybank, Craig, Ewe Hill, Crossdykes, Minsca, and Beck Burn) within the view, albeit at greater distances, and vertical structures associated with Chapelcross Power Station.
- The absence of visibility of infrastructure reduces the potential clutter associated with the Proposed Development.

Significance of Effect

7.429 The effect of the Proposed Development on recreational walkers, cyclists, residents, and road users would be **moderate** and **significant**. This is due to a combination of the factors that lead to the medium-low magnitude of change on the view and the high-medium to high sensitivity of the receptors.

Cumulative Effects

7.430 In relation to the consented cumulative scenario, there would be only very limited theoretical visibility of the distant consented Hopsrig (28.5km) and Little Hartfell (29.7km) wind farm developments from this viewpoint, which would be relatively indiscernible due to the degree of landform screening and the intervening distance. As a result, there would be no discernible change to the cumulative baseline under this scenario. Nevertheless, the Proposed Development would further intensify the influence of existing wind farm development within northern views across the Solway Firth, and it would be more apparent at closer range, possessing a larger vertical scale, and within a distinctly separate context to those other wind farms situated in the Dumfries and Galloway foothills. A **medium-low** cumulative magnitude of change is therefore predicted in the consented cumulative scenario, which would result in a **moderate** and **not significant** cumulative visual effect. Effects would be not significant due to the separation that exists between different wind farm clusters in the landscape and their relatively weak influence upon the view due to their distance from the viewpoint.

7.431 In relation to the application cumulative scenario, there would be a more discernible change to the baseline view primarily associated with the introduction of the Scoop Hill application-stage wind farm (36.6km) beyond the Proposed Development, and the Bloch (20.2km), Loganhead Resubmission (26.5km), Callisterhall (23.4km), Hopsrig Resubmission (28.2km) application stage wind farms, which would intensify the influence of wind farm development in the Scottish foothills that contain the operational Solwaybank

(19.4km), Ewe Hill (25.4km), Craig (26.6km), and Crossdykes (28.3km) Wind Farms. The Proposed Development would further intensify the influence of wind farm development within northern views across the Solway Firth, and it would be more apparent at closer range, possessing a larger vertical scale, and within a separate context to those other wind farms situated in the more elevated foothills. Overall, a **medium-low** cumulative magnitude of change is predicted in the application cumulative scenario, which would result in a **moderate** and **not significant** cumulative visual effect. Effects would be not significant due to the separation that exists between different wind farm clusters in the landscape and their relatively weak influence upon the view due to their distance from the viewpoint.

Viewpoint 11: King Edward I Monument

Baseline

- 7.432 The viewpoint is located immediately to the north of the King Edward I Monument, which is a tall red sandstone structure (Grade 2 listed) that was erected in 1685 to commemorate the site of his death. The viewpoint is reached by walking along the public footpath from the car park located approximately 1km to the north of Burgh-by-Sands. The view is therefore representative of those experienced by recreational walkers visiting the monument.
- 7.433 The viewpoint is located in the Burgh Marsh unit of the Bay and Estuary LCT, and the foreground of the view is characteristic of this LCT. The flat landscape is dominated by an expansive area of relatively short grassland, which is grazed by livestock. The openness of this landscape enables far-reaching views across the estuary to the Dumfries and Galloway coast and upland fringes, which rises gradually to form a distant undulating backdrop. Views to the west are similarly characterised by the Bay and Estuary LCT in the foreground and midground, with visibility of the Anthorn Radio Station masts and the sloping ridgeline of Criffel in the background. Views to the east are again similar in character, before the landscape transitions in the midground into the more diverse and wooded Coastal Margins LCT, which is punctuated by electricity pylons and the wind turbines associated with Beck Burn Wind Farm (7.8km). Views to the south encompass the monument and further areas of the Coastal Margins LCT in the midground, while the background is characterised by the northern uplands of the Lake District National Park.
- 7.434 There is considerable wind farm development within the view, but it is generally located at large distances from the viewpoint, beyond the Solway Firth in Dumfries and Galloway, and as such some wind turbines are relatively indiscernible. In views towards the Proposed Development, the Minsca (21.5km) and Solwaybank (18.1km) Wind Farms are clearly discernible on the hills to the north of the Site, while Beck Burn is located closer in views to the east. The influence of these wind farms upon the view is therefore relatively minor.

Sensitivity

- 7.435 The value of this view is high-medium. There is no formal viewpoint at this location, but it is located within the Solway Coast NL, which occupies the majority of the foreground and midground of the view. Views are therefore scenic and generally encompass a landscape that is in good condition. The location also possesses significant cultural value due to the history of the monument.
- 7.436 The susceptibility of recreational walkers would be high. Recreational walkers are likely to visit the viewpoint with an expectation to experience scenic views of the Solway Coast NL.

- 7.437 The combination of the value of the view and the susceptibility of viewers leads to an overall **high** rating of sensitivity for recreational walkers.

Magnitude of Change

- 7.438 All four of the proposed wind turbines, the anemometer mast, and the more elevated parts of the solar PV arrays and BESS / substation compound would be theoretically visible to the north west of this viewpoint from a minimum distance of 8.6km, with all hubs and towers theoretically visible. The proposed wind turbines would be contained within approximately 4° of the available HFOV. The wind turbines would extend across around 4° of the view. Site infrastructure, the solar PV array, and the BESS/ substation compound would be screened by intervening woodland and other vegetation, although tall cranes may be visible during the short-term construction and decommissioning phases. The magnitude of change on this view would be **medium-low** for the following reasons:
- The Proposed Development is situated at a moderate distance from the viewpoint.
 - The proposed wind turbines would be viewed in the context of the simple landscape of the Solway Firth and its surrounding farmland in the foreground and midground of the view.
 - The proposed wind turbines would be visible below and above the skyline.
 - The wind turbines would be larger in scale and closer than other operational wind farm development within the view.
 - While the wind turbines would be situated within a broad, expansive landscape setting, they would contrast with smaller scale landscape elements, such as the scattered buildings along the Dumfries and Galloway coast.
 - The anemometer mast would add some further complexity to the visual composition of the Proposed Development.
- 7.439 The factors that restrict the magnitude of change to a medium-low level are as follows.
- The Proposed Development would affect a limited proportion (around 4°HFOV) of the view that is available from this viewpoint.
 - The compact design of the wind farm.
 - The separation between the viewer and the Proposed Development which is emphasised by the contrasting character of the Solway Firth.
 - The presence of other operational wind farms (notably Solwaybank, Craig, Ewe Hill, Crossdykes, Minsca, and Beck Burn) within the view, albeit at greater distances, and vertical structures associated with Chapelcross Power Station.
 - The absence of visibility of infrastructure reduces the potential clutter associated with the Proposed Development.

Significance of Effect

- 7.440 The effect of the Proposed Development on recreational walkers would be **moderate** and **significant**. This is due to a combination of the factors that lead to the medium-low magnitude of change on the view and the high sensitivity of recreational walkers in this location.

Cumulative Effects

- 7.441 In relation to the consented cumulative scenario, there would be only very limited theoretical visibility of the distant consented Hopsrig (27.3km) and Little Hartfell (29.0km) wind farm developments from this viewpoint, which would be relatively indiscernible due to the degree of landform screening and the intervening distance. As a result, there would be no discernible change to the cumulative baseline under this scenario. Nevertheless, the Proposed Development would further intensify the influence of existing wind farm development within northern views across the Solway Firth, but it would be more apparent at closer range, possessing a larger vertical scale, and within a distinctly separate context to those other wind farms situated in the Dumfries and Galloway foothills. A **low** cumulative magnitude of change is therefore predicted in the consented cumulative scenario, which would result in a **moderate** and **not significant** cumulative visual effect. Effects would be not significant due to the separation that exists between different wind farm clusters in the landscape and their relatively weak influence upon the view due to their distance from the viewpoint.
- 7.442 In relation to the application cumulative scenario, there would be a more discernible change to the baseline view primarily associated with the introduction of the Scoop Hill (36.0km), Little Hartfell Resubmission (29km), Bloch (18.5km), Loganhead Resubmission (24.8km), Callisterhall (22.2km), and Hopsrig Resubmission (27.0km) application stage wind farms, which would intensify the influence of wind farm development in the distant Scottish foothills that also contain the operational Minsca (21.5km), Solwaybank (18.1km), Ewe Hill (24.3km), Craig (24.9km), and Crossdykes (27.4km) Wind Farms. The Proposed Development would further intensify the influence of wind farm development within northern views across the Solway Firth, but it would be more apparent at closer range, possessing a larger vertical scale, and within a separate context to those other wind farms situated in the more elevated foothills. Overall, a **medium-low** cumulative magnitude of change is predicted in the application cumulative scenario, which would result in a **moderate** and **not significant** cumulative visual effect. Effects would be not significant due to the separation that exists between the different wind farm clusters in the landscape and their relatively weak influence upon the view due to their distance from the viewpoint.

Viewpoint 12: A75, west of Annan

Baseline

- 7.443 The viewpoint is located in a field entrance along the A75 road, between Annan and Carrutherstown, approximately 3km northwest of Annan and 100m southeast of the junction between the A75 and the B7020. The view is representative of those that maybe experienced by road users along this more open section of the road, which is slightly elevated above the surrounding farmland, such that views are less interrupted less by hedgerows along the neighbouring field margins.
- 7.444 Views east towards the Proposed Development and also to the northeast consist of the rolling landscape associated with the Annandale Flow Plateau LCT, which consists of a mixture of arable farmland, scattered farmsteads, and woodlands. The landscape is often punctuated by various different forms of development, which contribute to a relatively diverse landscape character.
- 7.445 The most notable forms of development within the view typically relate to the scattered farmsteads at shorter range, and various forms of electrical distribution and transmission lines at varying distances, as well as the Chapelcross power station and the operational Minsca (12.7km) and Ewe Hill (19.7km) Wind Farms at greater distances.

Sensitivity

- 7.446 The value of this view is medium-low. There are no formal viewpoints along this section of the A75 with this particular viewpoint selected to represent the occasional views of road users in the direction of the Proposed Development. The viewpoint is also not located within a locally or nationally designated landscape.
- 7.447 The susceptibility of road-users to the Proposed Development would be medium-low. Road users are likely to be travelling at speeds of between 40-60mph, and as such this is likely to reduce their susceptibility to changes in the occasional views of the surrounding landscape.
- 7.448 The combination of the value of the view and the susceptibility of viewers leads to an overall **medium-low** rating of sensitivity for road users.

Magnitude of Change

- 7.449 All four of the proposed wind turbines and the anemometer mast would be theoretically visible to the east of this viewpoint from a minimum distance of 9.8km, with all hubs and approximately two thirds of the towers theoretically visible. The proposed wind turbines would be contained within approximately 3° of the available HFOV. In reality, there would also be some screening to further sections of the towers from intervening woodland. Site infrastructure, the solar PV array and the BESS/ substation compound would be screened by intervening landform, although tall cranes may be visible during the short-term construction and decommissioning phases. The magnitude of change on this view would be **low** for the following reasons:
- The Proposed Development is situated at a moderate distance from the viewpoint.
 - There would only be some screening of the turbines from intervening landform and vegetation.
 - The Proposed Development would introduce a new characteristic element into this section of the view, although the operational Minsca, Crossdykes and Ewe Hill wind farms would be apparent further to the north.
 - The Proposed Development would bring movement and contrasting colour and texture to the affected section of the view.
 - The design of the wind farm would result in some blades overlapping.
 - The anemometer mast would add some further complexity to the visual composition of the Proposed Development.
- 7.450 The factors that restrict the magnitude of change to a low level are as follows:
- The Proposed Development would affect a limited proportion (around 3°HFOV) of the view that is available from this viewpoint.
 - The Proposed Development is situated obliquely to the direction of road users travelling north west and south east.
 - The compact design of the wind farm.
 - The screening of the bottom of the turbine towers by landform and woodland gives a perception of increased separation between the viewpoint and the proposed wind turbines.

- The absence of visibility of infrastructure reduces the potential clutter associated with the Proposed Development.
- The presence of other vertical structures in the view such as electricity pylons and the Chapelcross power station, as well as other development associated with local settlements.

Significance of Effect

- 7.451 The effect of the Proposed Development on road users would be **minor** and **not significant**. This is due to a combination of the factors that lead to the low magnitude of change on the view and the medium-low sensitivity of road users.

Cumulative Effects

- 7.452 In relation to the consented cumulative scenario, in reality there is extremely limited visibility of any consented wind farm developments from this viewpoint, and as a result there would be no additional cumulative interaction with the Proposed Development in this scenario. The introduction of the Proposed Development into a baseline that contains visibility of some operational wind farm developments, such as Minsca (12.7km) and Ewe Hill (19.7km), would however increase the cumulative influence of wind farms upon the wider view. A reasonable degree of separation would be maintained though and consequently a **low** cumulative magnitude of change is predicted. A **minor** and **not significant** cumulative visual effect would therefore arise in the consented cumulative scenario.
- 7.453 In relation to the application cumulative scenario, there is some theoretical visibility of a number of distant application stage wind farms in the wider view, most notably Balgray (19.2km), Scoop Hill (26.7km), and Hopsrig Resubmission (22.1km). These wind farms would slightly increase the perceived influence of wind farm development in the wider view, but they would not reduce the existing visual separation between the Proposed Development and other wind farms. A **low** cumulative magnitude of change is therefore predicted in the application cumulative scenario, which would result in a **minor** and **not significant** cumulative visual effect.

