Chapter 4: Landscape and Visual Impact Assessment

Chapter 4
Landscape and Visual Impact Assessment

Introduction

4.1 This chapter presents the findings of the assessment of likely significant effects of the Proposed Development on:

- Landscape character and resources, including effects upon the physical elements, character and/or qualities of the landscape during construction and operation; and
- Visual amenity, including effects upon potential receptors (people) and viewing groups caused by change in the appearance of the landscape during construction and operation.

4.2 Landscape character and resources are considered to be of importance in their own right and are valued regardless of whether they are seen by people. Effects on views and visual amenity as perceived by people are clearly distinguished from, although closely linked to, effects on landscape character and resources. Landscape and visual assessments are therefore separate, although linked, processes. This chapter deals with landscape and visual effects separately, including assessment of cumulative landscape and visual effects in each section.

4.3 The assessment methodology for the Landscape and Visual Impact Assessment (LVIA) was developed in accordance with the Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3) 2013[1], and is detailed in **Appendix 4.1: LVIA and Visualisation Methodology**. The assessment was undertaken by chartered Landscape Architects at LUC.

4.4 The chapter should be read in conjunction with the following chapters:

- **Chapter 2: Site Selection and Design Strategy**;
- **Chapter 3: Development Description**;
- **Chapter 5: Cultural Heritage**; and
- **Chapter 6: Ecology**.

4.5 This chapter is supported by **Figures 4.1.1 to 4.1.14** in Volume 3a of the Environmental Impact Assessment (EIA) Report. **Figures 4.2.1 to 4.2.24** (which provide viewpoint visualisations) are included in Volume 3b of the EIA Report. All figures are referenced throughout the text where necessary.

4.6 The following appendices are also referred to throughout the chapter, and are found in Volume 4 of the EIA Report*:*

- **Appendix 4.1: LVIA and Visualisation Methodology**;
- **Appendix 4.2: Residential Visual Amenity Assessment (RVAA)**;
- **Appendix 4.3: Aviation Lighting Assessment**; and
- **Appendix 4.4: Consideration of Scoping Stage Sites**.

4.7 The Proposed Development comprises up to 15 turbines, each with a maximum tip height of 220 metres (m). As noted in **Chapter 3**, where relevant, the technical chapter of the EIA Report identifies which candidate turbine/turbine parameters have been used to assess a maximum / worst case scenario using currently available data. Within the turbines parameters available (all with a maximum tip height of 220 m), it is considered that a 'reasonable worst case' scenario for the LVIA would be a candidate turbine with the largest rotor. However, the 'reasonable worst case' in terms of the assessment of effects at night-time

[1] Landscape Institute and the Institute of Environmental Management and Assessment (2013) Guidelines for Landscape and Visual Impact Assessment, 3rd Edition

would be a candidate turbine with the tallest hub. This is because aviation lighting is positioned on the turbine nacelle, and therefore the more hubs that are visible, the greater the number of potentially visible aviation lights. The LVIA therefore considers two 'reasonable worst case' scenarios as follows:

- Candidate turbine with largest rotor – tip height 220 m, hub height 130 m, rotor diameter 180 m; and
- Candidate turbine with tallest hub – tip height 220 m, hub height 139 m, rotor diameter 162 m.

4.8 The LVIA reports on the candidate turbine with the largest rotor, but reference is made to the candidate turbine with the tallest hub where there is the potential for a change to the assessment of effects.

Methodology

Effects Scoped into the Assessment

4.9 The key issues for the assessment of potential landscape and visual effects relating to the Proposed Development are listed below. The following effects are assessed in accordance with the principles contained within GLVIA3, and in line with the methodology presented in **Appendix 4.1**:

- Direct effects on the physical landscape of the Site, during construction and operation;
- Indirect effects on landscape character within the wider study area (within 20 kilometres (km)) during operation;
- Indirect effects on the key characteristics and special qualities of designated landscapes (within 20 km) during operation, including the overall integrity of the designated landscape as required by the National Planning Framework 4 (NPF4)[2];
- Effects on visual amenity relating to changes in views experienced by people from representative viewpoints within 45 km, during operation;
- Effects on visual amenity relating to changes in views experienced by people from nearby settlements (within 20 km) and routes (within 20 km), during operation;
- Effects on landscape and visual receptors relating to the interaction between the Proposed Development and other existing and proposed wind farms (cumulative effects), during operation across a 45 km study area (but focussing on effects within 20 km where significant effects resulting from cumulative interactions are more likely to occur). Consideration of potential future cumulative effects with schemes at Scoping stage is provided separately in **Appendix 4.4**. This information will become relevant to the decision maker if these other projects progress to become more certain (for example applications submitted or consent given) before the application for the Proposed Development is determined. It is provided given the proximity of the projects and therefore their potential relevance, but in a separate appendix, with separate wirelines, for clarity;
- Effects on residential visual amenity at key receptors groups within 3 km during operation. This assessment is provided separately in **Appendix 4.2**;
- Landscape and visual effects at night-time due to the requirement for visible aviation lighting during operation. This assessment is provided separately in **Appendix 4.3**, and
- Decommissioning effects.

Effects Scoped Out

4.10 On the basis of the desk based and field work undertaken, the professional judgement and experience of the LVIA team and policy guidance or standards, the following effects were 'scoped out' of detailed assessment, as proposed in the Scoping Report. This was agreed with statutory consultees:

- Locations where receptors are unlikely to be affected by the Proposed Development, through having minimal or no predicted visibility, as predicted by the Zone of Theoretical Visibility (ZTV) mapping (**Figure 4.1.2**);

[2] The Scottish Government (2023) National Planning Framework 4

- Effects on visual receptors at viewpoints beyond 45 km from the nearest turbine, where it is judged that potential significant effects are unlikely to occur;
- Effects on visual receptors at settlements and routes beyond 20 km from the nearest turbine. Beyond this distance it is judged that potential significant effects are unlikely to occur;
- Effects on Landscape Character Types (LCTs) beyond 20 km from the nearest turbine, where it is judged that potential significant effects are unlikely to occur;
- Effects on designated landscapes and sites listed on the Inventory of Gardens and Designed Landscapes beyond 20 km from the nearest turbine, where it is judged that potential significant effects are unlikely to occur;
- Cumulative effects in relation to turbines of less than 50 m to blade tip, single turbines beyond 5 km and wind farms at design/Scoping stage (with the exception of those noted in **Table 4.7**); and
- Given their transient nature, landscape effects on LCTs beyond the Site during construction, visual effects during the construction phase, and cumulative landscape and visual effects during the construction phase.

Assessment Methodology

4.11 The LVIA methodology was prepared in accordance with the principles contained within GLVIA3 and is described in detail in **Appendix 4.1**, which should be referred to whilst reviewing the findings of this assessment to gain a clear understanding of how findings of significance were informed.

4.12 The key steps in the methodology for assessing both landscape and visual effects are as follows:

- The area from which the Proposed Development may theoretically be visible was established through creation of a ZTV covering a distance of up to 45 km from the outermost wind turbines of the Proposed Development, refer to **Figure 4.1.2** for blade tip ZTV and **Figure 4.1.3** for hub height ZTV;
- The landscape of the study area was analysed, and landscape receptors identified;
- The visual baseline was recorded in terms of the places where people will be affected by views of the Proposed Development, and the nature of views and visual amenity, seen by different groups of people;
- Viewpoints were selected (including representative viewpoints, specific viewpoints and illustrative viewpoints), in consultation with Scottish Borders Council (SBC), East Lothian Council (ELC) and NatureScot, and with inputs from Community Councils at the Scoping stage;
- Likely effects on landscape and visual resources were identified; and
- The significance of landscape and visual effects were judged with reference to the sensitivity of the resource/receptor (its susceptibility and value) and magnitude of effect (taking cognisance of the scale of effect, geographical extent and duration/reversibility).

Relevant Legislation, Policy and Guidance

4.13 The LVIA was carried out in accordance with, and with reference to the information and principles contained in:

Assessment Guidance

- The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017[3] – the EIA Regulations;
- Landscape Institute and the Institute of Environmental Management and Assessment (2013) Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3)[4];
- NatureScot (2021) Guidance - Assessing the cumulative landscape and visual impact of onshore wind energy developments;

[3] The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017
[4] Landscape Institute and the Institute of Environmental Management and Assessment (2013) Guidelines for Landscape and Visual Impact Assessment, 3rd Edition

- SNH (2018) A Handbook on Environmental Impact Assessment, Appendix 2: Landscape and Visual Impact Assessment, Version 5[5];
- SNH (2017) Visual Representation of Wind Farms, Version 2.2[6];
- Landscape Institute (2019) Technical Guidance Note 06/19, Visual Representation of Development Proposals[7]; and
- Landscape Institute (2019) Technical Guidance Note 02/19, Residential Visual Amenity Assessment[8].

Design and Locational Guidance

- Scottish Government (2023) National Planning Framework 4[9];
- SNH (2017) Siting and Designing Wind Farms in the Landscape, Version 3[10];
- SNH (2015) Spatial Planning for Onshore Wind Turbines – Natural Heritage Considerations[11];
- SNH (2015) Constructed Tracks in the Scottish Uplands, 2nd Edition[12];
- SNH (2019) Good Practice During Windfarm Construction, Version 3[13]; and
- NatureScot (2020) General pre-application and scoping advice for onshore wind farms[14]

Landscape Character, Landscape Capacity and Designated Landscapes

- SNH (2019) National Landscape Character Assessment[15];
- Scottish Borders Council (2018) Supplementary Guidance on Renewable Energy[16];
- Ironside Farrar (2016) Scottish Borders Council, Wind Energy Consultancy Update of Wind Energy Landscape Capacity and Cumulative Impact Study[17];
- Scottish Borders Council (2012) Supplementary Planning Guidance: Local Landscape Designations[18];
- Council of Europe (2000) European Landscape Convention[19].

Consultation

4.14 In undertaking the assessment, consideration was given to the Scoping responses and other consultation which was undertaken as detailed in **Table 4.1**:

[5] SNH (2018) A Handbook on Environmental Impact Assessment, Appendix 2: Landscape and Visual Impact Assessment, Version 5
[6] SNH (2017) Visual Representation of Wind Farms, Version 2.2
[7] Landscape Institute (2019) Technical Guidance Note 06/19, Visual Representation of Development Proposals
[8] Landscape Institute (2019) Technical Guidance Note 02/19, Residential Visual Amenity Assessment
[9] The Scottish Government (2023) National Planning Framework 4
[10] SNH (2017) Siting and Designing Wind Farms in the Landscape, Version 3
[11] SNH (2015) Spatial Planning for Onshore Wind Turbines – Natural Heritage Considerations
[12] SNH (2015) Constructed Tracks in the Scottish Uplands, 2nd Edition
[13] SNH (2019) Good Practice During Windfarm Construction, Version 3
[14] NatureScot (2020) General pre-application and scoping advice for onshore wind farms
[15] SNH (2019) National Landscape Character Assessment
[16] Scottish Borders Council (2018) Supplementary Guidance on Renewable Energy
[17] Ironside Farrar (2016) Scottish Borders Council, Wind Energy Consultancy Update of Wind Energy Landscape Capacity and Cumulative Impact Study
[18] Scottish Borders Council (2012) Supplementary Planning Guidance: Local Landscape Designations
[19] Council of Europe (2000) European Landscape Convention

Table 4.1: Consultation responses

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
East Lothian Council 08/04/2022	Scoping	The Council notes that assessment of Special Landscape Areas (SLAs) is included and welcome this.	An assessment of effects on the special qualities of designated landscapes (including SLAs) is provided in **Table 4.60 to Table 4.63**
		Full information on changes to levels i.e. platforming must be given, to allow assessment of the landscape impact of the proposals. Any levelling out of the Site or earthworks to provide platforms could have a significant landscape and visual impact.	An assessment of effects on the Site, including consideration of earthworks, is provided in **Table 4.9**.
		Visual assessment should not place reliance on shielding by existing trees unless they are within the Applicants control or are under a Tree Preservation Order.	Consideration was given to felling cycles where forestry is found to screen views. Other areas of woodland or hedgerow planting are assumed to be permanent in the LVIA. The ZTVs and wirelines assume a bare ground situation so illustrate the 'worst case' scenario.
		Proposed micrositing up to 100 m could change the visibility of the turbines within East Lothian with the potential to create significant effects which may not exist in the layout as proposed. It will be difficult to carry out an assessment of a 'worst case scenario' with this level of flexibility as there are many combinations of potential movements which could alter the arrangement of the turbines in the view.	As set out in **Chapter 3**, the EIA Report considers a micrositing allowance of up to 100 m (see paragraph 3.35). It is anticipated that any turbine micrositing of more than 50 m would require agreement with the Ecological Clerk of Works (ECoW) and written approval of the SBC planning officer. The assessment of effects within this LVIA takes the micrositing allowance into consideration. It is considered that micrositing turbines up to 100 m has the potential to change the composition of the layout in views, at a detailed level, but that there would be no change to the significance of effect as identified in this chapter. The exception to this is the movement of turbines within 1.2 km of residential properties with regard to effects on residential visual amenity (see **Table 3.2** in **Chapter 3**).
		The Council does not agree to the proposed Scoping out of effects on settlements and routes beyond a 20 km radius of the Site. East Lothian's main tourist road is the A198 provides panoramic views southwards along the Lammermuirs and should be included in any assessment. The national John Muir Way also follows the coastline to the north and impacts on views from this should be assessed.	The Proposed Development is unlikely to have a significant effect on people in settlements or on roads beyond a 20 km radius. However, the assessment considers effects on the John Muir Way in **Table 4.58** and the A198 in **Table 4.56**. Viewpoint assessments, with visualisations, are provided for these areas in Volume 3b of the EIA Report, so the likely effects can be understood. In addition, the ZTVs extend to cover these areas.

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
		The Council supports the inclusion of ancillary development within the assessment and within photomontages up to 5 km. Tracks, masts, substations and other built structures will all add to the development intensity. Full information on lighting on ancillary structures must also be included with any application.	Ancillary development is illustrated on the photomontages for viewpoints within 5 km of the nearest turbine, as shown on **Figures 4.2.1 to 4.2.4** in Volume 3b of the EIA Report. Turbine lighting is shown on the photomontages in **Figures 4.2.3 (g,h), Figures 4.2.7 (e,f) and Figures 4.2.12 (f,g)** and wirelines in **Figures TA4.3.4 to TA4.3.27** in Volume 3b. Further information about turbine lighting is provided in **Appendix 4.3.**
		The Council would wish to see numbering of turbines. Landmark high points such as Spartleton and Meikle Says Law should also be included to help inform the viewer of where turbines sit in relation to the landform.	Turbines are numbered on the wirelines in **Figures 4.2.1 to 4.2.24** in Volume 3b of the EIA Report. Landmarks are marked on a small number of key viewpoints.
		The Council supports the inclusion of the night-time assessment and suggests that consideration be given to the time of these visuals. Consideration should be given to dusk and/or full night. Viewpoint 2 should be included in night-time visuals. It is agreed Viewpoint 3 should be included as noted in the Scoping Report.	Night-time photomontages are provided from Viewpoints 3, 7 and 12, as set out in **Appendix 4.3**. No further photomontage is provided from Viewpoint 5: Minor road near Wrunk Law (formerly Viewpoint 2) as views from the minor road are represented by Viewpoint 3: Minor road near Wanside Rig junction. In addition, turbine lighting is shown on the wirelines in **TA4.3.4 to TA4.3.27** in Volume 3b. This enables a full understanding of the likely effects.
		In general the Council agrees with the viewpoints proposed, but would want to agree specific grid references before production of visuals. Seven viewpoints are proposed within East Lothian. ■ 1. Viewpoint 2 from the minor road to the south of Whiteadder Reservoir may be better relocated to within the Whiteadder valley and Special Landscape Area. At present there is no visibility of even turbine tips from this area. The ZTVs suggest visibility of tips and hubs with this proposal. Sequential views along this road would also be desirable along this road and possible night-time assessment. ■ 2. Viewpoint 14 says it is from the Garleton Hills. There is a direct view of the Fallago Rig turbines from the A6137 to the north of Haddington and this may be an appropriate assessment point.	Final viewpoint locations were agreed with ELC on 7 December 2022. ■ 1. Viewpoint 2 (now LVIA Viewpoint 5: Minor road near Wrunk Law in **Table 4.26**) was retained as it represents local residential receptors and road users. An additional viewpoint (Viewpoint 6: Spartleton Hill in **Table 4.27**) was included to represent views from the Whiteadder SLA. ■ 2. Viewpoint 14 (now LVIA Viewpoint 17: Barney Hill, Garleton Hills in **Table 4.38**) was relocated to represent the 'worst case' visibility from the Garleton Hills area. ■ 3. Viewpoint 15 (now LVIA Viewpoint 20: B6371 in **Table 4.41**)

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
		■ 3. Viewpoint 15 Tranent is supported as the raised elevation of the town gives wide ranging views along the Lammermuir Hills and gives an alternative view from the northwest towards the Site. An appropriate location may be from the junction of the B6355 and B6371 to the southeast of the town.	was relocated to the B6355 / B6371 junction as requested.
		Additional viewpoints: ■ 1. The A198 at Dirleton representative of users of the coast and the tourist coast road where there are panoramic views to the south of the Lammermuir Hills. Alternatively, a viewpoint from within the North Berwick to Seton Sands SLA at Gullane should be considered. This may also be appropriate for night-time assessment, as although just over 25 km from the Site it is one of East Lothian's darkest areas with wide ranging views of the hills and sea. ■ 2. A viewpoint from within Haddington. This would provide assessment for the impact on residential area and is important as the ZTV indicates visibility of hubs from here at a lower elevation that the hill tops proposed for most viewpoints. Existing views of wind farms are limited from the town along the Lammermuir skyline and any increase to this should be assessed. ■ 3. The summit of Spartleton for cumulative and recreational views.	All suggested viewpoints are included within the assessment. ■ LVIA Viewpoint 23: A198, Dirleton is assessed in **Table 4.44**. A wireline visualisation is provided in **Figure 4.2.23** in Volume 3b of the EIA Report. ■ LVIA Viewpoint 16: Park Lane, Haddington is assessed in **Table 4.37**. A wireline visualisation is provided in **Figure 4.2.16** in Volume 3b. ■ LVIA Viewpoint 6: Spartleton Hill is assessed in **Table 4.27**. A photomontage is provided in **Figure 4.2.6** in Volume 3b.
		Include offshore wind farms and turbines and wind farms in Fife when considering the cumulative impact from North Berwick Law. There is a single turbine at Woodhall which is operational so is in the baseline, however it should be considered for cumulative views.	Turbines within 45 km of the Proposed Development are considered for inclusion in the cumulative assessment, as detailed in **Table 4.7**. Single turbines are considered within 5 km of the Proposed Development. Cumulative wirelines for Viewpoint 22: North Berwick Law include offshore wind farms within 45 km of the viewpoint (**Figure 4.2.22**).
East Lothian Council 21/02/2023	Post-Scoping	The updated cumulative list does not include any offshore wind farms as these are all further than 45 km from the Site. The offshore wind farms are closer to North Berwick Law than to the Site, however, and should form part of any assessment from North Berwick Law.	Cumulative wirelines for Viewpoint 22: North Berwick Law include offshore wind farms within 45 km of the viewpoint (**Figure 4.2.22**).

