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## **6 LANDSCAPE & VISUAL IMPACT ASSESSMENT**

### **6.1 Introduction**

6.1.1 This Chapter of the Environmental Impact Assessment Report (EIA Report) presents the findings of a Landscape and Visual Impact Assessment (LVIA) of the Torrance Wind Farm Extension II (the Proposed Development) at land to the east and west of Westcraigs Road, Harthill, North Lanarkshire (the Site). This assessment was undertaken by a Chartered Landscape Architect of Arcus Consultancy Services Limited (Arcus).

6.1.2 The LVIA has been undertaken in accordance with best practice and is informed by regional / local landscape character assessments, and other guidance as referred to in relevant sections of this Chapter.

6.1.3 This LVIA Chapter is supported by the following figures provided in Volumes 2 and 3 of this EIA Report:

- 6.1 LVIA Study Area;
- 6.2 LVIA Zone of Theoretical Visibility (ZTV) to Blade Tip;
- 6.3 LVIA ZTV Blade Tip - Large Format;
- 6.4 ZTV Hub Height;
- 6.5 LVIA ZTV Hub Height - Large Format;
- 6.6 LVIA ZTV Detailed Comparative ZTV;
- 6.7 NatureScot Landscape Character Types;
- 6.8 NatureScot Landscape Character Types & ZTV;
- 6.9 Local Landscape Character Areas;
- 6.10 Local Landscape Character Areas & ZTV;
- 6.11 Topography;
- 6.12 Local Site Context (Aerial View);
- 6.13 Landscape Planning Designations;
- 6.14 Recreational & Transport Routes;
- 6.15 Residential Properties, Settlements & PROW;
- 6.16 Cumulative Baseline;
- 6.17 Cumulative Baseline - Detailed Study Area;
- 6.18 Cumulative ZTV – Operational (Torrance & Southrigg);
- 6.19 Cumulative ZTV – Operational (West Benhar);
- 6.20 Cumulative ZTV – Operational (Burnhead and Drumduff);
- 6.21 Cumulative ZTV – Operational – 10km radius;
- 6.22 Cumulative ZTV – Consented (Southrigg 2 and Drumelzie);
- 6.23 Cumulative ZTV – Consented (Forrestfield & Brownhill Farm);
- 6.24 Cumulative ZTV – Consented – 10km North;
- 6.25 Cumulative ZTV – Consented – 10km South;
- 6.26 Cumulative ZTV – Application;
- 6.27- 48 Visualisations from Viewpoints 1 – 22; and
- 6.50 – 71 Visualisations from Residential Properties R1 – R22.

6.1.4 This LVIA report is supported by the following appendices, provided in Volume 4:

- A6A: LVIA Methodology;
- A6B: Landscape Character Baseline;
- A6C: Residential Visual Amenity Assessment;
- A6D: LVIA Summary Assessment Table; and
- A6E: Cumulative Landscape and Visual Assessment Baseline Table.

6.1.5 The location of the Proposed Development is approximately equidistant, at 10 kilometres (km), between Livingston to the east and Airdrie to the west. Sited adjacent to the M8, it lies within the developed central plain (or Central Belt) of Scotland, with the city of Edinburgh to the east and the conurbation of the Greater Glasgow area to the west. As shown on Figure 6.1, The Proposed Development is a four-turbine extension of the existing five wind turbines of the Torrance Wind Farm/Torrance Wind Farm Extension (the Existing Wind Farm).

## **6.2 Legislation, Policy and Guidance**

### **European Landscape Convention**

6.2.1 The European Landscape Convention ('ELC') which was ratified in the UK on 21 November 2006 and became binding on 1 March 2007.

6.2.2 The ELC defines landscapes as: "*An area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.*"

6.2.3 The ELC applies to natural, rural, urban and peri-urban areas including land, inland water and marine areas. Its purpose is to promote landscape protection, management and planning in relation to all landscapes regardless of whether their quality and condition is considered outstanding, ordinary or degraded.

6.2.4 The UK, and the Landscape Institute through their published technical notes, is recognised as putting many of the principles of the ELC into practice. The importance of landscapes in contributing to local identity and in reflecting local cultural influences and ecological diversity is shown through the use of Landscape Character assessments and NatureScot National Character Areas project.

### **6.2.5 Scottish Planning Policy**

6.2.6 Scottish National and Regional Planning Policy is discussed in Chapter 5 of this EIAR. Those regional / local policies in the North Lanarkshire Plan (Adopted in 2022) which relate to the landscape and visual effects of the proposal, and any mitigation included within the Proposed Development.

6.2.7 Reference is also made to the Scottish National Planning Framework 4 (as approved in January 2023), Policy 11 (a) and (e):

#### *Policy 11*

*a) Development proposals for all forms of renewable, low-carbon and zero emissions technologies will be supported. These include:*

*i. wind farms including repowering, extending, expanding and extending the life of existing wind farms;*

*ii. enabling works, such as grid transmission and distribution infrastructure;*

*iii. energy storage, such as battery storage and pumped storage hydro;*

*iv. small scale renewable energy generation technology; and*

*v. solar arrays;*

*e) In addition, project design and mitigation will demonstrate how the following impacts are addressed:*

*i. impacts on communities and individual dwellings, including, residential amenity, visual impact, noise and shadow flicker;*

- ii. significant landscape and visual impacts, recognising that such impacts are to be expected for some forms of renewable energy. Where impacts are localised and/or appropriate design mitigation has been applied, they will generally be considered to be acceptable;*
- iii. public access, including impact on long distance walking and cycling routes and scenic routes;*
- iv. impacts on aviation and defence interests including seismological recording;*
- v. impacts on telecommunications and broadcasting installations, particularly ensuring that transmission links are not compromised;*
- vi. impacts on road traffic and on adjacent trunk roads, including during construction;*
- vii. impacts on historic environment;*
- viii. effects on hydrology, the water environment and flood risk;*
- ix. biodiversity including impacts on birds;*
- x. impacts on trees, woods and forests;*
- xi. proposals for the decommissioning of developments, including ancillary infrastructure, and site restoration;*
- xii. the quality of site restoration plans including the measures in place to safeguard or guarantee availability of finances to effectively implement those plans; and*
- xiii. cumulative impacts.*

6.2.8 In considering these impacts, significant weight will be placed on the contribution of the proposal to renewable energy generation targets and on greenhouse gas emissions reduction targets.<sup>1</sup>

#### **LVIA Guidance**

- 6.2.9 The purpose of the LVIA is to identify, predict and evaluate potential effects associated with the proposed development. The prediction of magnitude of change and assessment of the significance of the residual landscape and visual effects have been based on pre-defined criteria. A full assessment methodology set out in Appendix 6A.
- 6.2.10 The principal source of guidance used to inform the overall methodology of this LVIA is the Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3)<sup>2</sup>.
- 6.2.11 This guidance has been used in conjunction with the following recognised industry best practice guidance documents:
- GLVIA3 Statement of Clarification 1/13<sup>3</sup>;
  - Techniques for Judging Capacity and Sensitivity<sup>4</sup>;
  - Siting and Designing Windfarms in the Landscape, NatureScot (formerly named SNH)<sup>5</sup>;

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<sup>1</sup> National Planning Framework 4, approved 11 January 2023. Available online at: [Approved NPF4 | Transforming Planning](#)

<sup>2</sup> Landscape Institute and Institute of Environmental Management and Assessment, 2013, Guidelines for Landscape and Visual Impact Assessment, 3<sup>rd</sup> Edition, Routledge, London (Last accessed 06.01.23)

<sup>3</sup> The Landscape Institute (2013), GLVIA3 Statement of Clarification 1/13 Available on line at: <https://www.landscapeinstitute.org/technical-resource/glvia3-clarifications/> (Last accessed 06.01.23)

<sup>4</sup> NatureScot and the Countryside Agency (2002) Topic Paper 6: Techniques and Criteria for Judging Capacity and Sensitivity (Last accessed 06.01.23)

<sup>5</sup> NatureScot, Siting and Designing Windfarms in the Landscape, Version 3a, (August 2017) (Last accessed 06.01.23)

- Guidance: Assessing the Cumulative Impact of Onshore Wind Energy Developments, NatureScot<sup>6</sup>;
- NatureScot (2019) Landscape Character Types<sup>7</sup>;
- Wild Land Areas descriptions and maps<sup>8</sup>;
- Visual Representation of Wind Farms, Version 2.2, NatureScot<sup>9</sup>; and
- Visual Representation of Development Proposals, Technical Guidance Note 2019, The Landscape Institute<sup>10</sup>.

6.2.12 A number of different sources of information have also been used to help understand the Site and its surrounding context as follows:

- OS mapping at various scales;
- Aerial Photography;
- Publicly available GIS datasets; and
- Google Aerial Mapping and Maps.

### **Landscape Design Evolution**

6.2.13 The design evolution has taken account of the baseline pattern of existing and consented wind farm development. The scheme design responds to the underlying technical and environmental constraints of the site area, which have determined the location of the turbines, rather than an iterative design process.

6.2.14 The landscape character of the development site within the Plateau Moorlands – Glasgow & Clyde Valley LCT includes extensive existing wind farm development within a medium to large scale landscape and simple landform / land cover with settlements in the lowland areas.

6.2.15 The wind farm design has been examined from site survey observations and desk-based analysis of plans and the Resoft<sup>®</sup> Wind Farm computer model, which allows the design to be viewed (as wireframes) from many locations within the study area on screen.

6.2.16 Views from residential receptors, settlements, core paths, and minor roads within approximately 15 km of the turbines are the main visual receptors in the area and the design process specifically considered the likely visual effects from these receptors and properties, via a series of wireframes and site visits.

6.2.17 The Proposed Development is considered to be well sited in terms of its location as an extension to the existing Torrance Wind Farm I & II, within the context of an existing wind farm, within a 'wind farm landscape', and thereby reducing the potential for significant cumulative landscape and visual effects.

6.2.18 The scheme was reduced in number from ten, to four turbines due to on site constraints. With the reduction in the number of the turbines from ten to four, and the height of the turbines has increased from 140m to 200m blade tip height.

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<sup>6</sup> NatureScot, Guidance: Assessing the Cumulative Impact of Onshore Wind Energy Developments, 2012) (Last accessed 06.01.23)

<sup>7</sup> <https://www.nature.scot/professional-advice/landscape/landscape-character-assessment/scottish-landscape-character-types-map-and-descriptions> (Last accessed 27.11.22)

<sup>8</sup> <https://www.nature.scot/wild-land-area-descriptions> (Last accessed 27.11.22)

<sup>9</sup> NatureScot, *Visual Representation of Wind Farms*, Version 2.2, (February 2017) (Last accessed 06.01.23)

<sup>10</sup> The Landscape Institute, *Visual Representation of Development Proposals, Technical Guidance Note 06/19*, 17<sup>th</sup> September 2019 (Last accessed 06.01.23)

## 6.3 Assessment Methodology and Significance Criteria

### LVIA Methodology

- 6.3.1 Landscape effects are defined by the Landscape Institute as "*Effects on the landscape as a resource in its own right*". These effects can be positive or negative. Development may have a direct (physical) effect on the landscape as well as an indirect or effect perceived from outside the landscape character area. The potential landscape effects, occurring during the construction, decommissioning, and operation phases, may therefore include, but are not restricted to, the following:
- Changes to landscape elements: the addition of new elements or the removal of trees, vegetation, and buildings and other characteristic elements of the landscape character type;
  - Changes to landscape qualities: degradation, erosion, or reinforcement of landscape elements and patterns, and perceptual characteristics, particularly those that form key characteristic elements of landscape character types;
  - Changes to landscape character: landscape character may be affected through the effect on characteristic elements (including perceptual characteristics), landscape patterns and attributes and the cumulative addition of new features, the magnitude and presence of which is sufficient to alter a notable part of the overall landscape character type of a particular area;
  - Cumulative landscape effects: where more than one wind farm may lead to a potential landscape effect.
- 6.3.2 Visual effects are concerned wholly with the effect of development on views and general visual amenity. Visual effects are identified for different receptors (people) who would experience the view at their places of residence, during recreational activities, at work, or when travelling through the area. Visual effects may include the following:
- Visual effect: Change in the appearance of the landscape as a result of development. This can be positive (i.e. beneficial or an improvement) or negative (i.e. adverse or a detraction); and
  - Cumulative visual effects: the cumulative or incremental visibility of similar types of development may combine to have a cumulative visual effect.
- 6.3.3 Particular attention is dedicated to the Proposed Development's impact on local residents because they would experience the wind farm from different locations, at different times of the day, usually for longer periods of time, and in different seasons.
- 6.3.4 Essentially, the level of landscape and visual effect (and whether this is significant) is determined through consideration of the 'sensitivity' of:
- The landscape element, assemblage of elements, key characteristics or character type or area under consideration bearing in mind quality and value; or
  - The visual receptor; and the 'magnitude of change' posed by the Development, in this case the construction of a wind farm and associated infrastructure, its operation for a period of 30 years, and subsequent decommissioning.

- 6.3.5 The process involves design and re-assessment of any remaining, residual significant adverse effects that could not otherwise be mitigated or 'designed out'. Landscape or visual sensitivity is ranked from large, medium, small to negligible and the magnitude of change is similarly ranked from high, medium, small to negligible as indicated in Table 6.1. The type of effect is also considered and may be direct or indirect, temporary or permanent, cumulative, and positive, neutral or negative. The landscape and visual assessment involves a combination of both quantitative and subjective assessment and wherever possible has sought to gain a consensus of professional opinion through consultation, peer review and the adoption of a systematic, impartial, and professional approach.
- 6.3.6 In accordance with EIA Regulations, it is essential to determine whether the predicted effects are likely to be 'significant'. Significant landscape and visual effects, in the assessor's opinion, resulting from the Proposed Development would be all those effects that normally result in a 'major', a 'Moderate - Major, or 'Moderate' effect with any exceptions being clearly explained (refer to Table 6.1). The landscape and visual assessment unavoidably involves a combination of both quantitative and qualitative assessment and wherever possible a consensus of professional opinion has been sought through consultation, internal peer review, and the adoption of a systematic, impartial, and professional approach.
- 6.3.7 Effects predicted to be of major or moderate significance are considered to be 'significant' in the context of the EIA Regulations and are shaded in light grey in Table 6.1.
- 6.3.8 A full description of the methodology used in this assessment is set out in Appendix 6A.

**Table 6.1: Evaluation of Landscape and Visual Effects**

		<b>Sensitivity (value / importance)</b>			
		<b>High</b>	<b>Medium</b>	<b>Low</b>	<b>Negligible</b>
<b>Magnitude of change</b>	<b>Large</b>	<b>Major</b>	<b>Moderate – Major</b>	Minor – Moderate	Negligible
	<b>Medium</b>	<b>Moderate – Major</b>	<b>Moderate</b>	Minor	Negligible
	<b>Small</b>	Minor – Moderate	Minor	Negligible – Minor	Negligible
	<b>Negligible</b>	Negligible	Negligible	Negligible	Negligible

**Cumulative Landscape & Visual Assessment (CLVIA)**

- 6.3.9 The predicted cumulative effects of the Proposed Development and existing / consented / application wind farm developments are embedded within the landscape and visual assessment as a whole.
- 6.3.10 The cumulative assessment considers the extent to which the Proposed Development in combination with other wind farms may change landscape character through either incremental effects on characteristic elements, landscape patterns and quality, or by the cumulative addition of new features.

- 6.3.11 The cumulative assessment includes consideration of those wind energy developments already built, those consented but not yet built, those for which a detailed planning application has been submitted but not yet determined, and those for which an appeal has been lodged up to the 26<sup>th</sup> October 2022. Sites which may be at screening and scoping stages have been excluded on the basis that they may not progress to full applications and do not have sufficient detail available (on location and size of turbines) to allow cumulative effects to be assessed with any degree of certainty.
- 6.3.12 Cumulative effects are defined as follows:
- Cumulative Landscape Effects: Where more than one wind development may have an effect on a landscape designation or particular area of landscape character; and
  - Cumulative Visual Effects: Where the cumulative or incremental visibility of similar types of development may accumulate and give rise to a combined visual effect with the Proposed Development adding an increment of change to a pre-defined baseline's presence.
    - Simultaneous or combined – where two or more developments may be viewed from a single fixed viewpoint simultaneously, within the viewer's field of view and without requiring them to turn their head. Note: A person's field of view is variable but is approximately 90° when facing in one direction;
    - Successive or repetitive – where two or more developments may be viewed from a single viewpoint successively as the viewer turns their head or swivels through 360°; and
    - Sequential – where a number of developments may be viewed sequentially or repeatedly from a range of locations when travelling along a route.
- 6.3.13 The cumulative development of wind farms, and other built development, within a particular area may build up to create different types of cumulative effect, as follows:
- The wind farms are seen as separate isolated features within the landscape character type, too infrequent and of insufficient significance to be perceived as a characteristic of the area;
  - The wind farms are seen as a key characteristic of the landscape, but not of sufficient dominance to be a defining characteristic of the area; and
  - The wind farms appear as a dominant characteristic of the area, seeming to define the character type as a 'wind farm landscape character type'.
- 6.3.14 The assessment of cumulative effects involves reference to the cumulative visibility ZTV maps, which are provided in Volume 2 of this EIA Report. The level and significance of cumulative landscape or visual effects is determined in the same manner as effects in the main LVIA, i.e. through combination of sensitivity and magnitude of change.
- 6.3.15 For clarity, where significant cumulative effects have been predicted, the responsible wind energy development(s) is / are identified and noted in brackets in the summary tables. A full description of the cumulative assessment methodology is provided in Appendix 6A.

### **Study Area**

- 6.3.16 An overall LVIA Wider Study Area of 45 km radius from the Site centre has been established on the basis of a 45 km distance from each of the proposed turbine locations and is illustrated in Figure 6.1.

- 6.3.17 It is important to note that the boundary of the study area is not the limit of potential visibility in clear weather conditions. Rather it is an area defined by NatureScot methodology, on the basis of research to determine a suitable study area for the assessment of wind farms, which will contain all potential significant landscape and visual effects.
- 6.3.18 The LVIA study area was further defined for each part of the assessment process and has been focused within Site for direct effects on the Site and using the ZTV from where there may be a view of the Proposed Development at up to 45 km distance from the turbines. As the EIA process and design of the Proposed Development evolve through an iterative EIA process, the extent for significant landscape and visual effects evolved. Considering the scale of the Proposed Development, extent of the ZTV as shown on Figure 6.2 and the baseline receptors, two study areas have been identified for detailed assessment:
- 15 km Detailed Study Area: Following the site assessment, and consultation with North Lanarkshire Council, a 15 km radii provides illustration of regional and county level landscape character and landscape planning policy areas, and focuses on the areas where the greatest landscape and visual impacts may occur; and
  - 2 km Residential Study Area: Provides illustration of public rights of way and base plan for the focus for the assessment of visual effects potentially experienced from residential properties and settlements, in line with the Council's Onshore Wind Energy Supplementary Guidance (refer to Figure 6.15).
- 6.3.19 The search area for the CLVIA is based on a 60 km radius circle from the proposed turbines and identifies all known existing, under-construction, and consented wind farms as well as known planning application sites and scoping stage sites. A Detailed Cumulative Landscape and Visual Assessment Study Area was established at 25 km radius from the turbines (in consultation with the Council), focussing on those existing, consented and application sites which are most relevant to this application. The 25 km radii cumulative study area was verified in the field, and the intervisibility of the Proposed Development with other wind energy development was principally within 25 km radius. Beyond 25 km, other wind farm development would either be outwith the ZTV of the Proposed Development, or sufficiently distant for there not to be any anticipated significant cumulative effects.

### **Scoping Responses & Consultations**

- 6.3.20 Comments received via the Scoping Responses on landscape and visual issues are summarised in Table 6.2, together with a response to each comment.