Viewpoint 14: Repentance Tower, Hoddum

Baseline

- 7.454 The viewpoint is located by Repentance Tower, a 16th century watch tower located on Trailtrow Hill, approximately 11.7km north west of the Proposed Development. The tower can be accessed by recreational walkers following the CUMM/242 and/ or HODD/501 core paths, which facilitate access from the surrounding local road network. The elevated location of the tower provides far-reaching panoramic views over the surrounding landscape to the south, south west and east. Views in other directions are contained to varying degrees by the presence of the tower and the walls of the cemetery.
- 7.455 The viewpoint is located in the Dale with Hills LCT, but due to its short distance from the Annandale Flow Plateau unit of the Coastal/Flow Plateau LCT, and the ability to experience expansive far-reaching views, views experienced by recreational walkers comprise a varied landscape that generally consists of a mixture of woodland and farmland in the foreground and midground, with more elevated but smooth hills, associated with the Lake District fells, Annandale, and the Solway Coast, and the Solway Firth contributing to the character of the landscape in the background.

- 7.456 The character of the view is therefore varied with some settlement visible across the landscape, as well as the Chapelcross power station apparent within the same sector of the view as the Proposed Development. There is also some evidence of distant wind farm development across much of the view, with Solwaybank (14.9km) most apparent on the hills to the east of the viewpoint. Other wind farm development to the south of the viewpoint has a much more limited influence due to a combination of its scale and distance from the viewpoint.

Sensitivity

- 7.457 The value of this view is medium. The summit of the hill is not a formal viewpoint, nor is it located in a locally or nationally designated landscape, but it is a local attraction and access is facilitated by a core path.
- 7.458 The susceptibility of recreational walkers would be high. Recreational walkers are likely to hold an expectation that they will experience panoramic views from the summit of the hill, and therefore they are highly susceptible to changes in the views that will be attained from this location.
- 7.459 The combination of the value of the view and the susceptibility of viewers leads to an overall **high-medium** rating of sensitivity for recreational walkers.

Magnitude of Change

- 7.460 All four of the proposed wind turbines and the anemometer mast would be theoretically visible to the south east of this viewpoint from a minimum distance of 11.7km, with all hubs and approximately two thirds of the towers theoretically visible. The proposed wind turbines would be contained within approximately 3° of the available HFOV. In reality, there would also be some screening to further sections of the towers from intervening woodland, such that visibility would be limited to the upper sections of towers, hubs and blades. Site infrastructure, the solar PV array and the BESS/ substation compound would be screened by intervening landform, although tall cranes may be visible during the short-term construction and decommissioning phases. The magnitude of change on this view would be **low** for the following reasons:
- The Proposed Development is situated at a moderate distance from the viewpoint.
 - There would be visibility of the hubs and blades of the four wind turbines.
 - The Proposed Development would bring movement and contrasting colour and texture at closer range to the affected section of the view.
 - The design of the wind farm would result in limited instances of blades overlapping.
 - The relationship between the Proposed Development and Chapelcross Power Station would add a degree of complexity to the view.
- 7.461 The factors that restrict the magnitude of change to a low level are as follows:
- The Proposed Development would affect a limited proportion (around 3°HFOV) of the view that is available from this viewpoint.
 - The compact design of the wind farm.
 - The screening of the lower sections of the turbine towers by landform and woodland gives a perception of increased separation between the viewpoint and the proposed wind turbines.

- The absence of visibility of infrastructure reduces the potential clutter associated with the Proposed Development.
- The developed context of the affected sector of the view due to the presence of Chapelcross power station.

Significance of Effect

- 7.462 The effect of the Proposed Development on recreational walkers would be **moderate-minor** and **not significant**. This is due to a combination of the factors that lead to the low magnitude of change on the view and the high-medium sensitivity of the recreational walkers.

Cumulative Effects

- 7.463 In relation to the consented cumulative scenario, in reality there is extremely limited visibility of consented wind farm developments from this viewpoint, and as a result there would be no material additional cumulative interaction with the Proposed Development in this scenario. The introduction of the Proposed Development into a baseline view that contains some operational wind farm developments, such as Solwaybank (14.9km), would however increase the cumulative influence of wind farms upon broader character of the view. A reasonable degree of separation would be maintained between other discernible wind farm development though and consequently a **low** cumulative magnitude of change is predicted. A **moderate-minor** and **not significant** cumulative visual effect would therefore arise in the consented cumulative scenario.
- 7.464 In relation to the application cumulative scenario, there is some theoretical visibility of a number of distant application stage wind farms in the wider view, such as Bloch (16.9km). These wind farms would slightly increase the perceived influence of wind farm development in the wider view, but they would not reduce the existing visual separation between the Proposed Development and other wind farms. A **low** cumulative magnitude of change is therefore predicted in the application cumulative scenario, which would result in a **moderate-minor** and **not significant** cumulative visual effect.

Viewpoint 15: Malcolm Monument, Whita Hill

Baseline

- 7.465 The viewpoint is located next to the Malcolm Monument close to the summit of Whita Hill, which is situated approximately 1km west of the town of Langholm. The viewpoint can be reached by recreational walkers following the signed footpath to the Malcolm Monument, which starts in Langholm. The view is therefore representative of those experienced by recreational hill walkers in wider study area, who might appreciate the south eastern views from the summit of the hill towards the Dumfries and Galloway coast and beyond to the Lake District National Park.
- 7.466 There are 360 degree panoramic views available from the summit of Whita Hill, which encompass the Ewes Water valley to the north, Eskdale to the north west and south, the hills of the Southern Uplands that surround these two valleys, as well as the hills between the viewpoint and Liddesdale, and the far-reaching views to the south west that encompass the Dumfries and Galloway coast and the transitional landscapes in between. The views to the southwest towards the Proposed Development form an impressive vista that includes the majority of the large Solway Basin and the contrasting backdrop of the flat seascape and the undulating Lake District fells. The breadth of these views is

impressive and as a result the scale of the landscape appears to be very large, regardless of the varying landcover that presides across its many constituent parts. While these views are scenic, it is worth noting that there is an information board at the summit of the hill, which is oriented in the opposite direction, highlighting the draw of the other views that can be experienced from this location.

- 7.467 Wind farm development is a characteristic of the surrounding landscape. In the direction of the Proposed Development there are a large number of wind farms, with Beck Burn (15.5km), Robin Rigg (62.7km), and Solwaybank (9.4km) forming notable features within the view. Viewing west, there is considerable wind farm development atop the hills of the Southern Uplands, including Minsca (16.0km), Ewe Hill (9.9km), Craig (5.6km), and Crossdykes (11.8km) Wind Farms.

Sensitivity

- 7.468 The value of this view is high-medium. The summit of the hill is not a formal viewpoint but it is evidently a local attraction due to the presence of the Malcolm Monument and the information boards at the hill summit. The viewpoint is also located in the locally designated Langholm Hills RSA, and this SLA also encompasses much of the surrounding views.
- 7.469 The susceptibility of recreational hill walkers would be high. Recreational hill walkers are likely to hold an expectation that they will experience panoramic views from the summit of the hill, and therefore they are highly susceptible to changes in the views that will be attained from this location.
- 7.470 The combination of the value of the view and the susceptibility of viewers leads to an overall **high** rating of sensitivity for recreational hill walkers.

Magnitude of Change

- 7.471 All four of the proposed wind turbines, the anemometer mast, the solar PV array and the BESS / substation compound would be theoretically visible to the southwest of this viewpoint from a minimum distance of 20.0km, with all of the towers, hubs and blades visible. The proposed wind turbines would be contained within approximately 2° of the available HFOV. In reality, there would be very limited additional screening from vegetation. However, Site infrastructure, the solar PV array and BESS/ substation compound would be screened by intervening woodland. Tall cranes may be visible during the short-term construction and decommissioning phases though. The magnitude of change on this view would be **low** for the following reasons:
- The Proposed Development is situated at a reasonably long distance from the viewpoint.
 - The compact design of the wind farm would result in some blade stacking.
 - The Proposed Development would be situated within a part of a scenic panorama that encompasses various landscape designations.
- 7.472 The factors that restrict the magnitude of change to a low level are as follows:
- The Proposed Development would affect a limited proportion (around 2°HFOV) of the view that is available from this viewpoint.
 - The proposed wind turbines would appear to be relatively small elements situated with an expansive panoramic view.

- The presence of other operational wind farm developments (such as Solwaybank, Ewe Hill, and Craig) at closer distances to the viewpoint.
- The absence of visibility of infrastructure reduces the potential clutter associated with the Proposed Development.

Significance of Effect

- 7.473 The effect of the Proposed Development on recreational hill walkers would be **moderate-minor** and **not significant**. This is due to a combination of the factors that lead to the low magnitude of change on the view and the high sensitivity of the receptors.

Cumulative Effects

- 7.474 In relation to the consented cumulative scenario, the consented Hopsrig (10.0km) and Little Hartfell (14.3km) wind farm developments would be apparent in views to the west of the Langholm Hills, and as a result there is some limited potential for an additional cumulative interaction with the Proposed Development under this scenario. However, the Proposed Development would be situated within a distinctly separate sector of the view in the Solway basin, approximately 20km distant. There would therefore be a relatively weak association between the Proposed Development and these consented wind farms in the uplands. The introduction of the Proposed Development into a baseline view that contains numerous operational wind farm developments, such as Solwaybank (9.4km), Minsca (16.0km), and Ewe Hill (9.9km) would however increase the cumulative influence of wind farms upon broader character of the view. The Proposed Development would appear as a minor distant elements in the view though, and it would maintain a reasonable separation from other notable wind farms. A **low** cumulative magnitude of change is therefore predicted in the consented cumulative scenario, which would result in a **moderate-minor** and **not significant** cumulative visual effect.
- 7.475 In relation to the application cumulative scenario, the Bloch (4.3km), Loganhead Resubmission (6.1km), Callisterhall (8.9km), Hopsrig Resubmission (9.6km), Little Hartfell Resubmission (14.7km), Daer (42.5km), Rivox (40.2km), Scoop Hill (20.5km), and Teviot (14.8km) application stage wind farms, would be apparent in views of the surrounding upland hills, and as a result there is some limited potential for an additional cumulative interaction with the Proposed Development under this scenario. However, the Proposed Development would be situated within a distinctly separate sector of the view in the Solway basin, approximately 20km distant. There would therefore be a relatively weak association between the Proposed Development and these application wind farms in the uplands, in addition to existing operational wind farm developments. A **low** cumulative magnitude of change is therefore predicted in the application cumulative scenario, which would result in a **moderate-minor** and **not significant** cumulative visual effect.

Viewpoint 16: Ward Law

Baseline

- 7.476 The viewpoint is located on the site of a former iron age fort in the Nith Estuary NSA and the Solway Coast RSA, approximately 23.9km west of the Proposed Development. The fort can be accessed by recreational walkers and visitors following the CAER/540 and/ or CAER/32 core paths, which facilitate access from the north and south respectively. Vehicle parking is also available at the Caerlaverock Visitor Centre. The relatively elevated position of the fort provides far-reaching panoramic views over the surrounding landscape to the east, south and west.

- 7.477 The viewpoint is located in the Wardlaw Ridge unit of the Upland Fringe LCT, which is surrounded to the west, south and east by the coastal flats bordering the Solway Firth. Views from the viewpoint illustrate the slopes immediately surrounding Ward Law that transition into the expansive coastal flats below, characterised by their flat topography, and simple landcover of mixed livestock and rural farmland. Closer to the sea, the geometric pattern of field boundaries evolves into a more sparse and simple landscape that meets the Solway Firth.
- 7.478 The landscape is rural nature with only limited influence from development, such as scattered farmsteads and residential dwellings. Distant operational wind farm development is also apparent but given the distance of the Solwaybank (29km), Minsca (23.3km), Craig(35.3km), and Ewe Hill (30.4km) developments amongst others, and those visible across the Solway Firth in Cumbria, they have a relatively limited influence upon the view.

Sensitivity

- 7.479 The value of this view is high. The viewpoint is located at the site of a Scheduled Monument, which is of national value, as well as being located within the Nith Estuary NSA and Solway Coast RSA. Views experienced from the site of the hillfort also possess relatively high scenic value.
- 7.480 The susceptibility of visitors would be high. Visitors to Ward Law are likely to be interested in the setting of the hillfort, and therefore they would be susceptible to changes in views of the surrounding landscape.
- 7.481 The combination of the value of the view and the susceptibility of viewers leads to an overall **high** rating of sensitivity for recreational walkers and visitors.

Magnitude of Change

- 7.482 All four of the proposed wind turbines and the anemometer mast would be theoretically visible to the east of this viewpoint from a minimum distance of 23.9km, with all hubs and towers theoretically visible. The proposed wind turbines would be contained within approximately 2° of the available HFOV. In reality, there would only be very limited screening from intervening woodland. Site infrastructure, the solar PV array, and the BESS/ substation compound would be screened by intervening landform, but tall cranes may be visible during the short-term construction and decommissioning phases. The magnitude of change on this view would be **negligible** for the following reasons:
- The Proposed Development is situated at a reasonably long distance from the viewpoint.
 - The relatively compact design of the wind farm would result in some turbine stacking.
 - The Proposed Development would be situated within a part of a scenic panorama that encompasses various landscape designations.
- 7.483 The factors that restrict the magnitude of change to a negligible level are as follows:
- The Proposed Development would affect a limited proportion (around 2°HFOV) of the view that is available from this viewpoint.
 - The proposed wind turbines would appear to be relatively small elements situated with an expansive panoramic view.
 - The presence of other operational wind farm developments, albeit of smaller vertical scale, including Beck Burn and Hallburn in the same sector of the view.

- The absence of visibility of infrastructure and the solar PV array reduces the potential clutter associated with the Proposed Development.

Significance of Effect

- 7.484 The effect of the Proposed Development on recreational walkers and visitors would be **minor** and **not significant**. This is due to a combination of the factors that lead to the negligible magnitude of change on the view and the high sensitivity of the viewpoint.