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
		Viewpoint 3 will give a good impression of night-time visibility and impact on East Lothian. We also asked for inclusion of viewpoint 2 from Whiteadder as this is currently dark with no wider visibility out of the valley and no visible turbines at present. The proposals introduce turbines and probably lighting into this view. This has not been included as a night-time view. We would want this viewpoint included in night-time assessment but maybe not a night time visual. If the lights are shown on the wirelines this will show the visibility of lighting from that and assess the impact without a visual. We presume night-time impact will form part of the assessment for each viewpoint whether we have a visual from them or not.	Night-time photomontages are provided from Viewpoints 3, 7 and 12, as set out in **Appendix 4.3**. In addition, turbine lighting is shown on the wirelines in **TA4.3.4 to TA4.3.27** in Volume 3b. This enables a full understanding of the likely effects.
Gifford Community Council 04/08/2022	Scoping	Gifford is the closest significant community north of the proposed wind farm. Designated a Conservation Area, the village has a rich historical heritage, with many significant listed buildings, and is a popular destination for tourists and day visitors. It is appreciated that, compared with locations to the south and east of Dunside, there will not be a great visual impact on the village itself. Nevertheless, it is proposed that an additional viewpoint be considered approximately 1 km north of the centre of Gifford on the B6369. This location, which falls within the ZTV for 5-8 turbine tips, provides a view of the village in its historical context, supporting Yester Estate and lying beneath the Lammermuir Hills.	Gifford was considered for inclusion in the assessment but scoped out due to very limited visibility, as set out in **Table 4.5**. A wireline from the B6369 north of Gifford is provided in **Figure 4.2.25** in **Volume 3b**.
John Muir Trust 14/04/2022	Scoping	John Muir Trust noted that the proposed site is entirely located within the Lammermuir Hills Special Landscape Area (SLA) and borders the Lammermuir Moorland SLA in East Lothian to the north. No further comments are made at the Scoping stage	An assessment of effects on the special qualities of designated landscapes (including SLAs) is provided in **Table 4.60** to **Table 4.63**.
Lauderdale Community Council 05/04/2022	Scoping	The existing Fallago Rig turbines are visible from several upland areas of Lauderdale. The proposed turbines, at twice the height, will be significantly more so. We believe that they will be visible from walking, cycling and horse-riding routes on minor roads and request that the final submission should include photomontages from around the following points: NT 4942 4591 Lauder Common high point; NT 5331 4282 Jeaniefield; NT 5449 4508 Blainslie-Lauder road; NT 5836 4559 Old Boon.	The requested viewpoints are not included within the assessment due to very limited visibility, and the inclusion of similar viewpoints in more representative locations. Views from the Lauderdale area are represented by LVIA Viewpoint 11: Edgarhope Wood, Southern Upland Way (**Table 4.32**) and Viewpoint 14: B6362 above Lauder (**Table 4.35**).
	Scoping	NS note that Fallago Rig is located within a natural bowl formed by the landform that	The relationship between the Proposed Development and Fallago Rig turbines

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
Nature Scot (NS) 09/08/2022		accommodates the turbines (48 turbines at 125/110 m to blade tip). The landform helps to reduce adverse effects on the wider landscape and visual resource due to the containment that it provides and the height of the turbines contained therein. This development is proposing the use of 260 m turbines which will be located outside the natural bowl landform, therefore they are likely to be greater than 100 m taller than the operational Fallago Rig turbines. We consider that this would result in a considerable design contrast between the Dunside Wind Farm proposal and the Fallago Rig Wind Farm, with a notable increase in scale in relation to turbine height, turbine spacing, rotor diameter and the resultant requirement for lighting. NS advise that this aspect should be given close attention within the assessment.	is considered for all landscape and visual receptors as reported in the assessment tables. Fallago Rig was a key consideration in the design process as described further in **Chapter 2**. It is noted that the maximum blade tip height of the Proposed Development was reduced to 220 m as described in **Chapter 3**.
		NatureScot consider the potential for adverse landscape and visual effects in views of the skyline that the Lammermuir hills form, as appreciated from East Lothian, should be a key design consideration.	Views towards the Lammermuir Hills from East Lothian were a key consideration in the design process as described further in **Chapter 2**. Landscape and visual effects on receptors in East Lothian are considered in the relevant assessment tables.
Scottish Borders Council 01/05/2022	Scoping	The Ironside Farrar (IF) Landscape Capacity and Cumulative Impact Study is a material planning consideration in the assessment of wind turbine proposals within the Scottish Borders. Any S36 application at Dunside will need to be supported by an EIA that references and assesses the scheme against the new Supplementary Guidance and updated IF Study. The current policy is based on the LCT's of the Borders Landscape Character Assessment (now superseded by NatureScot's Landscape Character Assessment) and assesses the underlying landscape capacity for wind turbines of 120 m high and greater, concluding that there may be limited additional capacity for larger wind turbines within the Lammermuir Hills in association with existing wind farms. As a result of the above, the height of turbines proposed is outside the scope of available guidance and significantly larger than any turbines in consented wind farms in the Scottish Borders to date.	The findings of the IF Wind Energy Consultancy Update of Wind Energy Landscape Capacity and Cumulative Impact Study are discussed in paragraphs 4.51 to 4.53. The landscape assessment is based on the baseline information within NatureScot's Landscape Character Assessment (LCA).
		An initial study area of 45 km from the outermost turbines in all directions is proposed for the LVIA to identify the relevant landscape and visual receptors, as recommended in	No significant landscape and visual effects are anticipated beyond 45 km from the Proposed Development,

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
		current guidance for turbines over 150 m to blade tip. SBC questions whether this is relevant to the size of turbines proposed.	therefore the 45 km study area is considered appropriate.
		A full resolution ZTV to blade tip height with viewpoints with clear demarcation of the SBC/ELC border and clear background mapping should be made available. This information is required to allow the Council to confirm landscape and visual receptors.	A large format ZTV is provided in **Figure 4.2.1b** (tip height) and **Figure 4.2.2b** (hub height) in Volume 3b of the EIA Report.
		Siting and design of the wind farm should ensure that the proposal does not dominate the landscape. At design stage, consideration should be given to micrositing and take account of the screening potential of landform from key viewpoints.	Further detail on the design of the Proposed Development is provided in **Chapter 2**.
		The disparity of the height of the proposed turbines at 260 m in relation to existing and consented wind farms, particularly Fallago Rig where turbines are less than half the size (up to 150 m in height) of those proposed will be a key consideration. These issues will need to be addressed in the ES and should be demonstrated by photomontage visualisations where relevant.	The relationship between the Proposed Development and Fallago Rig turbines is considered for all landscape and visual receptors as reported in the assessment tables. Fallago Rig was a key consideration in the design process as described further in **Chapter 2**. It is noted that the maximum blade tip height of the Proposed Development was reduced to 220 m as described in **Chapter 3**.
		A variety of 'coincident' cumulative impacts with adjoining sites within 20 km range could give rise to significant effects and will need to be assessed.	A detailed cumulative assessment is included in the assessment tables. Consideration is given to wind farms at Scoping stage within **Appendix 4.4**.
		In addition, 'sequential' cumulative impacts may occur throughout the study area and these should be addressed separately in the ES	Sequential cumulative effects for receptors on roads and routes are considered in assessment **Table 4.51** to **Table 4.59**.
		The location of the proposed access road raises concerns regarding its position along a series of ROWs leading from the B6456, particularly where it shares a section of the Southern Upland Way, the most important long distant walking route for visitors to the Scottish Borders. The LVIA should consider the impacts on the adjacent Wedderlie Designed Landscape which borders the proposed access route.	The sections of access road shared with the Southern Upland Way and close to Wedderlie are existing features constructed for Fallago Rig Wind Farm. Effects on the Southern Upland Way are assessed in **Table 4.57**.
		The details of any changes in forest cover and the resulting landscape and visual effects also needs to be taken account of in the landscape and visual impact assessment.	Consideration is given to felling cycles where forestry is found to screen views in the assessment tables.
		Given the height of the proposed turbines with potential for visual effects at greater distances than previously experienced a few additional	Viewpoints at Foulden / Paxton, on the Southern Upland Way near Blackburn Rig and at Rubers Law were not

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
		VPs would be welcomed to assess the landscape and visual effects on receptors at greater viewing distances than those shown on the ZTVs e.g. ■ The A6112 a popular tourist route giving access to the north and eastern borders; ■ The A697 between Coldstream and Greenlaw an important cross Borders route, sequential effects should be assessed; ■ Sequential effects from the B6456; ■ Foulden or Paxton representing the eastern Borders; ■ Southern Upland Way near Blackburn Rig; and ■ Rubers Law, popular for hill walkers at approximately 45 km south. Some of these should be included in the night-time assessment.	included in the assessment as no significant effects are anticipated, due to distance. The following viewpoints are considered in the assessment: ■ Viewpoint 7: B6456, Westruther in **Table 4.28** with photomontage in **Figure 4.2.7**; ■ Viewpoint 8: B6456 near Bedshiel in **Table 4.29:** with wireline visualisation in **Figure 4.2.8**; ■ Viewpoint 18: A6112 near Fawcett Wood in **Table 4.39** with wireline visualisation in **Figure 4.2.18**; and ■ Viewpoint 19: A697 near Coldstream in **Table 4.40** with wireline visualisation in **Figure 4.2.19**.
		Given the height of the proposed turbines beyond the height of any consented turbines to date in the Scottish Borders, consideration should be given to an increased study area for the visual amenity of residential receptors (RVAA) from 2 km to 3 km or more if significant effects are likely to be experienced.	Within the RVAA in **Appendix 4.2**, consideration is given to properties within 3 km where wirelines indicate theoretical visibility of the Proposed Development.
		The ZTV Fig 4.1 indicates that there is potential for extensive theoretical visibility right across the Scottish Borders particularly to the south and east. To the north, East Lothian is largely shielded from visibility by the Lammermuir Hills with the exception of the more northerly coastal areas. It is questionable as to whether the receiving landscape will be able to 'absorb' turbines of this height and will be dependent on very careful siting, height adjustment and use of the landform, ridges, hills, valleys and vegetation to limit significant adverse effects on landscape and visual amenity.	Further detail on the design of the Proposed Development is provided in **Chapter 2**.
ECU 01/05/2022	Scoping	It is recommended by the Scottish Ministers that, with regards to impacts of night-time aviation lighting, the Company should discuss and agree with Scottish Borders Council, East Lothian Council and Nature Scot the range (in kilometres from the Proposed Development) for night-time assessments of the impacts of night-time aviation lighting and receptors to be	An assessment of night-time effects associated with turbine lighting is provided in **Appendix 4.3**. Night-time visualisations were agreed with ELC [20] and NatureScot.

[20] No response received from Scottish Borders Council as of 26 May 2023

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
		assessed. All findings should be provided in the EIA Report.	
		As the maximum blade tip height of turbine exceeds 150 m, the LVIA must include a robust night-time assessment, with agreed viewpoints to consider the effects of aviation lighting and how the chosen lighting mitigates the effects.	An assessment of night-time effects associated with turbine lighting is provided in **Appendix 4.3**. Night-time visualisations were agreed with ELC and NatureScot.
		It is recommended by Scottish Ministers that the study area in kilometres from the outer most turbines of the Proposed Development and the final list of viewpoints and visualisations, including those for night-time assessment, should be agreed following discussion between the Company, Scottish Borders Council, Nature Scotland and East Lothian Council.	Study areas, viewpoint locations and visualisation types were agreed with ELC and NatureScot20.
		Developments to be included in cumulative landscape impact assessments should be discussed and agreed by the Company, East Lothian Council and Scottish Borders Council. Photography and visualisations submitted in the EIA Report should reflect the most up-to-date cumulative position and the most up-to-date ecological and vegetation position.	Developments to be considered in the cumulative assessment were agreed with ELC and NatureScot[21].
East Lothian Council 14.03.2022	Gate check	The council noted that the visual assessment should not place reliance on shielding of existing trees unless they are within the Applicants control or are under a Tree Preservation Order. The developer has responded that areas of woodland and hedges other than forestry planting will be assumed to be permanent. This does not reflect the worst-case scenario, which would be that woodland or hedgerow is removed. Where woodland or hedgerow has a role in shielding views of the proposal, this should therefore be considered in the LVIA.	The LVIA viewpoints were microsited to avoid foreground vegetation and therefore represent the 'worst case' scenario in terms of views from the receptor which they represent. Within the LVIA, all changes are assumed to be during winter, representing a 'worst case' scenario with minimal screening by vegetation and deciduous trees. Note that wirelines and ZTVs prepared to illustrate potential visual effects are calculated on the basis of bare ground and therefore demonstrate the maximum extent of visibility possible, in the absence of buildings or vegetation.4-12here forestry is present, consideration is given to felling regimes if levels of screening by forestry are likely to change notably during the lifetime of the Proposed Development.
		We consider that an allowance of 100 m could change the worst case assessed. This is not desirable, as it would mean that micrositing	As set out in **Chapter 2**, the EIA Report considers a micrositing allowance of 100 m. The assessment of effects within this LVIA takes this allowance

[21] No response received from Scottish Borders Council as of 26 May 2023

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
		effects could potentially result in the need for further application. The council would therefore suggest the lower distance is used unless the applicant, having considered the visual information, is confident that no changes could be made from the layout presented using the 100 m micrositing allowance which make the impact significantly worse.	into consideration. It is anticipated that any turbine micrositing of more than 50 m would require agreement with the ECoW and written approval of the SBC planning officer.
		As noted at Scoping, the Council considers there is potential for significant impacts on settlements and routes beyond 20 km. The Lammermuirs form a backdrop to East Lothian and the proposal is likely to appear on the skyline. The turbines proposed are larger than those currently in the centre of the Lammermuirs at Fallago Rig, and in addition may be lit. The turbines at Fallago Rig may also be removed before this proposal, extending the impact of turbines on the horizon in the central Lammermuirs in time. We would therefore request that the impact on settlements and routes beyond 20 km be included in the assessment.	It is considered unlikely that significant effects could occur on settlements and routes beyond 20 km. The assessment considers effects on the John Muir Way in **Table 4.58** and the A198 in **Table 4.56**. For other settlements and routes beyond 20 km, reference can be made to the visual assessment for Viewpoint 16: Park Lane, Haddington (**Table 4.37** and **Figure 4.2.16**), Viewpoint 20: B6371, Tranent (**Table 4.41** and **Figure 4.2.20**) and Viewpoint 23: A198, Dirleton (**Table 4.44** and **Figure 4.2.23**). The ZTVs extend to cover all these areas and reference can also be made to these.
		We asked for inclusion of Viewpoint 2 from Whiteadder in the night-time assessment as this is currently dark with no visibility out of the valley. The proposals introduce turbines and probably lighting into this view. The developer states in the response that the scope of the aviation lighting assessment will be subject of further consultation with ourselves, SBC and NatureScot. This should follow discussions with the CAA, other operators of obstacles and night flying craft, to ascertain what the minimum scheme would be. We would expect Viewpoint 2 to be included in the assessment if lighting is visible from this point. We would prefer that this is included as a night-time visualisation as well.	Night-time photomontages are provided from Viewpoints 3, 7 and 12, as set out in **Appendix 4.3**. No further photomontage is provided from Viewpoint 5: Minor road near Wrunk Law (formerly Viewpoint 2) as views from the minor road are represented by Viewpoint 3: Minor road near Wanside Rig junction. In addition, turbine lighting is shown on the wirelines in **TA4.3.4 to TA4.3.27** in Volume 3b. This enables a full understanding of the likely effects.
		We note that the final cumulative list is still to be agreed. We are wary of completely ruling out consideration of single turbines beyond 5 km, as if there were to be an application prior to this for a turbine between a viewpoint and the proposal it may require to be considered. We are not aware of any such at the moment however. We would expect that offshore development is considered cumulatively for the North Berwick Law viewpoint.	Developments to be considered in the cumulative assessment were agreed with ELC (email dated 21 February 2023). Cumulative wirelines for Viewpoint 22: North Berwick Law include offshore wind farms within 45 km of the viewpoint (**Figure 4.2.22**).

Committed Design Considerations

Project Design Assumptions, Good Practice Measures and Embedded Design

4.15 Potential landscape and visual effects associated with the Proposed Development were a key consideration in the design evolution, to be balanced against onsite constraints and optimising wind yield. Landscape and visual objectives included the consideration of effects on residential visual amenity from nearby properties and the composition of the layout in key views. Further information on the design process is included in **Chapter 2.**

4.16 The primary assessment in the LVIA considers a scenario in which Fallago Rig Wind Farm is operational and forms part of the landscape and visual baseline, as will be the case until at least 2043. However, the understanding that Fallago Rig may be decommissioned at a future date, resulting in the Proposed Development being a standalone scheme, was a consideration in the development of the design for the Proposed Development. As such, the project was designed to look coherent, both with and without Fallago Rig.

Micrositing

4.17 It is proposed that the turbines and other infrastructure will be subject to a 100 m micrositing allowance, as set out in paragraph 3.35 of **Chapter 3**. Tailored restrictions to the standard micrositing allowance are proposed to ensure that the final position of the turbines and associated infrastructure are not varied to such a degree as to cause a notable change in the predicted environmental effects outline in the EIA Report. It is anticipated that any turbine micrositing of more than 50 m would require agreement with the EcoW and written approval of the Scottish Borders Council planning officer. Restrictions with regards to residential visual amenity are set out in **Table 3.2** of **Chapter 3**.

Method of Baseline Characterisation

Extent of the study area

4.18 The study area for this assessment is defined as 45 km from the outermost turbines of the Proposed Development in all directions, as recommended in current guidance for turbines above 150 m to blade tip, and in agreement with statutory consultees NatureScot and ELC (**see Table 4.1**). Wind farms within 60 km of the Proposed Development are shown on **Figure 4.1.8** and wind farms within 45 km are show on **Figure 4.1.9**.

4.19 To assess cumulative effects of the Proposed Development in relation to other developments in the wider area, operational, consented and proposed wind farms within 45 km of the Proposed Development were included within modelling and visualisations.

4.20 To assist with assessing theoretical visual effects of the Proposed Development, a ZTV map was produced illustrating where the proposed wind turbines may be visible from within the study area. The ZTV was based on bare earth topography and therefore does not take account of potential screening by vegetation or buildings. The ZTV is used as tool for understanding where significant visual effects may occur. Receptors located outside the ZTV will not be affected by views of the wind turbines within the Proposed Development. They are not considered further in the assessment.

Desk Study

4.21 The following data sources have informed the assessment:

- SNH (2019 web-based resource) Scottish LCT Map and Descriptions;
- Ordnance Survey (OS) Maps at 1:50,000 and 1:25,000 scale;
- OS Terrain® 5 mid-resolution height data (DTM) (5 m grid spacing, 2.5 m RMSE);
- Ordnance Survey 1:25,000 raster data;
- Ordnance Survey 1:50,000 raster data;
- Ordnance Survey 1:250,000 raster data; and

- Data from other wind farm applications for the cumulative assessment and SBC/ELC/Energy Consents Unit (ECU) planning portals.

Field Survey

4.22 Field survey work was carried out during several visits under differing weather conditions between July 2022 and April 2023, and records were made in the form of field notes and photographs. Field survey work included visits to the Site, viewpoints and designated landscapes, and extensive travel around the study area to consider likely effects on landscape character and on experiences of views seen from designated landscapes, settlements and routes.

Criteria for Assessing Significance

4.23 The significance of the potential effects of the Proposed Development was classified by professional consideration of the sensitivity of the receptor and the magnitude of the potential effect. A detailed methodology is presented in **Appendix 4.1**, and is summarised below.

Sensitivity of Receptors

4.24 The sensitivity of the baseline conditions, including the importance of environmental features on or near to the Site or the sensitivity of potentially affected receptors, was assessed in line with best practice guidance, legislation, statutory designations and professional judgement.

4.25 Judgements regarding the sensitivity of landscape or visual receptors require consideration of both the susceptibility of the landscape or visual receptor to the type of development proposed and the value attached to the landscape or visual resource. Judgements were recorded as high, medium, low or negligible. Detailed information about the approach to assessment of sensitivity is provided in **Appendix 4.1**.

Magnitude of Change

4.26 The magnitude of change was identified through consideration of the Proposed Development, the degree of change to baseline conditions predicted as a result of the Proposed Development, the duration and reversibility of an effect, and informed through knowledge of best practice guidance and legislation.

4.27 Judgements regarding the magnitude of landscape or visual change are recorded as high, medium, low or negligible and combine an assessment of the scale and geographical extent of the landscape or visual effect, its duration and reversibility. Detailed information about the approach to assessment of magnitude is provided in **Appendix 4.1**.

Significance of Effect

4.28 The sensitivity of the receptor and the magnitude of the predicted effects was used as a guide, in addition to application of professional judgement, to predict the significance of the likely effects.

4.29 This determination requires the application of professional judgement and experience to take on board the many different variables which need to be considered, and which are given different weight according to site-specific and location-specific considerations in every instance. Judgements were made on a case-by-case basis, guided by the principles set out in Diagram 1 in **Appendix 4.1**. As such numerical or formal weighting system is not appropriate. Consideration of the relative importance of each aspect was made to feed into the overall decision.

4.30 Levels of effect are described as Negligible, Minor, Moderate or Major, where **Moderate** and **Major** effects are considered **significant** in the context of the EIA Regulations. In terms of the direction of effects (positive or adverse), there is a wide spectrum of opinion with regard to wind energy development. To cover the worst-case scenario, effects are assumed to be adverse, unless stated otherwise.

Limitations and Assumptions

4.31 No substantial information gaps were identified during the preparation of baseline information or undertaking of the assessment. It is considered that there is sufficient information to enable an informed decision to be taken in relation to the identification and assessment of likely significant environmental effects on landscape and views and visual amenity.

4.32 As noted in paragraphs 4.7 and 4.8, the LVIA considers two 'reasonable worst case' scenarios as follows:

- Largest rotor scenario – maximum blade tip height 220 m, hub height 130 m, rotor diameter 180 m; and
- Tallest hub scenario – maximum blade tip height 220 m, hub height 139 m, rotor diameter 162 m.

4.33 The LVIA reports on the largest rotor scenario, but reference is made to the tallest hub scenario where there is the potential for a change to the assessment of effects.