**Table 6.2: Summary of Consultation Responses**

Consultee	Type and Date	Summary of Consultation Response	Response to Consultee
North Lanarkshire Council	Written response 31/10/2022	<p>Agreement of the proposed LVIA study areas.</p> <p><i>"1.45km general study area (an increase), which is the minimum specified by NatureScot guidance. The detailed assessment will be scoped down to 15km, based on the local landscape/visual context</i></p> <p><i>2. 60km cumulative study area, scoped down to 20-25km - focus would be to concentrate on those views in which it is likely to appear prominently."</i></p> <p>Confirmation of an official 'cut off date' for the cumulative baseline data gathering as the 26th October 2022.</p>	<p>These study areas have been adopted in the LVIA, and no further cumulative data received from the agreed date of the 26<sup>th</sup> October 2022.</p>
North Lanarkshire Council	Written response 16/12/2020	<p>While assessing the cumulative effects of this proposal all existing and agreed future developments should be accurately identified. Not all existing wind turbines that are in the local area have been identified within this scoping proposal and currently gives a false impression of the existing surroundings to the development site.</p> <p>The existing Torrance Farm Wind Park has 5 wind turbines. An additional turbine is located to the south east of this development approximately 150m east of the southernmost turbine next to the How Burn and accessed from Southrigg farm.</p> <p>It is presumed that this additional turbine is part of the Southrigg Farm development. Due to its size and proximity to the development this turbine should be included and referred to within the assessment to ensure a true reflection of the local effects are established.</p> <p>Additionally there are a number of turbines in the local area including a single turbine north of the proposed development site at Hill Farm, 2 at Knowehead and 4 located to the west of the site around Junction 5 of the M8.</p> <p>All turbines in the local area should be identified and included within the EIA in order to gain a true understanding of the current site and surroundings. Due to the number and size of</p>	<p>The cumulative impact assessment will include consideration of those wind energy developments already built, those consented but not yet built, those for which a detailed planning application has been submitted but not yet determined, and those for which an appeal has been lodged up to the 26th October 2022.</p> <p>The Council's comments on Scoping Report omissions are noted and they are included within the LVIA.</p> <p>Viewpoints have been agreed in advance of the assessment.</p>

Consultee	Type and Date	Summary of Consultation Response	Response to Consultee
		<p>these turbines there is an impression that visually all these developments are linked and have a cumulative effect.</p> <p><b>In response to Scoping Questions from Arcus (where answer is not in full agreement with questions asked):</b></p> <p>The scoping report indicates that the proposed viewpoints are similar to the ones that were assessed in the original Torrance Farm Wind Park Extension application with slight amendments. These receptors were identified during the initial application which was submitted in 2012, therefore any additional developments including residential that have established in the intervening period or are currently going through the planning process to be included and considered within the final EIA.</p> <p>Consented or any other proposed developments currently going through the planning process to be considered within the EIA. Information to be requested and obtained from the relevant Planning Authority.</p> <p>The proposed study area appears to be in line with the latest guidance. Any potential receptors that are located on the boundary of the study area should be included within the assessment.</p> <p>As the proposed viewpoints are based on the ones that were used in the original Torrance Farm Wind Park application a number of new developments have occurred in the intervening period which should be considered in the preparation of the EIA.</p> <p>As the proposed development site will be visible from a wider area and is directly overlooked by residential properties these are required to be included within the assessment.</p> <p>Additional consideration should be given to but not limited to the following viewpoints;</p> <ul style="list-style-type: none"> <li>• Residential properties to the west which are located outside the North Lanarkshire council boundary which includes:</li> </ul>	

Consultee	Type and Date	Summary of Consultation Response	Response to Consultee
		<ul style="list-style-type: none"> <li>- Greenrigg;</li> <li>- Viewpoints from Polkemmet Country Park;</li> <li>- Residential properties on the western edge of Whitburn;</li> <li>- Development around M8 Junction 4A and approaches;</li> <li>- North facing residential properties located along the B7066 at Eastfield and Harthill which look directly into the proposed development area;</li> <li>- All North facing residential properties at Eastfield Including Baird Terrace;</li> <li>- South facing residential properties at the villages of Blackridge and Westrigg including the properties on the south facing elevated slope above Blackridge along Woodhill road; and</li> <li>- West facing residential properties at Armadale.</li> </ul> <p>Viewpoints must be agreed in advance of preparation of any visuals with the Council. The viewpoints should correspond with the viewpoints used for existing wind energy schemes within the area as well as those currently under consideration.</p> <p>The detailed location of viewpoints has to be informed by site survey, mapping and predicted Zones of Theoretical Visibility.</p> <p>The purpose of the selected and agreed viewpoints shall be clearly identified and stated in the supporting information.</p> <p>All viewpoints should take into consideration and include the cumulative effects of this development when combined with existing or proposed developments that are currently going through the planning process.</p> <p>Sequential effects should also be recorded along the B7066.</p> <p>The ground level of the development site varies between 180-200m with surrounding landform gently rising to 220m at Blackridge to the north and 260m to the south at Fauldhouse. Therefore there will be no backdrop to the turbines and these</p>	

Consultee	Type and Date	Summary of Consultation Response	Response to Consultee
		<p>will be visible on a rising skyline across the wide undulating valley.</p> <p>Comparison between the Zone of Theoretical Visibility should be prepared to demonstrate the variation between the Actual zone of Visibility of the existing wind turbines and the proposed development taking into account the increased height of the proposed turbines and their location.</p> <p>The full visual extent of this development should be included within the final EIA within the parameters of the 40km study area and 15km detail assessment. If significant receptors are identified out with the 15km detail assessment area then these should be included within this assessment.</p> <p>Latest and current guidance to be used in the preparation of the EIA.</p>	
West Lothian Council	Written response dated 18/12/20	<p>The proposed 10 turbines at 140 m to blade tip are significantly larger in scale than the existing turbines at Torrance Farm and could be considered 'tall wind turbines'. Whilst the larger sweep of the rotors will offer greater energy generation, the landscape and visual impacts in relation to existing wind turbines / farms in the area need to be considered. Work done by Ironside Farrar for South Lanarkshire Council indicates that 150 m to tip height is considered as a threshold for tall turbines but there was also consideration of cases at 140 m to tip – and this is an emerging area of analysis. For the communities such as Greenrigg within say 500 m of a rotor sweep this analysis would assist.</p> <p>With respect to the Table 4: Proposed Viewpoint Locations (Scoping Report, pp. 20-21), the following suggestions are made:</p> <ul style="list-style-type: none"> <li>- it would be helpful if the Viewpoint Description column indicated in which council jurisdiction it is located i.e. NLC, WLC, SLC etc.</li> <li>- please add viewpoints for central and illustrative sites in Greenrigg, Whitburn and Armadale</li> </ul>	<p>All recommendations for viewpoint locations in relation to local authority boundaries have been included in the baseline figures and in the Viewpoint Assessment.</p> <p>Comments on the height of the turbines relate to a previous design of the scheme. All relevant NatureScot guidance has been followed in the LVIA, which is supported by figures and visualisations that also comply with that guidance.</p>

Consultee	Type and Date	Summary of Consultation Response	Response to Consultee
		<p>- please add viewpoints for illustrative sites in west, central and east Blackridge in the vicinity of Blackridge Primary School/ A89; Heights Road above Craig Inn Community Education Centre; and, Westrigg/ A89</p> <p>- additional viewpoints for westbound and eastbound traffic on the M8 given its proximity.</p>	
NatureScot	Written response dated 17/12/20	<p>NatureScot guidance on landscape and visual impacts of wind farms can be found on our website. We would recommend that this guidance is taken into account when you consider the landscape and visual impacts of this proposal:</p> <p>We are not able to comment on the landscape and visual impacts of this proposal. We are currently providing detailed landscape and visual advice in only the highest priority circumstances, where the effects of proposals approach or surpass levels that raise issues of national interest or where they affect place-based priorities for NatureScot.</p> <p>Our advice is that this proposal does not raise landscape issues of national interest in terms of:</p> <ol style="list-style-type: none"> <li>1. significant adverse effects on the integrity and objectives of designation of a National Scenic Area</li> <li>2. significant adverse effects on Special Landscape Qualities of a National Park</li> <li>3. significant adverse effects on the qualities of a Wild Land Area</li> <li>4. landscape issues in the wider countryside</li> </ol> <p>Any impacts on locally designated landscape areas should be considered by the council.</p>	All relevant NatureScot guidance has been followed in the LVIA, which is supported by figures and visualisations that also comply with that guidance.

### **Field Study**

6.3.21 Fieldwork was undertaken from April 2022 to December 2022. The key activities during baseline fieldwork were:

- To augment and verify the published descriptions of landscape character with fieldwork observations;
- To undertake an assessment of the quality or condition of baseline landscape and visual resources;
- To identify any significant features and elements in the landscape such as vegetation or built form that would screen the Proposed Development and thereby verify or refine the ZTV;
- To undertake an assessment of the cumulative baseline;
- To visit each viewpoint location identified during the desk study and Scoping process, and to microsite each viewpoint location in accordance with good practice guidance and obtain accurate coordinates; and
- To undertake photography using a digital SLR camera at each viewpoint location.

6.3.22 The baseline fieldwork also allowed the Wider Study Area to be refined / reduced to a Detailed Study Area of 15 km radius, and therefore the focus of the assessment stage of the LVIA (refer to Section 6.3.3).

6.3.23 Fieldwork during the assessment stage included an assessment of effects on the following receptors:

- Landscape resources including landscape character and landscape sensitivity, landscape features and landscape elements;
- Residential receptors;
- Recreational receptors on core paths and other footpaths / recreational routes;
- Local roads; and
- Visitors to cultural heritage assets.

6.3.24 The field surveys were carried out during periods of good visibility.

### **Weather Conditions**

6.3.25 Changing weather patterns could influence the visibility of the Proposed Development in terms of the colour and contrast of the turbines and the number of turbines visible and therefore the perceived visual impact of wind turbines in the landscape. There would be periods of low visibility during fog / low cloud or rain, in contrast to periods of high visibility in sunny clear weather.

6.3.26 In some instances, and from some locations, the turbines may be 'back-lit' (i.e. appearing darker in colour during sunset / sunrise and periods of pale or white blanket cloud) and in other circumstances may appear to be 'up-lit' (i.e. during stormy periods that combine dark clouds and bright sunshine).

### **Zone of Theoretical Visibility (ZTV)**

6.3.27 A preliminary visual analysis was carried out in order to identify landscape and visual receptors which are predicted to have theoretical visibility of the Proposed Development on the basis of the ZTV. The ZTV is shown on Figures 6.2 – 6.5.

- 6.3.28 The ZTV illustrates geographical areas predicted to have views of the turbines based on bare ground analysis based on Ordnance Survey (OS) digital terrain data supplied as gridded height data at 5 m interval resolution for the Detailed Study Area, and 50 m interval resolution for the Wider Study Area. The visibility shown on the ZTVs is more extensive than actual visibility on the ground, i.e. the ZTVs do not take account of vegetation, buildings/ man-made structures or localised landforms. Where the ZTV shows no visibility, it is predicted that no turbines would be seen.
- 6.3.29 The ZTVs have been supplemented by a visibility analysis based on the digital terrain model (DTM), which provides details of the number, height of, and distance to, visible turbines, as well as the horizontal angle.
- 6.3.30 The ZTV indicates that the scale and visual footprint of the Proposed Development and surrounding projects is primarily contained within 15 km from the proposed turbines.
- 6.3.31 As shown on Figure 6.8, the Proposed Development is located within a Plateau Moorland and Lowland Plateau landscape, with extensive visibility east west within the M8 corridor, and rising land to the north at Blawhorn Moss (229m AOD) and south at Faulhouse and Polkemmet Moor within 5 km contains potential visibility.
- 6.3.32 At 10 km distance there is further predicted visibility of the Proposed Development but settlements and conurbations truncate views of the Proposed Development. Where views are available in the study area, they are available alongside existing wind farm development, within a 'wind farm landscape'.
- 6.3.33 Analysis of the Cumulative ZTV in Figure 6.18 shows that the predicted blade tip visibility of the Proposed Development follows the same pattern within that of the ZTV of the Existing Torrance Wind Farm I and II. As shown on Figure 6.18, predicted visibility of the Proposed Development does not extend the visual influence of the wind turbines at Torrance Wind Farm Extension alongside the existing Torrance Wind Farm and the operational Southrigg I Wind Turbine.
- 6.3.34 Cumulative ZTVs (CZTVs) have been produced for the Proposed Development with the operational, consented and in application stage wind farms in order to identify the developments with which the Proposed Development could interact, to give rise to potentially significant cumulative effects, by examining the extent of combined or sequential visibility and the likely affected receptors (Figures 6.17 – 6.26).
- 6.3.35 The status of the wind farms within the cumulative assessment is taken to be correct as of 26th October 2022. The assessment considers only sites with turbines greater than 50 m tip height.

### **Viewpoints**

- 6.3.36 A selection of viewpoints was originally presented to the Council within the Scoping Report, and following Scoping feedback were amended to take into account the comments of both North Lanarkshire and West Lothian councils, and reflect the viewpoints used in the previous LVIA for Torrance Wind Farm. These were subsequently agreed with North Lanarkshire.
- 6.3.37 These viewpoints are considered to be representative of the main sensitive landscape and visual receptors in the study area. The viewpoints have also been checked against the cumulative ZTVs for existing, consented and proposed wind farms within the study area in order to ensure that they provide representative coverage of potential cumulative visibility and related effects.

- 6.3.38 Assessment of the potential effects on landscape and visual amenity arising from the turbines at each of these viewpoints has been carried out. This analysis has involved the production of computer-generated wirelines and photomontages which illustrate the operational views of the Proposed Development from each of the agreed viewpoints.
- 6.3.39 Following methodology established in GLVIA3, the viewpoints were chosen based on the following criteria:
- Viewpoints should be representative of the likely impacts;
  - Viewpoints should show a range of different types of views;
  - Viewpoints should be representative of a range of different receptor groups;
  - Viewpoints should be representative of a range of distances and directions; and
  - Viewpoints should be representative of the varying image of the Proposed Development in the landscape.
- 6.3.40 The viewpoints were selected to illustrate the landscape context and views from local core paths including regionally promoted routes, nearby residential properties/groups of properties, views from the local road network, and to represent the local landscape and seascape character.
- 6.3.41 A summary of the illustrated viewpoints agreed through consultation is provided in Table 6.3 below. All viewpoints are located in the public realm and focus on the indicative location of the Proposed Development. Site photography was undertaken during periods of fine weather and clear visibility. Viewpoint locations are shown on Figure 6.6, and Figures 6.27 to 6.49 for the baseline landscape photographs presented with wireline images and photomontages of the Proposed Development.

**Table 6.3: LVIA Selected Viewpoints**

No	VP Name	Distance to Nearest Turbine	Elevation (AOD)	Receptor Groups	LCT & LLCA
1	Hill Farm	0.29 km	218 m	Residential property and local road users. Users of the Core Path NL/212/1. Within North Lanarkshire	Farmed Lowland Plain - Glasgow and Clyde Valley LCT (213). Plateau Moorland (7) LLCA
2	Edinburgh Road (B7066), Eastfield	0.53 km	203 m	Local road users, residential properties Within North Lanarkshire	Farmed Lowland Plain - Glasgow and Clyde Valley LCT (213). Plateau Moorland (7) LLCA
3	Recreational area near Baird Terrace, Eastfield	0.59 km	222 m	Residential properties, recreational users of the park Within North Lanarkshire	Farmed Lowland Plain - Glasgow and Clyde Valley LCT (213). Plateau Moorland (7) LLCA
4	Dunn Terrace, Harthill	0.76 km	200 m	Residential properties, and recreational receptors within the public open space in Harthill.	Farmed Lowland Plain - Glasgow and Clyde Valley LCT (213). Plateau Moorland (7) LLCA

				Within North Lanarkshire	
5	Greenrigg	0.86 km	197 m	Residential properties, local road users and school pupils and staff. Within West Lothian	Lowland Plateau – Lothians LCT (273). Upper Almond Valley (6) LLCA
6	Harthill Road at Blairmuckhill Road Junction	1.15km	199 m	Road users of the B718 (Harthill Road), recreational users of the park area, and residential properties on Harthill Road. Within West Lothian	The boundary of the Farmed Lowland Plain - Glasgow and Clyde Valley LCT (213) & Lowland Plateau – Lothians LCT (273). Plateau Moorland (7) LLCA
7	Polkemmet Country Park	1.55 km	193 m	Recreational users of the country park. Within West Lothian	Lowland Plateau – Lothians LCT (273). Upper Almond Valley (6) LLCA
8	Main Street, Blackridge	1.95 km	188 m	Residential properties, local road users. Within West Lothian	Lowland Plateau – Lothians LCT (273). Blackridge Heights (12) LLCA
9	Hillside Drive, Blackridge	1.96 km	196 m	Residential properties, local road users. Within West Lothian	Lowland Plateau – Lothians LCT (273). Blackridge Heights (12) LLCA
10	B7057 at J5 of the M8 Motorway	2.31 km	250 m	Road users at overbridge of the M8. Within North Lanarkshire	Farmed Lowland Plain - Glasgow and Clyde Valley LCT (213). Plateau Moorland (7) LLCA
11	Properties at Polkemmet, Whitburn	2.35 km	216 m	Residential properties on the western boundary of Whitburn. Within West Lothian	Lowland Plateau – Lothians LCT (273). Upper Almond Valley (6) LLCA
12	Properties at Polkemmet, Whitburn	2.35 km	216 m	Residential properties on the western boundary of Whitburn. Within North Lanarkshire	Lowland Plateau – Lothians LCT (273). Upper Almond Valley (6) LLCA
13	Overbridge at Junction 4A, M8 motorway	2.73 km	177 m	Road users. Within West Lothian	Lowland Plateau – Lothians LCT (273). Upper

					Almond Valley (6) LLCA
14	Armadale, western edge of settlement	3.29 km	193 m	Local road users, residential properties. Within West Lothian	Lowland Plateau (273) LCT. Armdale / Bathgate Plateau (9) LLCA
15	Forrest Road and Benfoot	3.67 km	253 m	Local road users. Within North Lanarkshire	Farmed Lowland Plain - Glasgow and Clyde Valley LCT (213). Plateau Moorland (7) LLCA
16	Forest Road, near Forrestfield village	4.42 km	220 m	Local road users. Within North Lanarkshire	Farmed Lowland Plain - Glasgow and Clyde Valley LCT (213). Plateau Moorland (7) LLCA
17	Lochside Road, Black Loch	6.31 km	225 m	Local road users on the B825 road. Within Falkirk	Lowland Plateau – Central (151) LCT. Glasdmuir / Woodmuir / Gamily Fringe LLCA
18	Hillend Reservoir	7.11 km	197 m	Recreational users of the Cycle Route 75, and visitors to the Hillend Reservoir. Within North Lanarkshire	Farmed Lowland Plain - Glasgow and Clyde Valley LCT (213). Plateau Moorland (7) LLCA
19	Junction of Drumcross Road and Glenmavis Drive, Bathgate	7.94 km	184 m	Local road users and residential receptors. Within West Lothian	The boundary of the Lowland Hills and Ridges – Lothians (272) LCT & Lowland Plateau (273) LCT and Bathgate Hills (5) LLCA
20	The Knock	9.95 km	313 m	Recreational receptors at a promoted viewpoint location and a West Lothian Local Geodiversity Site. Within West Lothian	Lowland Hills & Ridges – Lothians LCT (272). Bathgate Hills (5) LLCA
21	Cockleroy	11.99 km	283 m	Recreational receptors at local hill summit. Within West Lothian	Lowland Hills and Ridges – Lothians (272) LCT. Bathgate Hills (5) LLCA
22	Viewpoint on Tak-Ma-Doon Road, Kilsyth Hills	22.72 km	321 m	Recreational receptors at promoted viewpoint. Within North Lanarkshire	Rugged Mountain Hills (216) LCT

- 6.3.42 There was no change to the selected viewpoints to those presented in consultation with the Council and NatureScot.

### **Visualisations**

- 6.3.43 The LVIA has been prepared with reference to the visualisations produced in accordance with NatureScot guidance.
- 6.3.44 In order to verify the findings of both the baseline appraisal and subsequent assessment of residual landscape and visual effects a series of representative viewpoints have been utilised. The existing view from each of the selected viewpoints has been illustrated by photographs. In order to illustrate the effect of the Proposed Development on views from key locations within the study area and number of photomontages and wirelines of the Proposed Development have been prepared which are presented in Figures 6.27 to 6.48, Appendix 3.
- 6.3.45 The photographs utilised were taken using a digital SLR full frame camera with a fixed 50 mm lens. To ensure accuracy, all photography was taken using a tripod mounted camera at a viewing height of 1.5 m above ground level, and location data recorded with a hand-held GPS.
- 6.3.46 It should be noted, however, that photography is a tool to assist in the visualisation process, and the wireline overlays produced cannot be expected to replicate the actual view, or predicted view, which would be attained on the ground.

### **Limitations of the Assessment & Assumptions**

- 6.3.47 At the time of the site visits, two attempts were made to visit Viewpoint 6 at Hillend Reservoir. On both occasions safe access was not possible, and wirelines have been presented in this assessment without baseline photography.
- 6.3.48 The appraisal of residential properties, or groups of properties, is limited to those within 2 km of the Proposed Development. A number of these properties are accessed from private farm tracks / roads and, due to the limitations of access, they have been appraised from the nearest public road or footpath with the aid of aerial photographs. In these cases, the appraisal should be regarded as an informed estimate of the likely visual effects.
- 6.3.49 Cumulative wind farm data has been obtained from a number of sources (including limited information from the Council's database, wind farm developers, Arcus internal database and various independent websites). The information included in this chapter reflects the information available up to 26th October 2022. These details may be subject to change.
- 6.3.50 The assessment of the effects on the setting of cultural heritage assets is described in Chapter 11: Cultural Heritage.

## **6.4 Baseline Conditions**

- 6.4.1 The assessment of baseline conditions was undertaken with reference to landscape character assessment studies extant within the Detailed Study Area to a 15km radius. These studies have been considered and verified on site, and for the purposes of this LVIA, the findings have been adopted as defining the baseline landscape character.
- 6.4.2 The receptors of visual amenity include the publicly accessible areas including outdoor recreational areas, settlements, roads and the core path network.
- 6.4.3 The following sections describe the existing environment in terms of landscape character and visual amenity, the baseline against which the impacts of the Proposed Development will be assessed, including sensitivity of landscape and visual receptors:

- NatureScot National / Regional Landscape Character Types (LCT) and Local Landscape Character Areas (LLCA);
  - Landscape Designations; and
  - Visual Receptors.
- 6.4.4 The baseline conditions include a number of operational wind farms within 15 km radius, and the Existing Torrance Wind Farm I and II where there are already wind turbines which exert a strong influence within the local landscape.
- 6.4.5 An appraisal of the baseline landscape character has been considered at three levels:
- **National/Regional LCTs** - in relation to landscape character type profiles produced by NatureScot<sup>11</sup>;
  - **Local landscape character** - in relation to LLCAs identified in the North Lanarkshire Council's Supplementary Guidance<sup>12</sup> and West Lothian Council's Landscape Character Classification<sup>13</sup>. The LLCAs follow approximately the same boundaries of the LCTs, but provide additional detail and sensitivity assessment in relation to onshore wind energy development in the supplementary planning guidance; and
  - Character of the Site and its immediate context based on field observations.
- National Landscape Character Types**
- 6.4.6 Landscape character descriptions are based on NatureScot (2019) Landscape Character Types and verified during the field survey (Figures 6.7 & 6.8). At the national level there are 16 LCTs within the Detailed Study Area. However, ten have been scoped out due to minimal visibility of the Proposed Development, which is unlikely to result in notable effects on landscape character.
- 6.4.7 The following are included within the scope of the LVIA are described in Appendix 6B. Descriptions and key characteristics are drawn directly from the Scottish Landscape Character Types Map and Descriptions, and listed below:
- Lowland Plateau (Central) LCT 151;
  - Plateau Farmland – Glasgow & Clyde Valley LCT 201;
  - Plateau Moorlands – Glasgow & Clyde Valley LCT 213;
  - Upland Fringes – Lothians LCT 269;
  - Lowland Hills & Ridges – Lothians LCT 272; and
  - Lowland Plateau – Lothians LCT 273.
- 6.4.8 The Proposed Development is located on the boundary of the Plateau Moorlands – Glasgow & Clyde Valley LCT 213 and the Lowland Plateau – Lothians LCT 273, the landscape character of both LCTs is described in Table 6.4 below.

