Technical Appendix 4.1: Landscape and Visual Impact Assessment Methodology

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1.1 Introduction

1.1.1 The Landscape and Visual Impact Assessment (LVIA) considers:

- Effects during construction and operation on the landscape character of the Site and the surrounding Study Area;
- Effects during operation on views across the Study Area towards the Proposed Development, including views from key viewpoint locations agreed through consultation, from settlements, and as part of sequential experiences along routes, including those used by recreational receptors;
- Cumulative effects on landscape character and views should other consented or in-planning wind farm sites be present;
- Effects from aviation lights on landscape character and visual amenity; and
- The implications of landscape and visual effects on the special qualities and integrity of designated landscapes.

1.1.2 This assessment is carried out in accordance with the principles contained within the following documents available up to July 2024:

- Guidelines for Landscape and Visual Impact Assessment, Third Edition (referred to hereafter as GLVIA3) (Landscape Institute, Institute of Environmental Management and Assessment, 2013)[1];
- Siting and Designing Windfarms in the Landscape (Scottish Natural Heritage (SNH), 2017)[2];
- Visual Representation of Wind Farms: Guidance. Version 2.2. (SNH, 2017):[3] and

1.1.3 Assessing the Cumulative Landscape and Visual Impact of Onshore Developments (NatureScot, 2021)[4].

1.2 Scope of Assessment

Study Area

1.2.1 NatureScot guidance (SNH, 2017) suggests that for turbines of over 150 m to blade tip, an initial study area of 45 km radius should be considered, followed by refinement of the Study Area to focus on potential significant effects (see **Figures 4.1 – 4.4, EIAR Volume 3a**). The Study Area was reduced to allow reporting to focus on the extent of likely significant effects, following a desk-top review, fieldwork, and analysis of Zone of Theoretical Visibility (ZTV) mapping. Visual effects were considered for locations across the wider area, but those reported on in detail are within an area of approximately 25 km radius for viewpoints and routes, and approximately 15 km radius for settlements. Effects on landscape character were also considered for a wider area, and the report focusses on those within approximately 15 km radius where significant effects were found to be more likely.

1.2.2 An assessment of effects on visual aspects of residential visual amenity at nearby properties was limited to properties within 2.5 km of the Proposed Development.

1.2.3 Scoped out of the LVIA, on the basis of initial fieldwork and ZTV coverage, are the following elements:

- Effects on landscape character beyond approximately 15 km;
- Effects on views from viewpoints beyond approximately 25 km, although there would be locations where the Proposed Development would be visible at greater distances;
- Effects on views from routes beyond approximately 25 km;
- Effects on views from local paths beyond approximately 5 km;
- Effects on views from settlements beyond approximately 10 km;
- Effects on designated landscapes beyond approximately 25 km;
- Cumulative effects with turbines of less than 50 m to blade tip; and
- Decommissioning effects, which are similar to, but in reverse of construction effects, reducing to nil on completion.

1.2.4 Viewpoint selection was also a form of containing the scope of the assessment, through the selection of representative viewpoints, rather than exhaustive inclusion of locations within the ZTV.

1.3 Baseline Methodology

1.3.1 Desk studies were undertaken to provide information about the baseline landscape and visual resource and to inform field work and the evaluation of effects. For this work, data sources included Ordnance Survey (OS) topographic and geological maps, as well as references specific to landscape character (NatureScot Scottish Landscape Character Assessment, 2019), designated areas (e.g. Local Plans). The LVIA also has cognisance of other, supplementary assessments of landscape character and sensitivity provided in South Lanarkshire Council (SLC) Landscape character assessment[5].

1.3.2 Field survey work was carried out during several visits under differing weather conditions, between September 2023 and June 2024. Records were made in the form of field notes and photographs. Field survey work included visits to viewpoints and designated landscapes, and extensive travel around the wider Study Area to consider potential effects on landscape character and on experiences of views seen from routes.

1.4 Methodology for the Assessment of Effects

Graphics Production

1.4.1 Graphics and visualisations are provided to support the assessment of effects. Visualisations for the assessment viewpoints have been produced in accordance with current good practice guidance from NatureScot (SNH, 2017) and the Landscape Institute (LI, 2019)[6].

Data Used for Modelling

- OS Terrain® 50 height data (DTM) (50m grid spacing, 4m RMSE) for wider landscape modelling;

[1] Landscape Institute., Institute of Environmental Management and Assessment. (2013) *Guidelines for Landscape and Visual Impact Assessment, Third Edition*. London. Routledge.

[2] Scottish Natural Heritage. (2017) *Siting and Designing Wind Farms in the Landscape, Guidance*. Available at: https://www.nature.scot/sites/default/files/2017-11/Siting%20and%20designing%20windfarms%20in%20the%20landscape%20-%20version%203a.pdf [Accessed: 13th May 2024]

[3] Scottish Natural Heritage. (2017) *Visual Representation of Wind Farms*. Available at: https://www.nature.scot/sites/default/files/2019-09/Guidance%20-%20Visual%20representation%20of%20wind%20farms%20-%20Feb%202017.pdf [Accessed: 13th May 2024]

[4] NatureScot (2021) *Assessing the Cumulative Landscape and Visual Impact of Onshore Developments*. Available at: https://www.nature.scot/doc/guidance-assessing-cumulative-landscape-and-visual-impact-onshore-wind-energy-developments [Accessed: 13th May 2024]

[5] Ironside Farrar. (2010) South Lanarkshire Landscape Character Assessment. Available at: https://www.southlanarkshire.gov.uk/downloads/file/4146/landscape_character_assessment_-_final_report_november_2010 [Accessed 13th May 2024]

[6] Landscape Institute (2019) *Technical Guidance Note 06/19. Visual Representation of Development Proposals*. Available at: https://www.landscapeinstitute.org/wp-content/uploads/2019/09/LI_TGN-06-19_Visual_Representation-1.pdf [Accessed: 13th May2024]

- OS Terrain® 5 mid-resolution height data (digital terrain model (DTM)) (5 m grid spacing, 2.5 m RMSE) for detailed modelling where required;
- Ordnance Survey 1:50,000 raster data; and
- Ordnance Survey 1:250,000 raster data.

ZTV Mapping

1.4.2 The OS DTM is used as an input for the production of map based graphics and ZTV mapping. ZTVs use the turbine dimensions (tip height and hub height) and DTM and assume a viewer height of 2 m. The calculation uses a 'bare ground' computer generated terrain model, which does not take account of potential screening by buildings or vegetation.

1.4.3 This is considered to over-emphasise the extent of visibility of the Proposed Development and therefore represents a 'maximum potential visibility' scenario. Separate ZTVs are run from the tip heights and hub heights of the proposed turbines, which can be used to indicate the proportion of the turbines likely to be visible. They take into consideration earth curvature and use a refraction coefficient of 0.13.

1.4.4 The ZTVs of the Proposed Development were calculated to show the number of turbines visible to blade tip height or hub height.

1.4.5 To construct combined ZTVs (CZTVs) to illustrate the combined visibility of the Proposed Development with other wind farms, the ZTV to tip height of each wind farm was generated (based on the tip height of each turbine to a radius in accordance with the current NatureScot guidance, SNH, 2017), and then combined with the Proposed Development ZTV. CZTVs are set up to show the number of wind farms (rather than the number of turbines) visible and are colour-coded to distinguish between areas where the Proposed Development is predicted to be visible (either on its own, or in conjunction with other wind farms), and areas where other wind farms would be visible but the Proposed Development would not be visible. The CZTVs do not necessarily identify which other wind farms would be visible, but paired CZTVs are provided where necessary to analyse the relationships between key wind farms.

1.4.6 The aviation lighting ZTV was modelled as an aggregate of the minimum vertical viewing angle calculated for Turbines 1, 3, 9, 16, 17, 19 and 22, the turbines proposed to be lit. This ZTV therefore shows the minimum vertical viewing angle for these turbines, i.e. the angle closest to the horizontal for the brightest light, which is not necessarily the closest turbine. Whilst the ZTV does not indicate which turbine would be the brightest, it indicates the least amount of downward reduction in intensity.

Viewpoint Photography

1.4.7 The methodology for photography is in accordance with guidance from NatureScot (SNH, 2017) and the LI (LI, 2019). The focal lengths used are in accordance with recommendations contained in guidance, and are stated on the figures. Photography was undertaken by Tom Finnie Photography between September 2023 and June 2024. Photography was taken in optimal visibility conditions wherever possible, though unpredictable weather and short daylight hours in autumn/winter make more distant viewpoints harder to get ideal photographs for.

1.4.8 The location of each viewpoint and information about the conditions was recorded in the field in accordance with the guidance. The camera used for the photography was a Canon EOS R5 Full frame sensor digital SLR with a fixed 50 mm focal length lens (Canon RF 50 mm f1.2 lens).

1.4.9 A tripod with vertical and horizontal spirit levels was used to provide stability and to ensure a level set of adjoining images. The camera was set at 1.5 m from ground level except where noted, and orientated to take photographs in landscape format. A panoramic head was used to ensure the camera rotated about the no-parallax point of the lens in order to eliminate parallax errors between the successive images and enable accurate stitching of the images. The camera was moved through increments of 15° (degrees) and rotated through a full 360° sweep at each viewpoint.

1.4.10 Weather conditions and visibility were considered an important aspect of the field visits for the photography. Where possible, visits were planned around clear days with good visibility. Viewpoint locations were visited at times of day to ensure, as far as possible, that the sun lit the scene from behind, or to one side of the photographer. South facing viewpoints can present problems particularly in winter when the sun is low in the sky. Photographs facing into the sun were avoided where possible to prevent the wind turbines appearing as silhouettes.

Visualisation

1.4.11 Photographic stitching software PTGui© and Adobe Photoshop© was used to stitch together the adjoining frames to create panoramic baseline photography.

1.4.12 The same terrain data used for the production of the ZTVs was also used to generate wire-line drawings, using ReSoft Windfarm software. The DTM includes the Site, viewpoint locations and all landform visible within the baseline photography. Turbine and viewpoint location coordinates were entered. Photomontages have been constructed to show the candidate turbine with the specified tip height, hub height and rotor diameter. Infrastructure elements are also shown where they would be visible.

1.4.13 The stitched photographs were matched to the wirelines using Adobe Photoshop. Wirelines were produced using a viewer height of 1.5 m above the terrain height. The panoramic baseline photographic images were imported into the Adobe Photoshop software and from each viewpoint the wireline views of the landform model with proposed turbines were carefully adjusted to obtain a match. Fixed features on the ground, such as mountain summits, buildings, and roads, were located in the model and used as markers to help with the alignment process where necessary. Each view was rendered taking account of the sunlight conditions and the position of the sun in the sky at the time the photograph was taken. Blade angle and orientation adjustments were also made to represent a realistic situation. Adobe Photoshop© software was used to combine the images and mask out (remove) turbines or sections of turbines which were located behind foreground elements in the original photograph. Location and rendering of infrastructure took a similar process, Adobe Photoshop© software was used to render forest removal areas once aligned with the wireline and photograph.

1.4.14 Finally, where applicable the images were converted from Cylindrical Projection to Planar Projection using PTGui© software.

Dusk photomontages showing aviation lighting

1.4.15 Photography for night-time photomontages to illustrate potential effects of aviation lighting was carried out in the evening. A set of photographs was taken prior to sunset to ensure that the camera was correctly set up, and to allow cross reference between lights caught on dark photographs and buildings caught on day-time photographs. A series of photograph sets were taken over a period of about an hour and a half from sunset to full darkness. This enabled the photographer to take multiple sets as the sky darkened, with varied camera settings. Downloaded sets were then reviewed to select a set that best matched NatureScot advice on having the sky relatively dark and other lights in the landscape on, but the form of the landscape still visible.

1.4.16 Photomontage illustrations prepared for night-time views using photography taken during twilight were produced using the same method as for daylight photomontages, with turbines rendered in black as silhouettes. Images of aviation lights are provided for indicative illustration only and have been modelled on the basis of approximately 200 candela (cd) with attenuation for distance, using information in Technical Appendix 11.1.

Figure Layout

1.4.17 The dimensions for each image (printed height and field of view) are in accordance with NatureScot requirements (SNH, 2017). Photography information and viewing instructions are provided on each page where relevant. Thumbnail maps are provided for location reference. A 5 cm rule is provided on each page to guide viewers when zooming in on electronic copies of the figures.

1.4.18 For each viewpoint, pages include:

- The first A3 height x A1 width format page contains 90° baseline photography and wireline to illustrate the wider landscape, visual and cumulative context. These are shown in cylindrical projection and presented on an A1 width page;
- Additional pages in the same format are provided if necessary to illustrate wider cumulative visibility up to 360°; and
- The subsequent pages contain 53.5° wireline (showing the LVIA baseline) and photomontage of the view towards the Proposed Development. These images are shown in planar projection and presented on an A1 width page.

1.5 Assessment Structure

1.5.1 Consideration of potential effects on landscape and visual amenity are related but distinct components of LVIA. The methodologies used to assess potential landscape, and visual effects are broadly similar, but in order that the differences are clear, the methodologies for assessing significance for landscape and visual effects, and the assessment sections themselves, are set out separately.

1.5.2 The LVIA considers the potential effects of the addition of the Proposed Development to the existing landscape, against a baseline that includes existing wind farms (and those under construction). The cumulative landscape and visual impact assessment (CLVIA), considers the potential changes in effects with the addition of the Proposed Development, relating to a baseline landscape that includes wind farms that may or may not be present in the landscape in the future (e.g. consented schemes developments that have not yet been built, or undetermined applications).

1.5.3 The operational phase elements of the Proposed Development, i.e. turbines, access tracks, battery storage units, solar power generators, substation and other infrastructure, are considered to be long term elements as they would be in situ for the 40 years of the wind farm. They are theoretically reversible upon decommissioning. This is taken to be the case for all effects but is not repeated for each receptor.

1.5.4 Using a precautionary approach, unless otherwise stated, all likely effects identified are considered to be negative or adverse.

1.5.5 The assessment is based on the candidate turbine specification, with an awareness that there may be hub height or rotor diameter changes within the parameters of the application, depending on the turbine model selected at the time of construction.

1.6 Identification of Landscape Effects

1.6.1 Judging the significance of landscape effects requires consideration of the nature of the landscape receptors (sensitivity) and the nature of the effect on those receptors (magnitude of change). GLVIA3 states that the nature of landscape receptors, commonly referred to as their sensitivity, should be assessed in terms of the susceptibility of the receptor to the type of change proposed, and the value attached to the receptor. The nature of the effect on each landscape receptor should be assessed in terms of its size and scale, geographical extent, duration, and reversibility. These aspects are brought together, to form a judgement regarding the overall significance of effect. The following sections set out the methodology used to evaluate landscape effects.

Sensitivity of Landscape Receptors

1.6.2 The sensitivity (or 'nature') of landscape receptors is assessed in terms of the susceptibility of the receptor to the type of change proposed and the value attached to the receptor.

1.6.3 The susceptibility of the landscape relates to *"the ability of the landscape receptor (whether it be the overall character or quality/condition of a particular type or area, or an individual element and/or feature, or a particular aesthetic and perceptual aspect) to accommodate the Development without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies"* (GLVIA3, Page 88).

1.6.4 Criteria that inform judgements of landscape susceptibility to the type of development being proposed include:

- Landscape scale;
- Landform;
- Skylines;
- Pattern and complexity;
- Inter-visibility with adjacent landscapes;
- Settlement and man-made influences; and
- Perceptual influences.

1.6.5 The value of a landscape is recognised as being a key contributing factor to the sensitivity of landscape receptors. Value is informed with reference to:

- A review of designations upon the landscape and the level of policy importance that they signify (such as landscapes designated at international, national, local or community level); and
- Other criteria that indicate value, including landscape quality, scenic quality, rarity, representativeness, conservation interests, recreation value, perceptual aspects, and artistic associations.

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

1.6.7 Judgements of relative sensitivity of different Landscape Character Types (LCTs) to wind farm development also has cognisance of other assessments of landscape character and sensitivity provided in SLC Landscape Character Assessment.

1.6.8 Sensitivity of the receptor is a consideration of susceptibility to change and value, and is described using 'High', 'Medium' and 'Low'. It is based on an evaluation of criteria such as those set out in Table TA4.1.1, using professional judgement to balance several factors that may raise or lower the level of sensitivity. 'High' is assigned to a receptor that meets all or most of the criteria indicating higher sensitivity, or where one or more criteria are considered to be sufficiently important to outweigh other 'lower' criteria. 'Low' is assigned to receptors where criteria fall into the lower part of the scale. 'Medium' is assigned to receptors where criteria are mixed or of intermediate sensitivity.

Table TA4.1.1: Sensitivity of the Receptor: Landscape		
Higher ⟷		**Lower**
Landscape Susceptibility to Change	Contains features vulnerable to change or loss that would in turn alter key landscape characteristics. Complex, rugged, irregular landform with strong topographical features and distinctive skylines. Few modern artefacts present, presence of small scale, historic or vernacular settlement. Remote from visible or audible signs of human activity and development.	Robust landscape, with few or no vulnerable features, and potentially able to accommodate types of change without altering landscape characteristics. Simple, regular landform without strong topographical features, non-prominent or screened skylines. Presence of large-scale structures e.g. utility, infrastructure, or industrial elements. Close to visible or audible signs of human activity and development.
Landscape Value	Relatively rare or 'unique' landscape character type (LCT). Designated landscape with national policy level protection.	Ubiquitous or extensive landscape type. A landscape without formal designation.

Landscape Magnitude of Change

1.6.9 Judgements regarding the magnitude of landscape change consider the size, scale, and geographical extent of the landscape effect, and its duration and reversibility.

1.6.10 For landscape elements/features, the size and scale of change depends on the extent of existing landscape elements that would be lost or changed, the proportion of the total extent that this represents (i.e. rarity) and the contribution of that element to the character of the landscape. For LCTs, the size and scale of change depends on the degree to which the character of the landscape is changed through alteration to the key characteristics of the landscape.

1.6.11 Given that wind farms currently exist in the study area, the scale and size of change also considers the relationship between the Proposed Development and other wind farms in the landscape, including consideration of:

- The arrangement of wind farms in the landscape, e.g. developments that are clustered or dispersed;
- The position of the wind farms in the landscape, e.g. in similar landscape or topographical contexts;
- The distances between wind farms, and their distances from the viewer;
- The relative perceived scales of the wind farms in the landscape; and
- How the Proposed Development fits with the pattern of wind farm development in the baseline, and whether it intensifies the presence of wind farms or fills a gap, leading to a total effect that is greater than the sum of its parts, e.g. creating a 'wind farm landscape'.

1.6.12 The geographical extent of landscape change is the area over which the landscape change being described would occur. Geographical extent is described as being limited to the Site, to the local area, or a wider area, which is defined in each case.

1.6.13 Size/scale, geographical extent, and duration/reversibility (assumed to be long term theoretically reversible for operational effects as explained above) are combined to form a judgement as to the overall magnitude (nature) of the landscape change, recorded as High, Medium, Low or Negligible.

1.6.14 Magnitude of change is described using criteria such as those set out in Table TA4.1.2, using professional judgement to balance several factors that may raise or lower the magnitude judgement. 'High' is assigned to a change that meets the criteria indicating higher changes, or where one or more criteria are considered to be sufficiently important to outweigh other 'lower' criteria. 'Low' or 'Negligible' is assigned to receptors where criteria fall into the lower part of the scale, 'medium' is assigned to receptors where criteria are mixed or of intermediate levels.

Table TA4.1.2: Magnitude of Change to the Landscape		
Criteria tending towards Higher or Lower Magnitude of Change		
	Higher ⟷	**Lower**
Scale	Large changes or extensive loss of key features;	Small changes to key features, little or no loss of features;
Geographical Extent	Large areas affected by change; Changes perceived as close to the receptor.	Limited area affected; Changes perceived as distant from receptor.

Judging the Levels of Landscape Effect and Significance

1.6.15 In judging significance, sensitivity of receptors has to be considered in combination with predicted magnitude of change. As set out above, sensitivity and magnitude are evaluated by considering a range of aspects. Considering all aspects in a multifaceted assessment and assigning more or less weight to individual aspects as appropriate, the overall level of effect is identified. This assessment of the level of effect draws on fieldwork, consultation and guidance provided in GLVIA3. It does not use a matrix or scoring of sensitivity against magnitude of change, an approach which is not supported by GLVIA3.

1.6.16 Four levels of effect are used in this assessment: Major, Moderate, Minor and Negligible. Effects that are significant in the context of EIA regulations include Major and Moderate effects.

1.6.17 Table TA4.1.3 sets out various criteria and descriptions that are used to guide judgments as to the level of effect.

Table TA4.1.3: Levels of Effect: Landscape			
Major ⟷	**Moderate**	**Minor**	**Negligible**
HIGHER LEVEL OF EFFECT Effects on people who may be particularly sensitive to changes in views/ visual amenity, or at recognised viewpoints or from recognised scenic routes. Large scale changes which introduce new, non-characteristic or discordant or intrusive elements into the view. These may be long term/ irreversible effects.		LOWER LEVEL OF EFFECT Effects on people who are generally less sensitive to changes in views/ visual amenity. Small changes or changes which are well integrated into the view, often involving features already present in the view. These may be reversible effects or of short duration.	
Significant		**Not Significant**	
Substantial changes affecting the character of the landscape or the elements therein	Changes affecting the character of the landscape or the elements therein.	Slight changes affecting the character of the landscape or specific elements therein.	No or minimal perceptible changes affecting the character of the landscape or specific elements therein. Note that this includes no impact.

1.7 Identification of Visual Effects

1.7.1 Visual effects are experienced by people at different locations around the study area, at static locations (for example settlements or viewpoints) and transitional locations (such as sequential views from routes). Visual receptors are the people who would be affected by changes in views at these places, and they are usually grouped by what they are doing at these places (for example residents, motorists, recreational users etc.).

Sensitivity of Visual Receptors or View

1.7.2 The sensitivity (or 'nature') of visual receptors is assessed in terms of the susceptibility of the receptor to the type of change proposed and the value attached to the receptor. The susceptibility of visual receptors to changes in views/visual amenity is a function of the occupation or activity of people experiencing the view and the extent to which their attention is focused on views (GLVIA3, page 113). Viewers of higher susceptibility to changes in views are those whose attention or interest is focused on their surroundings, including:

- Communities where views contribute to the landscape setting enjoyed by residents;
- People engaged in outdoor recreation (including users of public rights of way whose interest is likely to be focused on the landscape); and
- Visitors to heritage assets, advertised viewpoints or other attractions where views of the surroundings are an important contributor to experience.

1.7.3 Viewers of lower susceptibility to changes in views include travellers on road, rail, or transport routes (not recognised as scenic routes); people engaged in outdoor sport or recreation which does not involve or depend upon appreciation of views; and people at their place of work whose attention is not on their surroundings.

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

- Planning designations (such as designated landscapes at a local or national level);
- Importance in relation to heritage assets (such as designed views recorded in citations of designated landscapes or views recorded as of importance in Conservation Area Appraisals); and
- Indicators of the value attached to views by visitors, for example through appearances in guidebooks or on tourist maps, provision of facilities for their enjoyment and references to them in literature and art.

1.7.5 The sensitivity of views and visual receptors may involve a complex relationship between a viewer's susceptibility to change and the value attached to a view. The rationale for judgements of sensitivity of visual receptors are set out for each receptor in relation to both susceptibility and value.

1.7.6 Susceptibility and value are combined to form a judgement as the overall sensitivity of the visual receptor, recorded as 'High', 'Medium' and 'Low'. It is based on an evaluation of criteria such as those set out in the Table TA4.1.4, using professional judgement to balance several factors that may raise or lower the level of sensitivity.

1.7.7 'High' is assigned to a receptor that meets all or most of the criteria indicating higher sensitivity, or where one or more criteria are considered to be sufficiently important to outweigh other 'lower' criteria. 'Low' is assigned to receptors where criteria fall into the lower part of the scale. 'Medium' is assigned to receptors where criteria are mixed or of intermediate sensitivity.

Table TA4.1.4: Sensitivity of the Receptor: Visual

Higher ⟷ **Lower**		
Visual Susceptibility to Change	High scenic quality. Unaffected by overt or intrusive man-made elements.	Low scenic quality. View includes overt or intrusive man-made elements.
Visual Value	Residential or tourist viewers. Designated viewpoint advertised on OS maps and in tourist information. Location within an area (nationally) designated for landscape/scenic values.	Working or travelling viewers. Viewpoints not advertised on OS maps or tourist information. Location on quiet, little used road. Location not within an area designated for landscape/scenic values.

Magnitude of Visual Change

1.7.8 Judgements regarding the magnitude of changes to views consider the size and scale, and geographical extent of the visual effect, and its duration and reversibility.

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

- The scale of the change in view with respect to the loss or addition of features in the view and changes in its composition, including the proportion of the view occupied by the Proposed Development;
- The degree of contrast or integration of any new features or changes in the view with the existing elements in the view and their characteristics in terms of form, scale and mass, line, height, colour, texture, and lighting; and
- The nature of the view of the Proposed Development, in terms of the relative amount of time over which it would be experienced along routes and whether views would be full, partial or glimpses.

1.7.10 All changes to views are considered as they would occur in winter conditions, being the maximum case situation with minimal screening by vegetation and deciduous trees. Wirelines and ZTV maps are calculated on the basis of bare ground and therefore also demonstrate the maximum extent of visibility possible, in the absence of buildings or vegetation.

Given that wind farms currently exist in the study area, the scale and size of change also considers the relationship between the Proposed Development and other wind farms in the landscape, including consideration of:

- The arrangement of wind farms in the view, e.g. developments seen in one direction or part of the view (combined views), or seen in different directions (successive views in which the viewer must turn) or developments seen sequentially along a route;
- The relationship between the scale of the wind farms, including turbine size, proportions, and number;
- The position of the wind farms in the view, e.g. on the skyline or against the backdrop of land; and
- The distances between wind farms, and their distances from the viewer, and
- How the Proposed Development fits with the pattern of wind farm development visible.