Baseline Conditions

Landscape Baseline

4.34 This section provides an overview of the landscape baseline, including current landscape character, condition, and any designated landscapes. It draws on published studies, supplemented with project specific research and field work where relevant.

The Site and Context

4.35 The Site is located within the Lammermuir Hills in the Scottish Borders Council local authority area. The Site is approximately 6 km north of the settlement of Westruther and 7 km to the west of the settlement of Longformacus (to the nearest proposed turbine). The topography of the Site consists of a plateau of rolling hills ranging between 300 m and 500 m Above Ordnance Datum (AOD), separated by the steep sided valley of the Dye Water which runs west-east through the Site. The Dye is a tributary of the River Tweed. Notable hills within the Site include: Meikle Law (468 m AOD) in the north-west; Byrecleugh Ridge (440 m AOD) in the north, Dunside Hill (437 m AOD) in the south-east, and Wedder Lairs (486 m AOD) in the west. Multiple smaller watercourses join the Dye Water and further dissect the Site – these small watercourses are generally oriented north-south, and include Green Cleugh, Wood Cleugh, Kersons Cleugh, and Foul Cleugh.

4.36 The landcover on the Site consists mainly of heather moor and acid grassland. Tree cover is sparse, especially so on the upper plateau where heather moorland vegetation dominates. Large areas of the Site have been managed for shooting, and the patchy growth pattern of the vegetation reflects the distribution of muirburn. The Southern Upland Way runs approximately 0.8 km to the south of the nearest proposed turbine and passes through the Site boundary along the access track for approximately 0.7 km to the east of Twin Law.

4.37 As noted above, the closest settlements to the Site are Westruther, which is on the B6456 to the south, and Longformacus, which is on the minor road which crosses the Lammermuir Hills to the east. The B6355 runs broadly parallel to this minor road, and the two join at Wanside Rig to the north of the Site. There is a cluster of dwellings at Byrecleugh in the east of the Site, accessed via a private road. Other residential properties within 2-3 km of the Site include Trottingshaw and Dye Cottage to the east and Killpallet to the north.

4.38 The operational Fallago Rig Wind Farm (48 turbines, 125 m height to tip) is immediately to the north-west of the site boundary. The access track to Fallago Rig runs through the Site, along the valley of the Dye Water.

The Study Area

4.39 The study area extends to a 45 km radius from the outermost turbines of the Proposed Development in all directions, as shown in **Figure 4.1.1**. The Site itself, and the majority of the study area to the south, south-west, and east of the Site is within the SBC local authority area. The north of the study area is within the ELC local authority area (approximately 150 m from the nearest turbine). Much of the northern part of the study area is within the Firth of Forth which broadens to join the North Sea to the east. Small areas of Fife are within the study area, around 40 km to the north-west of the nearest turbine. To the west / north-west, the study area is within the Midlothian Council local authority area (12 km to the nearest turbine) and the City of Edinburgh (30 km from the nearest turbine). The south-east of the study area is within the Northumberland County Council local authority area (25 km from the nearest turbine).

4.40 The landscape character of the study area is highly varied and includes: upland plateau and moorland in the centre; smoothly rolling farmland, low-lying river valleys and coastal farmland in the north; and pastoral hills, crags, and rolling moorland in the south. To the east, the landcover transitions from rolling moorland to farmland which adjoins the cliffs along the North Sea coast. To the west a broad undulating pastoral valley containing both the Gala Water and Leader Water lies between the

Lammermuir Hills and the Moorfoot Hills. Within the more immediate study area, open and extensive moorland areas with smaller blocks of forestry form the dominant landcover. Extensive areas of muirburn within 5 km of the Site indicate the managed nature of the uplands, and areas of forestry to the south reinforce this characteristic.

4.41 In terms of settlement, the study area extends from the densely settled city and suburbs of Edinburgh and settled East Lothian coast in the north-west and north, to the smaller settlements of Penicuik and Peebles in the west, to the coastal towns of Eyemouth and Berwick upon Tweed in the east, and to the Borders settlements of Jedburgh and Hawick in the south, all of which are more than 20 km from the nearest turbine.

4.42 The road network within the immediate study area is limited to minor roads and B-roads, including the B6355 which skirts along the eastern edge of the Lammermuirs approximately 5 km to the north-east of the Proposed Development, and the B6456 approximately 7 km to the south, which connects Whiteburn and Polwarth. Within the wider study area, the A68 passes from north-west to south-west, within approximately 10 km from the nearest turbine, connecting Edinburgh with Darlington in England. The A697 passes south of the Proposed Development, within 10 km at its closest point. Approximately 20 km to the west, the A7 parallels the A68. Beyond 20 km, the A1 travels roughly along the coast, connecting Edinburgh to Berwick-upon-Tweed and crossing further south into England.

4.43 There are a number of Scotland's Great Trails within the study area, including the Southern Upland Way, which passes south and east of the Site, connecting Melrose, Lauder, Longformacus, and Cockburnspath. The Southern Upland Way crosses the Site boundary along the proposed access track, as noted above. The John Muir Way is located within 20 km to the north of the Proposed Development, and passes through Edinburgh and North Berwick. To the east, the Berwickshire Coastal Path passes within approximately 20 km, passing through St Abbs and Eyemouth. Both the Borders Abbey Way and St Cuthbert's Way pass within 25 km of the Site to the south, connecting through Melrose and Jedburgh. Other recreational routes within the study area include National Cycle Network (NCN) routes and Core Paths. The closest NCN route passes approximately 15 km to the north-east of the Proposed Development, connecting Haddington to Penicuik.

4.44 There are several existing large-scale wind farms within the study area. The closest of these include the previously mentioned Fallago Rig, Black Hill Wind Farm located approximately 11 km to the east, the Crystal Rig and Aikengall cluster located approximately 10 km to the north-east, and the Dun Law / Pogbie / Keith Hill cluster located approximately 12 km to the west.

Landscape Character Types (LCT) and Areas

4.45 The landscape character of the study area is described in the online Scottish LCA published by NatureScot in 2019 and Natural England's National Character Area profiles. LCTs across the study area are shown in **Figure 4.1.4**, and are shown overlaid with the ZTV in **Figure 4.1.5**.

4.46 The LCTs within 45 km of the Site are listed in **Table 4.2** below. Theoretical visibility of the wind turbines of the Proposed Development (ZTV coverage) is used as a means of identifying which LCTs require further assessment, and which LCTs can be scoped out because they are unlikely to experience significant effects arising from the Proposed Development. LCTs beyond 20 km from the nearest turbine, and those with limited theoretical visibility within 20 km of the Site, are not considered further within the assessment, although are shown in combination with the ZTV on **Figure 4.1.5**.

Table 4.2: Landscape Character Types Scoped In/Out of LVIA

Landscape Character Types	Theoretical visibility of proposed wind turbines of the Proposed Development (ZTV coverage) and distance to determine if LCT carried forward for detailed assessment
NatureScot Landscape Character Types	
90 - Dissected Plateau Moorland	Host LCT. Widespread theoretical visibility within 10 km. **Considered in the assessment.**
91 - Plateau Grassland - Borders	Some theoretical visibility within 15 km. **Considered in the assessment.**
92 - Plateau Outliers	Limited theoretical visibility at distances of over 20 km. Not considered in the assessment.

Landscape Character Types	Theoretical visibility of proposed wind turbines of the Proposed Development (ZTV coverage) and distance to determine if LCT carried forward for detailed assessment
93 - Southern Uplands with Scattered Forest	Some theoretical visibility at distances of over 30 km. Not considered in the assessment.
94 - Rolling Moorland	Some theoretical visibility at distances of over 30 km. Not considered in the assessment.
95 - Southern Upland Borders	Very limited theoretical visibility at distances of over 40 km. Not considered in the assessment.
97 - Rugged Uplands – Borders	Intermittent theoretical visibility at distances of over 25 km. Not considered in the assessment.
98 - Rolling Foothills	Very limited theoretical visibility at distances of over 40 km. Not considered in the assessment.
99 - Rolling Farmland – Borders	Host LCT (access track only). Widespread theoretical visibility within 10 km. **Considered in the assessment.**
100 - Plateau Farmland – Borders	Some theoretical visibility within 20 km. **Considered in the assessment.**
101 - Rocky Upland Fringe	Very limited theoretical visibility at distances of around 40 km. Not considered in the assessment.
102 - Upland Fringe with Prominent Hills	Widespread theoretical visibility within 20 km. **Considered in the assessment.**
103 - Undulating Upland Fringe	Widespread theoretical visibility within 20 km. **Considered in the assessment.**
105 - Upland Fringe Moorland with Hills	Widespread theoretical visibility within 20 km. **Considered in the assessment.**
106 - Lowland with Drumlins	Limited theoretical visibility within 20 km. Not considered in the assessment.
107 - Rolling Lowland Margin	Widespread theoretical visibility at distances of over 30 km. Not considered in the assessment.
108 - Lowland Margin	Widespread theoretical visibility within 20 km. **Considered in the assessment.**
109 - Lowland Margin with Hills	Limited theoretical visibility within 20 km. Not considered in the assessment.
110 - Coastal Farmlands – Borders	Limited theoretical visibility at distances of over 20 km. Not considered in the assessment.
111 - Coastal Pasture	Some theoretical visibility at distances of over 20 km. Not considered in the assessment.
112 - Coastal Moorland – Borders	Some theoretical visibility at distances of over 20 km. Not considered in the assessment.
113 - Upland Valley with Pastoral Floor	Very limited theoretical visibility. Not considered in the assessment.
114 - Pastoral Upland Valley	Limited theoretical visibility within 20 km. Not considered in the assessment.
115 - Upland Valley with Mixed Farmland	Some theoretical visibility within 10 km. **Considered in the assessment.**

Landscape Character Types	Theoretical visibility of proposed wind turbines of the Proposed Development (ZTV coverage) and distance to determine if LCT carried forward for detailed assessment
116 - Upland Valley with Woodland	Very limited theoretical visibility. Not considered in the assessment.
117 - Pastoral Upland Fringe Valley	Some theoretical visibility within 20 km. **Considered in the assessment.**
118 - Settled Upland Fringe Valley	Limited theoretical visibility at distances of over 20 km. Not considered in the assessment.
119 - Wooded Upland Fringe Valley	Limited theoretical visibility within 15 km. Not considered in the assessment.
120 - Lowland Valley with Farmland	Some theoretical visibility at distances of over 20 km. Not considered in the assessment.
266 – Plateau Moorland – Lothians	Widespread theoretical visibility within 10 km. **Considered in the assessment.**
267 - Plateau Grassland – Lothians	Limited theoretical visibility within 20 km. Not considered in the assessment.
268 - Upland Hills – Lothians	Some theoretical visibility at distances of over 20 km. Not considered in the assessment.
269 - Upland Fringes – Lothians	Very limited theoretical visibility within 10 km. Not considered in the assessment.
270 - Lowland River Valleys - Lothians	Very limited theoretical visibility within 10 km. Not considered in the assessment.
272 - Lowland Hills and Ridges – Lothians	Some theoretical visibility at distances of over 20 km. Not considered in the assessment.
274 - Lowland Plain	Limited theoretical visibility at distances of over 20 km. Not considered in the assessment.
275 - Lowland Farmed Plain – Lothians	Some theoretical visibility within 10 km. **Considered in the assessment.**
277 - Coastal Margins – Lothians	No theoretical visibility. Not considered in the assessment.
278 - Coastal Terrace – Lothians	Some theoretical visibility at distances of over 20 km. Not considered in the assessment.
279 - Settled Coastal Farmland	Some theoretical visibility at distances of over 20 km. Not considered in the assessment.

Landscape Sensitivity

4.47 SBC's Supplementary Guidance on Renewable Energy (2018) sets out detailed policy considerations against which all proposals for wind energy will be assessed. It contains an onshore spatial framework, identifying areas where wind farms will not be acceptable, areas of significant protection and areas with potential for wind farm development. The majority of the Site is within an area with potential for wind farm development (see Image 2.1 of the **Dunside Wind Farm Design and Access Statement**). SBC's Update of Wind Energy Landscape Capacity and Cumulative Impact Study (Ironside Farrar, 2016) forms part of the Supplementary Guidance on Renewable Energy. The study is based on the Borders LCA (ASH Consulting Group, 1998) which is now superseded by NatureScot's online character assessment.

4.48 The Scottish Borders Capacity Study[22] identifies the Dissected Plateau Moorland: Lammermuir Plateau LCT (the 'host' LCT) as being of medium landscape sensitivity, with low capacity for very large (100 m+ to tip height) turbines. The study outlines that the character area is reaching capacity, but also notes *"… there is still capacity for limited development within small areas around Fallago Rig taking advantage of areas with lower intervisibility and topographical containment for further windfarm developments of large or very large sized turbines"*[23]. The Lammermuir Plateau LCT is coincident with LCT 90: Dissected Plateau Moorland identified in NatureScot's national LCA.

4.49 Although the host LCT is identified as having low capacity for very large turbines, it should also be acknowledged that the concept of landscapes having a fixed 'capacity' is increasingly questioned. Policy imperatives such as the declared climate emergency imply that greater levels of landscape change must be accepted. To this point regarding onshore wind development, NatureScot state that "*wind energy studies should not be referred to as capacity studies, as no local or regional targets are available on which to determine the capacity for development.*"[24] However, the capacity studies do provide useful guidance on the underlying sensitivity of the landscape, which does not change with policy.

Designated Landscapes

4.50 Designated landscapes within the study area are listed in **Table 4.3** below and shown on **Figure 4.1.6**. Theoretical visibility of the Proposed Development from each designation is shown in **Figure 4.1.7** and described below and in the table. As with LCTs, this is used as a means of identifying which nationally and locally designated landscapes require further assessment, and which are unlikely to be affected by the Proposed Development and therefore not considered further in the assessment.

Nationally Designated Landscapes

4.51 There is one National Park partially located within the study area, the Northumberland National Park, approximately 34 km to the south of the nearest turbine. There is limited theoretical visibility of the Proposed Development from the northernmost reaches of this National Park, however given the distance, an assessment of effects on the National Park was scoped out.

4.52 There is one Area of Outstanding Natural Beauty (AONB) within the study area, the Northumberland Coast AONB, approximately 40 km to the south-east of the nearest turbine. There is limited theoretical visibility from this AONB, and due to the distance an assessment of effects on the AONB was scoped out.

4.53 The Eildon and Leaderfoot National Scenic Area (NSA) is located approximately 18 km to the south of the nearest turbine, with some theoretical visibility of the Proposed Development. Due to the proximity, an assessment of effects on the special qualities of the Eildon and Leaderfoot NSA is provided in **Table 4.60**. The Upper Tweeddale NSA is located approximately 40 km to the south-west of the Site with very limited theoretical visibility of the Proposed Development, and was therefore scoped out of the assessment.

Locally Designated Landscapes

4.54 There are a number of SLAs within the study area. The Site is located entirely within the Lammermuir Hills SLA and sits on the southern border of the Lammermuir Moorland SLA in East Lothian. Additional SLAs in proximity to the Site include Lammer Law, Hopes to Yester SLA, Whiteadder SLA, and Danskine to Whitecastle SLA. Theoretical visibility across these designated landscapes varies across the study area, as well as across further SLAs located within 20 km, as set out in **Table 4.3** below.

4.55 There are a number of Gardens and Designed Landscapes (GDLs) within the study area, many of which are open to members of the public and therefore of relevance to the assessment of visual effects on recreational receptors. The closest GDLs are at Thirlestane Castle and at Yester House, beyond 8 km from the nearest turbine and both experiencing very limited theoretical visibility of the Proposed Development. Thirlestane Castle and Yester House were therefore scoped out of the assessment, as set out in the table below. Mellerstain GDL (approximately 16 km to the south) is the only GDL within 20 km that experiences theoretical visibility of the Proposed Development and is publicly accessible. It was therefore scoped into the assessment.

[22] Scottish Borders Council (2016) Update of Wind Energy Landscape Capacity and Cumulative Impact Study
[23] ibid
[24] https://www.nature.scot/professional-advice/landscape/landscape-tools-and-techniques/landscape-sensitivity-studies

Table 4.3: Designated Landscapes Scoped In/Out of LVIA

Designated Landscapes	Theoretical visibility of Proposed Development (ZTV coverage) and distance to determine if Landscape Designation is carried forward for detailed assessment
National Parks	
Northumberland National Park	Intermittent theoretical visibility however, theoretical visibility in the National Park is beyond 35 km – not considered further.
Areas of Outstanding Natural Beauty (AONB)	
Northumberland Coast AONB	Intermittent theoretical visibility however, theoretical visibility in the AONB is beyond 40 km – not considered further.
National Scenic Areas (NSA)	
Eildon and Leaderfoot NSA	Some theoretical visibility within 20 km from areas of higher elevation. **Considered further.**
Upper Tweeddale NSA	Very limited theoretical visibility at a distance of over 40 km – not considered further.
ELC Special Landscape Areas (SLA)	
Lammermuir Moorland SLA	Widespread theoretical visibility, within 10 km. **Considered further.**
Lammer Law, Hopes to Yester SLA	Very limited theoretical visibility, within 10 km – not considered further.
Whiteadder SLA	Intermittent theoretical visibility, within 10 km. **Considered further.**
Danskine to Whitecastle SLA	Very limited theoretical visibility, within 10 km – not considered further.
Whittingehame to Deuchrie SLA	Very limited theoretical visibility, beyond 15 km – not considered further.
Monynut to Blackcastle SLA	Limited theoretical visibility, beyond 10 km – not considered further.
Humbie Headwaters SLA	Very limited theoretical visibility, beyond 15 km – not considered further.
Halls to Bransly Hill SLA	Very limited theoretical visibility, beyond 10 km – not considered further.
Linplum SLA	Very limited theoretical visibility, beyond 10 km – not considered further.
Traprain and Tyne Valley SLA	Limited theoretical visibility, within 15 km – not considered further.
Doonhill to Chesters SLA	Limited theoretical visibility, beyond 15 km – not considered further.
Winton Walks SLA	Limited theoretical visibility, beyond 15 km – not considered further.
Bolton SLA	Limited theoretical visibility, beyond 10 km – not considered further.
Morham SLA	Limited theoretical visibility, beyond 10 km – not considered further.
Clerkington and Tyne Walk SLA	Limited theoretical visibility, beyond 15 km – not considered further.
Biel and Belton SLA	Very limited theoretical visibility, beyond 15 km – not considered further.
Samuelston SLA	Limited theoretical visibility, beyond 15 km – not considered further.
Garleton Hills SLA	Limited theoretical visibility, beyond 15 km – not considered further.

Designated Landscapes	Theoretical visibility of Proposed Development (ZTV coverage) and distance to determine if Landscape Designation is carried forward for detailed assessment
Belhaven Bay SLA	Very limited theoretical visibility, beyond 15 km – not considered further.
Ormiston Yew and Fountainhall SLA	Limited theoretical visibility, beyond 15 km – not considered further.
Elphinstone Ridge SLA	Limited theoretical visibility, beyond 20 km – not considered further.
Garden County Farmland SLA	Limited theoretical visibility, beyond 20 km – not considered further.
SBC Special Landscape Areas (SLA)	
Lammermuir Hills SLA	Host SLA. Widespread theoretical visibility within 10 km. **Considered further.**
Cheviot Foothills SLA	Intermittent theoretical visibility beyond 35 km – not considered further.
Teviot Valleys SLA	Intermittent theoretical visibility beyond 35 km – not considered further.
Tweed, Ettrick and Yarrow Confluences SLA	Limited theoretical visibility beyond 25 km – not considered further.
Tweed Lowlands SLA	Intermittent theoretical visibility beyond 20 km – not considered further.
Tweed Valley SLA	Very limited theoretical visibility beyond 25 km – not considered further.
Tweedsmuir Uplands SLA	Limited theoretical visibility beyond 25 km – not considered further.
Berwickshire Coast SLA	Limited theoretical visibility beyond 25 km – not considered further.
Midlothian Council Special Landscape Areas (SLA)	
Fala Moor SLA	Limited theoretical visibility within 20 km – not considered further.
Fala Rolling Farmland and Policies SLA	Very limited theoretical visibility – not considered further.
Gladhouse Reservoir and Moorfoot Scarp SLA	Very limited theoretical visibility – not considered further.
South Esk Valley and Carrington Farmland SLA	Some theoretical visibility beyond 25 km – not considered further.
Tyne Valley SLA	Some theoretical visibility beyond 20 km – not considered further.
Pentland Hills SLA	Some theoretical visibility beyond 20 km – not considered further.
Fife and City of Edinburgh (SLA)	
Edmonstone House SLA	Some theoretical visibility beyond 30 km – not considered further.
The Drum SLA	Some theoretical visibility beyond 30 km – not considered further.
Holyrood, Duddingston and Prestonfield SLA	Some theoretical visibility beyond 30 km – not considered further.
Craigmillar Castle SLA	Very limited theoretical visibility – not considered further.
Braids, Liberton, Mortonhall SLA	Some theoretical visibility beyond 30 km – not considered further.
Pentland Hills SLA	Very limited theoretical visibility – not considered further.

