June 2026

Environmental Appraisal Report

Woolfords Wind Farm - Tip Height Increase

Technical Appendix 5-1: Landscape and Visual Assessment

Woolfords Wind Energy Ltd

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Document Prepared For

Ewan Eley
Woolfords Wind Energy Ltd

Document Prepared By

Nigel Buchan
Landscape Consultant
planning@atmosconsulting.com

Document Approved By

Malcolm Sangster
Technical Director
planning@atmosconsulting.com

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1.1	May 2026	Original Issue
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Executive Summary

The Proposed Development would be sited within the moorland plateau, immediately adjacent to Longhill Burn and Pates Hill wind farms.

Large forest plantations on rising ground provide extensive screening, limiting the prominence of the turbines in views from the north. More open views are possible from the south, although rising ground would screen tracks and ancillary structures from views in this direction.

In most views, the Proposed Development would appear to form an extension to Longhill Burn, having a similar landscape context, scale and rotation speed. This would help to minimise the landscape and visual effects of the Proposed Development.

Cumulative effects would be similarly minimised, as the Proposed Development would appear to form part of the cluster that includes Longhill Burn and the consented Heathland resubmission, which would lie immediately to the south of Longhill Burn.

Consequently, this Landscape and Visual Appraisal (LVA) has found that moderate-major effects would be limited to landscape and visual receptors lying within 2.5km of the Proposed Development.

These are described in more detail in Technical Appendix 5-1-1 and summarised below.

Landscape Effects

Construction

Moderate short-term effects are predicted on the landscape elements and features of the Proposed Development site and on immediately surrounding parts of the Plateau Moorlands (Glasgow & Clyde Valley) Landscape Character Type (LCT) and Upland Fringes (Lothians) LCT during the construction period.

Operation

The Proposed Development is not predicted to affect the integrity of any designated landscape by detracting from the qualities for which it has been designated. Moderate-major effects are predicted on the parts of the Plateau Moorlands LCT immediately surrounding the Proposed Development and moderate effects on parts of the Plateau Farmland LCT lying within 2.5km. Effects on LCTs elsewhere within the study area, are predicted to be moderate-minor or less.

Visual Effects

Construction

Residents of dwellings within 2.5km would experience very short-term moderate visual effects due to the presence of cranes. Elsewhere, visual effects during construction are predicted to be moderate-minor or less.

Operation

Moderate-major effects are predicted for residents of Woolfords, and for several individual dwellings lying within 2km of the Proposed Development (see Residential Visibility Amenity Assessment (RVAA)). Residents of Tarbrax with views of the Proposed Development would experience moderate effects. Elsewhere, visual effects for residents are predicted to be moderate-minor or less.

Moderate visual effects are predicted for rail users on the West Coast Main Line travelling north and within 2.5km of the Proposed Development. Visual effects from other road and rail routes are predicted to be moderate-minor or less.

Cumulative effects

Cumulative Landscape effects

The Proposed Development is not predicted to affect the integrity of any designated landscape by detracting from the qualities for which it has been designated.

Moderate-major cumulative effects are predicted on the parts of the Plateau Moorlands LCT immediately surrounding the Proposed Development; and moderate effects on parts of the Plateau Farmland LCT lying within 2.5km. Cumulative effects on LCTs elsewhere within the study area are predicted to be moderate-minor or less.

Cumulative Visual effects

Moderate-major cumulative effects are predicted for residents of Woolfords, and for several individual dwellings lying within 2km of the Proposed Development (see RVAA). Elsewhere, cumulative visual effects for residents are predicted to be moderate-minor or less.

Moderate cumulative visual effects are predicted for rail users on the West Coast Main Line travelling north and within 2.5km of the Proposed Development. Visual effects from other road and rail routes are predicted to be moderate-minor or less.

5. Landscape and Visual Assessment

5.1 Introduction

This technical appendix considers the likely substantial effects on landscape and visual receptors in the vicinity of the Proposed Development site and the surrounding study area during construction, operation and decommissioning.

The Proposed Development is an alteration to the Consented Development consisting of an increase to the maximum dimensions of the turbines and minor adjustments to turbine infrastructure and temporary construction areas to allow for the erection of the larger turbines. This is described in detail in Section 3: Description of Development of this EA Report.

These adjustments have required the landscape and visual effects to be reassessed to determine any changes in effect compared with the Consented Development. This technical appendix therefore identifies where the findings of that reassessment differs from the findings of the assessment for the Consented Development.

The specific objectives of the technical appendix are to:

- describe the landscape and visual baseline;
- describe the assessment methodology and significance criteria used in completing the assessment;
- describe the potential effects, including direct, indirect and cumulative effects;
- describe the mitigation measures proposed to address likely substantial effects; and
- assess the residual effects remaining following the implementation of mitigation.

In order to facilitate a direct comparison between the predicted effects associated with the Consented Development and the Proposed Development, the following approach and structure was adopted:

- Identification of any relevant changes to the cumulative baseline since the previous submission. See Section 5.16;
- Assessment of the landscape and visual effects of the Proposed Development including cumulative effects;
- Comparison of the potential residual landscape and visual effects of the Proposed Development with the effects predicted for the Consented Development; and
- Presentation of conclusions regarding the consequences of the proposed change to the Consented Development, in respect of predicted landscape and visual effects.

The assessment has been carried out by Nigel Buchan, BA (Hons) Landscape Architecture, Master of Landscape Architecture (Harvard). Nigel has over forty years in practice as a landscape architect and carried out the LVA for the Consented Development.

This technical appendix is supported by the following figures and annexes:

- Annexures:
  - Annex 5-1-1 – Detailed Viewpoint Assessments
  - Annex 5-1-2 – Residential Visual Amenity Assessment
  - Annex 5-1-3 – Aviation Lighting Assessment
- Figures:

- Figure 5-1: 45km Bare Earth ZTV with Nationally Designated Landscapes and Wild Land Areas;
- Figure 5-2: 15km Screened Blade Tip ZTV with Landscape Designations;
- Figure 5-3: 15km Screened Blade Tip ZTV with Landscape Character Types;
- Figure 5-4: 15km Screened Hub ZTV with Landscape Character Types;
- Figure 5-5: VP1 - A704-A706 Junction;
- Figure 5-6: VP2 - Minor road near Haywood and Bughtknowes (inc. Aviation Lighting);
- Figure 5-7: VP3 - A71 east of Breich;
- Figure 5-8: VP4 - Minor road at Woolfords Cottages (inc. Aviation Lighting);
- Figure 5-9: VP5 - Forth;
- Figure 5-10: VP6 - Fauldhouse;
- Figure 5-11: VP7 - Longridge (inc. Aviation Lighting);
- Figure 5-12: VP8 - A70 Maidenhill;
- Figure 5-13: Cumulative Sites and Viewpoints to 15km;
- Figure 5-14: Cumulative ZTV (15km) - Operational Sites Most Likely to Interact with Woolfords;
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- Figure 5-34: Residential Amenity Receptor RA8;
- Figure 5-35: Residential Amenity Receptor RA9;
- Figure 5-36: Residential Amenity Receptor RA10;
- Figure 5-37: Residential Amenity Receptor RA11;

- Figure 5-38: Residential Amenity Receptor RA12;
- Figure 5-39: Residential Amenity Receptor RA13;
- Figure 5-40: Cumulative ZTV (15km, Aviation Lighting) - Hub ZTV with Neighbouring Sites; and
- Figure 5-41: Comparative ZTV 45km Bare Earth.

Figures and annexures are referenced in the text where relevant.

5.2 Consultation

The consultation responses received in relation to the scope of the assessment undertaken for the Consented Development remain valid. A summary of this consultation is included in Table 5-1 below. The Screening Opinion (South Lanarkshire Council (SLC), February 2021) for the original application notes that the Consented Development does not constitute EIA development as it is:

- Not of a scale that has the potential to have a significant environmental impact on the local area;
- Within an area not designated for its environmental sensitivity; and
- Not of a scale to have a wider significant environmental impact within the landscape.

The 2021 Screening Opinion for the Consented Development notes that, whilst not being considered to constitute EIA development, any subsequent planning application should still be accompanied by a full suite of environmental assessments and reports including:

- Landscape and Visual Impact Assessment;
- Cumulative Impact; and
- Residential Amenity.

These aspects have been considered as part of this LVA.

In June 2025, South Lanarkshire Council confirmed that the proposed increase in turbine tip height would require a new planning permission as the original permission could not be altered to accommodate an increase in tip height. Based upon an assessment of the information provided as part of the Screening Request, SLC confirmed that the Proposed Development will not give rise to any significant adverse impacts on the environment and that as such the development does not constitute EIA development.

Responses to further consultations undertaken as part of this LVA are summarised in Table 5-1. All comments referring to the selection of viewpoints for detailed assessment have been taken into account in the viewpoint (VP) selection (Table 5-2).

Table 5-1: Consultation Responses

Consultee	Issues and Concerns raised	Response/Action Taken
SLC, 10 May 2021	Confirmation of the viewpoint selection, scope of cumulative assessment, Residential Visual Amenity Assessment (RVAA) and night time assessment	The LVA has been carried out according to the agreed scope
SLC, 26 May 2021	Adjustment of viewpoints 1 and 3 to improve visibility of turbines and addition of viewpoint 8 to improve overall spread Confirmation that SLC would not be consulting NatureScot about the scope of the appraisal	Amended viewpoints carried forward for appraisal

5.3 Legislation, planning policy and guidance

Section 4 of the EA presents polices and guidance relevant to the EA as a whole. This LVA takes account of the following specific landscape policies and guidance. Apart from minor updates to some of the guidance and the publication of Guidance on Aviation Lighting Impact Assessment by NatureScot, these remain largely the same as for the Consented Development.

- An Approach to Landscape Sensitivity Assessment – to Inform Spatial Planning and Land Management (Natural England, 2019);
- Assessing the Cumulative Impact of Onshore Wind Energy Developments (Scottish Natural Heritage, 2012);
- Constructed Tracks in the Scottish Uplands, 2nd Edition (Scottish Natural Heritage, 2015);
- England's Light Pollution and Dark Skies. Available at https://nightblight.cpre.org.uk/resources [Accessed on 08/10/21] (CPRE, 2016);
- Good Practice during Windfarm Construction, Version 4 (Scottish Natural Heritage, 2019);
- Guidance on Aviation Lighting Impact Assessment (NatureScot, 2024);
- Guidelines for Landscape and Visual Impact Assessment (GLVIA) (Landscape Institute *et al.*, 2024);
- Inventory of Gardens and Designed Landscapes. Available at: https://www.historicenvironment.scot/advice-and-support/listing-scheduling-and-designations/gardens-and-designed-landscapes/ [Accessed on 04/06/21] (Historic Environment Scotland, 2021);
- Landscape Capacity Study for Wind Energy Development in West Lothian (West Lothian Council and Scottish Natural Heritage, 2011);
- Landscape Character Assessment, Guidance for England and Scotland (Scottish Natural Heritage and the Countryside Agency, 2002);
- Siting and Designing Windfarms in the Landscape (Scottish Natural Heritage, 2014);
- South Lanarkshire Landscape Capacity Study for Wind Energy (Ironside Farrar, 2016);
- South Lanarkshire: Validating Local Landscape Designations (Ironside Farrar, 2010);
- Supplementary Guidance 10: Renewable Energy (South Lanarkshire Council, 2015);
- Tall Wind Turbines; Landscape Capacity, Siting and Design Guidance (South Lanarkshire Council, 2019);
- The Special Qualities of the National Scenic Areas (Scottish Natural Heritage, 2010);
- Technical Guidance Note (TGN-06-19): Visual Representation (Landscape Institute, 2019);
- Visual Assessment of Windfarms Best Practice Guidance, Scottish Natural Heritage Commissioned Report F01AA303A (Scottish Natural Heritage, 2002);
- Visual Representation of Wind Farms, Version 2.2 (Scottish Natural Heritage , 2017); and
- West Lothian Local Landscape Designation Review (Land Use Consultants, 2013).

5.4 Assessment Methodology

This LVA involved a combination of desk study, computer analysis, field work and interpretation using professional judgement. Field work was carried out during clear weather conditions in 2021 and April 2026 and included visits to the site, the agreed viewpoints and extensive travel around the study area, in order to gain a clear understanding of the likely effects of the Proposed Development.

The key objective of the LVA is to identify and assess whether there are substantial landscape and visual effects as a result of the Proposed Development. On the basis of the desk study and field work undertaken and experience from other relevant projects, the following potential effects have been scoped out of the LVA and are not considered further:

- Effects on landscape or visual receptors having minimal or no predicted visibility of the Proposed Development;
- Landscape effects on landscape character types (LCTs) over 15km from the Proposed Development, where the potential for substantial effects on key characteristics is judged to be unlikely;
- Landscape effects on designated landscapes beyond 15km where the potential for substantial effects on key characteristics and/or special qualities are judged to be minimal; and
- Visual effects on main routes and key settlements over 15km from the Proposed Development and visual effects on locally important routes, such as Core Paths, over 5km from the Proposed Development, where the potential for substantial visual or sequential effects is judged to be minimal.

This is the same approach as that adopted for the assessment of the Consented Development.

5.4.1 Study Area

In accordance with current best practice guidance (Scottish Natural Heritage, 2017) the study area has been defined as 45km, as adopted for the Consented Development.

5.4.2 Zone of Theoretical Visibility Maps

Maps showing the Zone of Theoretical Visibility (ZTV) have been prepared following best practice guidance (Scottish Natural Heritage, 2017). They indicate areas from which the Proposed Development may theoretically be visible and enable the LVA to be focused upon those locations that are most likely to be substantially affected.

The bare earth ZTV (Figure 5-1) is based solely on topography and shows the maximum theoretical visibility. It is important to bear the following points in mind when interpreting the visibility maps:

- They do not take the orientation of the viewer into account, for example when travelling in a vehicle;
- Visibility maps do not convey the likely nature or magnitude of visual effects of the Proposed Development, which can only be determined by further assessment; and
- The visibility shown on ZTV maps is likely to be more extensive than would actually be visible on the ground, but where the ZTVs indicate no visibility, the Proposed Development would not be seen.

The Screened ZTVs (Figures 5-2 to 5-4) take account of the likely screening by buildings and larger woodland blocks and forest plantations, using the Ordnance Survey 'VectorMap District' dataset. These assume a height of 10m for woodland or forest blocks and 6m for buildings.

Note that the Screened ZTVs do not take account of minor landforms such as road or rail embankments, small tree groups, hedges or scrub vegetation, which can reduce visibility in practice.

5.4.3 Viewpoints

The viewpoints listed in Table 5-2 have been identified using the ZTVs, site visits and through consultation with SLC. They remain the same as those used for the Consented Development and are shown on Figures 5-2 to 5-4.

Table 5-2: Agreed Viewpoints

Ref	Name	Distance*	NGR	Receptors
VP1	A704/A706 Junction	3.41	295531 658249	Road users
VP2	Minor road near Haywood and Bughtknowes	2.19	297267 655166	Road users, residents
VP3	A71 east of Breich	3.67	297602 661259	Road users
VP4	Minor road at Woolfords Cottages	1.70	300457 656774	Road users, residents
VP5	Forth	4.82	294714 654154	Residents, recreational users
VP6	Fauldhouse	5.55	294311 660782	Residents
VP7	Longridge	5.80	295164 662198	Residents
VP8	A70 Maidenhall	5.62	303987 654695	Road users

* Approximate distance from nearest turbine in km

5.4.4 Landscape Receptors

Landscape receptors within the study area that could be affected by the Proposed Development include:

- Landscape elements and features such as landform, vegetation, etc;
- Landscape character types (LCTs);
- Areas of recognised landscape value, such as Special Landscape Areas (SLAs); and
- Other recreational, natural or cultural heritage interests that contribute to landscape character.

5.4.5 Visual Receptors

Visual receptors are defined as those individuals or groups of people within the study area, who may be affected by the Proposed Development. The main groups of visual receptors in this case are considered to be:

- Residents at home;
- Walkers and recreational users; and
- People travelling through the area by road or rail.

The visual baseline identifies the parts of the study area from which the Proposed Development may be visible, and the way in which different receptors may experience views of it.