1.7.11 It should be noted that the assessment considered the differences in turbine sizes between wind farms in terms of their appearance from each assessment location, rather than relying on comparisons in numerical terms.

1.7.12 The geographical extent of visual changes records the extent of the area over which the changes would be visible, e.g. whether this is a unique viewpoint from where the Proposed Development can be glimpsed, or whether it represents a large area from which similar views are gained. Some viewpoints used in the assessment have been selected to represent typical views from wider areas; others have been selected as specific views. The geographical extent of the visual effect is defined in each case.

1.7.13 The duration of changes to views is taken as being short-term and temporary for construction and decommissioning effects and long term and theoretically reversible for operational effects.

1.7.14 Size/scale, geographical extent and duration/reversibility are combined to form a judgement as to the overall magnitude of the visual change, recorded as High, Medium, Low or Negligible. Magnitude of change is described based on an evaluation of criteria such as those set out in Table TA4.1.5, using professional judgement to balance several factors that may raise or lower the magnitude judgement.

1.7.15 'High' is assigned to a change that meets the criteria indicating higher changes, or where one or more criteria are considered to be sufficiently important to outweigh other 'lower' criteria. 'Low' or 'negligible' is assigned to receptors where criteria fall into the lower part of the scale, 'medium' is assigned to receptors where criteria are mixed or of intermediate levels.

Table TA4.1.5: Magnitude of Change to the Visual Resource		
Criteria tending towards Higher or Lower Magnitude of Change		
	High ⟷	**Lower**
Scale	Proposed Development is large in the view. Large proportion of the view affected.	Proposed Development forms a small feature in the view. Small proportion of the view affected.
Geographical Extent	Large areas affected by change; Changes perceived as close to the receptor. Changes viewed over prolonged section(s) of a route.	Limited area affected. Changes perceived as distant from receptor.

Judging the Levels of Visual Effect and Significance

1.7.16 As for landscape effects, visual effects are judged on the combined aspects of susceptibility, value, size and scale, geographical extent, duration, and reversibility. In the same way, four main levels of effect are used, Major, Moderate, Minor and Negligible. Major and moderate effects that are considered to be significant in the context of EIA regulations.

1.7.17 Table TA4.1.6 sets out various criteria and descriptions that are used to guide judgments as to the level of effect.

Table TA4.1.6: Levels of Effect: Visual			
Major	**Moderate**	**Minor**	**Negligible** ⟶
HIGHER LEVEL OF EFFECT Effects on people who may be particularly sensitive to changes in views/ visual amenity, or at recognised viewpoints or from recognised scenic routes. Large scale changes which introduce new, non-characteristic or discordant or intrusive elements into the view. These may be long term/ irreversible effects.		LOWER LEVEL OF EFFECT Effects on people who are generally less sensitive to changes in views/ visual amenity. Small changes or changes which are well integrated into the view, often involving features already present in the view. These may be reversible effects or of short duration.	
Significant		**Not Significant**	
The Proposed Development results in substantial changes in the view and may become a defining influence or key focal point in the view.	The Proposed Development results in clearly visible changes to the view and may form an important but not defining element of the view.	The Proposed Development results in slight changes to the view, and is neither dominant nor prominent, but is visible in the view.	The Proposed Development results in hardly perceptible changes to the view, may go unnoticed as a minor element in the view, or is not visible.

1.8 Assessment of Cumulative Effects

The Aim of the Cumulative Assessment

1.8.1 The methodology for the CLVIA is similar to that of the LVIA as set out above, although it focuses on the role played by the Proposed Development amongst other wind farms.

1.8.2 The key difference between LVIA and CLVIA is that some of the wind farms in the cumulative baseline do not currently exist. The judgements made in the LVIA are made in the context of the landscape, all its features and characteristics, the existing nature, quality, and type of available views etc., that exist at the time of the assessment, and therefore includes all existing wind farms. The way in which the Proposed Development relates to existing wind farms is set out in the LVIA, and the cumulative effect of this 'scenario' forms an element of the LVIA. In this sense the LVIA represents the 'first level' of a cumulative assessment (that which would consider introducing the Proposed Development into the landscape in the context of existing wind farms).

1.8.3 The 'next levels' of the CLVIA include wind farms that may be consented but not yet built and those that may be undetermined applications (including those under appeal). These possible future developments are assumed to be present for the purposes of CLVIA. In the consideration of cumulative effects, particular attention is given to the relationships between wind farms in the cumulative baseline, and how those relationships would change with the addition of the Proposed Development.

1.8.4 The aim of the CLVIA is to "*describe, visually represent and assess the ways in which a proposed windfarm would have additional impacts when considered together with other existing, consented or proposed windfarms*" (NatureScot, 2021). A cumulative assessment considers different cumulative scenarios, in addition to the existing baseline scenario:

- Consented Scenario: the addition of the Proposed Development in the context of operational, under construction and consented wind farms, i.e. a likely future scenario; and
- In-Planning Scenario: the addition of the Proposed Development in the context of operational, under construction, consented, undetermined planning applications and wind farm developments currently at appeal, i.e. a less certain future scenario.

1.8.5 Regarding sites a scoping stage, NatureScot guidance states "*Occasionally it may be appropriate to include proposals in an assessment which are at earlier stages of development (including at scoping), particularly where clusters of development or "hotspots" emerge, or where proposals are adjacent to one another. However, a degree of pragmatism is required to enable proposals to progress to determination, and to cater for proposals which may not yet be in the public domain*" (NatureScot, 2021). Scoping stage sites are therefore considered carefully in terms of whether their inclusion is important for the identification of potential/ significant effects.

The Stages of Assessment

1.8.6 The assessment of effects in the CLVIA includes a range of components or types of effect that must be identified in order to inform the decision maker on what 'contribution is made by' or 'role played by' the Proposed Development in the context of the overall accumulation of wind farms in the study area. Therefore, it considers both additive effects (which might be seen as quantitative effects) and 'overall' or 'in the round' effects (which might be seen as qualitative effects). Logical analysis and reasoning need then to be applied to judge the significance of the effect.

1.8.7 To undertake a CLVIA further information is required to inform the assessment, and further professional judgements would be necessary as part of the assessment. Further information required for the CLVIA includes:

- Preparation and analysis of combined ZTVs that focus on those areas where significant effects are most likely, and those developments with which significant effects are most likely;
- Information setting out the differing baseline scenarios against which judgement are made;
- Analysis of existing and / or emerging patterns of wind farm development in the landscape;
- Information regarding:
  - The directions of view in which the Proposed Development is visible in context of other developments;
  - Proximity of the Proposed Development to viewer and relative to other developments;
  - Composition, setting, scale and size of developments and how the Proposed Development compares with these; and
- Visualisations (wireframes) showing the Proposed Development relative to other developments.

1.8.8 The cumulative wind farms are shown on wireline visualisations, in accordance with NatureScot (SNH, 2017) guidance.

1.8.9 Taking a precautionary approach, the sensitivity of receptors used for the cumulative assessment is taken to be the same as that identified in the LVIA.

Levels of Effect

Additional Effects

1.8.10 The levels of additional cumulative effect are set out as Major, Moderate, Minor or Negligible using the same considerations as the LVIA methodology set out above and taking the level of effect to be the additional change as a result of the Proposed Development to the scenario baseline (as if it were existing).

1.8.11 The levels of effect identified in the cumulative scenarios are compared with the effects identified in the LVIA (the existing scenario), by means of description, which sets out whether the change in baseline means there would be increased or reduced effect created by the Proposed Development in that context.

Combined Effects

1.8.12 Combined or synergistic effects, effects for which the overall change is greater than the sum of the parts, are relevant for cumulative relationships between wind farms where there may be, for example, several discrete wind farms, which together create the sense of a group or band of wind farms across the landscape. These types of effects relate to patterns of development across the landscape and the role that the Proposed Development plays in altering the sense of wind energy development in the surrounding area.

1.8.13 Patterns of development are discussed in the LVIA and the cumulative assessment, and are considered using a series of thresholds or levels to indicate the degree to which the area is characterised by wind energy development, including:

- A landscape with occasional wind farms: wind turbines or wind farms are seen as separate isolated features within the landscape character type, too infrequent and of insufficient significance to be perceived as a characteristic of the area;
- A landscape with wind farms; wind turbines or wind farms are seen as a key characteristic of the landscape, but not of sufficient dominance to be a defining characteristic of the area; and
- A wind farm landscape: wind turbines or wind farms appear as a dominant characteristic of the area.

1.8.14 A significant in-combination cumulative effect would be one in which the introduction of the Proposed Development would cause a change from one level to the next. Not significant effects are those in which the introduction of the Proposed Development may cause an increase in the perceptions of wind farms in the landscape but would not alter the degree to which the area is characterised by wind energy development (using the levels set out above).

1.9 Implications of Effects for Designated Landscapes

1.9.1 The implications for designated landscapes as a result of the Proposed Development are considered against the values, aims and/or special qualities of the designated areas and whether the Proposed Development would compromise the integrity of the designation. This section, necessarily at the end of the chapter, does not draw conclusions about effects on designated areas, to avoid double counting of effects over the same areas of landscape as the landscape assessment, or the same views as the assessment of effects on views and visual amenity. Instead, the section draws out which effects (identified in the assessment sections) would affect the special qualities of the area and the reasons for which it was designated, to conclude on whether the integrity of the designated area would be affected.

1.10 Assessment Limitations

1.10.1 Limitations to the LVIA include a reliance on bare-ground modelling for wireframes and ZTVs used in graphics, which does not take account of potential screening by buildings and vegetation.

1.10.2 The theoretical visibility indicated by the bare-ground models is therefore an over-estimation of visibility. Actual visibility is described for receptors based on fieldwork and is illustrated in photomontages.

1.10.3 Whilst this issue has been identified, it is considered that there is sufficient information to enable an informed decision to be taken in relation to the identification and assessment of likely significant effects on landscape and visual amenity.

1.10.4 It should be noted that illustrations and modelling cannot replace the need for site visits and can only be used to represent what people may see from the viewpoint. Whilst accuracy of modelling is essential, modelling can only be as accurate as the data used and cannot be used to replace field visits. It is noted also that the movement of the turbines may render them more noticeable in the view than static photographs/photomontages can portray.

1.10.5 Limitations to the cumulative assessment include the uncertainty of whether the proposed wind farms would be built in the future. This includes consented schemes developments that may or may not be built. The assessment also relies on currently available data, and it should be noted that the locations and specifications of turbines may change for proposed and consented developments schemes before they are actually built, through redesign and/or micro-siting.

1.10.6 Wirelines have been produced with cumulative developments out to 15 km from the turbine array. Therefore, photographs may include operational or under construction wind farms that are not shown on wirelines.

References

Landscape Institute., Institute of Environmental Management and Assessment. (2013) *Guidelines for Landscape and Visual Impact Assessment, Third Edition*. London. Routledge.

Landscape Institute (2019) *Technical Guidance Note 06/19. Visual Representation of Development Proposals*. Available at: https://www.landscapeinstitute.org/wp-content/uploads/2019/09/LI_TGN-06-19_Visual_Representation-1.pdf [Accessed: 13th May 2024]

NatureScot (2021) *Assessing the Cumulative Landscape and Visual Impact of Onshore Developments.* Available at: https://www.nature.scot/doc/guidance-assessing-cumulative-landscape-and-visual-impact-onshore-wind-energy-developments [Accessed: 13th May 2024]

Scottish Natural Heritage. (2017) *Siting and Designing Wind Farms in the Landscape, Guidance*. Available at: https://www.nature.scot/sites/default/files/2017-11/Siting%20and%20designing%20windfarms%20in%20the%20landscape%20-%20version%203a.pdf [Accessed: 13th May 2024]

Scottish Natural Heritage. (2017) *Visual Representation of Wind Farms.* Available at: https://www.nature.scot/sites/default/files/2019-09/Guidance%20%20%20Visual%20representation%20of%20wind%20farms%20-%20Feb%202017.pdf [Accessed: 13th May 2024]

Technical Appendix 4.2: Landscape Character Assessment

Technical Appendix 4.2: Landscape Character Assessment

1.1 Introduction

1.1.1 This Technical Appendix (TA) of the Environmental Impact Assessment Report (EIAR) identifies and assesses effects on landscape character from the Proposed Development described in **Chapter 2 Development Description (EIAR Volume 2)** within a 15 km study area from the Site.

1.1.2 Landscape character is defined as a distinct, recognisable, and consistent pattern of elements in the landscape that makes one landscape different from another. Landscape Character Types (LCTs) refer to distinct types of landscape that are relatively homogenous in character. They are generic in nature and can occur more than once in different parts of the country but wherever they occur they share broadly similar combinations of geology, soils, climate, flora, and fauna, interact, and perceived alongside cultural and social components of historical and cultural heritage land use, settlement, enclosure, and other human interventions.

1.1.3 NatureScot (2019)[1] database identifies distinct areas as LCTs at 1:50,000 scale comprising geographical areas of combinations of landform, landcover and pattern conveying a sense of place and is the most recent landscape character assessment covering the study area. NatureScot set out the location and context, key characteristics, and landscape character description for each LCT. These LCTs form the basis of the assessment on landscape character and were verified during fieldwork.

1.1.4 The LCT baseline was also informed by the following documents:

- Landscape Character Assessment: Glasgow and Clyde Valley – Landscape Evolution and Influences (NatureScot, 2019)[2];
- South Lanarkshire Landscape Character Assessment (Ironside Farrar, 2010)[3];
- Scottish Natural Heritage (SNH) Review 116 - Glasgow and Clyde Valley landscape character assessment (Land Use Consultants, 1999)[4]; and
- South Lanarkshire Validating Local Landscape Designations (Ironside Farrar, 2010)[5].

1.1.5 Analysis of Zone of Theoretical Visibility (ZTV) mapping established which of the LCTs within 15 km of the Proposed Development would potentially be affected, followed by verification on site and an assessment of each LCT considered.

1.1.6 This Technical Appendix should be read in conjunction with the following:

- **Volume 2: Main Report**;
- **Volume 3a: Figures**;
- **Volume 3b: Visualisations**;
- **Volume 4: Technical Appendices**:
  - TA4.1: Landscape and Visual Impact Assessment Methodology;
  - TA4.2: Landscape Character Assessment;
  - TA4.3: Visual Assessment;
  - TA4.4: Cumulative Assessment;
  - TA4.5: Implications for Designated Landscapes;
  - TA4.6: Aviation Lighting Assessment; and
  - TA4.7: Residential Visual Amenity Assessment.

1.2 Review of Landscape Character Types

1.2.1 The extent of the study area for the landscape assessment was initially set at 45 km in accordance with good practice (SNH, 2017)[6]. A desk-based assessment identified a total of 57 LCTs within 45 km of the Site. These were reviewed in combination with ZTV mapping and fieldwork. This review concluded that potential significant effects on landscape character would likely occur up to an area of 15 km from the Site. Therefore, a study area of 15 km was suggested in the Scoping Report (January 2024).

1.2.2 As the design of the Proposed Development has evolved, landscape character has continued to be reviewed. **Annex 4.2.1** provides further justification for the scoping in or out of each LCT considered on the Design Freeze layout. This is based on analysis of their distance from the Proposed Development, extent of theoretical visibility predicted and fieldwork.

1.2.3 A total of 7 LCTs have been taken forward for detailed assessment as follows:

- LCT 201: Plateau Farmland – Glasgow & Clyde Valley;
- LCT 207: Upland River Valley – Glasgow & Clyde Valley;
- LCT 208: Broad Valley Upland;
- LCT 209: Upland Glen – Glasgow & Clyde Valley;
- LCT 213: Plateau Moorlands – Glasgow & Clyde Valley;
- LCT 217: Southern Uplands – Glasgow & Clyde Valley; and
- LCT 218: Rounded Landmark Hills.

1.3 Effects on the Site and Landscape Fabric

Site

1.3.1 The Site lies within a broad valley occupied by several infrastructure corridors (electricity transmission, transport, and utilities). The vicinity of these infrastructure corridors covers a very large area broadly from high ground to the east of Douglas to the lower ground near Moffat, the core area of which is where the M74 motorway dissects or cuts through the Southern Uplands. As is typical throughout this narrow valley, substantial new additional or upgraded infrastructure has been established over time. Either side of the M74 motorway, the high ground of the Southern Uplands dominates the landscape character.

1.3.2 The Site covers an area of approximately 1,275 ha and is located immediately northwest of Abington and approximately 1.5 km northeast of Crawfordjohn, in South Lanarkshire.

[1] NatureScot. (2019) Scottish Landscape Character Types Map and Descriptions. Available at: https://www.nature.scot/professional-advice/landscape/landscape-character-assessment/scottish-landscape-character-types-map-and-descriptions [Accessed: 27th May 2024]

[2] NatureScot. (2019) *Landscape Character Assessment: Glasgow and Clyde Valley – Landscape Evolution and Influences*. Available from: https://www.nature.scot/doc/landscape-character-assessment-glasgow-and-clyde-valley-landscape-evolution-and-influences (Accessed: 27th May 2024)

[3] Ironside Farrar (2010) *South Lanarkshire Landscape Character Assessment.* Available from: https://www.southlanarkshire.gov.uk/downloads/file/4146/landscape_character_assessmentfinal_report_november_2010 (Accessed: 27th May 2024)

[4] Land Use Consultants. (1999) *NatureScot Review 116 - Glasgow and Clyde Valley landscape character assessment*. Scottish Natural Heritage. Battleby.

[5] Ironside Farrar. (2010) *South Lanarkshire Validating Local Landscape Designations*. Available from: https://www.southlanarkshire.gov.uk/downloads/file/4147/landscape_designations_report_november_2010 (Accessed: 27th May 2024)

[6] Scottish Natural Heritage. (2017) *Visual Representation of Wind Farms, Guidance. Version 2.2*. Available from: https://www.nature.scot/sites/default/files/2019-09/Guidance%20-%20Visual%20representation%20of%20wind%20farms%20-%20Feb%202017.pdf (Accessed: 27th May 2024)

1.3.3 Occupying two distinct land parcels connected by the B7078 road, the largest would include the turbine array and part of the solar PV array. This parcel is defined by a boundary fence line along the north adjacent to Mill Burn, before turning south towards the Knock of Leaven and eastwards along the B7078 road until reaching the Duneaton Water. To the south, the Site boundary follows the Black Burn and is bounded in the west by a post and wire fence. Landcover is predominantly moorland and unimproved grazing but also includes Thirstone Sand and Gravel Quarry.

1.3.1 The second parcel is geographically smaller and is directly north and west of Abington Services on improved and semi-improved farmland, with the solar array located on either side of the M74 motorway and B7078 road. This area is bounded by the Duneaton Water to the north, the A702 road to the east, Craighead Hill to the south and a boundary fence to the west and would be occupied by the solar array.

1.3.2 Landform within the Site is generally undulating rising to Outer Law (362 m Above Ordnance Datum (AOD)) in the north and Knock Leaven in the south (346 m AOD) of the turbine array parcel. Landform within the solar PV array parcel includes the steep-sided northern slopes of Craighead Hill in the south (approximately 370 m AOD within the Site), reducing northwards to approximately 230 m AOD.

1.3.3 The Site forms a transitional landscape that is covered by 5 separate LCTs identified by NatureScot which would all include various elements of the Proposed Development as detailed in Table TA4.2.1.

Table TA4.2.1: Proposed Development

Landscape Character Type	Elements of the Proposed Development Present
LCT 207: Upland River Valley - Glasgow & Clyde Valley	• Approx. 1.0 km access tracks; • Turbine 16 and hardstanding; • 586 solar PV solar modules; and • 2 x invertors.
LCT 208: Broad Valley Upland	• 1 x construction compound; • Approx. 2.4 km new access tracks; • 2,061 solar PV modules; and • 8 x invertors.
LCT 209: Upland Glen – Glasgow & Clyde Valley	• 1 x construction compound; • Approx. 0.5 km access tracks; • 138 solar PV modules; and • 1x invertor.
LCT 213: Plateau Moorland – Glasgow & Clyde Valley	• 2 x construction compounds; • 5 search areas for borrow pits; • Approx 9.1 km access tracks; • Turbines 1 – 15 and 17- 22 with hardstanding's; • 1 x met mast; • 1 x substation; and • 1 x substation.
LCT 217: Southern Uplands – Glasgow & Clyde Valley	• Approx. 0.3 km access tracks; • 255 PV solar array tables; and • 1 x invertor;

Landscape Sensitivity

1.3.4 The majority of the Site is not covered by any national or local level landscape designation indicating a lower landscape value. The southern side of the Site south of the B7078 and east of the B740 roads covering approximately 328 ha is within the Leadhills and Lowther Hills Special Landscape Area (SLA), occupying 1.7 % of the overall SLA. This partially covers LCT 207: Upland River Valley – Glasgow & Clyde Valley and LCT 213: Plateau Moorland – Glasgow & Clyde Valley and represents higher value.

1.3.5 There are also areas of the Site that have landscape features of higher value such as Scheduled Monuments (SM) Thirstone Stone Circle (SM5094), Craighead, platform settlement (SM4485), barrow and Cairn (SM4517), and Black Hill Fort (SM2606) described in **Chapter 5: Cultural Heritage, EIAR Volume 2**.

1.3.6 The Site is representative of where open large-scale moorland merges with farmland and is not considered rare at a national or local level. Overtime, the Site has been drained to allow the grazing of livestock and is predominantly a mixture of unimproved and marshy grassland interspersed with wet modified bog. Interwoven throughout theses are patches and pockets of several other habitat types including broadleaf woodland plantation, wet dwarf shrub heath, blanket bog, flush, bare ground, semi-improved acid grassland and unimproved neutral grassland and an area of conifer plantation.

1.3.7 Thirstone Sand and Gravel Quarry forms a prominent feature within the Site; in particular, the excavated and storage areas contrast with the surrounding moorland landcover. Other notable man-made features include the linear developments of an overhead electricity transmission line, M74 motorway and B7078 road which all contribute to lowering landscape quality.

1.3.8 No conservation, recreation or artistic associations have been identified within the Site and landscape value is considered medium.

1.3.9 The Site is enclosed by a network of post and wire fencing. Further human interaction is evident across the Site and includes the M74 motorway, the B7078 road, drainage, the quarrying of gravel and sand, and farming. The landscape pattern varies in scale from large-scale with limited features in the turbine array parcel, to enclosed farmland of grassland solar array parcel. All these elements combine to lower the susceptibility to wind farm and solar development to low, resulting in an overall **Medium** sensitivity for the Site.

Magnitude of Change

1.3.10 During construction, the Site would become active with the presence of vehicles and construction activities within the footprint of the Proposed Development. Activities would be associated with the construction of tracks, compounds and laydown areas, import of materials, crane works associated with erecting turbines, establishment of the battery storage, substation and solar PV array, and reinstatement works at the end of the construction phase. There would be lights on the Site during construction, and on moving vehicles.

1.3.11 In addition, during construction approximately 32.2 ha of Sitka spruce and mixed conifer forestry planted under the Forestry Grany Scheme would be felled to create a habitat management area set out in **Technical Appendix 6.6 (EIAR Volume 4).**

1.3.12 The construction works would be of short-term duration and reversible in that construction activities would cease, and operational effects would take over. The extent of physical effects of the works within the Site would involve a relatively small geographical proportion of the Site as whole, the larger part of which would be physically unaffected by either construction works or operation. The scale of the components such as wind turbines, solar PV array would change the moorland characteristics of the Site. As part of the Proposed Development, Thirstone Sand and Gravel Quarry would be restored to its previous condition with the proposed substation and Battery Energy Storage System (BESS) being located within the original excavation reducing its visibility. The magnitude of change is judged to be **High**.

1.3.13 During operation, activity on the Site related to the Proposed Development would be less than during the construction phase and associated to the operation and maintenance of the turbine, solar PV arrays, BESS and substation. The magnitude associated with the change from moorland and farmland to a renewable energy generating site with wind turbines, solar panels and supporting ground level infrastructure would be **High**, long-term and reversible.

1.3.14 However, although the change from the Proposed Development would be greater, there would also be some positive changes to the landscape of the Site in relation to the Outline Biodiversity Enhancement Management Plan detailed in **Technical Appendix 6.6 (EIAR Volume 4)**. This would include the following:

- Enhancement to approximately 143.10 ha of existing and degraded peatland habitat and creation of favourable conditions for the re-establishment of peatland vegetation;
- Retention of approximately 3.9 ha of native woodland and replanting of 24.09 ha of native broadleaf trees in the west of the Site where Sitka spruce and other conifer species were felled during construction;
- Creation of 10.44 ha of riparian woodland along the Duneaton Water and Black Burn;
- Creation of approximately 4.37 ha broadleaf woodland around the substation;
- Creation of approximately 3.57 ha of scrub planting and grassland to complement the broadleaf planting around the substation;
- Creation of approximately 108.96 ha of meadow grassland enhancement within the solar PV array area; and
- Creation of 865 m of species rich hedgerows adjacent to the A702 road .

Landscape Significance of Effect

1.3.15 Overall, the predicted effect on the Site is judged to be **significant (Major**) for the duration of the construction period and operational and maintenance phases.

1.4 Operational Effects on Surrounding Landscape Character Types

Scope of Assessment and Reporting

1.4.1 A review of all the LCTs located within 45 km was undertaken (see Annex 4.2.1) which concluded that significant effects on character were likely to occur within 15 km, closer to the Site. It should be noted that the sensitivity of LCTs not hosting the Proposed Development is the sensitivity to development outside the Site rather than within it.

LCT 201: Plateau Farmland – Glasgow & Clyde Valley

1.4.2 This LCT is situated between plateau moorland and settled valleys south of Glasgow and occupies two extensive areas in the northern half of the 45 km study area, one of which also is located within 15 km extending between Lesmahagow and Happendon, approximately 7 km to the northwest of the Site. Viewpoint 1: Devonburn Road and Viewpoint 2: B7078 road (see **Figures 4.14 a-f and 4.15 a-f, EIAR Volume 3b**) represent the view of the Proposed Development from different distances and elevations within this LCT.