Designated Landscapes	Theoretical visibility of Proposed Development (ZTV coverage) and distance to determine if Landscape Designation is carried forward for detailed assessment
Craiglockhart SLA	Very limited theoretical visibility – not considered further.
Corstorphine Hill SLA	Some theoretical visibility beyond 35 km – not considered further.
Southern Forth Coast SLA	Some theoretical visibility beyond 40 km – not considered further.
Ratho Hills SLA	Some theoretical visibility beyond 40 km – not considered further.
Gardens and Designed Landscapes (GDL)	
Thirlestane Castle GDL	Very limited theoretical visibility – not considered further.
Yester House GDL	Very limited theoretical visibility – not considered further.
Marchmont GDL	Very limited theoretical visibility – not considered further.
Mellerstain GDL	Intermittent theoretical visibility within 16 km. **Considered further.**
Duns Castle GDL	Very limited theoretical visibility – not considered further.
Wedderburn GDL	No theoretical visibility – not considered further.
Manderston GDL	No theoretical visibility – not considered further.
Whittingehame GDL	Very limited theoretical visibility – not considered further.
Pilmuir GDL	Limited theoretical visibility beyond 15 km – not considered further.
Carolside and Leadervale GDL	Very limited theoretical visibility – not considered further.
Lennoxlove GDL	Limited theoretical visibility beyond 15 km – not considered further.
Kimmerghame GDL	Limited theoretical visibility beyond 19 km – not considered further.

Visual Baseline

4.56 This section describes the extent of theoretical visibility of the Proposed Development within the study area and identifies the visual receptors that were assessed. This section also introduces the representative viewpoints that were used to assess effects on visual receptors, including the reasons for their selection.

Analysis of Visibility of the Proposed Development

4.57 Figures 4.1.2 and 4.1.3 show the theoretical visibility of the Proposed Development to maximum blade tip height (220 m) and hub height (130 m) respectively. The ZTV indicates that, across the study area, theoretical visibility of the Proposed Development is more widespread in the southern half of the study area than in the northern half.

4.58 Within 5 km of the outermost turbines, there is theoretical visibility of up to 15 turbines to the south, east and west of the Site, and more intermittent theoretical visibility of up to 15 turbines to the north. There is theoretical visibility of up to 15 turbines from hill tops, including Twin Law (447 m AOD), Wedder Law (447 m AOD) and Hogs Law (449 m AOD) to the south. The ZTV also indicates widespread theoretical visibility along the Southern Upland Way long distance route between 2 km and 5 km to the south, passing near Scoured Rig and Twinlaw Cairns. Near Watch Water Reservoir, there is theoretical visibility of up to 5 turbines. There is intermittent theoretical visibility of up to 15 turbines from scattered properties across smaller side valleys to the east along the Dye Water, and from scattered properties within rolling farmland south of the Site. From a minor road to the north-east, there is intermittent visibility of up to 15 turbines.

4.59 Between 5 km and 10 km of the outermost turbines, there is theoretical visibility of up to 15 turbines from the rolling farmland to the south and upland fringe to the south-west, and intermittent theoretical visibility of up to 15 turbines from the moorland plateaus to the north-east. From the A697 and B6456 to the south near Westruther, there is intermittent visibility of up to 15 turbines. There is intermittent theoretical visibility of up to 15 turbines along minor roads to the east of the Site, concentrated across areas of higher elevation and site-facing slopes, i.e. from Dirrington Great Law and along Spartleton Edge.

4.60 Between 10 km and 20 km there is intermittent theoretical visibility of up to 15 turbines from major roads to the south, such as the A697 and A6089, and from site-facing slopes to the west between Oxton and north of Galashiels. Intermittent theoretical visibility of up to 15 turbines can be found along stretches of the Southern Upland Way between 12 km and 20 km to the south-west, on the approach to Lauder. Between 10 km and 15 km to the east of the Site, there is intermittent and limited theoretical visibility as indicated by the ZTV, concentrated across site-facing slopes such as Hardan's Hill (351 m AOD), Abbey Hill (278 m AOD) and Cockburn Law (325 m AOD). There is very limited theoretical visibility beyond 10 km to the north, except at Bransly Hill (397 m AOD) and across Monynut Edge to the north-east at a distance of approximately 13 km. There is limited theoretical visibility to the Site from the Southern Upland Way long distance route beyond 10 km to the east, except at Ecclaw Hill (278 m AOD).

4.61 Between 20 km and 45 km from the outermost turbines there is intermittent theoretical visibility to the south and south-east, limited to north-facing slopes and areas of elevation, including from the Eildon and Leaderfoot NSA, and within the lower lying areas within the Tweed floodplain. There is intermittent theoretical visibility to the west beyond 20 km, concentrated across east-facing slopes of the Moorfoot Hills and Pentland Hills. To the north, theoretical visibility is more limited, contained to small areas of higher elevation within North Berwick and the Garleton Hills.

Key Visual Receptors

4.62 Potential visual receptors include:

- Residents at their homes or in their communities, including views from isolated properties, scattered communities or defined settlements;
- Road users (including those travelling on recognised tourist routes);
- Those engaged in recreational activities (e.g. hill walkers and cyclists); and
- People at their place of work, including agricultural workers.

4.63 The main settlements, road routes and recreational resources are listed in paragraphs 4.61 to 4.65 above. People at work are generally held to be of lower sensitivity to changes in their view, and are not considered further in this LVIA.

Selection of Viewpoints for Assessment

4.64 This section sets out the viewpoints within the 45 km study area which were selected to represent and assess the visual effects of the Proposed Development. The viewpoint list is a representative selection of locations agreed with ELC and NatureScot. It is not an exhaustive list of locations from which the Proposed Development will be visible.

4.65 A total of 24 LVIA assessment viewpoints were selected through desk study, site work and discussions with statutory consultees. The viewpoints are all publicly accessible as advocated by GLVIA3[25] and include:

- Locations selected to represent the experience of different types of receptor;
- Locations at different distances to provide a representative range of viewing angles and distances (i.e. short, medium and long distance views);
- Locations which illustrate key cumulative interactions with other existing, consented and/or proposed wind farms (i.e. either in combined or successive views[26]);
- Locations which represent a range of viewing experiences (i.e. static views and points along sequential routes);

[25] The selection of viewpoints for LVIA should take account of the factors listed in Paragraph 6.20 of GLVIA3.
[26] Combined effects occur where the observer is able to see two or more developments from one viewpoint and successive views occur when the observer has to move to another viewpoint to see different developments

- Specific viewpoints selected because they represent promoted views or viewpoints within the landscape; and
- Illustrative viewpoints chosen specifically to demonstrate a particular visual effect or specific issue (which could include restricted visibility in particular locations).

4.66 The viewpoints used to assess the visual effects are listed in **Table 4.4** below and their locations are shown on **Figure 4.1.2** and **Figure 4.1.3**.

Table 4.4: LVIA Viewpoints

No	Name	Grid Ref (Approximate)	Distance from Nearest Turbine (km)	Reasons for Selection
1	Twin Law Cairns, Southern Upland Way	362427 654795	1.9	Represents recreational receptors on the Southern Upland Way at a popular summit within the Lammermuir Hills. In the Lammermuir Hills SLA.
2	Nun Rig, Southern Upland Way	360067 653747	2.8	Represents sequential views of recreational receptors on the Southern Upland Way. In the Lammermuir Hills SLA.
3	Minor road near Wanside Rig junction	360689 664164	4.0	Represents road users and the local community from the junction between the B6355 and the minor road which crosses the Lammermuir Hills to the north of the Site. In the Lammermuir Moorland SLA. An assessment of night-time effects was undertaken at this viewpoint – see **Appendix 4.3**.
4	Watch Water Reservoir, Southern Upland Way	366438 656399	4.5	Represents sequential views of recreational receptors on the Southern Upland Way. In the Lammermuir Hills SLA.
5	Minor road near Wrunk Law	367446 659497	5.5	Represents road users and the local community on the minor road which crosses the Lammermuir Hills, north-east of the Site. In the Lammermuir Hills SLA.
6	Spartleton Hill	365317 665542	6.5	Represents cumulative and recreational receptor views at the summit of Spartleton Hill. In the Whiteadder SLA.
7	B6456 Westruther	363840 650099	6.7	Represents road users and residential receptors in the settlement of Westruther. An assessment of night-time effects was undertaken at this viewpoint – see **Appendix 4.3**.
8	B6456 near Bedshiel	368161 651683	7.9	Represents road users and residential receptors near Bedshiel.
9	Dirrington Great Law	369800 654925	7.9	Represents recreational receptors at the summit of Dirrington Great Law. In the Lammermuir Hills SLA.
10	Lammer Law	352381 661820	7.9	Represents recreational receptors at a popular summit within the Lammermuir Hills. In the Lammer Law, Hopes to Yester SLA.

No	Name	Grid Ref (Approximate)	Distance from Nearest Turbine (km)	Reasons for Selection
11	Edgarhope Wood, Southern Upland Way	355819 649263	9	Represents sequential views of recreational receptors on the Southern Upland Way. In the Lammermuir Hills SLA.
12	Minor road near Hen Law	372371 654339	10.5	Represents views of road users and the local community from the minor road which crosses the Lammermuir Hills between Longformacus and Duns. An assessment of night-time effects was undertaken at this viewpoint – see **Appendix 4.3**.
13	A6015 near Greenlaw	371545 647647	13	Represents views of road users and the local community on the A6015 near Greenlaw.
14	B6362 above Lauder	350921 647097	13.1	Represents road users on the B6362 and residential receptors on the outskirts of Lauder.
15	Traprain Law	358165 674664	14.8	Represents recreational receptors at the summit of Traprain Law. In the Traprain and Tyne Valley SLA.
16	Park Lane, Haddington	350451 673707	16.6	Represents road users and residents on the outskirts of Haddington.
17	Barney Hill, Garleton Hills	351267 675955	18.2	Represents recreational receptors in the Garleton Hills. In the Garleton Hills SLA.
18	A6112 near Fawcett Wood	380541 663605	19.1	Represents road users on the outskirts of Grantshouse.
19	A697 near Coldstream	380140 641622	21.1	Represents road users on the outskirts of Eccles.
20	B6371 near Tranent	341264 671912	22.2	Represents road users and residents on the outskirts of Tranent.
21	Eildon North Hill	355510 632840	24.3	Represents recreational receptors at the summit of Eildon Hill North. In the Eildon and Leaderfoot NSA.
22	North Berwick Law	355641 684221	24.6	Represents recreational receptors at the summit of North Berwick Law. In the North Berwick Law SLA.
23	A198 near Dirleton	350517 683483	25.2	Represents road users on the outskirts of Dirleton.
24	Torfichen Hill	333625 653260	26.3	Represents recreational receptors at the summit of Torfichen Hill in the Moorfoot Hills. In the Gladhouse Reservoir and Moorfoot Scarp SLA.

Settlements

4.67 Settlements considered in the assessment are detailed in **Table 4.5** below. Settlements are those defined as such within the SBC Local Development Plan (2016) or ELC Local Development Plan (2018). There are no settlements within 5 km of the nearest turbine. In order to focus on potentially significant visual effects, settlements from which there is no theoretical visibility are not considered further in this assessment (see ZTV in **Figure 4.1.2**). In addition, settlements with limited visibility over a

longer distance, where views of the surrounding landscape (including the Site) are not important to setting, and / or where it is unlikely that significant effects could occur are not considered further in the assessment. The ZTV does not take account of any screening or filtering of views by buildings or vegetation, which will substantially reduce visibility from the majority of settlements. Settlements over 20 km from the Proposed Development are scoped out of the LVIA as noted in paragraph 4.14.

Table 4.5: Settlements within 20 km Scoped In/Out of the LVIA

Settlement	Theoretical Visibility of Proposed Development (ZTV coverage)
Westruther (Scottish Borders)	Situated approximately 6 km to the South of the nearest turbines, the ZTV indicates some theoretical visibility from the village, increasing along the rising valley side to the south. **Considered in the assessment.**
Cranshaws (Scottish Borders)	Very limited theoretical visibility from a distance of approximately 6 km from the nearest turbine, as indicated by the ZTV. Not considered in the assessment.
Longformacus (Scottish Borders)	Situated approximately 7 km east of the Site, the ZTV indicates intermittent theoretical visibility across the east of the village, within 7.5 km of the nearest turbines. **Considered in the assessment.**
Gifford (East Lothian)	No theoretical visibility as indicated by the ZTV. Not considered in the assessment.
Greenlaw (Scottish Borders)	Intermittent and limited theoretical visibility from a distance of over 13 km as indicated by the ZTV. Actual visibility is likely to be further limited by intervening vegetation. Not considered in the assessment.
Lauder (Scottish Borders)	No theoretical visibility from the centre or east of the settlement. More intermittent theoretical visibility from the rising slopes west of the town, at a distance of approximately 12 km. **Considered in the assessment.**
Oxton (Scottish Borders)	Intermittent and limited theoretical visibility from a distance of over 10 km as indicated by the ZTV. Actual visibility is likely to be further limited by intervening vegetation. Not considered in the assessment.
Gordon (Scottish Borders)	Theoretical visibility across the centre of the settlement and fringe areas to the north, at a distance of approximately 14 km to the south of the Site. **Considered in the assessment.**
Bolton (East Lothian)	Intermittent and limited theoretical visibility between 14 km and 15 km from the nearest turbines as indicated by the ZTV. Actual visibility is likely to be further limited by vegetation. Not considered in the assessment.
East Saltoun (East Lothian)	Limited theoretical visibility at distances of over 14 km as indicated by the ZTV. Not considered in the assessment.
Nether Blainslie (Scottish Borders)	Theoretical visibility at distances between 14 km and 15 km from the nearest turbines, along rising slopes west of the A68. **Considered in the assessment.**
Duns (Scottish Borders)	Limited theoretical visibility at distances of over 15 km as indicated by the ZTV. Not considered in the assessment.
Earlston (Scottish Borders	No theoretical visibility as indicated by the ZTV. Not considered in the assessment.
Haddington (East Lothian)	Limited theoretical visibility at distances of over 15 km north of the Site. Actual visibility is likely to be further limited by intervening buildings and vegetation. Not considered in the assessment.
Stow (Scottish Borders)	No theoretical visibility as indicated by the ZTV. Not considered in the assessment.
Pencaitland (East Lothian)	Limited theoretical visibility at distances of over 18 km as indicated by the ZTV. Not considered in the assessment.

Settlement	Theoretical Visibility of Proposed Development (ZTV coverage)
East Linton (East Lothian)	Limited theoretical visibility at distances of over 18 km as indicated by the ZTV. Not considered in the assessment.
Dunbar (East Lothian)	No theoretical visibility as indicated by the ZTV. Not considered in the assessment.
Cockburnspath (Scottish Borders)	No theoretical visibility as indicated by the ZTV. Not considered in the assessment.
Duns (Scottish Borders)	No theoretical visibility as indicated by the ZTV. Not considered in the assessment.

Routes

4.68 Visibility from a route is not uniform along its entire length. This is because views of the surrounding landscape change as one moves along the route depending on the direction of travel, surrounding topography, buildings, structures, tree cover and vegetation pattern alongside the route. Theoretical visibility of the Proposed Development from routes across the 45 km study area is illustrated in **Figure 4.1.2** and **Figure 4.1.3**. They include a hierarchy of roads, railways and recreational routes (promoted long distance footpaths, Core Paths and cycle routes). Road and rail routes tend to use low lying areas or valleys and passes, but walking routes are more variable and can pass over hills and along ridges.

4.69 Based on an analysis of theoretical visibility and potential views, **Table 4.6** below provides information on which routes were carried forward for detailed assessment. Due to the lower susceptibility of receptors typically using roads and railways, those beyond 20 km from the Site were scoped out of the assessment. Promoted long-distance footpaths and cycle routes are included at up to 20 km from the Site. Where there is limited theoretical visibility, or where actual visibility from a route is likely to be limited due to localised screening, these routes are not considered further in this LVIA, as the likelihood for significant sequential effects is limited.

Table 4.6: Routes within 20 km Scoped In/Out of LVIA

Route	Theoretical Visibility of Proposed Development (ZTV coverage)
Roads (within 20 km)	
Minor road via Longformacus	Passes within 2 km to the east of the Site at its closest point. The ZTV indicates theoretical visibility within 2.5 km of the nearest turbines. **Considered in the assessment.**
B6355	Passes within 5 km to the north of the Site at its closest point. The ZTV indicates intermittent theoretical visibility including within 5 km of the nearest turbines. **Considered in the assessment.**
B6456	Passes within 8 km of the Site to the south and west. The ZTV indicates widespread theoretical visibility within 8 km of the nearest turbines, to the south and east of the settlement of Westruther. **Considered in the assessment.**
A697	Passes within 10 km to the south and west of the Site, just east of Lauder and connecting through Greenlaw. Intermittent theoretical visibility including within 10 km of the nearest turbine as indicated by ZTV. **Considered in the assessment.**
A6089	Passing between 9 km and 15 km south of the Site, there is widespread theoretical visibility along the route as indicated by the ZTV. **Considered in the assessment.**
A6105	Passes within 15 km to the south of the Site, between Earlston and Greenlaw, connecting through Gordon. The ZTV indicates limited theoretical visibility west of Gordon, with intermittent theoretical visibility to the west between Gordon and Greenlaw. Not considered in the assessment.

Route	Theoretical Visibility of Proposed Development (ZTV coverage)
A68	Contained within narrow valley landform approximately 10 km to the south-west of the Site, there is very limited theoretical visibility as indicated by the ZTV. Not considered in the assessment.
B6370	Passes within 10 km to the north of the Site at its closest point, with very limited theoretical visibility as indicated by the ZTV. Not considered in the assessment.
B6362	Passing approximately 12 km to the south-west of the Site, the ZTV indicates widespread theoretical visibility within 13 km of the nearest turbines on the approach to Lauder. However, considering the distance and existing wind farm development in views to the north-east, it is unlikely that the Proposed Development will have significant effects on views. Not considered in the assessment.
B6368	Passing approximately 12.5 km to the north-west of the Site at its closest point, the ZTV indicates very limited theoretical visibility. Not considered in the assessment.
A6105	Intermittent theoretical visibility at a distance of 15 km. Not considered in the assessment.
A198	Passing approximately 17 km to the north of the Site at its closest point. Intermittent theoretical visibility indicated. **Considered in the assessment** at the request of consultees.
National Cycle Routes (within 20 km)	
National Cycle Network Route 76	Approximately 15 km north of the Site at its closest point. Very limited theoretical visibility at distances of over 15 km. Not considered in the assessment.
National Cycle Network Route 196	Approximately 15 km north of the Site at its closest point. Very limited theoretical visibility at distances of over 15 km. Not considered in the assessment.
Long Distance Walking Routes (within 20 km)	
Southern Upland Way	Passes within 2 km to the south of the Site at its closest point. Widespread theoretical visibility within 5 km of the nearest turbines, and intermittent theoretical visibility beyond 5 km. **Considered in the assessment.**
John Muir Way	Some limited theoretical visibility at distances of 15 km. **Considered in the assessment.**
Core Paths and Rights of Way within 5 km	Widespread theoretical visibility within 5 km. **Considered in the assessment.**

Residential Visual Amenity Assessment

4.70 Views from residential properties within 3 km of the nearest wind turbines of the Proposed Development are assessed as part of the RVAA, at the request of consultees. The RVAA is presented in **Appendix 4.2** and includes supporting wirelines.

Other Wind Farm Development

Identification of Developments to be included in the cumulative assessment

4.71 In line with NatureScot guidance[27], the scope for the assessment of cumulative landscape and visual effects included wind farms and wind farm proposals within an initial 60 km radius search area from the Proposed Development, to identify the distribution of wind energy development in the wider area, as listed in **Table 4.7** and shown on **Figure 4.1.8**.

4.72 The assessment of effects focuses on developments that are likely to give rise to significant cumulative effects and concentrates on the relationship between the Proposed Development and other operational, under construction, consented and proposed developments (i.e. developments with a valid application or awaiting determination following appeal/public inquiry). In this instance, the assessment focuses on schemes within 20 km of the Proposed Development because of the limited scope for significant cumulative effects beyond this distance, based on professional judgement. Other wind farms within 45 km are listed in **Table 4.7** below and shown on the wirelines in **Figures 4.2.1 to 4.2.24** to illustrate the wider cumulative context.