5.4.6 Appraisal of Potential Effects

The LVA focuses on an appraisal of the effects on the landscape and visual receptors at each of the agreed viewpoints. Together with the desk-based analysis and fieldwork, the detailed viewpoint assessment informed the general appraisal of effects within the study area.

The desk work refers to a range of maps, photographs, the ZTV analysis and computer-generated representations. The method used to create the ZTVs, photographs, wireline diagrams and photomontages follows good practice guidance (The Landscape Institute, 2019).

Each of the viewpoints was assessed, in order to identify, predict and evaluate the potential effects arising from the Proposed Development. Wherever possible, identified effects are quantified and the prediction of magnitude and appraisal of the landscape and visual effects based on pre-defined criteria in order to provide greater consistency.

The criteria used in this LVA have taken account of paragraph 3.26 of the GLVIA (Landscape Institute et al., 2024), which recommends that factors affecting the sensitivity of the receptor (susceptibility and value), and those affecting the magnitude of the effect (size, extent, duration and reversibility) are each assessed separately.

5.4.7 Duration and Reversibility of Effects

The Proposed Development is designed to operate for a period of 40 years, following which it would either be decommissioned or alternatively a new application may be submitted to extend the life of the Proposed Development or replace the turbines.

The construction phase is likely to take approximately nine months. Effects due to construction and decommissioning are considered to be short-term, whilst effects arising during the operational phase would be long-term, albeit temporary and largely reversible.

5.4.8 Degree of Effect

Tables 5-3 to 5-8 provide a framework that helps to ensure consistency and transparency in the decision-making process. These are not, however, used as prescriptive tools, allowing for the exercise of professional judgement in determining sensitivity, magnitude and the consequent degree of an effect.

The overall degree of effect on landscape and visual receptors is determined from a combined evaluation of the sensitivity of the receptor and the magnitude of the effect. Table 5-3 shows how the level of effect increases from negligible to major with increasing receptor sensitivity and with greater magnitude of effect.

The most substantial effects would occur where a receptor of highest sensitivity is affected by an effect of very large magnitude. Conversely, negligible effects would arise where a receptor of lowest sensitivity is affected by an effect of negligible magnitude. Between these two extremes, the degree of effect would vary continuously and the level of any one effect is determined by professional judgement.

Table 5-3: Determining Degree of Effects

Magnitude of Effect	Sensitivity of Receptor		
	High	Medium	Low
Very Large	Major	Major	Mod-Major
Large	Major	Mod-Major	Moderate
Medium	Mod-Major	Moderate	Mod-Minor
Small	Moderate	Mod-Minor	Minor
Negligible	Mod-Minor	Minor	Negligible

Table 5-3 includes additional levels of effect, as this reflects the diversity of magnitude and sensitivity commonly found in landscape and visual impact assessment.

5.4.9 Positive and Negative Effects

Negative effects result in a direct loss of physical resources, weaken key landscape characteristics or result in a reduction in visual amenity. Positive effects occur where a development or land use

change replaces physical resources, strengthens the landscape characteristics or improves the visual amenity. Effects may also be neutral, where there is no net effect on the landscape or visual resources.

Changes to rural landscapes that involve the construction of manufactured objects of a large scale generally have a negative effect on the character of rural landscapes, although this effect can be mitigated by the contribution to the landscape that the development may make in its own right, usually by virtue of good design, even if it is in contrast to the existing character.

Changes to views and visual amenity can be more subjective, in that people may like or dislike what they see, or may be used to seeing similar developments, and therefore more ambivalent about them.

Whether the visual effect is perceived as positive or negative depends upon individual preferences, the context in which a person experiences the view, and upon their attitude towards development in general. Although some people may be more neutral or ambivalent in their opinions about the proposed changes in views, this appraisal adopts a precautionary approach and assumes that visual effects are negative.

5.4.10 Direct and Indirect Effects

Direct landscape effects result directly from the Proposed Development, such as the loss of landform. Indirect effects are consequential changes resulting from the Proposed Development, such as changes to moorland vegetation following the restoration of new access tracks.

5.4.11 Acceptability of Effects

Wind turbines may be considered by some to be unacceptable intrusions in the landscape but could also be seen as essential contributors to tacking climate change.

It is not the effects on the landscape that change but the judgements about the acceptability of those effects. Acceptability is therefore a matter for the decision maker to determine, taking into account the overall balance of environmental benefits and effects of the Proposed Development, on the basis all of the available evidence.

The GLVIA (Landscape Institute et al., 2024) notes in paragraph 2.17 that:

> *"it is for the competent authority to judge the balance of weight between policy considerations and the effects that such proposals may have."*

There are no specific accepted, legal requirements or published criteria to use as a basis on which to judge whether a change in the landscape, or in a view, is acceptable. Nor is there any published guidance on establishing a threshold, beyond which further changes should be prevented.

This LVA sets out, in an impartial way, the nature and extent of landscape and visual effects that are likely to result from the Proposed Development and does not draw conclusions as to acceptability.

5.5 Landscape Effects

Landscape effects arise from changes to the physical components of the landscape, its character and how this is experienced. The level of landscape effects is assessed by considering the sensitivity of the landscape receptors and the magnitude of the landscape effect.

5.5.1 Sensitivity of Landscape Receptors

Best practice guidance (Natural England, 2019) states that:

> *"Landscape sensitivity may be regarded as a measure of the resilience, or robustness, of a landscape to withstand specified change arising from development types or land management practices, without undue negative effects on the landscape and visual baseline and their value*".

The GLVIA (Landscape Institute et al., 2024) indicates that landscape receptors need to be assessed firstly in terms of their sensitivity, combining judgements of their susceptibility to the type of proposal and the value attached to the landscape.

5.5.2 Susceptibility of Landscape Receptors

Table 5-4 sets out attributes of landscape character that have been considered in assessing susceptibility, adapted from best practice guidance (Natural England, 2019).

Table 5-4: Landscape Susceptibility to Wind Farms

Susceptibility	Lower	Higher
Scale	Large or vast scale	Intimate or small scale
Enclosure	Open or exposed, windswept	Enclosed or confined, sheltered
Landform	Flat, smooth, regular, gently undulating, or flowing landform	Dramatic, steep, rugged, or complex landform with prominent peaks or ridges
Diversity	Simple or uniform, e.g. moorland	Complex or diverse, with a variety of land cover
Land Cover Pattern and Line	Indistinct or irregular pattern	Strong and regular linear features, geometric or rectilinear patterns
Settlement and Infrastructure	Frequent masts, pylons, industrial elements, modern buildings, infrastructure, settlements or main roads	No obvious modern settlement, buildings, infrastructure or main roads
Perception of Landscape Change	Modern or clearly dynamic showing obvious land use changes	Little or no land use changes, or with obvious historical continuity
Tranquillity	Busy, with evidence of human activity, noise or regular movement	Remote or tranquil with strong sense of stillness or solitude
Settings and Skylines	Low-lying areas that do not tend to feature in views from populated areas or main roads	Areas with topographic features that define the setting, backdrop, outlook or skyline of populated areas or main roads

5.5.3 Landscape Value

The LVA takes as its starting point the recognised value of the landscape, as identified by landscape designations. It also considers the following factors, set out in Table 5-5, which are adapted from paragraphs 5.28-5.31 of the GLVIA (Landscape Institute et al., 2024) and other guidance (Scottish Natural Heritage and the Countryside Agency, 2002).

Table 5-5: Landscape Value

Factors Affecting Landscape Value	Considerations
Condition/Intactness	The degree to which the landscape is unified or intact
Scenic Quality	The extent to which the landscape appeals, primarily to the visual senses
Perceptual Aspects	The degree to which the landscape is recognised for perceptual qualities, such as its sense of remoteness
Rarity	The presence of unusual elements or features in the landscape or the presence of an unusual LCT

Factors Affecting Landscape Value	Considerations
Representativeness	The degree to which the landscape contains important examples of elements or features or is of a particular character that is considered important
Conservation Interests	Cultural or natural heritage interests that add to the value of the landscape and/or are of value in themselves
Recreational Value	Evidence of recreational activity where experience of the landscape is important, such as recognised scenic routes
Associations	Recognised cultural or historical associations that contribute to perceptions of the natural beauty of the landscape

5.5.4 Magnitude of Landscape Effects

Each effect on landscape receptors is also assessed in terms of its size or scale, the geographical extent of the area influenced and its duration and reversibility.

5.5.5 Size or Scale of Effect

This is judged using the factors set out in Table 5-6.

Table 5-6: Size or Scale of Landscape Effect

Class	Criteria
Very large	Highly obvious change, affecting the majority of the key characteristics and defining the experience of the landscape
Large	Obvious change, affecting many key characteristics and the experience of the landscape
Medium	Noticeable but not obvious change, affecting some key characteristics and the experience of the landscape
Small	Minor change, affecting some characteristics and the experience of the landscape slightly
Negligible	Little perceptible change

5.5.6 Geographical Extent of Effect

The geographical area over which the landscape effect would be experienced is taken into account. This is distinct from the scale of the change. For example, a small change to the landscape over a large geographical area could be comparable to a very large change affecting a much more localised area.

5.5.7 Duration of Effect

The duration and frequency of effect is also considered. Effects of longer duration and/or greater frequency are more likely to be substantial.

5.5.8 Degree of Landscape Effects

The appraisal of the overall degree of effect is based on professional judgement, considering both the sensitivity of the receptor, and the predicted magnitude of effect resulting from the Proposed Development, as described above.

Major loss of landscape features or characteristics across an extensive area that are important to the integrity of a nationally valued landscape are likely to be most substantial. Short-term effects on landscape features or characteristics over a restricted part of a landscape of lower value are likely to be least so.

5.6 Visual Effects

Visual effects result from the changes in the content or character of views and visual amenity, due to changes in the landscape. The appraisal LVA of visual effects takes account of both the sensitivity of the visual receptors (individuals or groups of people) and the magnitude of the change on their views and visual amenity.

5.6.1 Sensitivity of Visual Receptors

The sensitivity of each visual receptor is determined in terms of the susceptibility to changes in views or visual amenity, as well as the value attached to particular views.

5.6.2 Susceptibility to Change

People generally have different responses to views and visual amenity depending on the context (e.g. location, time of day, degree of exposure), and their purpose for being in a particular place (e.g. whether for recreation, travelling through the area, residence or employment). Susceptibility to change is therefore a function of:

- The occupation or activity of people experiencing the view or visual amenity; and
- The extent to which their attention or interest may be focused on the landscape around them.

Table 5-7 illustrates some examples of the relative susceptibility of some of the key visual receptors within the study area. Note that different individuals or groups of people at one location may have different levels of susceptibility.

Table 5-7: Examples of Susceptibility to Change in Views or Visual Amenity

Class	Example
High	People at home Users of recognised routes or trails, whose attention or interest are likely to be focused on the landscape or on particular views Road or rail users where appreciation of the landscape is an important part of the experience, such as recognised scenic routes Visitors to heritage assets or to other attractions, such as recognised beauty spots, where views of the surroundings are an important part of the experience
Medium	People at their place of work, where views are an important part of the setting, such as a countryside ranger Road or rail users likely to be travelling for other purposes than just the view
Low	People at their place of work whose attention is likely to be focused on their work or activity, not on their surroundings People engaged in active outdoor sports or recreation and less likely to focus on the view

5.6.3 Value Attached to Particular Views

Judgments are also made about the value attached to views, based on the following considerations:

- Recognised value – such as views from heritage assets or designated landscapes;
- Online references, inclusion in guidebooks or on tourist maps, facilities provided for visitors or references to the view in literature or art; and
- The relative number of people who are likely to experience the view.

People that are more susceptible to change and at viewpoints of recognised value are more likely to be substantially affected by any given change.

5.6.4 Magnitude of Visual Effect

The magnitude of the visual effect resulting from the Proposed Development is evaluated in terms of size or scale, geographical extent, duration and reversibility.

5.6.5 Size or Scale of Effect

This is based on the interpretation of a combination of a range of factors, based on best practice guidance (Scottish Natural Heritage and the Countryside Agency, 2002) and described in Table 5-8. Some of these are largely quantifiable and include:

- Distance and direction of the viewpoint from the Proposed Development;
- Extent of the Proposed Development visible from the viewpoint;
- Scale of the change in the view, including the proportion of the field of view occupied by the Proposed Development;
- Degree of contrast with the baseline landscape elements and characteristics in terms of background, form, pattern, scale, movement, colour, texture, mass, line or height;
- The relative amount of time during which the effect would be experienced and whether views would be full, partial or glimpses; and
- Orientation of receptors in relation to the Proposed Development, e.g. whether views are oblique or direct.

Table 5-8: Size or Scale of Visual Effect

Class	Description	Appearance in Field of Vision
Very Large	Dominant	Commanding, controlling the view Creation/removal of a dominant visual focus Highly uncharacteristic elements or pattern introduced Most of the view affected
Large	Prominent	Major change to the view, striking, sharp, unmistakeable, easily seen Creation/removal of major visual focus Uncharacteristic elements or pattern introduced Large proportion of the view affected
Medium	Conspicuous	Noticeable change to the view, distinct, clearly visible, well defined Creation or removal of a visual focus that may compete Some elements of the Proposed Development fit the existing pattern Some of the view affected
Small	Apparent	Minor change to the view but still evident Little change to focus of the view Fits intrinsic visual composition Little of the view affected
Negligible	Inconspicuous	No real change to perception of the view Weak, not legible, hardly discernible

5.6.6 Geographical Extent and Duration

The extent of visibility and the duration of effects are also taken into account in determining the magnitude of effect.

5.6.7 Degree of Visual Effects

The degree of effect on visual receptors is determined from a combined evaluation of the sensitivity of the visual receptor and the magnitude of the visual effect.

Effects are more likely to be substantial on people who are particularly sensitive to changes in views and visual amenity, when experienced at recognised and important viewpoints, or from recognised scenic routes. Large scale changes which introduce new, discordant or intrusive elements into the view are also more likely to be substantial than small changes or changes involving features already present within the view.

5.7 Cumulative Effects

Cumulative effects arise from changes brought about by one development in conjunction with those of another. The cumulative effect of wind farms on the landscape and visual resources depends upon a range of factors including:

- Distance between individual wind farms (or turbines);
- Distance over which they are visible;
- Overall character of the landscape and its sensitivity to wind farms;
- Siting and design of the individual wind farms; and
- Way in which the landscape is experienced.

The cumulative landscape and visual assessment (CLVA) focusses upon those wind farms and turbines that are most likely to give rise to substantial cumulative effects, in combination with the Proposed Development.

5.7.1 General Approach

The approach used to determine cumulative effects draws from guidance on cumulative assessment (Scottish Natural Heritage, 2012).

The cumulative assessment includes the predicted cumulative effects arising from the Proposed Development with a baseline of operating and consented wind farms. The non-cumulative appraisal takes account of operational wind farms, whereas the assessment of cumulative effects examines the way in which the Proposed Development adds to the cumulative situation, for example in terms of the direction and pattern of existing and proposed wind developments, as described below.

Wind farm developments within 15km of the Proposed Development that are operational, that have planning consent, or that are the subject of undetermined applications and are more than 50m to tip are illustrated on the cumulative wind farm base plan, Figure 5-13.

Cumulative wireframes have been prepared from each of the viewpoints to show all the wind farms that are theoretically visible. Using the cumulative wireframes and the findings of the field assessments, the cumulative assessment focusses upon those wind farms that are most likely to interact with the Proposed Development. This approach was agreed in principle during consultation with SLC.

ZTVs for these wind farms were overlain with that of the Proposed Development, in order to establish the combined theoretical visibility. The representative viewpoints were also used to understand the likely cumulative effects arising from the Proposed Development, in combination with these existing, consented or planned wind farms. The analysis distinguishes two types of static cumulative effects:

- Those arising from simultaneous visibility, where there are two or more developments visible within a 90 degree field of view from a single location; and

- Successive effects, where two or more wind farms are visible from one location but not within the same 90 degree field of view, so that viewers must move their head to see both or all wind farms.

The assessment also considers sequential cumulative effects. These effects occur when moving from one area to another, for instance when travelling along a road, when two or more developments are visible at the same, or at different times, in sequence.