1.4.3 NatureScot identifies the key characteristics of Plateau Farmland – Glasgow & Clyde Valley LCT as follows:

- '*Extensive, open, flat or gently undulating landform.*
- *Dominance of pastoral farming, but with some mosses surviving.*
- *Limited and declining tree cover.*
- *Visually prominent settlements and activities such as mineral working.*
- *Rural character of the Plateau Farmland has reduced as tree cover has declined and the visual influence of settlements, transport infrastructure and mineral working has increased.' (NatureScot, 2019*)[7]

Landscape Sensitivity

1.4.4 Within 15 km from the Site, this LCT is partially covered by the Mid Clyde SLA which occupies the northern periphery of the LCT. A very small part of the southeastern periphery is also located within the Leadhills and Lowther Hills SLA. Elsewhere, no national or local level designations cover the LCT within 15 km of the Site, and landscape value is considered medium overall.

1.4.5 This LCT retains a perception of being large in scale and open in nature, with no distinct skylines, and is heavily influenced through farming practices, modern development such as roads and houses, and includes areas of forestry, and several small to medium size wind turbines situated close to the M74 motorway. All these man-made features reduce landscape susceptibility to low for wind and solar development. Overall sensitivity to change for this LCT is **Medium**.

Magnitude of Change

1.4.6 The turbine array ZTV (see **Figure 4.2a, EIAR Volume 3a**) illustrates potential for widespread theoretical visibility for the LCT within 15 km of the Site. This would occur on Broken Cross Muir, farmland surrounding the settlement of Coalburn, and higher ground to the east and west of Lesmahagow. There would be no visibility of the solar array or ground level elements from within this LCT.

1.4.7 The Proposed Development would extend wind farm development southwards partially infilling a gap between Middle Muir / Andershaw Wind Farms and the more distant Clyde Wind Farm and seen within the context of nearby cluster of wind farms including Douglas West and Hagshaw Hill to the southwest of this LCT.

1.4.8 The size and scale of the change would be small because of distance and intervening screening by landform and vegetation which would also reduce the large geographical area predicted to receive theoretical visibility of the Proposed Development. The addition of the Proposed Development would not alter the key characteristics identified by NatureScot.

1.4.9 Changes to character would be associated with visibility of the Proposed Development in a neighbouring LCT and would be long-term and reversible following decommissioning. Magnitude of change would be **Low** during the construction and operational phases of the Proposed Development.

Landscape Significance of Effect

1.4.10 Overall, the effect on the character of the landscape is judged as **not significant (Minor)**.

LCT 207: Upland River Valley – Glasgow & Clyde Valley

1.4.11 Of the four units of this LCT located within the 45 km study area, three would be within 15 km of the Site. The nearest, the Duneaton Water, is partially covered by the Site and forms a broadly curved valley west of Crawfordjohn near to the Southern Uplands.

1.4.12 The other two units are located further to the northwest covering the Douglas Water between 4.0 – 12.1 km and River Nethan between 10.9 – 16.1 km from the Site. Viewpoint 7: Crawfordjohn (see **Figure 4.20 a-e, EIAR Volume 3b**) provides a representation of view from this LCT.

[7] NatureScot. (2019) *SNH National Landscape Character Assessment. Landscape Character Type 201. PLATEAU FARMLAND – GLASGOW & CLYDE VALLEY*. Available from: https://www.nature.scot/sites/default/files/LCA/LCT%20201%20-%20Plateau%20Farmland%20-%20Glasgow%20&%20Clyde%20Valley%20-%20Final%20pdf.pdf (Accessed: 27th May 2024)

1.4.13 NatureScot identifies the key characteristics of Upland River Valley – Glasgow & Clyde Valley LCT as follows:

- '*A series of valleys formed along faultlines through the Plateau Moorlands and paired with valleys to the south and west in Ayrshire.*
- *South-west to north-east orientation of the valleys.*
- *Strong contrast between the wooded and settled character of the valleys and the exposed enclosing uplands.*
- *Transition from the exposed upper reaches to more sheltered lowland areas.*' (NatureScot, 2019)[8]

Landscape Sensitivity

1.4.14 The eastern half of the Duneaton Water unit (including the Site) is within the Leadhills and Lowther Hills SLA. Two thirds of the eastern side of the Douglas Water is designated as the Douglas Valley SLA, and a very limited part of the northern River Nethen unit is located within the Middle Clyde Valley SLA. No other national or local landscape designations cover the three units within 15 km of the Site. Overall, landscape value is considered as high.

1.4.15 All three of the units identified within the 15 km study area are considered to have a high susceptibility to the Proposed Development due to forming a narrow valley between upland and plateau landscapes and is susceptible to large-scale developments. Overall, sensitivity is assessed as **High**.

Magnitude of Change

1.4.16 The turbine array ZTV (see **Figure 4.2a, EIAR Volume 3a**) indicates theoretical visibility would be limited to the upper north facing slopes above the Douglas Water. Extending from Happendon in the east, to Debog in the west. Much of this area is forested reducing the area of actual visibility of the turbine array although it is recognised that during the lifespan of the Proposed Development this forestry is likely to be felled.

1.4.17 Within the Duneaton Water unit of the LCT, theoretical visibility is predicted to be widespread to approximate 13 km, thereafter, becoming more sporadic as intervening screening reduces the visual envelope. Beyond the Site, potential effects would be indirect and associated with views of the turbine array with some limited theoretical visibility of the solar array near the Proposed Development.

1.4.18 The size and scale of the change to the character of the Duneaton Water would be high, covering approximately two thirds including the valley floor extending onto the containing sides. These changes would be short-term during construction, long-term during operation and reversible following decommissioning. The Proposed Development would infill an area to the north between Middle Muir and Andershaw Wind Farms to the north of the LCT, and Clyde Wind Farm further to the east. Magnitude of change for the Duneaton Water unit is judged as **High**.

1.4.19 Theoretical visibility is predicted to be reduced to the south facing slopes of the Douglas Water unit, reducing further in the Nethan Water unit because of intervening landform and vegetation. The size and scale of the change would be low due to distance covering the upper parts of the valley rather than the valley floor, covering a small geographical area. The turbine array would be viewed beyond the LCT occupying an area between Clyde Wind Farm in the east, and Middle Muir and Andershaw Wind Farms in the west. It is not considered that the introduction of the Proposed Development to the landscape would alter the character of the Douglas Water and Nethan Water units. Changes occurring would be short-term during construction, long-term during operation and reversible following decommissioning. Magnitude of change for both the Douglas Water and Nethen Water units of the LCT are judged as **Low**.

Landscape Significance of Effect

1.4.20 The effect on character for the Duneaton Water unit of the LCT is judged as **significant (Major)**. The other two units covering the Douglas Water and Nethan Water are considered to receive a **not significant (Minor)**.

LCT 208: Broad Valley Upland

1.4.21 This LCT covers the Clyde Valley between Douglas, Biggar and Abington and includes the southeastern part of the Site to the north of Abington. Viewpoint 5: Abington Services and Viewpoint 9: A702 near Hartside (see **Figures 4.18 a-e and 4.22 a-f, EIAR Volume 3b**) are representative of the view within this LCT.

1.4.22 NatureScot identifies the key characteristics of the Broad Valley Upland LCT as follows:

- 'Medium to large scale landscape comprising a broad, flat bottomed, basin-like valley enclosed by the rounded hills to the north and the Southern Uplands - Glasgow & Clyde Valley to the south.
- *Distinctive pattern of tree cover comprising shelterbelts on lower hill slopes and lines of mature trees along field boundaries.*
- *Medium to large agricultural field in central areas.*
- *Scattered pattern of rural settlement.*
- *Important navigation route evidenced by Roman camps and a road, which significant modern transport routes follow.*
- *Views predominantly focussed along the valley*.' (NatureScot, 2019)[9]

Landscape Sensitivity

1.4.23 The majority of this LCT is located within the Upper Clyde Valley LCT, the exception being a small area directly to the north of the Site, and the western side of the Douglas Water further to the north, landscape value is considered high.

1.4.24 Landscape susceptibility is also considered to be high for this LCT due to its small-scale elements which make it unsuitable for large-scale development of the turbine array.

1.4.25 Overall, landscape sensitivity is judged as **High**.

Magnitude of Change

1.4.26 The turbine array ZTV (see **Figure 4.2a, EIAR Volume 3a**) shows widespread theoretical visibility to approximately 6 km, thereafter, would be funnelled along the eastern side of the valley, and on the western side of the Douglas Water within 15 km. Actual visibility would be reduced by woodland and individual trees within the LCT.

1.4.27 The size and scale of the change would be large within 6 km from the Site and associated with visibility of the turbine array rather than the solar PV array which due to its low-lying nature would have a smaller visual envelope within the LCT. Beyond 6 km, theoretical visibility is predicted to reduce both in the geographical area affected and number of turbines visible. Changes to character would relate to visibility beyond the LCT of the turbine array, and to a lesser extent the solar PV array within and beyond the LCT. This would be experienced alongside the nearby wind farms of Middle Muir and

[8] NatureScot. (2019) *SNH National Landscape Character Assessment. Landscape Character Type 207. UPLAND RIVER VALLEY – GLASGOW & CLYDE VALLEY*. Available from: https://www.nature.scot/sites/default/files/LCA/LCT%20207%20-%20Upland%20River%20Valley%20-%20Glasgow%20&%20Clyde%20Valley%20-%20Final%20pdf.pdf (Accessed: 27th May 2024)

[9] NatureScot. (2019) *SNH National Landscape Character Assessment. Landscape Character Type 208. BROAD VALLEY UPLAND*. Available from: https://www.nature.scot/sites/default/files/LCA/LCT%20208%20-%20Broad%20Valley%20Upland%20-%20Final%20pdf.pdf (Accessed: 27th May 2024)

Andershaw further to the west, and Clyde to the south, as well as the M74 motorway and several roads which pass through the valley. The overall character of the LCT would be retained of a broad valley influenced by nearby wind turbines and linear infrastructure. Changes experienced would be indirect, short-term during the construction phase, long-term during operation, and reversible following decommissioning. Magnitude of change would be **Medium** within 6 km of the Proposed Development, thereafter, reducing with distance to **Low** and **Negligible** levels.

Landscape Significance of Effect

1.4.28 Overall, the effect on the character of the landscape is judged as **significant (Moderate)** within 6 km, thereafter, reducing to **not significant levels (Minor and Negligible).**

LCT 209: Upland Glen – Glasgow & Clyde Valley

1.4.29 This LCT occupies two units within 15 km of the Proposed Development, the nearest comprising the River Clyde is partially within the Site, and the Culter Water is located approximately 7.3 km to the east.

1.4.30 NatureScot identifies the key characteristics of Upland Glen – Glasgow & Clyde Valley LCT as follows:

- '*Glacially enlarged, smoothly contoured, U-shaped valleys cutting into the upland mass of the Southern Upland.*
- *Transition from moorland vegetation on upper slopes, through rough grassland and pastures on valley floor.*
- *Topography creates distinctive scenic vistas.*
- *Limited amounts of broadleaf woodland which tends to be concentrated along the course of rivers, on steeper sheltered slopes and in gullies and side glens.*
- *Important corridors for communication and settlement.*
- *Scattering of the remains of later prehistoric settlement and pre-improvement agriculture along the valley sides.*
- *Significant cumulative impacts of transport infrastructure in the glen of the River Clyde, with large scale wind farm development on the surrounding Southern Upland hills.*
- *Small scale, domesticated character of glen floors, despite dominant transport infrastructure, which contrasts with the enclosing uplands*.' (NatureScot, 2019)[10]

Landscape Sensitivity

1.4.31 The tributaries of the River Clyde unit covering the Glengonnar Water, Daer Water and Potrail Water are located within the Leadhills and Lowther Hills SLA, no other national or local landscape designation covers the River Clyde unit. The Culter Water unit of the LCT is located within the Upper Clyde and Tinto SLA. Landscape value is assessed as high for the upper parts of the River Clyde unit, and medium elsewhere, and high for the Culter Water unit.

1.4.32 Landscape susceptibility for both units of the LCT is assessed as high for the turbine array due to the LCT forming a narrow valley that is susceptible to large-scale features.

1.4.33 Landscape sensitivity is judged as **Medium** for the River Clyde unit of the LCT, although it is acknowledged that there are areas of higher sensitivity in the tributaries, and **High** for the Culter Fell unit.

Magnitude of Change

1.4.34 The turbine array ZTV (see **Figure 4.2a, EIAR Volume 3a**) predicts limited theoretical visibility to the north and east of Abington, thereafter, reducing to the north facing slopes west of Crawford, Great Hill in the Camps Water tributary, Lodge Hill southeast of Crawford, and Black Hill to the southwest. The number of turbines viewed from the valley sides would be dependent on elevation and tree cover.

1.4.35 The size and scale of the change within 5 km of the River Clyde unit would be large although this is not predicted to be from the entire unit due to landform screening but would be limited to the west facing slopes and part of the valley floor, covering a small geographical area of the whole LCT. From these locations the overriding character of the unit would not change although the proposed turbines would form feature within the adjacent LCT contrasting with the small-scale features of the unit. As distance increase, the winding nature of the valley would limit the extent of the turbine array visibility within the River Clyde unit.

1.4.36 Similarly, due to landform screening, there would be a limited extent of theoretical visibility predicted in the Culter Water unit being confined to the upper parts of the valley and would not alter the character of the unit.

1.4.37 Changes to the landscape would be short-term during construction, long-term during operation, and reversible on completion of decommissioning. Magnitude of change is assessed as **Medium** within 5 km of the Site, thereafter, reducing to **Low** and **Negligible** levels with distance.

Landscape Significance of Effect

1.4.38 Overall, the effect on the character of the landscape is judged as **significant (Moderate)** within 5 km of the Site, thereafter, reducing to **not significant levels (Minor and Negligible)**.

LCT 213: Plateau Moorlands – Glasgow & Clyde Valley

1.4.39 Most of the Site is located within this LCT which forms a large area of moorland between the south side of Glasgow and Abington. Viewpoint 3: M74 Southbound, B7078 near Parkhead, and Viewpoint 12: Cairn Table (see **Figures 4.16 a-e and 4.25 a-f, EIAR Volume 3b**) are representative of the landscape in this LCT.

1.4.40 NatureScot identifies the key characteristics of Plateau Moorlands – Glasgow & Clyde Valley LCT as follows:

- '*Large scale landform*
- *Undulating hills and sloping ridges in the western areas; a more even plateau landform in the east.*
- *Distinctive upland character created by the combination of elevation, exposure, smooth plateau landform, moorland vegetation.*
- *Predominant lack of modern development.*
- *Extensive wind turbine development, including one of the largest wind farms in Scotland, Black Law.*
- *Sense of apparent naturalness and remoteness which contrasts with the farmed and settled lowlands, although this has been reduced in places by wind energy development*.' (NatureScot, 2019)[11]

[10] NatureScot (2019) *SNH National Landscape Character Assessment. Landscape Character Type 209. UPLAND GLEN – GLASGOW & CLYDE VALLEY*. Available at: https://www.nature.scot/sites/default/files/LCA/LCT%20209%20-%20Upland%20Glen%20-%20Glasgow%20&%20Clyde%20Valley%20-%20Final%20pdf.pdf (Accessed: 27th May 2024)

[11] NatureScot. (2019) *SNH National Landscape Character Assessment. Landscape Character Type 213. PLATEAU MOORLANDS – GLASGOW & CLYDE VALLEY*. Available at: https://www.nature.scot/sites/default/files/LCA/LCT%20213%20-%20Plateau%20Moorlands%20-%20Glasgow%20&%20Clyde%20Valley%20-%20Final%20pdf.pdf (Accessed 27th May 2024)

Landscape Sensitivity

1.4.41 The periphery of this LCT is designated at a local level in three separate locations and includes the Douglas Valley SLA to the north, Upper Clyde Valley and Tinto SLA to the northeast, and the Leadhills and Lowther Hills SLA to the south. For the majority of the LCT, no national or local designations are identified, and landscape value is assessed as medium.

1.4.42 This LCT is large in scale, open and includes a variety of man-made features including Middle Muir and Andershaw Wind Farms 1.4 km, and Kennoxhead Phase 1 Wind Farm 10.7 km to the west of the Site which lowers susceptibility to wind turbine development to low.

1.4.43 Overall sensitivity to change is assessed as **Medium**.

Magnitude of Change

1.4.44 The turbine array ZTV (see **Figure 4.2a, EIAR Volume 3a**) indicates widespread theoretical visibility within 4.5 km of the Site, reducing thereafter to elevated areas only, and there would be limited screening by trees or buildings. The size and scale of the change would be large within 4.5 km due to proximity where the turbines would be experienced in a large open landscape alongside the nearby Middle Muir and Andershaw turbines and consistent in pattern. Changes in character would relate to the introduction of large-scale vertical elements into a moorland setting although the landscape would continue to be recognised as moorland with occasional wind farms situated on its southern periphery. Changes to character would be short-term during construction, long-term during operation, and reversible following decommissioning. Magnitude of change is **High** within 4.5 km, reducing to **Low** levels elsewhere in the LCT due to a combination of distance, presence of other wind farm developments.

Landscape Significance of Effect

1.4.45 Overall, the effect is judged as significant (Major) within 4.5 km, reducing to not significant levels (Minor and Negligible).

LCT 217: Southern Uplands – Glasgow & Clyde Valley

1.4.46 This LCT is located to the south of the Southern Upland Fault Line encompassing the Lowther Hills and Southern Uplands. The southern side of the Site is partially located within this LCT. The following viewpoints are representative of the views within this LCT:

- Viewpoint 6: Castle Hills (**Figures 4.19a-f, EIAR Volume 3b**);
- Viewpoint 8: B740 Spango (**Figures 4.21a-f, EIAR Volume 3b**);
- Viewpoint 13: Lowther Hill (**Figures 4.26a-f, EIAR Volume 3b**); and
- Viewpoint 14: Culter Fell (**Figures 4.27a-f, EIAR Volume 3b**).

1.4.47 NatureScot identifies the key characteristics of Southern Uplands – Glasgow & Clyde Valley LCT as follows:

- '*Extensive, large-scale upland landscape with strong but smooth relief.*
- *Glacial carved and smoothed landforms, including u-shaped valleys, hanging valleys and corries.*
- *Extensive mosaics of heath, with a transition to rough grazing on lower tops or slopes.*
- *Prominent isolated conifer forests and old stands of Scots pine.*
- *Largely undeveloped, except for occasional upland farms, shielings and Clyde wind farm.*
- *Important travel and transmission lines pass through the area are the A74, west coast mainline railway and Scotland-England interconnector pylon line*
- *Significant archaeological sites, particularly from the Bronze and Iron Age periods.*
- *Prominent hill ranges in views from many areas.*
- *Wide ranging panoramic views from the hill summits.*' (NatureScot, 2019)[12]

Landscape Sensitivity

1.4.48 This LCT is partially designated as the Upper Clyde and Tinto SLA in the northeast, and Leadhills and Lowther Hills SLA in the southwest. The remaining part of the LCT is not designated at a national or local landscape level. Landscape value is medium overall with parts of the periphery of the LCT displaying higher value.

1.4.49 This LCT is large in scale, open and includes a variety of man-made features including Clyde Wind Farm and has been identified as having some capacity for wind farm development which lowers landscape susceptibility to low.

1.4.50 Overall sensitivity to change is assessed as **Low**.

Magnitude of Change

1.4.51 The turbine array ZTV (see **Figure 4.2a, EIAR Volume 3a**) indicates theoretical visibility of the Proposed Development to the northeast, east and west of Abington within 5 km, thereafter, reducing to summits, north facing slopes and interconnecting ridgelines as distance increases. The extent of actual visibility would reduce further as a result of intervening forestry although it is acknowledged that some of these areas would be clear-felled during the lifespan of the Proposed Development. Clyde wind farm and extension is a prominent feature in this LCT and the turbine array would be experienced within this context.

1.4.52 Potential effects on character would mainly be associated with the turbine array which would have greatest visibility within the LCT. The solar PV array would be much more screened by adjacent hillsides and have a smaller visual envelope. The size and scale of the change would be medium on account of the large-scale and openness of the landscape and presence of other wind turbines both within the LCT (Clyde + Extension) and in neighbouring LCTs, combined with screening by landform. Changes occurring would be limited in comparison to the overall size of the LCT, affecting areas where wind farms are already a feature in views both within and beyond the LCT. Changes in character would be short-term during the construction phase, long-term during operation and reversible following decommissioning. Magnitude of change is judged as **Low**.

Landscape Significance of Effect

1.4.53 Overall, the effect on the character of the landscape is judged as **not significant (Minor)** reducing to **not significant levels (Minor and Negligible)** as distance increases.

LCT 218: Rounded Landmark Hills

1.4.54 This LCT forms a distinct feature of rounded high hills that sits separate from the Southern Uplands, north of the Southern Upland Fault and Clyde Valley between 2.8 – 11.5 km to the northeast of the Site.

[12] NatureScot. (2019) *SNH National Landscape Character Assessment. Landscape Character Type 217. SOUTHERN UPLANDS – GLASGOW & CLYDE VALLEY*. Available at: https://www.nature.scot/sites/default/files/LCA/LCT%20217%20-%20Southern%20Uplands%20-%20Glasgow%20&%20Clyde%20Valley%20-%20Final%20pdf.pdf (Accessed: 27th May 2024)

1.4.55 NatureScot identifies the key characteristics of Rounded Landmark Hills LCT as follows:

- *'High, rounded hills with a distinctive landform.*
- *Glacially carved and smoothed landforms including shallow meltwater channels.*
- *Highly prominent in views from many areas: Tinto is particularly striking as a landmark for the whole region.*
- *Mosaic of important habitat types including dry heather moorland, heath and rough grazing*
- *Woodland in blocks and shelterbelts on the lower slopes.*
- *Undeveloped, except for occasional steadings and houses on lower ground.*
- *Popular recreational area.*
- *Wide-ranging panoramic views from the summits and higher ground.'* (NatureScot, 2019)[13]

Landscape Sensitivity

1.4.56 The majority of this LCT is designated at a local level as the Upper Clyde Valley and Tinto SLA and landscape value is assessed as high.

1.4.57 Landscape susceptibility is also judged to be high as the prominent rounded hills separated from the Southern Uplands are assessed as being sensitive to large-scale development.

1.4.58 Overall, landscape sensitivity to change is assessed as **High**.

Magnitude of Change

1.4.59 The turbine array ZTV (see **Figure 4.2a, EIAR Volume 3a**) indicates theoretical visibility would occur from the summits and southwest facing slopes of Dungavel Hill 510 m AOD, and a continuous area including the southwest facing slopes Lochlyoch Hill 529 m AOD, Tinto 711 m AOD, and Scaut 586 m AOD.

1.4.60 The Proposed Development would occupy an area between Clyde Wind Farm in the east, and Middle Muir and Andershaw Wind Farms in the west. The size and scale of the change would be medium on account of the distance from the Site, elevation of view and indirect nature of the change predicted. The geographical coverage would be limited to south facing slopes and the summits of hills, from the southern part of the LCT between 2.8 and 8.4 km. Changes to characteristics would be limited to the panoramic views from summits and higher ground. The addition of the Proposed Development would be seen in these views in the existing context of operational wind farms and at a similar distance. The addition of the Proposed Development to the landscape would have limited effect on the scale of Tinto when viewed from the surrounding landscape due to distance. Changes to character would be short-term during construction, long-term during operation and reversible following decommissioning. Magnitude of change is judged as **Low**.

Landscape Significance of Effect

1.4.61 Overall, the effect on the character of the landscape is judged as **not significant (Minor)** within 2.8 – 8.4 km, thereafter, reducing to **not significant (Negligible)** levels.

1.5 Summary of Landscape Effects

1.5.1 The findings of the above assessments of landscape effect on landscape character are set out in Table 4.2.2:

TA4.2.2: Summary of Landscape Effects

Landscape Character Type	Potential Effect
Site	**Significant (Major)**
LCT 201: Plateau Farmland – Glasgow & Clyde Valley	**Not significant (Minor)**
LCT 207: Upland River Valley – Glasgow & Clyde Valley	**Significant (Major)** within the Duneaton Water unit of the LCT. **Not significant (Minor)** within the Douglas Water and Nethan Water units of the LCT.
LCT 208: Broad Valley Upland	**Significant (Moderate)** within 6 km, thereafter, reducing to **not significant levels (Minor and Negligible)** within the LCT.
LCT 209: Upland Glen – Glasgow & Clyde Valley	**Significant (Moderate)** within 5 km of the Site, thereafter, reducing to **not significant levels (Minor and Negligible**) within the LCT.
LCT 213: Plateau Moorland – Glasgow & Clyde Valley	**Significant (Major)** within 4.5 km, reducing to **not significant levels (Minor and Negligible)** elsewhere within the LCT.
LCT 217: Southern Uplands – Glasgow & Clyde Valley	**Not significant (Minor)** within 5 km, reducing to **not significant (Negligible)** levels elsewhere within the LCT.
LCT 218: Rounded Landmark Hills	**Not significant (Minor)** reducing to **not significant (Negligible)** thereafter.