4.73 Wind energy developments located within the 20 km radius study area, which are considered likely to give rise to significant cumulative effects, were selected as follows:

- a) Single wind turbines of ≥50 m blade tip height within a 5 km radius of the proposed outermost wind turbines (none were identified); and
- b) Wind farms (e.g. clusters of 2 or more wind turbines) with wind turbines of ≥80 m blade tip height within a 20 km radius of the proposed outermost wind turbines.

4.74 Proposals that had not yet progressed beyond Scoping stage were not considered within the assessment, with the exception of one proposed wind farm in proximity to the Proposed Development (Newlands Hill). This is because an advanced layout is available, and there is a level of certainty that this will not be subject to change ahead of its application. It can therefore can be assessed with a reasonable degree of confidence.

4.75 Other Scoping stage wind farm proposals at Longcroft, Wedderlie Farm, Back Burn and Lees Hill Energy Park were not considered in the assessment given their early stage and the fact that their size and layouts are still subject to change. A selection of wirelines which include all these Scoping stage projects, and high level consideration and commentary as to likely interactions, are provided in **Appendix 4.4**.

4.76 A cut-off date of 21 February 2023 was applied for the inclusion of developments within the cumulative assessment. These were agreed with ELC and NatureScot. These developments are listed in **Table 4.7** below and shown on **Figure 4.1.9**.

Table 4.7: Other Wind Farm Developments included within Cumulative Assessment

Distance (km)[28]	Name	Number of Turbines	Status	Blade Tip Height (m)
Operational				
0.76	Fallago Rig	48	Operational	125
7.62	Crystal Rig - Phase 2	56	Operational	125
7.94	Crystal Rig - Phase 2a	9	Operational	110
8.42	Crystal Rig - Phase 1a	5	Operational	100
8.51	Crystal Rig - Phase 1	20	Operational	100
9.96	Crystal Rig - Phase 3	7	Operational	125

[27] NatureScot (2021) Guidance - Assessing the cumulative landscape and visual impact of onshore wind energy developments
[28] This is an approximate distance taken between the closest turbine in each development.

Distance (km)[28]	Name	Number of Turbines	Status	Blade Tip Height (m)
10.36	Black Hill	22	Operational	78
10.66	Aikengall IIa	19	Operational	145
10.66	Dun Law - Phase 2	35	Operational	75
11.14	Aikengall II - Wester Dod	19	Operational	145
11.25	Aikengall	16	Operational	125
11.26	Keith Hill	5	Operational	76
11.47	Dun Law - Phase 1	26	Operational	63.5
11.70	Pogbie Extension	6	Operational	74
11.76	Pogbie	6	Operational	76
14.19	Toddleburn	12	Operational	125
14.95	Hoprigshiels	3	Operational	125
16.16	Quixwood	13	Operational	115
17.48	Kinegar Quarry (Neuk)	2	Operational	110
18.69	Longpark	18	Operational	100
19.65	Brockholes	3	Operational	84
20.61	Penmanshiel	14	Operational	100
21.67	Howpark Farm	8	Under Construction	100
22.68	Drone Hill	22	Operational	76
23.79	Carcant	3	Operational	99.7
31.05	Bowbeat	24	Operational	80
39.87	Barmoor	6	Operational	110.5
40.45	Langhope Rig	10	Operational	121.5
46.73	Earlseat Farm	8	Operational	120.5
Consented				
7.60	Crystal Rig - Phase 4	11	Consented	200
Application Submitted				
20.37	Greystone Knowe	14	Application Submitted	180

Distance (km)[28]	Name	Number of Turbines	Status	Blade Tip Height (m)
21.25	Wull Muir	8	Application Submitted	150
26.68	Scawd Law	8	Application Submitted	180
39.80	Cloich Forest	12	Application Submitted	149.9
Scoping (only schemes in proximity)				
3.70	Newlands Hill	17	Design/Scoping	200

Current and Future Baseline

4.77 There are a number of operational wind farms located across the study area, as listed in **Table 4.7** and shown on **Figure 4.1.9**. Operational wind farms are part of the current baseline, and cumulative interactions with these wind farms are therefore considered as part of the primary assessment as described in the methodology (**Appendix 4.1**).

4.78 In order to consider potential future cumulative effects, it is also necessary to assess the effects of the addition of the Proposed Development into a speculative future baseline. Given the varied status, and therefore certainty, associated with un-built wind farms across the study area, the LVIA also reports on two future baseline scenarios:

- a) Scenario 1: Higher level of certainty: the addition of the Proposed Development to a landscape with operational, under construction and consented wind farms; and
- b) Scenario 2: Lower level of certainty: the addition of the Proposed Development to a landscape with operational, under construction, consented, undetermined valid planning applications, appeal and Scoping stage schemes in close proximity to the Site.

4.79 It should be noted that this baseline situation is constantly changing, and there may be changes to the wind energy developments listed in Table 4.7 between carrying out the assessment, the submission and determination of the application. Unless there are substantial changes to proposals that will materially alter the pattern of cumulative development (such as the addition of a large wind farm located within a 10 km radius of the Proposed Development), it is considered that the cumulative assessment undertaken will remain relevant. A cut-off date of 21 February 2023 was applied for the inclusion of developments within the cumulative assessment.

Approach to Cumulative Assessment - against primary and future baseline scenarios

4.80 The cumulative assessment focuses on describing the additional cumulative change which may result from the introduction of the Proposed Development into the present or future baseline (i.e. in addition to other development which may or may not be present). The approach to cumulative assessment is presented in the methodology (**Appendix 4.1**) and summarised below.

4.81 GLVIA3 makes reference to 'combined cumulative effects', i.e. an assessment which considers the effects if all current, past and future proposals are deemed present, including the Proposed Development. GLVIA3 (paragraph 7.13) acknowledges that "*assessing combined effects involving a range of different proposals at different stages in the planning process can be very complex*". Therefore, this type of cumulative effect is only described where it is considered likely to be a relevant consideration in the determination of the Proposed Development.

4.82 For each of the three baseline scenarios (primary assessment, Scenario 1, and Scenario 2) a separate assessment of effects is made. The approach does not assess the 'difference' between scenarios, but treats each as a separate potential situation. It is important to note that in practice only one situation will arise at any one time, so effects as set out should be interpreted as an either/or situation and should not be double counted.

4.83 Combined ZTVs for other wind farms were prepared to show where ZTVs overlap and where cumulative effects may arise and are shown on **Figures 4.1.9 to 4.1.12**.

4.84 Although all these wind farms are considered in the cumulative assessment, the assessment focuses on the relationship of the Proposed Development with the closest wind farms or groups of wind farms. For the cumulative assessment, these include:

- Fallago Rig (operational) located <1 km to the north-west, which will be seen in close-range and long-distance views in combination with the Proposed Development, particularly in views from the north of the study area;
- Newlands Hill (Scoping) located around 6.5 km to the north, which will be seen in close-range and long-distance views in combination with the Proposed Development;
- A large cluster of wind farms located in the Lammermuir Hills to the north-east of the Site: Crystal Rig Phase 1 (operational), Crystal Rig Phase 1a (operational), Crystal Rig Phase 2 (operational), Crystal Phase 3 (operational), Crystal Rig Phase 4 (consented), Aikengall (operational), Aikengall (operational), Aikengall IIa (operational) and Aikengall II – Wester Dod (operational), all located approximately between 9 km and 14 km of the nearest turbines. This group is referred to as the **Crystal Rig / Aikengall Group**; and
- A large cluster of wind farms located at the south-western end of the Lammermuir Hills to the west of the Site: Dun Law Phase 1 (operational), Dun Law Phase 2 (operational), Toddle Burn (operational), Pogbie (operational), Pogbie Extension (operational) and Keith Hill (operational), all located approximately between 11 km and 15 km to the west of the nearest turbines. This group is referred to as the **Dun Law Group**.

General Observations – on pattern of development and combined effects

4.85 The following sections present general observations on the location, pattern and scale of existing and proposed wind energy development across the wider study area, and how the combined effects with the Proposed Development relate to landscape character and views.

Current Baseline (Operational Developments)

4.86 General observations on the location, pattern and scale of existing wind energy development across the study area, and how these relate to landscape character and views, are summarised below:

- The closest operational wind farm development to the Site, Fallago Rig is a large standalone scheme, less than 1 km to the north-west, located within the elevated Dissected Plateau Moorland LCT (90). In terms of combined effects, in both close range and long range views, the Proposed Development will be seen as an extension of Fallago Rig, which already characterises these views. The turbines of the Proposed Development will be larger in scale, contrasting with the Fallago Rig turbines in some views.
- Operational wind farms within the Crystal Rig / Aikengall Group are located approximately between 9 km and 14 km to the north-east of the nearest turbines of the Proposed Development. These wind farms are located within the Dissected Plateau Moorland LCT (90) and Plateau Moorlands- Lothian LCT (266). Close range views are afforded from elevated hills in between the Crystal Rig / Aikengall Group and the Site, particularly from Spartleton and Cranshaws Hill, where the combined effects of the existing and Proposed Development would result in wind farms being seen in both directions.
- To the west, operational wind farms within the Dun Law Group are located approximately between 11 km and 15 km to the west of the nearest proposed turbines. These wind farms are located within the Plateau Grassland – Borders LCT (91) and Plateau Grassland – Lothians LCT (267). Close range views are afforded from elevated hills in between the Dun Law Group and Proposed Development, including from Lammer Law, Cribs Law and Hogs Law, where the combined effects of the existing and Proposed Development would result in wind farms being seen in both directions.

4.87 As illustrated in **Figure 4.1.9**, the Proposed Development will be seen as an extension of the operational Fallago Rig, the combined effect being one of a larger wind farm located here, but will remain separate from the other existing wind farm clusters.

4.88 The cumulative ZTV in **Figure 4.1.10** illustrates where only the Proposed Development is theoretically visible, where only other operational wind farms within approximately 20 km are theoretically visible, and where both are theoretically visible together.

4.89 The cumulative ZTV illustrates that there will be combined theoretical visibility of the Proposed Development and other operational wind farms from the majority of the area within 5 km, including the open moorland hills within the Dissected Plateau

Moorland LCT and Plateau Moorland – Lothians LCT, and the SLAs which overlie these areas within the Lammermuir Hills. There will be combined theoretical visibility from scattered properties within 5 km, the minor road network including the B6355 and also the majority of the Southern Upland Way within 5 km. The Proposed Development will introduce new (additional) theoretical visibility to small areas where there is not already a view of wind turbines, mainly along tributaries of the Dye Water.

4.90 Between 5 and 10 km, theoretical visibility of the Proposed Development combined with other operational wind farms will be more intermittent and will include areas of plateau moorland around Whiteadder as well as areas of upland fringe and rolling farmland to the south of the Site. This will include the local road network including parts of the A697 and B6456, and the Southern Upland Way. The Proposed Development would introduce additional theoretical visibility, where there is none at present, to very small areas, typically along the valleys of the burns which are orientated towards the Site.

4.91 Between 10 and 20 km there will be theoretical visibility of the Proposed Development combined with other operational wind farms from the lowland farmland around Haddington to the north-west of the Site, from the east-facing upper valley sides above Lauder to the south-west of the Site and from the upland fringe and farmland in the south and south-east of the study area. This includes theoretical visibility from the settlements of Haddington, Pencaitland, Lauder (western area) and Gordon, the road network including parts of the A1, A199, A697 and A68, and parts of the Southern Upland Way. The Proposed Development will introduce additional theoretical visibility to very small areas of farmland.

Future Baseline Scenario 1

4.92 General observations on the location, pattern and scale of existing, under construction and consented wind energy development across the wider study area, and how the combined effects with the Proposed Development will relate to landscape character and views, are summarised below.

4.93 Crystal Rig Phase 4 (11 turbines, 174.5 m tip height) is a consented wind farm, located within the Crystal Rig / Aikengall Group, approximately 14 km to the north-west of the Site, within the host LCT (Dissected Moorland Plateau).

4.94 As illustrated on **Figure 4.1.9**, the Proposed Development will continue to appear as separate from the cluster of operational wind farms in the Dun Law Group and the cluster of operational and consented wind farms in the Crystal Rig / Aikengall Group. The consented Crystal Rig Phase 4 wind farm will bring turbines within the Crystal Rig / Aikengall Group marginally closer to the Proposed Development.

4.95 The cumulative ZTV in **Figure 4.1.11** illustrates where only the Proposed Development is theoretically visible (shown as green), where only other operational and consented wind farms within 20 km are theoretically visible (shown as yellow), and where both are theoretically visible together (shown as blue).

4.96 Within 5 km of the nearest turbine the cumulative ZTV indicates that the additional areas from which only the Proposed Development will be visible are very limited and scattered, contained within lower valley forms such as Watch Water Reservoir and incised burns. Theoretical visibility of only other operational and consented wind farms (but not the Proposed Development) is limited to slopes facing away from the Site to the north of Priestlaw Hill and Penshiel Hill, and to the south-west at South Hart Law. Areas from which the Proposed Development would be seen in combination with operational and consented wind farms are extensive, with widespread theoretical visibility from large parts of the Lammermuir plateau immediately surrounding the Site, particularly from elevated areas of upland moorland and moorland fringe in the south and south-west.

4.97 Between 5 and 10 km the cumulative ZTV indicates limited and small areas from which only the additional effects of the Proposed Development will be theoretically visible, again contained within lower valley forms and other topographic low points which are shielded from view of other wind farms, such as the eastern slopes of Whiteadder Reservoir and along Boondreigh Water. Theoretical visibility of only other consented and operational wind farms (but not the Proposed Development) is more widespread to the north and east, between Fala and Garvald, and Stenton to Ecclaw, the Whiteadder Valley to the east, and along the Leader Valley to the west. Areas from which the Proposed Development will be seen in combination with operational and consented wind farms are more extensive, concentrated to the south-west and south, across the fringe uplands and farmland between Thirlestane, Haliburton, and Longformacus.

4.98 Between 10 and 20 km the cumulative ZTV indicates almost no locations from which only the Proposed Development will be seen. Theoretical visibility of only other consented and operational wind farms is extensive to the west across the north-eastern fringe of the Moorfoot Hills near Fala and along the Leader Valley, to the north-east on the eastern side of Monynut Edge, across lower lying land near Duns to the south-east, and scattered areas of south-facing slopes across the undulating farmland to the south. Areas from which the Proposed Development will be seen in combination with operational and consented

wind farms are concentrated to the north-west and south, across the undulating farmland between Haliburton and Earlston, as well as within the lowland arable fields surrounding Haddington and south of Longniddry.

Future Baseline Scenario 2

4.99 General observations on the location, pattern and scale of existing, consented, under construction and proposed developments across the wider study area, and how the combined effects with the Proposed Development will relate to landscape character and views, are summarised below.

4.100 The only proposed wind farm within 20 km of the Proposed Development is Newlands Hill (17 turbines, 200 m tip height). Newlands Hill is at Scoping stage, and is located approximately 6.5 km to the north of the Proposed Development, either side of the B6355 to the north-west of Whiteadder Reservoir, within LCT 266. It is included in this assessment because the layout is at an advanced stage and the developer has indicated that it is unlikely to change ahead of its application, so can be assessed with a reasonable degree of confidence.

4.101 The cumulative ZTV in **Figure 4.1.12** illustrates where only the Proposed Development is theoretically visible, where other operational, consented and proposed wind farms within approximately 20 km are theoretically visible, and where both are theoretically visible together.

4.102 Within 5 km of the nearest turbine the cumulative ZTV indicates that the Proposed Development would be widely visible and seen in combination with operational, consented, and proposed wind farms from large parts of the study area, particularly from the elevated areas of upland moorland and moorland fringe in the immediate surroundings, as illustrated by the cumulative ZTV in **Figure 4.1.12**. From within the immediate surroundings of the Site, the Proposed Development would be seen in combination with the operational Fallago Rig Wind Farm and proposed Newlands Hill Wind Farm (at Scoping).

4.103 Between 5 and 10 km, the cumulative ZTV indicates that the Proposed Development would be seen in combination with other operational, consented and proposed wind farms from large expanses to the south. From the lower-lying arable landscape in the south, the Proposed Development would be visible in combination with the proposed Newlands Hill Wind Farm (at Scoping), seen to the north of the Proposed Development. From upland fringes in the north, set at lower elevations and across falling slopes, the Proposed Development would be largely screened from views by the rising slopes at the northern edge of the Lammermuir Hills, and would not be seen in combination with other proposed wind farms.

4.104 Between 10 and 20 km the cumulative ZTV in **Figure 4.1.12** indicates that the Proposed Development would be seen in combination with operational, consented and proposed wind farms from elevated slopes in the west, as well as more scattered and isolated elevated patches in the east. To the north-east, theoretical visibility is limited to other cumulative developments, with the Proposed Development appearing largely screened by intervening topography along Spartleton Edge.

Implications of Climate Change

4.105 Chapter 3 provides details of the climate change projections in Scottish Borders for the 2060s, when the operational period of the Proposed Development is likely to end. In summary, the projections highlight that in the 2060s, summer and winter temperatures are likely to be greater than the current baseline (greater for summer), with winter rainfall increasing and summer rainfall decreasing. The Landscape Institute's Position Statement on Climate Change[i] acknowledges that changes in average temperatures, precipitation and extreme weather events will have an effect on the landscape. However, whilst a change in rainfall and rising temperatures are anticipated, it is not considered that this will appreciably change the baseline landscape conditions. Mitigation associated with reducing climate change is likely to be a more noticeable change in the landscape.

Future Baseline in the Absence of the Proposed Development

4.106 In the absence of the Proposed Development, it is likely that the land will continue under the same land use, and the character of the Site is unlikely to significantly change. However, the landscape and visual amenity of the study area is likely to be influenced by a number of 'forces for change' including further wind energy development in the surrounding context.

4.107 Forces for change are those factors affecting the evolution of the landscape and which may affect the perception of the study area in the near or distant future. Although prediction of these is necessarily speculative, those of particular relevance are discussed below.

4.108 Wind farm development is a clear force for change and is likely to continue, as discussed in the preceding sections on future baseline. **Figure 4.1.9** illustrates the location and extent of operational, consented and proposed wind farms within the study area. In addition, there are an increasing number of operational, consented and proposed domestic wind turbines of varying heights and rotor diameters, located within the surrounding landscape. As farmers and land owners diversify income and seek opportunities to generate energy for domestic and commercial use, interest in this type of development may continue.

4.109 Agriculture and forestry within the study area, including land management practices, pastoral grazing, arable farming and commercial forestry are likely to remain important land uses. Other land uses may include settlement expansion and reinforcements to the electricity grid.

Assessment of Likely Significant Effects

4.110 The assessment of effects is based on the project description as outlined in **Chapter 3** and the embedded mitigation by design described in **Chapter 3**. An Outline Construction Environmental Management (CEMP) has also been prepared and is included in **Appendix 3.1.**

Potential Construction Effects

Sources of Effects during Construction

4.111 During the estimated 19-month construction phase, there will be potential short-term landscape and visual effects arising from the presence of partially constructed infrastructure and the undertaking of construction activities on the Site. Effects occurring during the construction phase are reversible unless otherwise stated, as construction works will cease on completion. Some effects may be longer lasting e.g. felling of trees or creation of new landform such as turbine platforms, or borrow pits which will remain as permanent features.

4.112 The changes arising from the construction of the Proposed Development will be primarily associated with:

- The introduction of construction activity and vehicular/personnel movements around the Site and on local roads;
- The potential need for lighting during construction if work extends into hours of darkness;
- Changes to the landform and disturbance to surface vegetation at borrow pit locations, substations, turbine bases, and along the access track roads;
- The excavation of trenches for cables adjacent to site tracks;
- The construction and use of construction compounds, control buildings; and,
- The introduction of tall structures including turbines, and the use of cranes.

4.113 Most of the effects which will occur during the construction phase will be short-term and largely reversible, limited to the Site and the immediate surroundings from which construction activity may be perceptible. The main exceptions to this are the permanent changes to landform, for example through excavation of borrow pits and creation of development platforms, and the construction and erection of the proposed turbines. The landscape and visual effects arising from the presence of partially constructed turbines, and the cranes used to do this, will be comparable to the operational effects.

Landscape Effects during Construction

4.114 Potential effects on the landscape character and resources of the Site are considered in **Table 4.8** below. Landscape effects during construction will be largely limited to the host LCT, as effects beyond the extents of the Site will be indirect and largely related to the construction of the partially erected turbines. As such, effects on the wider LCT are not considered to be any greater than operational effects, and therefore have not been assessed here.