5.7.2 Magnitude of Cumulative Effect

Cumulative landscape and visual effects result from changes to the baseline landscape or visual resources, as a result of the Proposed Development in the context of other wind developments. Paragraph 7.18 of the GLVIA (Landscape Institute *et al*., 2024) notes that;

> "…*assessing combined effects involving a range of different proposals at different stages in the planning process can be very complex. Furthermore the assessor will not have assessed the other schemes and cannot therefore make a fully informed judgement. A more comprehensive overview of the cumulative effects must rest with the competent authority".*

The emphasis of this cumulative assessment is on the additional changes that the Proposed Development brings and not the combined effect of all the wind turbines potentially visible. The assessment does, however, draw conclusions about whether the addition of the Proposed Development would itself cause the landscape to become characterised by wind farm development.

The principle of cumulative change allows for the Proposed Development to have a different magnitude of (non-cumulative) effect to the magnitude of cumulative effect on a given receptor. The magnitude of cumulative effect arising from the Proposed Development takes account of the following largely quantifiable parameters:

- The number of existing and proposed wind developments visible, their planning status and the number and scale of turbines;
- The distance of the development, its horizontal and vertical scale and position relative to other wind farms;
- The direction and pattern of existing and proposed wind developments; and
- The landscape setting, context and degree of separation of existing and proposed wind developments.

The cumulative assessment evaluates the magnitude of cumulative effect arising at each viewpoint as a result of the Proposed Development and draws conclusions about wider cumulative landscape and visual effects, based on fieldwork, the ZTV analysis and computer-generated wireline diagrams.

5.7.3 Degree of Cumulative Effect

The degree of the cumulative effect is assessed in relation to the sensitivity and importance or value of the receptor and the predicted magnitude and extent of change.

The most substantial cumulative landscape effects would change landscape character to such an extent as to have a major effect on its key characteristics or transform it to a different landscape type, where a development 'tips the balance' through its additional effect.

Higher degree of cumulative visual effect may arise due to:

- Developments that are close to the proposal and are clearly visible together in views from the selected viewpoints; and/or
- Developments that are highly inter visible with overlapping ZTVs – even though the individual developments may be at some distance from the Proposed Development and from individual viewpoints, the overall combined cumulative effect on a viewer at a particular viewpoint may be substantial.

The most substantial cumulative visual effects would arise where the Proposed Development results in a large degree of change, affecting a sensitive or important receptor, such as people visiting a popular scenic viewpoint.

5.8 Mitigation Measures to Reduce Predicted Negative Effects

One of the purposes of the LVA process is to influence and improve design, through iteration. As part of the appraisal of landscape and visual effects, it is also necessary to consider what mitigation measures might be possible in order to avoid or reduce substantial negative effects.

Mitigation measures include:

- Primary measures – modifications to avoid or reduce negative effects that become mainstream components of the project design, including standard construction practices, such as details of restoration measures; and
- Secondary measures, designed to address any adverse effects remaining after primary mitigation has been incorporated into the scheme, such as recommendations for potential landscape enhancement measures, including tree planting.

Primary mitigation measures, developed through the iterative design process, have been incorporated into the design as it developed, and this LVA considers the final scheme, taking into account the embedded primary mitigation measures.

5.9 Baseline Description

The purpose of the baseline study is to record the existing landscape and visual resources, against which the effects of the Proposed Development can be judged. Note that the baseline remains largely unchanged since the assessment undertaken for the Consented Scheme was carried out. Where any minor changes have occurred, these are noted in the text.

Analysis of the ZTVs has been included as part of the baseline, enabling landscape and visual receptors to be scoped out of the LVA where there is little or no theoretical visibility of the Proposed Development. The bare ground ZTVs illustrate a very similar pattern of visibility to those for the Consented Development.

5.9.1 Bare Earth ZTV

The Bare Earth ZTV (Figure 5-1) reflects the predicted visibility of the Proposed Development within 45 km. It differentiates between areas with theoretical visibility of one (yellow), two (orange) and three (mauve) turbines. Where the ZTV indicates theoretical visibility, it is mostly of three turbines.

It shows a very similar pattern of theoretical visibility to that of the Consented Development, with no changes within 5km, some additional theoretical visibility within 5-10km amongst Black Law windfarm, little change within 10-15km and minor additional theoretical visibility beyond 15km, mostly to the west of the Proposed Development (see Figure 5-41 Comparative ZTV).

Within 5km

Most of the zone within 5km has theoretical visibility, with the exception of some discrete areas, mostly to the north and west. Key landscape and visual receptors with theoretical visibility include:

- A very minor part of the Pentland Hills and Black Mount Local Landscape Area (LLA); and
- Main roads, including the A706, A704, A71; the Edinburgh to Glasgow Central and Edinburgh to Carlisle rail lines; Addiewell, Loganlea, Breich, Stoneyburn and several smaller settlements; and Cobbinshaw reservoir.

Within 5-10km

Much of this zone has theoretical visibility, especially to the north, although much of the Gladsmuir Hills to the west and Pentland Hills to the east, as well as some discrete areas to the south and north-west near Whitburn would have no visibility of the Proposed Development. Key receptors with theoretical visibility include:

- Harburn House designed landscape; westernmost part of Almond and Linhouse Valleys LLA, part of Pentland Hills and Black Mount LLA, mostly along western fringes, part of Pentland Hills LLA (West Lothian); and the westernmost tip of Pentland Hills Regional Park; and
- M8 and several main roads, including A706, A7066, A705, A801, A71 and sections of the A70; Edinburgh to Glasgow Central and Edinburgh to Carlisle rail lines; part of Whitburn and several smaller settlements, mostly to the north of this zone.

Within 10-15 km

Theoretical visibility is more sporadic within this zone, especially to the south-east and south-west. Key receptors with theoretical visibility include:

- Southernmost part of Bathgate Hills and River Avon LLA, part of Almond & Linhouse Valleys LLA, part of Pentland Hills LLA (West Lothian), a minor part of Pentland Hills and Black Mount LLA, the northern part of Upper Clyde Valley and Tinto LLA; and the western part of the Pentland Hills Regional Park; and
- Sections of the M8 and several main roads, including A89, A800, A801, A899, A70, A721 and A743; sections of the Edinburgh to Glasgow Central and Edinburgh to Carlisle rail lines; part of Bathgate, Livingston, Armadale and Lanark and several smaller settlements, mostly to the north and south-west of this zone; and Harperrig reservoir.

Within 15-30 km

Theoretical visibility is sporadic within this zone. Key receptors with some theoretical visibility include:

- Parts of the Pentland Hills Regional Park and north-facing slopes of the Tinto Hills; and
- Areas to the north and north-east of the site, including parts of Grangemouth, Rosyth and west Edinburgh and sections of the M9 and M90 , the A70 corridor south of Lanark; and a larger swathe to the south-east of Glasgow, including parts of Wishaw, Hamilton and sections of several main roads.

Over 30 km

Theoretical visibility is mostly restricted to the north, north-east, west and south-west of this zone. Key receptors with some theoretical visibility include:

- South-facing slopes of the Ochil Hills, including Ben Cleuch; and

- Parts of Bridge of Allan and other settlements along the base of the Ochil Hills, Alloa, Dunfermline, Inverkeithing, parts of south Glasgow, sections of the A91, M90, M74 corridor, the A71, several other main roads and the Kincardine Bridge.

5.9.2 Screened ZTV

These ZTVs (Figure 5-2 to 5-4) show the theoretical visibility of the Proposed Development, but take into account the screening effect of buildings, forest plantations and woodland blocks and extend to 15km from the Proposed Development. The screened ZTVs illustrate a very similar pattern of visibility to those for the Consented Development.

Within 5km

Much of the zone within 5km has theoretical visibility, with the exception of the extensive forest plantations and some adjacent areas, as well as some discrete areas, mostly to the north and west. Key landscape and visual receptors with theoretical visibility include:

- A very minor part of the Pentland Hills and Black Mount LLA, where forest plantations allow views; and
- Main roads, including the A706, A704, A71; the Edinburgh to Glasgow Central and Edinburgh to Carlisle rail lines; Addiewell, Loganlea, Breich, Stoneyburn and several smaller settlements; and Cobbinshaw reservoir.

The figures show how the extensive forest plantations throughout this zone restrict visibility from the key routes and settlements in practice.

Within 5-10 km

Much of this zone has some theoretical visibility, especially to the north, although a significant part of the Gladsmuir Hills to the west and Pentland Hills to the east, as well as some discrete areas to the south and north-west near Whitburn would not have any views of the Proposed Development.

Key landscape and visual receptors with theoretical visibility include:

- A very minor part of the Almond and Linhouse Valleys LLA, part of the Pentland Hills and Black Mount LLA and Pentland Hills LLA (West Lothian); and a very minor part of the westernmost tip of Pentland Hills Regional Park; and
- M8 and several main roads, including A706, A7066, A705, A801, A71 and sections of the A70; Edinburgh to Glasgow Central and Edinburgh to Carlisle rail lines; part of Whitburn and several smaller settlements, mostly to the north of this zone.

The figures show how extensive forest plantations to the west, south and east of this zone, tree belts and woodlands more generally, and buildings within urban areas restrict visibility from many of these key receptors in practice.

Within 10-15 km

Theoretical visibility is likely to be more sporadic within this zone, especially to the south-east and south-west. Key receptors with theoretical visibility include:

- Southernmost part of Bathgate Hills and River Avon LLA, a minor part of Almond & Linhouse Valleys LLA, part of Pentland Hills LLA (West Lothian), a minor part of Pentland Hills and Black Mount LLA, the northern part of Upper Clyde Valley and Tinto LLA; and the western part of the Pentland Hills Regional Park; and

- Sections of the M8 and several main roads, including A89, A800, A801, A899, A70, A721 and A743; sections of the Edinburgh to Glasgow Central and Edinburgh to Carlisle rail lines; part of Bathgate, Livingston, Armadale and Lanark and several smaller settlements, mostly to the north and south-west of this zone; and Harperrig reservoir.

Forest plantations, tree belts, woodlands and buildings throughout much of this zone restrict visibility from many of these key receptors in practice.

5.10 Existing Landscape Resources

5.10.1 Landscape Elements of the Site

The Site lies immediately to the south of Pates Hill Wind Farm, approximately 6km to the north-east of the centre of Forth (the closest settlement) as shown on Figure 3-1. The site lies mostly within the SLC area, although part of the eastern boundary extends into West Lothian to allow the access track to connect to the road network.

It forms part of the upland plateaux to the south of the main transport corridor between Glasgow and Edinburgh. The landform is gently undulating, rising to 314m above ordnance datum (AOD) at its highest point.

The land cover consists of generally poorly drained moorland with grass on drier, more elevated areas. It is currently used as sheep and cattle pasture. Several mixed tree blocks and belts provide shelter for stock and there are also some distinctive dry stone shelters, in various states of repair.

Two dry stone dykes intersect at the southern end of the site, which is otherwise unenclosed. Watercourses are generally confined to the periphery and south of the site. There are no core paths or surfaced tracks, but a few grass tracks cross the site.

The surrounding landscape is strongly influenced by forest plantations, which provide a degree of enclosure to the west and, to a lesser degree, to the north-east; and by wind farm development. There are longer views to the north, towards the Forth estuary and Fife hills beyond; east to Cobbinshaw reservoir and hills beyond; and south towards an undulating skyline of distant hills that includes Tinto Hill.

The closest dwellings lie to the south-east of the site at Woolfords Cottages, Woolfords Farm (which is financially involved) and Easter Mosshat.

5.10.2 Designated Landscapes

The following nationally designated landscapes are shown on the Bare Earth ZTV Figure 5-1.

Wild Land Areas

Talla Hart Fell Wild Land Area (WLA) lies just over 40km to the south-east of the Proposed Development. Figure 5-1 indicates that there would be almost no theoretical visibility of the turbines from this WLA, which is not considered further.

Upper Tweeddale National Scenic Area

This National Scenic Area (NSA) lies approximately 22.5km to the south-east of the Proposed Development at its closest point.

The special qualities of the designated area are described within the special qualities report (Scottish Natural Heritage, 2010) as follows:

- Diverse scenery of great charm and soft beauty;
- The historical continuity of settlement;
- Green, intimate pastoral valleys;
- Expansive, open hills with panoramic views;
- The variety of woodlands and trees;
- The large, geometric fields;
- The distinctive vernacular buildings; and
- Tranquil riverine landscapes.

Figure 5-1 indicates that theoretical visibility would be very restricted and limited to a few discrete areas of north-west facing hill slopes, mostly over 30km from the Proposed Development. No substantial effects on the special qualities are considered possible and the NSA has consequently been scoped out of this appraisal.

Gardens and Designed Landscapes

There are 75 Gardens and Designed Landscapes (GDLs) within the 45km study area (Historic Environment Scotland, 2021). The Bare Earth ZTV (Figure 5-1) indicates that very few of the sites over 15km from the Proposed Development have any theoretical visibility.

Many of these GDLs are encircled by extensive woodland belts that would reduce visibility in practice. Where the Proposed Development is visible, it is likely to appear as a minor distant feature that would not affect the character of the designed landscape, its setting or views. Substantial landscape effects are not considered likely and these sites are not considered further.

Only two of these GDLs lie within 15km from the Proposed Development. The theoretical visibility is as follows:

- Harburn House is the closest designed landscape, lying 5.5km to the north-east of the Proposed Development. It occupies low, gently undulating ground and is completely enclosed by thick perimeter belts of mixed conifers and deciduous trees. The Screened ZTV (Figure 5-2) confirms that this planting would prevent any views towards the Proposed Development; and
- Little Sparta lies 10.4km to the south-east of the Proposed Development. The Screened ZTV (Figure 5-2) shows no theoretical visibility.

As neither of these sites has theoretical visibility of the Proposed Development, they are not considered further.

Pentland Hills Regional Park

The Pentland Hills Regional Park is a nationally designated landscape covering some 10,000 ha of land and provides an important recreational resource. The aims of the Pentland Hills Regional Park, as set out in its designation order, are:

- To retain the essential character of the hills as a place for the peaceful enjoyment of the countryside;
- Caring for the hills so that the landscape and the habitat is protected and enhanced;
- Within this caring framework to encourage responsible public enjoyment of the hills; and
- Co-ordination of these aims so that they co-exist with farming and other land uses within the Pentland Hills Regional Park.

Figure 5-1 shows widespread theoretical visibility from summits and west-facing slopes and the area is therefore taken forward for appraisal.

Local Landscape Areas

These regionally designed landscapes are shown on the Screened ZTV, Figure 5-2. The following eight Special Landscape Areas (SLAs) lie within 15km of the Proposed Development:

- Almond and Linhouse Valleys (West Lothian);
- Bathgate Hills (West Lothian);
- Blackridge Heights (West Lothian);
- Pentland Hills (West Lothian);
- Pentland Hills and Black Mount (South Lanarkshire);
- Middle Clyde Valley (South Lanarkshire);
- Upper Clyde Valley and Tinto (South Lanarkshire); and
- Pentland Hills (Scottish Borders).

Figure 5-2 indicates that theoretical visibility of the Proposed Development is likely to be very limited from the following three SLAs, which are not considered further:

- Almond and Linhouse Valleys (West Lothian);
- Middle Clyde Valley (South Lanarkshire); and
- Pentland Hills (Scottish Borders).

The five remaining areas have been taken forward for appraisal.

5.11 Landscape Character

Landscape Character Types are illustrated on the Screened ZTV, Figure 5-3. The site lies within South Lanarkshire, just to the west of the boundary with West Lothian. In the 1990s Scottish Natural Heritage carried out the national programme of landscape character assessment. The LCT descriptions and mapping have since been updated and included on the NatureScot website (NatureScot, 2021). The following 15 LCTs lie within 15km of the Proposed Development:

South Lanarkshire

- 200: Rolling Farmland – Glasgow & Clyde Valley;
- 201: Plateau Farmland – Glasgow & Clyde Valley;
- 204: Incised River Valleys;
- 208: Broad Valley Upland;
- 210: Undulating Farmland and Hills;
- 212 Moorland Hills – Glasgow & Clyde Valley; and
- 213 Plateau Moorlands – Glasgow & Clyde Valley.

North Lanarkshire

- 201: Plateau Farmland – Glasgow & Clyde Valley; and
- 213 Plateau Moorlands – Glasgow & Clyde Valley.