<sup>11</sup> Scottish Landscape Character Types Map & Descriptions. Available online at:

<https://www.nature.scot/professional-advice/landscape/landscape-character-assessment/scottish-landscape-character-types-map-and-descriptions>. (Last accessed 18.12.22)

<sup>12</sup> North Lanarkshire Local Development Plan – Modified Proposed Plan – Local Landscape Character Assessment Background Report, November 2019 (URS for North Lanarkshire Council). Available on line at: [Microsoft Word - Modified October 2018 Local Landscape Character.docx \(northlanarkshire.gov.uk\)](https://www.northlanarkshire.gov.uk/media/4837/West-Lothian-Landscape-Character-Classification/pdf/WL-LandscapeCharacterClassificationAugust2014.pdf?m=635458774692900000)

<sup>13</sup> West Lothian Council, Landscape Character Classification, West Lothian Local Development Plan: background paper, August 2014. Available on line at: <https://www.westlothian.gov.uk/media/4837/West-Lothian-Landscape-Character-Classification/pdf/WL-LandscapeCharacterClassificationAugust2014.pdf?m=635458774692900000> (Last accessed 18.12.22)

**Table 6.4: NatureScot 'Host' Landscape Character Types (LCT)**

LCT Name	Key characteristics which apply to the detailed study area <sup>14</sup>
<p>Plateau Moorlands – Glasgow &amp; Clyde Valley LCT 213</p>	<p>This is the 'host' LCT for the proposed development.</p> <ul style="list-style-type: none"> <li>• Large scale landform.</li> <li>• Undulating hills and sloping ridges in the western areas; a more even plateau landform in the east.</li> <li>• Distinctive upland character created by the combination of elevation, exposure, smooth plateau landform, moorland vegetation.</li> <li>• Predominant lack of modern development.</li> <li>• Extensive wind turbine development, including one of the largest wind farms in Scotland, Black Law.</li> <li>• Sense of apparent naturalness and remoteness which contrasts with the farmed and settled lowlands, although this has been reduced in places by wind energy development.</li> </ul> <p>The Plateau Moorlands - Glasgow &amp; the Clyde Valley Landscape Character Type occurs in extensive areas in two parts of Glasgow and the Clyde Valley – the western part of South Lanarkshire on the Ayrshire Rim, where it extends into East Ayrshire, and the Central Plateau on the eastern boundary of North and South Lanarkshire.</p> <p>Farmland, often with wind bent trees and thorn hedges, extends onto the lower slopes, particularly on the Central Plateau where altitude and exposure is less extreme. The landscape is of an open, exposed and rather remote character despite occasional isolated hill farms, and sheep and cattle grazing. Mosses, comprising areas of extensive peatland, form an important ecological and landscape component of the plateau moorlands.</p> <p>Both areas of plateau moorland have had extensive conifer plantations, although areas of these have been felled to accommodate wind farm development. The afforestation has significantly modified the original character in terms of colour, textures and the length of views possible.</p> <p>However, there is a general lack of elevation which means that the forests create dark horizons, rather than being visible in their full extent.</p> <p>At a lower altitude, together with a series of important transport corridors linking Glasgow and Edinburgh, settlement is more extensive. Modern development in these areas takes a number of forms and can be very prominent in this otherwise open, expansive and simple landscape. Tall structures are often visible over a considerable distance. There has been significant wind energy development on the Plateau Moorlands, taking advantage of their upland exposure, yet relative proximity to large centres of population.</p> <p>On the Central Plateau Black Law wind farm also forms a distinctive point feature. Examples of other tall structures include the dense cluster of communication masts and electricity pylons on the moorland ridge above Paisley, the communications mast on Ballageich Hill south of Newton Mearns, and the masts on either side of the M8 motorway near Harthill.</p> <p>Coal working has experienced a number of clear phases of development. Historically it would have been worked on a small scale with surface pits, drift mines and shallow pits. Up until recent decades deep mining also took place, though this has been replaced by open-cast working, often on a very large scale. Extensive commercial peat extraction has also been carried out. Cumulatively, these activities have had a major influence on the landscape in the form of bings and tips, areas of derelict land, operating open-cast workings (such as those to the south of Shotts) and associated Industrial infrastructure including disused railway embankments. Hard rock quarries are also visible features in some areas.</p>

<sup>14</sup> Scottish Landscape Character Types Map & Descriptions. Available online at: <https://www.nature.scot/professional-advice/landscape/landscape-character-assessment/scottish-landscape-character-types-map-and-descriptions>. (Last accessed 18.12.22)

	<p>Several former extraction sites are now used for the landfilling of waste in North Lanarkshire.</p> <p>The landscape has an exposed and relatively remote character where wind turbines are not present, although enclosure within the forests can be well defined. Wind farms have reduced the perception of undeveloped character, although this is still associated with higher, exposed areas of remoter moorland.</p> <p>Where forestry permits, views tend to be relatively open across the surrounding valleys and adjacent hill groups. There are a number of man-made features visible, particularly road corridors and electrical infrastructure, though few visual foci are present.</p>
<p>Lowland Plateau – Lothians LCT 273</p>	<p>This LCT is immediately adjacent to the Proposed Development to the north east, south east and east.</p> <ul style="list-style-type: none"> <li>• Broadly undulating and open plateau landform, becoming more rolling to the south and east to form a series of craggy hills above Blackridge.</li> <li>• The principal rivers form shallow valleys, with more deeply incised tributaries.</li> <li>• A pastoral landscape with post and wire fences, thin hedges and windswept shelterbelts. Important wetland habitats and lowland peat bogs.</li> <li>• Scattered woodland consisting of small areas of coniferous, deciduous and mixed species.</li> <li>• Evidence of historical mining activity, leaving highly visible traces in the red shale bings.</li> <li>• Widespread residential and commercial development, as well as major transport corridors.</li> <li>• A landscape with extensive presence of modern human development and infrastructure.</li> </ul>

6.4.9 Direct and indirect landscape effects on the NatureScot LCT profiles have been scoped out of this assessment. The local landscape character assessment, with more detail on the local landscape has been used. Landscape characteristics detailed within the LCT profiles are likely to be represented over a wide area of the LCT. Also, given the extent of wind farm development within the Detailed Study Area, located within the Plateau Moorlands – Glasgow & Clyde Valley LCT and Upland Fringes – Lothian LCT, wind turbines are characteristic existing features within the landscape. As such, any changes are unlikely to significantly impact upon those key landscape characteristics identified for the LCT as a whole.

#### **Local Landscape Character Areas (LLCA)**

6.4.10 Landscape character descriptions are based local landscape character assessments produced by local planning authorities as part of the Local Plan. These local character descriptions are verified during the field survey (as illustrated in Figures 6.9 & 6.10, and in Appendix 6B).

6.4.11 At the local level there are 43 LLCAs within the Detailed Study Area. However, 25 have been scoped out due to minimal, or no, visibility of the Development.

- 6.4.12 The ZTV indicated the following 18 LLCAs have potential visibility of the Proposed Development within the Study Area Descriptions and key characteristics are drawn directly from the source text<sup>15161718</sup>:
- North Lanarkshire - Southern Plateau Moorland LLCA 6b;
  - North Lanarkshire - Plateau Moorland LLCA 7;
  - Falkirk – Slamannan Plateau LLCA 3(i);
  - Falkirk - Darnrig / Gardrum Plateau Moorland LLCA 3(ii);
  - Falkirk - Avon Valley LLCA 4;
  - Falkirk - Bo'ness Coastal Hills LLCA 5;
  - South Lanarkshire – Urban Fringe Farmland LLCA 1;
  - South Lanarkshire - Plateau Moorland Wind Farm LLCA 6c;
  - West Lothian - Gladsmuir / Woodmuir / Gamilty Fringe LLCA 3;
  - West Lothian - Harburn / Hartwood Rings LLCA 4;
  - West Lothian - Bathgate Hills LLCA 5;
  - West Lothian – Upper Almond Valley LLCA 6;
  - West Lothian – Couston Valley LLCA 7;
  - West Lothian – Polkemmet Moor LLCA 8;
  - West Lothian – Armadale / Bathgate Plateau LLCA 9
  - West Lothian - Livingston / Blackburn Plateau LLCA 10;
  - West Lothian - Avonbridge to Armadale Plateau Edge LLCA 11; and
  - West Lothian - Linlithgow Fringe LLCA 20.
- 6.4.13 However, given the rising topography to the north and south of the Proposed Development, and the extent of urban development within the Detailed Study Area, there would be limited opportunity visibility of the Proposed Development within the local landscape, the Proposed Development would be viewed alongside the existing wind farm development, in a 'wind farm landscape'.
- 6.4.14 The Proposed Development is located on the boundary of the Plateau Moorlands LLCA 7 and the Lowland Plateau LLCAs 8, 9, and 11. The landscape character of the LLCAs is described in Table 6.5 below. Descriptions and key characteristics are drawn directly from the local landscape character assessment documents.

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<sup>15</sup> North Lanarkshire Local Development Plan – Modified Proposed Plan – Local Landscape Character Assessment Background Report, November 2019 (URS for North Lanarkshire Council). Available on line at: [Microsoft Word - Modified October 2018 Local Landscape Character.docx \(northlanarkshire.gov.uk\)](https://www.northlanarkshire.gov.uk/media/4837/West-Lothian-Landscape-Character-Classification/pdf/WL-LandscapeCharacterClassificationAugust2014.pdf?m=635458774692900000)

<sup>16</sup> Falkirk Council, Supplementary Planning Guidance – Landscape Character Assessment and Landscape Designations, April 2021 (Falkirk Council). Available on line at: [SG09 Landscape Character Assessment and Landscape Designations April 2021 \(falkirk.gov.uk\)](https://www.falkirk.gov.uk/media/4837/West-Lothian-Landscape-Character-Classification/pdf/WL-LandscapeCharacterClassificationAugust2014.pdf?m=635458774692900000)

<sup>17</sup> West Lothian Council, Landscape Character Classification, West Lothian Local Development Plan: background paper, August 2014. Available on line at: <https://www.westlothian.gov.uk/media/4837/West-Lothian-Landscape-Character-Classification/pdf/WL-LandscapeCharacterClassificationAugust2014.pdf?m=635458774692900000> (Last accessed 18.12.22)

<sup>18</sup> South Lanarkshire Council, South Lanarkshire Landscape Character Assessment, November 2010, (Ironsides Farrar for South Lanarkshire Council). Available online at: [https://www.southlanarkshire.gov.uk/downloads/file/4146/landscape\\_character\\_assessment-final\\_report\\_november\\_2010](https://www.southlanarkshire.gov.uk/downloads/file/4146/landscape_character_assessment-final_report_november_2010) (Last accessed 18.12.22)

**Table 6.5: Local Landscape Character Areas (LLCA)**

LCT Name	Key characteristics which apply to the detailed study area
<b>North Lanarkshire Local Landscape Character Areas</b>	
Plateau Moorland LLCA 7 (HOST LLCA) <sup>19</sup>	<p>North Lanarkshire contains a considerable area of Plateau Moorland that extends over much of the eastern part of the Local Authority area. This is a large scale, open upland landscape which contrasts with the more settled lowlands of North Lanarkshire.</p> <ul style="list-style-type: none"> <li>• Topographical characteristics: This LLCA is defined by an elevated, large scale flat or gently undulating topography. There is a strong sense of exposure and openness throughout. Soils are variable, from areas of wet peatland to thinner soils with exposed rock outcrops. However, the land cover is relatively simple and uniform.</li> <li>• Openness and inter-visibility: Much of the Plateau Moorlands LLCA is open and gently rolling or relatively flat. Therefore, there is considerable inter-visibility with adjacent LLCAs. The occasional more elevated areas within this landscape enable medium to long distance views over adjacent areas and into neighbouring Local Authority areas.</li> <li>• Settlement and man-made influences: There are a number of small to medium sized settlements, in addition to a considerable number of farmsteads and small light-industrial developments within this LLCA. There is considerable evidence of past industrial use with numerous former open cast sites, quarries and the presence of many bings and spoil heaps. There are extensive areas of commercial plantation, which in North Lanarkshire is almost exclusively coniferous. Rotational cropping and replanting of the plantation areas has led to a changing landscape, of varying ages and maturity. These commercial woodlands differ considerably from the mixed and deciduous natural woodlands that occur sparsely within this LLCA. A number of wind farms within this LLCA and in adjacent areas have a locally strong influence on this landscape.</li> <li>• Land use: This landscape is crossed by major transport links, including the M8 and A71, the corridors of which form a considerable division within the LLCA. Rough grassland, mostly sheep grazing with limited and localised cattle grazing is the principal land use. There is also some minor existing light industry, including mineral extraction and quarrying. The LLU includes extensive telecommunications and overhead transmission connections, incorporating National Grid connections for the various small and medium sized wind farms within the character area.</li> <li>• Landscape pattern and field boundaries: There is a network of irregular field boundaries, largely post and wire fencing, with occasional lengths of hedgerow, incorporating hedgerow trees. The diversity of field boundaries is reflected in the varied nature of the field pattern, the irregular field size and shape, and the presence of many plantations. The landscape pattern is large scale with large areas of rough grassland and large forestry plantations.</li> <li>• Landscape quality and condition: The quality and condition of this landscape varies considerably, from areas of well managed farmland to former abandoned industrial and open cast sites. The predominance of former opencast sites and bings and existing quarries has a strong influence on the landscape quality of this LLU.</li> <li>• Value of the landscape: The upland, exposed and generally less settled nature of this landscape provides a contrast to much of the</li> </ul>

<sup>19</sup> North Lanarkshire Local Development Plan – Modified Proposed Plan – Local Landscape Character Assessment Background Report, November 2019 (URS for North Lanarkshire Council). Available on line at: [Microsoft Word - Modified October 2018 Local Landscape Character.docx \(northlanarkshire.gov.uk\)](#)

	<p>wider North Lanarkshire landscape. There is also some value as a setting to the adjacent urban area to the north.</p> <ul style="list-style-type: none"> <li>• Sensitivity to future development: The large scale nature of this landscape and the prevalence of existing and former industrial development, wind farms and other structures results in a low sensitivity to some types of development (e.g. wind farms and small scale residential). However, not all development will be appropriate and it will be important to ensure that any future development relates well to the upland nature of the landscape.</li> </ul> <p>The large scale nature of this landscape and the predominance of existing and former industrial development [and wind farm development] results in a low sensitivity to certain development types.</p>
<b>West Lothian Local Landscape Character Areas</b>	
<p>Upper Almond Valley LLCA 6<sup>20</sup></p>	<ul style="list-style-type: none"> <li>• Distinctive west-east grain of the gently undulating landscape as a number of small burns gradually fall from the moorland into the River Almond before it continues eastwards through Livingston and beyond to the Forth;</li> <li>• Predominantly medium scale pastoral landscape with some arable farmland close to settlement at the edges of the unit;</li> <li>• Broadleaved woodland within Polkemmet Country Park provides considerable natural heritage value and significant landscape character within an uncharacteristic sheltered river valley;</li> <li>• Beyond the Country Park woodland is not extensive but is found predominantly to the centre and west of the area, with coniferous and mixed woodland including some in Woodland Trust ownership (e.g. East Whitburn, Cousland);</li> <li>• Roadside treebelts are a feature along the B7015 and at Gavieside to the east, with shelterbelts elsewhere;</li> <li>• Scattered scrubby birch are a landscape feature;</li> <li>• Scattered but frequent steadings linked by several minor roads criss-crossing the area in either an east-west or north-south direction;</li> <li>• The balance of tree cover is increasing as tree and woodland planting matures north of West Calder associated with several lowland crofting schemes to the east of Longridge;</li> <li>• Rural character of open areas is diluted by features providing a legacy of the areas industrial past, most notably the Five Sisters oilshale bing at Westwood and others, disused railway lines, and modern features including quarries, sewage works, recycling centre, electricity pylons and overhead lines, etc;</li> <li>• Several linear settlements on the edge of the area have developed as either coal or oil shale mining towns, such as Whitburn, Fauldhouse, Stoneyburn, Addiewell, Loganlea and Seafield, some retaining the neat rows of former miners cottages; and</li> <li>• Major roads pass through or alongside the settlements along the boundaries of the area, including the M8 and A705 to the north, A71 to the south and A706 through the west of the area.</li> </ul>
<p>Polkemmet Moor – Lowland Plateaux LLCA 8<sup>21</sup></p>	<ul style="list-style-type: none"> <li>• A relatively flat plateau with a central west-east ridge of moorland and extensive coniferous plantations gently falling northwards from the Fauldhouse Hills at 290m AOD to the River Almond at around</li> </ul>

<sup>20</sup> West Lothian Council, Landscape Character Classification, West Lothian Local Development Plan: background paper, August 2014, pages 19 - 20. Available on line at: <https://www.westlothian.gov.uk/media/4837/West-Lothian-Landscape-Character-Classification/pdf/WL-LandscapeCharacterClassificationAugust2014.pdf?m=635458774692900000>

<sup>21</sup> West Lothian Council, Landscape Character Classification, West Lothian Local Development Plan: background paper, August 2014, pages 21 – 22. Available on line at: <https://www.westlothian.gov.uk/media/4837/West->

	<p>190m AOD, and falling more steeply southwards down to the Breich Water at around 210m;</p> <ul style="list-style-type: none"> <li>• Past open cast coal mining is very evident in the numerous artificial humps and hollows, coal bings, dismantled railway lines and disused mines and quarries;</li> <li>• Poorly drained peatland bogs with heather, cotton grass and rough unimproved tussocky grass on the higher slopes;</li> <li>• Open pasture on the lower slopes, with wire fencing rather than hedges;</li> <li>• Coal bings are becoming vegetated but are still conspicuous features in the landscape;</li> <li>• Great variety in views, from extensive, distant views out from open moorland southwards to the Gladsmuir Hills and the Blacklaw wind farm, to more confined and enclosed views from within the plantations;</li> <li>• The high plateau is almost entirely unoccupied, with very little settlement apart from isolated farms on the lower slopes and some expansion of Fauldhouse and Longridge (just outside the area) up the slope; and</li> <li>• Only one minor road crosses the plateau, with other minor tracks and plantation rides.</li> </ul>
<p>Armadale &amp; Bathgate Plateau – Lowland Plateaux LLCA 9<sup>22</sup></p>	<ul style="list-style-type: none"> <li>• A poorly drained, medium scale watershed between the Couston / Avon Valley to the north and the Almond Valley to the south;</li> <li>• A predominantly rural area between Armadale, Bathgate, Blackburn and Whitburn, but with significant modern intrusions;</li> <li>• Rolling moorland plateau becoming wild and exposed to the west and more enclosed with more urban influences to the east within the Armadale / Bathgate fringe;</li> <li>• Distinctive simple, exposed, plateau bog-like character of open rolling moorland with heather and gorse around the high point at Hall Torbane Farm south-east of Armadale;</li> <li>• By way of contrast, to the east is a more enclosed landscape where mature woodland policies of the former Boghead House and extensive shelterbelts are important landscape features providing an attractive western edge to Bathgate;</li> <li>• Large areas of open water are features in the landscape, including to the east of the A801 (Half Loaf Pond) and to the west around Hall Torbane Farm south-east of Armadale;</li> <li>• A801 is a dominant major transport corridor passing mostly on embankment north-south through the area, with the A706 and new Bathgate-Airdrie railway and associated infrastructure creating major intrusions in the landscape;</li> <li>• Overhead power lines and pylons, and an electricity sub-station also dilute the rural character of the landscape;</li> <li>• Telecommunications masts on high ground are features within the unit visible from many kilometres. From the west of the unit the huge radio and TV transmitter masts at Black Hill and Kirk o’Shotts within North Lanarkshire are visible approximately 6-7km away;</li> <li>• South of the A89 is a series of gentle lowland undulations of improved grassland, including restored mine workings;</li> </ul>

[Lothian-Landscape-Character-Classification/pdf/WL-](#)

[LandscapeCharacterClassificationAugust2014.pdf?m=635458774692900000](#) (Last accessed 18.12.22)

<sup>22</sup> West Lothian Council, Landscape Character Classification, West Lothian Local Development Plan: background paper, August 2014, pages 22 – 23. Available on line at: [https://www.westlothian.gov.uk/media/4837/West-Lothian-Landscape-Character-Classification/pdf/WL-](https://www.westlothian.gov.uk/media/4837/West-Lothian-Landscape-Character-Classification/pdf/WL-LandscapeCharacterClassificationAugust2014.pdf?m=635458774692900000)

[LandscapeCharacterClassificationAugust2014.pdf?m=635458774692900000](#) (Last accessed 18.12.22)

	<ul style="list-style-type: none"> <li>• In the north of the area the restored Easton colliery bing on the west side of Bathgate provides an elevated feature now well integrated into the landscape; and</li> <li>• Long distance views eastwards to the Bathgate Hills and southwards to the Pates Hill wind farm.</li> </ul>
<p>Avonbridge to Armadale Plateau Edge – Lowland Plateaux LLCA 11<sup>23</sup></p>	<ul style="list-style-type: none"> <li>• Gently rolling eastern edge of the higher Slamannan Plateau which covers an extensive area to the west within Falkirk district;</li> <li>• Distinctive west-east grain to the landscape due to drainage by a series of tributary burns, including Mad Burn, which flow eastwards off the higher plateau into the Barbauchlaw Burn which in turn flows northwards into the River Avon;</li> <li>• The Unit represents a transition between arable farmland on the lower ground, to pasture and up to rough hill grazing on higher ground;</li> <li>• Small scale, semi-enclosed pattern of rural roads, mixed farming, woodland and shelterbelts in parts of the unit, but generally with no strong pattern of field boundaries;</li> <li>• Former woodland policies of Bridge Castle and within the Barbauchlaw Burn valley along the eastern edge of the area, and around the top of Blackridge Heights at North Rhodens, East Rhodens and West Rhodens, are significant landscape features providing an attractive, mature, managed character with broadleaved woodland, fine roadside beech avenues and clipped beech hedges;</li> <li>• Extensive mixed forest plantation at Drumtassie Burn managed by the Forestry Commission as part of the Central Scotland Forest;</li> <li>• Meandering form of the Barbauchlaw Burn and in places the steep sided Barbauchlaw Glen north of Armadale, with localised raised ground between the burn and the A801 at Kinnen Hill and Tantallan Hill, provides variety of landform and contrasts with the flatter Couston Valley to the east;</li> <li>• The northern edge of Armadale is a generally low lying, open, gently terraced pastoral landscape for sheep grazing; and</li> <li>• Relatively unspoiled apart from overhead lines and electricity pylons, small disused quarries and an active open cast coal mine north of Armadale (Woodend Colliery). The Gowanbank gas compressor station is relatively well screened.</li> </ul>

### Landscape Character of the Site

- 6.4.15 Most of the landscape within a 15 km radius features a gently sloping / undulating landform of plateau moorland to lower plateau and urban fringe farmland. The Site is characterised as a former colliery site at the lower elevations to the south, and the open grazing farmland to the north.
- 6.4.16 The landscape is highly influenced by the activity of people, former mining, commercial forestry and the existing wind turbines which exert a strong influence on the landscape character of the site and local landscape. It is a landscape in constant change, visually, with the movement of vehicles on the local road network and in the M8 motorway corridor, and the movement of the existing wind turbines neighbouring the Site. The site is intersected by the B718 road between Blackridge to the north and Harthill to the south.