Cumulative Effects

- 7.485 In relation to the consented cumulative scenario, in reality there is extremely limited visibility of consented wind farm developments (Hopsrig and Little Hartfell) from this viewpoint, which are situated at distances of over 29km from the viewpoint, and as a result there would be no material additional cumulative interaction with the Proposed Development in this scenario. The introduction of the Proposed Development into a baseline view that contains some operational wind farm developments, in particular Beck Burn and Hallburn at distances of 31.5km and 38.3km respectively within the same sector of the view, would however increase the cumulative influence of wind farms upon the broader character of the view. The Proposed Development would not reduce the separation between these wind farm clusters though and this would moderate the cumulative magnitude of effect. A **low** cumulative magnitude of change is therefore predicted in the consented cumulative scenario, which would result in a **moderate-minor** and **not significant** cumulative visual effect.
- 7.486 In relation to the application cumulative scenario, there is some theoretical visibility of a number of distant application stage wind farms in the wider view, such as Bloch (31.0km), Loganhead Resubmission (33.5km), Callisterhall (30.6km), Hopsrig Resubmission (32.3km), Little Hartfell Resubmission (29.4km), so there is some limited potential for additional cumulative interactions in this scenario. These wind farms would slightly increase the perceived influence of wind farm development in the wider view, and they would tend to visually consolidate existing wind farm clusters. As a result, the separation between the existing wind farm clusters would remain relatively similar, which would moderate the cumulative magnitude of change. A **low** cumulative magnitude of change is therefore predicted in the application cumulative scenario, which would result in a **moderate-minor** and **not significant** cumulative visual effect.

Assessment of Effects on Visual Receptors

- 7.487 The second part of the assessment of effects on views is the assessment of the effects that the Proposed Development would have on the views from principal visual receptors. The principal visual receptors considered in the assessment include settlements and route corridors (including roads, walking routes and national cycle routes) all of which are shown on Figure 6.5, and shown in conjunction with the ZTV on Figure 6.11a-b. The principal visual receptors assessed in detail have been selected as they have potential to undergo significant effects as a result of the Proposed Development. A preliminary assessment to identify these receptors has been carried out through the use of ZTVs and wirelines to indicate the extents, level and nature of theoretical visibility and site work to determine the extents, level and nature of actual visibility. This process has identified the following principal visual receptors as requiring detailed assessment:
- Settlements – Eastriggs, Kirkpatrick-Fleming, Gretna, Creca, Annan, Port Carlisle, Bowness-on-Solway, Eaglesfield, Drumburgh, Boustead Hill, and Longtown;

- Roads - A75 (forming part of the Galloway Tourist Route), B721, B6357, and B7076;
- Cycling Routes - NCR7 and NCR72;
- Walking Routes - Hadrian's Wall Path; and
- Core Paths – GRET/248, EAST/531, GRET/517, EAST/530, and EAST/315.

Eastriggs

- 7.488 An assessment of the worst-case visual effects, including cumulative and night-time effects, of the Proposed Development on the settlement of Eastriggs is provided in the assessment of Viewpoint 2 (Eastriggs) earlier in the Assessment of Visual Effects. Viewpoint 2 provides representative views that would be experienced by residents (high sensitivity) from the eastern edge of the village, where relatively open views towards the Proposed Development can be experienced, and the highest levels of theoretical visibility of the Proposed Development are predicted to occur. These views would be experienced by residents who dwell in the nearby residential properties on the perimeter of the settlement, while screening from buildings and vegetation is likely to interrupt or entirely screen views from properties within the interior of the settlement. A **high** magnitude of change to views and a **major** and **significant** effect would be experienced by residents at this location, but this would reduce to no change or negligible and not significant within the interior of the neighbouring housing estates. In relation to cumulative effects, in reality there is no visibility of any consented or application wind farm developments from the majority of the settlement, and as a result there would be no cumulative interaction with the Proposed Development under these scenarios. There would therefore be no cumulative magnitude of change and **no cumulative effect** in either scenario.
- 7.489 Effects to views experienced from most other parts of Eastriggs are likely to be subject to **no change** or a **negligible** magnitude of change due primarily to screening from intervening buildings, particularly across those parts of the settlement to the south of the railway line, which would be at worst **minor** and **not significant**.
- 7.490 To the north of the railway line, some more open views towards the Proposed Development may be experienced from parts of Central, East and North Roads where intervening hedgerows and trees are of a lower height. The magnitude of change to views from these northern roads is likely to vary between **high** and **no change** depending on the levels of intervening screening. Where relatively open views towards the Proposed Development are experienced by residents, a **high** magnitude of change is predicted, and these effects are likely to be **major** and **significant**. Where views are interrupted by woodland and hedgerow screening and the magnitude of change is consequently between **negligible and low**, it is considered that these effects would be **moderate-minor or lower** and **not significant**.

Kirkpatrick-Fleming

- 7.491 An assessment of the worst-case visual effects, including cumulative and night-time effects, of the Proposed Development on the settlement of Kirkpatrick-Fleming is provided in the assessment of Viewpoint 3 (Kirkpatrick-Fleming) earlier in the Assessment of Visual Effects. Viewpoint 3 provides representative views that would be experienced by residents (high sensitivity) from an elevated part of the village, where open views towards the Proposed Development can be experienced, and some of the highest levels of theoretical visibility of the Proposed Development are predicted to occur. The views would be experienced by residents who dwell in the nearby residential properties on the northern side of the B7076, which are oriented towards the Proposed Development, but also

pedestrians walking through this part of the town, who may stop to sit on the bench to appreciate the views. A **high-medium** magnitude of change to views and a **major** and **significant** effect would be experienced by residents at this location. In relation to cumulative effects, in reality there is no visibility of any consented or application wind farm developments from the majority of the settlement, and as a result there would be no cumulative interaction with the Proposed Development under these scenarios. There would therefore be no cumulative magnitude of change and **no cumulative effect** in either scenario.

- 7.492 Effects to views across other parts of Kirkpatrick Fleming are likely to be variable due to screening from intervening buildings and woodland. For example, there is likely to be potential to experience open views towards the Proposed Development from the western perimeter of housing located in Greenfield Park and Elmside, and also around the junction between the B6357 and the B7076 roads, where a **medium** magnitude of change and **major-moderate** and **significant** effect upon views is predicted. However, views from the less elevated parts of the village, such as those around Victoria Hall, the Primary School, Burnholm Road, and the majority of Greenfield Park, are likely to be subject to screening from intervening buildings and woodland, and as such there would be either **negligible** or **no change** to views towards the Proposed Development, and effects are therefore likely to be at worst **minor** and **not significant**. Similarly views experienced from residential properties situated across the western end of the village are typically screened by woodland or industrial buildings, such that there are few opportunities to experience open views towards the Proposed Development. Where open views can be experienced from properties on the southern side of the B7076 they would experience a **medium** magnitude of change and a **major-moderate** and **significant** effect, but for the majority of residential properties there would be **no change** to their views.

Gretna

- 7.493 An assessment of the worst-case visual effects, including cumulative effects, of the Proposed Development on broader area surrounding Gretna is provided in the assessment of Viewpoint 6 (Gretna Green – Famous Blacksmiths Shop Visitor Car Park) earlier in the Assessment of Visual Effects. Viewpoint 6 provides views towards the Proposed Development that would be illustrative of those experienced by visitors (medium-low sensitivity), rather than residents, from an elevated location on the edge of Gretna Green, which is located approximately 400m north of the village of Gretna. A **low** magnitude of change to views and a **moderate-minor** and **not significant** effect would be experienced by visitors at this location. In relation to cumulative effects, a **low** cumulative magnitude of change is predicted in the consented and application cumulative scenarios, which would result in a **moderate-minor** and **not significant** cumulative visual effect.
- 7.494 Given the lower elevation of the settlement of Gretna, the flat topography of the local landscape, and the considerable intervening woodland, it is predicted that while there is widespread theoretical visibility, there would be very limited instances of visibility of the Proposed Development from the settlement. These occasional views may be experienced from the edges of the settlement where open views can be experienced, such as locations along Victory Avenue and Old Graitney Road to the south west and north of the settlement respectively. Where visibility of the Proposed Development can be experienced from these locations, it is considered that the magnitude of change to the view would be moderated to a degree by intervening woodland screening varying lengths of the turbine towers. As a result, it is likely that the magnitude of change to the view would be **low**, and visual effects would be at worst **moderate** and **not significant**. From all other locations

within the settlement of Gretna, there would be **no change** to the views experienced by residents, and as such effects would be **not significant**.

Creca

- 7.495 An assessment of the worst-case visual effects, including cumulative effects, of the Proposed Development on the small settlement of Creca is provided in the assessment of Viewpoint 4 (Creca) earlier in the Assessment of Visual Effects. Viewpoint 4 provides views that are representative of those that would be experienced by residents (high sensitivity) from the south eastern edge of the village, where open views towards the Proposed Development can be experienced. The views would be experienced by residents who dwell in the nearby residential properties, particularly those that are located to the north of the minor that possess rear gardens that allow open views towards the coast and the Proposed Development. A **medium** magnitude of change to views and a **major-moderate** and **significant** effect would be experienced by residents at this location. In relation to cumulative effects, a **medium-low** cumulative magnitude of change is predicted in the consented and application cumulative scenarios, which would result in a **moderate** and **not significant** cumulative visual effect.

Annan

- 7.496 An assessment of the worst-case visual effects, including cumulative effects, of the Proposed Development on the settlement of Annan is provided in the assessment of Viewpoint 8 (Annan-Watchill) earlier in the Assessment of Visual Effects. Viewpoint 8 provides representative views that would be experienced by road users (medium-low sensitivity) from the south eastern edge of the town, where open views towards the Proposed Development can be experienced. The views would be experienced by residents who are travelling around the outskirts of the town. A **medium-low** magnitude of change to views and a **moderate-minor** and **not significant** effect would be experienced by road users at this location. In relation to cumulative effects, in reality there is no visibility of any consented or application wind farm developments from the majority of the settlement, and as a result there would be no cumulative interaction with the Proposed Development under these scenarios. There would therefore be no cumulative magnitude of change and **no cumulative effect** in either scenario.
- 7.497 From the majority of other parts of the town, visibility of the Proposed Development would be screened by intervening buildings, woodland and/ or hedgerows, and as a result there would be **no change** to views experienced by residents. The only exception to this would be views that would be experienced by residents and road users along a short stretch of the B721 road/ Keswick Place on the outskirts of the town, where more open views towards the Proposed Development can be experienced. The magnitude of change to the view experienced from this short stretch of the B721 road/ Keswick Place would be similar to Viewpoint 8 (**medium-low**), and effects as a consequence would be **moderate** and **moderate-minor** for road users and residents respectively and **not significant**.

Bowness-on-Solway

- 7.498 An assessment of the worst-case visual effects, including cumulative effects, of the Proposed Development on the settlement of Bowness-on-Solway is provided in the assessment of Viewpoint 7 (Start of Hadrian's Wall Path, Bowness-on-Solway) earlier in the Assessment of Visual Effects. Viewpoint 7 provides views that are representative of those that would be experienced by residents (high sensitivity) from the village beach, where open views towards the Proposed Development can be experienced. Similar views

may be experienced by residents who dwell in the nearby residential properties, such as Sunset View, Shore Gate House, Curlews, and Maia Lodge, where garden vegetation does not provide screening, but also by recreational walkers following some of the closest sections of Hadrian's Wall Path that pass close to the shore. A **medium-low** magnitude of change to views and a **moderate** and **significant** effect would be experienced by residents and recreational walkers at this location. In relation to cumulative effects, a **medium-low** cumulative magnitude of change is predicted in the consented and application cumulative scenarios, which would result in **moderate** and **not significant** and **moderate** and **significant** cumulative visual effects respectively.

- 7.499 Visibility of the Proposed Development from other residential properties within the village is likely to be screened by a combination of buildings and vegetation, and as such there is likely to be **no change** to their views.

Port Carlisle

Baseline

- 7.500 The small village of Port Carlisle is situated 5.8km south west of the Proposed Development. The village contains some services for the local community, including a public house, church, and a bowling club. The village is positioned on the Cumbrian coast, approximately 100m from the shore of the Solway Firth, with the majority of the residential properties oriented to the north east. A large number of residential properties therefore experience views of the Solway Firth and beyond to the Dumfries and Galloway coast.

Sensitivity

- 7.501 Settlements are accorded a high sensitivity as visual receptors due to the residential nature of viewers, so the residents of Port Carlisle are therefore considered to have a **high** sensitivity.

Magnitude of Change

- 7.502 The ZTV (see **Figure 7.6c**) indicates theoretical visibility of the hubs and blade tips of the Proposed Development across the entire settlement. The wind turbines would be clearly discernible at distances of over 5.8km from the Hadrian's Wall Path and from the few detached houses, such as Custom House, Fishers Cross, and Dean House, situated along the route, which skirts around the northern perimeter of the village, due to the general absence of intervening landform and vegetation. The magnitude of change upon views experienced from the northern perimeter of the village would be **medium**.
- 7.503 Views from many of the residential properties and the church, the pub, and the bowling green that line the road between Bowness-on-Solway and Drumburgh would be screened by some relatively low-level shrubs and trees, but more elevated views from first floor windows are likely to be less interrupted, and as such are likely to gain views of the wind turbines.
- 7.504 Views towards the Proposed Development from residential properties located on Field View Road that are typically oriented in a south west direction would experience screening from other buildings in the village, and as such there would be **no change** to their views.

Significance of the Effect

- 7.505 The effect of the Proposed Development on views from Port Carlisle would be at worst **major-moderate** and **significant** from the northern edges and centre of the village, but there would be **no change** to views experienced from residential properties located on Field View.