West Lothian

- 268: Upland Hills – Lothians;

- 269: Upland Fringes - Lothians;
- 271: Lowland River Corridors – Lothians;
- 272: Lowland Hills and Ridges - Lothians;
- 273 Lowland Plateaux – Lothians;
- 274: Lowland Plain; and
- 276: Lowland Hill Fringes – Lothians.

Scottish Borders

- 90: Dissected Plateau Moorland.

Of these the following 10 LCTs have no or minimal theoretical visibility of the Proposed Development and are not considered further:

- 90: Dissected Plateau Moorland;
- 200: Rolling Farmland – Glasgow & Clyde Valley;
- 204: Incised River Valleys;
- 208: Broad Valley Upland;
- 210: Undulating Farmland and Hills
- 212 Moorland Hills – Glasgow & Clyde Valley
- 271: Lowland River Corridors – Lothians;
- 272: Lowland Hills and Ridges - Lothians;
- 274: Lowland Plain; and
- 276: Lowland Hill Fringes – Lothians.

The following five LCTs all have a moderate degree of theoretical visibility of the Proposed Development and are taken forward for detailed appraisal.

- 201 Plateau Farmland – Glasgow & Clyde Valley;
- 213 Plateau Moorlands – Glasgow & Clyde Valley;
- 268 Upland Hills – Lothians;
- 269 Upland Fringes – Lothians; and
- 273 Lowland Plateaux – Lothians.

5.12 Existing Visual Receptors

These are illustrated on the ZTVs (Figures 5-1 to 5-4).

5.12.1 Dwellings and Settlements

The settlement pattern of the study area is highly varied, with a range of settlements of different sizes. The northern half is generally more settled, with several larger towns, including Dunfermline, Grangemouth and Stirling. Glasgow and Edinburgh lie to the north-west and north-east of the study area respectively, and form the largest urban centres.

In the southern half of the study area the settlement pattern is more scattered, with smaller towns, such as Lanark, and villages set within valleys.

Within 15km, most settlement is focussed to the north of the Site, along the main transport corridor between Glasgow and Edinburgh. Livingston and Bathgate are the largest settlements within this

predominantly low-lying stretch. There are fewer settlements to the south and south-west, the largest of which are Forth and Carluke.

Table 5-9 identifies the main settlements within 15km and describes the theoretical visibility of the Proposed Development. Those settlements likely to have no or very limited visibility of the Proposed Development are not considered further in the appraisal. Individual dwellings within 2km of the Proposed Development are included in the RVAA, which is contained in Annex 5-1-2.

Table 5-9: Main Settlements

Settlement	Theoretical Visibility of the Proposed Development	Consider Further
Within 5 km		
Addiewell	Visibility likely to be limited by whisky bonds and mixed woodland to south of settlement; vegetation along rail line is likely to further limit views towards the Proposed Development	No
Auchengray	Widespread visibility likely	Yes
Breich	Visibility likely from southern fringes of settlement	Yes
Loganlea	Visibility likely from southern fringes of settlement	Yes
Stoneyburn/Bents	Visibility likely from southern fringes of settlement	Yes
Tarbrax	Widespread theoretical visibility	Yes
Wilsontown	Surrounding forest plantations would screen views	No
Woolfords	Open views towards the Proposed Development likely	Yes
5-10 km		
Blackburn	Visibility likely to be limited by woodland along River Almond to south of settlement; trees within settlement are likely to further limit views towards the Proposed Development	No
Braehead	Some limited visibility likely from northern fringes of settlement	Yes
East Whitburn	No theoretical visibility from this settlement	No
Fauldhouse	Some limited visibility likely from southern fringes of settlement	Yes
Forth	Widespread theoretical visibility	Yes
Livingston	Woodlands within and around the settlement would screen views	No
Longridge	Visibility likely from western fringes of settlement	Yes
Polbeth	Woodland belts to south of settlement would screen views	No
Seafield	Visibility likely from southern fringes of settlement	Yes
West Calder	Visibility likely from southern fringes of settlement	Yes
Whitburn	Almost no theoretical visibility	No
10-15 km		
Armadale	Almost no theoretical visibility	No
Bathgate	Limited visibility likely to be further restricted by trees and woodlands within settlement	No
Blackridge	Some dwellings on southern fringes may have views of the Proposed Development	Yes
Carluke	No theoretical visibility	No
Carnwath	Some dwellings on northern fringes may have views of the Proposed Development	Yes
Carstairs	Almost no theoretical visibility	No
Dunsyre	No theoretical visibility	No
East Calder	Almost no theoretical visibility	No
Harthill	No theoretical visibility	No
Lanark	Almost no theoretical visibility	No
Libberton	Some dwellings on northern fringe may have views of the Proposed Development	Yes
Mid Calder	Extensive woodlands along the Linhouse Water screen any views	No

Settlement	Theoretical Visibility of the Proposed Development	Consider Further
Newbigging	Marginal theoretical visibility	No
Shotts	Almost no theoretical visibility	No
West End	No theoretical visibility	No
Weston	Open views northwards possible	Yes

5.13 Key Roads and Railways

5.13.1 Main Roads

The following main roads lie within 15km of the Proposed Development:

- A70;
- A704;
- A705;
- A706;
- A71;
- A721;
- A743;
- A800;
- A801;
- A89;
- A899; and
- M8.

Figures 5-2 to 5-4 indicate that there would be no or sporadic theoretical visibility from the A705, A721, A743, A800, A801, A89, A899 and M8. These have not been considered further. The remaining four routes (A70, A704, A706, and A71) have been taken forward for detailed appraisal.

5.13.2 Rail Lines

Main rail lines within 15km include the following:

- Glasgow Central-Edinburgh via Bathgate – sporadic theoretical visibility, mostly over 10km from the Proposed Development;
- Glasgow Central -Edinburgh via Shotts; and
- West Coast Main Line, Edinburgh-Carlisle via Carstairs.

Figures 5-2 to 5-4 indicate that theoretical visibility from the two Glasgow-Edinburgh lines is sporadic, with extensive screening by buildings, embankments and trackside vegetation. These have therefore, not been considered further. Sections of the Edinburgh-Carlisle rail line have theoretical visibility, and this has been taken forward for detailed appraisal.

5.13.3 Recreational Routes

National Routes

Only one National Cycle Route (NCN) lies within 15km of the Proposed Development. NCN75 follows the Glasgow-Edinburgh rail line along much of its length. Figures 5-2 to 5-4 illustrate that

theoretical visibility is sporadic, with extensive screening by buildings, rail embankments and vegetation. It has therefore, not been considered further.

Core Paths

There are several Core Paths within 5km of the Proposed Development, mostly within forest plantations in the vicinity of Forth. Figure 5-2 indicates that sections of two paths have theoretical visibility of the Proposed Development. These routes have been taken forward for appraisal:

- CL/3151/1: East Forth Road – Wilsontown Road; and
- CL/3155/1: Track out to workings, Wilsontown.

5.14 Embedded Mitigation

The site selection and design process are described in full within Section 3 of the EA: The Development. The design of the Proposed Development has evolved as part of an iterative process that aims to provide an optimal design in environmental terms but also takes into account technical and economic factors.

A number of mitigation measures have been introduced into the design in order to minimise the likely landscape and visual effects. These embedded mitigation measures are as follows.

5.14.1 Design Strategy

In line with best practice guidance (Scottish Natural Heritage, 2014), the design strategy for the key elements of the Proposed Development has taken into account the following objectives:

- To provide a turbine layout with a simple form that relates to the landscape character of the site and its surroundings;
- To reflect the pattern of nearby existing and proposed wind farms;
- To create a turbine layout that reflects the scale of the landscape in which it lies;
- To ensure that the design and layout of the turbines expresses the function of the Proposed Development as an energy generator as clearly as possible by avoiding complexity and visual confusion;
- To achieve a balanced composition of the turbines against the landscape and skyline;
- To create a design that takes account of the relevant national, regional and local policy and guidance; and
- To respond to the various constraints identified, including responses from statutory consultees.

5.14.2 Site Specific Design Measures

The design process has taken into account the position of the Proposed Development in relationship to the landform, the spacing of turbines and their apparent height and extent. The Proposed Development has also been designed to appear to form an extension to Longhill Burn Wind Farm in the majority of views.

In order to minimise the contrast against the sky, it is proposed that the turbines would be finished in a semi-matt, off-white/pale grey colour. This would have the effect of reducing the distance over which the turbines would be visible, especially in dull weather or low light conditions.

The length of new access track, the number of watercourse crossings and the amount of ground and vegetation disturbance would be minimised and progressive reinstatement of disturbed areas

would be carried out as early as possible in order to avoid and reduce the effects of the Proposed Development on the landscape elements and features of the site.

The final design has thus sought to balance the technical requirements of the Applicant with the environmental considerations, including those highlighted by consultees. The residual impacts of the Proposed Development are considered in the following sections.

5.15 Assessment of Effects following Mitigation

The Proposed Development would comprise three distinct phases:

- A temporary construction phase;
- The operational phase; and
- A short-term decommissioning phase.

5.15.1 Temporary Construction Phase

It is anticipated that the construction phase would last approximately nine months. During this time, the following activities and elements have the potential to cause an effect on the landscape resources and visual receptors within the study area:

- Construction of the access tracks and watercourse crossings and opening of the borrow pit);
- Temporary construction compound and lay down area;
- Construction of turbine infrastructure, including foundations and crane hardstanding;
- Cable delivery and installation;
- Construction of control building and substation;
- Turbine delivery and installation; and
- Reinstatement work, including removal of temporary site compound and accommodation.

It is likely to take approximately two to four weeks to erect the turbines and the presence of construction cranes on site would consequently be of very short duration.

Effects on Physical Landscape Resources

Activities that would have an effect on the landscape elements and features of the site during the construction phase include the formation of the borrow pit, construction of the tracks, excavation of turbine foundations and cable trenches and construction of the control building and substation.

Borrow pits would be established on site for aggregate extraction; however, the quantity is as yet unconfirmed. An estimated 2.6km of new on-site access tracks would be required.

The crane hardstanding area beside the turbine bases would be up to 45 x 24m. In all, some 6.4ha of land would be disturbed, as much of this as possible will be restored to existing agricultural use following the construction phase. The tracks have been designed to avoid the distinctive mixed tree blocks which provide shelter for stock.

Reinstatement would be undertaken as soon as practicable after each stage of the project is completed. The turbine foundations and the verges of tracks would be re-graded with topsoil and re-seeded or cultivated as appropriate. The ground below the temporary site office and compound area would be restored to the current profile.

Construction activities would have a very limited effect upon the undulating pasture of the site. One circa 15m long section of stone dyke between T2 and T3 would need to be removed to accommodate the access track and one stone livestock pen would need to be removed beside T3.

This is a medium-large scale, open undulating landscape, which is relatively simple. Being slightly elevated, it forms a backdrop in views from surrounding areas. Views of wind turbines, masts, pylons, eroded field boundaries reduce the landscape susceptibility, which is assessed as low-medium.

The rural character, moorland vegetation and long views contribute to the landscape value, but wind turbines and other infrastructure, some decrepit stone dykes and a mix of fencing types detract. The landscape value is assessed as low-medium

Taking into account the relatively minor amount of disturbance and progressive reinstatement of disturbed areas, the Proposed Development is predicted to have a medium magnitude of effect, giving rise to a short-term temporary moderate effect on the landscape elements and features of the site.

Effects on Landscape Character

Landscape effects during the construction activity would arise mainly due to views of crane movements and turbine construction, as vehicle movements and ground disturbance would not be widely visible.

Within the vicinity of the site, nearby infrastructure, noise, activity and movement of vehicles would have a localised effect on the landscape. This is predicted to have a medium magnitude of effect on the immediate surroundings, giving rise to a short-term temporary moderate landscape effect on adjacent parts of the Plateau Moorlands (Glasgow & Clyde Valley) and Upland Fringes (Lothians) LCTs.

Taking into account the small proportion of the LCTs likely to be affected and the short-term nature of the effects, the overall magnitude is predicted to be small, giving rise to a moderate-minor landscape effect overall.

The detailed assessments within Annex 5-1-1 indicate that the movement of cranes would be visible from most of the viewpoints. During the construction period, the extent of visibility of cranes within the wider landscape would be similar to that of the operational turbines.

Given the very short duration of crane activity, however, the wider landscape effects during the construction phase are likely to be less than those during the operational phase.

Visual Effects

Construction access to the site access at Pearie Law would be from the north along Auchengray Road. Auchengray Road provides access to a number of isolated farms and dwellings, some of which lie adjacent to this minor road and may have views of passing construction traffic. Residents of these dwellings are predicted to experience a small-medium magnitude of effect during the construction period, giving rise to a short-term moderate degree of visual effect.

Residents of nearby dwellings are unlikely to have views of ground-based construction activity, due to the screening effects of landform and vegetation. During the erection of the wind turbines, the movement of cranes and turbine parts would be visible for a very short period.

The detailed assessments within Annex 5-1-1 note that the movement of cranes would be widely visible within 6km of the Proposed Development. Residents of some dwellings within approximately 2.5km would have views of the cranes on the skyline and are predicted to experience a medium magnitude of effect or less, giving rise to a short-term temporary moderate visual effect at most.

Between 2.5 and 6km the magnitude is likely to be small-medium or less for all receptors. Substantial visual effects are consequently unlikely, taking into account the very short duration of crane activity.

5.15.2 Temporary Decommissioning Phase

Decommissioning would involve the dismantling of all structures above ground and would take approximately six to nine months. Unless otherwise agreed, the upper sections of the turbine foundations would be removed to a depth that would permit the continuation of current land use practices and crane hardstanding areas would be removed and reinstated.

Unless required in connection with ongoing agricultural use, additional on-site access tracks would be removed, and the affected area reinstated. All underground cables would be left in place.

There would therefore be some temporary effects from the activities on site to remove structures, but these would be of short duration. Much of the ground works associated with the construction phase, such as excavations, formation of foundations and track construction would not be required during the decommissioning phase.

Consequently, the landscape and visual effects during the decommissioning phase are predicted to be less than those during construction.

5.15.3 Operational Phase

The operational elements with the potential to affect the landscape and visual amenity of the study area include the turbines, control building, substation, access tracks and reduced hard-standings. These elements are described in full in Section 3: The Proposed Development.

The maximum height from the proposed turbine base to the top of the blade tip would be 200m when the blades reach their highest point. The candidate turbines would not require external transformers and no permanent meteorological mast would be required.

The site access tracks and reduced areas of hard-standing would be retained throughout the operational stage to provide controlled access for maintenance vehicles.

The potential effects of these elements on the landscape and visual resources of the study area are considered in detail in the following sections. The assessment of the landscape and visual effects arising from the Proposed Development during the operational phase takes account of the embedded mitigation measures described above. Effects have been assessed in two ways:

- Detailed assessment of the potential landscape and visual effects at the representative viewpoints; and
- An overview of effects on the landscape and visual resources of the study area as a whole.

Detailed Viewpoint Assessments

Table 5-10 summarises the detailed assessments at each of the eight viewpoints. Please also refer to Annex 5-1-1 which contains the full text of the detailed assessments and to the assessment of landscape effects described below.

The assessment of landscape effects considers the overall effect upon each landscape receptor. This is informed by the magnitude of landscape effect identified at the viewpoints, but also takes account of the extent and nature of the predicted effect on the receptor as a whole.

Table 5-10 identifies the magnitude of the landscape effect at each viewpoint, but conclusions about the significance of landscape effects are contained within the general assessment of landscape effects.

Visual representations (photos, wireframes and photomontages) of views from each of the eight agreed viewpoints are provided in Figures 5-5 to 5-12.