<sup>23</sup> West Lothian Council, Landscape Character Classification, West Lothian Local Development Plan: background paper, August 2014, page 24. Available on line at: <https://www.westlothian.gov.uk/media/4837/West-Lothian-Landscape-Character-Classification/pdf/WL-LandscapeCharacterClassificationAugust2014.pdf?m=635458774692900000> (Last accessed 18.12.22)

- 6.4.17 The Site comprises of areas of commercial forestry and broad leaf woodland plantation, grazing land, and a core path which runs south from Blackridge along a former railway line, and west along Blairmuckhill Road. There is a small area of wet modified bog within the south west corner of the Site. There are open path ways through the forest area, popular for dog walking.
- 6.4.18 The highest point of the Site is to the north, which lies approximately 215m AOD near Hill Farm and Blairmuckhill Farm, and 175m AOD at its lowest point in the south east corner of the site at the junction of the B718 overbridge across the M8 near Netherton Farm.
- 6.4.19 A number of manmade 'linear' features, both horizontal and vertical, are evident within this landscape, including roads, tracks, fence lines, dykes, pylons and wooden poles as well as a range of buildings, farms and machinery.
- 6.4.20 Vertical elements are highly visible within this open landscape as can be noted from existing vertical features and including the operational wind turbines from the existing Torrance Wind Farm I & II and Southrigg wind turbine immediately to the east of the Site. The communications mast at Blairmuckhill Farm to the north west, and the television transmitting station at Kirk O'Shotts are vertical elements within the landscape.
- 6.4.21 The existing Torrance Wind Farm turbines exert a strong influence within the landscape character of the Site.

#### **Landscape Designations**

- 6.4.22 Landscape designations within the Detailed Study Area are all shown on Figure 6.13.
- 6.4.23 The site is not subject to any statutory landscape designation. It does not lie within or close to any nationally or regionally designated areas of landscape interest such as a National Park or National Scenic Areas (Figure 6.13).

#### **Conservation Areas**

- 6.4.24 The only Conservation Area within the Detailed Study Area is within the settlement of Torphichen (reference Figure 6.13). This settlement is located 10 km north east of the proposed development. Due to the woodland south of the B8047 road, and the topography rising to the south of the settlement, there would be no views of the proposed turbines within the settlement area of the village conservation area. However, the conservation area boundary extends north and east of the properties, the Torphichen Hills, from which there would be potential views of the Proposed Development 9.5km southeast of the conservation area.

#### **Country Park**

- 6.4.25 Polkemmet Country Park is situated 1.54 km east of the Proposed Development. The country park comprises of 68 ha of woodland, riverside walks, play areas, picnic areas and golf course and driving range within the park.
- 6.4.26 Whilst the park area is wooded, views from the western edge of the Polkemmet Country Park are represented in Viewpoint 11, Figure 6.37.

#### **Gardens and Designed Landscapes**

- 6.4.27 There are three Gardens and Designed Landscapes (GDL) within the Detailed Study Area:
- Allanton (GDL00012) - A landscape park, typical of its time, with parkland, lake, woodland in groups, clumps, plantations and single specimens and walled garden. This asset is now removed and will not be included within this assessment;

- Callendar Park (GDL00078) - A large 18th and 19th century informal parkland landscape, with a long and complex history dating from the construction of the Antonine Wall in 142 AD. Callendar Park is a well- preserved designed landscape in an area of great urban pressure and is now largely a public park for the town of Falkirk. The park lies out with the ZTV and has not been included within the assessment; and
- Harburn House (GDL00208) - Playing an important role in the scenery of the area, this early 19th century landscaped park was laid out with advice from Thomas White, Jnr. (1764-1836). Pearie Law Wind Farm and Harburnhead Wind Farm are located in proximity to the Harburn House GDL. The proposed development would not influence the landscape character or exert a visual influence on views from the GDL to bring about significant landscape or visual effects therefore Harburn House GDL has not been included further within the assessment.

### Visual Receptors

#### Residential Properties

- 6.4.28 The landscape of the Wider Study Area is densely settled with villages and a number of isolated farm properties.
- 6.4.29 The visual assessment considers views from individual residential properties within 2 km of the Proposed Development (Figure 6.15). From identification of receptors via desk based assessment and site visits, this LVIA and associated RVAA include an assessment of 20 properties within a 2 km radius of the Site.
- 6.4.30 Table 6.6 details the residential properties within 2 km of the Site. A visual full assessment of the views from these properties is provided in Appendix 6D: Residential Assessment.

**Table 6.6: Residential Properties within 2 km**

Property Ref No.	Property Name	Approximate Distance from Nearest Proposed Turbine	Approximate Distance from Nearest Existing Turbine at Torrance Wind Farm I & II
R1	Blairmuckhill Farm	T3, 0.58km	E01-3, 1.96km
R2	Hill Farm	T3, 0.30km	E01-3, 1.60km
R3	Loan Farm	T2, 0.71km	E01-3, 0.77km
R4	Netherton Farm	T1, 0.25km	E01-3, 0.65km
R5	Torrance Farm	T1, 0.61km	E01-3, 0.23km
R6	Knowehead	T4, 0.83km	E01-3, 2.70km
R7	Treebanks Farm	T4, 0.72km	E01-3, 2.84km
R8	Blairmuckhole	T4, 1.28km	E01-3, 3.21km
R9	Forrestburn Holding	T4, 1.77km	E01-3, 3.52km
R10	Forrestburn	T4, 1.58km	E01-3, 3.23km
R11	Bogend Farm	T3, 1.52km	E01-1, 2.58km
R12	Standhill Farm	T3, 1.67km	E01-1, 1.56km
R13	School House	T1, 1.33km	E01-1, 0.61km
R14	Northrigg Farm	T1, 1.80km	E01-2, 1.12km

R15	Southrigg Farm	T1, 1.49km	E03-1, 0.85km E02-1, 0.91km
R16	Couch	T1, 1.22km	E02-2, 0.92km
R17	West Benhar	T4, 1.25km	E01-3, 3.18km
R18	Hirst Road (East)	T4, 1.27km	E01-3, 3.40km
R19	Hirst Road (West)	T4, 1.74km	E01-3, 3.87km
R20	South Blair	T4, 1.89km	E01-3, 4.01km
R21	Property at Edencroft Equestion Centre	T1, 1.24 km	E01-2, 0.53km
R22	Old Miners Hall, east of The School House	T1, 1.5 km	E01-2, 0.82km

#### Settlements

6.4.31 There are four settlements within 2 km radius of the Proposed Development. The landscape of the Wider Study Area is densely settled with villages and urban conurbations. The following four villages have been included within this LVIA (as illustrated in Figure 6.15) due to their proximity to the Proposed Development and where potential significant visual effect may occur. Site assessment revealed that whilst there are many more settlements and conurbations within the Detailed Study Area, views from the settlements are screened by built development and tree cover within the wider landscape. Viewpoints within this assessment illustrate the views from the settlements of Whitburn, Bathgate, Armadale, Forrestfield, Blackridge, Eastfield, Greenrigg and Harthill.

**Table 6.7: Settlements within 2 km**

Settlement Ref No.	Settlement	Approximate Distance from Nearest Proposed Turbine	Approximate Distance from Nearest Existing Turbine at Torrance Wind Farm I & II
S1	Harthill	T2, 0.48km	E02-2, 1.05km
S2	Greenrigg	T2, 0.67km	E02-2, 0.75km
S3	Eastfield	T4, 0.46km	E01-3, 2.02km
S4	Blackridge	T2, 1.20km	E01-1, 0.83km

#### Recreational Receptors

6.4.32 Visual impacts on tourists, or those participating in recreation activities, may be brief in nature by passing through the area on boat, ferry, horse, foot, or bike, and their sensitivity to landscape and visual change is high because their purpose/activity is to appreciate landscape and surroundings.

6.4.33 Recreational receptors within the Detailed Study Area of the Proposed Development are illustrated on Figure 6.14 and include. Given the extent of urban development within the Detailed Study Area, and following site assessment, the LVIA focusses on the following recreational receptors, from which there is either a clear view for visitors to the location, towards the Proposed Development, or there is a potential for significant visual effects. The recreational receptors include:

- The National Cycle Route 75;
- The North Lanarkshire Core Path Network – NL/213/1, NL/212/1, NL/214/1, NL/215/1, and NL216/1;

- Visitors to Polkemmet Country Park; and
- Visitors to Hillend Reservoir.

#### Transport Routes

- 6.4.34 It is important to take account of how the Proposed Development would be experienced from the surrounding road network. The visual assessment considers the potential visual effects likely to be experienced by people travelling through the landscape on main roads and the local road network. Views would vary depending on proximity to the road, the mode of transport, the angle of view, and intervening landscape features.
- 6.4.35 There are many routes which pass within 15 km of the Proposed Development connecting the extensive number of settlements. Given the extent of urban development within the Detailed Study Area, and following site assessment, the LVIA focusses on the following transport routes from where there is a potential for significant visual effects:
- M8 Motorway;
  - A89; and
  - B718, B7066, B7069, B717 roads; and
  - The local road network.
- 6.4.36 Table 6.8 summarises the constraints within the Detailed Study Area.

**Table 6.8: Landscape Designations and Protected Heritage Assets**

<b>Landscape Designations &amp; Protected Heritage Assets</b>	<b>Present Within Site Boundary</b>	<b>Present within the Detailed Study Area (15 km radius)</b>
<b>NSAs</b>	No	No
<b>Wild Land Areas</b>	No	No
<b>Special Landscape Area / Local Landscape Designation</b>	No	No
<b>Scheduled Monument</b>	No	Yes
<b>Listed Buildings</b>	No	Yes
<b>Conservation Areas</b>	No	Yes
<b>Gardens and Designed Landscapes</b>	No	Yes

#### Cumulative Baseline

- 6.4.37 The locations of wind farms (operational, consented, application, at appeal and scoping) are shown on Figure 6.17, illustrating all sites within the 25 km Cumulative Search Area. The status of the wind farms is taken to be correct as of 26th October 2022. The assessment considers only sites with turbines greater than 50 m tip height.
- 6.4.38 Table 6.9 below, lists the existing/operational, consented and in planning wind farms located within the Detailed Study Area, which have been included in the cumulative assessment.

**Table 6.9: Wind Energy Developments Included within the CLVIA**

<b>Wind Farms</b>	<b>Status of Wind Farm</b>	<b>Number of Turbines</b>	<b>Height to blade tip of Turbines (m)</b>	<b>Direction of Cumulative Site from the Proposed Development</b>
<i>Torrance I (E01)</i>	<i>Operational</i>	<i>3</i>	<i>120</i>	<i>East</i>
<i>Torrance II (E02)</i>	<i>Operational</i>	<i>2</i>	<i>125</i>	<i>East</i>
<i>Southrigg 1 (E03)</i>	<i>Operational</i>	<i>1</i>	<i>125</i>	<i>East</i>
<i>Wester Hasockrigg (E04)</i>	<i>Operational</i>	<i>1</i>	<i>78</i>	<i>South West</i>
<i>West Benhar Wind Farm (E05)</i>	<i>Operational</i>	<i>8</i>	<i>150</i>	<i>South</i>
<i>Drumduff Wind Farm (E06)</i>	<i>Operational</i>	<i>3</i>	<i>120</i>	<i>North</i>
<i>Burnhead Wind Farm (E07)</i>	<i>Operational</i>	<i>13</i>	<i>127</i>	<i>North</i>
<i>Nether Bracco Farm (E08)</i>	<i>Operational</i>	<i>1</i>	<i>100</i>	<i>North West</i>
<i>Black Law Wind Farm Extension Phase 1 (E09)</i>	<i>Operational</i>	<i>23</i>	<i>127</i>	<i>North</i>
<i>Black Law Wind Farm Extension Phase 2 (E10)</i>	<i>Operational</i>	<i>11</i>	<i>117</i>	<i>North</i>
<i>Tormywheel Wind Farm (E11)</i>	<i>Operational</i>	<i>15</i>	<i>111</i>	<i>North</i>
<i>Climpy Road (E12)</i>	<i>Operational</i>	<i>1</i>	<i>102</i>	<i>North</i>
<i>Greendykeside (E13)</i>	<i>Operational</i>	<i>2</i>	<i>100</i>	<i>North West</i>
<i>Easter Glentore Wind Turbine, The Shetland Centre (E14)</i>	<i>Operational</i>	<i>1</i>	<i>102</i>	<i>North West</i>
<i>Gardrum Farm (E15)</i>	<i>Operational</i>	<i>1</i>	<i>86</i>	<i>North</i>
<i>Gardrum Farm 2 (E16)</i>	<i>Operational</i>	<i>1</i>	<i>86</i>	<i>North</i>
<i>Whiterigg Wind Turbine (E17)</i>	<i>Operational</i>	<i>1</i>	<i>77</i>	<i>North</i>
<i>Polmont Golf Club (E18)</i>	<i>Operational</i>	<i>1</i>	<i>77</i>	<i>North</i>
<i>Pates Hill Wind Farm (E19)</i>	<i>Operational</i>	<i>7</i>	<i>107</i>	<i>South East</i>
<i>Upper Haywood Forth (E20)</i>	<i>Operational</i>	<i>1</i>	<i>67</i>	<i>North</i>
<i>Black Law Wind Farm (E21)</i>	<i>Operational</i>	<i>54</i>	<i>110</i>	<i>North</i>
<i>Damhead Farm (E22)</i>	<i>Operational</i>	<i>1</i>	<i>100</i>	<i>West</i>
<i>Pearie Law Wind Farm (E23)</i>	<i>Operational</i>	<i>6</i>	<i>125</i>	<i>South East</i>
<i>Harburnhead Wind Farm (E24)</i>	<i>Operational</i>	<i>22</i>	<i>125</i>	<i>South East</i>
<i>Muirhall Wind Farm (Stallashaw Moss) (E25)</i>	<i>Operational</i>	<i>6</i>	<i>125</i>	<i>South East</i>
<i>Muirhall Wind Farm Extension (E26)</i>	<i>Operational</i>	<i>2</i>	<i>145</i>	<i>South East</i>
<i>Muirhall Wind Farm South (E27)</i>	<i>Operational</i>	<i>3</i>	<i>146</i>	<i>South East</i>
<i>Braidenhill Farm (E28)</i>	<i>Operational</i>	<i>1</i>	<i>77</i>	<i>North West</i>
<i>Bellstane Farm (E29)</i>	<i>Operational</i>	<i>1</i>	<i>86</i>	<i>North West</i>
<i>AG Barr Factory wind turbine (E30)</i>	<i>Operational</i>	<i>1</i>	<i>70</i>	<i>North West</i>
<i>Rosti Turbine, Strutherhill (E31)</i>	<i>Operational</i>	<i>1</i>	<i>110</i>	<i>South West</i>
<i>Lochhead Farm (E32)</i>	<i>Operational</i>	<i>3</i>	<i>100</i>	<i>South West</i>
<i>Lochhead Farm Extension (E33)</i>	<i>Operational</i>	<i>2</i>	<i>100</i>	<i>South West</i>

<i>Marshall Farm 1 (E34)</i>	<i>Operational</i>	<i>1</i>	<i>119</i>	<i>South West</i>
<i>Marshall Farm 2 (aka Netherburn West) (E35)</i>	<i>Operational</i>	<i>1</i>	<i>100</i>	<i>South West</i>
<i>Whitehill Farm, Stonehouse (E36)</i>	<i>Operational</i>	<i>1</i>	<i>77</i>	<i>South West</i>
<i>Tanhill Farm 1 (E37)</i>	<i>Operational</i>	<i>1</i>	<i>77</i>	<i>South West</i>
<i>Westtown Farm, Stonehouse (E38)</i>	<i>Operational</i>	<i>1</i>	<i>77</i>	<i>South West</i>
<i>Southfield Farm (E39)</i>	<i>Operational</i>	<i>1</i>	<i>67</i>	<i>South West</i>
<i>Auchnotroch Farm (E40)</i>	<i>Operational</i>	<i>1</i>	<i>84</i>	<i>South West</i>
<i>Lampits Farm (E41)</i>	<i>Operational</i>	<i>2</i>	<i>64</i>	<i>South East</i>
<i>Shotlinn Farm, Nr Chapelton (E42)</i>	<i>Operational</i>	<i>1</i>	<i>77</i>	<i>South West</i>
<i>Burnbrae Farm (E43)</i>	<i>Operational</i>	<i>1</i>	<i>66</i>	<i>South West</i>
<i>Haspielaw Farm (E44)</i>	<i>Operational</i>	<i>1</i>	<i>78</i>	<i>South West</i>
<i>Blantyre Muir Wind Farm (E45)</i>	<i>Operational</i>	<i>3</i>	<i>111</i>	<i>South West</i>
<i>Blantyre Muir Wind Farm Extension (E46)</i>	<i>Operational</i>	<i>3</i>	<i>115</i>	<i>South West</i>
<i>Kirkton Farm, Dunfermline (E47)</i>	<i>Operational</i>	<i>1</i>	<i>100</i>	<i>North East</i>
<i>Tulliallan Concrete Works (E48)</i>	<i>Operational</i>	<i>1</i>	<i>74</i>	<i>North East</i>
<i>Southrigg 2 (aka Rigg Wind Turbine) (C01)</i>	<i>Consented</i>	<i>1</i>	<i>149</i>	<i>East</i>
<i>Forrestfield Wind Farm (C02)</i>	<i>Consented</i>	<i>4</i>	<i>125</i>	<i>West</i>
<i>Drumelzie (C03)</i>	<i>Consented</i>	<i>1</i>	<i>126</i>	<i>North</i>
<i>Brownhill Farm (C04)</i>	<i>Consented</i>	<i>2</i>	<i>149</i>	<i>South</i>
<i>Easter Drumclair Wind Farm (C05)</i>	<i>Consented</i>	<i>2</i>	<i>150</i>	<i>North</i>
<i>Hartwood Wind Farm Resubmission (C06)</i>	<i>Consented</i>	<i>7</i>	<i>132</i>	<i>South West</i>
<i>Greengairs East Wind Farm (C07)</i>	<i>Consented</i>	<i>8</i>	<i>150</i>	<i>North West</i>
<i>Tormywheel Wind Farm Extension (C08)</i>	<i>Consented</i>	<i>3</i>	<i>126</i>	<i>South East</i>
<i>Heathland Wind Farm (C09)</i>	<i>Consented</i>	<i>14</i>	<i>180</i>	<i>South East</i>
<i>Longhill Burn Wind Farm (C10)</i>	<i>Consented</i>	<i>8</i>	<i>200</i>	<i>South East</i>
<i>Greengairs Wind Farm (C11)</i>	<i>Consented</i>	<i>9</i>	<i>125</i>	<i>North West</i>
<i>Albert Bartlett (C12)</i>	<i>Consented</i>	<i>1</i>	<i>126</i>	<i>North West</i>
<i>Watsonhead Farm (C13)</i>	<i>Consented</i>	<i>2</i>	<i>150</i>	<i>South West</i>
<i>Greenwall Farm (C14)</i>	<i>Consented</i>	<i>1</i>	<i>55</i>	<i>South</i>
<i>South Lanarkshire Council Roads Depot (C15)</i>	<i>Consented</i>	<i>1</i>	<i>50</i>	<i>South West</i>
<i>Kittymuir Farm (C16)</i>	<i>Consented</i>	<i>2</i>	<i>77</i>	<i>South West</i>
<i>Lampits Farm 2 (C17)</i>	<i>Consented</i>	<i>1</i>	<i>64</i>	<i>South East</i>
<i>Low Blackwoodyards Farm (C18)</i>	<i>Consented</i>	<i>1</i>	<i>67</i>	<i>South West</i>
<i>Dewshill Wind Farm (A01)</i>	<i>Application</i>	<i>3</i>	<i>150</i>	<i>West</i>
<i>Marshall North Wind Turbine (A02)</i>	<i>Application</i>	<i>1</i>	<i>180</i>	<i>South West</i>
<i>Bughtknowes Farm (S01)</i>	<i>Scoping</i>	<i>1</i>	<i>127</i>	<i>South East</i>

### **Receptors Scoped Out of the LVIA**

- 6.4.39 The following landscape and visual receptors have been scoped out of this assessment due to lack of intervisibility, or confirmed at site survey:
- All landscape receptors beyond 15km from the Proposed Development and outwith the ZTV;
  - All visual receptors outwith the ZTV;
  - All heritage assets (addressed in Heritage Assessment); and
  - All Gardens & Designed Landscapes.