Cumulative Effects

- 7.506 In relation to the consented cumulative scenario, there would be only very limited theoretical visibility of the distant consented Hopsrig and Little Hartfell wind farm developments from parts of Port Carlisle, which would integrate cohesively with the operational Minsca and Ewe Hill wind farms in the distant foothills. As a result, there would be no discernible change to the cumulative baseline under this scenario. Nevertheless, the Proposed Development would further intensify the influence of existing wind farm development in views to the north east across the Solway Firth, and it would be more apparent at closer range, possessing a larger vertical scale, and within a distinctly separate context to those other wind farms situated in the Dumfries and Galloway foothills. A **medium-low** cumulative magnitude of change is therefore predicted in the consented cumulative scenario, which would result in a **moderate** and **not significant** cumulative visual effect. Effects would be not significant due to the separation that exists between the different wind farm clusters in the landscape and their relatively weak influence upon the view due to their distance from the settlement.
- 7.507 In relation to the application cumulative scenario, there would be a discernible change to the baseline view primarily associated with the introduction of the larger scale turbines associated with the Bloch, Loganhead Resubmission, Callisterhall, and Hopsrig Resubmission application stage wind farms, which would intensify the influence of wind farm development in the foothills containing the operational Solwaybank, Ewe Hill, Craig, and Crossdykes Wind Farms. The Proposed Development would further intensify the influence of wind farm development in views to the north east across the Solway Firth, and it would be more apparent at closer range, possessing a larger vertical scale, and within a distinctly separate context to those other wind farms situated in the Dumfries and Galloway foothills. Overall, a **medium-low** cumulative magnitude of change is predicted in the application cumulative scenario, which would result in a **moderate** and **significant** cumulative visual effect. Effects would be significant due to the reduction in the separation between wind farm clusters, due to the increased horizontal extent of wider wind farm development, primarily associated with the application-stage Bloch wind farm.

Eaglesfield

- 7.508 An assessment of the worst-case visual effects, including cumulative effects, of the Proposed Development on the small settlement of Eaglesfield is provided in the assessment of Viewpoint 9 (Eaglesfield) earlier in the Assessment of Visual Effects. Viewpoint 9 provides views that are representative of those that would be experienced by residents (high sensitivity) situated to the south of the B722, where open views towards the Proposed Development can be experienced. A **low** magnitude of change to views and a **moderate-minor** and **not significant** effect would be experienced by residents at this location. In relation to cumulative effects, in reality there is no visibility of any consented or application wind farm developments from the majority of the settlement, and as a result there would be no cumulative interaction with the Proposed Development under these scenarios. There would therefore be no cumulative magnitude of change and **no cumulative effect** in either scenario.

- 7.509 Visibility of the Proposed Development from residential properties situated to the north of the B722 are likely to be screened or interrupted by a combination of buildings and vegetation, and as such there is likely to be **no change** to their views.

Drumburgh

Baseline

- 7.510 The hamlet of Drumburgh is situated 8.5km south of the Proposed Development. The hamlet is sited on undulating landform and as such the views experienced by residential properties differ according to their elevation. While a few elevated houses at the western end of the village are positioned such that they experience far reaching views across the Solway Firth and the Cumbrian and Dumfries and Galloway coasts, the majority of the houses in the hamlet are positioned beneath the rising landform to the north of the village and as a result these coastal views are screened.

Sensitivity

- 7.511 Settlements are accorded a high sensitivity as visual receptors due to the residential nature of viewers, and Drumburgh is therefore considered to have a **high** sensitivity.

Magnitude of Change

- 7.512 The ZTV (see **Figure 7.6c**) indicates theoretical visibility of the Proposed Development across much of the settlement, apart from the south western corner. However, in reality views are likely to be screened from the majority of the residential properties located along the minor road connecting Bowness-on-Solway and Burgh by Sands due to screening from other buildings and intervening woodland. From these residential properties there is likely to be **no change** to their views in the direction of the Proposed Development.
- 7.513 The exception to this would be the possible visibility of the Proposed Development experienced at the elevated residential properties around the north western edge of the village, such as Sea View, Colmlin and Firthsyde. From these more elevated properties, more open views can be experienced, which are still interrupted to a degree by intervening trees. It is likely that a **low to medium-low** magnitude of change to their views towards the Proposed Development would be experienced depending on the level of screening from intervening vegetation and buildings.

Significance of the Effect

- 7.514 The effect of the Proposed Development on views from some of the more elevated parts of Drumburgh would be at worst **moderate** and **significant**, but from the majority of residential properties there would be **no change** to their views.

Cumulative Effects

- 7.515 In relation to the consented cumulative scenario, there would be only very limited theoretical visibility of the distant consented Hopsrig and Little Hartfell wind farm developments from parts of Drumburgh, which would be relatively indiscernible due to the degree of landform screening and the intervening distance. As a result, there would be no discernible change to the cumulative baseline under this scenario. Nevertheless, the Proposed Development would further intensify the influence of existing wind farm development within northern views across the Solway Firth, and it would be more

apparent at closer range, possessing a larger vertical scale, and within a distinctly separate context to those other wind farms situated in the Dumfries and Galloway foothills. A **medium-low** cumulative magnitude of change is therefore predicted in the consented cumulative scenario, which would result in a **moderate** and **not significant** cumulative visual effect. Effects would be not significant due to the separation that exists between different wind farm clusters in the landscape and their relatively weak influence upon the view due to their distance from the viewpoint.

- 7.516 In relation to the application cumulative scenario, there would be a more discernible change to the baseline view primarily associated with the introduction of the Scoop Hill application-stage wind farm beyond the Proposed Development, and the Bloch, Loganhead Resubmission, Callisterhall, Hopsrig Resubmission application stage wind farms, which would intensify the influence of wind farm development in the Scottish foothills that contain the operational Solwaybank, Ewe Hill, Craig, and Crossdykes Wind Farms. The Proposed Development would further intensify the influence of wind farm development within northern views across the Solway Firth, and it would be more apparent at closer range, possessing a larger vertical scale, and within a separate context to those other wind farms situated in the more elevated foothills. Overall, a **medium-low** cumulative magnitude of change is predicted in the application cumulative scenario, which would result in a **moderate** and **not significant** cumulative visual effect. Effects would be not significant due to the separation that exists between different wind farm clusters in the landscape and their relatively weak influence upon the view due to their distance from the viewpoint.

Boustead Hill

- 7.517 An assessment of the worst-case visual effects, including cumulative effects, of the Proposed Development on the settlement of Boustead Hill is provided in the assessment of Viewpoint 10 (Boustead Hill) earlier in the Assessment of Visual Effects. Viewpoint 7 provides views that are representative of those that would be experienced by residents (high sensitivity) from a slightly less elevated roadside location near to the hamlet, where open views towards the Proposed Development can be experienced. Similar views are likely to be experienced by residents who dwell in the nearby residential properties, albeit from slightly more elevated locations, where occasion trees do not provide an interruption to the available panorama. A **medium-low** magnitude of change to views and a **moderate** and **significant** effect would be experienced by residents at this location. In relation to cumulative effects, a **medium-low** cumulative magnitude of change is predicted in the consented and application cumulative scenarios, which would result in a **moderate** and **not significant** cumulative visual effect.

Longtown

- 7.518 An assessment of the worst-case visual effects, including cumulative effects, of the Proposed Development on the settlement of Longtown is provided in the assessment of Viewpoint 12 (Longtown Bridge) earlier in the Assessment of Visual Effects. Viewpoint 12 provides representative views that would be experienced by residents (high sensitivity) and road users (medium-low sensitivity) from a relatively central part of the town, where views towards the Proposed Development can be experienced. **No change** to views would be experienced by residents and road users at this location. In relation to cumulative effects, there would also be **no change** in both the consented and application scenarios.

- 7.519 The nature of effects would be similar from all other parts of the town due to the screening present from intervening buildings and woodland, and as such they would also be **not significant**.

A75

Baseline

- 7.520 The A75 connects the towns of Gretna in the east of the study area to Stranraer in the west. The route is approximately 154km long with travellers generally oriented east or west for the majority of the route. There is relatively widespread theoretical visibility predicted between Gretna and Carrutherstown. These potentially affected sections of the road therefore form the focus of this assessment.

Sensitivity

- 7.521 The value of views from the A75 is low. The value of views is moderated by the absence of scenic designations covering the area through which the route passes in the detailed study area, and the lack of marked or mapped viewpoints along the road where travellers would be encouraged to stop and enjoy the view. The scenic value of the road is primarily influenced by the rural countryside that the road passes through, which is generally typical of the Annandale unit of the Coastal/ Flow Plateau LCT.
- 7.522 The susceptibility of road-users to the Proposed Development would be medium. This is primarily due to the broader purpose of those travelling along the road, which in the absence of specific scenic routes, is likely to be for other local purposes.
- 7.523 The combination of the value of the views and the susceptibility of viewers leads to an overall **medium-low** rating of sensitivity.

Magnitude of Change

- 7.524 There is extensive theoretical visibility along the majority of the A75 road between Gretna and Carrutherstown, but views of the Proposed Development along much of the route are intermittent due to screening from roadside trees and embankments. While this assessment acknowledges the effects from views that are likely to be experienced over a short duration, it focusses in more detail on sections of the roads where uninterrupted views might be experienced for longer durations.
- 7.525 In between Gretna and Kirtleside, views towards the Proposed Development are generally intermittent due to the level of roadside vegetation and as a result effects are likely to be relatively limited. Further west, more open views of the Proposed Development would be experienced from the road where it runs along the top of the embankment to the north of Rigg until the road passes under the bridge at Redroad Woods. Views from this section of the road at distances of between 1-2km from the Proposed Development would be subject to a **high** magnitude of change due to the large scale of the wind turbines and the alignment of the road. Views of the Proposed Development between Redroad Woods and Eastriggs are again likely to be experienced intermittently due to the screening from roadside vegetation and occasional woodlands, but when open, oblique views can be experienced there is likely to be a **high** magnitude of change.
- 7.526 Further west, in between Eastriggs and the Dornock Burn bridge, oblique views towards the Proposed Development would be experienced intermittently, but where uninterrupted they would be subject to a **high-medium** magnitude of change at distances of between 2-3.5km. Beyond the Dornock Burn bridge until Annan, visibility is generally screened by

roadside trees and hedgerows and as such there would be **no change** to views experienced by road users.

- 7.527 Views from sections of the road to the west of Annan would be intermittent, with short sections of the road providing more open views towards the Proposed Development south east of Burnside Farm at distances of approximately 9km. At this distance, the Proposed Development would appear as distant, smaller scale elements, situated beyond the electricity transmission lines that traverse the landscape in the foreground of the views. As a consequence, it is predicted that a **low** magnitude of change would arise along this stretch of the A75 road.
- 7.528 At distances greater than 10km from the Proposed Development, the magnitude of any effects upon intermittent open views would continue to diminish with increasing distance, and it is therefore predicted that the magnitude of change would be no greater than **low**.

Significance of the Effect

- 7.529 The effect of the Proposed Development on road users of the A75 would be up to **moderate** and **significant** where open views can be experienced between Rigg and the Dornock Burn bridge, due to a combination of the factors that lead to the at worst high magnitude of change on the views and the medium-low sensitivity of the receptors.

Cumulative Effects

- 7.530 Given the relatively extensive screening that is present from roadside vegetation and intervening woodland situated across the relatively flat landscape of the Solway basin, it is anticipated that cumulative visual effects experienced along the A75 in both the consented and application scenarios would be moderated considerably. From the majority of the sections of road, it is predicted that there would be **no cumulative effects** in reality, and where the Proposed Development may be seen in combination with distant wind farm/s (such as the operational Minsca, Solwaybank, and Beck Burn Wind Farms and the application-stage Bloch Wind Farm) in the more elevated foothills a **negligible to low** cumulative magnitude of change would be experienced upon these views. This is due to the distance of road users from these cumulative wind farms, the likelihood of views being interrupted to a degree by vegetation and/ or buildings, and the different landscape context of the Proposed Development. Overall, it is considered that these cumulative visual effects in the consented and application scenarios would be no greater than **minor** and **not significant**.

B721

- 7.531 The B721 road is approximately 15km in length and connects Annan and Gretna (see **Figure 7.11b**). An assessment of the worst-case visual effects, including cumulative effects, of the Proposed Development on the B721 is provided in the assessment of Viewpoint 1 (B721 near Rigg) (**Figure 7.17**) earlier in the Assessment of Effects on Viewpoints, where effects would be **major** and **significant**. In relation to cumulative effects, there would **no change** under the consented and application scenarios and therefore **no cumulative visual effect** is predicted in either scenario.
- 7.532 Views of the Proposed Development from other sections of the road would be intermittent due to screening from roadside trees and hedgerows. For example, views experienced by road users towards the Proposed Development between the town of Gretna and the village of Rigg would be screened by roadside trees, while further west, views are more open along some sections of the road between Rigg and Eastriggs at distances of

between 1-2km and road users may experience effects similar in nature to those assessed for Viewpoint 1. Views towards the Proposed Development between Eastriggs and Dornock at distances of approximately 3.5km are again heavily influenced by roadside hedgerows and intervening woodland, and as such any oblique views of the Proposed Development would be limited in duration and of a slightly lower (**medium**) magnitude than those experienced at Viewpoint 1. Views towards the Proposed Development between Dornock and Annan are more open and although still experienced intermittently would be subject to a **medium to medium-low** magnitude of change at distances of between 4-5.5km, which result in **moderate** and **significant to moderate-minor** and **not significant** effects.

B6357

Baseline

- 7.533 The B6357 is approximately 80km in length and connects Annan to Newcastleton in the north east of the study area. The closest sections of the road are situated between Annan and Kirkpatrick Fleming within 5km of the Proposed Development, and therefore where theoretical visibility of the Proposed Development is predicted there may be potential for significant effects to arise. Theoretical visibility is also predicted to arise along sections further to the north east of Kirkpatrick Fleming, and as such it is necessary to assess whether significant effects might also arise along these more distant sections.

Sensitivity

- 7.534 The value of views from the B6357 is low. The value of views is moderated by the absence of scenic designations covering the area through which the route passes in the detailed study area, and the lack of marked or mapped viewpoints along the road where travellers would be encouraged to stop and enjoy the view. The scenic value of the road is primarily influenced by the rural countryside that the road passes through, which is generally typical of the Annandale unit of the Coastal/ Flow Plateau LCT.
- 7.535 The susceptibility of road-users to the Proposed Development would be medium. This is primarily due to the broader purpose of those travelling along the road, which in the absence of specific scenic routes, is likely to be for other local purposes.
- 7.536 The combination of the value of the views and the susceptibility of viewers leads to an overall **medium-low** rating of sensitivity.