[13] NatureScot. (2019) *SNH National Landscape Character Assessment. Landscape Character Type 218. ROUNDED LANDMARK HILLS*. Available at: https://www.nature.scot/sites/default/files/LCA/LCT%20218%20-%20Rounded%20Landmark%20Hills%20-%20Final%20pdf.pdf (Accessed: 27th May 2024)

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Annex 4.2.1: Landscape Character Type Review

TA4.2.1: Review of Landscape Character Types Within 45 km Study Area		
Landscape Character Type	**Theoretical Visibility Predicted**	**Included in LVIA**
LCT 66: Agricultural Lowlands - Ayrshire	Located between 28.2 – 45 km to the west of the Site, three separate units of this LCT cover agricultural land to the north and south of the Rivers Ayr and Irvine. No theoretical visibility predicted.	No
LCT 68: Lowland River Valleys - Ayrshire	Two units of this LCT are located within the 45 km study area covering the River Ayr and Lugar Water in the west, and the River Irvine and Cessnock Water to the northwest between 27.7 - 45 km from the Site. No theoretical visibility is predicted in both units.	No
LCT 69: Upland River Valleys - Ayrshire	Five units of this LCT covering the River Irvine, River Ayr, Bellow Water / Glenmuir Water, River Nith and River Doon are located between 11.1 – 45 km from the Site. Theoretical visibility of the Proposed Development of 1-22 turbines depending on elevation is predicted in the River Ayr unit on the northern side of the river between Glenbuck and Muirkirk. The area affected comprises farmland and opencast workings on the mid to lower slopes, and moorland on upper slopes.	No, due to the limited theoretical visibility predicted within the River Ayr unit, and none elsewhere in the other units. Where theoretically visible is predicted in the River Ayr unit, it is not considered that the addition of the Proposed Development would significantly alter the key characteristics of the valley but would form a distant feature in the wider landscape beyond nearby operational wind farms.
LCT 73: Upland Glen - Ayrshire	This LCT is located between 29.5 – 34.7 km to the southwest of the Site. No theoretical visibility predicted.	No
LCT 74: Upland Basin - Ayrshire	This LCT is located between 27.2 – 36.5 km to the southwest of the Site. No theoretical visibility predicted.	No
LCT 75: Lowland Hills - Ayrshire	Located between 42.3 – 45 km to the west of the Site. No theoretical visibility is predicted.	No
LCT 76: Foothills - Ayrshire	Located between 31.9 – 45 km to the southwest of the Site, two units of the LCT are within the 45 km study area. Theoretical visibility is predicted to be limited to 1- 5 turbines from the summits of Headmark Moss, Benquhat Hill, and Benbeoch.	No, due to the limited number of turbines and theoretical visibility predicted combined with distance resulting in no significant effect on the key characteristics of the LCT.
LCT 78: Plateau Moorland - Ayrshire	Two units of this LCT are located within the 45 km study area covering north and south of the River Ayr between 11.0 – 37.1 km to the west of the Proposed Development. Theoretical visibility is predicted to be very limited in each unit of the LCT occurring on the summits and east facing upper slopes covering moorland and forestry.	No, due to the limited theoretical visibility where the Proposed Development would be seen beyond nearby operational wind farms in the adjacent LCTs which form a more prominent feature within the landscape. There is no potential for significant effects on the key characteristics of the LCT.
LCT 79: Plateau Moorland with Windfarms - Ayrshire	Situated between 25.1 – 45 km to the northwest of the Site. Theoretical visibility is predicted between 27.4 – 36.0 km in an area covered by forestry and within the existing Whitlee Wind Farm site.	No, due to a combination of distance, screening by forestry, and the limited extent of theoretical visibility predicted There is no potential for significant effects on the key characteristics of the LCT.
LCT 81: Southern Uplands - Ayrshire	Two units of this LCT are located 25.2 – 36.6 km to the southwest of the Site. The nearest unit east of the Afton Water includes Hare Hill Wind Farm. Theoretical visibility is predicted in both units of the LCT of 1-22 turbines north and south of Hare Hill, reducing in geographical area and number of turbines further west.	No, due to distance and no potential for significant effects on the key characteristics of the LCT.
LCT 82: Southern Uplands with Forest - Ayrshire	This LCT is located between 31.2 – 45 km to the southwest of the Site. Limited theoretical visibility is predicted around 35 km from moorland covering a limited geographical area.	No, due to distance from the Proposed Development resulting in no significant effects to the key characteristics of the LCT.
LCT 90: Dissected Plateau Moorland	This LCT is located between 29.3 - 45 km to the northeast comprising two units covering the Pentland and Moorfoot Hills. Theoretical visibility is predicted in the Pentland Hills unit around the periphery of 1-5 turbines. Within the Moorfoot Hill unit theoretical visibility would mainly occur on higher ground covered by forestry, the exception being Jeffries, Dundreich, Cardon Law and Black Knowe where moorland is the predominant land cover.	No, due to the limited theoretical visibility predicted combined with distance resulting in no significant effects on the key characteristics of the LCT.
LCT 92: Plateau Outliers	Two units of this LCT are located between 21.0 – 39.5 km to the northeast of the Site covering the Broughton Heights. Theoretical visibility is predicted from the southwest facing slopes of the Broughton Heights and to the north of the Cloich Hills.	No, due to distance from the Proposed Development resulting in no significant effects to the key characteristics.
LCT 93: Southern Uplands with Scattered Forest - Borders	Two units of this LCT are located within the 45 km study area between 29.3 – 45 km to the east of the Site. No theoretical visibility predicted.	No
LCT 95: Southern Uplands - Borders	This LCT covers a large area to the east of the Site between 11.6 – 34.2 km. Theoretical visibility is predicted to be very limited to summits and the upper west facing slopes beyond 20 km with a small area of visibility around 15 km at Cardon Hill	No, due to distance and the limited extent of theoretical visibility predicted resulting in no significant effects on the key characteristics of the LCT.
LCT 96: Southern Uplands with Forest - Borders	This LCT is located 27.7 – 45 km to the southeast of the Site. No theoretical visibility is predicted of the Proposed Development.	No

TA4.2.1: Review of Landscape Character Types Within 45 km Study Area		
Landscape Character Type	**Theoretical Visibility Predicted**	**Included in LVIA**
LCT 99: Rolling Farmland - Borders	This LCT is located between 28.3 – 45 km to the northeast of the Site. Theoretical visibility of 1-11 turbines is predicted covering farmland and forestry.	No, due to distance from the Proposed Development resulting in no significant effects to the key characteristics of the LCT.
LCT 102: Upland Fringe with Prominent Hills	This LCT is located between 17.9 – 30.4 km to the northeast of the Site. Theoretical visibility is predicted to be widespread in the western half of the LCT of 1-22 turbines.	No, due to distance from the Proposed Development resulting in no significant effects to the key characteristics of the LCT.
LCT 113: Upland Valley with Pastoral Floor	Five units of this LCT are located to the east of the Site between 13.9 – 45 km. One unit covering the River Tweed is predicted to receive limited theoretical visibility of 1-11 turbines between Biggar and Hartree Hill.	No, due to distance and limited theoretical visibility predicted resulting in no significant effects to the key characteristics of the LCT.
LCT 114: Pastoral Upland Valley	Situated between 33.5 – 40.4 km to the northeast of the Site. No theoretical visibility is predicted of the Proposed Development.	No
LCT 116: Upland Valley with Woodland	This LCT is located between 20.4 - 45 km to the northeast of the Site. Theoretical visibility is predicted of 1-6 turbines from a limited geographical area on Quarry Hill at Stobo Castle, an area planted in forestry.	No, due to distance and limited theoretical visibility predicted occurring on an area of forestry and would not significantly alter the key characteristics of the LCT.
LCT 151: Lowland Plateaux - Central	Located 40.2 km to the north of the Site. No theoretical visibility is predicted.	No, due to distance and very limited theoretical visibility predicted of a few turbines.
LCT 152: Lowland River Valleys - Central	A small part of the River Avon unit of this LCT is located within the 45 km study area 44.0 km to the north. Theoretical visibility of 1-5 turbines is predicted south of Limerigg.	No, due to distance and limited theoretical visibility predicted.
LCT 160: Narrow Wooded River Valleys – Dumfries & Galloway	Two units of this LCT are located to the southeast and southwest of the Site between 33.4 - 37.6 km covering the Water of Ken and the Garvald Water and White Esk. No theoretical visibility is predicted of the Proposed Development in both units of the LCT.	No
LCT 161: Pastoral Valley – Dumfries & Galloway	Two units of this LCT are located within the 45 km study area covering the Cairn Water and Dryfe Water between 35.4 km – 45 km to the southeast and southwest. No theoretical visibility is predicted of the Proposed Development in either unit of the LCT.	No
LCT 162: Lower Dale – Dumfries & Galloway	Located in two separate locations 41.7 – 45 km to the southeast of the Proposed Development. No theoretical visibility is predicted.	No
LCT 163: Middle Dale – Dumfries & Galloway	This LCT covers both Annadale and Nithsdale 25.6 – 45 km to the south and southeast of the Site. No theoretical visibility is predicted within both units of this LCT.	No
LCT 165: Upper Dale – Dumfries & Galloway	Two units of this LCT are located between 14.6 – 45 km to the southwest of the Site covering Nithsdale and Glen Kens. No theoretical visibility is predicted within both units of this LCT.	No
LCT 166: Upland Glens – Dumfries & Galloway	Seven units of this LCT are located within the 45 km study area between 13.3 – 42.0 km to the southeast and southwest. Theoretical visibility of the Proposed Development would be very limited and confined to the mid-slopes of East Mount Lowther in the Mennock unit.	No, due to distance and the very limited extent of theoretical visibility predicted.
LCT 172: Upland Fringe – Dumfries & Galloway	Five units of this LCT are located within 23.1 – 45 km to the south and southeast of the Site. No theoretical visibility predicted.	No
LCT 175: Foothills – Dumfries & Galloway	Six units are located within the 45 km study area 21.4 – 45 km to the southeast and southwest of the Site. Limited theoretical visibility of 1-22 turbines is predicted from a small geographical area south of Cormunnoch Hill, north of Moniaive.	No, due to the limited extent of geographical coverage and distance from the Proposed Development.
LCT 176: Foothills with Forest – Dumfries & Galloway	Situated in three separate locations within the 45 km study area 17.7 – 45 km to the southeast and sout west of the Site. No theoretical visibility is predicted.	No
LCT 177: Southern Uplands – Dumfries & Galloway	Seven units of this LCT are located within the 45 km study area to the south, southeast and southwest between 8.7 – 45 km from the Site. Theoretical visibility is predicted in six of the units from summits and upper hill slopes facing north but limited in geographical extent. The closes unit to the Proposed Development to the northwest and southeast of Wanlockhead includes sections of the Southern Upland Way, although theoretical visibility of the Proposed Development would occur from the surrounding summits rather than from the long-distance footpath, and theoretical visibility would be further reduced by forestry.	No, due to the limited extent of theoretical visibility predicted, combined with screening by forestry. The Proposed Development would be seen beyond foreground LCT, and it is not considered that the Proposed Development would significantly alter the key characteristics of the LCT.
LCT 178: Southern Uplands with Forest – Dumfries & Galloway	Four units of this LCT are located between 8.5 – 45 km to the southeast and southwest of the Site. All four are predicted to receive some theoretical visibility of the Proposed Development. The closest unit 8.5 – 23.2 km to the north of Kirkconnel is more characteristic of the adjacent LCT 177: Southern Uplands – Dumfries & Galloway covering Wanlockhead due to the limited extent of forestry. Elsewhere, the presence of forestry would reduce visibility of the Proposed Development.	No, due to the limited extent of theoretical visibility predicted, combined with screening by forestry. The Proposed Development would be seen beyond foreground LCT, and it is not considered that the Proposed Development would significantly alter the key characteristics of the LCT.

TA4.2.1: Review of Landscape Character Types Within 45 km Study Area		
Landscape Character Type	**Theoretical Visibility Predicted**	**Included in LVIA**
LCT 200: Rolling Farmland – Glasgow & Clyde Valley	This LCT is located 11.5 km to the northeast of the Site. Theoretical visibility is predicted to be widespread within the LCT. Fieldwork undertaken established that actual visibility of the Proposed Development from within this LCT would be reduced on account of woodland and hedgerows as well as the built form of Lanark.	No, due to the screening effects of vegetation which would reduce the potential for significant effects to occur to the key characteristics of the LCT.
LCT 201: Plateau Farmland - Glasgow & Clyde Valley	Located between 7.0 – 45 km to the northwest of the Proposed Development, extensive theoretical visibility of this LCT is predicted.	Yes, due to proximity to the Proposed Development and extent of theoretical visibility predicted.
LCT 203: Urban Fringe Farmland	Eight units of this LCT are located around Motherwell, Airdrie, and Coatbridge between 29.1 – 45 km to the northwest. Theoretical visibility is predicted in all eight; however, actual visibility would be limited by the surrounding built form.	No, due to distance from the Proposed Development and screening from the built form of urban development.
LCT 204: Incised River Valleys	This LCT is characteristic of the River Clyde, River Nethan, Avon Water, South Calder Water, and the North Calder Water 11.8 – 40.9 km to the north and northwest of the Site. Theoretical visibility is predicted on the more elevated valley sides covering a limited geographical area. Fieldwork confirmed that intervening screening from woodland and the built environment would reduce actual visibility.	No, due to the limited theoretical visibility predicted and effects from intervening screening.
LCT 206: Broad Urban Valley	Located in two locations 30.6 – 41.5 km to the northwest of the Site. The ZTV predicts theoretical visibility in both units of the LCT to the west of Motherwell and Broomhouse, but actual visibility would be screened by the surrounding built form.	No, due to a combination of distance, limited theoretical visibility predicted and screening by intervening landscape features.
LCT 207: Upland River Valley – Glasgow & Clyde Valley	Four units of this LCT are located within the 45 km study area, one of which, the Duneaton Water partially covers the Site potentially resulting in direct and indirect effects on the character of the LCT	Yes, due to the Proposed Development being located within the Duneaton Water unit and proximity.
LCT 208: Broad Valley Upland	One unit of this LCT is located within the 45 km study area and partially covers the Site potentially resulting in direct and indirect effects on the character of the LCT.	Yes, due to the Proposed Development being located within the LCT.
LCT 209: Upland Glen – Glasgow & Clyde Valley	Part of the Site is located within this LCT which would also receive close views of the proposed turbines from Abington area potentially resulting in direct and indirect effects on the character of the LCT.	Yes, due to part of the Proposed Development being located within the LCT.
LCT 210: Undulating Farmland and Hills	Two units of this LCT are located between 4.6 – 30.3 km to the northeast of the Site. Theoretical visibility is predicted to be limited in both units and confined to southwest facing slopes and summits. Between 5 and 10 km this predicted from a small geographical area covering the lower slopes of Tinto, much of which is forested.	No, due to the very small area of theoretical visibility predicted combined with screening by forestry.
LCT 212: Moorland Hills – Glasgow & Clyde Valley	This LCT is located 23.7 – 31.5 km to the northeast of the Site. Theoretical visibility is predicted to be limited to the north and western side of the LCT at Seat Hill and Tarbrax of 1-5 turbines.	No, due to the limited extent and coverage of theoretical visibility and distance from the Proposed Development.
LCT 213: Plateau Moorlands – Glasgow & Clyde Valley	The proposed turbines would be located within this LCT which is also predicted to receive widespread theoretical visibility resulting in potential direct and indirect significant effects to character.	Yes, due to the Proposed Development being partially located within this LCT.
LCT 214: Plateau Moorland with Windfarms – Glasgow & Clyde Valley	Located 25.1 – 45 km to the northwest of the Site. Theoretical visibility is predicted beyond 30 km predominantly covering an area of forestry.	No, due to distance and area predicted to receive theoretical visibility being forestry.
LCT 217: Southern Uplands – Glasgow & Clyde Valley	Part of the Site is located within this LCT which would also receive close views of the proposed turbines from elevated locations potentially resulting in direct and indirect effects to the key characteristics of the LCT.	Yes, due to part of the Proposed Development being located within the LCT.
LCT 218: Rounded Landmark Hills	Located between 2.8 – 11.5 km to the northeast of the Site. Theoretical visibility is predicted on southwest facing slopes.	Yes, due to proximity and extent of theoretical visibility predicted of the Proposed Development.
LCT 219: Broad River Valley	This LCT is situated 19.0 – 31.1 km to the northwest. Theoretical visibility of 1 to 22 turbines is predicted in the most elevated parts of the LCT on the upper reaches of the valley covering farmland and the edge of settlements.	No, due to distance and limited theoretical visibility predicted which would not lead to significant effects to the key characteristics of the LCT.
LCT 266: Plateau Moorland - Lothians	Located 43.6 - 45 km to the north of the Site. Theoretical visibility is predicted around the periphery of the LCT on west facing slopes.	No, due to the limited theoretical visibility predicted and distance from the Proposed Development.
LCT 268: Upland Hills - Lothians	This LCT is located between 30.8 – 45 km to the northeast of the Site. Theoretical visibility is predicted to be very limited of 1-5 turbines from hill summits and upper slopes.	No, due to distance from the Proposed Development and the limited geographical and extent of the Proposed Development visible.
LCT 270: Lowland River Valleys - Lothians	This LCT covers the River North Esk between 42.5 – 45 km to the northeast of the Site. No theoretical visibility is predicted.	No
LCT 271: Lowland River Corridors - Lothians	Two units of this LCT are located within the 45 km study area covering the River Avon and Linhouse Water 35.7 – 45 km to the northeast of the Site. No theoretical visibility is predicted within both units of the LCT.	No

TA4.2.1: Review of Landscape Character Types Within 45 km Study Area		
Landscape Character Type	**Theoretical Visibility Predicted**	**Included in LVIA**
LCT 272: Lowland Hills and Ridges - Lothians	This LCT is located 41.0 - 45 km to the northeast of the Site. Very limited theoretical visibility is predicted on the south facing slopes of Cairnpapple and the Knock Hills.	No, due to distance and very limited theoretical visibility predicted of a few turbines which would not result in significant effects to the key characteristics of the LCT.
LCT 274: Lowland Plain	This LCT is located 40.5 - 45 km to the northeast of the Proposed Development. No theoretical visibility is predicted of the Proposed Development.	No
LCT 276: Lowland Hill Fringes - Lothians	This LCT is situated 41.6 – 45 km to the northeast of the Site. No theoretical visibility is predicted.	No
LCT 346: Open Farmed Slopes	Located between 29.4 – 45 km to the northwest of the Site. Theoretical visibility is predicted to be limited on the southern periphery of Hamilton Bothwell Street, Almada Street, New Stevenson, Bellshill, Bothwell and Uddingston of 1-22 turbines. However, actual visibility would be reduced by the surrounding built form	No, due to a combination of distance and screening by nearby built environment which would reduce visibility of the Proposed Development.

Technical Appendix 4.3: Assessment of Visual Effects

Technical Appendix 4.3: Assessment of Visual Effects

1.1 Introduction

1.1.1 This Technical Appendix (TA) accompanies Chapter 4: Landscape and Visual Amenity and identifies and assesses the visual effects of the Proposed Development described in **Chapter 2: Development Description (EIAR Volume 2)** on visual receptors within the Study Area.

1.1.2 This assessment is carried out in accordance with the principles contained within the following documents:

- *Guidelines for Landscape and Visual Impact Assessment, Third Edition* (referred to hereafter as GLVIA3) (Landscape Institute, Institute of Environmental Management and Assessment, 2013)[1]; and
- *Visual Representation of Wind Farms: Guidance. Version 2.2*. (SNH, 2017):[2] and

1.1.3 This TA is supported by the following volumes of the Environmental Impact Assessment Report (EIAR):

- **Volume 2: Main Report**;
- **Volume 3a: Figures**;
- **Volume 3b: Visualisations**;
- **Volume 4: Technical Appendices**:
  - TA4.1: Landscape and Visual Impact Assessment Methodology;
  - TA4.2: Landscape Character Assessment;
  - TA4.4: Cumulative Assessment;
  - TA4.5: Implications for Designated Landscapes;
  - TA4.6: Aviation Lighting Assessment; and
  - TA4.7: Residential Visual Amenity Assessment.

1.2 Scope of Assessment and Reporting

1.2.1 The assessment considers potential effects on views and visual amenity out to 45 km, with viewpoints and receptors for more detailed analysis within approximately 25 km, which is an appropriate range to catch all likely significant effects and forms the Study Area for the visual assessment. Using Zone of Theoretical Visibility (ZTV) mapping and wireline images as indicators of likely visibility, fieldwork, and an initial assessment of potential effects, the following assessment sets out the overview of potential visual effects on selected representative receptors. Visual receptors are assessed in more detail where effects are potentially significant or useful for context, as per the methodology set out in **Technical Appendix 4.1 (EIAR Volume 4)**.

1.3 Visual Receptors

1.3.1 Viewers within the Study Area who would be affected by the changes in views and visual amenity include residents, tourists, walkers and recreational route users, road users etc. The assessment of visual effects considers the changes that people would see in views from various locations around the Study Area, using representative viewpoints, as well as considering views from settlements and from along routes. The methodology for the identification of sensitivity of visual receptors is set out in TA4.1.

1.4 Viewpoints

1.4.1 The viewpoints assessed in the LVIA are listed in Table 4.3.1 and shown on **Figure 4.6 (EIAR Volume 3)** were proposed in the Scoping Report submitted in January 2024. Viewpoints selected are a combination of viewpoints identified in the South Lanarkshire Landscape Capacity Study for Wind Energy (SLLCSWE) (Ironside Farrar, 2016)[3], and a review of ZTV mapping verified on site.

Table 4.3.1: Viewpoints Assessed in the LVIA

Location	Grid Reference		Distance to nearest turbine	Direction to the Proposed Development	Representative
VP1: Devonburn Road	282691	639483	12.8 km	Southeast	Slightly elevated location above the M74 motorway and representing views of the Proposed Development from the north around Lesmahagow and Devonburn.
VP2: B7078 Carlisle Road	283436	636719	10.2 km	Southeast	Representing views from the B7078 road, and National Cycle Network Route (NCNR74).
VP3: M74 Southbound, B7078 near Parkhead	286477	629678	2.7 km	Southeast	Slightly elevated above the M74 motorway representing views southbound when travelling along the B7078 road and NCNR74 as the routes rise onto the moor from the Douglas valley.
VP4: M74 within the Site	289180	626920	358 m	Within the Site	Adjacent to the M74 motorway within the Site, representing the experience of passing through the Site.
VP5: Abington Services	293053	625116	2.0 km	Northwest	Close to the M74 motorway Junction 13 by the service area. Representing view from the Service Station and Hotel.
VP6: Castle Hill	294442	622274	4.9 km	Northwest	Elevated location between Abington and Crawford, with views to other wind farms. Representing views from local hills.
VP7: Crawfordjohn	287755	623680	2.5 km	Northeast	On the B740 road descending into Crawfordjohn, representing views from the settlement and the road.
VP8: B740 Spango	283273	618995	8.3 km	Northeast	At the South Lanarkshire / East Ayrshire boundary, represents early views of the Proposed Development from along this road.
VP9: A702 near Hartside	295910	629245	5.4 km	Southwest	Representing views from the A702 road, the West Coast Main Line.
VP10: B7055 Greenhill	292955	633028	6.0 km	Southwest	On the minor road to the south of Tinto, representing views from the north.
VP11: Tinto Hill	295280	634375	8.5 km	Southwest	A popular landmark hill with paths from different directions and a summit cairn. VP14 in the SLLCSWE.

[1] Landscape Institute., Institute of Environmental Management and Assessment. (2013) *Guidelines for Landscape and Visual Impact Assessment, Third Edition*. London. Routledge.

[2] Scottish Natural Heritage. (2017) *Visual Representation of Wind Farms*. Available at: https://www.nature.scot/sites/default/files/2019-09/Guidance%20-%20Visual%20representation%20of%20wind%20farms%20-%20Feb%202017.pdf [Accessed: 13th May 2024]

[3] Ironside Farrar. (2016) *South Lanarkshire Landscape Capacity Study for Wind Energy*. Available at: https://www.southlanarkshire.gov.uk/download/downloads/id/10362/part_1_sl_landscape_capacity_study_for_wind_turbines_feb16pdf.pdf [Accessed 15th May2024]

Table 4.3.1: Viewpoints Assessed in the LVIA					
Location	**Grid Reference**		**Distance to nearest turbine**	**Direction to the Proposed Development**	**Representative**
VP12: Cairn Table	272555	624234	15.2 km	East	A popular landmark hill in East Ayrshire with summit memorial cairn. VP18 in the SLLCSWE.
VP13: Lowther Hill	289047	610766	14.3 km	Northeast	A landmark hill over which the Southern Upland Way passes over.
VP14: Culter Fell	305286	629077	14.3 km	West	The highest hill to the east of the Study Area, on the South Lanarkshire / Scottish Borders boundary. VP17 in the SLLCSWE.
VP15: B7016 east of Biggar	306972	637590	19.2 km	Southwest	Representing views from the countryside around Biggar.

1.4.2 Due to access and health and safety reasons, no photography was taken for Viewpoint 4: M74 motorway or Viewpoint 9: on the A702 near Hartside. Therefore, wireline projections have been provided for these viewpoints only.

1.5 Other Viewpoints considered during the Selection Process

1.5.1 The viewpoints above were selected to represent and assess the visual effects of the Proposed Development that would be seen by various groups of people, in various parts of the landscape. It is not an exhaustive list of locations from which the Proposed Development would be visible but is a representative list of locations selected through desk study, site work, and those suggested in the Scoping Report. The viewpoints are all publicly accessible and include locations that are representative, specific, and/or illustrative of views of the Proposed Development. They were selected to represent a range of receptors, viewing directions, distances and elevations, whilst focussing on sensitive visual receptors with the potential to experience significant effects. All viewpoints were selected as being suitable for use to illustrate landscape effects, visual effects, cumulative effects, and/or sequential assessments where they are located on or adjacent to routes.

1.5.2 The SLLCSWE (Ironside Farrar, 2016) identifies three types of sensitive receptors within South Lanarkshire as follows:

- *'Settlements, representing concentrations of residential receptors, based on the settlements defined in the South Lanarkshire Local Development Plan (LDP) (Adopted June 2015);*
- *Routes, representing travelling receptors, and including the motorway, "A" roads, selected "B" roads, railways, and long-distance footpaths and cycleways;*
- *Viewpoints, representing visitors, selected from popular walking destinations, visitor attractions, and viewpoints identified on OS maps, including several viewpoints just outside South Lanarkshire.'*

1.5.3 A total of 26 viewpoints are identified within the SLLCSWE and a review of these were undertaken to inform the LVIA viewpoints. These locations are listed in Table 4.3.2 and the analysis was based on ZTV mapping and field verification to scope in or out of the LVIA.