### **Future Baseline**

- 6.4.40 It is not anticipated that the baseline conditions described above would differ significantly in the future without the Proposed Development, or with the Proposed Development for the duration of its operations. This is due to the nature of the Site and its proximity to an existing wind farm and within the M8 corridor.

## **6.5 Embedded Design & Mitigation**

- 6.5.1 The operational period of the Proposed Development would cover a period of 40 years and includes site management to ensure the adequate maintenance of site facilities and landscape features such as access tracks, field boundaries, gates, and signage.
- 6.5.2 There is limited opportunity for landscape design related mitigation alongside the four turbines of the Proposed Development, however, the following considerations have been made to improve core path connectivity, by linking Core Path NL/213/1 from Blackridge to pathways within the Site to provide an off road route from Blackridge in the north to the south of the site and over the bridge to Harthill, and west to Blairmuckill Road and core path NL/212/1 west. Local upgrades and repairs to the core path would be beneficial to make the route more accessible in places.
- 6.5.3 An Outline Habitat Management Plan has been developed (refer to Figure 10.5.1) which indicates areas of proposed tree planting and proposed wader scrapes.
- 6.5.4 Any new tree planting would comprise of native woodland shelter belt planting which would include a mix of the lower growing species and some taller tree species. A selection of native species would include:
- Light Standard trees (2.5 – 3m height) including *Alnus glutinosa*, *Betula pubescens*, *Populus tremula*, and *Sorbus aucuparia*; and
  - Native shrub species (60 – 80cm height) including *Betula pubescens*, *Crataegus mongyna*, *Pinus sylvestris*, *Prunus spinosa* and *Salix caprea*.

## **6.6 Assessment of Potential Construction Effects**

- 6.6.1 The construction phase would result in localised and direct landscape effects on the plateau moorland and lowland plateau local landscape character, and the landscape elements within the Site itself. Table 6.10 provides a list of the construction activities to be undertaken together with an appraisal of the level and type of effect predicted.
- 6.6.2 Construction activities could result in temporary landscape and visual effects during the construction period, specifically:
- Effects on landscape character, based on a current and future baseline, from construction and plant activities within 2 km radius; and

- Effects on visual amenity of surrounding visual receptors, including residential properties, users of the local core paths and the local road network, based on a current and future baseline, from construction and plant activities within 5 km radius.

### Construction Landscape Effects

**Table 6.10 Landscape Effects during Construction**

Construction Activity and Assessment	Landscape Assessment		
	Landscape Character Sensitivity	Magnitude	Level of Effect
<p><u>Access Tracks</u></p> <p>New access track will be required at a minimum width of 5 m with some localised widening on bends and new road access from the B718 to access the T 1 turbine location. The access track will affect areas of rough grassland / grazing land, and commercial forestry. As the works commence on site the magnitude of change would increase from zero to small affecting localised areas. The effects on landscape elements overall will be None – Negligible - Minor and temporary (reversible), direct, and negative.</p>	Low	Zero to Small	None to Negligible – Minor
<p><u>Substation &amp; Transformer</u></p> <p>The Substation would be established adjacent to the access track within the Site, and occupying an area of low landscape sensitivity. It would be single storey building, housing the switchgear and control equipment, plus secure storage space.</p> <p>Given the limited area affected, the magnitude of change would increase from zero to small and the landscape effect will be None – Negligible - Minor and temporary (reversible), direct, and negative.</p>	Low	Zero to Small	None to Negligible – Minor
<p><u>Turbine Foundations</u></p> <p>As the works commence on site the magnitude of change associated with the construction of the hard standing and foundations will increase from zero to large, directly affecting localised areas of rough grassland and landscape character of the Site as a whole. The landscape effect on the Site (low landscape sensitivity) would be None to Minor - Moderate. The nature of these effects will be long term (reversible), direct, and negative to neutral.</p>	Low	Zero to Large	None to Minor - Moderate

- 6.6.3 Taking all the factors above together, the low sensitivity of the landscape, and the predicted small (with limited large) magnitude of change, results in an overall effect on the landscape, and the landscape elements during construction predicted to be minor and minor – moderate, long term (reversible), direct, and negative during the construction process. These landscape effects are **not significant** in the context of the EIA Regulations.

## **Construction Visual Effects**

- 6.6.4 The visual effects of the Proposed Development during the construction period would be most noticeable from 'close-range views' of the turbine erection, dismantling and movement of the crane, layout areas, control building and construction vehicles using the site access track and entrance.
- 6.6.5 The Site is visually open to the north, east and west at ground level, with no notable boundary features to screen many of the views of the ground based activities from the Blairmuckhill Road, and nearby residential properties and core paths. The woodland to the south of the Site, and tree cover along the M8 road corridor would provide screening from the nearest settlements of Harthill, Greenrigg and Eastfield, from road receptors on the M8 and B718 as they approach the Proposed Development from the south east and east and immediately south of the Proposed Development.
- 6.6.6 Overall, the sensitivity of visual receptors is medium (road users) and high (recreational receptors and residential receptors). The magnitude of visual change would vary over the course of the construction phase in line with the extent of infrastructure present on site. The magnitude would therefore be negligible to small initially and the level of effect (Minor – Minor Moderate) before gradually increasing in relation to the progressive increase in turbine height and numbers. However, the level of visual effect towards the end of the construction period would not exceed that assessed for the operational period where both turbines would be at their full height and exert their maximum visual influence.
- 6.6.7 These visual effects are not significant and limited significant visual effects during turbine construction, in the context of the EIA Regulations.

### **Overview of Visual Effects during Decommissioning**

- 6.6.8 All of the visible, above-ground structures required for the Proposed Development (including associated infrastructure, but excluding access tracks) will be removed upon decommissioning.
- 6.6.9 The access track will be the only remaining elements of the scheme visibility at ground level and in overall terms the level of effect will reduce to not significant levels (negligible magnitude). The nature of these effects will be permanent, direct, and neutral when compared to the pre-existing landscape of the site.

## **6.7 Assessment of Operational Landscape Effects**

### **Assessment of Effects on Landscape Character**

- 6.7.1 The landscape character is considered at two levels within the LVIA:
- Local landscape character areas as identified within the North Lanarkshire and West Lothian Local Landscape Character Assessments; and
  - Local setting, based on field observations to confirm the key features and characteristics pertinent to the Detailed Study Area and the Site.
- 6.7.2 The 'host' landscape is defined by NatureScot and the North Lanarkshire Council and the landscape character types and local landscape character areas which border the host LLCA all share broadly similar boundaries (as illustrated in Figures 6.7 – 6.10). They are described as:
- Plateau Moorland LLCA 7 (North Lanarkshire);
  - Upper Almond Valley LLCA 6 (West Lothian);
  - Polkemmet Moor – Lowland Plateaux LLCA 8 (West Lothian);
  - Armadale & Bathgate Plateau – Lowland Plateaux LLCA 9 (West Lothian); and
  - Avonbridge to Armadale Plateau Edge – Lowland Plateaux LLCA 11 (West Lothian).

- 6.7.3 The local landscape character assessment reports provide the most detailed assessment of the landscape character and sensitivity, and it is these two documents which we have referred to particularly within the landscape character assessment.
- 6.7.4 An appraisal of the baseline landscape character has been undertaken in order to determine the sensitivity of the landscape to accommodate the Proposed Development.

#### Plateau Moorland LLCA 7

- 6.7.5 The Plateau Moorland LLCA 7 is the host LLCA for the Proposed Development. This LLCA is a large LLCA within the Detailed Study Area, extending from Cumbernauld in the north and to Forth in the south. "Much of the Plateau Moorlands [LLCA] is open and gently rolling or relatively flat. Therefore, there is considerable inter-visibility with adjacent LLUs [LLCA]. The occasional more elevated areas within this landscape enable medium to long distance views over adjacent areas and into neighbouring Local Authority areas"<sup>24</sup>
- 6.7.6 Assessment for the effects on landscape character is a combination of a review of the conclusions presented in the North Lanarkshire Council Landscape Character Assessment, and professional judgement from field observations.
- 6.7.7 The Plateau Moorland LLCA has been assessed as having:
- Landscape value – the area within the Detailed Study Area is an undesignated landscape. However, there is some value of the local landscape as *"a setting to the adjacent urban areas"*<sup>25</sup>. The Plateau Moorland LLCA is considered to be of a low landscape value;
  - Landscape Scale – *"This is a large scale, open upland landscape which contrasts with the more settled lowlands of North Lanarkshire."*<sup>26</sup>
  - Landscape quality – the landscape quality within the LLCA varies, with areas of well managed farmland with an overall positive landscape quality within the LLCA, in contrast to former abandoned colliery, industrial and former opencast sites. There are some areas of alteration/degradation/erosion of features along the M8 and A718 and A89 road corridors to the north, south and east. Torrance Wind Farm I and II, Southrigg 1 & 2 turbines, farm scale turbines, commercial forestry are dominant landscape features, and within a former colliery modified landscape. Overall, the LCT is considered to be of a low - medium landscape quality;
  - Landscape Susceptibility – given the presence of existing wind turbines within the LLCA, and neighbouring LLCAs, there is a medium capacity for the Plateau Moorland LLCA to accommodate the Proposed Development, which would not detract from the overall existing landscape quality, features and characteristics of the LLCA, nor adversely affect the setting of historic or distinctive features within the LLCA. This results in a low susceptibility to the Proposed Development taking account of the existing character and quality of the landscape;
  - Landscape sensitivity – *"The large scale nature of this landscape and the prevalence of existing and former industrial development, wind farms and other structures results in a low sensitivity to some types of development (e.g. wind farms and small scale residential). However, not all development will be appropriate and it will be important to ensure that any future development relates well to the upland nature of the landscape."*<sup>27</sup> This is an undesignated landscape,

<sup>24</sup> North Lanarkshire Local Development Plan – Modified Proposed Plan – Local Landscape Character Assessment Background Report, November 2019, page 21 (URS for North Lanarkshire Council). Available on line at: [Microsoft Word - Modified October 2018 Local Landscape Character.docx \(northlanarkshire.gov.uk\)](#)

<sup>25</sup> Ibid 22

<sup>26</sup> Ibid 22

<sup>27</sup> Ibid 22

but neighboured to the north by the Blackridge Heights LLCA, and Upper Almond Valley LLVA to the east and south east both distinctive LLCAs in the Detailed Study Area. The Plateau Moorland LLCA borrows the landscape characteristics of the urban fringe / settlement / motorway corridor to the south. Therefore, the LCT is considered to be of a low landscape sensitivity overall, with pockets of medium sensitivity; and

- Cumulative Landscape Sensitivity – The landscape of the Plateau Moorland LLCA is considered as being of a medium cumulative sensitivity to additional wind turbines, which would be a new introduction to the LLCA. This is due to the volume of wind farm development in the LLCA, but also the scale of the proposed turbines in this Proposed Development.
- 6.7.8 The magnitude of change arising from the Proposed Development within the LLCA would be small for the LLCA overall given the size of the LLCA, and medium within 5 km of the Proposed Development. There would be limited change to aesthetic and / or perceptual attributes of the landscape character and any indirect landscape changes would occur across a very limited geographical area within the LLCA given the number of existing wind farms and turbines, and proposed, within the LLCA.
- 6.7.9 There would be little, or no, undue consequences for the maintenance of the baseline situation given the presence of the existing and consented wind farms in this LLCA. This results in a low susceptibility to the Proposed Development. The landscape would be able to accommodate the Proposed Development taking account of the existing character and quality of the landscape.
- 6.7.10 The landscape effects within the LLCA overall would be Negligible - Minor, direct, cumulative, and adverse and non significant landscape effect, and there would be no discernible improvement or deterioration to the existing landscape character of the Plateau Moorland LLCA.
- 6.7.11 Within 5 km radius of the Proposed Development, the magnitude of change within the landscape would increase to medium, with a medium susceptibility to the Proposed Development, the landscape effects within the LLCA within 5 km radius would be Minor – Moderate (in areas of low landscape sensitivity) increasing to Moderate (in areas of medium sensitivity), which would result in a direct, adverse significant and non significant landscape effects.
- 6.7.12 The extent of wind farm development, including farm scale single turbines, has a very strong influence locally on the landscape of the Plateau Moorland LLCA. The following wind farms, and individual wind turbines, are located within the Plateau Moorland LLCA:
- Operational Torrance 1 & II;
  - Operational Southrigg I (comprising of 1 turbine);
  - Southrigg II (consented, comprising of 1 turbine);
  - Operational Wester Hasockrigg;
  - Consented Forrestfield Wind Turbine;
  - Consented Brownhill Farm
  - West Benhar Wind Farm (under construction);
  - Operational Nether Bracco Farm;
  - Application Dewshill Wind Farm;
  - Consented Greengairs East Wind Farm;
  - Operations Greendykeside Wind Farm;
  - Operational Easter Glentore Wind Turbine;
  - Consented Hartwood Wind Farm Resubmission; and
  - Operational Black Law Wind Farm Extension 2.

6.7.13 The cumulative magnitude of change, comprising of in-combination cumulative magnitude of change with existing wind farm developments (arising from the Proposed Development within the LLCA) would be small. Within a LLCA of low to medium sensitivity, this would result in a Minor – Moderate, cumulative, indirect, and non significant landscape effect for the Plateau Moorland LLCA. Locally, there may be a medium magnitude to change, in proximity to existing wind farm development, which would result in a Moderate, direct and indirect, and significant cumulative landscape effect on the Plateau Moorland LLCA, within a 5 km radius of the Proposed Development.

Upper Almond Valley LLCA 6

6.7.14 The Upper Almond Valley LLCA borders the host LLCA and the Site to the south east, and extends 15 km east from Greenrigg, Whitburn to Livingstone in the east, along the River Almond Valley.

*"Distinctive west-east grain of the gently undulating landscape as a number of small burns gradually fall from the moorland into the River Almond before it continues eastwards through Livingston and beyond to the Forth"<sup>28</sup>*

6.7.15 Assessment for the effects on landscape character is a combination of a review of the conclusions presented in the West Lothian Council Landscape Character Assessment, and professional judgement from field observations.

6.7.16 The Upper Almond Valley LLCA has been assessed as having:

- Landscape value – the area within the Detailed Study Area is an undesignated landscape. However, there is some value of the local landscape, especially Polkemmet Country Park, and broadleaf woodland within the LLCA. The Upper Almond Valley LLCA is considered to be of a medium landscape value;
- Landscape Scale – a medium scale landscape, with a combination of pastoral and arable field units;
- Landscape quality – the landscape quality within the LLCA varies, with areas of well managed farmland with an overall positive landscape quality within the LLCA, associated with the Country Park and woodland areas. There are some areas of alteration/degradation/erosion of features along the M8 and A705 and A71 road corridors and with the Five Sister oilshale bing near Westwood. Overall, the LLCA is considered to be of a low - medium landscape quality;
- Landscape Susceptibility – given the presence of major roads, and of existing wind turbines within neighbouring LLCAs, there is a medium capacity within the Upper Almond Valley LLCA, which would not detract from the overall existing landscape quality, features and characteristics of the LLCA, nor adversely affect the setting of historic or distinctive features within the LLCA. This results in a medium susceptibility to the Proposed Development taking account of the existing character and quality of the landscape;
- Landscape sensitivity – This is an undesignated landscape, but the Upper Almond Valley LLCA borrows the landscape characteristics of the urban fringe / settlement / motorway corridor to the north and west and east. Therefore, the LLCA is considered to be of a low landscape sensitivity overall, with pockets of medium sensitivity; and
- Cumulative Landscape Sensitivity – The landscape of the Upper Almond Valley LLCA is considered as being of a medium cumulative sensitivity to additional wind

<sup>28</sup> West Lothian Council, Landscape Character Classification, West Lothian Local Development Plan: background paper, August 2014, page 19. Available on line at: <https://www.westlothian.gov.uk/media/4837/West-Lothian-Landscape-Character-Classification/pdf/WL-LandscapeCharacterClassificationAugust2014.pdf?m=635458774692900000> (Last accessed 18.12.22)

turbines, and especially taller wind turbines which would be a new introduction to the LLCA.

- 6.7.17 The magnitude of change arising from the Proposed Development within the Upper Almond Valley LLCA would be small for the LLCA overall, and medium within 5 km of the Proposed Development, given the extent of potential visibility of the Proposed Development and proximity of the Proposed Development to the Upper Almond LLCA. There would be limited change to aesthetic and / or perceptual attributes of the landscape character and any indirect landscape changes would occur across a very limited geographical area within the LLCA given the number of existing wind farms and turbines, and proposed, neighbouring the LLCA.
- 6.7.18 There are no existing and consented wind farms in this LLCA. This results in a high susceptibility to the Proposed Development. The landscape would be able to accommodate the Proposed Development taking account of the existing character and quality of the neighbouring landscape to the north and south, and the proximity of existing and consented wind farm development on the boundary of the LLCA to the north and west.
- 6.7.19 The landscape effects within the LLCA overall would be Negligible - Minor, indirect, cumulative, and adverse and non significant landscape effect, and there would be no discernible improvement or deterioration to the existing landscape character of the Upper Almond LLCA overall. However, within 5 km radius of the Proposed Development, there would be a medium magnitude of change, within a landscape of low – medium sensitivity, which would result in a Moderate, significant, adverse landscape effect within the Upper Almond LLCA.
- 6.7.20 There would be no cumulative landscape effects within the Upper Almond Valley LLCA.

#### Polkemmet Moor LLCA 8

- 6.7.21 The Polkemmet Moor LLCA borders the host LLCA and the Site to the south at Harthill, and extends south across Polkemmet Moor to Faulhouse, 5 km south of the Proposed Development.

*"A relatively flat plateau with a central west-east ridge of moorland and extensive coniferous plantations gently falling northwards from the Fauldhouse Hills at 290m AOD to the River Almond at around 190m AOD, and falling more steeply southwards down to the Breich Water at around 210m"<sup>29</sup>*

- 6.7.22 Assessment for the effects on landscape character is a combination of a review of the conclusions presented in the West Lothian Council Landscape Character Assessment, and professional judgement from field observations.
- 6.7.23 The Polkemmet Moor LLCA has been assessed as having:
- Landscape value – the area within the Detailed Study Area is an undesignated landscape. However, there is some value of the local landscape, especially Polkemmet Country Park, and broadleaf woodland within the LLCA. The Polkemmet Moor LLCA is considered to be of a low – medium landscape value;
  - Landscape Scale – a medium to large scale landscape, dominated by commercial forestry and evidence of the former open cast coal mining in the area, with coal bing, artificial mounds, former rail lines, and disused mines<sup>30</sup>;

<sup>29</sup> West Lothian Council, Landscape Character Classification, West Lothian Local Development Plan: background paper, August 2014, page 21 - 22. Available on line at: <https://www.westlothian.gov.uk/media/4837/West-Lothian-Landscape-Character-Classification/pdf/WL-LandscapeCharacterClassificationAugust2014.pdf?m=635458774692900000> (Last accessed 18.12.22)

<sup>30</sup> Ibid 28, page 22

- Landscape quality – Overall, the LLCA is considered to be of a low landscape quality, in a restored landscape with remains of former coal mining and existing commercial forestry;
  - Landscape Susceptibility – given the absence major roads, and of existing wind turbines within neighbouring LLCAs, there is a medium capacity within the Polkemmet Moor LLCA, which would not detract from the overall existing landscape quality, features and characteristics of the LLCA. This results in a medium susceptibility to the Proposed Development taking account of the existing character and low quality of the landscape;
  - Landscape sensitivity – The Polkemmet Moor LLCA is considered to be of a low landscape sensitivity overall; and
  - Cumulative Landscape Sensitivity – The landscape of the Polkemmet Moor LLCA is considered as being of a low cumulative sensitivity to additional wind turbines, and especially taller wind turbines.
- 6.7.24 The magnitude of change arising from the Proposed Development within the Polkemmet Moor LLCA would be small for the LLCA overall, given the limited potential visibility of the Proposed Development within the Polkemmet Moor LLCA due to the extensive commercial coniferous forestry which reduces the intervisibility of the Proposed Development within the Polkemmet Moor LLCA to the south. There would be limited change to aesthetic and / or perceptual attributes of the landscape character and any indirect landscape changes would occur across a very limited geographical area within the LLCA given the number of existing wind farms and turbines, and proposed, neighbouring the LLCA to the west and north.
- 6.7.25 There are no existing and consented wind farms in this LLCA. This results in a high susceptibility to the Proposed Development. The landscape would be able to accommodate the Proposed Development taking account of the proximity of existing and consented wind farm development on the boundary of the LLCA immediately to the west of the Polkemmet Moor LLCA to the west, and also to the north and south west and south east.
- 6.7.26 The landscape effects within the LLCA overall would be Minor, indirect, adverse and non significant landscape effect, and there would be no discernible improvement or deterioration to the existing landscape character of the Polkemmet Moor LLCA overall.
- 6.7.27 There would be no cumulative landscape effects within the Polkemmet Moor LLCA.
- Armadale & Bathgate Plateau – Lowland Plateaux LLCA 9
- 6.7.28 The Armadale & Bathgate Plateau LLCA borders the host LLCA and the Site to the north 1 km south of Blackridge, and extends east towards Armadale, within 5 km north east and east of the Proposed Development.
- "A predominantly rural area between Armadale, Bathgate, Blackburn and Whitburn, but with significant modern intrusions"<sup>31</sup>*
- 6.7.29 Assessment for the effects on landscape character is a combination of a review of the conclusions presented in the West Lothian Council Landscape Character Assessment, and professional judgement from field observations.