Table 5-10: Summary of Detailed Assessment at Viewpoints

VP	Location	Distance	Landscape			Visual						
			Receptors	Magnitude - operation	Magnitude - Construction	Receptors	Susceptibility	Value	Magnitude - Operation	Degree of Effect - Operation	Magnitude - Construction	Degree of Effect - Construction
1	A704/A706 Junction	3.41	269	negligible	negligible	road users	medium	medium-high	small-negligible	moderate-minor	negligible	minor
2	Minor road near Haywood and Bughtknowes	2.19	213	medium	small-medium	residents	high	medium	medium-large	moderate-major	medium	moderate
						road users	medium	low-medium	medium	moderate	small-medium	moderate-minor
3	A71 east of Breich	3.67	273	small-negligible	negligible	road users	medium	medium-high	small-negligible	moderate-minor	negligible	minor
4	Minor road at Woolfords Cottages	1.70	201	medium	small-medium	residents	high	medium	large	moderate-major	medium-large	moderate-major
						road users	medium	medium	medium-large	moderate	medium	moderate
5	Forth	4.82	213	small-negligible	negligible	residents	high	medium	small	moderate	small-negligible	moderate-minor
						road users	medium	low-medium	small-negligible	moderate-minor	negligible	minor
6	Fauldhouse	5.55	273	negligible	negligible	residents	high	medium	small	moderate-minor	small-negligible	moderate-minor
7	Longridge	5.80	273	small-negligible	negligible	residents	high	medium	small	moderate	small-negligible	moderate-minor
8	A70 Maidenhill	5.62	268, SLA	small-negligible	negligible	road users	medium	medium-high	small	moderate-minor	small-negligible	moderate-minor

5.15.4 Operational Landscape Effects

Physical Landscape Resources

The effect of the Proposed Development on the landscape elements and features of the site during the construction phase is described above. The operational phase is not predicted to have any additional effect on the physical landscape resources of the site.

Designated Landscapes - Local Landscape Areas

Bathgate Hills SLA (West Lothian)

At its closest point, this SLA lies 10.3km to the north of the Proposed Development. The key qualities of the SLA can be summarised as follows:

- A range of rounded hills, rocky crags and valleys, with a distinct West Lothian sense of place;
- A group of prominent summits, several of which exhibit 'crag and tail' features, with steep western outcrops backed by gentler eastern slopes. Cockleroy and the Knock offer panoramic views across West Lothian and beyond;
- The hills have a strong relationship with neighbouring settlements forming a backdrop in longer views;
- The Bathgate Hills provide an essential recreational resource close to the main settlements; and
- Once away from settlements, the hills have a sense of isolation and exhibit tranquillity.

There are no commercial scale wind farms within the SLA, but several are visible looking south, including Longhill Burn, Harburnhead, Pearie Law, Muirhall, Pates Hill, Tormywheel and the Black Law Group.

The Proposed Development is theoretically visible from the open, south-facing slopes above Bathgate, potentially affecting the long views southwards.

Where visible, it would appear behind Longhill Burn, amongst a cluster that includes Muirhall and Pates Hill. It would form a barely noticeable addition to this cluster and have a negligible effect on the panoramic views, sense of isolation or other qualities for which the SLA has been designated. No overall effect on the integrity of the designation is predicted.

Blackridge Heights SLA (West Lothian)

At its closest point, this SLA lies 12.3km to the north-west of the Proposed Development. The Statement of Significance (Land Use Consultants, 2013) includes the following description:

> *"This area of continuous moorland plateau forms a surprisingly upland landscape for the central belt of Scotland. The area has an openness emphasised by the extensive moorland land cover, lack of trees, and the availability of long views in all directions. The area provides attractive long views northwards to the Highlands and southwards to the Pentland Hills. A sense of remoteness is notable, with limited human influence on the landscape in comparison to nearby areas. Westcraigs, Crowns and Eastcraigs Hills are landmark features of the wider area: they are clearly seen from the M8, and provide a setting for the settlement of Blackridge".*

Although there are no commercial scale wind energy developments within the SLA, Burnhead wind farm lies immediately adjacent to the north. From the SLA, views to the south include several wind

farms, including Longhill Burn, Harburnhead, Pearie Law, Pates Hill, Tormywheel and the Black Law Group. Parts of the Blackridge Heights SLA and the immediate surrounds have been worked as open cast coal mines, which forms a partly restored landscape.

The Proposed Development is theoretically visible from a wide area of this open, upland landscape, potentially affecting the long views southwards. Where visible, it would introduce further turbines, but would in most views be seen behind Longhill Burn, in close association with Pates Hill, appearing to form a barely noticeable addition to this cluster of existing wind farms.

It is predicted to have a negligible effect on the long views, sense of remoteness or other qualities for which the SLA has been designated and no overall effect on the integrity of the designation.

Pentland Hills SLA (Scottish Boarders, West Lothian and South Lanarkshire)

Parts of the Pentland Hills are designated within the Scottish Borders (Pentland Hills SLA), West Lothian (Pentland Hills SLA) and South Lanarkshire (Pentland Hills and Black Mount SLA) council areas. Much of the range of hills outwith South Lanarkshire was designated as a Regional Park in 1984.

These designations mostly respond to council boundaries, but the experience of the hills is as a single upland area and this assessment considers the designations together. The closest designated area is the Pentland Hills and Black Mount SLA, which lies 4.1km to the south-east of the Proposed Development.

The key qualities of the hill range can be summarised as follows (adapted from LUC, 2013 and Ironside Farrar, 2010):

- A distinct and recognisable landscape feature that extends in an unbroken chain approximately 30km from south-west to the north-east;
- A landscape of rounded hill tops and sweeping slopes, cut by steep upland streams and covered with grassland and heather moorland, which provides a dramatic contrast with the lower-lying surroundings;
- The range offers long, unobstructed views and provides a setting to the populated Midland Valley to the north;
- It has a strongly undeveloped character and the general lack of human activity, minimal vegetation and openness enhance the sense of comparative isolation and exposure, attracting recreational use; and
- The Pentland Hills Regional Park is a very popular and highly valued recreational resource.

There are no commercial scale wind farms within the hill range, but several can be seen from the summits and western-facing hill flanks. These include Longhill Burn, Harburnhead, Pearie Law, Pates Hill, Tormywheel and the Black Law and Muirhall Groups.

Theoretical visibility is widespread from parts of the Pentland Hills within South Lanarkshire and West Lothian, but very limited within the Scottish Borders. The Proposed Development would be visible from west-facing slopes and summits, including East Cairn Hill, West Cairn Hill, Harrows Law and Bleak Law.

Operational turbines currently affect views from the hills, particularly to the west. Where visible, the Proposed Development would introduce further turbines in these views but would generally be seen behind Harburnhead and Pearie Law, adjacent to Pates Hill and Longhill Burn, and in front of Tormywheel and the Black Law group. It would appear as a small addition to this large cluster of existing wind farms.

Although its presence in views to the west may have some limited effect on the sense of isolation and remoteness, the Proposed Development is not predicted to affect the role that the hills play in providing a setting and dramatic contrast in views from the surrounding lowlands. Neither would it affect any other qualities for which the range has been designated.

Consequently, no overall effect on the integrity of the designation is predicted,

Upper Clyde Valley and Tinto SLA (South Lanarkshire)

This extensive SLA lies approximately 11.6km to the south of the Proposed Development at its closest point. The area includes Upper Clyde Valley, Tinto Hill and parts of the Southern Upland hills. The key qualities of the SLA can be summarised as follows (adapted from Ironside Farrar, 2010):

- The broad and distinctive semi-upland horseshoe of the Upper Clyde Valley contrasts with the enclosed character of the river immediately upstream, associated with the open and expansive landscape in which the imposing Tinto Hill and the steep rolling Southern Uplands are ever present;
- Tinto Hill can be viewed from the major conurbations to the north. As an exceptionally well-used recreational walking route offering panoramic views, Tinto Hill offers a distinctive landscape feature of regional importance; and
- The Southern Uplands provide a very distinctive and scenic landscape of high hills with smooth rolling profiles, openness and feelings of remoteness. They are strongly rural in character and the major conurbations to the north have limited influence.

There are no commercial scale wind farms within the SLA, but there are views of several operational wind farms, including Hagshaw Hill, Clyde, the Black Law and Muirhall Groups, Tormywheel, Pates Hill, Longhill Burn, Harburnhead and Pearie Law.

Wind turbines are a feature in views from Tinto Hill, particularly to the west and north-west of the SLA, where there are several wind farms within the plateau moorland of South Lanarkshire.

The Proposed Development would be visible from north-facing areas of farmland above the Clyde Valley, and from the north-facing slopes and summit of Tinto Hill, introducing further turbines into a landscape backdrop already containing several wind farms. Where visible, it would appear adjacent to Longhill Burn and Pates Hill as a small extension to Longhill Burn.

It is predicted to have a negligible effect on the long views, the sense of remoteness or other qualities for which the SLA has been designated and no overall effect on the integrity of the designation.

Landscape Character

The detailed viewpoint assessments (Annex 5-1-1) indicate that substantial effects on landscape character are unlikely to be experienced beyond approximately 2.5 km.

At greater distances, the Proposed Development would be unlikely to noticeably affect the rural character or other landscape characteristics. This is especially true for LCTs lying to the north of the Proposed Development, from where the turbines would appear less prominent, low on the skyline and partly obscured by intervening forest plantations.

For these reasons, the following two LCTs are not considered further:

- 268 Upland Hills – Lothians. This unit lies to the east of the Proposed Development, approximately 5.2km from the nearest turbine at its closest point; and

- 273 Lowland Plateaux – Lothians. This unit lies some 3.3km to the north of the Proposed Development at its closest point.

201 Plateau Farmland – Glasgow & Clyde Valley

This LCT has the following key characteristics:

- 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; and
- 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.

This unit lies to the south and west of the Proposed Development, approximately 950m from the nearest turbine at its closest point. Within 10km theoretical visibility is extensive, although forest plantations reduce visibility in practice. Beyond 10km visibility would become sporadic.

This medium to large scale landscape is moderately varied, with undulating landform and a landscape pattern that responds to the landform. Prominent settlement, other human influences and views of wind farms reduce susceptibility, which is assessed as low-medium overall.

Although the LCT is predominantly rural, with long views that contribute to the landscape quality, the declining tree cover and prominent human influences detract. The landscape value is assessed as low-medium.

The Proposed Development would have a similar typology to adjacent wind farms and the landscape context would be similar, but it would bring turbines further south and have a slightly adverse effect on the rural character.

Viewpoint 4 lies within this LCT, where the detailed assessment predicts a medium magnitude of landscape effect, giving rise to a localised moderate effect within approximately 2.5km of the Proposed Development.

Landscape effects would lessen with distance, as the prominence of the turbines reduces. Taking account of the degree of screening, overall effects on the LCT are predicted to be small, giving rise to a moderate-minor degree of effect.

213 Plateau Moorlands – Glasgow & Clyde Valley

This LCT has the following characteristics:

- 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; and
- Extensive wind turbine development, including one of the largest wind farms in Scotland, Black Law.

The Proposed Development is located within this unit, so effects would be both direct and indirect. Within 5km, theoretical visibility is extensive, noticeably reducing beyond 5km and becoming more sporadic beyond 10km. Extensive forest plantations to the west of the Proposed Development would reduce visibility in practice.

This open landscape is moderately varied, with undulating landform and no strong landscape pattern. Urban influences, forest plantations, wind turbines and other infrastructure reduce susceptibility, which is assessed as low-medium overall. Long views and some mixed woodlands contribute to the landscape quality, although wind farms and forest plantations detract. The landscape value is assessed as low-medium.

The Proposed Development would bring turbines slightly further south, affecting the rural character slightly. At close range the changes would be noticeable, but within a landscape that already contains turbines of a similar scale.

Viewpoints 2 and 5 lie within this LCT, where the detailed assessments predict a magnitude of landscape effect of medium at 2.19km, reducing to small-negligible at 4.82km from the Proposed Development, respectively, as the prominence of the turbines within the landscape lessens.

Effects would be greater closer to the site, where the scale of the turbines would contrast with that of adjacent tree blocks and the movement of blades would be very apparent, adversely affecting the rural character.

Consequently, a large magnitude of effect is predicted for the site and immediate surroundings, giving rise to a moderate-major landscape effect. Taking into account the sporadic nature of visibility in areas further west, however, overall effects on the LCT are predicted to be small, giving rise to a moderate-minor degree of effect.

269 Upland Fringes – Lothians

This LCT has the following characteristics:

- Broadly undulating, landforms forming a series of smooth rounded hills and slopes, some steep-sided and some gently sloping, shelving gradually from the Uplands northward to merge with rolling farmlands;
- Occasional hills where underlying geology incorporates harder strata;
- Varied scale, openness and land use reflecting transitional nature between upland and lowland;
- Incised watercourses have etched v-shaped valleys into the slopes, often forming deep cleughs;
- Occasional larger rivers flow through similar, but larger-scale, v-shaped channels;
- Remnant heather moorland and rough grassland on high ground gives way to improved grassland and then to arable land on the lowest elevations, with a parallel transition from post and wire fence and walls to beech and hawthorn hedges;
- Some areas of extensive coniferous forest, but tree cover is more frequent in the form of shelterbelts;
- Deciduous woodland is restricted to steeper land in river channels, though this includes some important ancient woodlands;
- Dispersed settlement pattern of farmsteads and clusters of cottages, with occasional small villages;

- Distinctive character of rural road network, dense in places, including local features such as fords and bridges;
- Quarries, overhead lines and busy A roads which have localised influence in some parts of the landscape;
- Clearly transitional landscape between lowland and upland characters; and
- Views across the lowland, and to the coast in the east, backed by the ridge lines of the hills to the south.

This unit lies immediately to the north of the Proposed Development. Within 5km, theoretical visibility is widespread, although extensive forest plantations would reduce visibility in practice. Beyond 5km theoretical visibility is restricted to the more open, eastern parts of the LCT.

The varied scale, openness and land use indicate a higher susceptibility, although forest plantations, wind farms, power infrastructure and quarries detract, and it is assessed as medium overall. This LCT has some natural heritage assets and recreational use, varied land use and panoramic views. Part lies within the Regional Park and the landscape value is judged to be medium-high.

Where visible, the Proposed Development would introduce further turbines, but would generally appear as an extension to Longhill Burn, within the context of other wind farms, including Harburnhead, Pearie Law, Pates Hill and Tormywheel.

Viewpoint 1 lies within this LCT, 3.41km to the north-west of the Proposed Development, where the detailed assessment predicts a negligible magnitude of effect.

Forest plantations would restrict visibility within areas immediately to the north of the site, but further east, near Cobbinshaw the turbines would be more visible, where a medium magnitude of effect is predicted, giving rise to a localised moderate effect within approximately 2.5km. The magnitude of effect on this LCT as a whole is predicted to be small-negligible, giving rise to a moderate-minor degree of effect.

5.15.5 Operational Visual Effects

Settlements

Residential receptors are assessed as having high susceptibility and a view towards the Proposed Development of medium value, unless otherwise stated.

In relation to the settlements to the north and north-west of the Proposed Development, the detailed assessments at viewpoints 1, 3, 6 and 7 provide a reliable guide to the likely wider visual effects. These predict a magnitude of visual effect of small or small-negligible, where direct views are possible. This is due to the relatively low profile of the turbines on the skyline, their fit with the existing pattern of neighbouring wind farms and the limited proportion of the generally wide views affected.

The location of the Proposed Development would also avoid adverse effects on the longest part of views from these settlements, which is generally towards the Pentland Hills and Tinto Hill. Consequently, where views are possible, the Proposed Development is predicted to give rise to a moderate-minor or minor visual effect from the following settlements:

- Blackridge;
- Breich;

- Fauldhouse;
- Loganlea;
- Longridge;
- Seafield;
- Stoneyburn/Bents; and
- West Calder.

Auchengray

This small rural settlement lies approximately 2.6km to the south of the Proposed Development on a minor road that runs north to south. It is slightly elevated above the surrounding grazing land and views to the north are typically open, although outbuildings, garden vegetation and tree belts provide localised screening. Several wind farms are currently visible, including Longhill Burn, Pates Hill, Pearie Law and Muirhall.

The majority of dwellings face east or west, but views north would be possible from those with gable windows or conservatories and from gardens.

Where visible, the Proposed Development would appear amongst woodland blocks on the rising pasture land, to the left of Pates Hill and in front of the Longhill Burn turbines, with which it would seem to form an extension. It would sit relatively prominently on the skyline, but would occupy a small part of this wide view. It would not affect the longer views towards hills to the south-west, south and east.

Viewpoint 2 is the closest to this settlement, where the detailed assessment predicts a medium magnitude of effect, 2.19km from the Proposed Development. Taking into account the similar proximity of the settlement but the relatively small proportion of dwellings with direct open views, the magnitude of visual effect is predicted to be small-medium. This would give rise to a moderate level of effect for residents.