Table 4.3.2: Viewpoints considered in the selection process	
Location	**Observations**
1. Cathkin Braes	Approximately 40.8 km to the northwest. Due to distance and intervening screening, no significant effect is predicted.
2. Morrisons, East Kilbride	Approximately 35.7 km to the northwest. A combination of distance and intervening built form would screen views, no significant effect predicted.
3. Chatelherault Country Park	Approximately 30.5 km to the northwest. No view is predicted.
4. Motherwell Heritage Centre	Approximately 32.1 km to the northwest. Intervening screening by the surrounding built form would screen views, no significant effect predicted.
5. West Forth Community Woodland	Approximately 25.2 km to the northeast. Turbines would be viewed above the distant horizon, intervening forestry would provide screening, no significant effect predicted.
6. West Cairn Hill	Approximately 37.0 km to the northeast. Turbines would be viewed above the distant horizon, no significant effect predicted.
7. Black Law Covenanter's Grave	Approximately 30.3 km to the northeast. No view is predicted.
8. Little Sparta	Approximately 26.1 km to the northeast. No view is predicted.
9. Black Hill	Approximately 16.4 km to the northwest. 9 blade tips are predicted to be visible, no significant effect predicted.
10. Footpath crossing A73 near Lanark	Approximately 18.0 km to the north. 9 turbines are predicted to be visible, no significant predicted.
11. Hyndford Bridge	Approximately 13.3 km to the north. No view is predicted.
12. Loudoun Hill	Approximately 28.8 km to the northwest. No view is predicted.
13. Trumpeter's Well	Approximately 26.2 km to the northwest. No view is predicted.
14. Tinto Hill	Located approximately 8.4 km to the northeast. Included as Viewpoint 11 (see Figures 4.24a-f)
15. Biggar Common	Approximately 15.4 km to the northeast. No view predicted.
16. Douglas Castle	Approximately 5.7 km northwest. No view predicted.
17. Culter Fell	Approximately 14.3 km to the east. Included as Viewpoint 14 (see Figures 4.27a-f).
18. Cairn Table	Approximately 15.3 km to the west. Included as Viewpoint 12 (see Figures 4.25a-f).
19. Red Moss	Approximately 920 m west. Included as Viewpoint 3 (see Figures 4.16a-e).
20. Abington Services	Approximately 2.0 km southeast. Included as Viewpoint 5 (see Figures 4.18a-e).
21. Crawford Footbridge	Approximately 6.8 km southeast. No view predicted.
22. Leadhills	Approximately 10.1 km south. No view predicted.
23. Green Lowther	Approximately 13.0 km south. Viewpoint 13: Lowther Hill has been included in the assessment as an alternative.
24. Devil's Beef Tub	Approximately 20.0 km southeast. No view predicted.
25. Queensberry	Approximately 26.8 km southeast. Partially visible above the ridgeline, no significant effect predicted.
26. Pykestone Hill	Approximately 26.4 km northeast. 5 turbines visible above the ridgeline, no significant effect predicted.

1.6 Settlements

1.6.1 The SLLCSWE identifies 93 settlements within the SLC administrative area. A review of ZTV mapping and verification on site, established the following settlements as having the potential for significant effects and are therefore considered further in this assessment:

- Crawfordjohn – 2.1 km west of the nearest turbine; and
- Roberton – 3.5 km east of the nearest turbine.

1.6.2 There are several residential properties within 2.5 km of the Site, these are considered separately in the Residential Visual Amenity Assessment set out in **Technical Appendix 4.7 (EIAR Volume 4)**.

1.7 Sequential Views from Routes

1.7.1 Main routes through the Study Area tend to follow the edges of the valley floors or run over passes. Further north where the landscape is flatter and settlement dense, there is a network of roads radiating out from key settlements. A review of ZTV mapping and verification on site established the following route receptors as having the potential to receive a significant effect and are therefore considered further in this assessment:

- M74 motorway;
- A702 road;
- B740 road;
- B7055 road;
- B7078 road;
- West Coast Main Line;
- Scottish Hill Track (SHT) 57: Roberton to Douglas; and
- SHT 58: Douglas to Wanlockhead.

1.8 Viewpoint Assessment

1.8.1 The following provides a detailed assessment for each viewpoint considered.

Viewpoint 1: Devonburn Road

Table 4.3.3: Viewpoint 1: Devonburn Road	
Grid Reference:	282691, 639483
Figure Number:	4.14
Landscape Character Type:	LCT 201: Plateau Farmland – Glasgow & Clyde Valley
Designated Landscape:	None
Direction and distance to nearest turbine:	12.9 km
Number of hubs and blades theoretically visible:	14 hubs, 22 blades

1.8.2 This viewpoint is located on Devonburn Road, a minor road southeast of Lesmahagow in South Lanarkshire. Situated on the mid-slopes of Boghill at approximately 237 m Above Ordnance Datum (AOD). Views to the north and east are restricted by rising landform, and elevated semi-open views across farmland to the south and west are obtained backdropped by the distant hills of the Southern Uplands, albeit with partial screening from roadside trees and hedges.

1.8.3 There are several linear features within the view including the M74 motorway to the west, wood pole electricity overhead lines and telephone wires. Within the mid-ground are several small-scale wind turbines on either side of the M74 motorway, and beyond large-scale wind farms to the southeast forming a large cluster. To the east lies the suburbs of Lesmahagow. To the south, Broken Cross Energy Project is currently being constructed.

Sensitivity

1.8.4 This viewpoint is on a minor road close to dense and scattered settlement and is not within a national or local landscape designation and value is considered medium. Susceptibility of viewers is considered medium as they include residents and people accessing local properties. Overall sensitivity is judged to be **Medium**.

Magnitude of Change

1.8.5 All 22 of the proposed turbines are predicted to be visible from this location at 12.8 km. None of the other project components would be seen from this location due to intervening screening by landform. Turbine 4 would be the most notable turbine in the middle of the cluster with the remaining turbines being viewed beyond the foreground landform reducing their size and scale. The cluster would occupy a small part of the view southwards and be seen as a separate development that would be distant and less prominent than the foreground small-scale turbines and Broken Cross Energy Project to the south, and larger wind farms to the southeast. Magnitude of change is judged as **Low**, long-term and reversible.

Effect

1.8.6 The visual effect is judged to be **not significant (Minor).**

Viewpoint 2: B7078 Carlisle Road

Table 4.3.4: Viewpoint 2: B7078 Carlisle Road	
Grid Reference:	283436, 636719
Figure Number:	4.15
Landscape Character Type:	LCT 201: Plateau Farmland – Glasgow & Clyde Valley
Designated Landscape:	None
Direction and distance to nearest turbine:	10.2 km
Number of hubs and blades theoretically visible:	10 hubs, 20 blades

1.8.7 This viewpoint represents views from the B7078 road and cycle route west of Broken Cross Muir. Although open with views onto surrounding rough pasture and hills to the southwest, rising landform to the east and remnants of roadside hedgerows provides some partial screening filtering views, and screens the motorway which is located approximately 350 m to the east. There are several small-scale wind turbines nearby as a well as an overhead electricity transmission line to the east, and a large cluster of wind farms to the southwest including Douglas West, Hagshaw Hill and Galawhistle.

Sensitivity

1.8.8 This viewpoint is located within the Douglas Valley SLA and on the NCNR 74, value is medium. Susceptibility of the viewers is also judged to be medium as users of the route are likely to have some appreciation of the view, in particular, cyclists. Overall sensitivity is judged as **Medium**.

Magnitude of Change

1.8.9 Most of the proposed turbines are predicted to be visible to the southeast in the direction of travel southbound. Turbine 4 would be the most prominent with the remaining turbines being at a lower elevation and partially screened by landform. These would be viewed beyond a small-scale turbine in the foreground and be partially filtered by roadside trees. Views from this location are open and the Proposed Development would occupy a small extent of the view with the size and scale of the turbines being reduced through a combination of screening by landform and roadside trees. Magnitude of change is judged as **Low**, long-term and reversible.

Effect

1.8.10 The visual effect is judged to be **not significant (Minor)**.

Viewpoint 3: M74 Southbound, B7078 near Parkhead

Table 4.3.5: Viewpoint 3: M74 Southbound, B7078 near Parkhead	
Grid Reference:	286477, 629678
Figure Number:	4.16
Landscape Character Type:	LCT 213: Plateau Moorlands – Glasgow & Clyde Valley
Designated Landscape:	Douglas Valley SLA
Direction and distance to nearest turbine:	2.7 km
Number of hubs and blades theoretically visible:	13 hubs, 22 blades

1.8.11 This viewpoint is from a raised grassy area leading from the B7078 road and includes open views of the surrounding landscape with some screening by roadside trees to the southwest. The landscape is relatively simple comprising rough grazing with two prominent linear features, the M74 motorway heading south eastwards, and an overhead electricity transmission line which changes direction and crosses the motorway in a southwest direction. Further to the southwest, Middle Muir and Andershaw wind farms are partially visible.

Sensitivity

1.8.12 This viewpoint is not located within a national or local landscape designation but is recognised as the NCNR 74 and value is considered as medium. Susceptibility of the viewers is also judged to be medium as users of the route are likely to have some appreciation the view, in particular, cyclists. Overall sensitivity is judged as **Medium**.

Magnitude of Change

1.8.13 All 22 turbines are predicted to be visible from this location and would be viewed separately from Middle Muir and Andershaw wind farms. None of the other components of the Proposed Development would be visible from this location. The northern most turbines would be the most visible and include views of towers, hubs and blades. Turbines located further south within the site would be partially screened by foreground landform resulting in the upper parts of the turbine being visible only. The Proposed Development would cover a large part of the view southwards from this location and the size and scale of the change would be large. Magnitude of change is judged as **High**, long-term and reversible.

1.8.14 The visual effect is judged as **significant (Major)**.

Viewpoint 4: M74 within the Site

Table 4.3.6: Viewpoint 4: M74 within the Site	
Grid Reference:	289180, 626920
Figure Number:	4.17
Landscape Character Type:	LCT 213: Plateau Moorlands – Glasgow & Clyde Valley
Designated Landscape:	None
Direction and distance to nearest turbine:	Within the Site
Number of hubs and blades theoretically visible:	22 hubs, 22 blades.

1.8.15 This viewpoint is situated within the Site and is representative of views from the M74 motorway when travelling north from Abington. **Figure 4.17 (EIAR Volume 3b)** provides a wireline projection of the Proposed Development. Views are open predominantly across moorland rising southwards to a series of rounded hills forming the outer foothills of the Southern Uplands. To the west, extensive visibility of forested and farmed hills can be obtained including Middle Muir wind farm in the mid-ground. To the south, Clyde wind farm is partially visible on hill sides at various elevations. The M74 motorway and overhead electricity transmission line are distinctive linear features crossing the landscape and Thirstone Sand and Gravel Quarry within the Site also forms a notable feature; in particular, the contrast between the surrounding moorland and excavated areas and piles of sand and gravel.

Sensitivity

1.8.16 This viewpoint is not located within any national or local landscape designation, value is considered medium. The M74 motorway is a relatively fast road comprising 3 lanes of traffic-oriented north west to south east through the Site and is a major transport route between Scotland and England. Passengers travelling in vehicles are likely to have some appreciation of views resulting in a medium susceptibility. Overall sensitivity is judged as **Medium**.

Magnitude of Change

1.8.17 It is predicted that all the components of the Proposed Development would be visible when travelling through the Site, although not at the same time but viewed sequentially. A large extent of the view on both sides of the motorway would be affected and the size and scale of the change would be large. Magnitude of change is judged to be **High**, long-term and reversible.

1.8.18 The visual effect is judged as **significant (Major)**.

Viewpoint 5: Abington Services

Table 4.3.7: Viewpoint 5: Abington Services	
Grid Reference:	293053, 625116
Figure Number:	4.18
Landscape Character Type:	LCT 208: Broad Valley Upland
Designated Landscape:	None
Direction and distance to nearest turbine:	2.0 km
Number of hubs and blades theoretically visible:	16 hubs, 22 blades

1.8.19 This viewpoint is situated in the picnic area next to the hotel at Abington Services. Views from the picnic area tend to be focused northwards onto surrounding farmland and moorland beyond with some screening by boundary vegetation and a forestry plantation in the mid-ground. To the north of the Duneaton Water, the landscape rises further curtailing the distance of view.

1.8.20 Views to the east are heavily filtered by existing trees along the boundary of the Services, to the south by a timber fence and car park, and west by the hotel building. Notable features include the M74 motorway to the northwest, and geometric blocks of forestry within the surrounding landscape.

Sensitivity

1.8.21 This location is not located within any national or local landscape designations and is in the grounds of a motorway service station and value is judged to be medium. The picnic area has not been specifically sited to take advantage of the views and susceptibility is medium. Overall sensitivity is judged as **Medium**.

Magnitude of Change

1.8.22 All 22 turbines would be visible along with close views overlooking the solar array which would be situated immediately north of the viewpoint location and form the foreground to the wind turbines. Other elements that are likely to be visible include the supporting infrastructure between the solar arrays and wind turbines. The Proposed Development would occupy a large extent of the view

northwards and the size and scale of the change to the view is also predicted to be large due to proximity. Magnitude of change is judged to be **High**, long-term and reversible.

1.8.23 The visual effect is judged to be **significant (Major)**.

Viewpoint 6: Castle Hill

Table 4.3.8: Viewpoint 6: Castle Hill	
Grid Reference:	294442, 622274
Figure Number:	4.19
Landscape Character Type:	LCT 217: Southern Uplands – Glasgow & Clyde Valley
Designated Landscape:	None
Direction and distance to nearest turbine:	4.9 km
Number of hubs and blades theoretically visible:	22 hubs, 22 blades

1.8.24 This viewpoint is on the summit of Castle Hill, a hill top situated approximately 1.5 km south east of Abington and 1.3 km north west of Crawford. A transmitter mast is located on the lower slopes west of the summit. Accessed via a track to the south leading to the transmitter, or as part of a circular walk from Abington, at 431 m AOD, the summit commands extensive views over the River Clyde valley sweeping northwards with Abington in the foreground and short sections of the M74 motorway and River Clyde visible.

1.8.25 From this location, Tinto Hill can be seen 13.2 km to the north, and Green Lowther and Lowther Hill approximately 11.2 km to the southwest. Elsewhere, views are of the rounded hills of the Southern Uplands which curtails visibility. Close views of Clyde wind Farm at approximately 2.6 km can be obtained to the east and southeast, and Middle Muir wind farm 8.5 km to the northwest. The view is open and extensive, predominantly across the uplands landscape of the Southern Uplands, comprising rounded hills clad in grassland, interspersed by occasional geometric blocks of forestry on upper slopes and summits.

Sensitivity

1.8.26 This location is not located within any national or local landscape designation but is scenically attractive with elevated views of the River Clyde and value is considered high. The susceptibility of the viewers is also considered to be high as people accessing the summit are expected to appreciate the surrounding landscape. Overall sensitivity is judged as **High**.

Magnitude of Change

1.8.27 All 22 turbines would be visible from this location to the north and include part of the solar array and short sections of access track beyond Abington. Thirstone Sand and Gravel Quarry would be restored resulting in the removal of stock piles, with the substation and BESS being on the site of the former quarry. Craighead Hill, northwest of Abington would provide some partial screening of the turbine bases and lower towers west of the M74 motorway, nevertheless, the size and scale of the change would be large from this summit due to proximity. The addition of the Proposed Development would increase the horizontal extent of turbines visible from this location and would be closer than any of the operational turbines in the surrounding landscape. Magnitude of change is judged as **High**, long-term and reversible.

Effect

1.8.28 The visual effect is judged to be **significant (Major)**.

Viewpoint 7: Crawfordjohn

Table 4.3.9: Viewpoint 7: Crawfordjohn	
Grid Reference:	287755, 623680
Figure Number:	4.20
Landscape Character Type:	LCT 207: Upland River Valley – Glasgow & Clyde Valley
Designated Landscape:	Leadhills and Lowther Hills SLA
Direction and distance to nearest turbine:	2.5 km
Number of hubs and blades theoretically visible:	19 hubs, 22 blades

1.8.29 This viewpoint is located on the B740 road west of Crawfordjohn and provides a representation of the view obtained when entering the village from the west. This illustrates the transitional nature of the landscape with undulating farmland and forestry within the valley of the Duneaton Water, and the surrounding Southern Uplands of grassland and extensive areas of forestry.

1.8.30 The view from this location is semi-enclosed by rising topography and forestry within the Duneaton Water valley and the hills of the Southern Uplands beyond, to the north, west and south, and more open views eastwards towards the village. Man-made features are a common feature within views, mainly associated with Crawfordjohn in the foreground, but also farming and forestry practices, telecommunication masts and Clyde wind farm to the east and southeast.

Sensitivity

1.8.31 This location is situated on a minor road (B740) between the B7078 road and Sanquhar and is situated within the Leadhills and Lowther Hills SLA and value is considered high. The susceptibility of the viewers is high as they include residents, cyclists and vehicles crossing between South Lanarkshire and Dumfries and Galloway. Overall sensitivity is judged as **High**.

Magnitude of Change

1.8.32 All 22 of the proposed turbines are predicted to be visible viewed to the east of the village and include turbine hubs, with three of the northwestern turbines being only the blades visible. None of the other components of the Proposed Development would be visible on account of screening by foreground landform. Some partial and full screening would occur as result of screening by intervening forestry and woodland. The Proposed Development would result in turbines being located closer to the village and would overlap with Clyde Wind Farm occupying a large part of the view north and eastwards. The size and scale of the change would be large with turbines being prominent above the horizon. Magnitude of change is judged as **High**, long-term and reversible.

Effect

1.8.33 The visual effect is judged to be **significant (Major)**.

Viewpoint 8: B740 Spango

Table 4.3.10: Viewpoint 8: B740 Spango	
Grid Reference:	283273, 618995
Figure Number:	4.21
Landscape Character Type:	LCT 217: Southern Uplands – Glasgow & Clyde Valley
Designated Landscape:	Leadhills and Lowther Hills SLA
Direction and distance to nearest turbine:	8.7 km
Number of hubs and blades theoretically visible:	0 hubs, 3 blades

1.8.34 This viewpoint is located on the B740 road to the southwest of the Proposed Development within the wider River Clyde valley. Orientated northeast and southwest, the twisting nature of the valley combined with steep sides results in views along its length being curtailed by landform. Generally open, the viewpoint overlooks farmland on either side of the Duneaton Water with the occasional woodland and forestry providing some contrast.

Sensitivity

1.8.35 This location is situated on a minor road between the B7078 road and Sanquhar, the northern half of this road where the viewpoint is located is within the Leadhills and Lowther Hills SLA, and value is considered high. The susceptibility of the viewers is high as they include residents, cyclists and vehicle users travelling between South Lanarkshire and Dumfries and Galloway. Overall sensitivity is judged as **High**.

Magnitude of Change

1.8.36 The tips of the three northerly turbines would be visible above Mountherrick Hill which would be barely visible in north easterly views. No other components of the Proposed Development would be visible from this location. The three turbines would extend turbines southwards within the view and would appear as part of Middle Muir wind farm, albeit less visible than the Middle Muir turbines. The geographical extent of the and size and scale of the change would be relatively small, and magnitude of change is judged as **Low**, long-term and reversible.

Effect

1.8.37 The visual effect is judged to be **not significant (Minor)**.

Viewpoint 9: A702 near Hartside

Table 4.3.11: Viewpoint 9: A702 near Hartside	
Grid Reference:	295910, 629245
Figure Number:	4.22
Landscape Character Type:	LCT 208: Broad Valley Upland
Designated Landscape:	Upper Clyde Valley and Tinto SLA
Direction and distance to nearest turbine:	5.4 km
Number of hubs and blades theoretically visible:	14 hubs, 20 blades

1.8.38 This viewpoint is located on the A702 road, near Hartside within the River Clyde valley and adjacent to the West Coast Main Line railway line. Views within the valley tend to be focussed on the direction of travel which is northeast to southwest and enclosed by the steep valley sides and filtered by woodland and forestry. The surrounding landscape is predominantly sheep farming on rounded hills enclosed by a mixture of post and wire fences and stone boundary walls. Small to large-scale blocks of geometric forestry are a feature within the landscape alongside the road, railway line and electricity cables.

Sensitivity

1.8.39 This viewpoint is located within the Upper Clyde Valley and Tinto SLA and value is judged as high. Susceptibility of viewers is judged as Medium, as road users are likely to appreciate the view of the surrounding landscape but is not considered to be higher as this is a relatively fast section of road with no lay-bys. Overall sensitivity is judged as **Medium**.

Magnitude of Change

1.8.40 A total of 20 turbines are predicted to be visible from this location and appear at the head of the valley when travelling southwards. No other components of the Proposed Development would be visible from this location. Views of turbines would vary between full turbines where the horizon dips down to turbines allowing visibility of turbine hubs or limited to blades because of screening by landform. The Proposed Development would occupy a medium extent of the overall view when travelling southbound. The size and scale of the change would also be medium on account of the degree of screening to turbines combined with the turbines being silhouetted along the horizon. Magnitude of change is judged as **Medium**, long-term and reversible.

1.8.41 The visual effect is judged as **significant (Moderate)**.

Viewpoint 10: B7055 Greenhill

Table 4.3.12: Viewpoint 10: B7055 Greenhill	
Grid Reference:	292955, 633028
Figure Number:	4.23
Landscape Character Type:	LCT 218: Rounded Landmark Hills
Designated Landscape:	Upper Clyde Valley and Tinto SLA
Direction and distance to nearest turbine:	6.0 km
Number of hubs and blades theoretically visible:	10 hubs, 20 blades

1.8.42 This viewpoint is situated on the B7055 road below the Tinto range of hills. Views from this location are focussed along the direction of travel which is east to west with open views across farmland to the south. Visibility to the north is curtailed by forestry and steep-sided slopes of Lochlyoch Hill. The landscape is predominantly grazed with areas of forestry on hill slopes, and open in nature. Other features include the road and telegraph poles and scattered settlement.

Sensitivity

1.8.43 This viewpoint is located within the Upper Clyde Valley and Tinto Hills SLA and is a popular cycle route and value is considered high. The susceptibility of viewers are also considered to be high as users of the road are likely to appreciate the surrounding landscape. Overall sensitivity is judged as **High**.

Magnitude of Change

1.8.44 A total of 20 turbines are predicted to be visible from this location to the southwest. These would be viewed above the horizon and include four hubs, the rest being blades due to landform screening. No other components of the Proposed Development are predicted to be visible from this location. The extent of the overall view affected would be small in comparison to the panoramic views that can be obtained southwards. Due to foreground screening by landform, the size and scale of the change would also be small with turbines being sky lined but mainly limited to blades. Magnitude of change is judged as **Low**, long-term and reversible.

Effect

1.8.45 The visual effect is judged as **not significant (Minor)**.

Viewpoint 11: Tinto Hill

Table 4.3.13: Viewpoint 11: Tinto Hill	
Grid Reference:	295280, 634375
Figure Number:	4.24
Landscape Character Type:	LCT 218: Rounded Landmark Hills
Designated Landscape:	Upper Clyde Valley and Tinto SLA
Direction and distance to nearest turbine:	8.5 km
Number of hubs and blades theoretically visible:	22 hubs, 22 blades

1.8.46 This viewpoint is located on the popular hill summit of Tinto Hill which is a prominent hill located 3.9 km to the west of Symington in South Lanarkshire. The viewpoint is representative of the views obtained from the north by hill walkers and visitors to the summit. Accessible from several directions, the most popular route is from the car park to the north at Fallburn, with other tracks accessing the summit via Broadlees in the east, and Wiston from the south.

1.8.47 From the summit, extensive 360-degree views of the surrounding landscape can be obtained which includes the Clyde Valley to the north, the Lowther Hills to the southwest, and the Southern Uplands to the south. These are separated by a series of interlocking valleys comprising farmland. Operational wind farms are visible from the summit including Clyde wind farm located to the south, with Minnygap and Harestanes wind farms beyond. To the southeast, Middle Muir wind farm can be viewed in the foreground with Wether Hill, Sanquhar and Andershaw wind farms beyond. To the west lies Hagshaw Hill + Extension and several other developments around the periphery.

Sensitivity

1.8.48 This viewpoint is not within a national designation but is located within the Upper Clyde Valley and Tinto SLA and is a popular recreational route, and value is high. Susceptibility of viewers is also considered to be high as walkers' attention will be focussed on the views of the surrounding landscape. Overall, sensitivity is judged as **High**.

Magnitude of Change

1.8.49 The Proposed Development would be viewed to the southwest beyond Clyde wind farm and back clothed due to the elevation of the viewpoint. The Proposed Development would lead to an increase in the horizontal extent of turbines viewed from this location, however, this would be a small extent in the context of an otherwise panoramic view from the summit which features several other wind farm developments. The size and scale of the change in view would be small from a relatively close distance. Magnitude of change is judged as **Low**, long-term and reversible.

Effect

1.8.50 The visual effect is judged to be **significant (Moderate)**.

Viewpoint 12: Cairn Table

Table 4.3.14: Viewpoint 12: Cairn Table	
Grid Reference:	272555, 624234
Figure Number:	4.25
Landscape Character Type:	LCT 213: Plateau Moorlands – Glasgow & Clyde Valley
Designated Landscape:	East Ayrshire SLA
Direction and distance to nearest turbine:	15.2 km
Number of hubs and blades theoretically visible:	22 hubs, 22 blades

1.8.51 This viewpoint is situated on the summit of Cairn Table located on the administrative boundary between East Ayrshire and South Lanarkshire. Accessed via the settlement of Muirkirk to the northwest, as part of circular walk, the summit includes a triangulation pillar, direction indicator and large cairn built in the memory of local men and women who served or were killed in the First World War.