Magnitude of Change

- 7.537 Theoretical visibility is predicted along the entirety of the road between Annan and Kirkpatrick Fleming. In reality, open views towards the Proposed Development can be experienced from much of the road where roadside hedgerows have been trimmed to a sufficiently low height. For sections of the route between Annan and Broats, the wind turbines would be apparent in oblique views experienced by road users travelling eastbound, with the large-scale wind turbines situated within a rural landscape that is characteristic of the Annandale unit of the Coastal/ Flow Plateau LCT. At distances of between 2-5km from the Proposed Development, it is considered that a **high to medium** magnitude of change upon views is likely to arise along this section of the road, with effects reducing with the increasing distance. Views of a similar nature would be experienced by road users traveling between Broats Farm and Nutberry Farm at distances of around 1.5km from the Proposed Development, but the Proposed Development would be situated perpendicular to the direction of the road and beyond a

line of electricity pylons. Along this short section of the road to the north of the Proposed Development, a **high** magnitude of change to the views is predicted to arise. Finally, while theoretical visibility is predicted between Nutberry Farm and Kirkpatrick Fleming, it is predicted that there would be limited visibility of the Proposed Development along this section of the route in reality due to screening from woodland and forestry, and as a result **no change** is predicted to the majority of these views experienced by roads users.

- 7.538 At Kirkpatrick Fleming, westbound travellers would experience some relatively uninterrupted views of the Proposed Development aligned along a short section of the road when leaving the village. A **high** magnitude of change to views from this section of the road at Kirkpatrick Fleming is predicted at distances of approximately 2.5km
- 7.539 Further to the north east, views of the Proposed Development would be intermittent and generally screened or interrupted by intervening woodland. As a consequence, it is likely that the magnitude of change to views towards the Proposed Development would be **medium** at worst, and given the medium-low sensitivity of road users, it is anticipated that effects experienced at these greater distances would be **not significant**.

Significance of the Effect

- 7.540 The effect of the Proposed Development on road users of the B6357 would be at worst **moderate** and **significant**, due to a combination of the factors that lead to the at worst high magnitude of change on the views and the medium-low sensitivity of the receptors.

Cumulative Effects

- 7.541 Given the relatively extensive screening that is present from roadside vegetation and intervening woodland situated across the relatively flat landscape of the Solway basin, it is anticipated that cumulative visual effects experienced along the B6357 in both the consented and application scenarios would be moderated considerably. From the majority of the sections of road, it is predicted that there would be **no cumulative effects** in reality, and where the Proposed Development may be seen in combination with distant wind farm/s (such as the operational Minsca, Solwaybank, and Beck Burn Wind Farms and the application-stage Bloch and Callisterhall Wind Farm) in the more elevated foothills a **negligible to low** cumulative magnitude of change would be experienced upon these views. This is due to the distance of road users from these cumulative wind farms, the likelihood of views being interrupted to a degree by vegetation and/ or buildings, and the different landscape context of the Proposed Development, which would ensure that the wind farms would generally be viewed sequentially rather than in combination. Overall, it is considered that these cumulative visual effects in the consented and application scenarios would be no greater than **minor** and **not significant**.

B7076

- 7.542 The B7076 road connects Gretna and Lockerbie (see **Figure 7.11b**), following a similar route to the M74 motorway and the national West Coast railway line connecting Preston to Glasgow. An assessment of the worst-case visual effects, including cumulative effects, of the Proposed Development on the B7076 is provided in the assessment of Viewpoint 3 (Kirkpatrick Fleming – from B7076) (**Figure 7.19**) earlier in the Assessment of Effects on Viewpoints, where effects upon residents would be **major** and **significant**. Effects upon road users would be of a slightly lower level due to their reduced sensitivity (medium-low) to changes in the view, and it is therefore predicted that effects would be **moderate** and **significant**. In relation to cumulative effects, there would **no change** under the consented scenario and a **low** cumulative magnitude of change predicted under the application

scenario, which would result in a **moderate** cumulative effect that would be **not significant**.

- 7.543 The nature of effects from other sections of the route to the south of Kirkpatrick Fleming, where theoretical visibility is predicted, would be influenced to a large degree by intervening hedgerows and trees that line the roadside, but also the proximity of the M74 motorway and the railway line connecting Preston to Glasgow. There is therefore limited potential for significant visual effects to be experienced by road users along this section of the route, and it is likely that the magnitude of change to views would generally be at worst **medium** at distances of between 2-5km from the Proposed Development. To the north of Kirkpatrick Fleming, there is limited theoretical visibility of the Proposed Development predicted along some short sections to the north of the village, to the west of Eaglesfield, and to the north of Ecclefechan with potential to be affected. From sections of the road to the north of Kirkpatrick Fleming, it is expected that woodland associated with the paths of the Kirtle Water valley and the railway line would screen visibility of the Proposed Development in reality, so there would be **no change** or a **negligible** magnitude of change to views. While to the west of Eaglesfield, effects would be similar in nature to those experienced at Viewpoint 9 (Eaglesfield), such that a **low** magnitude of change to views would be experienced. To the north of Ecclefechan, theoretical visibility is limited to blade tips of the proposed wind turbines at distances of approximately 13km, and as such the magnitude of change to views is likely to be **negligible**. Effects along these other potentially affected sections of the B7076 are therefore likely to be no greater than **moderate-minor** and **not significant**.

Glasgow South Western Line

Baseline

- 7.544 The Glasgow South Western Line connects the towns of Carlisle in the south east of the study area to Dumfries in the north west. There is relatively widespread theoretical visibility predicted between Carlisle and Dumfries. However, significant effects are unlikely to be experienced by travellers between Carlisle and Gretna primarily due to the extensive screening from woodland/ vegetation along this section of the route, but also, where views towards the Proposed Development can be experienced, they are partially characterised by the electricity transmission line that runs alongside the railway line. The introduction of the Proposed Development is therefore unlikely to significantly alter the perceived character of these views. The closer potentially affected sections of the railway line in between Gretna and Annan therefore form the focus of this assessment.

Sensitivity

- 7.545 The value of views from the railway line is low. The value of views is moderated by the absence of scenic designations covering the area through which the route passes in the detailed study area, and the lack of marked or mapped viewpoints along the line where travellers would appreciate the view. The scenic value of the railway line is primarily influenced by the rural countryside that it passes through, which is generally typical of the Annandale unit of the Coastal/ Flow Plateau LCT.
- 7.546 The susceptibility of travellers to the Proposed Development would be medium. This is primarily due to the broader purpose of those travelling, which in the absence of specific scenic routes, is likely to be for other local or regional purposes.
- 7.547 The combination of the value of the views and the susceptibility of viewers leads to an overall **medium-low** rating of sensitivity.

Magnitude of Change

- 7.548 Views of the Proposed Development from the railway line would be experienced intermittently due to screening from enclosing landform and trackside trees and hedgerows. In particular, views experienced by travellers towards the Proposed Development between the town of Gretna and Annan would be largely screened by trackside vegetation and the railway cutting. Where occasional views of the Proposed Development are experienced by travellers, they are likely to be glimpsed at speed and for relatively short durations. Nevertheless, there is potential for a **high** magnitude of change to some views that would be experienced by travellers for short durations. Along the majority of the railway line, the magnitude of change is likely to be **negligible** or **no change** through due to the extensive landform screening provided by the railway cutting.

Significance of the Effect

- 7.549 The effect of the Proposed Development on railway users of the Glasgow South Western Line would be up to **moderate** and **significant** where open views can be experienced, due to a combination of the factors that lead to the at worst high magnitude of change on the views and the medium-low sensitivity of the receptors.

Cumulative Effects

- 7.550 Given the relatively extensive screening that is present across the relatively flat landscape of the Solway basin, it is anticipated that cumulative visual effects experienced along the Glasgow South Western Line in both the consented and application scenarios would be moderated considerably. From the majority of the sections of railway line, it is predicted that there would be **no cumulative effects** in reality, and where the Proposed Development may be seen in combination with distant wind farm/s (such as the operational Minsca, Solwaybank, and Beck Burn Wind Farms and the application-stage Bloch Wind Farm) in the more elevated foothills a **negligible to low** cumulative magnitude of change would be experienced upon these views. This is due to the distance of travellers from these cumulative wind farms, the likelihood of views being interrupted to a degree by vegetation and/ or buildings, and the different landscape context of the Proposed Development. Overall, it is considered that these cumulative visual effects in the consented and application scenarios would be no greater than **minor** and **not significant**.

National Cycle Route 7

Baseline

- 7.551 NCR7 primarily follows the local road network (see **Figure 7.11b**), including sections of the B721, and therefore the assessment of effects upon users of this road are also relevant to this assessment. These effects are described in the assessment of Viewpoint 1 (B721 near Rigg) (**Figure 7.17**) earlier in the Assessment of Effects on Viewpoints, where a **high** magnitude of change is predicted to be experienced by cyclists and effects would be **major** and **significant**. Further assessment has also been included in relation to other sections of this road in the earlier assessment of visual effects associated with those travelling along the B721 road, where a magnitude of change of up to **medium** was predicted to arise along sections of the road between Rigg and Annan, which would result in some intermittent **moderate** and **significant** effects.
- 7.552 Other relevant sections of NCR7 include the stretches between Rigg and Gretna, and Dornock and Annan. Visual effects at greater distances to the west of Annan are likely to

be moderated by a combination of distance and the intervening settlement and woodland, while effects to the east of Gretna are likely to be moderated by a combination of distance and the proximity of the route to closer wind farm development associated with the operational Solwaybank Wind Farm. It is therefore unlikely that there is potential for significant effects to arise along these more distant sections of NCR7.

Sensitivity

- 7.553 The value of this route is medium. There are no formal or informal viewpoints along the route, and the relevant parts of the route are not located within an area designated for its scenic value. However, the route forms part of the national cycle network, which increases the route's value.
- 7.554 The susceptibility of cyclists would generally be high-medium. Cyclists would be travelling relatively slowly along the route, and while views are likely to be transient in nature, it is possible to appreciate them either while moving or by stopping on the roadside.
- 7.555 The combination of the value of the route and the susceptibility of cyclists leads to an overall **high-medium** rating of sensitivity.

Magnitude of Change

- 7.556 Between Gretna and Rigg, the route follows a minor road from the south western edge of Gretna that passes through Old Graitney. Widespread theoretical visibility is predicted along the entirety of this section of the route at distances of between 2-5km from the Proposed Development. Cyclists travelling westbound along this stretch of NCR7 are most likely to experience views in the direction of the Proposed Development, due to the broader alignment of the road, whereas those travelling eastwards are less likely to stop and observe the views behind them. Travelling westbound, views are likely to be intermittent though, and where uninterrupted by roadside vegetation, the lower sections of the turbine towers would be screened by some intervening woodland. It is therefore likely that at closer range at distances of between 2-3km a **high-medium** magnitude of change would be experienced by cyclists, while at distances of 4-5km a **medium** magnitude of change to views would arise.
- 7.557 Between Dornock and Annan, sections of the route are also predicted to receive widespread theoretical visibility at distances of 3.5-5km, which is most likely to affect cyclists travelling eastbound due to the broader alignment of the road. Views of the wind turbines are likely to be interrupted to a degree by roadside hedgerows and intervening woodland, but overall, it is likely that where open views can be experienced by cyclists up to a **medium** magnitude of is predicted along these sections of the route.

Significance of the Effect

- 7.558 In summary, visual effects along the closest sections of NCR7 would be intermittent, but where open views towards the Proposed Development can be experienced at relatively close range, a medium to high magnitude of change is predicted, which would result in a **moderate to major** and **significant** visual effects would arise.

Cumulative Effects

- 7.559 Given the relatively extensive screening that is present from roadside vegetation and intervening woodland situated across the relatively flat landscape of the Solway basin, it is anticipated that cumulative visual effects experienced along NCR7 in both the consented

and application scenarios would be moderated considerably. From the majority of the sections of route, it is predicted that there would be **no cumulative effects** in reality, and where the Proposed Development may be seen in combination with distant wind farm/s (such as the operational Minsca, Solwaybank, and Beck Burn Wind Farms and the application-stage Bloch Wind Farm) in the more elevated foothills a **negligible to low** cumulative magnitude of change would be experienced upon these views. This is due to the distance of cyclists from these cumulative wind farms, the likelihood of views being interrupted to a degree by vegetation and/ or buildings, and the different landscape context of the Proposed Development. Overall, it is considered that these cumulative visual effects in the consented and application scenarios would be no greater than **minor** and **not significant**.

National Cycle Route 72

Baseline

- 7.560 NCR72, also referred to as Hadrian's Cycleway, follows the local road network along the coast from Carlisle in the south east of the detailed study area to Silloth in the south west (see **Figure 7.11b**).

Sensitivity

- 7.561 The value of this route is high. The route forms part of the national cycle network, and while there are no formal viewpoints along the route, it passes through the Solway Coast NL, which is designated for its scenic value.
- 7.562 The susceptibility of cyclists would generally be high-medium. Cyclists would be travelling relatively slowly along the route, but while views are likely to be transient in nature, it is possible to appreciate them either while moving or by stopping on the roadside.
- 7.563 The combination of the value of the route and the susceptibility of cyclists leads to an overall **high-medium** rating of sensitivity.