Tarbrax

This settlement is located approximately 4.1km to the south-east of the Proposed Development, along a minor road which runs south-west to north-east. It has a slightly elevated position above the grazing land to the north and west and views to the north-west are typically open.

Tormywheel wind farm is visible above forest plantations to the west and Pates Hill can just be seen beyond a prominent oil shale bing, which provides localised screening. Several dwellings along Tarbrax Road have direct views towards the Proposed Development, although garden vegetation, woodland and other buildings would provide screening from the majority of those within the settlement.

Where visible, the Proposed Development would appear amongst woodland blocks in front of Tormywheel and amongst Longhill Burn wind farm, seeming to form a widely spaced extension to this cluster. It would sit slightly prominently on the skyline, but would occupy a relatively small part of this open view.

The view would be similar, but less elevated, to that from viewpoint 8, where the detailed assessment predicts a magnitude of small for road users at 5.6km. Taking into account the closer proximity of the settlement but also the relatively small proportion of dwellings with direct open views, the magnitude of visual effect is predicted to be small-medium. This would give rise to a moderate level of effect overall.

Woolfords

This long terrace of 46 dwellings lies approximately 1.6-1.7km to the south-east of the Proposed Development, along a minor road. Views north-west are across pasture, which slopes gently upwards to the west, and is divided by stone dykes, with numerous tree clumps.

Pates Hill turbines can be seen on the skyline to the north-west. Numerous garages, outbuildings, mature trees and other garden vegetation to the west of the terrace provide substantial screening.

The Proposed Development would lie in front of Longhill Burn, appearing to form an extension. It would occupy a substantial part of the view and would be more prominent than Longhill Burn. Blade overlap would increase the visual effect.

Taking into account the degree of the screening and that that the principal view remains unaffected; the magnitude of visual effect is predicted to be medium-large, giving rise to an overall moderate-major visual effect.

Braehead

This small, rural settlement lies approximately 6.8km to the south-west of the Proposed Development, along the B7016 and the Main Street. Views north-east are typically open, across undulating farmland towards forest plantations on the skyline. Several wind farms are visible, including Tormywheel, Longhill Burn, Pates Hill, Pearie Law, Harburnhead and Muirhall.

Some dwellings, mainly along the northern edge of the settlement, would have open views of the Proposed Development. Where visible, the Proposed Development would lie in front of Pates Hill and to the right of Longhill Burn, appearing to form a small extension.

The visual effect would be similar to that at viewpoint 5, where the detailed assessment predicts a magnitude of small for residents at 4.82km from the Proposed Development. Taking into account the greater distance, the magnitude of visual effect for residents of Braehead is predicted to be small-negligible. This would give rise to a moderate-minor level of effect overall.

Forth

This settlement lies approximately 4.8km to the south-west of the Proposed Development. Some dwellings would have views of the Proposed Development, but the majority would have none, due to the screening effect of adjacent buildings, woodland and other vegetation.

The detailed assessment at viewpoint 5 predicts a visual effect of small for residents with direct views. Taking into account the small proportion of residents who may have views of the turbines, the overall magnitude of effect on this settlement is predicted to be small, giving rise to a moderate-minor effect.

Carnwath

This settlement lies approximately 10.3km to the south of the Proposed Development. Several wind farms are visible, including the Black Law group, Tormywheel, Longhill Burn , Pates Hill and Muirhall.

Dwellings along the northern side of the A70 may have views of the Proposed Development, where garden vegetation and outbuildings allow. Further east, industrial buildings would prevent views from the majority of dwellings along the A721.

Where views are possible, the Proposed Development would appear amongst woodland blocks, seeming to form a small extension to Longhill Burn. It would occupy a very small part of this wide

view and not affect longer views towards hills to the south-west, south and east. The magnitude of effect is predicted to be negligible, giving rise to a moderate-minor degree of effect.

Libberton

This small rural settlement lies approximately 13.8km to the south of the Proposed Development. Several wind farms are visible, including the Black Law group, Tormywheel, Longhill Burn , Muirhall and Harburnhead.

Agricultural buildings on the northern fringes would provide screening, but a few nearby dwellings may have oblique views of the Proposed Development. Elsewhere, woodland and garden vegetation would limit views northwards.

Where visible, the Proposed Development would appear as a minor element in the view, forming a small extension to Longhill Burn. It would occupy a very small part of this wide view and would not affect longer views towards hills to the south-west, south and east. The magnitude of effect is predicted to be negligible, giving rise to a moderate-minor degree of effect.

Weston

This small rural settlement lies approximately 10.6km to the south-east of the Proposed Development. The nearby Muirhall group is the most visible of operational wind farms. Most dwellings are set within woodland, preventing views, although some on the eastern fringe of the settlement have more open views north-westwards.

Where visible, the Proposed Development would appear as a minor element in the view, seeming to form an extension to Longhill Burn, behind Muirhall. It would occupy a very small part of this wide view and would not affect longer views towards hills to the south-west, south and east. The magnitude of effect is predicted to be negligible, giving rise to a moderate-minor degree of effect for residents.

Key Roads and Railways

None of the following roads are classed as tourist routes. Road users are assessed as medium susceptibility and the view towards the site as medium value.

A70

This route passes within 5.5km to the east of the Proposed Development, crossing open moorland between Carnwath to the south and Balerno to the north.

For most of the route between Carnwath and Maiden Hill, theoretical visibility is intermittent, due to screening by landform and large forest plantations. The longest section with theoretical visibility is some 3.6km in length, in the vicinity of viewpoint 8, approximately 5.6km from the Proposed Development.

To the north of Camilty Plantation, another section 3km long and 8.4km from the Proposed Development would allow road users heading south to have views of the turbines. Elsewhere, any views are likely to be restricted to short glimpses.

The detailed assessment at Viewpoint 8 predicts a small magnitude of visual effect for road users at one of the closest points along this route. The Proposed Development would appear to form an extension to Longhill Burn, occupy a relatively small proportion of the wide view and would not affect longer views towards Tinto Hill.

Taking into account the limited proportion of this fast route with theoretical visibility of the turbines and the predicted effects at viewpoint 8, the overall magnitude of effect is assessed to be small-negligible. This would give rise to a minor visual effect for users of the route.

A704

This short route passes within 2.9km to the north-west of the Proposed Development, running north-east from the A704 at viewpoint 1 to meet the A71 near West Calder. Within 5km theoretical visibility is intermittent, as it passes through several large forest plantations.

The longest section of road with potential views is some 600m in length, near the A71 junction, where road users heading west are likely to have direct views of the turbines, lying 4km to the south-west.

Further west, tree belts, hedgerows and other roadside vegetation would allow only short glimpses to the south.

The detailed assessment at viewpoint 1 predicts a small-negligible magnitude of visual effect for road users at one of the closest points along this route. The Proposed Development would fit the existing pattern of turbines established by Longhill Burn and occupy a relatively small proportion of the wide view; it would not sit prominently on the skyline or affect longer views towards the Pentland Hills.

Taking into account the very limited proportion of this route with theoretical visibility of the turbines and the predicted effects at viewpoint 1, the overall magnitude of effect is assessed to be small-negligible. This would give rise to a minor visual effect for users of the route.

A706

This route passes within 3.3km to the west of the Proposed Development, running north-east from Lanark to Bathgate. Within 5km theoretical visibility is sporadic, due to screening by large forest plantations. The longest section of road with potential views is some 750m in length to the north of viewpoint 1, approximately 3.8km from the Proposed Development.

Further south there are longer sections with theoretical visibility, one 1.6km long, to the south-west of Forth and another 2.4km long, 10.1km from the Proposed Development. To the north, the route passes through several large settlements which, in combination with numerous woodland blocks and tree belts would allow only short glimpses to the south.

The longest of these are to the east of Seafield, where two open sections, 240m and 550m long, are likely to have views, 8.8km or more from the Proposed Development.

The detailed assessment at viewpoint 1 predicts a small-negligible magnitude of visual effect for road users at one of the closest points along this route. The Proposed Development would fit the existing pattern of turbines established by Longhill Burn and occupy a relatively small proportion of the wide view; it would not sit prominently on the skyline or affect longer views towards the Pentland Hills.

Viewpoint 5 lies some 300m to the east of the route, where the detailed viewpoint assessment predicts a small-negligible visual effect for road users travelling north. The Proposed Development would lie well away from the focus of this view, which is to the east, towards the Pentland Hills. It would occupy a small proportion of the wide view and would appear to form an extension to Longhill Burn.

Taking into account the relatively limited proportion of this route with theoretical visibility of the turbines and the predicted effects at the viewpoints, the overall magnitude of effect is assessed to be small-negligible. This would give rise to a minor visual effect for users of the route.

A71

The A71 passes within 3.6km to the north of the Proposed Development near Breich.

Within 5km of the Proposed Development, theoretical visibility is intermittent, as the route passes through numerous settlements. Woodland blocks and tree belts would also screen views. Further west, a 2.5km section of road is likely to have open views, 7km or more from the Proposed Development. Elsewhere, any views are likely to be restricted to short glimpses due to the screening effect of buildings and woodlands.

The detailed assessment at viewpoint 3 predicts a small-negligible magnitude of visual effect for road users at one of the closest points along this route. The Proposed Development would occupy a small proportion of the view, would not sit prominently on the skyline and would not affect longer views towards the Pentland Hills.

Taking into account the limited proportion of this route with theoretical visibility of the turbines and the predicted effects at the closest viewpoint, the overall magnitude of effect is assessed to be negligible. This would give rise to a minor visual effect for road users.

Rail Lines

Rail users are assessed as having medium susceptibility and the value of the view towards the site as medium.

West Coast Main Line

This line passes within 1.8km to the south-east of the Proposed Development at Woolfords (viewpoint 4) as it runs north-east from Carstairs Junction towards Edinburgh. To the north of Woolfords, large forest plantations and long sections of cutting would limit any views, especially within 5km of the Proposed Development. Further west, views may be possible for passengers travelling south from two sections of line, one 450m in length and another 750m, some 8km and 5km from the nearest turbine, respectively.

South of Woolfords the line is more open with shorter lengths of cutting. Passengers travelling north are likely to have views for much of this section, all of which lies within 5km. Further south, visibility is likely to become more intermittent as the line passes near several forest plantations. In all, passengers heading north are likely to have intermittent views of the Proposed Development along a section of line some 8.5km long as they approach Woolfords.

The detailed assessment at viewpoint 4 predicts a medium-large magnitude of visual effect at one of the closest points along the line. Although the Proposed Development would not affect long views eastwards towards the Pentland Hills, it would occupy a moderate proportion of the view and sit prominently on the skyline.

Although it would appear to form an extension to Longhill Burn and Pates Hill, it would introduce further blade overlap, which would increase the visual effect.

The magnitude of effect would reduce with increasing distance as the relative prominence of the turbines and proportion of the view affected decrease. The detailed viewpoint assessments indicate that beyond 2.5km, the magnitude of visual effect is likely to be small or less.

Taking into account the pattern of theoretical visibility of the turbines and the predicted effects at the viewpoints, the magnitude of effect is assessed to be medium within 2.5km for passengers

heading north. This would give rise to a moderate visual effect. Effects on the route as a whole are predicted to be small-negligible, resulting in a minor visual effect.

Recreational Routes

CL/3151/1: East Forth Road – Wilsontown Road; and CL/3155/1: Track out to workings, Wilsontown.

Path users are assessed as having high susceptibility and the value of the view towards the site as medium

Figure 5-2 indicates that theoretical visibility would be restricted to approximately 900m and 500m of these routes respectively. Both lie close to viewpoint 5, where the detailed assessment predicts a small magnitude of effect where direct views are possible. Taking into account the proportion of these routes where views would be possible, the degree of visual effect is assessed as moderate-minor.

5.16 Cumulative Impact Assessment

5.16.1 Introduction

Best practice guidance places emphasis on the need to identify the key cumulative effects which are likely to influence decision making, rather than an assessment of every potential cumulative effect (SNH, 2012).

Accordingly, this cumulative assessment focusses on those wind farms and single turbines that are most likely to give rise to substantial cumulative effects, in combination with the Proposed Development.

The wind farms and individual turbines within the study area are listed in Table 5-11. This information is correct as of April 2026.

Single turbines are scattered throughout the study area, creating a random pattern of turbines often with contrasting heights, proportions and rotation speed. With some exceptions, individual turbines tend to be located at lower elevations and harder to discern amongst masts, pylons and other vertical features of a similar scale at moderate distances.

Consequently, only larger single turbines, over 50m to tip, have been included within the assessment. This approach was agreed with SLC during consultation.

Table 5-11: Wind Farms Included in Cumulative Assessment

Wind Farm	Status	Tip (m)	Turbines	Distance (km)	Direction
Auchrobert	Operational	132	12	29	Southwest
Bankend Rig	Operational	76	11	40.4	Southwest
Black Law	Operational	110	54	5.5	West
Black Law extension	Operational	126.5	23	4.8	West
Black Law extension 2	Operational	126.5	11	6.5	West
Blackhill Farm	Approved	54.7	1	4	Northwest
Burnfoot Poultry Farm	Approved	77	1	1	Southwest
Burnhead	Operational	126.5	13	15	Northwest
Camilty resubmission	Approved	149.9	6	4.5	East
Climpy	Operational	99	1	5.2	West
Covanhill Farm	Approved	51	1	7.5	Southwest
Cumberhead West	Approved	200	21	30.6	Southwest

Wind Farm	Status	Tip (m)	Turbines	Distance (km)	Direction
Dalquhandy	Operational	149.9	10	29.1	Southwest
Dewshill Farm	Approved	200	2	14.9	Northwest
Douglas West Extension	Approved	200	13	29.7	Southwest
Drumduff	Operational	120	3	14.6	Northwest
Drumduff Extension	Approved	180	3	14.3	Northwest
Drumelzie	Abandoned	126.5	1	14.6	Northwest
Dungavel Hill	Operational	102	13	36.2	Southwest
Forrestburn Farm	Approved	78	1	13.4	Northwest
Forrestfield	Approved	125	4	14.2	Northwest
Galawhistle	Operational	121	22	32.7	Southwest
Gladsmuir Hills	Approved	220	6	5.4	West
Greengairs	Approved	125	9	22.6	Northwest
Greengairs East	Operational	149.9	8	20.5	Northwest
Greens Farm	Approved	84	1	6.8	South
Greenwall Forth	Operational	99	1	4.5	West
Hagshaw Hill Repowering	Approved	200	14	32.4	Southwest
Harburnhead	Operational	126	22	2.1	East
Hare Craig	Approved	230	8	35.3	Southwest
Hartwood	Approved	126.5	7	13.6	West
Haywood Farm extension	Operational	66	1	1.6	Southwest
Heathland resubmission	Approved	180	14	0 (adjoining site boundaries)	West
Kype Muir	Operational	132	26	31.3	Southwest
Kype Muir Extension	Approved	220	15	33	Southwest
Lampits Farm	Operational	64	2	10.7	South
Lampits Road	Approved	67	1	10.8	South
Longhill Burn	Operational	200	8	0 (adjoining site boundaries)	Northwest
Medwyn Park	Operational	67	1	9.1	South
Moss Hall Farm	Operational	80	1	6.1	North
Mountainblaw Farm	Operational	19.4	1	1.7	Southwest
Muirhall	Operational	125	6	1.8	South
Muirhall Extension	Operational	147	2	4	Southeast
Muirhall South	Operational	145	3	5	Southeast
Muldron Farm	Operational	79	1	6.5	West
Nutberry	Operational	125	6	32	Southwest
Pates Hill	Operational	107	7	0 (adjoining site boundaries)	North
Pearie Law	Operational	125	6	0 (adjoining site boundaries)	Northeast
Pearie Law extension	Approved	180	4	0 (adjoining site boundaries)	Northeast
Redlands	Approved	77	1	9.8	South
Rigg Wind	Approved	149.5	1	10.2	Northwest
Rimmon	Operational	76	1	11	West
Southrigg	Operational	126.5	1	10.1	Northwest
Springhill and Leadloch Road	Approved	77	1	9	West
Standhill Farm	Operational	84	2	11.3	Northwest
Stanebent Farm	Approved	61	1	9.5	West

Wind Farm	Status	Tip (m)	Turbines	Distance (km)	Direction
Stobwood Farm	Operational	67	1	3.3	Southwest
The Heights	Approved	180	3	14.3	Northwest
Tippethill	Operational	77	1	8.6	Northwest
Tormywheel	Operational	111	15	2.5	West
Tormywheel extension	Approved	149.9	2	3.4	West
Torrance Farm	Operational	125	3	11.2	Northwest
Torrance Farm Wind Park Extension	Operational	125	2	10.2	Northwest
Treesbank Farm	Abandoned	90	3	12.5	Northwest
Upper Haywood Forth	Operational	66	1	2	Southwest
West Benhar	Operational	149.9	7	9.1	Northwest
Westend Wood	Operational	74	1	9.4	Southwest
Wester Hassockrigg Farm	Operational	78	1	12.9	Northwest
Whitelee	Operational	110	140	35.7	Southwest
Whitelee Phase 1	Operational	140	36	43	Southwest
Whitelee Phase 2	Operational	140	39	43	Southwest

Following initial desk and site-based assessment, the scope of the cumulative assessment was narrowed to include those proposals within 15km. These are illustrated on Figure 5-13. Developments beyond this range are judged to be less noticeable from the majority of the study area and therefore less likely to interact with the Proposed Development.