Table 4.8: Construction Effects on the Site

The Site
Location and Baseline Description:

The Site
The Site is described fully in paragraphs 4.39 to 4.42. The topography of the Site consists of a plateau of rolling hills ranging between 300 m and 500 m AOD, separated by the steep sided valley of the Dye Water which runs west-east through the Site. Multiple smaller watercourses join the Dye Water and further dissect the Site. The landcover on the Site consists mainly of heather moor and acid grassland. Tree cover is sparse, especially so on the upper plateau where heather moorland vegetation dominates. There is a cluster of dwellings at Byrecleugh in the east of the Site, accessed via a private road. The operational Fallago Rig Wind Farm is immediately to the north-west of the Site boundary.
Sensitivity: The Site forms part of an expansive, undulating landscape with a relatively uniform and simple pattern of upland moorland. The landform consists of individually massed hills dissected by streams and is set within a broad plateau with wide horizons. The Site is located within the Lammermuir Hills SLA and borders the Lammermuir Moorland SLA in East Lothian to the north. Human influences within the Site include access tracks to the neighbouring Fallago Rig Wind Farm, grouse butts and a small cluster of buildings at Byrecleugh. Taking these considerations into account, susceptibility is judged to be **medium**. The Site is within a designated landscape, the Lammermuir Hills SLA, and borders the Lammermuir Moorland SLA to the north. There are no long-distance footpaths, cycle routes, or Core Paths within the Site, with the exception of the Southern Upland Way which follows the access track in part. Overall, the landscape value of the Site is judged to be **medium**. Taking account of the judgements of susceptibility and value, overall sensitivity is considered to be **medium**.
Magnitude of Change and Significance of Landscape Effects: Construction activities will result in direct effects on the landscape of the Site. The main construction activities with the potential to affect the Site include: excavations and track construction/upgrading; the working of borrow pits; the presence of tall cranes and partially built towers whilst turbines are being erected; construction of the substations and associated buildings and the movement of and lighting on construction vehicles and plant. There will be **large-scale** changes within the Site relating to construction activity. The geographical extent of these changes will be at the Site level (medium). The construction works are expected to last approximately 19 months, so will be temporary and short-term. The level of reversibility will be varied, from fully reversible changes associated with ground disturbances (albeit that vegetation will take some time to recover) to longer lasting effects associated with alterations to the landform and infrastructure that forms part of the operational scheme. Overall, the magnitude of change during construction is judged to be **high**. Overall, the landscape effect of construction on the Site will be **Major and Significant**, however these effects will be temporary and largely contained within the geographical extent of the Site. Most effects will cease following the 19-month construction period.

Visual Effects during Construction

4.115 In terms of visual effects during the construction phase, beyond those experienced at the Site level where low-level construction activity will be apparent in certain views, these will largely relate to views of tall cranes (potentially with lights if present at night) and turbine construction experienced from the wider study area. These effects will be transient and change throughout the construction period as wind turbines are gradually constructed in sections. As such, visual effects during the construction phase are unlikely to exceed the level of effect associated with operational visual effects and are not assessed separately.

Proposed Mitigation

4.116 Measures such as arrangements for vegetation and soil removal, storage and replacement and the restoration of disturbed areas after construction will be detailed in a Construction Environmental Management Plan (CEMP) produced following consent and prior to construction, which will also include reference to Construction Method Statements.

4.117 The following landscape mitigation and habitat enhancement objectives are proposed (see **Appendix 6.6: Outline Restoration and Enhancement Plan (OREP)** for further details):

- Objective 1 - Riparian shrub/ woodland planting of key river corridors;

- Objective 2 - Species-rich grassland;
- Objective 3 – Native shrub regeneration;
- Objective 4 – Re-wetted areas (bog and heath enhancement); and
- Objective 5 – Heath improvement.

Residual Construction Effects

4.118 The assessment of effects above assumes all construction-related, best practice, mitigation measures are implemented, therefore the residual effects arising from construction will remain as identified in the section above.

4.119 The re-establishment of ground level vegetation will take approximately three to five years, depending on the vegetation and soils, and levels of effect will decline over this period.

4.120 There will be **no significant** landscape or visual effects associated with temporary ground disturbance after restoration works have been completed, and vegetation has regenerated. The effects of the permanent changes to landform are considered as operational effects.

Potential Operational Effects

4.121 The main likely effects of the operational Proposed Development on the landscape will be the permanent changes to the landform, and those associated with the presence of the wind turbines (some with lighting during the hours of darkness) and ancillary infrastructure including access tracks, control building and battery storage area. A summary of effects on the landscape, including LCTs is provided at the end of the report in **Table 4.64**.

Operational Effects on the Fabric of the Site

4.122 This section describes the operational effects resulting from the Proposed Development on the landscape fabric of the Site and the LCTs which have been identified as requiring detailed consideration in **Table 4.2**. Further information on key characteristics is provided in the tables below.

4.123 All operational effects are considered to be **long-term**, **reversible**, and **adverse** unless stated otherwise.

Table 4.9: Operational Effects on the Site

The Site
Location and Baseline Description: The Site is described fully in paragraphs 4.39 to 4.42. The topography of the Site consists of a plateau of rolling hills ranging between 300 m and 500 m AOD, separated by the steep sided valley of the Dye Water which runs west-east through the Site. Multiple smaller watercourses join the Dye Water and further dissect the Site. The landcover on the Site consists mainly of heather moor and acid grassland. Tree cover is sparse, especially so on the upper plateau where heather moorland vegetation dominates. There is a cluster of dwellings at Byrecleugh in the east of the Site, accessed via a private road. The operational Fallago Rig Wind Farm is immediately to the north-west of the Site boundary.
Sensitivity: The Site is judged to be of **medium** sensitivity as set out in **Table 4.8:** above.
Magnitude of Change and Significance of Landscape Effects: Direct operational effects on the landscape will be introduced through the presence of all 15 turbines (some of which will have steady red lights on their hubs during hours of darkness) and associated infrastructure, including access tracks, control building and battery storage area, as well as the permanent changes associated with borrow pits, although these will be partially reinstated after construction with surplus excavated material to provide a more aesthetic appearance and prevent any unstable and steep rock faces. Landscape mitigation and habitat enhancement including riparian planting along river corridors, native shrub regeneration, and bog and heath enhancement (see **Appendix 6.6** for further details) will enhance the existing characteristics of the Site. Against the broad moorland plateaux, which offers an undulating but relatively uniform landscape, the turbines will appear large in scale and will form notable new features. There will be **large-scale** changes to the Site relating to the introduction of new features including up to 15 turbines and associated infrastructure (including access

The Site
tracks and turning areas, borrow pits, hard standings, and substation) which will change the character of the Site from moorland to moorland with a wind farm. The presence and influence of the existing Fallago Rig Wind Farm (which is not lit at night) means that some areas of the Site are already characterised by its presence. Other areas which are more distant from existing turbines are less influenced by the presence of the existing wind farm. Overall, the change will be experienced within a **medium** geographical extent. The magnitude of change is judged to be **high.** The effect of the Proposed Development on the Site is judged to be **Major and Significant**. Although the overall effect of the Proposed Development will be adverse, some beneficial effects are also recognised due to landscape mitigation and habitat enhancement within the Site.

Operational Effects on Landscape Character

4.124 LCTs within 45 km of the Proposed Development are illustrated on **Figure 4.1.4**, with theoretical visibility from those LCTs illustrated on **Figure 4.1.5**. The tables below describe the potential effects on landscape character resulting from the Proposed Development during the operational phase. Consideration is also given to potential cumulative effects on the landscape, arising in conjunction with other existing, consented, and/or proposed wind farms. The assessments set out below are focussed on those LCTs where potentially significant effects are considered likely, as detailed in **Table 4.2**. Operational effects are considered long-term, reversible, and adverse unless otherwise stated.

4.125 As set out in paragraphs 4.7 and 4.8, the LVIA considers two 'worst case scenarios', with two different hub heights / rotor diameters. The candidate turbine with the largest rotor (with hub height 130 m and rotor diameter 180 m) is the basis of reporting within the following section, which assesses effects on landscape character. Given the scale and expansive nature of the LCTs, it is considered that the candidate turbine with the tallest hub (with hub height 139 m and rotor diameter 162 m) is not likely to give rise to notable differences in visibility, or effects on landscape character, than are identified for the candidate turbine with the largest rotor. Therefore, the likely effects resulting from use of a candidate turbine with a taller hub is not reported on separately within each of the following LCT assessments. The effects of aviation lighting on landscape character (notably at dusk and dawn when the landscape is visible) are considered separately in **Appendix 4.3**.

Table 4.10: Operational Effects on LCT 90: Dissected Plateau Moorland (host)

NatureScot (2019) LCT	LCT 90: Dissected Plateau Moorland
Location and Baseline Description: This LCT is located approximately 3 km north of Westruther and encompasses the entirety of the Site and northern half of the access road. Two further units of this LCT are located approximately 19 km south-west and 43 km west of the nearest turbines. The larger and closer of the two units encompasses the Moorfoot Hills north of Innerleithen, and the latter encompasses part of the Pentland Hills just north of West Linton. Key characteristics include: ■ "*Plateau landform consisting of a series of level-topped hills and ridges;* ■ *Strong topographic identity and overall grandeur of scale;* ■ *Individual hill masses separated by steep sided valley features of different scales;* ■ *Semi-natural peatland, heather moorland and grassland communities dominant, with a high degree of perceived naturalness of vegetation cover;* ■ *Very low settlement density with isolated, dispersed pattern;* ■ *Scattered prehistoric settlement and burial mounds above watercourses; and* ■ *Sense of wildness created by wide horizons and long distance, unobstructed views."*[29]	
Sensitivity:	

[29] SNH (2019) National Landscape Character Assessment, Landscape Character Type 90, Dissected Plateau Moorland

NatureScot (2019) LCT	LCT 90: Dissected Plateau Moorland
The LCT is large-scale and composed of broad flat-topped hills dissected and defined by incised burns. Expansive swathes of muirburn and rough grazing comprise the majority of the landcover, with pockets of acid grassland and peat found in areas of higher elevation. Within the host LCT, there are three operational wind farms with associated tracks and infrastructure, including Fallago Rig Wind Farm (unlit at night), which is located directly adjacent to the Proposed Development. A small number of dispersed farmsteads are found throughout the LCT, and the road network is limited and composed of unclassified roads, with the exception of the B6355 which crosses through the east of the LCT. This contributes to an overall perception of remoteness. The overall susceptibility of the landscape is judged to be **medium**. The entirety of the LCT host unit is within the Lammermuir Hills SLA, and the Lammermuir Moorland SLA and Whiteadder SLA border the LCT host unit to the north. Additionally, the Southern Upland Way crosses along the southern edge of the LCT, with expansive views across the landscape. Therefore, the LCT is considered to be of **medium-high** value. Taking account of the judgements of susceptibility and value, the sensitivity of the LCT is judged to be **medium** overall.	
Magnitude of Change and Significance of Landscape Effects: Direct operational effects on the landscape would be introduced through the presence of 15 turbines (some of which will have steady red lights on their hubs during hours of darkness) and associated infrastructure, including access tracks, and the permanent changes in landform which remain after the excavation of borrow pits and construction of development platforms). Against the broad moorland plateaux, which offers an undulating but relatively uniform landscape, the turbines would appear large in scale and would form notable new features in views. The existing Fallago Rig Wind Farm to the west is already widely apparent across parts of the plateau, but more widespread visibility of wind turbines, associated with the Proposed Development to the east of this will further alter the character of the landscape. It will further affect the "*wide horizons and distant unobstructed views*" from the plateau tops, which create "*an impression of considerable wildness and remoteness"* and *"overall grandeur of scale"*, as noted in the NatureScot LCA. Landscape mitigation and habitat enhancement including riparian planting along river corridors, native shrub regeneration, species-rich grassland and bog and heath enhancement is proposed within the Site (see **Appendix 6.6** for further details). These measures will locally enhance the key characteristics of the landscape including its "*Semi-natural peatland, heather moorland and grassland communities."* The ZTV in **Figure 4.1.5** indicates widespread theoretical visibility of the Proposed Development from the host LCT unit, concentrated within the plateau landscape immediately around the Site, at distances between <1 km and 5 km from the nearest turbine. Further east within the LCT unit, there is intermittent theoretical visibility from western facing slopes near Cranshaws Hill and Spartleton Edge, at distances beyond 10 km. A **large scale** change will be experienced within the Site, reducing to a medium scale of change up to a distance of around 5 km. The changes will be experienced over a **large** geographical extent. The overall magnitude of change is therefore considered to be **high** within the Site, reducing to **medium** between the Site boundary and up to 5 km from the Site. The effect of the Proposed Development on this LCT is judged to be **Major and Significant** within the Site, reducing to **Moderate and Significant** for the area immediately surrounding the Site, up to a distance of around 5 km, broadly between Hogs Law and Cranshaws Hill. Beyond around 5 km the integrity of the key characteristics of the LCT would remain intact, and the effect would reduce to **Minor** and **Not Significant**. No effect will be experienced in the LCT units encompassing parts of the Moorfoot Hills and Pentland Hills. Although the overall effect of the Proposed Development will be adverse, some localised beneficial effects are also recognised due to landscape mitigation and habitat enhancement within the host LCT.	
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Under Scenario 1, the consented Crystal Rig Phase 4 Wind Farm would be located within the far east of the LCT unit. It would form an extension to the existing Crystal Rig / Aikengall Group. As this change would not notably alter the existing baseline, effects under Scenario 1 would be the same as the primary assessment (**Major and Significant** within the Site, reducing to **Moderate and Significant** within 5 km). Under Scenario 2, there would not be any proposed (at application or appeal) wind farms within the unit of the LCT which hosts the Site. Newlands Hill Wind Farm (at Scoping stage) would be located in the adjacent Plateau Moorland – Lothians LCT to the north. As illustrated by the cumulative ZTV in **Figure 4.1.12**, there would be visibility of both the Proposed Development and Newlands Hill from elevated parts of the Dissected Plateau Moorland LCT. As this LCT is already influenced by wind farm development, both within and outside of the LCT, this change would not notably alter the existing baseline. Therefore effects under Scenario 2 would be the same as the primary assessment (**Major and Significant** within the Site, reducing to **Moderate and Significant** within 5 km).	

Table 4.11: Operational Effects on LCT 91: Plateau Grassland – Borders

NatureScot (2019) LCT	LCT 91: Plateau Grassland – Borders
Location and Baseline Description: This LCT is situated approximately 8 km west of the nearest turbine. Key characteristics include: ■ "*Large-scale rolling plateau topography with gentle slopes and smooth relief;* ■ *Vegetation cover dominated by coarse grassland with localised patches of heather moorland rush pasture and scattered conifer plantations;* ■ *Low density settlement with widely dispersed farm buildings;* ■ *Wind farm development in the northern and central parts of the LCT; and* ■ *Remote isolated quality, with open panoramic views.*[30]	
Sensitivity: The LCT is large-scale, located within undulating uplands. A medium to large scale pattern of arable and pastoral fields with limited hedgerows and patches of forestry covers the rolling landform. There is existing influence from human development, with four operational large-scale wind farms (Dun Law Group) concentrated in the north, and quarries, transmission lines, minor roads, and scattered farmsteads throughout. Therefore, the overall susceptibility of the landscape is judged to be **low-medium**. The western part of the LCT unit is within the Lammermuir Hills SLA, and the Fala Moor SLA borders the LCT to the north. Therefore the LCT is considered to be of **medium** value. Taking account of the judgements of susceptibility and value, the sensitivity of the LCT is judged to be **medium**. The Scottish Borders Capacity Study[31] identifies this LCT (Plateau Grassland: Lauder Common) as being of medium landscape sensitivity.	
Magnitude of Change and Significance of Landscape Effects: Landscape effects will be indirect, resulting from changes in how the character of the LCT is perceived. Visibility of the Proposed Development from areas of higher elevation may alter the "*open, large-scale, and exposed*" character, with effects on the "*distant and panoramic views over the adjoining landscape types*" noted in the NatureScot LCA. Large-scale turbines associated with the Proposed Development will be visible against the skyline in easterly views. The ZTV in **Figure 4.1.5** indicates that theoretical visibility of up to 15 turbines is concentrated across elevated eastern facing slopes near Sell Moor, Collie Law, Dun Law, Headshaw Hill and Hangingshaw Hill, within approximately 15 km of the nearest turbine. Overall, a **small** scale of change will be experienced over a **medium** geographical extent. The overall magnitude of change is therefore considered to be **low**. The effect of the Proposed Development on this LCT is judged to be **Minor** and **Not Significant** within the Lammermuir Hills, east of the Leader Water Valley. Beyond this the effect is judged to be **Negligible** and **Not Significant**.	
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Under Scenario 1 there would be no consented developments within or in proximity to the LCT. As there would be no change to the existing baseline, effects under Scenario 1 would be the same as the primary assessment (**Minor** and **Not Significant** within the Lammermuir Hills unit, east of the Leader Water Valley, reducing to **Negligible** and **Not Significant** elsewhere). Under Scenario 2 the proposed Wull Muir Wind Farm (at application) would be located in the west of the LCT, to the west of the A7 and Gala Water Valley. As the Plateau Grassland – Borders LCT is already influenced by wind farm development, both within and outside of the LCT, this change would not notably alter the existing baseline. Therefore, effects under Scenario 2 would be the same as the primary assessment (**Minor** and **Not Significant** within the Lammermuir Hills, east of the Leader Water Valley, reducing to **Negligible** and **Not Significant** elsewhere).	

[30] SNH (2019) National Landscape Character Assessment, Landscape Character Type 91, Plateau Grassland - Borders
[31] Scottish Borders Council (2016) Update of Wind Energy Landscape Capacity and Cumulative Impact Study

Table 4.12: Operational Effects on LCT 99: Rolling Farmland – Borders

NatureScot (2019) LCT	LCT 99: Rolling Farmland – Borders
Location and Baseline Description: This LCT occurs as five units within the study area, the closest of which is located approximately 3.5 km south of the nearest turbine, encompassing the settlement of Westruther and southern half of the access track to the Proposed Development. The remaining four LCT units are over 25 km to the south and west of the nearest turbine, extending beyond the 45 km study area. Key characteristics include: ■ "*Undulating relief, becoming more pronounced at higher elevations;* ■ *Distinctive areas of flat or constant gentle gradients, giving wide horizons and Skyscapes;* ■ *Large-scale strong geometric field pattern, enclosed by hedgerows, with scattered coniferous woods;* ■ *Moderately densely settled, with frequent farmsteads and small villages; and* ■ *Well-kempt, prosperous appearance.*"[32]	
Sensitivity: The landscape of the closest LCT unit is comprised primarily of undulating medium or large scale arable and pasture fields, with larger blocks of forestry and scattered pockets of broadleaved woodland and hedgerows. There is existing influence from human development, with the small hamlets and villages of Whiteburn, Westruther and Houndslow strung along the A697 and B6456, which cross through the middle of the LCT. Scattered farmsteads are dispersed throughout the LCT, connected by a network of unclassified minor roads and access tracks. There is no wind farm development within the LCT. The overall susceptibility of the landscape is judged to be **medium.** The northernmost edges of the LCT unit fall within the Lammermuir Hills SLA, and the Southern Upland Way passes along the north-eastern edge of the LCT. Therefore, the LCT is considered to be of **medium-high** value. Taking account of the judgements of susceptibility and value, the sensitivity of the LCT is judged to be **medium-high**. The Scottish Borders Capacity Study[33] identifies this LCT (Rolling Farmland: Westruther Platform) as being of medium-high landscape sensitivity.	
Magnitude of Change and Significance of Landscape Effects: Landscape effects would be indirect, resulting from changes in how the character of the LCT is perceived. As indicated by the ZTV in **Figure 4.1.5**, there is theoretical visibility of the Proposed Development from more elevated areas across the LCT between 5 km and 12 km from the Proposed Development. The Proposed Development would introduce large-scale vertical elements in the neighbouring LCT to the north, and may affect the "*wide horizons and skyscapes*" in northerly views. Whilst in place, subject to felling regimes, woodland and forestry would screen and filter views towards the Proposed Development from parts of the LCT. Where visible the turbines may be notable features on the skyline in northerly views within approximately 5 km. Beyond this distance the turbines may be perceptible but are unlikely to affect the key characteristics of the LCT. The ZTV in **Figure 4.1.5** indicates widespread theoretical visibility across the middle of the LCT, extending from Boon Hill in the west to Harelaw Moor in the east. There is more limited theoretical visibility from northern facing slopes near Westruther, along the northern edge of the LCT, with views constrained by gradually rising landform. Overall, a **small** scale of change will be experienced over a **large** geographical extent. The overall magnitude of change is therefore considered to be **low**. The effect of the Proposed Development on this LCT is judged to be **Minor** and **Not Significant**.	
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Under Scenario 1 there would be no consented developments within or in proximity to the LCT. As there would be no change to the existing baseline, effects under Scenario 1 would be the same as the primary assessment (**Minor** and **Not Significant**).	