1.8.52 Extensive 360-degree views can be obtained from the summit, and on clear days distant visibility of western Scotland. The surrounding landscape is predominantly upland and moorland in nature, with farmland to the north on either side of the River Ayr and Douglas Water to the northeast. Forestry is a common feature in the landscape and there is a large geometric block directly to the south and below the summit. Wind turbines are a common feature in views and include Kennoxhead directly to the east with Middlemuir and Clyde beyond, and a cluster to the northeast including Galawhistle, Hagshaw Hill and Douglas West.

Sensitivity

1.8.53 This viewpoint is within the East Ayrshire SLA and is a popular summit and circular walk and value is considered high. Susceptibility of viewers is also considered high as walkers would likely have an appreciation of the view across the landscape. Overall sensitivity is judged **High**.

Magnitude of Change

1.8.54 All 22 turbines would be visible from this location to the east beyond Kennoxhead and Middle Muir wind farms and would be seen within their horizontal extent and occupying a small part of the overall view obtained from the summit. There would be potential to view the solar array from the summit, however, this would be through two existing wind farms and the distance involved would result in the solar array being barely discernible. The size and scale of the change in view would also be very small on account of distance. Magnitude of change is judged **Low**, long-term and reversible.

Effect

1.8.55 The visual effect is judged to be **not significant (Minor)**.

Viewpoint 13: Lowther Hill

Table 4.3.15: Viewpoint 13: Lowther Hill	
Grid Reference:	289047, 610766
Figure Number:	4.26
Landscape Character Type:	LCT 217: Southern Uplands – Glasgow & Clyde Valley
Designated Landscape:	Leadhills and Lowther Hills SLA
Direction and distance to nearest turbine:	14.3 km
Number of hubs and blades theoretically visible:	22 hubs, 22 blades

1.8.56 This viewpoint is located on Lowther Hill and includes a ridgeline to Green Lowther which has the National Air Traffic Services (NATS) radar station on the summit. The summit is accessed from a footpath which is parallel to a metalled road leading to the radar station. From the summit, 360-degree views of the surrounding Southern Uplands can be obtained, although due to the rounded nature of the summit combined with the existing infrastructure on Green Lowther, views tend to be focussed on a particular direction rather than being able to experience the full 360-degree panorama from one location. The surrounding valleys are generally screened by landform resulting in the perception of a continuous upland landscape. Several wind farm clusters are also visible including Hagshaw Hill, Douglas West and Galawhistle to the northwest with Middle Muir in the mid-ground. To the east, there is extensive visibility over the Southern Uplands extending into the Scottish Borders with Daer Reservoir appearing in the mid-ground, Clyde wind farm is a prominent feature within views in this direction. To the south, there is extensive visibility across the Southern Uplands of Dumfries & Galloway including Criffel and the Solway coast. Several turbine clusters can be seen but are distant and include Wether Hill and Sanquhar. To the west, the foreground hills limit the extent of visibility with Goat Fell being visible on a clear day beyond.

Sensitivity

1.8.57 This viewpoint is located on the edge of the Leadhills & the Lowther Hills SLA and is a popular long-distance footpath (Southern Upland Way) resulting in a high landscape value. Susceptibility of viewers is also considered to be high as walkers' attention will be focussed on the surrounding view. Overall, sensitivity is judged as **High**.

Magnitude of Change

1.8.58 The Proposed Development would be visible to the north and predominantly back clothed by the landscape beyond. Some partial screening would occur because of intervening forestry. None of the other components of the Proposed Development are predicted to be visible from this location. The Proposed Development would be seen within the existing context of Clyde wind farm but there would be a noticeable gap between the developments for them to appear as separate schemes.

1.8.59 The Proposed Development would occupy a smaller proportion of the view than Clyde wind farm to the northeast and Middle Muir wind farm to the northwest, infilling an area in the landscape but still distinctive a separate development, and occupy a small extent of an otherwise panoramic view. Due to distance and some partial screening by foreground landform and forestry, the size and scale of the change would be small. Magnitude of change is judged as **Low**, long-term and reversible.

Effect

1.8.60 The visual effect is judged to be **not significant (Minor)**.

Viewpoint 14: Culter Fell

Table 4.3.16: Viewpoint 14: Culter Fell	
Grid Reference:	305286, 629077
Figure Number:	4.27
Landscape Character Type:	LCT 217: Southern Uplands – Glasgow & Clyde Valley
Designated Landscape:	Upper Clyde Valley SLA / Tweedsmuir Uplands SLA
Direction and distance to nearest turbine:	14.3 km
Number of hubs and blades theoretically visible:	22 hubs, 22 blades

1.8.61 Culter Hill is located within the Coulter Hills range which forms part of the Southern Uplands. The summit is the highest point in South Lanarkshire and is popular with hill walkers. Comprising a short steep walk, it can also form part of a circuit that includes the nearby hills of Gathersnow Hill and Hudderstone. The summit is generally accessed from a minor road close to Culter Allers Farm to the northwest. 360-degree views of the surrounding hill tops can be obtained from this location which includes extensive views across the Southern Uplands as well as Tinto Hill to the west and the Clyde valley. Several wind farms can be viewed from this location including Glenkerrie to the west, Clyde to the south, and distant views of Harestanes, Minnygap, Wether Hill, Sanquhar, Middle Muir and Andershaw, and finally the Hagshaw cluster further to the west.

Sensitivity

1.8.62 This viewpoint is located within the Upper Clyde Valley SLA and is a summit frequently visited by walkers, value is high. Susceptibility of viewers is also considered to be high as walkers' attention will be focussed on the surrounding view. Overall sensitivity is judged as **High**.

Magnitude of Change

1.8.63 The Proposed Development would be visible beyond Clyde wind farm and in front of Middle Muir wind farm to the west. The proposed turbines would be back clothed and appear as part of a larger cluster occupying a small extent of the extensive view experienced from the summit. As a result of distance, the size and scale of the change would be small and magnitude of change is judged as **Low**, long-term and reversible.

Effect

1.8.64 The visual effect is judged to be **not significant (Minor)**.

Viewpoint 15: B7016 east of Biggar

Table 4.3.17: Viewpoint 15: B7016 east of Biggar	
Grid Reference:	306972, 637590
Figure Number:	4.28
Landscape Character Type:	LCT 210: Undulating Farmland and Hills
Designated Landscape:	Upper Clyde Valley and Tinto SLA
Direction and distance to nearest turbine:	19.2 km
Number of hubs and blades theoretically visible:	5 hubs, 3 blades

1.8.65 This viewpoint is located on the B7016 road east of Biggar and is representative of views from the northeast of the study area. Views from this location are onto the surrounding undulating farmland and curtailed by the surrounding higher ground. Man-made features are limited to the road and top of a telecommunication mast.

Sensitivity

1.8.66 This viewpoint is located within the Upper Clyde Valley and Tinto SLA and is a popular road recreationally, value is considered high. Susceptibility of viewers is also considered high as road users would have an appreciation of the surrounding landscape. Overall sensitivity is judged as **High**.

Magnitude of Change

1.8.67 A total of seven turbines are predicted to be visible above the ridgeline to the southwest, four of which would include hubs, and the remaining turbines limited to blades. The Proposed Development would be an addition to the existing landscape where no wind turbines can presently be seen. No other components of the Proposed Development would be visible from this location. The extent of the view affected would be very small and the size and scale of the change would also be very small on account of the distance and partial screening by landform. Magnitude of change is judged to be **Low**.

Effect

1.8.68 The visual effect is judged to be **not significant (Minor)**.

1.9 Settlement Assessment

1.9.1 A total of two settlements were carried forward for detailed assessment in the following paragraphs.

1.9.2 For this assessment, all settlements are of **High** sensitivity as people at their home attach high value to their existing view and visual amenity and are more susceptible to being affected by changes.

Crawfordjohn

1.9.3 Crawfordjohn is a village located to the west of the M74 motorway / A74 road in South Lanarkshire settled around a juncture of the B740 which passes through the settlement, Manse Road and a minor road leading to the B797 road to the south. Lying at approximately 250 m AOD, the village is surrounded by a series of rounded hills, which along with coniferous shelter belts and a large area of forestry to the south, curtail the distance of views experienced. Properties within the village are mixed orientation with the fronts facing onto adjacent roads and open views to the rear of the surrounding farmland. To the east, some of the turbines of the Clyde wind farm can be seen alongside an overhead transmission pylon breaking the skyline.

Magnitude of Change

1.9.4 The Proposed Development would be seen as turbines that are larger and closer than those of Clyde wind farm in eastward views. The solar array and supporting infrastructure of the Proposed Development would not be visible due to screening by intervening landform. Viewpoint 7 (see **Figure 4.20 a-e, EIAR Volume 3b**) is illustrative of views from the B740 road travelling eastwards towards the village.

1.9.5 The main change to the view would be from an existing view of some turbines seen at a distance on the horizon, to larger turbines at a closer proximity, occupying a larger extent in eastward views. The size and scale of the change would be reduced slightly by intervening landform which would provide screening to the lower sections of turbine towers, gradually rising northwards to provide full and partial screening to the turbines situated in the north of the Site. Although there are existing turbines in the view, it is judged that the magnitude of change would be **High**, long-term and reversible.

Effect

1.9.6 The effect on this settlement is judged to be **significant** (**Major**).

Roberton

1.9.7 Is a village located to the northeast of Abington on Howgate Road and on the junction with the A73 road approximately 3.5 km from the nearest turbine. Lying at approximately 200 m AOD, the village is linear with properties scattered along Howgate Road which is oriented in a northwest to southeast direction above the Roberton Burn. Most properties are situated on the southern side of the burn, with a few located north and close to the junction of the A73 road where the land is flatter. Older properties are tucked into the southern side of the slope for shelter and face northeast experiencing enclosed views by adjacent hillsides, and partially screened visibility to the rear. There are several modern properties that are located further south from Howgate Road that take advantage of the open views to the west. Operational turbines of Clyde wind farm are visible to the south from some properties.

Magnitude of Change

1.9.8 This settlement would receive views of the Proposed Development to the west but would be limited to the turbines only. The solar array and infrastructure of the Proposed Development would be screened by foreground landform. The extent of the turbines visible from properties within the village would vary with the greatest visibility occurring from properties close to the A73 road junction where turbines would be visible between Forside Hill and Pillmore Hill, reducing to the blades of turbines located in the mid to northern part of the Site. Elsewhere, views from properties along Howgate Road wouldl be limited to the blades of turbines, mainly experienced by residents on the southern side of Roberton Burn, such as modern properties where the elevation is greater. A small part of the overall view experienced from properties within the village would be affected by the Proposed Development and the size and scale of the change would be small on account of screening by intervening landform. Magnitude of change is judged to be **High**, long-term and reversible.

Effect

1.9.9 The effect on this settlement area, albeit scattered and with some properties without open views westwards, is judged to be **significant (Moderate)** for properties in the east of the village, and **not significant (Minor)** overall to screening by landform.

1.10 Sequential Views from Routes Assessment

1.10.1 A total of seven routes were carried forward for detailed assessment in the following paragraphs.

M74 motorway

1.10.2 This route is one of the main roads between Scotland and England, passing through the 45 km study area generally in a northwest to southeast direction, extending between Broomhouse in the north, to Abington in the south, and is known as the A74 road south of Abington.

1.10.3 Views from this route are more open with some sections enclosed by roadside embankments. In the north, the landscape is urban in nature and includes views onto several large-scale settlements to the east and west. Gradually south of Hamilton and Motherwell, the landscape changes to farmland interspersed with smaller settlements offering greater visibility to the south. To the south of Cairn Lodge Services, the road rises, and moorland becomes the predominant landcover, some of which has been semi-improved for grazing and views of the Southern Upland hills provides a backdrop to the south. On passing Abington, the landscape surrounding the road becomes much more enclosed by the hills of the Southern Uplands and forestry before opening south of Beattock onto farmland.

1.10.4 Wind turbines are common feature in views from the road, these include smaller scale turbines alongside the road to the south of Motherwell and Hamilton to larger developments within the open plateau and hills to the west including a large cluster around Hagshaw Hill, Douglas West and Galawhistle, and separately Middle Muir Windfarm. Within the Southern Uplands, Clyde wind farm is partially visible within the hills with turbines being seen at different elevations.

Sensitivity

1.10.5 This route passes through the Mid Clyde Valley and Douglas Valley SLAs to the north of the Proposed Development resulting in short sections of higher value, overall, the route is not covered by any national or local landscape designation and value is low. The M74 motorway is a relatively fast road comprising 3 lanes of traffic-oriented north west to south east through the Site and is a major transport route between Scotland and England. Passengers travelling in vehicles are likely to have some appreciation of views but would experience these at high-speed resulting in a low susceptibility. Overall sensitivity is judged as **Low**.

Magnitude of Change

1.10.6 In northbound views, the turbine array would be the most notable feature when travelling north from Abington with the other components becoming much more visible when passing through the Site sequentially. Approximately 3.8 km of views from the motorway would be affected, thereafter, the Proposed Development would be behind the viewer.

1.10.7 When travelling southbound, the turbine array would be the most visible of the components of the Proposed Development and would be viewed from a section of the motorway between Junction 12 (Douglas) and Junction 13 (Abington). Views would vary along the length with south bound vehicles experiencing the turbine array of Middle Muir wind farm to the west and back clothed by Clyde wind farm beyond. The scale and size of the change plus the extent that the proposed turbines occupy in southern views would start as relatively small and would be medium to low within 10 km and increase to large on approaching the Proposed Development. On reaching the Site, the other project components such as the solar PV array, BESS and substation would become visible on either side of the motorway and would be viewed sequentially whilst passing through. Overtime, the substation and BESS would be partially screened by broadleaf woodland planted around the former Thirstone Quarry. A large extent of the view on both sides of the motorway would be affected and the size and scale of the change would be large. Magnitude of change is judged to be **High**, when passing through the Site extending to approximately 5 km in southbound views, thereafter, reducing to **Medium** – **Negligible** levels as the distance increases from 10 – 15 km. The changes in view would be long-term and reversible.

Effect

1.10.8 The effect on this route is judged to be **significant (Major)**, within 5 km reducing to **significant (Moderate)** within 10 k in southbound views, and **not significant (Minor or Negligible)** thereafter.

A702 road

1.10.9 The A702 road links Edinburgh and St John's Town of Dalry and passes through the 25 km study area northeast of Biggar and Drumshinnoch including the villages of Coulter and Lamington, and a variety of landscape within 25 km. Predominantly comprising farmland with extensive views across the landscape to more enclosed views when passing through the Southern Uplands due to the road following a series of narrow valleys. Northeast of Abington the road runs parallel to the West Coast Main Line and Middle Muir and Clyde wind farms can partially be viewed.

Sensitivity

1.10.10 Sections of this road pass through the Upper Clyde Valley and Tinto, Leadhills and Lowther Hills SLAs, and the Thornhill Uplands Regional Scenic Area (RSA) resulting in a higher value, overall, the route is not designated, and value is judged as medium. Susceptibility of viewers is judged as medium, as road users are likely to have some appreciation of the view of the surrounding landscape. Overall sensitivity is judged as **Medium**.

Magnitude of Change

1.10.11 The Proposed Development is predicted to become visible travelling southbound to the northeast of Lamington, increasing in the number of turbines visible southwest of the village. Viewpoint 9, **Figure 4.22 a-f (EIAR Volume 3b)** is representative of the view from this road and shows a total of 20 turbines visible. The turbine array is predicted to become visible to the northeast of Lamington, increasing in the number of turbines visible when travelling southbound. South of Wandel, other project components would become visible such as the solar PV array when approaching Abington occupying the foreground fields to the north and northwest. Magnitude of change is judged as **Medium** within 2 km of the Site, reducing to **Low** and **Negligible** levels as the distance increases, changes would be long-term and reversible. Overtime, some partial filtering of views of the solar PV array would occur as a result of 865 m of new hedgerows which would be planted adjacent to the road. This would provide some filtering of the foreground with the remaining solar PV array being visible above the hedgerow beyond.

Effect

1.10.12 The visual effect is judged as **significant (Major)** within 2 km, reducing to **not significant (Minor and Negligible)** levels as the distance increases.

B740 road

1.10.13 The B740 road extends between the B7078 road and Sanquhar, crossing the Crawick Pass. This road is generally orientated northeast to southwest, is twisting in nature and enclosed by landform as it follows a valley through the Southern Uplands. The farmland in the valley comprises semi-improved pasture in the valley bottom and rough grazing on the adjacent slopes. This is interspersed with small areas of woodland and larger areas of forestry.

Sensitivity

1.10.14 The northern half of this road is within the Leadhills and Lowther Hills SLA, and value is considered high. The susceptibility of the viewers is high as they include residents, cyclists and vehicle users travelling between South Lanarkshire and Dumfries and Galloway. Overall sensitivity is judged as **High**.

Magnitude of Change

1.10.15 Viewpoint 7, **Figure 4.20 a-f (EIAR Volume 3b)** is representative of views from this road. A short section of this road would obtain views between the junction with the B7078 road and Blackburn approximately 850 m in length (within the Site) when travelling southbound. Northbound views would occur to the southwest of Crawfordjohn and are predicted over a 4.6 km stretch of the road with the turbine array being visible intermittently and seen in conjunction with more distant views of Clyde wind farm to the east and southeast, and Middle Muir wind farm to the northwest. Past Crawfordjohn, the turbines would become larger increasing the size and scale of the change and would be entirely visible on leaving the hills and beyond shelterbelt planting at the edge of the Site. Other components visible from this section would include the substation and BESS located in the former Thirstone Quarry, and part of the solar PV array. Overtime, the substation and BESS would be partially screened by broadleaf woodland and scrub planted around the boundary. Magnitude of change is judged as **High** within 4.7 km, **Medium** around Crawfordjohn, and **Low** and **Negligible** levels west of the village.

Effect

1.10.16 The visual effect is judged as **significant (Major)** within 4.3 km, reducing to **significant (Moderate)** around Crawfordjohn and thereafter **not significant (Minor and Negligible)** levels as the distance increases.

B7055 Road

1.10.17 This road is between the A70 road at Rigside, and the A73 road and is orientated in a northwest to southeast direction following a valley around the base of the Tinto Hills. Views tend to follow the direction of travel and across the valley floor to the south of the road. To the north visibility is limited by landform and there is further screening intermittently from forestry adjacent to the road. The landscape comprises semi-improved pasture in the valley to rough pasture on hill sides and the landscape is open.

Sensitivity

1.10.18 This road is located within the Upper Clyde Valley and Tinto Hills SLA and is a popular cycle route and value is considered high. The susceptibility viewers are also considered to be high as users of the road are likely to appreciate the surrounding landscape. Overall sensitivity is judged as **High**.

Magnitude of Change

1.10.19 The turbine array is predicted to be visible to the southwest above the mid-ground hills. Viewpoint 10, **Figure 4.23 a-f (EIAR Volume 3b)** provides a representation of the views obtained from the road. A section of approximately 4.2 km between Greenhill and Tinto End is predicted to receive theoretical visibility of the turbine array. This would vary in number of turbines visible at one time and be seen sky lined above the horizon. The extent of the overall change would be small in comparison to the panoramic views that can be obtained southwards. Due to foreground screening by landform, the size and scale of the change would also be small with turbines being sky lined but mainly limited to blades. Magnitude of change is judged as **Low**, long-term and reversible.

Effect

1.10.20 The visual effect is judged as **not significant (Minor)**.

B7078 road

1.10.21 This road and cycle route NCNR74 runs between Larkhall and Abington and is in a northwest to southeast direction. Views tend to be open onto surrounding rough pasture and hills to the southwest, rising landform to the east and remnants of roadside hedgerows as well as woodland provides some partial screening filtering views, and sometimes screens the M74 motorway which is parallel to the east.

There are several small-scale wind turbines nearby as a well as an overhead electricity transmission line to the east, and a large cluster of wind farms to the southwest including Douglas West, Hagshaw Hill and Galawhistle, and approaching the Southern Uplands to the south, Middlemuir to the east and Clyde to the southeast.

Sensitivity

1.10.22 This viewpoint is located within the Douglas Valley Special Landscape Area (SLA) and a separate cycle lane has been created adjacent to the B7078 road, reflecting the roads being designated as the National Cycle Network Route (NCNR) 74, value is high. Susceptibility of the viewers is also judged to be high as users of the route are likely to appreciate the view, in particular, cyclists. Overall sensitivity is judged as **High**.

Magnitude of Change

1.10.23 Approximately 13.4 km of this route is predicted to receive theoretical visibility of the turbine array. Of this, approximately 5.3 km would pass through the Site. Viewpoints 2 and 3 **Figures 4.15 a-f and 4.16 a-e (EIAR Volume 3b)** are representative of the views obtained from this road. In northbound views, the turbine array would be the most notable feature when travelling north from Abington with the other components becoming much more visible when passing through the Site sequentially. Approximately 5.3 km of views from the road would be affected, thereafter, the Proposed Development would be behind the viewer.

1.10.24 When travelling southbound, the turbine array would be the most visible of the components of the Proposed Development and would be viewed from a section of the road between Lesmahagow and the Site. Views would vary along the length with south bound vehicles experiencing the turbine array to the west of Middle Muir wind farm and back clothed by Clyde wind farm beyond. The scale and size of the change plus the extent that the proposed turbines occupy in southern views would start as relatively small and would be medium to low within 10 km and increase to large on approaching the Proposed Development. On reaching the Site, the other project components would become visible on either side of the road and would be viewed sequentially whilst passing through. This would include the solar PV array, substation and BESS. Overtime, the substation and BESS would become partially screened by broadleaf woodland and scrub planted around the boundary. A large extent of the view on both sides of the road would be affected and the size and scale of the change would be large. Magnitude of change is judged to be **High**, when passing through the Site extending to approximately 5 km in southbound views, thereafter, reducing to **Medium – Negligible** levels as the distance increases from 10 – 15 km. The changes in view would be long-term and reversible.

Effect

1.10.25 The effect on this route is judged to be **significant (Major)**, within 5 km reducing to **significant (Moderate)** within 10 km in southbound views, and **not significant (Minor or Negligible)** thereafter.

West Coast Main Line

1.10.26 This railway is one of the main routes between Scotland and England and generally follows a north to south direction twisting through the South Lanarkshire countryside. Within 25 km, the length of the railway line is approximately 61.8 km in length in total. Views are mainly open over the surrounding farmland with partially to fully enclosed views when passing through railway embankments and the valleys of the Southern Uplands.

Sensitivity

1.10.27 This route passes through the Upper Clyde Valley and Tinto SLA to the northeast of the Proposed Development resulting in short sections of higher value, overall, the route is not covered by any national or local landscape designation and value is low. The railway line is a relatively fast and is a major transport route between Scotland and England. Passengers travelling in vehicles may have some appreciation of views, overall susceptibility is low. Overall sensitivity is judged as **Low**.

Magnitude of Change

1.10.28 The turbine array would be the most noticeable component of the Proposed Development when travelling through the River Clyde valley. Turbines are predicted to be visible from approximately 9.4 km northeast to southeast of the Site. Views of the turbines and solar array when approaching the Site would be intermittent when travelling through cuts but the project components would be close and seen from a relatively short section of the line when travelling at speed. The extent of the view occupied and size and scale of the change to view would also be low. Magnitude of change is judged as **Low** within 1 km, reducing to **Negligible** levels as distance increases. Any changes to the view would be long-term and reversible.

Effect

1.10.29 The visual effect is judged as **not significant (Minor)** within 2 km, reducing to **not significant (Negligible)** levels as the distance increases.

SHT 57: Roberton to Douglas

1.10.30 This SHT crosses moorland and farmland generally in an east to west direction, entering the Douglas Valley in the west. The SHT is in an open landscape affording extensive views across farmland and moorland to the north, east and west, and the outer foothills of the Southern Upland Way to the south. Occasionally, visibility reduces due to the elevation of the footpath resulting in adjacent landform providing screening.

Sensitivity

1.10.31 This route is located partially within the Douglas Valley and Upper Clyde Valley and Tinto SLAs and is a popular footpath resulting in a high landscape value. Susceptibility of viewers is also considered to be high as walkers' attention will be focussed on the surrounding view. Overall, sensitivity is judged as **High**.

Magnitude of Change

1.10.32 The Proposed Development would be visible for much of the SHT with the turbine array being the most visible component, and from a short section of the solar array. The number of turbines visible would vary at Roberton due to a ridgeline which reduces visibility to the top of turbines, and the Douglas Valley in the west where no visibility is predicted. The SHT is located approximately 1.9 km to the closest turbine and the footpath is entirely within 5 km of the Site. The size and scale of the change and extent would be large when travelling in an eastward direction, and less so westwards although walkers may stop to admire the view or take a break. The turbine array would occupy an area of land between Middlemuir wind farm to the west, and Clyde wind farm to the southeast and appear as a separate development. Magnitude of change is judged to be **High** for the majority of the SHT, long-term and reversible.

Effect

1.10.33 The effect on this footpath is judged to be **significant (Major)**.

SHT 58: Douglas to Wanlockhead

1.10.34 This SHT is oriented north to south and extends between Douglas in the north and Wanlockhead in the south. Crossing a variety of landscapes from the enclosed nature of the Douglas Valley in the north, and valleys of the Southern Uplands in the south, much of the route within 5 km of the Site crosses farmland and moorland affording open views. Middle Muir wind farm is located to the west and close to the footpath.

Sensitivity

1.10.35 This viewpoint is located partially within the Leadhills & the Lowther Hills SLA and is a popular footpath resulting in a high landscape value. Susceptibility of viewers is also considered to be high as walkers' attention will be focussed on the surrounding view. Overall, sensitivity is judged as **High**.