5.16.2 Theoretical Combined Visibility

Combined Visibility at Viewpoints

In the first instance, cumulative wireframes (Figures 5-18 to 5-25) were prepared from each of the viewpoints to show each of the operational, consented or planned wind farms and single turbines above 50m to tip within 15km of the Proposed Development that are theoretically visible from each of the viewpoints.

The combined visibility of the Proposed Development with each of these is analysed in Table 5-12. This table has been prepared from information taken from the cumulative wireframes and verified in the field. It summarises the theoretical visibility of each of the wind developments that are likely to be clearly evident from each of the eight viewpoints.

Note that the eight viewpoints were selected to provide the clearest views of the Proposed Development. In some cases, visibility of some of the other wind farms or single turbines may be better nearby, but mostly at the expense of views of the Proposed Development.

Whilst the viewpoints have been chosen to provide some of the clearest views of the Proposed Development, trees and other vegetation often partly or wholly obscure potential views of other wind farms. This needs to be borne in mind when referring to Figures 5-18 to 5-25, which do not show trees, other vegetation, buildings, minor landforms or embankments that may screen views in practice.

5.16.3 Selection of Developments for Detailed Assessment

In general, the Proposed Development is more likely to interact significantly with other developments that are within the simultaneous view, rather than those where the viewer has to turn around to see; i.e. within the successive view.

Table 5-12 provides an overview of the cumulative situation at each viewpoint and an indication of which wind farms and single turbines are most likely to interact with the Proposed Development.

Where a development is theoretically visible within the simultaneous view from a viewpoint, this is indicated by a tick. Brackets indicate where developments are screened by built elements, trees, other vegetation or minor landforms not contained within the digital terrain model.

Table 5-12: Combined Theoretical Visibility of Developments from Viewpoints

Wind Farm	Tip (m)	Turbines	VP 1	VP 2	VP 3	VP 4	VP 5	VP 6	VP 7	VP 8
Consented										
Blackhill Farm	54.7	1							✓	
Burnfoot Poultry Farm	77	1		✓			✓			✓
Camilty resubmission	149.9	6		[✓]			[✓]	[✓]	✓	
Heathland resubmission	180	14	✓	✓	✓	✓	✓	✓	✓	✓
Pearie Law extension	180	4	✓	✓	✓		[✓]	✓	✓	✓
Rigg Wind	149.5	1								[✓]
Tormywheel extension	149.9	2				✓				✓
Operational										
Black Law	110	54				[✓]				✓
Black Law extension	126.5	23				[✓]				✓
Black Law extension 2	126.5	11								✓
Burnhead	126.5	13								[✓]
Climpy	99	1								✓
Greenwall Forth	99	1				[✓]				✓
Harburnhead	126	22	[✓]	✓	✓		✓	✓	✓	✓
Haywood Farm extension	66	1				[✓]	✓		✓	[✓]
Longhill Burn	200	8	✓	✓	✓	✓	✓	✓	✓	✓
Moss Hall Farm	80	1		[✓]						[✓]
Mountainblaw Farm				✓		[✓]	[✓]			[✓]
Muirhall	125	6								
Pates Hill	107	7	[✓]	✓	✓	✓	[✓]	✓	✓	✓
Pearie Law	125	6	[✓]	[✓]	✓			✓	✓	✓
Standhill Farm	84	2								[✓]
Stobwood Farm	67	1								✓
Tormywheel	111	15	✓			✓	[✓]	✓	✓	✓
Torrance Farm	125	3								[✓]
Upper Haywood Forth	66	1				[✓]	✓		✓	✓
Whitelee	110	140								✓
Whitelee phase 1	140	36								✓
Whitelee phase 2	140	39								✓

Table 5-13 includes the eleven developments that are most often clearly visible simultaneously with the Proposed Development. The assessment of cumulative effects focusses on these as they are most likely to interact with the Proposed Development. Additional developments may be prominent from specific parts of the study area and these are noted where relevant.

ZTVs have been prepared for these wind farms and turbines, to show the combined visibility with the Proposed Development. These are illustrated in Figures 5-14 to 5-17 and discussed below.

Table 5-13: Wind Farms and Single Turbines Selected for Detailed Assessment

Development	Tip Height (m)	Turbines
Consented		
Burnfoot Poultry Farm	77	1
Camilty resubmission	149.9	6
Haywood Farm extension	66	1
Heathland resubmission	180	14
Pearie Law extension	180	4
Operational		
Harburnhead	126	22
Longhill Burn	200	8
Pates Hill	107	7
Pearie Law	125	6
Tormywheel	111	15
Upper Haywood Forth	66	1

5.16.4 Cumulative Visibility shown on ZTVs

Cumulative ZTVs (Figures 5-14 to 5-17) showing the wind farm developments listed in Table 5-13 have been overlain with that of the Proposed Development, in order to determine the likely extent of combined theoretical visibility. Note that these ZTVs are all bare earth. Four ZTVs illustrate the combined visibility of the Proposed Development with the following developments:

- Figure 5-14: Woolfords + operational developments likely to have greatest effect);
- Figure 5-15: Woolfords + operational and consented developments likely to have greatest effect);
- Figure 5-16: Woolfords + Longhill Burn; and
- Figure 5-17: Woolfords, Heathland resubmission + Pearie Law extension.

Figure 5-14 shows that the Proposed Development is always theoretically visible with several other operational developments, and nowhere is it likely to be visible on its own. Figure 5-15 indicates that a similar pattern of theoretical visibility would occur when including consented developments.

This analysis indicates that the Proposed Development is unlikely to extend the influence of operational or consented wind turbines. Figure 5-16 shows that the Proposed Development is almost always theoretically visible in combination with Longhill Burn, with which it is likely to appear to form an extension. Figure 5-17 indicates a similar pattern of theoretical visibility with Heathland resubmission and Pearie Law extension, suggesting that the Proposed Development would also appear to form an extension with these consented wind farms.

Figures 5-16 and 5-17 suggest that the Proposed Development would almost always appear to form part of a cluster that contains turbines of similar scale, proportion, rotation speed, and occupying a similar part of the landscape. This would help to minimise the cumulative landscape and visual effects of the Proposed Development.

5.16.5 Predicted Cumulative Effects at Viewpoints

The detailed assessment of cumulative effects at each viewpoint is contained in Annex 5-1-1 and the results of the assessment are summarised in Table 5-14.

The assessment of cumulative landscape effects takes into account the overall effect on each landscape receptor. This is informed by the magnitude of cumulative landscape effect identified at

the viewpoints, but also takes into account the extent and nature of the predicted effect on the receptor as a whole.

Whilst Table 5-13 identifies the magnitude of the effect at each viewpoint, conclusions about the overall degree of cumulative landscape effects are contained within the general assessment that follows.

Table 5-14: Cumulative Effects at Viewpoints

			Cumulative Landscape Effects			Cumulative Visual Effects	
VP	Location	Distance	Landscape Receptors	Magnitude	Visual Receptors	Magnitude	Degree of Effect
1	A704/A706 Junction	3.41	269	negligible	road users	negligible	minor
2	Minor road near Haywood and Bughtknowes	2.19	213	small-medium	residents	small-medium	moderate
					road users	small-medium	moderate-minor
3	A71 east of Breich	3.67	273	negligible	road users	negligible	minor
4	Minor road at Woolfords Cottages	1.70	201	medium	residents	medium	moderate-major
					road users	medium	moderate
5	Forth	4.82	213	small-negligible	residents	small	moderate
					road users	small-negligible	minor
6	Fauldhouse	5.55	273	negligible	residents	negligible	minor
7	Longridge	5.80	273	negligible	residents	small-negligible	moderate-minor
8	A70 Maidenhill	5.62	268	small-negligible	road users	small	moderate-minor

5.16.6 Cumulative Landscape Effects at Viewpoints

The detailed viewpoint assessments in Annex 5-1-1 predict a maximum medium magnitude of cumulative landscape effect at viewpoint 4, which lies 1.70km to the south of the Proposed Development.

The effects arise because the Proposed Development brings turbines closer to settlement and has an adverse effect on the rural character and the scale of landscape elements such as woodland blocks. It would increase the amount of development evident but would not introduce a different pattern, either in terms of typology or landscape context.

Similar effects would be experienced at viewpoint 2, which lies 2.19km to the south-west of the Proposed Development, where a small-medium magnitude of cumulative landscape effect is predicted.

Although cumulative effects occur at all of the eight viewpoints, the magnitude of cumulative landscape effect tends to reduce with increasing distance from the site as the Proposed Development adds less to the cumulative situation. Effects are predicted to be small-negligible or negligible from the remaining six viewpoints as the Proposed Development would:

- Not bring development appreciably closer or to a new part of the landscape;
- Not result in a noticeable increase in the amount of wind farm development evident; and
- Have little noticeable effect on the landscape characteristics.

The representative viewpoints examine the potential cumulative effects at specific points in the landscape and the results can be interpreted using the cumulative ZTVs and site visits to draw conclusions about the potential effects on landscape and visual receptors more generally.

The following sections takes into account the information presented above and the findings of the site survey, including the detailed viewpoint assessments presented in Annex 5-1-1.

5.16.7 Cumulative Effects of Construction and Decommissioning

Cumulative landscape and visual effects could arise when the Proposed Development is under construction or being de-commissioned at the same time as other, nearby developments. Given the uncertainties concerning the timing of approval and subsequent construction or decommissioning of wind farm developments, assessment of these effects would be speculative has not been considered further.

5.16.8 Cumulative Landscape Effects during Operation

Local Landscape Areas

Bathgate Hills SLA (West Lothian)

At its closest point, this SLA lies 10.3km to the north of the Proposed Development. There are no commercial scale wind farms within the SLA, but several are visible looking south, including Harburnhead, Longhill Burn, Pearie Law, Muirhall, Pates Hill, Tormywheel and the Black Law Group. Together these stretch across much of the simultaneous view.

The Proposed Development is theoretically visible from the open, south-facing slopes above Bathgate, potentially affecting the long views southwards. Where visible, it would be seen in

simultaneous views behind Longhill Burn and between Pearie Law extension and Heathland resubmission.

It would reflect the pattern of existing development, being similar in typology and landscape context, and forming a barely noticeable addition to this large cluster of existing wind farms.

It is predicted to have a negligible cumulative effect on the panoramic views, sense of isolation or other qualities for which the SLA has been designated and no overall effect on the integrity of the designation.

Blackridge Heights SLA (West Lothian)

At its closest point, this SLA lies 12.3km to the north-west of the Proposed Development.

Although there are no commercial scale wind energy developments within the SLA, Burnhead wind farm lies immediately adjacent to the north and views to the south include several wind farms, occupying most of the simultaneous view. The closest of these are Torrance Farm, Torrance Farm Wind Park extension and Southrigg.

The Proposed Development is theoretically visible from a wide area of this open, upland landscape, potentially affecting the long views southwards.

It would be seen in simultaneous views to the right of Pates Hill and behind Longhill Burn. The consented single turbine at Rigg Wind would be prominent in front of Longhill Burn.

The Proposed Development would lie between Heathland resubmission and Pearie Law extension, appearing similar in scale to these. It would reflect the pattern of development, being similar in typology and landscape context, and forming a barely noticeable addition to this large cluster of wind farms.

It is predicted to have a negligible cumulative effect on the panoramic views, sense of isolation or other qualities for which the SLA has been designated and no overall effect on the integrity of the designation.

Pentland Hills SLA (Scottish Borders, West Lothian and South Lanarkshire)

The closest part of the designated area is the Pentland Hills and Black Mount SLA, which lies 4.1km to the south-east of the Proposed Development.

There are no commercial scale wind farms within the hill range, but several can be seen from the summits and western-facing hill flanks, occupying much of the simultaneous view.

Theoretical visibility is widespread from parts of the Pentland Hills within South Lanarkshire and West Lothian, but very limited within the Scottish Borders. The Proposed Development would be visible from west-facing slopes and summits, including East Cairn Hill, West Cairn Hill, Harrows Law and Bleak Law.

Where visible, the Proposed Development would appear adjacent to Longhill Burn, and behind Harburnhead and Pearie Law. Camilty resubmission would be relatively prominent in the foreground, Heathland resubmission would appear behind and Pearie Law extension in front of the Proposed Development.

The Proposed Development would reflect the pattern of existing development, being similar in typology and landscape context, and forming a relatively small addition to this large cluster of wind farms.

Although its presence in views to the west may have some limited cumulative effect on the sense of isolation and remoteness, the Proposed Development is not predicted to affect the role that the

hills play in providing a setting and dramatic contrast in views from the surrounding lowlands or any other qualities for which the range has been designated.

No overall effect on the integrity of the designation is predicted.

Upper Clyde Valley and Tinto SLA (South Lanarkshire)

This extensive SLA lies approximately 11.6km to the south of the Proposed Development at its closest point. The area includes Upper Clyde Valley, Tinto Hill and parts of the Southern Upland hills. There are no commercial scale wind farms within the SLA, but several operational wind farms and wind turbines are a feature in views to the north.

The Proposed Development would be visible from north-facing areas of farmland above the Clyde Valley, and from the north-facing slopes and summit of Tinto Hill, introducing further turbines into a landscape backdrop already containing several wind farms.

Where visible, the Proposed Development would be seen adjacent to Longhill Burn, between Heathland resubmission and Pearie Law extension. It would reflect the pattern of existing development, being similar in typology and landscape context, and would appear to form a small addition to the cluster containing Longhill Burn and Heathland.

It is predicted to have a negligible cumulative effect on the long views, sense of remoteness or other qualities for which the SLA has been designated and no overall effect on the integrity of the designation.

Landscape Character

The following section identifies the cumulative landscape effects on LCTs which have some theoretical visibility of the Proposed Development.

The detailed viewpoint assessments (Annex 5-1-1) indicate that substantial cumulative landscape effects on landscape character are unlikely to be experienced beyond approximately 2.5km.

Above this distance, the Proposed Development would be unlikely to increase the proportion of the view with turbines, bring turbines closer to the observer or appear more prominent than other nearby developments. Consequently, the magnitude of cumulative landscape effect is predicted to be small-negligible or negligible.

For these reasons, the following two LCTs are not considered further:

- 268 Upland Hills – Lothians. This unit lies to the east of the Proposed Development, approximately 5.2km from the nearest turbine at its closest point; and
- 273 Lowland Plateaux – Lothians. This unit lies some 3.3km to the north of the Proposed Development at its closest point.

201 Plateau Farmland - Glasgow & Clyde Valley

This unit lies to the south and west of the Proposed Development, approximately 950m from the nearest turbine at its closest point. Within 10km theoretical visibility is extensive, although forest plantations would reduce visibility in practice. Beyond 10km visibility would become sporadic.

This medium to large scale landscape is moderately varied, with undulating landform and a landscape pattern that responds to the landform. Prominent settlement, other human influences and views of wind farms reduce susceptibility, which is assessed as low-medium overall.

Although the LCT is predominantly rural, with long views that contribute to the landscape quality, the declining tree cover and prominent human influences detract. The landscape value is assessed as low-medium.