[32] SNH (2019) National Landscape Character Assessment, Landscape Character Type 99, Rolling Farmland – Borders
[33] Scottish Borders Council (2016) Update of Wind Energy Landscape Capacity and Cumulative Impact Study

NatureScot (2019) LCT	LCT 99: Rolling Farmland – Borders
Under Scenario 2 there would be no proposed (at application or appeal) wind farms within or in proximity to the LCT. As there would be no change to the existing baseline, effects under Scenario 2 would be the same as the primary assessment (**Minor** and **Not Significant**).	

Table 4.13: Operational Effects on LCT 100: Plateau Farmland – Borders

NatureScot (2019) LCT	LCT 100: Plateau Farmland – Borders
Location and Baseline Description: This LCT is located between approximately 13 km and 23 km to the east of the nearest turbine, to the east of the Lammermuir Hills. Key characteristics include: ■ "*Large scale smooth landform characterized by gentle sweeping slopes;* ■ *Simple pattern of large arable and pasture fields emphasized by contrasting coniferous shelterbelts and forests;* ■ *Fields divided by drystone dykes or fences;* ■ *Widely dispersed farmsteads and small villages linked by a grid like minor road network* ■ *A line of prehistoric settlement on the southern edge; and* ■ *An open exposed landscape with a simple uniform character.*"[34]	
Sensitivity: The landscape appears highly managed, formed primarily by medium and large scale arable and pasture fields and interspersed by small pockets of woodland and drystone walls. Larger scale forestry is more prevalent along the western edge of the LCT. A limited number of minor roads cross through the area, connecting dispersed farmsteads and small villages. The operational wind farm at Quixwood Moor forms existing vertical elements in the rounded landform, as do transmission lines which pass north-south along the western edge of the LCT. Additionally, the Crystal Rig / Aikengall Group appears in views to the north-west, within the adjacent LCT 90. The overall susceptibility of the landscape is judged to be **medium**. The western edge of the LCT is within the Lammermuir Hills SLA, and the long distance Southern Upland Way crosses through the middle of the area, and therefore the LCT is considered to be of **medium-high** value. Taking account of the judgements of susceptibility and value, the sensitivity of the LCT is judged to be **medium-high**. The Scottish Borders Capacity Study[35] identifies this LCT (Platform Farmland: Eye Water Platform) as being of medium-high landscape sensitivity.	
Magnitude of Change and Significance of Landscape Effects: The ZTV in **Figure 4.1.5** indicates intermittent theoretical visibility of up to 15 turbine hubs from elevated west-facing slopes within the LCT, including from Drakemire, Quixwood Moor, Ecclaw Hill, and Corse Law, at distances of approximately 13 km or more from the nearest turbine. Lower lying areas and north or east facing slopes have very limited or no theoretical visibility of the Proposed Development. Additionally, it is likely that areas of theoretical visibility would be reduced due to intervening forestry along the western edge of the LCT, whilst in place. Landscape effects would be indirect, resulting from changes in how the character of the LCT is perceived. Visibility of the Proposed Development from elevated areas along the western edge of the LCT will have an influence on the "*open exposed landscape*" with its "*simple, uniform character*", as noted in the NatureScot LCA. However, at distances of over 12 km, the turbines of the Proposed Development are not likely to form notable features. A **small** scale of change would be experienced from Drakemire in the south, and from Quixwood Moor and the Ecclaw Hill ridge in the centre of the unit. For the rest of the LCT, a **barely perceptible** scale of change would be experienced over a **medium** geographical extent. The overall magnitude of change is therefore considered to be **low**, reducing to **Negligible** elsewhere in the LCT. The effect of the Proposed Development on this LCT is judged to be **Minor** and **Not Significant**.	

[34] SNH (2019) National Landscape Character Assessment, Landscape Character Type 100, Plateau Farmland - Borders
[35] Scottish Borders Council (2016) Update of Wind Energy Landscape Capacity and Cumulative Impact Study

NatureScot (2019) LCT	LCT 100: Plateau Farmland – Borders
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Under Scenario 1 there would be no consented developments within or in proximity to the LCT. The consented Crystal Rig Phase 4 Wind Farm would be visible within the neighbouring Dissected Plateau Moorland LCT around 5 km to the west, from elevated parts of the LCT. However, given the context of views to the west, where the existing Crystal Rig / Aikengall Group forms a feature, this would not constitute a notable change to the existing baseline. Therefore, effects under Scenario 1 would be the same as the primary assessment (**Minor** and **Not Significant**). Under Scenario 2 there would be no proposed (at application or appeal) wind farms within or in proximity to the LCT. As there would be no change to the existing baseline, effects under Scenario 2 would be the same as the primary assessment **(Minor** and **Not Significant).**	

Table 4.14: Operational Effects on LCT 102: Upland Fringe with Prominent Hills

NatureScot (2019) LCT	LCT 102: Upland Fringe with Prominent Hills
Location and Baseline Description: This LCT occurs as four units between 8 km and 38 km from the nearest turbine. The closest of the units is located approximately 8 km to the east of the nearest turbine, adjacent to the small village of Longformacus and rising to a high point of 360 m at Hardens Hill and 353 m AOD at Knock Hill. The other units are approximately located between 25 km and 38 km to the south of the nearest turbine. Key characteristics include: ■ *"Typically steep, cone or dome-shaped hills, frequently of volcanic or igneous rock giving strong landform identity.* ■ *Diverse surrounding landform types, ranging from smooth undulations to strongly elongated ridges and hollows;* ■ *Land cover dominated by permanent pasture;* ■ *Locally frequent woodland cover;* ■ *Generally low settlement density with isolated farmsteads and occasional small settlements;* ■ *Rich in visual contrasts, with individual hills as dominant focal points of views; and* ■ *Diversity of landscape scale."*[36]	
Sensitivity: Comprised of undulating landform with a matrix of rough pasture fields, muirburn, and numerous areas of forestry and broadleaved woodland, the landscape appears highly managed. Within the northernmost LCT unit, the ordered qualities of the landscape, presence of overhead lines, small settlement and A-road in the south, operational Black Hill windfarm in the north-west, and views to operational windfarms in nearby LCTs introduce elements of human development. The overall susceptibility of the landscape is judged to be **medium-low**. The LCT unit furthest north and closest to the Proposed Development is not within any designated landscapes, although the Lammermuir Hills SLA is in proximity to the north-west. Further LCT units to the south are partially located within the Eildon and Leaderfoot NSA, Teviot Valleys SLA, and the Tweed, Ettrick and Yarrow Confluences SLA. Therefore on balance, the LCT is considered to be of **medium** value. Taking account of the judgements of susceptibility and value, the sensitivity of the LCT is judged to be **medium**. The Scottish Borders Capacity Study[37] identifies this LCT (Grassland with Hills: Knock Hill) as being of medium-high landscape sensitivity.	
Magnitude of Change and Significance of Landscape Effects: The ZTV in **Figure 4.1.5** indicates widespread theoretical visibility across the northern and western extents of the closest LCT unit. Theoretical visibility is concentrated across the elevated stretches between Cockburn Law (325 m AOD) and Hardens Hill (360 m AOD) to the north and Lees Hill (265 m AOD) to the south, within 12 km of the nearest turbine.	

[36] SNH (2019) National Landscape Character Assessment, Landscape Character Type 102, Upland Fringe with Prominent Hills
[37] Scottish Borders Council (2016) Update of Wind Energy Landscape Capacity and Cumulative Impact Study

NatureScot (2019) LCT	LCT 102: Upland Fringe with Prominent Hills
Effects on the landscape will be indirect, resulting from changes in how the character of the LCT is perceived. Visibility of the Proposed Development has the potential to affect the perception of "*individual hills as dominant focal points*" as noted by NatureScot, as a result of introducing large-scale turbines into the surrounding landscape, although noting that the operational Black Hill Wind Farm is likely to be visible from these hills. The proposed turbines are likely to form new features within westerly views, contrasting against the rolling plateau landform. A **small** scale change would be experienced from the elevated slopes around Hardens Hill and Abbey Hill in the north-west of the LCT, approximately 10 km from the nearest turbine. It is likely that westerly views towards the Site, seen against the conical forms of Dirrington Great Law and Dirrington Little Law in the neighbouring LCT, would be affected. For the rest of the LCT, a **barely perceptible** scale of change would be experienced over a **medium** geographical extent. The overall magnitude of change is therefore considered to be **low** within 10 km of the nearest turbine, reducing to **barely perceptible** elsewhere in the LCT. The effect of the Proposed Development on this LCT is judged to be **Minor** and **Not Significant** within around 10 km of the nearest turbine, reducing to **Negligible** and **Not Significant** elsewhere.	
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Under Scenario 1 there would be no consented developments within or in proximity to the LCT. As there would be no change to the existing baseline, effects under Scenario 1 would be the same as the primary assessment (**Minor** and **Not Significant** within around 10 km, reducing to **Negligible** and **Not Significant** elsewhere). Under Scenario 2 there would be no proposed (at application or appeal) wind farms within or in proximity to the LCT. As there would be no change to the existing baseline, effects under Scenario 2 would be the same as the primary assessment (**Minor** and **Not Significant** within around 10 km, reducing to **Negligible** and **Not Significant** elsewhere).	

Table 4.15: Operational Effects on LCT 103: Undulating Upland Fringe

NatureScot (2019) LCT	LCT 103: Undulating Upland Fringe
Location and Baseline Description: This LCT occurs as two units, between 13 km and 23 km to the south-west of the nearest turbine. Both LCT units are located east and west of Gala Water Valley, on the rising slopes either side of the town of Galashiels. Key characteristics include: ■ *"Large-scale, moderately to steeply sloping and undulating landform incised in places by steep gullies and narrow valleys;* ■ *Unity of land cover characterised by improved pastures, with prominent field pattern delineated by a well maintained network of drystone dykes, and scattered coniferous plantations;* ■ *Medium density settlement with small villages and farmsteads sited typically in sheltered valleys and on lower slopes;* ■ *Simple uniform landscape of smooth flowing curves, open in character with distant views over adjoining valley types and the Lammermuir and Moorfoot hills; and* ■ *Boundaries clearly defined by major river valleys*"[38]	
Sensitivity: The landscape is comprised primarily of permanent and large-scale pastures, defined by drystone walls and interspersed by small patches of forestry. Small settlements and a network of minor roads extend across the LCT units, and the A68 and A72 hem in the units to the east and west, with the A7 in between. Although there are no operational windfarms in the LCT units, there are numerous wind farms visible to the north and north-east in adjacent LCTs. The overall susceptibility of the landscape is judged to be **medium**. The unit to the east, in closer proximity to the Site, is not located within any SLAs. The unit to the west is partially located within the Tweed, Ettrick and Yarrow Confluences SLA, and the Tweed Valley SLA, and therefore the landscape is considered to be of **medium** value.	

[38] SNH (2019) National Landscape Character Assessment, Landscape Character Type 103, Undulating Upland Fringe

NatureScot (2019) LCT	LCT 103: Undulating Upland Fringe
Taking account of the judgements of susceptibility and value, the sensitivity of the LCT is judged to be **medium**. The Scottish Borders Capacity Study[39] identifies these LCT units (Undulating Grassland: East Gala and West Gala) as being of medium-high landscape sensitivity.	
Magnitude of Change and Significance of Landscape Effects: The ZTV in **Figure 4.1.5** indicates that there will be widespread theoretical visibility between the Site and the LCT, particularly along eastern facing slopes within the eastern LCT unit within 15 km of the nearest turbine. Landscape effects will be indirect, resulting from changes in how the character of the LCT is perceived. Visibility of the Proposed Development may influence the "*open character with distant views over adjoining valley types and the Lammermuir and Moorfoot hills"*, as a result of introducing large-scale turbines into the surrounding landscape. Overall, a **small** scale change will be experienced in eastern parts of the LCT, across a **medium** geographical extent, between the area south of Lauder and north of Melrose, at distances of over 13 km from the nearest turbine. Throughout the rest of the eastern LCT unit, a **barely perceptible** scale change will be experienced over a **medium** geographical extent. The overall magnitude of change is therefore considered to be **low** within around 15 km, and reducing to **Negligible** beyond 15 km. Therefore, the effect of the Proposed Development on this LCT is judged to be **Minor** and **Not Significant** within around 15 km, reducing to **Negligible and Not Significant** elsewhere.	
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Under Scenario 1 there would be no consented developments within or in proximity to the LCT. As there would be no change to the existing baseline, effects under Scenario 1 would be the same as the primary assessment (**Minor** and **Not Significant** within around 15 km, reducing to **Negligible** and **Not Significant** elsewhere). Under Scenario 2 there would be no proposed (at application or appeal) wind farms within or in proximity to the LCT. As there would be no change to the existing baseline, effects under Scenario 2 would be the same as the primary assessment (**Minor** and **Not Significant** within around 15 km, reducing to **Negligible** and **Not Significant** elsewhere).	

Table 4.16: Operational Effects on LCT 105: Upland Fringe Moorland with Hills

NatureScot (2019) LCT	LCT 105: Upland Fringe Moorland with Hills
Location and Baseline Description: This LCT is located approximately 4.5 km south of the nearest turbine, and contains the prominent landform of Dirrington Great Law and Dirrington Little Law in the north, and the Bedshiel Kaims in the south. Key characteristics include: ■ *"Landform consists of a uniform, flat to gently sloping platform interrupted by two prominent dome-shaped hills, and a distinctive meandering glacial moraine;* ■ *Open land cover with few trees dominated by rough grassland with rushes and bog vegetation on lower ground and heather moorland on upper slopes;* ■ *Very widely dispersed isolated farm buildings and few field boundaries;* ■ *A dramatic large scale landscape with open views; and* ■ *Unique within the region, with well-defined visual identity."*[40]	
Sensitivity: Comprised primarily of rough grazing, large scale pasture fields, and swathes of muirburn, the landscape pattern is relatively uniform and expansive with wide horizons. Occasional drystone walls, scattered farmsteads and small blocks of forestry form small scale features within the landscape. There are no operational windfarms in the LCT, however there are frequent views to large wind farms to the north-west and north-east, and the B6456 cuts east-west through the centre, introducing elements of human development. The overall susceptibility of the landscape is judged to be **medium-low**.	

[39] Scottish Borders Council (2016) Update of Wind Energy Landscape Capacity and Cumulative Impact Study
[40] SNH (2019) National Landscape Character Assessment, Landscape Character Type 105, Upland Fringe Moorland with Hills

NatureScot (2019) LCT	LCT 105: Upland Fringe Moorland with Hills
The LCT is partially within the Lammermuir Hills SLA, which covers the northern extents of the unit, and is therefore considered to be of **medium** value. Taking account of the judgements of susceptibility and value, the sensitivity of the LCT is judged to be **medium**. The Scottish Borders Capacity Study[41] identifies this LCT (Upland Fringe Moorland: Greenlaw Common) as being of medium landscape sensitivity.	
Magnitude of Change and Significance of Landscape Effects: As indicated by the ZTV in **Figure 4.1.5** there is widespread visibility across most of the LCT between approximately 5 km and 11 km of the nearest turbine, particularly concentrated across northern facing slopes, and across the elevated Greenlaw Moor in the south of the unit. There are pockets of lesser or no theoretical visibility, located to the south of the Dirrington landform which form intervening topographical features in the landscape. Landscape effects will be indirect, resulting from changes in how the character of the LCT is perceived. The Proposed Development will introduce large-scale vertical features into the surrounding landscape, which will be visible on the skyline in north-westerly views. It is likely that the proposed turbines would form notable new features in views towards the Lammermuir Plateau, which would distract from the "*uniform, flat to gently sloping platform interrupted by two prominent dome-shaped hills"* and "*dramatic large scale landscape with open views*", as noted by the NatureScot LCA. Overall, a **medium** scale of change will be experienced from the northern parts of the LCT, between the Site and Dirrington Little Law, within approximately 7 km of the nearest turbine. Elsewhere in the LCT beyond 7 km, a **small** scale of change will be experienced, over a large geographical extent. The overall magnitude of change is therefore considered to be **medium** within approximately 7 km, reducing to **low** beyond 7 km. Overall, the effect of the Proposed Development on this LCT is judged to be **Moderate and Significant** within 7 km, reducing to **Minor** and **Not Significant** beyond 7 km.	
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Under Scenario 1 there would be no consented developments within or in proximity to the LCT. As there would be no change to the existing baseline, effects under Scenario 1 would be the same as the primary assessment (**Moderate and Significant** within around 7 km, reducing to **Minor** and **Not Significant** beyond 7 km). Under Scenario 2 there would be no proposed (at application or appeal) wind farms within or in proximity to the LCT. As there would be no change to the existing baseline, effects under Scenario 2 would be the same as the primary assessment (**Moderate and Significant** within around 7 km, reducing to **Minor** and **Not Significant** beyond 7 km).	

Table 4.17: Operational Effects on LCT 108: Lowland Margin

NatureScot (2019) LCT	LCT 108: Lowland Margin
Location and Baseline Description: This LCT is located approximately 11 km south of the nearest turbine, within the Tweed Lowlands, and encompassing the town of Gordon. Key characteristics include: ■ "*Even, very gently sloping landform with extensive flat low-lying areas;* ■ *Large arable and pasture fields divided by drystone dykes;* ■ *Widely dispersed woodlands;* ■ *Medium density settlement of scattered stone built farmsteads and villages; and* ■ *A large scale, regular, uniform landscape with distant and panoramic views to uplands, punctuated by volcanic hills in the middle distance outwith the unit."*[42]	
Sensitivity:	

[41] Scottish Borders Council (2016) Update of Wind Energy Landscape Capacity and Cumulative Impact Study
[42] SNH (2019) National Landscape Character Assessment, Landscape Character Type 108, Lowland Margin

NatureScot (2019) LCT	LCT 108: Lowland Margin
The LCT is medium in scale, forming part of the transition from the larger-scale uplands to the north. Comprised primarily of undulating pasture and arable fields bound by drystone walls, and interspersed by pockets of forestry, the landscape presents a varied and pastoral scene. The A6105 and A6089 pass through the LCT, coming to a junction in the town of Gordon and connecting with a network of minor roads that link various farmsteads scattered throughout the landscape. There are no operational wind farms within the LCT, however large-scale overhead transmission lines pass east-west through the landscape, cutting across pastoral fields and forming prominent features within the gently undulating surroundings. A single turbine of 34.2 m tip height is present in the north of the character area near Rumbleton. The overall susceptibility of the landscape is judged to be **medium-high**. The LCT has some inter-visibility with sensitive landscapes and possess some scenic qualities, although is not part of a designated landscape. The LCT is therefore considered to be of **medium** value. Taking account of the judgements of susceptibility and value, the sensitivity of the LCT is judged to be **medium**. The Scottish Borders Capacity Study[43] identifies this LCT (Lowland Margin Platform: Gordon Platform) as being of medium-high landscape sensitivity.	
Magnitude of Change and Significance of Landscape Effects: As indicated by the ZTV, there will be widespread theoretical visibility of the Proposed Development across the LCT, particularly from the southern and eastern parts of the character area, from approximate distances of 12 km to 17 km. Areas of limited to no theoretical visibility are located along the northern edge between Rumbletonlaw and Greenlaw, in the centre near Middlethird, and to the west between Gordon Moss and East Morriston. Landscape effects will be indirect, resulting from changes in how the character of the LCT is perceived. When visible, the turbines would appear on the skyline to the north formed by the Lammermuir Hills, and would form tall, man-made features in the surrounding landscape. Visibility of the Proposed Development from areas of higher elevation and site-facing slopes has the potential to affect the "*distant and panoramic views to uplands, punctuated by volcanic hills in the middle distance*", as noted by the NatureScot LCA. Overall, a **small** scale of change will be experienced over a **large** geographical extent. The overall magnitude of change is therefore considered to be small. The effect of the Proposed Development on this LCT is judged to be **Minor** and **Not Significant**.	
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Under Scenario 1 there would be no consented developments within or in proximity to the LCT. As there would be no change to the existing baseline, effects under Scenario 1 would be the same as the primary assessment (**Minor** and **Not Significant**). Under Scenario 2 there would be no proposed (at application or appeal) wind farms within or in proximity to the LCT. As there would be no change to the existing baseline, effects under Scenario 2 would be the same as the primary assessment (**Minor** and **Not Significant**).	