Magnitude of Change

- 7.564 Effects upon two sections of this route are described in the assessment of Viewpoint 7 (Start of Hadrian's Wall Path, Bowness-on-Solway) (**Figure 7.23**) earlier in the Assessment of Effects on Viewpoints, where a **high** magnitude of change is predicted to be experienced by cyclists and effects would be **major** and **significant**, and Viewpoint 10 (Boustead Hill) (**Figure 7.26**), where a **high** magnitude of change is predicted to be experienced by cyclists and effects would be **major** and **significant**. Effects along much of the stretch of the NCR72 between Bowness-on-Solway and Boustead Hill would be relatively similar, given the opportunities to experience open and expansive panoramic views across the Solway Firth towards the Proposed Development. Further assessment has also been included earlier in relation to other sections of this route that pass through the settlements of Port Carlisle and Drumburgh, where up to **moderate** and **significant** and **moderate** and **not significant** effects are predicted to occur.
- 7.565 Other relevant sections of NCR72 include the stretches between Bowness-on-Solway and Silloth and Boustead Hill and Carlisle. In relation to the section of NCR72 between Bowness-on-Solway and Silloth, there are likely to be some intermittent open views towards the Proposed Development between Bowness-on-Solway and Herd Hill, where roadside vegetation is absent, at distances of between 6-11km from the Proposed Development. At these distances, when travelling eastbound, the Proposed Development

is likely to be clearly discernible, situated within the coastal landscape to the north of the Solway Firth, and as a result the magnitude of change experienced by cyclists travelling in this direction is likely to increase from **low** around Herd Hill to **medium** closer to Bowness-on-Solway as distance from the Proposed Development decreases. Between Herd Hill and Silloth, it is likely that the magnitude of change to views experienced by cyclists travelling in either direction would be moderated to either **no change** or **negligible** due to intervening vegetation, the increased distance from the Proposed Development, and also the presence of the nearby Anthorn radio masts.

- 7.566 In relation to the section of NCR72 between Boustead Hill and Carlisle, with the exception of the stretch of the route between Boustead Hill and Longburgh, where a **medium** magnitude of change is predicted to be experienced upon the open views towards the Proposed Development at distances of between 8-9km, it is likely that views would be subject to **no change** due to screening from roadside hedgerows and/ or intervening woodland.

Significance of the Effect

- 7.567 In summary, visual effects would be experienced by cyclists, sometimes intermittently, along some of the closest sections of NCR72 between Herd Hill and Longburgh, where a low to medium magnitude of change would be experienced, which would result in **major-moderate to moderate** and **significant** visual effects. Along all other sections of the NCR72, it is likely that there would be either a negligible change to the view or no change, which would result in at worst **minor** and **not significant** effects.

Cumulative Effects

- 7.568 Given the screening that is present from intermittent roadside vegetation, it is anticipated that cumulative visual effects experienced along NCR72 in both the consented and application scenarios would be moderated considerably along some sections. From these sections of route, it is predicted that there would be **no** or **negligible** cumulative effects in reality. Where open views across the Solway Firth towards the Proposed Development can be experienced, the nature of the potential cumulative visual effects are described in relation to Viewpoints 7 (Start of Hadrian's Wall Path, Bowness-on-Solway) and 10 (Boustead Hill), which are situated along sections of NCR72. Overall, it is considered that the cumulative magnitude of change in the consented and application scenarios would be no greater than **medium-low**, which would result in at worst **moderate** effects that would be **not significant** in the consented cumulative scenario and **significant or not significant** in the application cumulative scenario. Effects would only be significant in the application cumulative scenario where the separation between wind farm clusters is reduced significantly due to the increased horizontal extent of wider wind farm development, primarily associated with the application-stage Bloch wind farm.

Hadrian's Wall Path

Baseline

- 7.569 The Hadrian's Wall Path follows a vaguely similar route to sections of the Frontiers of the Roman Empire (FRE) WHS, which at its closest section is situated approximately 6km south west of the Proposed Development, south of the Solway Firth in England (see **Figure 7.10b**). Although there is very often some separation between the route of the Path and the WHS 'component parts'.

- 7.570 As part of the LVIA, it is therefore of relevance to consider whether in terms of landscape and visual matters the Proposed Development would impact upon the Outstanding Universal Value (OUV) of the FRE WHS. The OUV of the WHS is summarised in the document entitled 'Statement of Outstanding Universal Value for the Frontiers of the Roman Empire and its Component Parts (WHS FRE) (C430)' (2012):
- 7.571 *"Hadrian's Wall is the most elaborately designed and constructed element of the Frontiers of the Roman Empire.*
- 7.572 *Hadrian's Wall is an outstanding example of a fortified frontier constructed in dressed stone, which illustrates an ambitious and coherent system of defensive constructions perfected by engineers over the course of several generations. Whether with respect to military architectural construction techniques, strategic design in the Imperial period or a policy for ground use and the organisation of space in a frontier zone, this cultural property is an exceptional reference whose universal value leaves no doubt. This military zone bears exceptional testimony to Roman colonisation by the large number of human settlements associated with the defences. The vicus of Vindolanda, for example, is an excellent example of a garrison settlement which contributes to an understanding of how, in times of peace, away from the entrenched camp, soldiers and their families lived.*
- 7.573 *Occupied for nearly three centuries, the Wall exerted great influence on the spatial organisation of the north of the Roman Province of Britain and is still a part of the landscape from the Tyne to Solway."*
- 7.574 While the Statement of OUV do not explicitly refer to landscape and visual sensitivities, the current WHS Management Plan refers to nine 'Attributes' associated with these OUV, including one related to how *"The setting of the WHS offers the opportunity to understand and appreciate Roman military planning and operations"*.
- 7.575 The character and extent of the visual setting of the WHS varies along its length with some sections possessing open views of the immediate and surrounding landscapes, and others possessing more contained views due to the surrounding vegetation and/ or buildings. From the closest sections of the WHS, the surrounding landscape is relatively open with the Solway Firth reinforcing the apparent visual edge of the Frontier, with views extending beyond to the Dumfries and Galloway coast. This part of the surrounding landscape therefore currently possesses a relatively clear delineation between the immediate and wider setting of the WHS.
- 7.576 When defining the immediate and wider setting of the WHS, it is helpful to understand that the WHS designation incorporates a protected 'buffer zone', which is described by UNESCO in their publication 'World Heritage and Buffer Zones' (2008)²:
- 7.577 *"Buffer zone is intended to protect World Heritage sites from negative influences. In other words, it represents a zone, that in itself is not of outstanding universal value, but that may influence a World Heritage site."*
- 7.578 In this instance, it appears that the boundaries of the WHS designation encompass its immediate setting. The Proposed Development would not be situated within or near a part of the WHS designation, including its buffer zone, instead it would be situated at greater distance in an area that could form part of its wider setting. Given the intervening distance between the Proposed Development and the WHS, it is therefore necessary to understand the contribution of the Site to its wider setting. This aspect of the assessment has been carried out as part of the Archaeology and Cultural Heritage assessment in

² UNESCO (2008). World Heritage and Buffer Zones. World Heritage Papers 25.

Chapter 8 of the EIA Report, with an assessment of the visual effects upon views containing parts of the WHS's wider setting included in this chapter.

- 7.579 The contribution of the views across the Solway Estuary are described in the previous WHS Management Plan (2014-2018)³ under the section 'Aesthetic Values':

"The views across the Solway estuary from Bowness-on-Solway and as far as Maryport are of the Scottish Solway coast, which was not wholly under Roman control, and is dominated by the evocative mountain of Criffel. These views in their different ways strongly evoke the sensation of being on the edge of the Empire."

Sensitivity

- 7.580 The value of views experienced from the Hadrian's Wall Path is high. This high value primarily relates to the international level of the FRE WHS designation, which covers some parts of the Path's route, but also to the location of the relevant sections of the Path within the Solway Coast NL. The high scenic level of the surrounding area may therefore contribute to both the appreciation of the Path itself and the visual setting of the WHS designation.
- 7.581 The susceptibility of recreational walkers and visitors would be high. Recreational walkers are likely to hold an expectation that they will experience scenic views due to the location of the Hadrian's Wall Path within the Solway Coast NL, and therefore they are highly susceptible to changes in the views that will be attained from the relevant sections of the Path.
- 7.582 The combination of the value of the views and the susceptibility of viewers leads to an overall **high** rating of sensitivity.

Magnitude of Change

- 7.583 An assessment of the worst-case visual effects, including cumulative and night-time effects, of the Proposed Development on the Hadrian's Wall Path is provided in the assessment of Viewpoints 7 (Start of Hadrian's Wall Path, Bowness-on-Solway) and 10 (Boustead Hill) earlier in the Assessment of Visual Effects, where a **medium-low** magnitude of change is predicted to be experienced by recreational walkers and effects would be **moderate** and **significant**. While both of these viewpoints are located close to the Path, neither are located within the Core Area of the FRE WHS, with Viewpoint 7 located outside of both the Core Area and the Buffer Zone, and Viewpoint 10 located in the Buffer Zone. These views while representative of the open views across the Solway Firth that can be experienced from sections of the Hadrian's Wall Path, are therefore not necessarily illustrative of the visual effects experienced from the nearby Core Area of the WHS.
- 7.584 It is anticipated that the visual effects that would be experienced from the majority of the Core Area of the WHS further inland, for example to the south and south east of Bowness-on-Solway and areas surrounding Burgh by Sands, would be moderated to varying degrees by screening from buildings and vegetation, such that the magnitude of change to views would be lower. It is therefore likely that with the exception of some coastal areas of the WHS near Port Carlisle where the nature of the effects would be similar to those experienced at Viewpoints 7 and 10 and subject to a **medium-low**

³ Frontiers of the Roman Empire World Heritage Site Hadrian's Wall Management Plan 2008-2014.

magnitude of change, the magnitude of change to views from all other areas of the WHS would be at worst **low** or **negligible** and across the majority of the Core Area of the WHS there would be **no change** to the view.

Significance of the Effect

- 7.585 The effects of the Proposed Development on views experienced by recreational walkers and visitors to the Hadrian's Wall Path would be at worst **moderate** and **significant** where open views can be experienced along the coastline between Bowness-on-Solway and Boustead Hill, due to a combination of the factors that lead to the at worst medium-low magnitude of change on the views and the high sensitivity of the receptors, but where views are experienced further inland visual effects would be reduced materially such that effects would vary between **negligible** and **no change** and **not significant**. Visual effects upon views experienced from the Core Area of the FRE WHS would be more limited and contained to coastal areas around Port Carlisle where at worst **moderate** and **significant** effects would be experienced, with **no change** predicted to arise to views from the vast majority of the WHS' Core Area.

Cumulative Effects

- 7.586 Given the screening that is often present from intervening vegetation, it is anticipated that cumulative visual effects experienced along Hadrian's Wall Path in both the consented and application scenarios would be moderated considerably along some sections. From these sections of route, it is predicted that there would be **no** or **negligible** cumulative effects in reality. Where open views across the Solway Firth towards the Proposed Development can be experienced, the nature of the potential cumulative visual effects are described in relation to Viewpoints 7 (Start of Hadrian's Wall Path, Bowness-on-Solway) and 10 (Boustead Hill), which are situated near sections of the Path. Overall, it is considered that the cumulative magnitude of change in the consented and application scenarios would be no greater than **medium-low**, which would result in at worst **moderate** effects that would be **not significant** in the consented cumulative scenario and **significant or not significant** in the application cumulative scenario. Effects would only be significant in the application cumulative scenario where the separation between wind farm clusters is reduced significantly due to the increased horizontal extent of wider wind farm development, primarily associated with the application-stage Bloch wind farm.

Core Paths

Baseline

- 7.587 The preliminary assessment identified that the following core paths have the potential to be significantly affected by the Proposed Development: GRET/248, EAST/531, GRET/517, EAST/530, and EAST/315. These core paths are all located within the local context of the Proposed Development and their locations are illustrated on **Figure 7.11b**.

Sensitivity

- 7.588 Core paths are identified by local authorities to provide members of the public reasonable access throughout their area, and as a result they are of medium value.
- 7.589 Users of the core paths will have an appreciation of the surrounding landscape and its contribution to views that can be experienced from the routes. The surrounding landscape contains evidence of human influences, such as settlements and farms, and as a

consequence this is likely to moderate their susceptibility to change in views. Overall, the susceptibility to change of core path users is therefore considered to be high-medium.

- 7.590 In combining the medium value with the high-medium susceptibility, the sensitivity of users of core paths is considered to be **high-medium**.

Magnitude of change

- 7.591 Theoretical visibility of the Proposed Development is predicted to arise along the length of the GRET/248 (Browhouses to Redkirk point) core path with only some limited screening of the turbine towers. Where views are uninterrupted by intervening vegetation, such as hedgerows, views of the Proposed Development would therefore be experienced by recreational walkers at distances of between 2.4-3.9km. At these distances, the Proposed Development would appear as medium to large scale elements in the landscape, occupying a relatively narrow extent of the available HFOV. A **medium-high to medium** magnitude of change is therefore predicted to arise with the level of effects reducing as distances from the Proposed Development increases. Where visibility of the Proposed Development is screened by intervening hedgerows and trees, there would be **no change** to views from these sections of the core path.
- 7.592 Theoretical visibility of the Proposed Development is predicted to arise along the length of the EAST/531 (Dornochbrow) core path with only some limited screening of the turbine towers. Where views are uninterrupted by intervening vegetation and buildings, views of the Proposed Development would therefore be experienced by recreational walkers at distances of between 3.0-3.7km. At these distances, the Proposed Development would appear as medium to medium-large scale elements beyond the village of Eastriggs, occupying a relatively narrow extent of the available HFOV. A **medium** magnitude of change is therefore predicted to arise with the level of effects reducing as distances from the Proposed Development increases. Where visibility of the Proposed Development is screened by intervening hedgerows and trees, there would be **no change** to views from these sections of the core path.
- 7.593 Theoretical visibility of the Proposed Development is predicted to arise along the length of the GRET/517 (Gretna Service Area to Gretna) core path with only some limited screening of the turbine towers. Where views are uninterrupted by intervening vegetation, such as hedgerows, views of the Proposed Development would therefore be experienced by recreational walkers at distances of between 3.6-3.9km. At these distances, the Proposed Development would appear as medium to medium-large scale elements in the rural landscape, occupying a relatively narrow extent of the available HFOV. A **medium** magnitude of change is therefore predicted to arise with the level of effects reducing as distances from the Proposed Development increases. Where visibility of the Proposed Development is screened by intervening hedgerows and trees, there would be **no change** to views from these sections of the core path.
- 7.594 An assessment of the visual effects, including cumulative and night-time effects, of the Proposed Development on the EAST/530 (Dornoch Burn) and EAST/315 (Battlehill) core path is provided in the assessment of Viewpoint 5 Coastal Path (junction of Battlehill and Dornoch Burn core paths) earlier in the Assessment of Visual Effects. Viewpoint 5 provides representative views that would be experienced by recreational walkers (medium-high sensitivity) where open views towards the Proposed Development can be experienced at a distance of approximately 4.9km. A **medium-low** magnitude of change to views (and a **moderate** and **significant** effect) would be experienced by recreational walkers at this location. Where visibility of the Proposed Development is uninterrupted by vegetation, views of a similar nature would be experienced along other sections of the core path. Where visibility of the Proposed Development is screened by intervening

hedgerows and trees, there would be **no change** to views from these sections of the core path.