Magnitude of Change

1.10.36 The Proposed Development would be close to the footpath resulting in walkers travelling between Middle Muir wind farm and the turbine array for approximately 2.8 km. Most of the footpath within 5 km of the Site would experience close views of the turbine array, and the substation and BESS within the restored Thirstone Quarry, and part of the solar PV array beyond. Over time, the substation and BESS would be partially screened by broadleaf woodland and scrub planted around the boundary. This would be experienced alongside wind farms to the northwest at Hagshaw Hill and Clyde wind farm to the southeast. The size and scale of the change and horizontal extent of the view occupied would be large and magnitude of change is judged **High**, long-term and reversible.

Effect

1.10.37 The effect on this footpath is judged to be **significant (Major)**.

1.11 Summary of Visual Effects

1.11.1 The findings of the above assessments of visual effects are set out in Table 4.3.18.

Table 4.3.18: Summary of Visual Effects

Visual Receptor	Effect
Viewpoints	
VP1: Devonburn Road	Not significant (Minor)
VP2: B7078 Carlisle Road	Not significant (Minor)
VP3: M74 Southbound, B7078 near Parkhead	Significant (Major)
VP4: M74 within Site	Significant (Major)
VP5: Abington Services	Significant (Major)
VP6: Castle Hill	Significant (Major)
VP7: Crawfordjohn	Significant (Major)
VP8: B740 Spango	Not significant (Minor)
VP9: A702 near Hartside	Significant (Moderate)
VP10: B7055 Greenhill	Not significant (Minor)
VP11: Tinto Hill	Significant (Moderate)
VP12: Cairn Table	Not significant (Minor)
VP13: Lowther Hill	Not significant (Minor)
VP14: Culter Fell	Not significant (Minor)
VP15: B7016 east of Biggar	Not significant (Minor)
Settlements	
Crawfordjohn	Significant (Major)
Roberton	Significant (Moderate) and Not Significant (Minor)
Routes	
M74 Motorway	Significant (Major), within 5 km reducing to significant (Moderate) within 10 k in southbound views, and not significant (Minor or Negligible) thereafter.
A702 Road	Significant (Moderate) within 2 km, reducing to not significant (Minor and Negligible) levels as the distance increases.
B740 road	Significant (Major) within 4.3 km, reducing to significant (Moderate) around Crawfordjohn and thereafter not significant (Minor and Negligible) levels as the distance increases.
B7055 road	Not significant (Minor).
B7078 road	Significant (Major), within 5 km reducing to significant (Moderate) within 10 k in southbound views, and not significant (Minor or Negligible) thereafter.
West Coast Main Line	Not significant (Minor) within 2 km, reducing to not significant (Negligible) levels as the distance increases.
SHT 57: Roberton to Douglas	Significant (Major)
SHT 58: Douglas to Wanlockhead	Significant (Major)

References

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Ironside Farrar. (2016) *South Lanarkshire Landscape Capacity Study for Wind Energy*. Available at: https://www.southlanarkshire.gov.uk/download/downloads/id/10362/part_1_sl_landscape_capacity_study_for_wind_turbines_feb16pdf.pdf [Accessed 15th May2024]

Technical Appendix 4.4: Cumulative Assessment

Technical Appendix 4.4: Cumulative Assessment

1.1 Introduction

1.1.1 This Technical Appendix (TA) of the Environmental Impact Assessment Report (EIAR) identifies and assesses cumulative effects on landscape character and visual amenity from the Proposed Development described in **Chapter 2 Development Description (EIAR Volume 2)** within a 25 km study area from the Site.

1.1.2 This Technical Appendix should be read in conjunction with the following:

- **Volume 2: Main Report**;
- **Volume 3a: Figures**;
- **Volume 3b: Visualisations**;
- **Volume 4: Technical Appendices**:
  - TA4.1: Landscape and Visual Impact Assessment Methodology;
  - TA4.2: Landscape Character Assessment;
  - TA4.5: Implications for Designated Landscapes;
  - TA4.6: Aviation Lighting Assessment; and
  - TA4.7: Residential Visual Amenity Assessment.

1.2 Scope of the Cumulative Assessment

1.2.1 Cumulative effects are assessed following the methodology set out in **Technical Appendix 4.1: Landscape and Visual Impact Methodology**. It should be noted that:

- Taking a precautionary approach, the sensitivity of receptors used for the cumulative assessment is taken to be the same as that identified in the LVIA;
- Judgements regarding the magnitude of change include consideration of all the information considered in the LVIA plus consideration of changes to the relationship between wind farms in the cumulative baseline;
- The LVIA considered existing wind farms in the baseline, and therefore represents the 'Existing Scenario'.
- The cumulative assessment considers different cumulative scenarios:
  - **Consented Scenario**: the addition of the Proposed Development in the context of operational, under construction and consented wind farms, i.e. a likely future scenario; and
  - **In-Planning Scenario**: the addition of the Proposed Development in the context of operational, under construction, consented, undetermined planning applications and wind farm developments currently at appeal, i.e. a less certain future scenario.
- The cumulative assessment in this TA considers additional effects as a result of the Proposed Development. In-combination effects of the Proposed Development are set out in the main chapter.

1.2.2 The list of existing wind farms has been set out in Table 4.1 of **Chapter 4: Landscape and Visual Amenity (EIAR Volume 2)** and shown on **Figures 4.9a – b (EIAR Volume 3a)**.

1.2.3 The consented, in-planning, and scoping stage wind farms considered in the cumulative baselines are within approximately 25 km of the Site and are also shown on **Figures 4.9 a – b, (EIAR Volume 3a)**, and listed in Table 4.4.1.

Table 4.4.1: Cumulative Wind Farms

Wind Farm	Number of Turbines	Blade Tip Height (m)	Approximate Distance (between nearest turbines)
Consented			
54. Auldton Farm	1	61	12.8 km
55. Auldtonheights	1	67	10.8 km
56. Birkhill Mill	2	99.9	10.8 km
57. Broken Cross Surface Mine	2	55.7	8.7 km
58. Corra Farm	1	77	11.2 km
59. Crookedstane	4	126.5	12.7 km
60. Douglas West Extension	13	200	8.1 km
61. Glenkerrie Extension	6	100	15.9 km
62. Glenmuckloch	8	149.9	20.5 km
63. Hare Craig	8	230	13.8 km
64. Kennoxhead Phase 2	14	180	10.0 km
65. Kennoxhead Phase 2 (Penbreck Redesign)	8	230	13.0 km
66. Lampits Farm	1	64	18.4 km
67. Lethans	22	220	18.4 km
68. Lion Hill	4	126.5	16.1 km
69. Lochead Extension	3	100	20.6 km
70. Muirhouse Farm	1	51	16.7 km
71. NHS The State Hospital	1	67	18.5 km
72. Priestgill	7	145	4.1 km
73. Redlands Poultry Farm	1	77	19.6 km
74. South Priorhill	1	110.9	17.7 km
75. Whitelaw Brae	14	133.5	16.7 km
In-planning			
44. Bankend Rig III	10	250	19.0 km
45. Bodinglee	37	250	850 m
46. Daer	17	180	19.1 km
47. East Merkland	3	150	21.0 km
48. Grayside	15	200	7.2 km
49. Lethans Extension	10	251	16.7 km
50. Little Gala	7	149	3.5 km
51. Rivox	29	230	19.4 km
52. Rowancraig	6	180	22.7 km
53. Sandy Knowe Extension	6	149.9	23.5 km

Table 4.4.1: Cumulative Wind Farms			
Wind Farm	**Number of Turbines**	**Blade Tip Height (m)**	**Approximate Distance (between nearest turbines)**
Scoping			
76. Glentaggaert	7	250	3.3 km
77. Hagshaw Energy Cluster – Western Expansion – Area A Phase 1	26	230	18.4 km
78. Hagshaw Energy Cluster – Western Expansion – Area B Phase 2	20	230	15.5 km
79. Hagshaw Energy Cluster – Western Expansion – Area C Phase 2	12	230	18.8 km
80. Hawkwood Hill	6	250	18.5 km
81. Oliver Forest	10	250	15.8 km
82. West Andershaw	11	250	4.3 km

1.2.4 In addition, the cumulative assessment also considers Redshaw Substation, a proposed substation adjacent to an existing 400 kV overhead line approximately 600 m to the north of the Site and is currently at Pre-application stage.

1.3 Development Patterns and Scope of Assessment

Existing Scenario

1.3.1 The pattern of existing wind farm development in the study area is one of clusters to the east and west of the M74 motorway, with single, small-scale turbines adjacent to the motorway between Larkhall in the north and Happendon in the south. **Figures 4.9a-b** (EIAR Volume 3a) identifies existed, consented, in-planning and scoping sies within 25 km of the Site.

1.3.2 On high ground between the A71 and A70 roads, and west of the M74 motorway there are several groups of wind turbines associated with agricultural farms with varying heights and turbine models. Further west are three wind farms comprising Bankend Rig, Dungeval and Kype Muir which occupy higher ground. An extension to Kype Muir currently under construction infills a gap between Kype Muir and Dungeval creating the perception of a larger wind farm from the surrounding landscape.

1.3.3 West of Happendon and north west of Douglas there is a cluster of older and more modern developments comprising Cumberhead and extension (the latter currently under construction), Dalquhandy, Douglas West, Galawhistle, and Hagshaw Hill (the latter currently being repowered). From the surrounding landscape there is a perception of these developments forming one large wind farm although from some locations the varying tip heights are noticeable.

1.3.4 South of the A70 road, there is a change in pattern, with less development owing to the complexity of the landform of the Southern Uplands. This results in single developments rather than clusters, usually not visible in their entirety due to screening by landform. The largest of these is Clyde wind farm which is located to the southeast of the Site and to the east and west of the M74 motorway. This site was subsequently extended northwards and follows a series of ridgelines. Other existing wind farms within the southern half of the study area are located to the west of the Site (Middle Muir, Kennoxhead), south west (Sunnyside, Twenty Shilling), and east of Clyde (Glenkerrie).

Consented Scenario

1.3.5 In the Consented Scenario, i.e. with both existing and consented wind farms included in the baseline, there would be a further concentration of turbines around existing sites and clusters discussed previously, the exception to this would be Priestgill which occupies an area between the Site and Clyde wind farm and would appear as a separate development.

In-planning Scenario

1.3.6 The In-planning Scenario, i.e. with existing, consented and in-planning sites in the baseline, Bodinglee and Little Gala would extend turbines closer to the Site creating a larger cluster alongside the Proposed Development although there would be a noticeable difference in layout design between the developments so that they would be read as separate to one another. Within the wider landscape, the in-planning scenario would be similar to that discussed for the Existing and Consented scenario with sites being located around the periphery, or within existing and consented sites creating a much larger cluster of wind turbines. This would include an infilling of the gap between Dungeval and Bankend Rig by Bankend Rig III to the northwest of the Site. Grayside would be located close to the northern edge of Clyde wind farm to the southeast of the Site, Lethans Extension would increase the size of Lethan and Glenmuckloch cluster, and Sandy Knowe Extension to the original Sandy Knowe wind farm all to the southwest of the Site. Rowancraig would form a standalone wind farm to the southwest of the Site and Daer and Rivox would be south of Clyde forming a cluster but separate from Clyde wind farm.

Scoping Scenario

1.3.7 The pattern of scoping sites would generally be in the vicinity of existing, consented and in-planning sites. Glentaggart and West Andershaw would extend Middle Muir wind farm westwards within 5 km of the Site creating a larger cluster of turbines. Within the wider landscape, there would be a concentration of turbines north of Muirkirk with Hagshaw Energy Cluster and Hawkwood Hill further infilling an area between Bankend Rig, Dungeval and Kype Muir. Hagshaw Hill Energy Cluster would also extend turbines further west from Hare Craig. A standalone development, Oliver Forest is located east of Clyde between Glenkerie and Whitelaw Brae. Scoping sites are not assessed due to their early stages of development but are included on **Figures 4.9 a-b (EIAR Volume 3)** for reference.

1.4 Cumulative Effects

1.4.1 The following provides a cumulative assessment of landscape character and visual amenity within the study area.

Cumulative Assessment on Landscape Character Types

LCT 201: Plateau Farmland – Glasgow & Clyde Valley

1.4.2 The Proposed Development would not be located within this LCT which occupies an area between Lesmahagow and Happendon, approximately 7 km to the northwest of the Site.

1.4.3 The LVIA considered the sensitivity of this LCT as **Medium** and concluded that the introduction of the Proposed Development would give rise to a **not significant (Minor)** landscape effect across the LCT.

1.4.4 This relates to the introduction of the Proposed Development to the south which would be visible from the LCT but would not alter the key characteristics of the LCT.

1.4.5 **Consented Scenario**: There would be several new single turbine sites located within this LCT along the M74 motorway between Lesmahagow and Happendon further reinforcing the corridor of turbines in which the motorway passes through. Within the wider landscape, there would be an addition to the existing cluster of wind farms to the southwest. This would not alter the baseline greatly from the Existing Scenario (the LVIA), such as the effects of introducing the Proposed Development would be

essentially the same as those identified in the LVIA. No alteration to the magnitude of change is identified and effects would remain as **not significant (Minor)**.

1.4.6 **In-planning Scenario**: There would be no application sites within this LCT, the main changes to the existing baseline would be associated with visibility of Bodinglee and Little Gala to the south which would be located closer to the LCT. The Proposed Development would be beyond these developments. In this context, the likely effect attributable to the Proposed Development on the character of the LCT would be somewhat less than predicted in the LVIA, but still within the level bracket of low magnitude of change and remain a **not significant (Minor)** effect across the LCT.

LCT 207: Upland River Valley – Glasgow & Clyde Valley

1.4.7 Three units of this LCT are located within 15 km of the Site, the nearest the Duneaton Water partially covers the Site and forms a broadly curving valley west of Crawfordjohn. The other two units are located further to the north west covering the Douglas Water between 4.0 – 12.1 km, and the River Nethan between 10.9 – 16.1 km from the Site.

1.4.8 Approximately 1.0 km of new access track, Turbine 16, 586 solar PV modules and two invertors would be located within this LCT.

1.4.9 The LVIA considered the sensitivity of this LCT as **High** and concluded that the introduction of the Proposed Development would give rise to a **significant (Major)** effect within the Duneaton Water unit due to proximity, reducing to **not significant (Minor)** effect in the other units due to distance and screening by landform.

1.4.10 **Consented Scenario**: No consented sites would be located within this LCT and would be further away resulting in limited influence on its characteristics. One consented site, Priestgill would be closer to the eastern side of the valley on high ground and would be visible within the eastern part of the LCT and north facing valley sides. This site would occupy an area between Clyde wind farm and the Site and would be visible sequentially when passing through the valley from short sections of road resulting in additional turbines in the backdrop seen from some locations. However, the experience of the landscape would continue to be one of partially hosting a wind and solar development and seeing other wind farms in the wider area. This does not alter the baseline greatly from that in the Existing Scenario (the LVIA), such that the effects of introducing the Proposed Development would be essentially the same as those identified in the LVIA. No alteration to the magnitude of change is identified and effects would remain as **significant (Major)** within the Duneaton Water unit, reducing to **not significant (Minor)** in the other two units due to distance and screening by landform.

1.4.11 **In-planning Scenario**: No in-planning sites would be located within the vicinity of this LCT, and effects assessed for the Existing Scenario would remain as described above.

LCT 208: Broad Valley Upland

1.4.12 This LCT covers the Clyde Valley between Douglas, Biggar and Abington and partially covers the Site to the north of Abington.

1.4.13 Approximately 2.4 km of access track, 2,061 solar PV modules, 8 invertors and a temporary storage compound would be located within this LCT.

1.4.14 No Consented sites would be located within or in the vicinity of the River Clyde unit of this LCT. Grayside currently an application site would be visible from a short section of the valley near Lamington on high ground to the south appearing alongside Clyde wind farm and being perceived as part of one larger wind farm. The baseline for each of the scenarios would be similar from that described for the Existing Scenario (the LVIA), such that the effects of introducing the Proposed Development would be essentially the same as those identified in the LVIA.

LCT 209: Upland Glen – Glasgow & Clyde Valley

1.4.15 This LCT occupies two units within 15 km of the Proposed Development, the nearest comprising the River Clyde is partially within the Site, and the Culter Water is located approximately 7.3 km to the east.

1.4.16 Approximately 0.5 km of access track, 138 solar PV modules, 1 invertor and 1 temporary construction compound are located within this LCT.

1.4.17 The LVIA considered the sensitivity of this LCT as **Medium** for the River Clyde unit and **High** for the Culter unit and concluded that the introduction of the Proposed Development would give rise to a **significant (Major)** effect within 5 km due to proximity, reducing to **not significant (Minor)** levels elsewhere in the River Clyde unit as a consequence of distance and screening by landform, and **not significant (Minor)** in the Culter unit due to a lack of visibility predicted, combined with distance.

1.4.18 No Consented or In-planning Scenario sites would be located within or in the vicinity of the River Clyde unit of this LCT. Therefore, there would be no alteration to the baseline from that described for the Existing Scenario (the LVIA), such that the effects of introducing the Proposed Development would be essentially the same as those identified in the LVIA.

LCT 213: Plateau Moorlands – Glasgow & Clyde Valley

1.4.19 Most of the Site is located within this LCT which forms a large area of moorland surrounding the south side of Glasgow.

1.4.20 Approximately 9.1 km of access track, Turbines 1 – 15 and 17 - 22, 1 met mast, 1 substation and two temporary construction compounds would be located within this LCT.

1.4.21 The LVIA considered the sensitivity of this LCT as **Medium** and concluded that the introduction of the Proposed Development would give rise to a **significant** (**Major)** within 4.5 km, reducing to **not significant (Minor)** levels thereafter due to screening by landform.

1.4.22 **Consented Scenario**: Three consented sites would be located within this LCT, these include Kennoxhead Phase 2 including Penbreck Redesign approximately 10.0 km to the west of the Site, and Douglas West Extension approximately 8.1 km to the north west. Due to their distance anddirection from the Site combined with being seen close to existing sites, there would be no alteration to the baseline from that described for the Existing Scenario (the LVIA), such that the effects of introducing the Proposed Development would be essentially the same as those identified in the LVIA.

1.4.23 **In-planning Scenario**: Two in-planning sites, Bodinglee and Little Gala would be located directly to the north of the Site. This would result in additional turbines occupying an area between Happendon and Middle Muir wind farm extending turbines into an area currently unaffected directly. The addition of the Proposed Development would further increase the number of turbines directly affecting the fabric of the LCT as well as being seen indirectly. The experience of the landscape would continue to be one of hosting several renewable energy projects. In this context, the likely effect attributable to the Proposed Development on the character of the LCT would be somewhat less than predicted in the LVIA, but still within the level bracket of High magnitude of change and remain as **significant (Major)** within 4.5 km, reducing to **not significant (Minor)** levels thereafter.

LCT 217: Southern Uplands – Glasgow & Clyde Valley

1.4.24 This LCT is located to the south of the Southern Upland Fault Line encompassing the Lowther Hills and Southern Uplands. The southern side of the Site is partially located within this LCT.

1.4.25 Approximately 0.3 km of access track, 255 solar PV modules and 1 invertor are located within this LCT.

1.4.26 The LVIA considered the sensitivity of this LCT as **Medium** and concluded that the introduction of the Proposed Development would give rise to a **significant (Moderate)** for an area up to 5 km from the Site, and eastwards for 9 km, reducing to **not significant (Minor)** effect as distance increases and from screening by landform.

1.4.27 **Consented Scenario**: Two consented sites, Crookedstane approximately 12.7 and Lion Hill approximately 16.1 to the south east of the Site have received consent and would extend turbines westwards from Clyde wind farm but appearing as part of one larger wind farm. This would result in a limited alteration to the baseline from that in the Existing Scenario (the LVIA), such that the effects of introducing the Proposed Development would be essentially the same as those identified in the LVIA. No alteration to the magnitude of change is identified and effects would remain as identified in the LVIA.

1.4.28 **In-planning Scenario**: Two sites are located within this LCT that are currently in-planning, Daer and Rivox approximately 19.1 and 19.4 km to the south east. Similar to above, the In-planning Scenario would have limited influence on the baseline due to distance from sites located within the wider landscape and intervening landform between the Daer and Rivox sites and the Proposed Development. Therefore, there would be minimal alteration to the baseline from that in the Existing Scenario (the LVIA), such that the effects of introducing the Proposed Development would be essentially the same as those identified in the LVIA. No alteration to the magnitude of change is identified and effects would remain as identified in the LVIA.

LCT 218: Rounded Landmark Hills

1.4.29 This LCT forms a distinct feature of rounded high hills that sits separate from the Southern Uplands, north of the Southern Upland Fault and Clyde Valley between 2.8 – 11.5 km to the north east of the Site.

1.4.30 The LVIA considered the sensitivity of this LCT as **High** and concluded that the introduction of the Proposed Development would give rise to **a significant (Moderate)** landscape effect within 2.8 – 8.4 km, thereafter, reducing to **not significant (Minor)** effect across the LCT.

1.4.31 **Consented Scenario**: No consented developments would be located within this LCT. Within the wider landscape, consented sites would be located further to the west and southeast and seen next to existing wind farms. Therefore, their addition would not alter the baseline greatly from that in the Existing Scenario (the LVIA), such that the effects of introducing the Proposed Development would be essentially the same as those identified in the LVIA. No alteration to the magnitude of change is identified and effects would remain as identified in the LVIA.

1.4.32 **In-planning Scenario**: Two in-planning sites, Bodinglee and Little Gala would be located directly to the north of the Site and closer to the LCT. This would result in additional turbines occupying an area between Happendon and Middle Muir wind farm extending turbines into an area currently unaffected directly. The addition of the Proposed Development would further increase the number of turbines but would be beyond the two application sites. The experience of the landscape would continue to be one of hosting several renewable energy projects. In this context, the likely effect attributable to the Proposed Development on the character of the LCT would be somewhat less than predicted in the LVIA, but still within the level bracket of High magnitude of change and remain as **significant (Major)** within 4.5 km, reducing to **not significant (Minor)** levels thereafter.

Cumulative Effects on Selected Visual Receptors

1.4.33 Below are assessments of additional cumulative effects on the selected viewpoints (as listed above) in the In-planning Scenario.

Viewpoints

1.4.34 A review of viewpoints potentially affected by changes in cumulative relationships in the scenario baselines, is set out in Table TA4.4.2. Reference can be made to cumulative wirelines for each viewpoint (see **Volume 3b: Visualisations**, and to the paired ZTVs (**Figure 4.11 and 4.12, EIAR Volume 3a)**.

Table 4.4.2: Cumulative Viewpoint Assessment

Viewpoint	LVIA findings (Existing Scenario)	Review of Consented Scenario	Review of In-planning Scenario
VP1: Devonburn Road	**Not significant (Minor)**	Consented sites are predicted to the south and southeast forming part of the existing Hagshaw Hill and Douglas West cluster. The Proposed Development t would be viewed beyond Broken Cross Energy Project and occupy a small part of the overall view. Therefore, there would be no alteration to the baseline described for the Existing Scenario and the effect would remain the same.	Bodinglee and West Gala sites would be visible to the south and much more prominent due to their closer proximity to the viewpoint and less influence of landform screening. Bodinglee would also extend turbines westwards of the M74 motorway towards Middle Muir Wind Farm The Proposed Development would extend turbines eastwards but would be less prominent than the In-planning Scenario due to screening by landform and distance. In this context, the likely effect attributable to the Proposed Development would be somewhat less than predicted in the LVIA, but still within the level bracket of **not significant (Minor).**
VP2: B7078 Carlisle Road	**Not significant (Minor)**	Birkhill Mill would feature in close views to the south and Douglas West further away to the southeast alongside the Hagshaw Hill Phase 2, Galawhistle and Douglas West cluster. The Proposed Development would be more distant and partially screened by landform and roadside trees. There would be no alteration to the baseline described for the Existing Scenario and the effect would remain the same.	Like Viewpoint 1, Bodinglee and West Gala would be visible to the south and much more prominent due to their closer proximity to the viewpoint and less screening by intervening landform. The Proposed Development would be seen beyond this but not include as many turbines as visible in Viewpoint 1 because of screening by landform. In this context, the likely effect attributable to the Proposed Development would be somewhat less than predicted in the LVIA, but still within the level bracket of not significant (Minor).
VP3: M74 Southbound, B7078 near Parkhead	**Significant (Major)**	No Consented sites predicted to be visible. No change to the baseline for Existing Scenario.	Bodinglee would be visible to the south and much more prominent due to their closer proximity to the viewpoint. The Proposed Development would extend turbines in the view westwards but would be less prominent than the In-planning sites with some screening by landform. In this context, the likely effect attributable to the Proposed Development would be somewhat less than predicted in the LVIA, but still within the level bracket of significant (Major).
VP4: M74 within Site	**Significant (Major)**	The consented Priestgill would be visible in front of Clyde wind farm appearing as part of the same development.	Bodinglee and West Gala would be visible to the north. The Proposed Development would be within the foreground and prominent given the viewpoint is located within the Site.