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<sup>31</sup> West Lothian Council, Landscape Character Classification, West Lothian Local Development Plan: background paper, August 2014, page 22 - 23. Available on line at: <https://www.westlothian.gov.uk/media/4837/West-Lothian-Landscape-Character-Classification/pdf/WL-LandscapeCharacterClassificationAugust2014.pdf?m=635458774692900000> (Last accessed 18.12.22)

- 6.7.30 The Armadale & Bathgate Plateau LLCA has been assessed as having:
- Landscape value – the area within the Detailed Study Area is an undesignated landscape. However, there is some value of the local landscape, especially woodland policies with broadleaf woodland within the LLCA. The Armadale & Bathgate Plateau LLCA is considered to be of a low – medium landscape value;
  - Landscape Scale – a medium scale landscape, predominantly rural, with a distinctive, exposed plateau – bog like character of open rolling moorland<sup>32</sup>;
  - Landscape quality – Overall, the LLCA is considered to be of a low - medium landscape quality, with influence of overhead pylons and communications masts which detract from the landscape character;
  - Landscape Susceptibility – given the limited influence of major roads, and of existing wind turbines within neighbouring LLCAs, there is a medium capacity within the Armadale & Bathgate Plateau LLCA, which would not detract from the overall existing landscape quality, features and characteristics of the LLCA. This results in a medium susceptibility to the Proposed Development taking account of the existing character and low - medium quality of the landscape;
  - Landscape sensitivity – The Armadale & Bathgate Plateau LLCA is considered to be of a low – medium landscape sensitivity overall; and
  - Cumulative Landscape Sensitivity – The landscape of the Armadale & Bathgate Plateau LLCA is considered as being of a low - medium cumulative sensitivity to additional wind turbines, and especially taller wind turbines.
- 6.7.31 The magnitude of change arising from the Proposed Development within the Armadale & Bathgate Plateau LLCA would be small for the LLCA overall, given the limited potential visibility of the Proposed Development within the Armadale & Bathgate Plateau LLCA due to the extensive commercial forestry areas and the urban fringe environment around Armadale which reduces the intervisibility of the Proposed Development within the Armadale & Bathgate Plateau LLCA to the south, south west and west. The magnitude of change would increase to medium within 2 - 5 km of the Proposed Development, given the extent of potential visibility of the Proposed Development and proximity of the Proposed Development to the Armadale & Bathgate Plateau LLCA. There would be limited change to aesthetic and / or perceptual attributes of the landscape character and any indirect landscape changes would occur across a very limited geographical area within the LLCA given the number of existing and proposed wind farms and turbines, neighbouring the LLCA.
- 6.7.32 There are no existing and consented wind farms in this LLCA. This results in a high susceptibility to the Proposed Development. The landscape would be able to accommodate the Proposed Development taking account of the proximity of existing and consented wind farm development on the boundary of the LLCA.
- 6.7.33 The landscape effects within the LLCA overall would be Negligible – Minor to Minor, indirect, cumulative, and adverse and non significant landscape effect, and there would be no discernible improvement or deterioration to the existing landscape character of the Armadale & Bathgate Plateau LLCA overall. However, within 2 - 5 km radius of the Proposed Development, there would be a medium magnitude of change, within a landscape of low – medium sensitivity, which would result in a Moderate, significant, adverse landscape effect within the Armadale & Bathgate Plateau LLCA.
- 6.7.34 There would be no cumulative landscape effects within the Armadale & Bathgate Plateau LLCA.

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<sup>32</sup> Ibid 28, page 22

### Avonbridge to Armadale Plateau Edge – Lowland Plateaux LLCA 11

6.7.35 The Avonbridge to Armadale Plateau LLCA lies approximately 1 km north of the Site, and includes the settlement Blackridge, and extends west and east along the A82 corridor, within 1 - 5 km of the Proposed Development.

*"Gently rolling eastern edge of the higher Slamannan Plateau which covers an extensive area to the west within Falkirk district.... The Unit represents a transition between arable farmland on the lower ground, to pasture and up to rough hill grazing on higher ground."*<sup>33</sup>

6.7.36 Assessment for the effects on landscape character is a combination of a review of the conclusions presented in the West Lothian Council Landscape Character Assessment, and professional judgement from field observations.

6.7.37 The Avonbridge to Armadale Plateau LLCA has been assessed as having:

- Landscape value – the area within the Detailed Study Area is an undesignated landscape. However, there is some value of the local landscape, especially woodland policies with broadleaf woodland within the LLCA. The Avonbridge to Armadale Plateau LLCA is considered to be of a low – medium landscape value;
- Landscape Scale – a small scale landscape, predominantly rural, with a distinctive, exposed plateau – bog like character of open rolling moorland<sup>34</sup>;
- Landscape quality – Overall, the LLCA is considered to be of a low - medium landscape quality, with influence of *"overhead lines and electricity pylons, small disused quarries and an active open cast coal mine north of Armadale (Woodend Colliery). The Gowanbank gas compressor station is relatively well screened"*<sup>35</sup> which detract from the landscape character;
- Landscape Susceptibility – given the limited influence of major roads, and of existing wind turbines within neighbouring LLCAs, there is a medium capacity within the Avonbridge to Armadale Plateau LLCA, which would not detract from the overall existing landscape quality, features and characteristics of the LLCA. This results in a medium susceptibility to the Proposed Development taking account of the existing character and low - medium quality of the landscape;
- Landscape sensitivity – The Avonbridge to Armadale Plateau LLCA is considered to be of a low – medium landscape sensitivity overall; and
- Cumulative Landscape Sensitivity – The landscape of the Avonbridge to Armadale Plateau LLCA is considered as being of a low - medium cumulative sensitivity to additional wind turbines, and especially taller wind turbines.

<sup>33</sup> West Lothian Council, Landscape Character Classification, West Lothian Local Development Plan: background paper, August 2014, page 24. Available on line at: <https://www.westlothian.gov.uk/media/4837/West-Lothian-Landscape-Character-Classification/pdf/WL-LandscapeCharacterClassificationAugust2014.pdf?m=635458774692900000> (Last accessed 18.12.22)

<sup>34</sup> Ibid 28, page 22

<sup>35</sup> Ibid 28, page 24

- 6.7.38 The magnitude of change arising from the Proposed Development within the Avonbridge to Armadale Plateau LLCA would be small for the LLCA overall, given the limited potential visibility of the Proposed Development within the Avonbridge to Armadale Plateau LLCA beyond 3 km distance of the Site. The magnitude of change would increase to medium within 1 - 3 km of the Proposed Development, given the extent of potential visibility of the Proposed Development along the A82 road corridor with open views to the south. There would be limited change to aesthetic and / or perceptual attributes of the landscape character and any indirect landscape changes would occur across a very limited geographical area within the LLCA given the number of existing wind farms and turbines, and proposed, neighbouring the LLCA to the north and south of the LLCA.
- 6.7.39 There are no existing and consented wind farms in this LLCA. This results in a high susceptibility to the Proposed Development. The landscape would be able to accommodate the Proposed Development taking account of the proximity of existing and consented wind farm development on the boundary of the LLCA.
- 6.7.40 The landscape effects within the LLCA overall would be Negligible – Minor to Minor, indirect, cumulative, and adverse and non significant landscape effect, and there would be no discernible improvement or deterioration to the existing landscape character of the Armadale & Bathgate Plateau LLCA overall. However, within 1 - 3 km radius of the Proposed Development, there would be a medium magnitude of change, within a landscape of low – medium sensitivity, which would result in a Minor to Moderate, non significant and significant, adverse landscape effect within the Avonbridge to Armadale Plateau LLCA.
- 6.7.41 There would be no cumulative landscape effects within the Avonbridge to Armadale Plateau LLCA.

#### Landscape Character of the Site

- 6.7.42 The Proposed Development would be sited with each turbine located within commercial coniferous forestry and open grazing land, directly east of the Existing Torrance Wind Farm I & II, and north of the Harthill Services within the M8 corridor. The fields are bounded by broken hedgerows and isolated hedgerow trees. As a former colliery site, the landscape lacks time-depth in its character, and the broadleaf and commercial woodland, within and around the perimeter of the Site, is characteristic of colliery restoration schemes, in species and the large scale field units in the restored landscape profile.
- 6.7.43 The land cover within the Site where the Proposed Development is currently in use grassland for rough grazing, and commercial forestry plantation.
- 6.7.44 The landscape character of the Site has been assessed as having:
- Landscape value – the area within the detailed study area is an undesignated landscape. The landscape of the site is considered to be of a low landscape value;
  - Landscape quality – the rough grazed arable land and commercial forestry is considered to be of a low - medium landscape quality;
  - Capacity to change – given the presence of existing wind turbines, and consented Southrigg Turbine, neighbouring the site, there is a high capacity for the landscape character of the Site to accommodate the Proposed Development, which would not detract from the overall existing landscape character, landscape quality, features and characteristics of the site, shared by the surrounding famed lowland plain, and the visually open nature of the site. This results in a low susceptibility to the development taking account of the existing character and quality of the landscape; and
  - Landscape sensitivity – this is an undesignated landscape, and the Site is considered to be of a low landscape sensitivity overall.

- 6.7.45 The magnitude of change arising from the Proposed Development within the Site would be large where there would be the addition of large scale landscape elements within the Site.
- 6.7.46 Indirect landscape effects of the existing wind turbines are already evident in the landscape character of the Site, and the addition of the Proposed Development would reflect the key characteristics of the landscape character of the Site, and the surrounding Plateau Moorland LLCA within which the Site is located.
- 6.7.47 There would be little, or no, undue consequences for the maintenance of the baseline situation and/or achievement of relevant planning policies / strategies given the presence of the existing wind farms nearby. This results in a low susceptibility to the development. The landscape character of the Site would be able to accommodate the Proposed Development, taking account of the existing character and quality of the landscape.
- 6.7.48 The Proposed Development, as a solus development, would result in Moderate, significant, direct, adverse landscape effects, and there would be limited improvement to the existing landscape character of the Site as a result of the proposed planting and biodiversity management objectives in the scheme design.
- 6.7.49 Cumulatively, alongside the existing wind farm development within the local landscape the Proposed Development would bring about a large magnitude of change on the landscape character of the Site, which would result in a Moderate, significant, direct, adverse cumulative landscape effect.
- 6.7.50 These effects, both individually and cumulatively as a result of the Proposed Development, are significant in the context of the EIA Regulations.

#### **Summary of Landscape Effects**

- 6.7.51 In summary:
- The Proposed Development, as a solus development, would result in Moderate, significant, direct, adverse landscape effects, and there would be no discernible improvement or deterioration to the existing landscape character of the Site. Cumulatively, alongside the Existing Torrance Wind Farm I & II, the Proposed Development would bring about a large magnitude of change on the landscape character of the Site, which would result in a Moderate, significant, direct, adverse cumulative landscape effect, and there would be no discernible improvement or deterioration to the existing landscape character of the Site as a result.
  - The landscape effects within the Plateau Moorland LLCA, both individually and cumulatively as a result of the Proposed Development, are significant in the context of the EIA Regulations in direct landscape effects only. Landscape effects across the LLCA as a whole reduce to negligible – minor, indirect, long term, adverse and not significant overall.
  - The landscape effects within the Upper Almond Valley LLCA 6, both individually and cumulatively as a result of the Proposed Development, are both significant within 5 km radius) and not significant in the LLCA overall, in the context of the EIA Regulations;
  - The landscape effects within the Polkemmet Moor LLCA, both individually and cumulatively as a result of the Proposed Development, are not significant in the context of the EIA Regulations;
  - The landscape effects within the Armadale & Bathgate Plateau – Lowland Plateaux LLCA 9 both individually and cumulatively as a result of the Proposed Development, are not significant in the context of the EIA Regulations; and
  - The landscape effects within the Avonbridge to Armadale Plateau Edge – Lowland Plateaux LLCA 11 both individually and cumulatively as a result of the Proposed

Development, are not significant in the context of the EIA Regulations both individually and cumulatively as a result of the Proposed Development, are not significant in the context of the EIA Regulations

- 6.7.52 The predicted landscape effects on the local landscape character areas within the Detailed Study area are significant within 5 km distance of the Site and reducing to non significant 5 – 15 km of the Site.

## **6.8 Assessment of Effects on Visual Amenity**

- 6.8.1 Visual effects are concerned wholly with the effect of the Proposed Development on views, and the general visual amenity as experienced by people.
- 6.8.2 Visual effects are assessed by considering the sensitivity of the receptor (people) against the proposed magnitude of change to determine a level of visual effect. The acceptability of this effect largely relates to the activity and the experience of the viewer and the visual composition, character, context, and the overall ability of the landscape in that view to accommodate the Proposed Development in design terms. Visual effects are assessed in relation to the agreed viewpoints, properties and settlements, tourist and recreational destinations including tourist routes (A82 and the NCR 75 north of the Site) as well as main transport routes.

### **Viewpoint Assessment**

- 6.8.3 An appraisal of visual effects was undertaken from 22 viewpoints, which were selected to replicate those viewpoints from the previous landscape and visual assessments, and the viewpoints represent typical views from key receptors at varying distances and orientations from the site. The selected viewpoints were agreed in consultation with the Council.
- 6.8.4 From each viewpoint the following information is provided, and presented in accordance with Landscape Institute and NatureScot Guidance (as detailed in Section 6.2.2).
- 6.8.5 It is recognised that different receptors would appreciate the landscape in many different ways, depending on whether they live in, work in, or are holidaying in the area and how they are travelling through e.g. on road, foot, water etc. Those on holiday would experience the landscape in its broader sense forming an opinion on scenic quality based on first impression and would appreciate the landscape for its distinctiveness at a high level. Conversely visitors may cast a more critical eye over the introduction of visual detractors in the landscape.
- 6.8.6 Those living within, or travelling through, the landscape of the Detailed Study Area on a regular basis may appreciate it beyond the perception of a visitor and may appreciate familiarity of landscape and views, based on their experience of viewing it in a certain way, over time and in its present state without intervention. Therefore, those who notice change within the landscape may be more acutely affected by change irrelevant of the scale of the Proposed Development. There may also be a different appreciation for change where such change for instance brings social or economic benefits and as such it is difficult to interpret how such changes would be interpreted by various users other than as set out in the methodology in Appendix 6A.
- 6.8.7 The viewpoint locations are shown on Figure 6.22. Photographs and photomontages of the existing baseline and the Proposed Development from each viewpoint, and are shown in Viewpoints 1 – 18, Figures 6.23 to 6.40.
- 6.8.8 The Viewpoint Analysis is detailed in Table 6.11 below.

### ***Table 6.11: Viewpoint Analysis***

No	VP Name	Distance to Nearest Turbine	Elevation (AOD)	Receptor Groups	LCT & LLCA	Value, Sensitivity & Susceptibility	Magnitude of Change	Level of Visual Effect
1	Hill Farm	0.29 km	218 m	Residential property and local road users. Users of the Core Path NL/212/1	Farmed Lowland Plain - Glasgow and Clyde Valley LCT (213). Plateau Moorland (7) LLCA	Low (local road) & High (residential receptors and core path users) Value, Susceptibility and Sensitivity	Large	<b>Moderate (road users) and Major (residential receptors and core path users), adverse, cumulative and significant visual effect.</b>
2	Edinburgh Road (B7066), Eastfield	0.53 km	203 m	Local road users, residential properties	Farmed Lowland Plain - Glasgow and Clyde Valley LCT (213). Plateau Moorland (7) LLCA	Low (road users) & High (residential receptors) Value Low (road users) & High (residential receptors) Susceptibility Low & High Sensitivity	Large	<u>Road Users</u> Minor – Moderate, adverse, cumulative and a non significant visual effect. <u>Residential Receptors</u> <b>Major</b> , adverse, cumulative and <b>significant</b> visual effect.
3	Recreational area near Baird Terrace, Eastfield	0.59 km	222 m	Residential properties, recreational users of the park	Farmed Lowland Plain - Glasgow and Clyde Valley LCT (213). Plateau	High (residential and recreational receptors in public open	Large	<b>Major (residential receptors and recreational receptors), adverse,</b>

					Moorland (7) LLCA	space) Value, Susceptibility and Sensitivity		<b>cumulative and significant visual effect.</b>
4	Dunn Terrace, Harthill	0.76 km	200 m	Residential properties, and recreational receptors within the public open space in Harthill.	Farmed Lowland Plain - Glasgow and Clyde Valley LCT (213). Plateau Moorland (7) LLCA	Medium Value High Susceptibility and High Sensitivity	Large	<b>Major, adverse, cumulative and significant visual effect.</b>
5	Greenrigg	0.86 km	197 m	Residential properties, local road users and school pupils and staff	Lowland Plateau – Lothians LCT (273). Upper Almond Valley (6) LLCA	High (residential receptors) Value, Susceptibility and Sensitivity	Large	<b>Major (residential receptors), adverse, cumulative and significant visual effect.</b>
6	Harthill Road at Blairmuckhill Road Junction	1.15km	199 m	Road users of the B718 (Harthill Road), recreational users of the park area, and residential properties on Harthill Road.	The boundary of the Farmed Lowland Plain - Glasgow and Clyde Valley LCT (213) & Lowland Plateau – Lothians LCT (273). Plateau Moorland (7) LLCA	Low Value <u>Road Users</u> Medium Susceptibility and Medium Sensitivity <u>Residential Properties</u> High Susceptibility and High Sensitivity	Large	<u>Road Users</u> <b>Moderate – Major, adverse, cumulative and significant visual effect.</b> <u>Residential Properties</u> <b>Major, adverse, cumulative and significant visual effect.</b>

7	Polkemmet Country Park	1.55 km	193 m	Recreational users of the country park	Lowland Plateau – Lothians LCT (273). Upper Almond Valley (6) LLCA	High (recreational receptors) Value, Susceptibility and Sensitivity	Large	<b>Major (recreational receptors), adverse, cumulative and significant visual effect.</b>
8	Main Street, Blackridge	1.95 km	188 m	Residential properties, local road users	Lowland Plateau – Lothians LCT (273). Blackridge Heights (12) LLCA	Low (road users) & High (residential receptors) Value Low (road users) & High (residential receptors) Susceptibility Low & High Sensitivity	Large	<b>Major (residential receptors), adverse, cumulative and significant visual effect.</b>
9	Hillside Drive, Blackridge	1.96 km	196 m	Residential properties, local road users	Lowland Plateau – Lothians LCT (273). Blackridge Heights (12) LLCA	High (residential receptors) Value, Susceptibility and Sensitivity	Large	<b>Major (residential receptors), adverse, cumulative and significant visual effect.</b>
10	B7057 at J5 of the M8 Motorway	2.31 km	250 m	Road users at overbridge of the M8	Farmed Lowland Plain - Glasgow and Clyde Valley LCT (213). Plateau Moorland (7) LLCA	Low Value Low Susceptibility Low Sensitivity	Large	Minor - Moderate, adverse, cumulative and a non significant visual effect.