Significance of the Effect

- 7.595 In summary, while the Proposed Development would have a varied influence on views experienced on different sections of the core paths included in the detailed assessment, significant visual effects are assessed to occur across part or the whole of the length of the following core paths: GRET/248, EAST/531, GRET/517, EAST/530, and EAST/315.

Visible Aviation Lighting

- 7.596 This section contains the assessment of aviation lighting effects upon receptors in the night-time environment and considers the proposed embedded mitigation measures outlined earlier in the LVIA. It is supported by various figures and visualisations, which are referenced in the text.
- 7.597 The assessment of night-time visual effects is based on clear night-time conditions, and on the use of reduced 200cd intensity aviation lights only, rather than 2000cd intensity, in accordance with NatureScot's Guidance on Aviation Lighting Impact Assessment (2024). Further information relating to the parameters of the assessment is provided in the earlier 'Aviation Lighting Assessment' section of the 'Methodology for the Assessment of Effects' section of this LVIA.
- 7.598 It is important to remember that for the majority of visual receptors, the effect arising from aviation lighting is likely to be gained over a relatively short period. Views from within properties are likely to be restricted by the use of window coverings, particularly in winter, and properties within settlements are likely to be affected by baseline lighting of streetlights. As a result, people who experience views at night are frequently those using the road network, whose adaptation to darkness is compromised by dashboard and car headlights such that this group of receptors will not perceive the turbine lighting at its highest intensity. Remote rural locations, hilltops and footpaths are generally visited infrequently at night and the number of people affected would be low.

Turbine Lighting Visibility

- 7.599 **Table 7-15** provides a summary of the potential visibility of the two nacelle lights for each of the LVIA viewpoints, this is based on the nacelle light ZTV (**Figure 7.15**) and details of how many lit turbines would be theoretically visible from each of the viewpoints included in the LVIA.

Table 7-15: Turbine Lighting Visibility at Viewpoints

| No. | Viewpoint | Nacelle lighting theoretical visibility |
|-----|---|---|
| 1 | B721 near Rigg | 2 |
| 2 | Eastriggs – from edge of settlement | 2 |
| 3 | Kirkpatrick Fleming – from B7076 | 2 |
| 4 | Creca – from road south of settlement | 2 |
| 5 | Coastal Path (junction of Battlehill and Dornock Burn core paths) | 2 |

| No. | Viewpoint | Nacelle lighting theoretical visibility |
|-----|---|---|
| 6 | Gretna Green – Famous Blacksmiths Shop Visitor Car Park | 2 |
| 7 | Start of Hadrian's Wall Path, Bowness-on-Solway | 2 |
| 8 | Annan – Watchill | 2 |
| 9 | Eaglesfield | 2 |
| 10 | Boustead Hill | 2 |
| 11 | King Edward I Monument | 2 |
| 12 | A75, west of Annan | 2 |
| 13 | Longtown Bridge | 2 |
| 14 | Repentance Tower, Hoddum | 2 |
| 15 | Malcolm Monument, Whita Hill | 2 |
| 16 | Ward Law | 2 |
| 17 | Criffel | 2 |

Turbine Lighting Intensity

7.600 In addition to dimming mitigation, a reduction in lighting intensity may also be achieved through vertical directional intensity mitigation. This is achieved through the use of a light that emits a reduced lighting intensity dependent on the degree of the vertical angle of view from the light in relation to landform. The lighting intensity ZTV (**Figure 7.16**) illustrates the different lighting intensities across the surrounding landscape, based on the CEL-WT-MIC light model. It is important to note that the vertical directional intensity mitigation information is provided as an illustrative example, and the applicant has not committed to using this specific light fitting, as this choice is normally made at turbine procurement stage. Many of the viewpoints within the areas closest to the Proposed Development can benefit from reduced intensity as a result of the negative vertical angle in which the two nacelle lights would be viewed. **Table 7-16** below provides a summary of the reduced intensity for the nacelle lights based on the light intensity data presented on **Figure 7.15**.

Table 7.16: Turbine Lighting Intensity (Candela) at Viewpoints

| No. | Viewpoint | Turbine Lighting Intensity (cd) | |
|-----|---|---------------------------------|--------------|
| | | Vertical Angle | 200cd |
| 1 | B721 near Rigg | -3.68 | 21 - 13 cd |
| 2 | Eastriggs – from edge of settlement | -3.18 | 21 - 13 cd |
| 3 | Kirkpatrick Fleming – from B7076 | -1.67 | 106 - 41 cd |
| 4 | Creca – from road south of settlement | -0.71 | 203 - 106 cd |
| 5 | Coastal Path (junction of Battlehill and Dornock Burn core paths) | -1.44 | 106 - 41 cd |

| No. | Viewpoint | Turbine Lighting Intensity (cd) | |
|-----|---|---------------------------------|--------------|
| | | Vertical Angle | 200cd |
| 6 | Gretna Green – Famous Blacksmiths Shop Visitor Car Park | -1.14 | 106 - 41 cd |
| 7 | Start of Hadrian's Wall Path, Bowness-on-Solway | -1.17 | 106 - 41 cd |
| 8 | Annan – Watchill | -0.99 | 203 - 106 cd |
| 9 | Eaglesfield | -0.49 | 203 - 106 cd |
| 10 | Boustead Hill | -0.86 | 203 - 106 cd |
| 11 | King Edward I Monument | -0.86 | 203 - 106 cd |
| 12 | A75, west of Annan | -0.62 | 203 - 106 cd |
| 13 | Longtown Bridge | -0.69 | 203 - 106 cd |
| 14 | Repentance Tower, Hoddum | -0.14 | 203 - 106 cd |
| 15 | Malcolm Monument, Whita Hill | 0.6 | 203 - 205 cd |
| 16 | Ward Law | -0.12 | 203 - 106 cd |
| 17 | Criffel | 0.77 | 203 - 205 cd |

- 7.601 It is evident from **Figure 7.16** that the full intensity of the two aviation lights would only be theoretically experienced when receptors are situated on similar or more elevated terrain. Given the surrounding flat or gently sloping landform, areas where these highest levels of light intensity are predicted to be experienced tend to be located across more elevated parts of the wider landscape at distances generally over 10km from the Proposed Development, with the exception of some small closer areas near Eaglesfield. In these elevated areas the vertical angles are between 0° and 1° resulting in an approximate light intensity of between 203 cd and 106 cd when visibility >5km. Noting that the light intensity could be higher for the 0° to 1° vertical angle, where the highest candela value calculated by Contarnex for the CEL-WT-MIC aviation warning light was recorded (for a vertical angle of 0.6°) as 2206 cd when visibility <5km and up to 221 cd when visibility >5km.
- 7.602 At closer distances, the intensity of the two lights would reduce significantly, particularly within 2-3km from the Proposed Development, where light intensity would range from <13cd at distances of approximately less than 1km to between 13-41 cd at distances of between 1-3km. Beyond these distances, the intensity of the lights would be more consistent with the majority of the Solway basin predicted to experience theoretical levels of between 41 – 203 cd. Across these areas, the nature of the effects will vary based on the degree of contrast to the underlying baseline light pollution that is experienced in different locations, the intervening distance, and the activity of the receptor.

Assessment of Representative Night-time Viewpoints

Viewpoint 2: Eastriggs – from edge of settlement

- 7.603 The sensitivity of this viewpoint is likely to reduce from high to medium-low for residents. This reduction in their susceptibility relates to the reduced ability of residents to appreciate distant landscape patterns and the scenic qualities of the view in darkness, together with reduced dark adaptation as a consequence of nearby street lighting.
- 7.604 The baseline night-time view towards the Proposed Development is characterised by the rural landscape in the midground and background, which contains some plant machinery associated with the current expansion of the settlement, vehicle lighting associated with

the A75 road, and the vertical structures associated with electricity distribution and transmission lines. The baseline light pollution figure (**Figure 7.14**) illustrates that the light levels in this part of Eastriggs are generally between 0.6 - 1.5 Radiance 10^{-9} W/cm² *sr, which illustrates a moderate level of light pollution. The light is generally emitted from the surrounding houses, streetlamps, and passing cars.

- 7.605 Two turbine lights would be theoretically visible from a minimum of 1.6km away, contained within 2° of the available HFOV. The vertical angle between this viewpoint and the closest nacelle is -3.18° and the intensity of the nacelle lights, based on the CEL-WT-MIC light model, would therefore be between 21 - 13 cd (see **Figure 7.16**).
- 7.606 The Proposed Development would introduce a new influence of fixed red lights across part of the sky in the night-time view. The position of the lights within the currently dark sky and the absence of intervening landform would increase their effect on the view, as would the flashing appearance that would be likely to arise. The magnitude of change arising from the lighting is further influenced by the level of baseline lighting in the village; the affected HFOV of the lighting extending intermittently across approximately 2° of the view; and the short distance between the viewpoint and the Proposed Development.
- 7.607 Overall, it is considered that the night-time magnitude of change on this view would be **high-medium**. As a result, when combined with the receptor's medium-low sensitivity, the effect of the aviation lighting on residents is considered to be **moderate** and **significant**.
- 7.608 There are no hubs visible of consented or application wind farms that are predicted to be theoretically visible from this location, and as a result there would be **no cumulative lighting effect** under these scenarios.

Viewpoint 3: Kirkpatrick Fleming – from B7076

- 7.609 The sensitivity of this viewpoint is likely to reduce from high to medium for residents. This reduction in their susceptibility relates to the reduced ability of residents to appreciate distant landscape patterns and the scenic qualities of the view in darkness, together with reduced dark adaptation as a consequence of nearby street lighting.
- 7.610 The baseline night-time view towards the Proposed Development is characterised by the rural landscape in the foreground and midground, and glimpses of the reflective waters of the Solway Firth, as well as the smooth ridgelines of the Lake District fells in the background. There is limited artificial lighting within the view, primarily from some scattered dwellings, but also from aviation lighting associated with occasional distant masts, such as those associated with the Anthorn Radio Station to the south west of the viewpoint. The baseline light pollution figure (**Figure 7.14**) illustrates that the light levels at this location are around 0.6 - 1.5 Radiance 10^{-9} W/cm² *sr, which illustrates a moderate level of light pollution. The light is generally emitted from the surrounding houses, streetlamps, and passing cars.
- 7.611 Two turbine lights would be theoretically visible from a minimum of 2.7km away at elevated locations above the distant skyline, contained within 4° of the available HFOV. The vertical angle between this viewpoint and the closest nacelle is -1.67° and the intensity of the nacelle lights in the 200cd scenario would therefore be between 106 - 41 cd (see **Figure 7.16**).
- 7.612 The Proposed Development would introduce a further influence of red lights above the skyline into the night-time view. The elevated position, the absence of intervening landform, and the closer location of the lights would increase their effect on the view, as would the flashing appearance that would be likely to arise. The magnitude of change arising from the lighting is further influenced by the level of baseline lighting in the village;

the affected HFOV of the lighting extending intermittently across approximately 4° of the view, and the presence of some limited baseline lighting within the wider view.

- 7.613 Overall, it is considered that the night-time magnitude of change on this view would be **medium**. As a result, and when combined with the receptor's medium sensitivity, the effect of the aviation lighting on residents is considered to be **moderate** and **significant**.
- 7.614 There are no hubs visible of consented or application wind farms that are predicted to be theoretically visible from this location, and as a result there would be **no cumulative lighting effect** under these scenarios.