The Proposed Development would be associated with a part of the landscape already affected by large scale turbines, appearing to form part of the large cluster that contains Pearie Law extension, Heathland resubmission, Tormywheel, Longhill Burn and Pates Hill.

It would have a similar typology to adjacent wind farms and the landscape context would be similar, but it would bring turbines further south and have a slightly adverse effect on the rural character.

Viewpoint 4 lies within this LCT, where the detailed assessment predicts a medium magnitude of effect, giving rise to a localised moderate level of cumulative effect within approximately 2.5 of the Proposed Development.

Effects would lessen with distance, as the prominence of the turbines reduces and the cumulative landscape effects on the LCT as a whole are predicted to be small, giving rise to a moderate-minor degree of effect.

213 Plateau Moorlands - Glasgow & Clyde Valley

The Proposed Development is located within this unit. Within 5km, theoretical visibility is extensive, noticeably reducing beyond 5km and becoming more sporadic beyond 10 km. Extensive forest plantations to the west of the Proposed Development would reduce visibility in practice.

This open landscape is moderately varied, with undulating landform and no strong landscape pattern. Urban influences, forest plantations, wind turbines and other infrastructure reduce susceptibility, which is assessed as low-medium overall. Long views and some mixed woodlands contribute to the landscape quality, although wind farms and forest plantations detract. The landscape value is assessed as low-medium.

The Proposed Development would introduce further turbines, affecting the rural character very slightly. It would appear to form part of the large cluster that contains Pearie Law extension and Heathland resubmission, Tormywheel, Longhill Burn and Pates Hill. At close range the changes would be noticeable, but within a landscape that already contains turbines of a similar scale.

Viewpoints 2 and 5 lie within this LCT, where the detailed assessments predict a magnitude of cumulative landscape effect of small-medium at 2.19km, reducing to small-negligible at 4.82km from the Proposed Development, respectively, as the prominence of the turbines within the landscape reduces.

Effects would be greater closer to the site, as the turbines would become more prominent in relation to more distant wind farms, and their more southern location would be increasingly apparent. Consequently, a large magnitude of effect is predicted for the site and immediate surroundings, giving rise to a localised moderate-major cumulative effect.

Taking into account the sporadic nature of visibility in areas further west, the overall cumulative effects on the LCT are predicted to be small. This would give rise to a moderate-minor degree of effect.

269 Upland Fringes - Lothians

This unit lies immediately to the north of the Proposed Development. Within 5km, theoretical visibility is widespread, although extensive forest plantations would reduce visibility in practice. Beyond 5km visibility would be restricted to the more open, eastern parts of the LCT.

The varied scale, openness and land use indicate a higher susceptibility, although forest plantations, wind farms, power infrastructure and quarries detract, and it is assessed as medium overall. This LCT has some natural heritage assets and recreational use, varied land use and panoramic views. Part lies within the Regional Park and the landscape value is judged to be medium-high.

Where visible, the Proposed Development would introduce further turbines, but would generally be seen in close association with Heathland resubmission and Pearie Law extension, Harburnhead, Pearie Law, Pates Hill, Tormywheel and Longhill Burn, appearing as a small addition to this large cluster of existing wind farms.

Viewpoint 1 lies within this LCT, 3.41km to the north-west of the Proposed Development, where the detailed assessment predicts a negligible magnitude of cumulative effect. Forest plantations would generally prevent closer range views and the magnitude of cumulative effect on this LCT as a whole is predicted to be negligible, giving rise to a minor degree of effect.

5.16.9 Cumulative Visual Effects

Dwellings and Settlements

Residential receptors are assessed as having a high susceptibility to wind farms, with a view towards the site of medium value, unless otherwise stated.

In relation to the settlements to the north and north-west of the Proposed Development, the detailed viewpoint assessments (Annex 5-1-1) predict a magnitude of cumulative visual effect of small-negligible or negligible at viewpoints 1, 3, 6 and 7, where direct views are possible.

The Proposed Development would be of similar scale, proportion and rotation speed, occupy the same part of the view and appear to form part of the cluster that includes Longhill Burn and Heathland resubmission. The location of the Proposed Development would also avoid adverse effects on the longest part of views from these settlements, which is generally towards the Pentland Hills and Tinto Hill.

Consequently, where views are possible, the Proposed Development is predicted to give rise to a moderate-minor or minor degree of cumulative effect from the following settlements:

- Blackridge;
- Breich;
- Fauldhouse;
- Loganlea;
- Longridge;
- Seafield;
- Stoneyburn/Bents; and
- West Calder.

Auchengray

The Proposed Development would appear amongst woodland blocks on the rising pastures, to the left of Pates Hill, in front of Longhill Burn and between Heathland resubmission and Pearie Law extension. It would sit relatively prominently on the skyline, bringing turbines slightly closer, but would occupy a small part of this wide view. The Proposed Development would be of similar scale,

proportion and rotation speed, occupy the same part of the view and appear to form part of the cluster that includes Longhill Burn and Heathland resubmission.

Viewpoint 2 lies nearby this settlement, where the detailed assessment predicts a small-medium magnitude of cumulative effect, 2.19km from the Proposed Development.

Taking into account the similar proximity of the settlement but the relatively small proportion of dwellings with direct open views, the magnitude of cumulative visual effect is predicted to be small, giving rise to a moderate-minor effect overall.

Tarbrax

The Proposed Development would appear amongst woodland blocks in front of Tormywheel and amongst Longhill Burn and Heathland resubmission turbines, seeming to form an extension to this cluster. It would sit slightly prominently on the skyline, but would occupy a relatively small part of this open view. Pearie Law extension would lie to the right of the view, extending the cluster of turbines across the simultaneous view.

The view would be similar, but less elevated, to that from viewpoint 8, where the detailed assessment predicts a magnitude of small for road users at 5.6km.

Taking into account the closer proximity of the settlement but also the relatively small proportion of dwellings with direct open views, the magnitude of cumulative visual effect is predicted to be small, giving rise to a moderate-minor level of cumulative effect.

Woolfords

Blades and hubs of Heathland resubmission would be visible above forest plantations to the north-west, behind the Proposed Development. Pearie Law extension would appear to the south-east, between Pates Hill and Harburnhead, overlapping with Pearie law slightly. The Proposed Development would be of similar scale, proportion and rotation speed, occupy the same part of the view and appear to form part of the cluster that includes Longhill Burn and Heathland. It would bring turbines slightly closer and the magnitude of cumulative visual effect is predicted to be medium, giving rise to a moderate-major effect.

Braehead

The Proposed Development would lie in front of Pates Hill, to the right of Longhill Burn and Heathland resubmission and to the left of Pearie Law extension. It would form a small extension to this cluster, which also includes Tormywheel. Viewpoint 5 lies 4.82km from the Proposed Development, where the detailed assessment predicts a magnitude of small for residents. Taking into account the greater distance, the magnitude of cumulative visual effect for residents of Braehead is predicted to be negligible, giving rise to a minor level of cumulative effect.

Forth

The detailed assessment at viewpoint 5 predicts a cumulative visual effect of small for residents with direct views. Taking into account the small proportion of residents who would have views, the overall magnitude of effect on this settlement is predicted to be small, giving rise to a moderate-minor effect.

Carnwath

The Proposed Development would appear to form a small extension to the cluster containing Longhill Burn and Heathland resubmission. It would occupy a very small part of this wide view and would not bring turbines appreciably closer. The magnitude of cumulative effect is predicted to be negligible, giving rise to a moderate-minor effect.

Libberton

This small rural settlement lies approximately 13.8km to the south of the Proposed

The Proposed Development would appear to form a small extension to the cluster containing Longhill Burn, Heathland resubmission and Tormywheel. It would occupy a very small part of this wide view and would not bring turbines appreciably closer. The magnitude of cumulative effect is predicted to be negligible, giving rise to a moderate-minor effect.

Weston

The Proposed Development would appear amongst the cluster containing Longhill Burn and Heathland resubmission, lying behind the Muirhall group. It would affect a very small part of this wide view and would not bring turbines closer. The magnitude of cumulative effect is predicted to be negligible, giving rise to a moderate-minor effect.

Key Roads and Railways

None of the following roads are classed as tourist routes. Road users are assessed as medium susceptibility and the view towards the site as medium value.

A70

The route passes close to several wind farms, including the Muirhall group and Harburnhead.

For most of the route between Carnwath and Maiden Hill, theoretical visibility is intermittent, due to screening by landform and large forest plantations. The longest section of road with theoretical visibility is some 3.6km in length in the vicinity of viewpoint 8, approximately 5.6km from the Proposed Development.

To the north of Camilty Plantation, another section 3km long and 8.4km from the Proposed Development would allow road users heading south to have views of the turbines. Elsewhere, any views are likely to be restricted to short glimpses.

The detailed assessment at viewpoint 8 predicts a small magnitude of cumulative visual effect for road users at one of the closest points along this route. The Proposed Development would appear to form an extension to Longhill Burn, in front of Tormywheel and Heathland resubmission. Pearie Law extension would appear close by to the right of the Proposed Development and Camilty resubmission would lie adjacent to the road.

The Proposed Development would always be seen in the context of other turbines from this route and would have little appreciable sequential effect. Taking into account the limited proportion of this fast route with theoretical visibility of the turbines and the predicted effects at viewpoint 8, the overall magnitude of effect is assessed to be negligible. This would give rise to a minor cumulative visual effect for road users.

A704

The road passes through the Tormywheel wind farm, Heathland and Longhill Burn also lie close by.

Within 5km theoretical visibility of the Proposed Development is intermittent, as the road passes through several large forest plantations.

The longest section of road with potential views is some 600m in length, near the A71 junction, where road users heading west are likely to have direct views of the turbines, lying 4km to the south-west. Further west, tree belts, hedgerows and other roadside vegetation would allow only short glimpses to the south.

The detailed assessment at viewpoint 1 predicts a negligible magnitude of cumulative visual effect for road users at one of the closest points along this route. The Proposed Development would fit the existing pattern of turbines established by Longhill Burn and Heathland resubmission, not bring turbines closer and add very little to the cumulative situation.

The Proposed Development would always be seen in the context of other turbines from this route and would have little appreciable sequential effect.

Taking into account the very limited proportion of this route with theoretical visibility of the turbines and the predicted effects at viewpoint 1, the overall magnitude of effect is assessed to be negligible. This would give rise to a minor cumulative visual effect for road users.

A706

This route passes close to the Black Law group and through Tormywheel wind farm.

Within 5km theoretical visibility of the Proposed Development is sporadic, due to screening by large forest plantations. The longest section of road with potential views is some 750m in length to the north of viewpoint 1, approximately 3.8km from the Proposed Development.

Further south there are longer sections with theoretical visibility, one 1.6km long, to the south-west of Forth and another 2.4km long, 10.1km from the Proposed Development.

To the north, the route passes through several large settlements which, in combination with numerous woodland blocks and tree belts would allow only short glimpses to the south. The longest of these are to the east of Seafield, where two open sections, 240m and 550m long, are likely to have views, 8.8km or more from the Proposed Development.

The detailed assessments at viewpoints 1 and 5 lie on or close to this route and predict a negligible or small-negligible magnitude of cumulative visual effect for road users. The Proposed Development would fit the existing pattern of turbines established by Longhill Burn and Heathland resubmission, not bring turbines appreciably closer and add very little to the cumulative situation.

The Proposed Development would always be seen in the context of other turbines from this route and would have little appreciable sequential effect.

Taking into account the relatively limited proportion of the route with theoretical visibility of the turbines and the predicted effects at viewpoints, the overall magnitude of effect is assessed to be negligible. This would give rise to a minor visual effect for road users

A71

Several wind farms are visible from the route, including the Black Law group, Tormywheel, Longhill Burn, Pates Hill and Pearie Law.

Within 5km of the Proposed Development, theoretical visibility is intermittent, as the route passes through numerous settlements. Woodland blocks and tree belts would also screen views. Further west, as section of road 2.5km is likely to have open views, 7km or more from the Proposed Development. Elsewhere, any views are likely to be restricted to short glimpses due to the screening effect of buildings and woodlands.

The detailed assessment at viewpoint 3 predicts a negligible magnitude of cumulative visual effect for road users at one of the closest points along this route. The Proposed Development would occupy a small proportion of the view behind Longhill Burn and not bring turbines closer.

The Proposed Development would always be seen in the context of other turbines from this route and would have little appreciable sequential effect.

Taking into account the limited proportion of this route with theoretical visibility of the turbines and the predicted effects at the closest viewpoint, the overall magnitude of effect is assessed to be negligible. This would give rise to a minor cumulative visual effect.

Rail Lines

Rail users are assessed as having medium susceptibility and the value of the view towards the site as medium.

West Coast Main Line

This line passes close to the Muirhall group and between Pearie Law and Harburnhead wind farms.

The detailed assessment at viewpoint 4 predicts a medium magnitude of cumulative visual effect for oblique views at one of the closest points to the line. The Proposed Development would occupy the same part of the view as Longhill Burn, Pearie Law extension and Heathland resubmission

The magnitude of cumulative effect would reduce with increasing distance as the relative prominence of the Proposed Development becomes less noticeable. The detailed viewpoint assessments indicate that beyond 2.5km, the magnitude of cumulative visual effect is likely to be small or less.

The Proposed Development would be seen in the context of other turbines from this line but, from the section to the south-west of Pearie Law, it would bring turbines closer, resulting in a small sequential effect. Taking account of the pattern of theoretical visibility of the turbines and the predicted effects at the viewpoints, the magnitude of effect is assessed to be medium within approximately 2.5km for passengers heading north. This would give rise to a moderate cumulative visual effect. Effects on the line as a whole are predicted to be small-negligible, resulting in a minor visual effect.

Recreational Routes

CL/3151/1: East Forth Road – Wilsontown Road; and CL/3155/1: Track out to workings, Wilsontown.

Path users are assessed as having high susceptibility and the value of the view towards the site as medium.

Figure 5-2 indicates that theoretical visibility would be restricted to approximately 900m and 500m of these routes respectively. Both lie close to viewpoint 5, where the detailed assessment predicts a small magnitude of cumulative effect, where direct views are possible. The Proposed Development is likely to appear to form part of a larger cluster, Heathland resubmission would be visible, the blades overlapping with those of Longhill Burn and the Proposed Development. Taking into account the proportion of these routes where views would be possible, the degree of cumulative visual effect is assessed as minor.

5.17 Comparative Assessment of Effects between the Consented and Proposed Developments

Figure 5-41 Comparative ZTV indicates that there would be a very small increase in the extent of theoretical visibility between the Consented and Proposed Developments. It shows a very similar pattern of theoretical visibility, with no changes within 5km, some additional theoretical visibility within 5-10km amongst Black Law windfarm, little change within 10-15km and minor additional theoretical visibility beyond 15km, mostly to the west of the Proposed Development.

The Proposed Development would result in a slight increase in excavations and other disturbance to the landscape of the site, mainly because of the larger laydown areas required for the taller turbines when compared to the Consented Development.

No change in the landscape effects on designated landscapes or LCTs is predicted.

The increase in the overall turbine dimensions of the Proposed Development would increase the magnitude of visual effect during construction and operation at viewpoints 2, 4 and 6 (see Annex 5-1-1). These differences arise from the proposed change in turbine proportion and increased turbine size (a combination of a higher hub height and a larger rotor diameter/blade length). The small increase in magnitude is not predicted to result in a greater degree of visual effect.

No changes in the cumulative landscape or visual effects are predicted as a result of the taller turbines.

The Proposed Development would increase the magnitude of visual effect for several dwellings included in the Residential Visual Amenity Assessment (see Annex 5-1-2). These are: RA7 Wester Mosshat, RA8 Easter Mosshat, RA9 Woolfords, RA10 2-3 Woolfords Farm Cottages, RA11 1 Woolfords Farm Cottages, RA12 Woolfords settlement and RA13 Woolfords Bungalows. The small increase in magnitude is not predicted to result in a greater degree of visual effect.

No changes in the night time assessment are predicted as a result of the higher hubs of the Proposed Development.

From the majority of the study area the changes brought about by the larger turbines of the Proposed Development would be hard to discern. As a result, only very localised changes to the findings reported for the Consented Scheme are predicted.

5.18 References

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