11	Properties at Polkemmet, Whitburn	2.35 km	216 m	Residential properties on the western boundary of Whitburn	Lowland Plateau – Lothians LCT (273). Upper Almond Valley (6) LLCA	Medium Value High Susceptibility and High Sensitivity	Large	<b>Major, adverse, cumulative and significant visual effect.</b>
12	B718 from Harthill to Shotts, at Brownhill Farm	2.46 km	238 m	Local road users, near farm property. Users of the Core Path NL/216/1.	Farmed Lowland Plain - Glasgow and Clyde Valley LCT (213). Plateau Moorland (7) LLCA	Low (road users) & High (core path users) Value Low (road users) & High (core path users) Susceptibility Low & High Sensitivity	Medium	<u>Road Users</u> Minor, adverse, cumulative and non significant visual effects <u>Core Path Users</u> , <b>Moderate – Major</b> , adverse, cumulative and <b>significant</b> visual effect.
13	Overbridge at Junction 4A, M8 motorway	2.73 km	177 m	Road users	Lowland Plateau – Lothians LCT (273). Upper Almond Valley (6) LLCA	Low (road users) Value, Susceptibility and Sensitivity	Medium	Minor, adverse, cumulative and a non significant visual effect.
14	Armadale, western edge of settlement	3.29 km	193 m	Local road users, residential properties	Lowland Plateau (273) LCT. Armadale / Bathgate Plateau (9) LLCA	Low (road users) & High (residential receptors) Value Low (road users) & High (residential receptors) Susceptibility	Medium	<u>Road Users</u> Minor, adverse, cumulative and anon significant visual effect. <u>Residential Receptors</u> <b>Moderate – Major</b>

						Low & High Sensitivity		adverse, cumulative and <b>significant</b> visual effect.
15	Forrest Road and Benfoot	3.67 km	253 m	Local road users	Farmed Lowland Plain - Glasgow and Clyde Valley LCT (213). Plateau Moorland (7) LLCA	Low value Low Susceptibility Medium Sensitivity	Medium	<b>Moderate, adverse, cumulative and significant visual effect.</b>
16	Forest Road, near Forrestfield village	4.42 km	220 m	Local road users	Farmed Lowland Plain - Glasgow and Clyde Valley LCT (213). Plateau Moorland (7) LLCA	Low Value Low Susceptibility Low Sensitivity	Medium	Minor, adverse, cumulative and a non significant visual effect.
17	Lochside Road, Black Loch	6.31 km	225 m	Local road users on the B825 road.	Lowland Plateau – Central (151) LCT. Glasdmuir / Woodmuir / Gamilty Fringe LLCA	Low Value Low Susceptibility Low Sensitivity	Medium	Minor, adverse, cumulative and a non significant visual effect.
18	Hillend Reservoir	7.11 km	197 m	Recreational users of the Cycle Route 75, North Calder Heritage Trail, and visitors to the Hillend Reservoir	Farmed Lowland Plain - Glasgow and Clyde Valley LCT (213). Plateau Moorland (7) LLCA	Medium Value Medium Susceptibility High Sensitivity	Negligible	Negligible, adverse, cumulative and a non significant visual effect.

19	Junction of Drumcross Road and Glenmavis Drive, Bathgate	7.94 km	184 m	Local road users and residential receptors	The boundary of the Lowland Hills and Ridges – Lothians (272) LCT & Lowland Plateau (273) LCT and Bathgate Hills (5) LLCA	High Value High Susceptibility High Sensitivity	Negligible	Negligible, adverse, cumulative and a non significant visual effect.
20	The Knock	9.95 km	313 m	Recreational receptors at a promoted viewpoint location and a West Lothian Local Geodiversity Site	Lowland Hills & Ridges – Lothians LCT (272). Bathgate Hills (5) LLCA	Medium Value Medium Susceptibility Medium Sensitivity	Small	Minor, adverse, cumulative and a non significant visual effect.
21	Cockleroy	11.99 km	283 m	Recreational receptors at local hill summit	Lowland Hills and Ridges – Lothians (272) LCT. Bathgate Hills (5) LLCA	Medium Value High Susceptibility High Sensitivity	Small	Minor - Moderate, adverse, cumulative and a non significant visual effect.
22	Viewpoint on Tak-Ma-Doon Road, Kilsyth Hills	22.72 km	321 m	Recreational receptors at promoted viewpoint	Rugged Mountain Hills (216) LCT	Medium Value High Susceptibility High Sensitivity	Negligible	Negligible, adverse, cumulative and a non significant visual effect.

### Overview of Visual Effects during Operation

- 6.8.9 Post construction and during operation, the appearance of the Proposed Development will recover a calmer visual character with negligible levels of maintenance activity visible on site from the nearest visual receptors, and no significant visual effects are likely to result from the associated site infrastructure.
- 6.8.10 The visibility of the turbines will extend over the Detailed Study Area, affecting a range of visual receptors and the viewpoint analysis indicates that potentially significant effects will occur within approximately 3.8 km, receding in magnitude (small to negligible) and not significant beyond this distance. The visual assessment has focused on those areas where potentially significant visual effects are most likely, in particular those receptors within approximately 15 km of the Proposed Development.

### **Visual Effects on Views from Residential Properties & Settlements**

#### Residential Properties

- 6.8.11 Visual assessment of residential properties within closest proximity of the application site (2 km) has been undertaken. All of the residents within and visitors to settlements and residential properties are considered to be of high sensitivity in accordance with the GLVIA3. The findings of the residential assessment are described in detail in Appendix 6D, and wireline visualisation from each property presented in Figures 6.50 – 6.71 in Volume 3.
- 6.8.12 22 properties have been assessed within 2 km via a combination of a site visit to the closest public location in the vicinity of that property (usually the highway), desk-based assessment, the production of wireframes and the use of aerial and digital mapping.
- 6.8.13 Based on the viewpoint assessment, significant visual effects would generally occur within distances of approximately 3.8 km from the nearest turbine where there are clear views of the existing wind farm and the Proposed Development. Whilst it is not practical to assess all residential properties within this zone or the wider study area, those within 2 km of the Site, which are likely to be the most affected have been assessed to give an indication of the greatest visual effects likely to occur.
- 6.8.14 The residential assessment identifies that the following properties (within 0.25 to 1.89 km radius of the turbines), would experience a significant visual effect, this is either a significant visual effect from the property itself, or from the access / egress to the Site:
- R2 Hill Farm
  - R3 Loan Farm
  - R4 Netherton Farm
  - R5 Torrance Farm
  - R6 Knowehead
  - R8 Blairmuckhole
  - R11 Bogend Farm
  - R12 Standhill Farm
  - R13 School House
  - R14 Northrigg Farm
  - R15 Southrigg Farm
  - R16 Couch
  - R18 Hirst Road (East)
  - R19 Hirst Road (West)
  - R21 Property at Edencroft Equestion Centre

- R22 Old Miners Hall, east of The School House  
Whilst it is accepted that a number of properties would experience a significant change to a view or views, considering the grouping and composition of the Proposed Development it is considered that one of these properties would suffer unduly from negative visual effects such as visual over-dominance, over-bearance, which collectively may affect the overall visual amenity, and associated living standards arising from the Proposed Development as an individual development, and also cumulatively with nearby operational, consented and application wind farm schemes. This property is Hill Farm (R2).

#### Settlements

- 6.8.15 There are four settlements within 2 km radius of the Proposed Development. Within the surrounding landscape are groups of properties which have been included in the residential assessment above.
- 6.8.16 The assessment of likely visual effects likely to be experienced from settlements includes consideration of residential areas, the public realm, and public open spaces within the settlements that would be frequented by people. The sensitivity of residential receptors within settlement is considered to be high, and also other receptors given the high proportion of recreational visitors in this location.
- 6.8.17 Those settlements within 15 km of the Proposed Development, and included within the scope of the assessment, have been illustrated in Figure 6.15 and assessed and detailed in Table 6.9 below.

**Table 6.9: Visual Effects on Settlements**

Settlement	Description of Effect
Harthill (refer to VP 4, Figure 6.30)	<p>Nearest proposed turbine: Turbine 2 – 0.48 km Nearest to existing turbine: T2, Torrance II - 1.05 km</p> <p>Description: Harthill is a former mining village, 0.48km south of the Proposed Development, adjacent to the M8 road, and on land rising to the south from 179 – 197m AOD. All of the village lies within the ZTV for the Proposed Development. There are potential views of the turbine towers and blades of the Proposed Development from the village, situated behind the tree / woodland cover on the site and adjacent to the M8 motorway. Some views are screened by built development in the village, and those properties to the north of the village, at a lower elevation and adjacent to the motorway would experience some screening of the turbines, or partial views, due to the woodland cover around the Harthill Services and along Howburn Road and Miller Street in Harthill. However, from residential roads, public open space / recreational areas and north facing properties within Harthill there would be clear and open views of the proposed turbines at a lower or similar elevation to the properties, and at 200m blade tip height, the turbines would be visible over the settlement between 0.48 and 1.2km distance.</p> <p>Cumulative Proposed Developments: The operational wind farms which are visible from Harthill within 5 km radius include: Torrance I &amp; II Wind Farms and Southrigg turbine to the east, West Benhar to the south west and Drumduff and Burnhead Wind Farms to the north. There are three consented wind farm developments at Southrigg II, Forrestfield and Drumelzie.</p> <p>There are a large number of wind farm developments within the wider landscape around Harthill, which appear in medium to long range views. But those named above are the most visible within the local landscape.</p> <p>Magnitude of Change: High Level of Effect: Major</p> <p>The nature of these effects would be major, long-term, cumulative and adverse, which would be significant in the context of the EIA Regulations.</p>

Settlement	Description of Effect
	<p>Considering the proximity of the turbines to this settlement at approximately 480m (at the closest point), the horizontal extent of the array of turbines west to east immediately to the north of the settlement, and the blade tip height of the turbines 211 - 219 m above the properties when considering the terrain and position and orientation of the low lying properties to the north of the village and north of the B7066 road and north facing properties along the B7066 road where there are open views to the north, the significant visual effects could affect the living standards of a limited number of properties within Harthill, when judged objectively and in the public interest.</p> <p>The significant visual effects would not affect the living standards of the village overall, when judged objectively and in the public interest.</p>
<p>Eastfield (refer to VP2 &amp; 3, Figure 6.28 and 6.30)</p>	<p>Nearest proposed turbine: Turbine 4 – 0.59 km Nearest to existing turbine: T2, Torrance II – 0.75 km</p> <p>Description: Eastfield is a former mining village, 0.5km south of the Proposed Development, adjacent to Harthill (to the west) and south of the M8 road, on land rising to the south from 201 – 225m AOD. All of the village lies within the ZTV for the Proposed Development. There are potential views of the turbine towers and blades of the Proposed Development from the village. From residential roads, public open space / recreational areas, and north facing properties within Eastfield, there would be clear and open views of the proposed turbines at a lower or similar elevation to the properties, and at 200m blade tip height, the turbines would be visible over the settlement between 0.51 and 1.8km distance.</p> <p>Cumulative Proposed Developments: The operational wind farms which are visible from Eastfield within 5 km radius include: Torrance I &amp; II Wind Farms and Southrigg turbine to the east, West Benhar to the south west and Drumduff and Burnhead Wind Farms to the north. There are three consented wind farm developments at Southrigg II, Forrestfield and Drumelzie.</p> <p>There are a large number of wind farm developments within the wider landscape around Eastfield, which appear in medium to long range views. But those named above are the most visible within the local landscape.</p> <p>Magnitude of Change: Large Level of Effect: Major</p> <p>The nature of these effects would be major, long-term, cumulative and adverse, which would be significant in the context of the EIA Regulations.</p> <p>Considering the proximity of the turbines to this settlement at approximately 510m (at the closest point), the horizontal extent of the array of turbines west to east immediately to the north of the settlement, and the blade tip height of the turbines 179 - 193 m above the properties along the B7066 road, when considering the terrain and position and orientation of the low lying properties to the north of the village, the significant visual effects could affect the living standards of a limited number of properties of Eastfield, when judged objectively and in the public interest.</p> <p>The significant visual effects would not affect the living standards of the village overall, when judged objectively and in the public interest.</p>
<p>Greenrigg (refer to VP 5, Figure 6.31)</p>	<p>Nearest proposed turbine: Turbine 2 – 0.72 km Nearest to existing turbine: T2, Torrance II – 0.70 km</p> <p>Description: Greenrigg is a former mining village, 0.72km south east of the Proposed Development, adjacent to Harthill (to the east) and south of the M8 road, on land rising to the south from 178 – 197m AOD. All of the village lies within the ZTV for the Proposed Development. There are potential views of the turbine towers and blades of the Proposed Development from the village. From residential roads, public open space / recreational areas, and north, north west and west facing properties within Greenrigg, there would be clear and open views of the proposed turbines at a lower or similar elevation to the properties, and at 200m blade tip height, the turbines would be visible over the settlement between 0.78 and 1.6km distance.</p> <p>Cumulative Proposed Developments: The operational wind farms which are visible from Greenrigg within 5 km radius include: Torrance I &amp; II Wind Farms and Southrigg turbine to the east, West Benhar to the south west and Drumduff and Burnhead Wind</p>

Settlement	Description of Effect
	<p>Farms to the north. There are three consented wind farm developments at Southrigg II, Forrestfield and Drumelzie.</p> <p>There are a large number of wind farm developments within the wider landscape around Greenrigg, which appear in medium to long range views. But those named above are the most visible within the local landscape.</p> <p>Magnitude of Change: Large</p> <p>Level of Effect: Major</p> <p>The nature of these effects would be major, long-term, cumulative and adverse, which would be significant in the context of the EIA Regulations.</p> <p>Considering the proximity of the turbines to this settlement at approximately 720m (at the closest point), the horizontal extent of the array of turbines west to east immediately to the north of the settlement, and the blade tip height of the turbines 179 - 193 m above the properties when considering the terrain and position and orientation of the low lying properties to the north and west of the village on Polkemmet Road and Polkemmet Drive, the significant visual effects could affect the living standards of a limited number of properties of Greenrigg, when judged objectively and in the public interest.</p> <p>The significant visual effects would not affect the living standards of these village overall, when judged objectively and in the public interest.</p>
<p>Blackridge (refer to VP 8 &amp; 9, Figures 6.34 &amp; 6.35)</p>	<p>Nearest proposed turbine: Turbine 2 – 1.1 km</p> <p>Nearest to existing turbine: T2, Torrance II – 0.83 km</p> <p>Description: Blackridge is a former mining village, 1.1 km north of the Proposed Development, , on land rising to the south from 194 – 203m AOD. All of the village lies within the ZTV for the Proposed Development. There are potential views of the turbine towers and blades of the Proposed Development from the village. From residential roads, public open space / recreational areas, and south facing properties within Blackridge, there would be clear and open views of the proposed turbines at a lower or similar elevation to the properties in Blackridge, and at 200m blade tip height, the turbines would be visible over the settlement between 1.1 and 1.8km distance.</p> <p>Cumulative Developments: The operational wind farms which are visible from Blackridge within 5 km radius include: Torrance I &amp; II Wind Farms and Southrigg turbine to the south, West Benhar to the south west and Drumduff and Burnhead Wind Farms to the north. There are three consented wind farm developments at Southrigg II, Forrestfield and Drumelzie.</p> <p>There are a large number of wind farm developments within the wider landscape around Blackridge, which appear in medium to long range views. But those named above are the most visible within the local landscape.</p> <p>Magnitude of Change: Large</p> <p>Level of Effect: Major</p> <p>The nature of these effects would be major, long-term, cumulative and adverse, which would be significant in the context of the EIA Regulations, and non significant for the settlement overall.</p> <p>The significant visual effects would not affect the living standards of these village overall, when judged objectively and in the public interest.</p>
<p>Whitburn (refer to VP 11, Figure 6.37)</p>	<p>Nearest proposed turbine: Turbine 1 – 2.5 km</p> <p>Nearest to existing turbine: Southrigg Turbine – 2 km</p> <p>Description: Whitburn is a large and expanding settlement south east of Polkemmet Country Park and the B7066 Road, east, south of the Proposed Development. There is extensive house building on the western side of the village, on land rising to the south from 188 – 215 m AOD. All of the village lies within the ZTV for the Proposed Development. There are potential views of the turbine towers and blades of the Proposed Development from the western and north western perimeter of the village. From residential roads, public open space / recreational areas, and south facing properties within Whitburn, there would be clear and open views of the proposed turbines.</p>

Settlement	Description of Effect
	<p>Cumulative Developments: The operational wind farms which are visible from Whitburn within 5 km radius include: Torrance I &amp; II Wind Farms and Southrigg turbine to the south, West Benhar to the south west and Drumduff and Burnhead Wind Farms to the north. There are three consented wind farm developments at Southrigg II, Forrestfield and Drumelzie. In addition, the Tornmywheel, Pates Hill, Pearie Law and Harburnhead Wind Farm developments to the south and east of Whitburn are visible on the horizon.</p> <p>There are a large number of wind farm developments within the wider landscape around Whitburn, which appear in medium to long range views. But those named above are the most visible within the local landscape.</p> <p>Magnitude of Change: Large (for western edge of the settlement only), Negligible for the settlement overall.</p> <p>Level of Effect: Major (for western edge of the settlement only, Negligible for the settlement overall)</p> <p>The nature of these effects would be major, long-term, cumulative and adverse, which would be significant in the context of the EIA Regulations, and non significant for the settlement overall.</p>

### Visual Effects on Views from Core Paths & Promoted Recreational Routes / Locations

- 6.8.18 There are a number of core paths in the local landscape, and the National Cycle Route 75 within the Detailed Study Area (Figure 6.14).
- 6.8.19 The visual effects that would be experienced by the walkers, riders and cyclists using these routes are described below in Table 6.10. The assessment of the potential effects on these routes has been assisted by the use ZTV maps during the site assessment. The sensitivity to landscape and visual change is high because their purpose/activity is to appreciate the landscape and surroundings.

**Table 6.10: Visual Effects on Core Paths, Recreational Routes & Cycle Route**

Route	Description of Effect
<p>National Cycle Route 75 (refer to VP 8, Figure 6.34)</p>	<p>Nearest proposed turbine: Turbine 1 at 1.86 km</p> <p>Description: National Cycle Route 75 runs from Edinburgh to Gourrock via Glasgow. It is often known as the Clyde to Forth cycle route. Within the study area this route follows a route in an east – west direction along the A89 road, between 1.5 – 2 km north of the Proposed Development and through Blackridge. The cycle route offers clear and open views of the existing Torrance Wind Farm I &amp; II to the south of the route, in the context of the wider wind farm development in the local landscape</p> <p>Cumulative Schemes: The operational wind farms which are visible from the NCR 75 within 5 km radius include: Torrance I &amp; II Wind Farms and Southrigg turbine to the south, West Benhar to the south west and Drumduff and Burnhead Wind Farms to the north. There are three consented wind farm developments at Southrigg II, Forrestfield and Drumelzie.</p> <p>Magnitude of Change: There would be a large magnitude of change arising from the Proposed Development along this route within 2 km of the Proposed Development, reducing to medium with the level of screening within the wider landscape and settlement areas along the route. Views would be oblique and partially screened by built development within Blackridge. The Proposed Development would be viewed alongside a large number of wind farm developments within the wider landscape, sequentially and statically, in medium to long distance views. But those named above are the most visible within the local landscape.</p> <p>Level of Effect: Major</p> <p>The nature of these effects would be major, long-term, cumulative and adverse which would be significant in the context of the EIA Regulations.</p>

Route	Description of Effect
Core Path NL/213/1	<p>Nearest proposed turbine: Turbine 3 at 672 m</p> <p>Description: Core Path NL/213/1 runs from Blackridge in the north, to the northern boundary of the Site. The core path offers clear and open views of the existing Torrance Wind Farm I &amp; II, in close proximity and in the context of the wider wind farm development in the local landscape. The proximity of the core path means the recreational receptors along this route will feel part of the wind farm as they travel south from Blackridge to Blairmuckhill Road. When travelling the route from the north, the core path users would approach the Site with partial screening of the turbines by local woodland cover in proximity to the route, along the southern boundary of Blackridge, but the open section of the route affords views to the south and south west.</p> <p>Cumulative Schemes: The operational wind farms which are visible from the Core Path NL/213/1 within 5 km radius include: Torrance I &amp; II Wind Farms and Southrigg turbine to the south east, West Benhar to the south west and Drumduff and Burnhead Wind Farms to the north. There are three consented wind farm developments at Southrigg II, Forrestfield and Drumelzie.</p> <p>Magnitude of Change: There would be a large magnitude of change arising from the Proposed Development along this route within 2 km of the Proposed Development, reducing to medium with the level of screening within the wider landscape and settlement areas along the route. The Proposed Development would be viewed alongside a large number of wind farm developments within the wider landscape, sequentially and statically, in medium to long distance views. But those named above are the most visible within the local landscape.</p> <p>Level of Effect: Major</p> <p>The nature of these effects would be major, long-term, cumulative and adverse which would be significant in the context of the EIA Regulations.</p>
Core Path NL/212/1 (refer to VP1, Figure 6.27)	<p>Nearest proposed turbine: Turbine 3 at 300 m</p> <p>Description: Core Path NL/212/1 runs along Blairmuckhill Road to the north and west of the Site and west to Forrest Road, north of Forrestburn Reservoir at a distance of 5 km. The core path offers clear and open views of the existing Torrance Wind Farm I &amp; II, in close proximity and in the context of the wider wind farm development in the local landscape. The core path rises to an elevation of 248m AOD and the nearest turbines T3 and T4 are at 198 and 196m AOD respectively below the core path. The proximity of the core path means the recreational receptors along this route will feel part of the wind farm as they travel south from Blackridge, and travel west along Blairmuckhill Road, until the turbines are behind the recreational receptors. When travelling the route from the west, the core path users would approach the Site with partial screening of the turbines by rising land, and then as the route ascends Blairmuckhill Road, the turbines would be viewed in an open landscape, and in the context of the operational Torrance Wind Farm I &amp; II. The route then heads north to Blackridge, and the turbines are to the rear of the recreational receptors.</p> <p>Cumulative Schemes: The operational wind farms which are visible from the Core Path NL/212/1 within 5 km radius include: Torrance I &amp; II Wind Farms and Southrigg turbine to the south east, West Benhar to the south west and Drumduff and Burnhead Wind Farms to the north. There are three consented wind farm developments at Southrigg II, Forrestfield and Drumelzie.</p> <p>Magnitude of Change: There would be a large magnitude of change arising from the Proposed Development along this route within 2 km of the Proposed Development, reducing to medium with the level of screening within the wider landscape and settlement areas along the route. The Proposed Development would be viewed alongside a large number of wind farm developments within the wider landscape, sequentially and statically, in medium to long distance views. But those named above are the most visible within the local landscape.</p> <p>Level of Effect: Major</p> <p>The nature of these effects would be major, long-term, cumulative and adverse which would be significant in the context of the EIA Regulations.</p>
Core Path NL/214/1	<p>Nearest proposed turbine: Turbine 2 at 1.1 km</p>