Table 4.4.2: Cumulative Viewpoint Assessment

Viewpoint	LVIA findings (Existing Scenario)	Review of Consented Scenario	Review of In-planning Scenario
			The effect assessed for the Existing Scenario would remain as significant (Major).
VP5: Abington Services	**Significant (Major)**	The tips of 2 of Priestgill turbines would be visible to the south east and seen in context with Clyde wind farm of which it would be perceived as. A significant (Major) effect is predicted from this location and the slight change to the baseline view is not considered to alter the assessment.	Bodinglee would be partially seen to the north resulting in additional turbines being visible, albeit occupying a small extent of the view. The addition of the Proposed Development to this baseline would result in close views of turbines within the foreground. Bodinglee would be viewed beyond and appear as part of the same development. The effect would remain as significant (Major) assessed previously.
VP6: Castle Hill	**Significant (Major)**	Priestgill would be partially visible from this location to the north east. and seen within the existing context of Clyde wind farm to the east, and Middle Muir to the north west. This would slightly alter the baseline assessed for the Existing Scenario, but the overall effect would remain as significant (Major) due to proximity.	The addition of Bodinglee and Little Gala would extend turbines across the landscape to the north and overlap with Middle Muir. The Proposed Development would be viewed in the foreground of several large wind farms but appearing as a separate development. Due to proximity to the Site, a significant (Major) is assessed.
VP7: Crawfordjohn	**Significant (Major)**	The tips of Priestgill would be visible from this location but appear as part of Clyde wind farm which is also partially visible from this location. This would provide a slight alteration to the baseline, but the effect would still be judged as significant (Major) on account of the extent of the horizon westwards that would be occupied by the Proposed Development.	The blade tips of Bodinglee would be visible to the east but would have minimal alteration to the baseline described previously and the effect is still judged to be significant (Major)
VP8: B740 Spango	**Not significant (Minor)**	No consented sites would be visible from this location.	Little Gala and Bodinglee would be visible to the northeast but would occupy a small part of the overall view obtained and be screened by landform. This would lead to a slight alteration to the baseline, but the effect would remain as not significant due to distance and screening by landform after the addition of the Proposed Development.
VP9: A702 near Hartside	**Significant (Moderate)**	No consented sites would be visible from this location.	No in-planning sites would be visible from this location.
VP10: B7055 Greenhill	**Not significant (Minor)**	No consented sites would be visible from this location.	Bodinglee and Little Gala would be seen to the southwest and would be more prominent than other developments visible occupying a large part of the horizon. The addition of the Proposed Development to this baseline would extend wind turbine development across the landscape albeit visibility of turbines would be reduced to a few hubs and blades by screening from intervening landform, and the effect is judged as not significant (Minor).

Table 4.4.2: Cumulative Viewpoint Assessment

Viewpoint	LVIA findings (Existing Scenario)	Review of Consented Scenario	Review of In-planning Scenario
VP11: Tinto Hill	**Significant (Moderate)**	Priestgill would occupy an area of land in front of Clyde wind farm but would appear as part of the overall grouping of Clyde turbines. This would result in a very limited alteration to the baseline and the effect is judged as significant (Moderate) on account of the elevated and relatively close views of the Proposed Development experienced from the summit.	The addition of Bodinglee and Little Gala would result in further views of turbines to the south west and would be much more prominent in views due to their closer proximity. The addition of the Proposed Development to this baseline would extend turbines eastwards in the view. This is judged to remain as significant (Moderate) as the turbine array would be further away from the viewpoint location in comparison to the application sites and less prominent in views.
VP12: Cairn Table	**Not significant (Minor)**	Priestgill would be seen within Clyde wind farm appearing as part of the same development and the Douglas West Extension further to the north as part of the Hagshaw Hill Phase 2, Galawhistle and Douglas West cluster. There would be minimal alteration to the baseline. The not significant (Minor) effect would remain for this scenario.	Bodinglee and Little Gala would extend turbines further north from Middle Muir and Clyde and occupy the foreground in front of Tinto. The addition of the Proposed Development to this baseline would increase the density of turbines between the in-planning sites and Clyde. Due to distance and the context of the view which includes several wind farms at a similar distance, the effect would remain as significant (Minor).
VP13: Lowther Hill	**Not significant (Minor)**	Priestgill would extend turbines northwards from Clyde wind farm and occupy a small part of the overall view obtained from this location. Douglas West Extension, Broken Cross Surface Mine and Birkhill would be seen further to the north at distance and form part of a larger cluster of wind farms. This would result in a very minor alteration to the baseline and the effect would remain as not significant (Minor).	Bodinglee and Little Gala would be viewed to the north creating a new separate cluster of turbines east of Middle Muir. The addition of the Proposed Development to this baseline would result in a denser cluster of turbines would not extend turbines in views to the north. In this context, the likely effect attributable to the Proposed Development would be somewhat less than predicted in the LVIA, but still within the level bracket of not significant (Minor).
VP14: Culter Fell	**Not significant (Minor)**	Priestgill would be seen within Clyde wind farm appearing as part of one larger development and Douglas West extension and Birkhill Mill further to the north but at distance. There would be limited alteration to the baseline. The effect would remain as not significant (Minor).	Bodinglee and Little Gala would extend turbines northwards from Middle Muir in views from this location. The addition of the Proposed Development to this baseline would result in a denser cluster of turbines. In this context, the likely effect attributable to the Proposed Development would be somewhat less than predicted in the LVIA, but still within the level bracket of not significant (Minor).
VP15: B7016 east of Biggar	Not significant (Minor)	Priestgill would be partially visible above the ridgeline to the north west of Clyde wind farm which is also seen from this location in a similar context with both developments appearing as one single wind farm. The extent of Priestgill visible would be small and the change in baseline view would be limited, resulting in no change to the not significant (Minor) effect assessed for the Existing Scenario.	No in-planning sites would be visible from this location.

Settlements

1.4.35 **Crawfordjohn**: The LVIA (Existing Scenario) concluded that the Proposed Development would have a **significant (Major)** effect on the settlement of Crawfordjohn which lies 2.1 km west of the Site. This is due to the extent that the turbines would occupy on the ridgeline to the west of the village. No other consented, in-planning, or scoping sites are predicted to be visible from the settlement. Therefore, there would be no alteration to the baseline assessed for the Existing Scenario and magnitude of change and effect would remain the same as that assessed in the LVIA.

1.4.36 **Roberton**: This settlement is located 3.5 km east of the Site and the LVIA (Existing Scenario) concluded that the southern pat of the village and houses in elevated locations above the Roberton Burn would receive a **significant (Moderate)** effect as a result of the Proposed Development, reducing to **not significant (Minor and Negligible)** effect elsewhere in the village due to screening by landform.

1.4.37 The baseline for the Consented Scenario would be similar to the Existing Scenario as consented sites would be generally further away and associated with existing clusters of wind farms. The exception to this would be Priestgill which is located to the south east and would be visible from the same locations predicted to have views of the Proposed Development. The addition of the Proposed Development to this baseline would extend turbines further north in views from the areas of village described above. Views of the Proposed Development and Priestgill would be partially screened by landform and further away from the village and it is not judged that there would be an increase in magnitude on account of this. Therefore, a **significant (Moderate)** effect would remain for areas of the village where both developments would be visible.

1.4.38 In-planning sites would be limited to Bodinglee which would introduce turbines in views to the northwest above the horizon. The addition of the Proposed Development to this baseline would extend turbines southwards across the horizon to the west. However, turbines would be partially screened by intervening landform which would reduce their prominence in the view and appear as part of the Bodinglee development. For this reason, the effect remains as **significant (Moderate)** for the eastern part of the village and elevated properties above the Roberton Burn, and elsewhere **not significant (Negligible)** levels due to screening.

Routes

1.4.39 The sequential experiences along routes through the study area that may be affected by cumulative relationships in each scenario are set out in Table 4.4.3.

Table 4.4.3: Cumulative Route Assessment

Route	LVIA findings (Existing Scenario)	Review of Consented Scenario)	Review of In-planning scenario
M74 Motorway	**Significant (Major)**, within 5 km reducing to **significant (Moderate)** within 10 km in southbound views, and **not significant (Minor or Negligible)** thereafter.	The paired ZTV (**Figure 4.11**) indicates that for the majority of this route, only the Proposed Development would be visible from the M74 motorway, with Priestgill becoming visible as receptors pass through the Site where the turbine array would be prominent. Therefore, there would be minimal change in terms of the baseline view experienced and the effect remains as significant (Major) within 5 km, and (Moderate) in 10 km, thereafter, reducing to not significant levels (Negligible).	Bodinglee and Little Gala would extend turbines northwards from Middle Muir in views from the motorway with turbines viewed on either side. The addition of the Proposed Development to this baseline would result in a denser cluster of turbines and would be visible in combination for much of the route between Happendon and Abington. In this context, the likely effect attributable to the Proposed Development would be somewhat less than predicted in the LVIA, but still within the level bracket of not significant (Minor).
A702 Road	**Significant (Major)** within 2 km, reducing to **not significant (Minor and Negligible)** levels as the distance increases.	The paired ZTV (**Figure 4.11**) indicates that the Proposed Development would be visible from a short section of this route to the north of Abington, this would also include successive views of Priestgill. The difference in baseline would be very small and it is not considered that the effect would change from significant (Major) within 2 km, reducing to not significant (Minor and Negligible) levels thereafter.	The paired ZTV (**Figure 4.12**) indicates that the Proposed Development would be visible from a short section of this route to the north of Abington, where the in-planning sites would be set-back from the road and partially screened by intervening landform. The difference in baseline would be very small and it is not considered that the effect would change from significant (Major) within 2 km, reducing to not significant (Minor and Negligible) levels thereafter.
B740 road	**Significant (Major)** within 4.3 km, reducing to **significant (Moderate)** around Crawfordjohn and thereafter **not significant (Minor and Negligible)** levels as the distance increases.	The paired ZTV (**Figure 4.11**) indicates that the eastern half of this route would receive theoretical visibility of the Proposed Development. This would be combined with Priestgill for a short section of the road south west of Crawfordjohn and be partially visible alongside Clyde wind farm. Therefore, there would be minimal change in terms of the baseline view experienced and the effect remains as significant (Major) within 4.3 km, reducing to not significant levels (Negligible).	Bodinglee and Little Gala would extend turbines northwards and Figure 4.12 suggest that this would be from two thirds of the route although in reality turbines would be partially visible from a section of the road south of Crawfordjohn. The addition of the Proposed Development to this baseline would result in additional turbines visible within the valley. In this context, the likely effect attributable to the Proposed Development would be somewhat less than predicted in the LVIA, but still within the level bracket assessed for the previous two Scenarios.
B7055 road	**Not significant (Minor).**	The paired ZTV (**Figure 4.11**) indicates that the western side of the road would receive combined theoretical visibility with Priestgill which would be seen alongside Clyde appearing as one development, and from the eastern side of the route the Proposed Development only. There would be minimal alteration to the baseline assessed for the Existing Scenario and the effect would remain as not significant (Minor).	**Figure 4.12** shows Bodinglee and Little Gala would be extending turbines northwards towards this road and would be prominent in southward views**.** The Proposed Development would be seen beyond these developments occupying less of the view southwards. In this context, the likely effect attributable to the Proposed Development would be somewhat less than predicted in the LVIA, but still within the level bracket assessed for the previous two Scenarios.
B7078 road	**Significant (Major)**, within 5 km reducing to **significant (Moderate)** within 10 k in southbound views, and **not significant (Minor or Negligible)** thereafter.	The paired ZTV (**Figure 4.1**1) indicates that for the majority of this route, only the Proposed Development would be visible with Priestgill becoming visible from the route to the north west of the Site and as the receptor passes through in a southbound direction. Therefore, there would be minimal change in terms of the baseline view experienced and the effect remains as significant (Major) within 2 km, thereafter, reducing to not significant levels (Negligible).	Bodinglee and Little Gala would extend turbines northwards from Middle Muir in views from the road with turbines viewed on either side. The addition of the Proposed Development to this baseline would result in a denser cluster of turbines and would be visible in combination for much of the route between Happendon and Abington. In this context, the likely effect attributable to the Proposed Development would be somewhat less than predicted in the LVIA, but still within the level bracket assessed for the previous two scenarios.
West Coast Main Line	**Significant (Major)** within 2 km, reducing to **not significant (Minor and Negligible)** levels as the distance increases.	The paired ZTV (**Figure 4.11**) indicates that the Proposed Development would be visible from a short section of this route to the north and south of Abington, this would also include successive views of Priestgill for a shorter section north of Abington. The difference in baseline would be very small and it is not considered	The paired ZTV (Figure 4.12) indicates that the Proposed Development would be visible from a short section of this route to the north of Abington, where the in-planning sites would be set-back from the railway line and partially screened by intervening landform. The difference in baseline would be very small and it is not considered that the effect would change from significant (Major) within 2 km, reducing to not

Table 4.4.3: Cumulative Route Assessment			
Route	**LVIA findings (Existing Scenario)**	**Review of Consented Scenario)**	**Review of In-planning scenario**
		that the effect would change from significant (Major) within 2 km, reducing to not significant (Minor and Negligible) levels thereafter.	significant (Minor and Negligible) levels thereafter.
SHT 57: Roberton to Douglas	**Significant (Major)**	The paired ZTV (**Figure 4.11**) indicates that for the majority of this route, Priestgill would be viewed in combination with the Proposed Development when travelling southbound. Priestgill would be viewed in the context of Clyde and appear as part of the same development set back from the route. The effect would remain as significant (Major) for this route.	This route would pass through Little Gala and would also experience close views of Bodinglee. Close views of the Proposed Development would also be seen in combination for much of the route above the Douglas valley as shown of **Figure 4.12**. In this context, the likely effect attributable to the Proposed Development would be somewhat less than predicted in the LVIA, but still within the level bracket assessed for the previous two scenarios.
SHT 58: Douglas to Wanlockhead	**Significant (Major)**	The paired ZTV (**Figure 4.11**) indicates that for the majority of this route, Priestgill would be viewed in combination with the Proposed Development when travelling south from Douglas. Priestgill would be viewed in the context of Clyde and appear as part of the same development set back from the route, and nearby Middle Muir. The effect would remain as significant (Major) for this route.	This route would pass through Bodinglee and would also experience close views of Little Gala. Close views of the Proposed Development would also be seen in combination for much of the route above the Douglas valley as shown of **Figure 4.12** alongside Middle Muir. In this context, the likely effect attributable to the Proposed Development would be somewhat less than predicted in the LVIA, but still within the level bracket assessed for the previous two scenarios.

1.5 Summary of Assessment of Additional Cumulative Effects

1.5.1 As identified in Table TA4.4.1 and shown on **Figures 4.9 a-b, EIAR Volume 3a**) there are wind energy proposals that would increase wind farm development in the wider landscape through the enlargement of existing turbine groups and introduction of new turbine groups. Proposals for larger numbers of turbines tend to be further northwest, those further south tend to be for fewer numbers of turbines. Most proposals are for larger turbines than those existing.

1.5.2 In the Consented Scenario, Priestgill will not alter the pattern of development around Clyde. The introduction of the Proposed Development would therefore have similar effects to those identified for the Existing Scenario in the LVIA (i.e. no change in findings of effect).

1.5.3 In the In-planning Scenario, Little Gala and Bodinglee would result in a new cluster of turbines north east of Middle Muir, bringing turbines closer to the Site. Cumulative effects are most likely to occur for receptors between Happendon and Abington.

1.5.4 There are no instances in which the effects of the Proposed Development in the context of those wind farms are judged to be increased above the LVIA finding.

1.6 References

NatureScot (2020) *Guidance - Assessing the cumulative landscape and visual impact of onshore wind energy developments* Available from: https://www.nature.scot/doc/guidance-assessing-cumulative-landscape-and-visual-impact-onshore-wind-energy-developments [Accessed 28h May 2024]

Technical Appendix 4.5: Implications for Designated Landscapes

Technical Appendix 4.5: Implications for Designated Landscapes

1.1 Introduction

1.1.1 This Technical Appendix (TA) of the Environmental Impact Assessment Report (EIAR) identifies and assesses Designated Landscapes within a 15 km study area from the Site. This TA sets out how conclusions were drawn with respect to effects on Special Landscape Areas (SLA).

1.1.2 The policy context as set out in National Planning Framework[1] (NPF4) in relation to local landscape areas is Policy 4 (Natural places). It sets out the following in relation to local designated areas:

'd) 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.'

1.1.3 In order to be able to assess the potential effect of the Proposed Development on designated areas, it is necessary to understand the '*special qualities of the area and the reasons for designation*' and this effectively provides the '*baseline*'. The baseline was informed by the Landscape Character Assessment (see TA4.2) and by the review of local landscape designations as set out in:

- South Lanarkshire Validating Local Landscape Designations (Ironside Farrar, 2010)[2].

1.1.4 Analysis of Zone of Theoretical Visibility (ZTV) mapping established which of the designated landscapes within 15 km of the Proposed Development could potentially be affected, followed by verification on site and an assessment of each designated landscape considered.

1.1.5 Part of the southern extent of the Site is located within the Leadhills and Lowther Hills Special Landscape Area (SLA) which has been included in the LVIA. The remaining part of the Site is not subject to any statutorily or nationally protected landscape-based designations. The eastern side is abutted by the Upper Clyde Valley and Tinto SLA.

1.1.6 Analysis of the ZTV identified a further three locally designated landscape areas with theoretical intervisibility of the Proposed Development which are briefly considered in the LVIA, as follows:

- Middle Clyde Valley SLA – 10.5 km to the northwest;
- Upper Clyde Valley SLA – abuts to the southeastern boundary of the Site; and
- Douglas Water SLA – 2.1 km to the northwest.

1.1.7 This TA is supported by the following volumes of the EIAR:

- Volume 2: Main Report;
- Volume 3a: Figures;
- Volume 3b: Visualisations;
- Volume 4: Technical Appendices.

1.2 Implications of the Findings of the LVIA

Leadhills and Lowther Hills SLA

1.2.1 This local level landscape designation is identified by South Lanarkshire Council (SLC) and is located to the immediate south west of the Site. The South Lanarkshire Validating Local Landscape Designations (Ironside Farrar, 2010) Report, Figure 6vi, identifies that the significance of the designation arises from its 'special qualities' as follows:

"The significance of the Leadhills / Lowther Hills area arises from:

- *"an extensive area of high, smooth, rolling, hills and varied upland glens with a sense of emptiness engendered by a lack of extensive forestry or windfarm development;*
- *cultural features include the mining heritage surrounding Leadhills and remains of settlements on the sides of glens;*
- *extensive areas of rough grassland and heather moorland vegetation;*
- *the Southern Upland Way and other walking routes accessible via the M74 and main roads passing through to the west; visitor attractions at Leadhills and fishing on the Daer reservoir."*

1.2.2 Approximately 328 ha of the Proposed Development site falls within most northerly part of the designated area and this includes Black Hill 385 m Above Ordnance Datum (AOD). Two turbines (T20 and T22), two hardstanding's, 1.4 km of access track, 463 solar panels, a borrow pit search area and two inverters are located within this 328 ha of the Leadhills and the Lowther Hills SLA designation.

1.2.3 The landscape description of the SLA (page 19) places the area as part of the Lowther Hills range which in itself is part of the 'Southern Uplands Landscape Character Type (LCT) which extends into Dumfries and Galloway. This is characterised by steep hills with smooth rolling summits in contrast with the lower moors and plateaus to the north and west. Distinctive' glacial valleys with steep slopes, crags, screes and waterfalls are largely derived from the underlying geology and glacial erosion. These features are in common with the general character of the Southern Uplands LCT. Because of the introduction of extensive coniferous forestry and of windfarms, parts of the Southern Uplands LCT have been redefined as 'sub' types such as for example Southern Uplands with Forestry. This refinement demonstrates the dynamic and evolving or changing nature of our landscapes.

1.2.4 Special qualities of this SLA include lack of extensive forestry or windfarm development which engenders a sense of emptiness. The mining heritage associated with the small-scale mining industry readily visible around Leadhills, is one of the special qualities attributed to the SLA.

1.2.5 Turbines of the Proposed Development located outside, and turbines within the SLA are visible from a relatively large part of the SLA.

1.2.6 The ZTV indicates that theoretical visibility of the turbine array is relatively widespread in the northern part of the SLA, within 4 km of the Proposed Development. As a result of this visibility, the Proposed Development would reduce the *'sense of emptiness'* in the northeastern part of the SLA as identified in the special qualities. However, it should be noted that views of wind farms are already a feature from the SLA and include Middle Muir and Clyde Wind Farm nearby. The combination of visibility of the

[1] Scottish Government (2023) National Planning Framework 4. Available from: https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2023/02/national-planning-framework-4/documents/national-planning-framework-4-revised-draft/national-planning-framework-4-revised-draft/govscot%3Adocument/national-planning-framework-4.pdf [Accessed 17th August 2024]

[2] Ironside Farrar. (2010) South Lanarkshire Validating Local Landscape Designations. Available from: https://www.southlanarkshire.gov.uk/downloads/file/4147/landscape_designations_report_november_2010 (Accessed: 27th May 2024)

Proposed Development with Middle Muir and Clyde effectively creates the boundary of the designated area. Neither Clyde nor Middlemuir have given rise to further amendments of the SLA.

1.2.7 The ZTV illustrates that theoretical visibility reduces to an area along the Duneaton Water and Shar Water, from the summits and north facing slopes, and a ridgeline extending between Louisie Wood and Lowther Hill within 10 km. Beyond this, theoretical visibility is predicted to reduce substantially and be limited to the summits of Comb Hill 645 m AOD, Rodger Law 688 m AOD, Ballencleuch Law 689 m AOD, and Whiteside Hill 554 m AOD.

1.2.8 No other special qualities, cultural artefacts, extensive moorland etc are impacted upon and whilst there is some loss of the sense of emptiness in the northeastern part of the SLA, this does not substantively affect the integrity of the designation. The special qualities are not present in equal measure across the designated area. For this reason, the assessment concludes a a not significant (Minor) overall effect.

Middle Clyde Valley SLA

1.2.9 This SLA is located approximately 10.5 km at its closest point to the northwest of the Site.

1.2.10 The reason for designation is cited as:

"The significance of the Middle Clyde Valley lies in a combination of landscape qualities and uniquely important sites:

- *scenic qualities in the combination of large valleys surrounding major rivers; enclosure contrasting with the surrounding farmlands; dramatic gorges; extensive woodland; shelter and tranquillity;*
- *cultural features, including New Lanark World Heritage Site; designed landscapes; historic buildings and settlements; extensive semi-natural woodlands; meadows and a high-quality water environment;*
- *accessibility to urban and local populations via footpaths, walkways, minor roads and the A72 tourist route."*

1.2.11 The ZTV indicates the turbine array would theoretically be visible from large parts of the SLA but at distances greater than 10.5 km. Actual visibility will be very substantially less for the turbines and negligible for the solar component the solar elements and further reduced by woodland and built development within the SLA.

1.2.12 Any effect on the special qualities of this SLA would be indirect and whilst there will some visibility of the Proposed Development from areas within the SLA, neither the reasons for designation or the integrity of the designation will be affected.

Upper Clyde Valley and Tinto SLA

1.2.13 This SLA abuts the Site to the east and covers a large part of the north eastern side of the study area. Prior to the review of local landscape designations, this area formed part of the Regional Scenic Area. This RSA also included what is now the Leadhills and Lowther Hills SLA. The RSA included a very extensive area of the Southern Uplands which at the time of the review was under development with Clyde windfarm. The presence of Clyde, major transmission grid infrastructure, the west coast main railway and the M74 have been named as reasons for no longer meeting the requirements for designation as SLA.

1.2.14 The reason for designation is cited as:

"The key qualities include:

- *scenic qualities of a meandering river in a broad semi-upland valley setting that contrasts with the enclosing hills of the Southern Uplands and the prominent Tinto Hill;*
- *cultural features include country houses set in designed policies, small settlements and the historic burgh of Biggar in the valley and many signs of prehistoric settlement in the hills;*
- *a network of mature policy woodlands and shelterbelts, a high quality water environment and vast areas of heather moorland and rough grasslands;*
- *frequently visited, as it traversed by major transport routes to the south and includes popular hillwalking destinations such as Tinto Hill and Culter Fell."*

1.2.15 The ZTV indicates that theoretical visibility of the turbine array and to a lesser extent visibility of the solar array would be extensive within 6 km from the Site. Likely visibility is indicated from within the River Clyde Valley and from the high ground to the south, and the prominent summits of Dungavel Hill 510 m AOD and Tinto Hill 711 m AOD to the north east.

1.2.16 Potential effects on the special qualities would be indirect and could be associated with views from within the SLA to the areas outside the boundary of the SLA. The Proposed Development would be viewed to the east of Middle Muir Wind Farm and experienced in the context of other nearby wind farms mainly from a localised area within the River Clyde Valley and from elevated areas of the Tinto Hills. The turbine array would be seen against the *'enclosing hills of the Southern Uplands'* to the south but in the context of other wind farm development.

1.2.17 Overall, the special qualities of the SLA are not considered to be compromised by the addition of the Proposed Development to the landscape beyond the designation boundary.

Douglas Water SLA

1.2.18 This SLA is located 2.1 km to the northwest of the Proposed Development and covers the Douglas Water.

1.2.19 The reasons for designation are cited as:

"The significance of the Douglas Water relates to a combination of scenic and cultural features:

- *scenic compositional qualities of a meandering upland river passing through sheltered, mature pastoral landscape enclosed by moorland hills;*
- *cultural features include the designed landscape of Douglas Castle and the historic village of Douglas together and their historic associations with the Douglas family, the Cameronians regiment and literary associations with Sir Walter Scott;*
- *a network of mature policy woodlands and shelterbelts and a high quality water environment;*
- *frequently visited, as the M74 passes through the eastern end of the designated area and intersects with the main east-west route of the A70 which passes along the valley. The village and castle are visitor designations with well maintained footpaths through the designed landscape."*

1.2.20 Due to the landform of the river valley, theoretical visibility is predicted to be limited to the upper parts of both sides of the valley covering the summits and south facing slopes some of which are forested, on the north side of the valley facing the Proposed Development, and in the southern periphery of the designation including Earls Hill 329 m AOD and Pagie Hill 388 m AOD.

1.2.21 Potential effects on the special qualities of the designation would be indirect and from a limited area along the periphery. The special qualities listed above tend to focus features and perceptual experience from within the valley rather than the periphery. The addition of the Proposed Development to the landscape would not compromise these special qualities on account of screening by landform, and forestry and woodland. Areas of the SLA affected would experience the Proposed Development alongside Middle Muir Wind Farm.

1.3 References

Ironside Farrar. (2010) *South Lanarkshire Validating Local Landscape Designations*. Available from: https://www.southlanarkshire.gov.uk/downloads/file/4147/landscape_designations_report_november_2010 (Accessed: 27th May 2024)