Viewpoint 10: Boustead Hill

- 7.615 The sensitivity of this viewpoint is likely to remain high for residents due to the relatively dark baseline night time environment.
- 7.616 The baseline night-time view towards the Proposed Development is characterised by the open, flat landscape of the Solway basin in the foreground and midground, which is undeveloped and free of visual obstructions. There is therefore very limited artificial light within the view, primarily from some scattered dwellings along the Dumfries and Galloway coastline. While in other directions there is some visibility of aviation lighting associated with the Anthorn Radio Station to the west of the viewpoint. The baseline light pollution figure (**Figure 7.14**) illustrates that the light levels at this location are around 0.0 - 0.1 Radiance $10^{-9} \text{ W/cm}^2 \text{ sr}$, which are some of the darkest levels in the detailed study area. Although it should be considered that the location does not experience complete darkness due to the nearby hamlet of Boustead Hill and cars on the minor road.
- 7.617 Two turbine lights would be theoretically visible from a minimum of 8.6km away at elevated locations above the coastline, contained within 3° of the available HFOV. The vertical angle between this viewpoint and the closest nacelle is -0.86° and the intensity of the nacelle lights in the 200cd scenario would therefore be between 203 - 106 cd (see **Figure 7.16**).
- 7.618 The Proposed Development would therefore add a further influence of red lights above the skyline of the local area into the night-time view. The elevated position and the absence of intervening landform would increase their effect on the view, as would the flashing appearance that would be likely to arise. The magnitude of change arising from the lighting is further influenced by the affected HFOV of the lighting extending intermittently across approximately 4° of the view; the distance of the lights from the viewpoint; and the presence of only some limited baseline lighting within the wider view.
- 7.619 Overall, it is considered that the night-time magnitude of change on this view would be **low**. As a result, and when combined with the receptor's high sensitivity, the effect of the aviation lighting on residents is considered to be **moderate** and **significant**.
- 7.620 In relation to cumulative lighting effects, there is some visibility of turbine hubs of the operational Crossdykes Wind Farm (28.3km), and the application-stage Bloch (20.2km), Loganhead Resubmission (29.7km), Callisterhall (23.4km), Hopsrig Resubmission (28.2km), Little Hartfell Resubmission (29.7km), Balgray (30.6km), Scoop Hill (36.6km), Teviot (41.5km), and Harestanes West (44.7km) Wind Farms. While some of the lights associated with the closest wind farms might be apparent from the viewpoint, it is likely that at distances greater than 20-30km, many of the lights would be less discernible. The addition of the Proposed Development to the baseline is likely to introduce lighting at slightly closer distances and this would increase the cumulative magnitude of change.
- 7.621 Given the limited influence of lighting in the consented cumulative scenario, it is likely that the cumulative magnitude of change would be **negligible**. Cumulative effects in the

application cumulative scenario would be more pronounced and as a result the cumulative magnitude of change would be **low**. When combined with the viewpoint's high sensitivity, the cumulative effect of the aviation lighting on residents is considered to be at worst **moderate-minor** and **not significant**.

Night-time Assessment of LVIA Viewpoints

- 7.622 Whilst lighting visualisations have only been produced for three of the LVIA viewpoints, an assessment has been carried out for the other LVIA viewpoints - see **Table 7-17**. This assessment is based on the information provided in **Tables 7-15** and **7-16** and draws on the detailed assessments of visible aviation lighting carried out for the representative viewpoints.
- 7.623 As described in **Technical Appendix 7.1 LVIA Methodology**, the susceptibility of visual receptors differs at night reflecting the different activities people undertake during the hours of darkness. For example, drivers using roads at night tend to be more focused on the road and the area illuminated by headlights than during the day and may have oncoming headlights or other reflective signage and dashboard lighting drawing their attention, and affecting an individual's dark adaptation, resulting in lower susceptibility. On the other hand, people taking part in activities where darkness is essential, such as stargazing, are of higher susceptibility. It should also be noted that where existing cumulative developments have moderated susceptibility for some viewpoints during the day, that this would not necessarily apply to receptors susceptibility at night, and as a result susceptibility and potentially sensitivity may increase. The assessment therefore takes account of this difference in susceptibility for receptors at night compared with during the day and receptor sensitivity at night is recorded in **Table 7-17**.

Table 7-17 Night-time Assessment of LVIA Viewpoints within 20km

| No. | Viewpoint | Receptor sensitivity at night | Magnitude of change | Significance of Effect |
|-----|---|-------------------------------|---------------------|---|
| 1 | B721 near Rigg | Low to Medium-low | High | Moderate and Significant |
| 2 | Eastriggs – from edge of settlement | Medium-low | High-medium | Moderate and Significant |
| 3 | Kirkpatrick Fleming – from B7076 | Medium | Medium | Moderate and Significant |
| 4 | Creca – from road south of settlement | Medium-low | Medium | Moderate-minor and Not Significant |
| 5 | Coastal Path (junction of Battlehill and Dornock Burn core paths) | High-medium | Medium-low | Moderate and Significant |
| 6 | Gretna Green – Famous Blacksmiths Shop Visitor Car Park | Medium-low | Low | Moderate-minor and Not Significant |
| 7 | Start of Hadrian's Wall Path, Bowness-on-Solway | Medium to High | Low | Moderate and Significant |
| 8 | Annan – Watchill | Medium-low | Low | Minor and Not Significant |

| No. | Viewpoint | Receptor sensitivity at night | Magnitude of change | Significance of Effect |
|-----|------------------------------|-------------------------------|---------------------|---|
| 9 | Eaglesfield | Medium-low | Low | Minor and Not Significant |
| 10 | Boustead Hill | High | Low | Moderate and Significant |
| 11 | King Edward I Monument | High | Low | Moderate and Significant |
| 12 | A75, west of Annan | Low | Low | Negligible and Not Significant |
| 13 | Longtown Bridge | Medium-low | Negligible | Negligible and Not Significant |
| 14 | Repentance Tower, Hoddum | High-medium | Low | Moderate-Minor and Not Significant |
| 15 | Malcolm Monument, Whita Hill | High | Negligible | Minor and Not Significant |
| 16 | Ward Law | High | Negligible | Minor and Not Significant |
| 17 | Criffel | High | Negligible | Minor and Not Significant |

- 7.624 The duration of the effect of the lights on receptors is likely to be over a relatively short period, more commonly experienced during evening and morning hours of darkness, around dusk and sunrise. The ICAO standard requires the lights to be switched on 30 minutes after sunset, and 30 minutes before sunrise, removing the likelihood of visible lighting during twilight. The effect of the Proposed Development's visible aviation lighting at night would also be limited by the activity of receptors at night.
- 7.625 Receptors that experience views at night are generally limited to residents of settlements, rural properties and motorists using the road network. Views from within properties are also likely to be restricted by the use of window coverings, particularly in winter (it should be noted that this was not a factor of consideration in the assessment). The assessment of night-time effects is based on clear nighttime viewing conditions. At dusk and sunrise, it may be possible to identify the formation of the turbines with the lighting switched on, but only in conditions of good and excellent visibility. At sunrise it may also be possible, in views from the west, to see the turbines with lights switched on whilst backlit by the rising sun. Views from remote uplands and hills, rural farmland and footpaths etc. are visited infrequently at night therefore numbers of receptors affected will be low.
- 7.626 At night, whilst the two proposed aviation lights would be visible from the surrounding landscape, the turbines themselves would not be visible during the hours of darkness. Nevertheless, the assessment of night-time effects for the Proposed Development has predicted significant effects for some of the viewpoints. Significant effects predicted to arise as a consequence of the Proposed Development's visible aviation lighting are limited to viewpoints 1, 2, 3, 5, and 7, 10, and 11.

Summary of Predicted Effects and Statement of Significance

- 7.627 The potential effects on the landscape and visual receptors that would arise as a result of the Proposed Development have been assessed in this Chapter. The process taken

involved identifying those receptors within the study area with the potential to be significantly affected. The significance of these effects has been assessed through combining the sensitivity of each receptor with a prediction of the magnitude of change that would occur as a result of the Proposed Development. The findings of the assessment are presented in **Table 7-18**.

- 7.628 Where possible these effects have been mitigated by reducing the number of turbines and increasing the separation distances of the turbines from residential dwellings. While emphasis has also been placed on designing a relatively small, compact wind farm that does not markedly impact upon the scenic and perceptual qualities of the nearby NSA and NL. The removal of tower lighting and the reduction of aviation lighting located on hubs (from 4 to 2 lights) also reduces effects. Furthermore, at the local level landscape and visual effects would also be mitigated by the tree planting proposed across parts of the Site.
- 7.629 In summary, the assessment has shown that the residual effects of the Proposed Development on the landscape and visual resource of the great majority of this study area would be not significant, which means that for the great majority of the study area, and the receptors that lie within it, the effect of the Proposed Development is not defining and the existing, baseline characteristics of the landscape and views would continue to prevail. The receptors that would not be significantly affected by the Proposed Development in isolation include the following:
- National Parks and National Scenic Areas;
 - Wild Land Areas;
 - Regional Scenic Areas;
 - railway lines; and
 - the great majority of the landscape character types that are found within the study area.
- 7.630 While the effect on the majority of the study area would be not significant, as described above, the LVIA has indicated that there is potential for the Proposed Development to result in some localised significant effects on the area that lies in closer proximity to the Site. The LVIA has identified that there is potential for significant effects to arise upon the following receptors:
- the landscape character of the Site and some of its surroundings, including the Annandale Flow Plateau Unit of the Coastal/ Flow Plateau LCT, the Kirtle Water Unit of the Narrow Valleys LCT, the Cardurnock Flats and Moricambe Bay Unit of the Bay and Estuary LCT, the Bowness on Solway/ Burgh by Sands/ Newton Arlosh Unit of the Coastal Margins LCT, and the Burgh Marsh Unit of the Bay and Estuary LCT.
 - views experienced by residents from parts, but not all, of the local settlements of Easttriggs, Kirkpatrick Fleming, Creca, Bowness-on-Solway, Port Carlisle, Drumburgh, and Boustead Hill;
 - views experienced by residents from a large number of the closest residential properties, with the Proposed Development resulting in the potential for the 'Residential Visual Amenity Threshold' to be reached in respect of four especially close-range (financially involved) properties. (see **Technical Appendix 7.2: RVAA** for details);
 - views experienced by recreational walkers from certain sections of the Hadrian's Wall Path;

- views experienced by road users along some of the closest sections of the A75, B721, B6357, and B7076 roads;
- views experienced by recreational users of sections of the following Core Paths: GRET/248, EAST/531, GRET/517, EAST/530, and EAST/315; and
- views experienced by residents from parts of the local settlements of Eastriggs, Kirkpatrick Fleming, and Bowness-on-Solway at night-time as a consequence of aviation lighting.

7.631 In addition to these effects arising as a result of the Proposed Development in isolation, there are also likely to be some significant cumulative effects upon the following receptors:

- Views experienced by residents from Viewpoint 2: Eastriggs – from edge of settlement in a scenario which includes operational, under-construction, consented and application-stage wind farm developments;
- Views experienced by residents and recreational walkers from Viewpoint 7: Start of Hadrian's Wall Path, Bowness-on-Solway in a scenario which includes operational, under-construction, consented and application-stage wind farm developments; and
- Views experienced by residents from parts of the settlements of Eastriggs, Bowness-on-Solway, Port Carlisle, and Boustead Hill in a cumulative scenario which contains all operational, under-construction, consented and application-stage wind farm developments.

7.632 This summary indicates that the Proposed Development would result in some localised significant effects on aspects of the landscape and visual resource at distances of up to approximately 8-9km from the Proposed Development. Given the relatively modest gradient of the Site, it is considered that these effects would be likely to be comparable in nature if micro-siting is undertaken within a 50m distance of the current turbine locations.

7.633 It is important to note, however, that assessments of this type tend to focus on those locations and receptors where significant effects may arise, and there are large parts of the study area where ZTVs show that there will be no visibility, or limited visibility, of the Proposed Development, including those receptors that are listed above.

Table 7-18: Summary of Predicted Effects

| Receptor | Significant Effect? |
|--|-----------------------|
| 14. Coastal/ Flow Plateau LCT - Annandale Flow Plateau Unit | Yes (localised) |
| 4. Narrow Valleys LCT - Kirtle Water Unit | Yes (localised) |
| 1. Bay and Estuary LCT - Cardurnock Flats and Moricambe Bay Unit | Yes (localised) |
| 2. Coastal Margins LCT - Bowness on Solway/ Burgh by Sands/ Newton Arlosh Unit | Yes (localised) |
| 1. Bay and Estuary LCT – Burgh Marsh Unit | Yes (localised) |
| Nith Estuary NSA | No |
| Solway Coast NL | Yes (on two SLQs) |
| Solway Coast RSA | No |
| Viewpoint 1: B721 near Rigg | Yes (inc. night-time) |
| Viewpoint 2: Eastriggs – from edge of settlement | Yes (inc. night-time) |
| Viewpoint 3: Kirkpatrick Fleming – from B7076 | Yes (inc. night-time) |
| Viewpoint 4: Creca – from road south of settlement | Yes |
| Viewpoint 5: Coastal Path (junction of Battlehill and Dornock Burn core | Yes (inc. night-time) |
| Viewpoint 6: Gretna Green - Famous Blacksmiths Shop Visitor Car Park | No |

| Receptor | Significant Effect? |
|--|----------------------------------|
| Viewpoint 7: Start of Hadrian's Wall Path, Bowness-on-Solway | Yes (inc. night-time) |
| Viewpoint 8: Annan – Watchill | No |
| Viewpoint 9: Eaglesfield | No |
| Viewpoint 10: Boustead Hill | Yes (inc. night-time) |
| Viewpoint 11: King Edward I Monument | Yes (inc. night-time) |
| Viewpoint 12: A75, west of Annan | No |
| Viewpoint 13: Longtown Bridge | No |
| Viewpoint 14: Repentance Tower, Hoddom | No |
| Viewpoint 15: Malcolm Monument, Whita Hill | No |
| Viewpoint 16: Ward Law | No |
| Viewpoint 17: Criffel | No |
| Eastriggs | Yes (localised, inc. night-time) |
| Kirkpatrick-Fleming | Yes (localised, inc. night-time) |
| Gretna | No |
| Creca | Yes (localised) |
| Annan | No |
| Bowness-on-Solway | Yes (localised, inc. night-time) |
| Port Carlisle | Yes (localised, inc. night-time) |
| Eaglesfield | No |
| Drumburgh | Yes (localised, inc. night-time) |
| Boustead Hill | Yes (inc. night-time) |
| Longtown | No |
| A75 | Yes (localised) |
| B721 | Yes (localised) |
| B6357 | Yes (localised) |
| B7076 | Yes (localised) |
| Glasgow South Western Line | Yes (localised) |
| NCR7 | Yes (localised) |
| NCR72 | Yes (localised) |
| Hadrian's Wall Path | Yes (localised) |
| GRET/248 (Browhouses to Redkirk Point) Core Path | Yes (localised) |
| EAST/531 (Dornochbrow) Core Path | Yes (localised) |
| GRET/517 (Gretna Service Area to Gretna) Core Path | Yes (localised) |
| EAST/530 (Dornoch Burn) Core Path | Yes (localised) |
| EAST/315 (Battlehill) Core Path | Yes (localised) |