Route	Description of Effect
	<p>Description: Core Path NL/214/1 runs from the southern boundary of Harthill, along Sidehead Road, adjacent to former forestry plantation at a distance of 1 – 3 km from Turbine 2. The core path offers clear and open views of the existing Torrance Wind Farm I &amp; II in the north, and also the West Benhar Wind Farm (in construction). The Proposed Development would be viewed in the context of the wider wind farm development in the local landscape. When travelling the route in a southerly direction, the land rises, and the Proposed Development is behind the core path user. There would be oblique views to West Benhar turbines to the west. When travelling south, towards Harthill, the Proposed Development would be viewed beyond Harthill and the M8 corridor and in the context of a number of operational turbines in the local landscape.</p> <p>Cumulative Schemes: The operational wind farms which are visible from the Core Path NL/214/1 within 5 km radius include: Torrance I &amp; II Wind Farms and Southrigg turbine to the south east, West Benhar to the south west and Drumduff and Burnhead Wind Farms to the north. There are three consented wind farm developments at Southrigg II, Forrestfield and Drumelzie.</p> <p>Magnitude of Change: There would be a large magnitude of change arising from the Proposed Development along this route within 2 km of the Proposed Development, reducing to medium with the level of screening within the wider landscape and settlement areas along the route. The Proposed Development would be viewed alongside a large number of wind farm developments within the wider landscape, sequentially and statically, in medium to long distance views. But those named above are the most visible within the local landscape.</p> <p>Level of Effect: Major</p> <p>The nature of these effects would be major, long-term, cumulative and adverse which would be significant in the context of the EIA Regulations.</p>
Core Path NL/215/1	<p>Nearest proposed turbine: Turbine 4 at 0.92 km</p> <p>Description: Core Path NL/215/1 runs from the southern boundary of Eastfield, south of Covenantor Road, adjacent to former forestry plantation at a distance of 1.5 km from Turbine 4 and returns north towards West Benhar Road (B717) 1.1 km south west of T4. The core path offers clear and open views of the existing Torrance Wind Farm I &amp; II in the north, and also the West Benhar Wind Farm (in construction), but views are restricted in areas of commercial forestry southern of Eastfield (some coupes have already been felled and some are young plantations which offer limited screening). The Proposed Development would be viewed in the context of the wider wind farm development in the local landscape. When travelling the route in a southerly direction, the land rises, and the Proposed Development is behind the core path user. There would be oblique views to West Benhar turbines to the west. When travelling south, towards Eastfield, the Proposed Development would be viewed beyond Eastfield and Harthill and the M8 corridor and in the context of a number of operational turbines in the local landscape.</p> <p>Cumulative Schemes: The operational wind farms which are visible from the Core Path NL/215/1 within 5 km radius include: Torrance I &amp; II Wind Farms and Southrigg turbine to the south east, West Benhar to the south west and Drumduff and Burnhead Wind Farms to the north. There are three consented wind farm developments at Southrigg II, Forrestfield and Drumelzie.</p> <p>Magnitude of Change: There would be a large magnitude of change arising from the Proposed Development along this route within 1.5 km of the Proposed Development. The Proposed Development would be viewed alongside a large number of wind farm developments within the wider landscape, sequentially and statically, in medium to long distance views. But those named above are the most visible within the local landscape.</p> <p>Level of Effect: Major</p> <p>The nature of these effects would be major, long-term, cumulative and adverse which would be significant in the context of the EIA Regulations.</p>
Core Path NL/216/1 (refer to VP)	<p>Nearest proposed turbine: Turbine 4 at 0.92 km</p> <p>Description: Core Path NL/216/1 is a core path route on a narrow tarmac path along the B717 road, west of Eastfield and at a distance of 1 km from Turbine 4. The core path offers clear and open views of the existing West Benhar Wind Farm in the south,</p>

Route	Description of Effect
12, Figure 6.38)	<p>and also the Torrance I &amp; II Wind Farms to the east, when travelling in and easterly direction. The Proposed Development would be viewed in the context of the wider wind farm development in the local landscape. When travelling east, towards Eastfield, the Proposed Development would be partially screened by coniferous woodland to the north of the core path, and viewed beyond Eastfield and Harthill and the M8 corridor and in the context of a number of operational turbines in the local landscape.</p> <p>Cumulative Schemes: The operational wind farms which are visible from the Core Path NL/215/1 within 5 km radius include: Torrance I &amp; II Wind Farms and Southrigg turbine to the south east, West Benhar to the south west and Drumduff and Burnhead Wind Farms to the north. There are three consented wind farm developments at Southrigg II, Forrestfield and Drumelzie.</p> <p>Magnitude of Change: There would be a medium magnitude of change arising from the Proposed Development along this route within 1.5 km of the Proposed Development. The Proposed Development would be viewed alongside a large number of wind farm developments within the wider landscape, sequentially and statically, in medium to long distance views. But those named above are the most visible within the local landscape.</p> <p>Level of Effect: Major</p> <p>The nature of these effects would be moderate - major, long-term, cumulative and adverse which would be significant in the context of the EIA Regulations.</p>
Polkemmet Country Park (refer to VP 7, Figure 6.33)	<p>Nearest proposed turbine: Turbine 1 at 1.55 km</p> <p>Description: Polkemmet is a 68 hectare country park near Whitburn comprising of woodland and riverside walks, play area, and picnic areas. There is also a golf course, driving range and Visitor Centre within the Park.</p> <p>Many of the routes within the park are within the woodland. There is a direct view from the western edge of the park, where there are views of Torrance Wind Farm I &amp; II an Southrigg Turbine. The proposed turbines would be viewed alongside the existing turbines, and would extend the horizontal array to the west.</p> <p>Cumulative Schemes: The operational wind farms which are visible from the the Country Park within 5 km radius include: Torrance I &amp; II Wind Farms and Southrigg turbine to the north west. There are three consented wind farm developments at Southrigg II, Forrestfield and Drumelzie which may also be visible, but at a distance from the park.</p> <p>Magnitude of Change: There would be a large magnitude of change arising from the Proposed Development along this route within 1.5 km of the Proposed Development. The Proposed Development would be viewed alongside a large number of wind farm developments within the wider landscape, sequentially and statically, in medium to long distance views. But those named above are the most visible within the local landscape.</p> <p>Level of Effect: Major</p> <p>The nature of these effects would be major, long-term, cumulative and adverse which would be significant in the context of the EIA Regulations.</p>

### Visual Effects on Views from Transport Routes

- 6.8.20 This section considers the views from the main transport routes and the likely visual effects on receptors, visual experience whilst using the M8, , A9 and local road network within the Detailed Study Area.
- 6.8.21 The views from these routes would be experienced transiently by road and the sensitivity of all these receptors is considered to be low - medium - high (low for A road users where potential views are fleeting and travelling at speed, medium for users of the local road network, and high for recreational users of promoted scenic routes).
- 6.8.22 The key routes were driven in both directions to assess the potential effects on the routes and the assessment has been assisted with the use of ZTV maps. Those routes outside the ZTV have not been assessed.

**Table 6.11: Visual Effects on Transport Routes & Cycle Routes**

Receptor	Description of Effect
<p>M8 Motorway (refer to Viewpoint 10, Figure 6.36)</p>	<p>The M8 is the busiest motorway in Scotland and it connects Glasgow and Edinburgh, providing connections to Airdrie, Coatbridge, Greenock, Livingston and Paisley. The motorway is 60 miles long, and runs west to east within the Detailed Study Area, and adjacent to the Proposed Development to the south, at Harthill Services.</p> <p>Woodland around the services and within the Site screen views in close proximity to the site, but views of the Proposed Development would be available when travelling in both directions along the M8 motorway.</p> <p>Views would be at oblique angles to the direction of travel for the most part, although due to the proximity of the Proposed Development, and the transport corridor, there would be direct, straight on views, or slightly oblique views, as the road travels west to east.</p> <p>Road users of the M8 motorway are of a low sensitivity due to the speed of travel, and this is not considered a scenic route.</p> <p>Cumulative Schemes: The operational wind farms which are visible from the Core Path NL/215/1 within 5 km radius include: Torrance I &amp; II Wind Farms and Southrigg turbine to the south east, West Benhar to the south west and Drumduff and Burnhead Wind Farms to the north. There are three consented wind farm developments at Southrigg II, Forrestfield and Drumelzie. In addition, road users of the M8 would also view the Proposed Development cumulatively with other wind farm visible within the wider landscape north and south of the M8 corridor up to 8km west of the Site and up to 10 km east of the Site.</p> <p>Magnitude of Change: There would be a medium to large magnitude of change arising from the development within 2 – 2.5 km when travelling westbound and eastbound and close range views of the Proposed Development would be available.</p> <p>Level of Effect: Minor rising to Minor - Moderate</p> <p>The nature of these effects would be not significant, long-term, cumulative and adverse.</p>
<p>A89 (refer to Viewpoints 8 &amp; 9, Figures 6.34 &amp; 6.35)</p>	<p>Within the Detailed Study Area the A89 follows a route in an east – west direction, between 1.5 – 2 km north of the Proposed Development and through Blackridge. Views from the A89 offer clear and open views of the existing Torrance Wind Farm I &amp; II to the south of the route, in the context of the wider wind farm development in the local landscape</p> <p>Cumulative Schemes: The operational wind farms which are visible from the A89 within 5 km radius include: Torrance I &amp; II Wind Farms and Southrigg turbine to the south, West Benhar to the south west and Drumduff and Burnhead Wind Farms to the north. There are three consented wind farm developments at Southrigg II, Forrestfield and Drumelzie.</p> <p>Road users of the A89 would be of a medium sensitivity. Whilst this is not a promoted scenic route, it passes through a number of settlements and connects promoted recreational areas to the west and north within the Detailed Study Area.</p> <p>Magnitude of Change: There would be a large magnitude of change arising from the Proposed Development along this route within 2 km of the Proposed Development, reducing to medium with the level of screening within the wider landscape and settlement areas along the route. Views would be oblique and partially screened by built development within Blackridge. The Proposed Development would be viewed alongside a large number of wind farm developments within the wider landscape, sequentially and statically, in medium to long distance views. But those named above are the most visible within the local landscape.</p> <p>Level of Effect: Moderate to Moderate - Major</p> <p>The nature of these effects would be long-term, cumulative and adverse which would be significant in the context of the EIA Regulations.</p>
<p>B718 (refer to Viewpoint 6, Figure 6.32)</p>	<p>Within the Detailed Study Area the B718 follows a route in a north south direction connecting Blackridge and Harthill, and is situated between 260 - 380 m bisecting the Proposed Development between T1 and T2. The B718 offers clear and open views of the existing Torrance Wind Farm I &amp; II, in close proximity and in the context of the wider wind farm development in the local landscape. The proximity of the B718 means</p>

Receptor	Description of Effect
	<p>road users along will feel part of the wind farm as they travel south from Blackridge to Harthill.</p> <p>Cumulative Schemes: The operational wind farms which are visible from the B718 within 5 km radius include: Torrance I &amp; II Wind Farms and Southrigg turbine to the south, West Benhar to the south west and Drumduff and Burnhead Wind Farms to the north. There are three consented wind farm developments at Southrigg II, Forrestfield and Drumelzie.</p> <p>Road users of the B718 would be of a medium sensitivity. Whilst this is not a promoted scenic route, it passes through residential areas in Blackridge and Harthill.</p> <p>Magnitude of Change: There would be a large magnitude of change arising from the Proposed Development along this route within 0.8 – 1.9 km of the Proposed Development, reducing to medium with the level of screening within the wider landscape and within the settlement areas along the route. Views would be oblique and partially screened by built development within Blackridge and Harthill to the north and south. The Proposed Development would be viewed alongside a large number of wind farm developments within the wider landscape, sequentially and statically, in medium to long distance views. But those named above are the most visible within the local landscape.</p> <p>Level of Effect: Moderate to Moderate - Major</p> <p>The nature of these effects would be long-term, cumulative and adverse which would be significant in the context of the EIA Regulations.</p>
<p>B717 (refer to Viewpoint 12, Figure 6.38)</p>	<p>Within the Detailed Study Area the B717 follows a route in a north east to south west direction south of Eastfield, and is situated between 0.59 – 2.85 km from T4. The B717 offers clear and open views of the West Benhar Wind Farm (under construction) in close proximity and in the context of the wider wind farm development in the local landscape. The Proposed Development would be visible on the horizon to the north east of the B717 and partially screened by the coniferous plantation at West Benhar, north of the road.</p> <p>Cumulative Schemes: The operational wind farms which are visible from the B717 within 5 km radius include: Torrance I &amp; II Wind Farms and Southrigg turbine to the south, and West Benhar to the south west. There are three consented wind farm developments at Southrigg II, Forrestfield and Drumelzie.</p> <p>Road users of the B717 would be of a medium sensitivity. Whilst this is not a promoted scenic route, it passes through residential areas in Eastfield.</p> <p>Magnitude of Change: There would be a medium magnitude of change arising from the Proposed Development along this route within 0.59 – 2.85 km of the Proposed Development, reducing to low with the level of screening within the wider landscape. Views would be oblique and partially screened by tree cover to the north of the road. The Proposed Development would be viewed alongside a large number of wind farm developments within the wider landscape, sequentially and statically, in medium to long distance views. But those named above are the most visible within the local landscape.</p> <p>Level of Effect: Moderate</p> <p>The nature of these effects would be long-term, cumulative and adverse which would be significant in the context of the EIA Regulations.</p>
<p>B7066 (refer to Viewpoint 2, Figure 6.28)</p>	<p>Within the Detailed Study Area the B7066 road runs west to east, parallel to the M8 motorway, from Kirk O'Shotts in the west to Whitburn in the east, through Eastfield, Harthill and Greenrigg, in close proximity to the Proposed Development, T4 0.53 km north of Edinburgh Road (B7066 in Eastfield).</p> <p>Views from the B7066 offer clear and open views of the existing Torrance Wind Farm I &amp; II to the north of the route, in the context of the wider wind farm development in the local landscape. However, within the settlement areas, buildings do provide local screening in views to the north. The tree cover and woodland planting along the M8 corridor also provides from screening / filtering of views from the B7066 to the north and north east, however, this is limited to West Benhar Road (west of Eastfield).</p> <p>Cumulative Schemes: The operational wind farms which are visible from the B7066 within 5 km radius include: Torrance I &amp; II Wind Farms and Southrigg turbine to the south, West Benhar to the south west and Drumduff and Burnhead Wind Farms to the</p>

Receptor	Description of Effect
	<p>north. There are three consented wind farm developments at Southrigg II, Forrestfield and Drumelzie.</p> <p>Road users of the B7066 would be of a medium sensitivity. Whilst this is not a promoted scenic route, it passes through a number of settlements and connects promoted recreational areas to the west and north within the Detailed Study Area.</p> <p>Magnitude of Change: There would be a large magnitude of change arising from the Proposed Development along this route within 2 km of the Proposed Development, reducing to medium with the level of screening within the wider landscape and settlement areas along the route. Views would be oblique and partially screened by built development within Blackridge. The Proposed Development would be viewed alongside a large number of wind farm developments within the wider landscape, sequentially and statically, in medium to long distance views. But those named above are the most visible within the local landscape.</p> <p>Level of Effect: Moderate to Moderate - Major</p> <p>The nature of these effects would be long-term, cumulative and adverse which would be significant in the context of the EIA Regulations.</p>

### Visual Effects during Decommissioning

- 6.8.23 It is recognised that there would be some additional temporary effects during decommissioning of the turbines over and above those assessed for the operational period of the Proposed Development. Any additional effects arising from decommissioning activities would be localised within 3.8 km radius (in line with the predicted extent of significant visual effects during operation of the Proposed Development), and not adverse when considering the context of the turbines being removed.
- 6.8.24 The effects on visual amenity would decrease as decommissioning progresses whilst turbines and associated infrastructure are removed. Users of core paths and other recreational routes within close proximity of the site, will experience the greatest effects during decommissioning. Receptors using these routes have unobstructed views of the decommissioning activities associated with the Proposed Development. The effects would be similar to those during the construction phase but in reverse.
- 6.8.25 Overall, it is considered that there would be a small magnitude of change (over that during the operation phase) during the decommissioning process. This would result in no greater than a Minor - Moderate temporary effect for visual receptors, that would be not significant. The decommissioning effects would be temporary in nature.
- 6.8.26 The decommissioning effects of the Proposed Development on visual amenity would not be significant.

### Summary of Visual Effects

- 6.8.27 Based on the viewpoint assessment, significant visual effects would generally occur within distances of approximately 3.8 km from the nearest turbine where there are clear views of the existing wind farms and the Proposed Development.

- 6.8.28 The residential assessment identifies that 16 properties (within 0.25 to 1.89 km radius of the turbines), would experience a significant visual effect, this is either a significant visual effect from the property itself, or from the access / egress to the Site. One property, Hill Farm, could suffer unduly from negative visual effects such as visual over-dominance, over-bearance, which collectively may affect the overall visual amenity, and associated living standards arising from the Proposed Development as an individual development, and also cumulatively with nearby operational wind farm schemes.
- 6.8.29 Visual effects on views from the villages of Harthill, Eastfield, Greenrigg, Blackridge and Whitburn would be major, long-term, cumulative and adverse which would be significant in the context of the EIA Regulations.
- 6.8.30 Visual effects on views from the core path network and Polkemmet Country Park would vary with distance from the Proposed Development, with significant visual effects on views from those core paths within 1.55 km.
- 6.8.31 Visual effects on views from the road network would also vary with distance from the Proposed Development, and with the direction of travel. The assessment identifies significant visual effects for those users of the A89, B718, B717 and B7066 roads. Sequential cumulative views along these routes are anticipated, including significant, sequential, not static, cumulative views arising from the existing wind farm development.
- 6.8.32 Visual effects on views from The Knock would be negligible, not significant, cumulative and adverse from views from the SAM. Views from two listed buildings north and north west of the Proposed Development, within 1.2 – 1.8 km, would be major, long-term, cumulative and adverse which would be significant in the context of the EIA Regulations.
- 6.8.33 The decommissioning effects of the Proposed Development on visual amenity would not be significant.

#### **Cumulative Effects**

- 6.8.34 In summary, however, potential cumulative effects are restricted, either due to the distance of the nearest existing / consented / application sites, and also, the visual influence of those turbines being restricted by the local rolling topography within the M8 corridor and the Plateau Moorland, reducing the extent to which the cumulative sites exert and influence on the Proposed Development.
- 6.8.35 The main cumulative effect is the relationship of the Proposed Development with the Torrance I & II Wind Farms and Southrigg turbine to the south, West Benhar to the south west and Drumduff and Burnhead Wind Farms to the north. There are also three consented wind farm developments at Southrigg II, Forrestfield and Drumelzie.
- 6.8.36 Analysis of the Comparative ZTV on Figure 6.6 shows that the predicted blade tip visibility of the Proposed Development is follows the same pattern within that of the ZTV of the Existing Torrance Wind Farm (I & II), with extended visibility of the proposed turbines to the south and south west within 5 – 15 kms.
- 6.8.37 The Comparative ZTV on Figure 6.19 shows the predicted blade tip visibility of the Proposed Development alongside the West Benhar Wind Farm visibility. The Proposed Development follows the same pattern as West Benhar Wind Farm, but West Benhar Wind Farm, at an elevated location, is more visible to the south, and to a greater distance to the west and east of the Proposed Development. In many locations, the existing Torrance Wind Farm, West Benhar Wind Farm, and the Proposed Development, would be viewed together within the Plateau Moorland.

6.8.38 The Comparative ZTV on Figure 6.20 shows the predicted blade tip visibility of the Proposed Development alongside the 'Northern Group' of Drumduff and Burnhead Wind Farms. The comparative ZTV illustrates a complex visibility of the Proposed Development alongside the two wind farms 510 km to the north of the Proposed Development. Predicted visibility of all three schemes is extensive across the Detailed Study Area of 15 km radius. However, views from elevated locations to the south are either in forested or open moorland, and cumulative visibility as experienced within the local landscape, is largely within the Plateau Moorland, within 5 km radius.

## **6.9 Conclusion**

6.9.1 The Proposed Development would not exceed the cumulative capacity of the Plateau Moorland landscape, nor would it become the dominant characteristic of the landscape within the study area given the number of operational wind farms in the local landscape.

6.9.2 The Proposed Development would form a direct extension to the Existing Torrance Wind Farm I & II and would reflect the landscape character with operational wind farms.

6.9.3 Significant visual effects are anticipated within 3.8 km radius of the Proposed Development only.

6.9.4 Considering the proximity of the turbines to residential properties within 1.89 km radius, the horizontal extent of the array of turbines, and the blade tip height of the turbines above the properties, could result in significant visual effects on residential visual amenity.

6.9.5 However, the consolidation of wind farms within a motorway corridor, within an existing 'wind farm landscape' in the Plateau Moorland, provides opportunity to reduce pressure elsewhere, and meet national renewable energy targets.

## **6.10 Statement of Significance**

6.10.1 Effects are considered to be significant for the purposes of the EIA Regulations where the effect is classified as being of 'major' or 'moderate' significance.

6.10.2 It is concluded that locally significant effects on landscape character and visual amenity are inevitable as a result of commercial wind energy development. Whilst the LVIA identifies some significant landscape and visual effects within 3.8 km radius of the Proposed Development, it is considered that overall and within the context of existing wind farm development, the landscape has the capacity to accommodate the effects identified.