Table 4.18: Operational Effects on LCT 115: Upland Valley with Mixed Farmland

NatureScot (2019) LCT	LCT 115: Upland Valley with Mixed Farmland
Location and Baseline Description: This LCT is split into two units either side of the Lammermuir plateau, and each is within 5 km and 10 km of the nearest turbine. The unit to the east is approximately 3 km from the nearest turbine, and the unit to the west is approximately 8 km from the nearest turbine. Key characteristics include: ■ "*Broad flat valley floor with distinct floodplain and meandering river channel;* ■ *Evenly sloping valley sides;* ■ *Rich red soils derived from Old Red Sandstone parent materials;* ■ *Land cover dominated by arable and improved pasture land, with medium to large size fields;*	

[43] Scottish Borders Council (2016) Update of Wind Energy Landscape Capacity and Cumulative Impact Study

NatureScot (2019) LCT	LCT 115: Upland Valley with Mixed Farmland

- *Valley bottom and lower valley sides well-treed, with hedgerows, hedgerow trees, small woodlands and coniferous plantations all locally prominent;*
- *Significant designed landscapes in each valley;*
- *Unity of vernacular architecture utilizing local red sandstone and whinstone."*[44]

Sensitivity:

Comprising arable fields, rough grassland and permanent pastures spread across undulating upland valley forms, interspersed with frequent blocks of forestry, the landscape is varied. Wooded valleys meander through the character areas, and stone farmsteads and hedgerows provide a sense of time-depth across the landscape. Above the valley floors, the landform transitions into undulating upland plateau, providing some contrast and visual interest. There are no operational wind farms within the LCT units. However larger scale wind farms are highly visible within neighbouring LCTs to the north, including the Crystal Rig / Aikengall Group in LCT 90, and the Dun Law Group within LCT 91. The overall susceptibility of the landscape is judged to be **medium**. Located within the locally designated Lammermuir Hills SLA, and host to a portion of the promoted Southern Upland Way, it is judged that the landscape is of **medium-high** value.

Taking account of the judgements of susceptibility and value, the sensitivity of the LCT is judged to be **medium-high**. The Scottish Borders Capacity Study[45] identifies this LCT (Upland Valley with Farmland: Upper Leader, Upper Whiteadder) as being of medium-high sensitivity.

Magnitude of Change and Significance of Landscape Effects:

Theoretical visibility within both LCT units is intermittent, largely limited to elevated hill tops and site-facing slopes. The ZTV in **Figure 4.1.5** indicates theoretical visibility of up to 15 turbine hubs from distances between 4 km and 7 km from the Proposed Development within the closer, eastern LCT unit, seen from the locally prominent Wrunk Law (345 m AOD) and Whining Hill (330 m AOD). Along lower valley slopes, theoretical visibility is more limited by intervening landform, with up to 2 hubs theoretically visible at distances of approximately 3.5 km near Watch Water Reservoir, and up to 11 hubs from falling slopes near Fellcleugh and Ellem, approximately 9 km from the nearest turbine. Within the western LCT unit, theoretical visibility is more limited, seen from rising slopes west of the Leader Valley, from distances of approximately 13 km from the Proposed Development.

Landscape effects would be indirect, resulting from changes in how the character of the LCT is perceived. The introduction of tall vertical structures such as the proposed turbines across the Lammermuir Hills, seen from the closest LCT unit at close range distances of between approximately 3.5 km to 5 km, would potentially detract from the medium-scale and varied valley landscape. From lower down the valley slopes, proposed turbines would be seen over the plateau edge along the eastern side of the Site, although partially screened by landform. However, the Proposed Development would be seen in combination with the existing Fallago Rig, and in successive views with operational wind farm clusters to the north, which *"form visually prominent point features from many areas within the valleys*", as noted by the NatureScot LCA. Forestry along the valley floors and slopes is likely to provide additional filtering of views towards the Proposed Development, whilst in place.

Within 5 km, a **medium** scale of change would be experienced over a **small** geographical extent. Beyond 5 km, this reduces to a **small** scale of change over a **medium** geographical extent.

The overall magnitude of change is therefore considered to be **small**. The effect of the Proposed Development on this LCT is judged to be **Minor** and **Not Significant**.

Potential for Effects under Future Baseline Scenarios (Cumulative Assessment):

Under Scenario 1, there would be no consented developments within the LCT. The consented Crystal Rig Phase 4 Wind Farm would be located less than 1 km to the north within the neighbouring LCT 90. However, given the context of views to the north, where the existing Crystal Rig / Aikengall Group forms a feature, this would not constitute a notable change to the existing baseline. Therefore, effects under Scenario 1 would be the same as the primary assessment (**Minor** and **Not Significant**).

Under Scenario 2 there would be no proposed (at application or appeal) wind farms within or in proximity to the LCT. As there would be no change to the existing baseline, effects under Scenario 2 would be the same as the primary assessment (**Minor** and **Not Significant**).

[44] SNH (2019) National Landscape Character Assessment, Landscape Character Type 105, Upland Fringe Moorland with Hills
[45] Scottish Borders Council (2016) Update of Wind Energy Landscape Capacity and Cumulative Impact Study

Table 4.19: Operational Effects on LCT 117: Pastoral Upland Fringe Valley

NatureScot (2019) LCT	LCT 117: Pastoral Upland Fringe Valley

Location and Baseline Description:

Within the study area, this LCT is found as five units. The closest LCT unit is located approximately 12 km to the south-west of the nearest turbine, and the valley contains the A68 corridor between Lauder and Melrose, following the Leader Water. Another unit is located 18 km to the east of the nearest turbine, and encompasses Eye Water between Cockburnspath and Houndwood. Further units are located beyond 30 km to the south, and the valley landform contain the watercourses Kale Water, Bowmont Water, and a segment of the River Teviot. Key characteristics include:

- "*Medium scale pastoral valley with flat floor enclosed by upland fringe pastures, often with rough grassland and moorland covered hills above;*
- *Smooth large scale landform modified in places by bluffs and moraine on valley floor, scree slopes or rock outcrops on valley sides;*
- *Narrow, often wooded tributary side valleys;*
- *Broadleaf woodlands and scrub on bluff slopes and scattered trees along river banks, occasional coniferous plantations and shelterbelts on valley sides;*
- *Valley floor pastures enclosed by drystone dykes with occasional hedgerows, interspersed with occasional patches of scrub, coarse grass and rushes; and*
- *Scattered villages, farmsteads and mansion houses with policy woodlands."*[46]

Sensitivity:

Small to medium scale arable and pasture fields dominate the land cover in the closest LCT unit, with frequent hedgerows and bands of broadleaved woodland crossing the slopes and following along the Leader Water. There are no operational wind turbines within this LCT, however the landscape is influenced by human development, namely agricultural use with small villages and farmsteads scattered along the valleys. Human development in the LCT also includes main roads that follow the valley floors, including the A68 and overhead lines. The overall susceptibility of the landscape is judged to be **medium.**

The LCT units located 35 km to the south of the nearest turbine are partially within the Cheviot Foothills SLA. Given the distance between these units and the Site the LCT is considered to be of **medium** value overall.

Taking account of the judgements of susceptibility and value, the sensitivity of the LCT is judged to be **medium**. The Scottish Borders Capacity Study[47] identifies the Pastoral Upland Fringe Valley LCT as being of medium-high landscape sensitivity.

Magnitude of Change and Significance of Landscape Effects:

The ZTV in **Figure 4.1.5** indicates some theoretical visibility between the Site and the north-western edge of the closest LCT unit, particularly concentrated along the east-facing slopes of the valley. On the valley floors and west-facing valley slopes theoretical visibility is more limited due to the intervening topography. In the remaining units, within 20 km theoretical visibility is very limited due to intervening topography between the Site and these units, and beyond 20 km theoretical visibility is scattered and limited to north and west-facing valley sides.

Landscape effects would be indirect, resulting from changes in how the character of the LCT is perceived. The Proposed Development would introduce vertical man-made features (some of which will be lit during hours of darkness by steady read lights on their hubs) which will be visible along and behind the moorland slopes, albeit at distances of over 12 km.

There will be a **barely perceptible** scale of change. Changes will be experienced over a **small** geographical extent. The magnitude of change is therefore considered to be **barely perceptible**.

Overall, the effect of the Proposed Development on this LCT is judged to be **Negligible and Not Significant**.

[46] SNH (2019) National Landscape Character Assessment, Landscape Character Type 117, Pastoral Upland Fringe Valley
[47] Scottish Borders Council (2016) Update of Wind Energy Landscape Capacity and Cumulative Impact Study

NatureScot (2019) LCT	LCT 117: Pastoral Upland Fringe Valley
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Under Scenario 1 there would be no consented developments within or in proximity to the LCT. As there would be no change to the existing baseline, effects under Scenario 1 would be the same as the primary assessment (**Negligible and Not Significant**). Under Scenario 2 there would be no proposed (at application or appeal) wind farms within or in proximity to the LCT. As there would be no change to the existing baseline, effects under Scenario 2 would be the same as the primary assessment (**Negligible and Not Significant**).	

Table 4.20: Operational Effects on LCT 266: Plateau Moorland - Lothians

NatureScot (2019) LCT	LCT 266: Plateau Moorland - Lothians
Location and Baseline Description: This LCT is located north of the Site, and forms part of the Lammermuir platform that hosts the Proposed Development. Lammer Law (529 m AOD) forms a focal point at the far west of the unit, and Spartleton rises to a high point of 468 m AOD in the east. Through the middle of the unit, Whiteadder Water cuts through a broader valley and feeds into Whiteadder Reservoir. Key characteristics include: ■ "*Modest hills and moors forming broad plateau;* ■ *Smooth convex hill slopes dissected by a complex tracery of valley landform which vary in scale and appearance, from minor burn and incised gullies to occasional wider flat-bottomed valleys of larger rivers;* ■ *Medium to large scale landscape;* ■ *Open upland character with sparse tree cover;* ■ *Expanses of heather moorland, with rough grasses on upper slopes;* ■ *Generally unenclosed, with some post and wire fences along roads and access tracks, and occasional stone sheep stells and walls around farmsteads;* ■ *Sparely inhabited, with scattered farmsteads in valleys;* ■ *Reservoirs creating local focal points;* ■ *Historic human influences evident in the many enclosures, cairns, hill forts and stone circles;* ■ *Steep north-facing scarps with spectacular panoramic views overlooking the coastal plain of Lothian to the north with views across the Firth of Forth; and* ■ *Forms the skyline when viewed from lower land to the north."*[48]	
Sensitivity: Situated at the northern edge of the Lammermuirs, the southern extents of the LCT within the Lammermuir Plateau are larger in scale with a broad and open upland character. Across the steep northern slopes the landscape is more intricate, with a sudden transition to smaller-scale arable fields. There are three operational wind farms located in the east of the LCT unit, within 15 km of the Site. Beyond the presence of wind farms, there is little influence from human development with very sparse settlement, and no road network except the B6355 crossing through the east of the LCT. The overall susceptibility of the landscape is judged to be **medium**. The LCT unit is partially located within six separate SLAs, including Lammer Law, Hopes to Yester SLA in the east, Lammermuir Moorland SLA and Whiteadder SLA in the centre, Danskine to Whitecastle SLA in the north, and small segments of Whittingehame to Deuchrie SLA, Halls to Bransly Hill SLA, and Monynut to Blackcastle SLA in the east. Three of these SLAs are within 5 km of the Proposed Development, and given the distance and number of SLAs, the LCT is considered to be of **medium** value.	

[48] SNH (2019) National Landscape Character Assessment, Landscape Character Type 105, Upland Fringe Moorland with Hills

NatureScot (2019) LCT	LCT 266: Plateau Moorland - Lothians
Taking account of the judgements of susceptibility and value, the sensitivity of the LCT is judged to be **medium**. The East Lothian Capacity Study[49] identifies this LCT (Lammermuir Plateau: Central and East) as being of medium-high to high landscape sensitivity.	
Magnitude of Change and Significance of Landscape Effects: As indicated by the ZTV in **Figure 4.1.5**, there is widespread theoretical visibility of the Proposed Development scattered across the areas of higher elevation within the LCT, particularly across south and west facing slopes within 5 km of the nearest turbine. Within valley landform and on north facing slopes, theoretical visibility is limited due to intervening topography. There is extensive theoretical visibility within 5 km of the Proposed Development, with proposed turbines situated directly at the southern edge of the LCT. Landscape effects will be indirect, resulting from changes in how the character of the LCT is perceived. The Proposed Development will introduce large-scale vertical features which will be visible along and behind the moorland plateaus, and will be visible from lower elevations to the north. The broad and open expanse of the landscape is likely be able to accommodate the new features, however they would be large-scale features as compared to the underlying rolling plateau landform and uniform landcover. Due to the proximity of the Proposed Development, the contrast is likely to be obvious and notable within 5 km. There will be a **medium** scale of change in proximity to the Site within 5 km, and changes will be experienced over a **large** geographical extent. The magnitude of change is therefore considered to be **medium**. Overall, the effect of the Proposed Development on this LCT is judged to be **Moderate and Significant** within approximately 5 km, reducing to **Minor** and **Not Significant** between 5 km and 10 km.	
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Under Scenario 1, there are currently no other consented wind farm developments within this LCT. In the neighbouring Dissected Plateau Moorland LCT, the consented Crystal Rig Phase 4 would be visible in combination with the Proposed Development from large parts of the LCT, as illustrated by the cumulative ZTV in **Figure 4.1.11**. However, this consented development is located within the Crystal Rig / Aikengall Group. As the above changes would not notably alter the existing baseline, effects under Scenario 1 would be the same as the primary assessment (**Moderate and Significant** within 5 km, reducing to **Minor** and **Not Significant** between 5 km and 10 km). Under Scenario 2, the proposed Newlands Hill Wind Farm (at Scoping stage) would be located within this LCT, across the summits of Newlands Hill, Wanside Rig and Moss Law. It would form a standalone development which is separate from existing wind farms and groups, including Fallago Rig and the Crystal Rig / Aikengall Group. As illustrated by the cumulative ZTV in **Figure 4.1.12** the Proposed Development and Newlands Hill would be visible in combination from large parts of the LCT. Given that wind farms within and in proximity to the LCT are characteristic, the changes described would not notably alter the existing baseline. Effects under Scenario 2 would therefore be the same as the primary assessment (**Moderate and Significant** within 5 km, reducing to **Minor** and **Not Significant** between 5 km and 10 km).	

Table 4.21: Operational Effects on LCT 275: Lowland Farmed Plains - Lothians

NatureScot (2019) LCT	LCT 275: Lowland Farmed Plains - Lothians
Location and Baseline Description: This LCT is located broadly north and north-west of the Site, between 8 km and 30 km, and forms part of the extensive agricultural plains that border the Lammermuir Hills. Generally, a low-lying and undulating landscape, the Garleton Hills, Traprain Law, and North Berwick Law provide more prominent points of elevation within the north-east of the area. Key characteristics include: ■ "*Smoothly rolling, large-scale arable plain landform with occasional igneous intrusions forming local landmarks.* ■ *Small streams forming shallow breaks in the smooth slopes, feeding into the broad meandering valley of the River Tyne;*	

[49] East Lothian Council (2005) Landscape Capacity Study for Wind Turbine Development in East Lothian

NatureScot (2019) LCT	LCT 275: Lowland Farmed Plains - Lothians

- *High quality agricultural land, divided into a chequerboard pattern of fields with historic field pattern being retained in some areas. Field boundaries defined by clipped hedges, scattered hedgerow trees, post and wire fences and occasional stone walls.*
- *Occasional small-scale woodlands and shelterbelts relate to watercourses and reinforce field pattern.*
- *Policy woodlands, estate houses and, buildings and boundary walls of several estates throughout the area create a historic character.*
- *Numerous conservation villages spread throughout the Landscape Character Type with a scattering of farmsteads and small housing clusters, as well as larger settlement of Haddington.*
- *Open views across the landscape to Edinburgh, the coast to the north, and hills to the south."*[50]

Sensitivity:

Situated along the fertile coastal plains, and extending south towards the edge of the Lammermuir Hills, the landscape is varied in scale although simple in its uniform arable fields. Smaller scale fields lie in proximity to the coast and settlements, and transition into larger-scale field patterns in the south as the landform gradually rises to meet the uplands. Field boundaries are generally intact, with hedgerows and fencing providing an orderly appearance across the plains. The River Tyne meanders generally east-west through the fields, and is well wooded along its course. The influence of human development is evident throughout, with a robust network of minor roads linking between settlements and dispersed farmsteads, and major roads (including the A1) generally oriented east-west through the landscape and connecting to Edinburgh. Settlements within the LCT include the larger town of Haddington in the centre of the area, as well as several smaller villages and towns arranged along the coast and set within the arable fields. Numerous overhead lines string across the landscape. There are no operational wind farms within the LCT, although multiple large-scale overhead transmission lines pass through the west and are visually prominent within the landscape. The overall susceptibility of the landscape is judged to be **medium**.

The LCT unit encompasses several SLAs, including the Garleton Hills SLA, Kingston SLA, Traprain and Tyne Valley SLA, Linplum SLA, North Berwick Law SLA, Garden County Farmland SLA, and the Whitekirk and Balgone Outcrops SLA. The John Muir Trail long distance path passes through the eastern part of the area, before cutting along the coast towards Edinburgh. Taking these into account the value of the landscape is judged to be **medium-high**.

Taking account of the judgements of susceptibility and value, the sensitivity of the LCT is judged to be **medium-high**. The East Lothian Capacity Study[51] identifies this LCT (Lowland Plains: Haddington Plain) as being of medium landscape sensitivity.

Magnitude of Change and Significance of Landscape Effects:

Landscape effects will be indirect, resulting from changes in how the character of the LCT is perceived. Visibility of the Proposed Development from this LCT may alter the *"open views across the landscape to … the hills to the south"* which are available from elevated ridges across the landscape as well as from the lower lying plains.

As indicated by the ZTV in **Figure 4.1.5**, there is theoretical visibility of the Proposed Development across the east-west oriented ridges within the LCT, as well as areas of higher elevation near North Berwick and the Garleton Hills. However, theoretical visibility would mostly be limited to turbine blades, except the areas of higher elevation within the Garleton Hills and North Berwick Law, and would be seen at long-range distances exceeding 15 km. Turbine blades would be seen over the rising northern edge of the Lammermuir Hills, but are unlikely to form new focal points within southerly views.

Overall, a **small** scale change will be experienced over a **large** geographical extent. The overall magnitude of change is therefore considered to be **low.** Overall, the effect of the Proposed Development on this LCT is judged to be **Minor** and **Not Significant.**

Potential for Effects under Future Baseline Scenarios (Cumulative Assessment):

Under Scenario 1 there would be no consented developments within or in proximity to the LCT. As there would be no change to the existing baseline, effects under Scenario 1 would be the same as the primary assessment (**Minor** and **Not Significant**).

[50] SNH (2019) National Landscape Character Assessment, Landscape Character Type 275: Lowland Farmed Plains - Lothians
[51] East Lothian Council (2005) Landscape Capacity Study for Wind Turbine Development in East Lothian

NatureScot (2019) LCT	LCT 275: Lowland Farmed Plains - Lothians
Under Scenario 2 there would be no proposed (at application or appeal) wind farms within or in proximity to the LCT. As there would be no change to the existing baseline, effects under Scenario 2 would be the same as the primary assessment (**Minor** and **Not Significant**).	

Operational Visual Effects

4.126 The assessment of visual effects from the 24 viewpoints selected to represent views of the Proposed Development (as listed in **Table 4.4:** above and shown on **Figures 4.1.2 and 4.1.3**) are set out below. This assessment assumes that all effects are long-term, during the proposed 35-year operational lifespan of the Proposed Development, and reversible, unless stated otherwise. A summary of effects on visual receptors is provided at the end of the report in **Table 4.64**.

4.127 Accompanying visualisations for each assessment viewpoint are contained in **Volume 3b** of the EIA Report. The visualisations were prepared in accordance with the methodology set out in **Appendix 4.1**.

Table 4.22: Viewpoint 1: Twin Law Cairns, Southern Upland Way

Viewpoint 1: Twin Law Cairns, Southern Upland Way			
Grid Reference (NGR)	362427 654795	**Figure Number**	4.2.1
LCT	90 - Dissected Plateau Moorland	**Designated Landscape or Wild Land Area**	Lammermuir Hills SLA
Direction of View	North-west	**Distance to nearest turbine (km)**	1.9 km
Number of hubs theoretically visible	15	**Number of turbines with blades theoretically visible**	15
Location, description of existing view and potential receptors: This viewpoint is located along the Southern Upland Way at the local landmark Twin Law Cairns (445 m AOD) to the south of the Site. The viewpoint is representative of local recreational receptors along the long-distance footpath and Core Path, and visitors to the cairns. The viewpoint offers panoramic views from an elevated location in all directions over the surrounding rolling landscape of the Lammermuirs, which is blanketed by rough grassland, heather moorland and forestry. To the south, the landscape transitions into a more settled, low-lying landscape of farmland and forestry. The landmark landform of Spartleton Edge appears on the horizon to the north-east. Dirrington Great Law appears on the horizon to the east, and there are distant views south to the Eildon Hills. To the north-west, the existing Fallago Rig wind farm is visible at a distance of approximately 5 km to the nearest turbine. It is partially backclothed to the north-west by rising moorlands further north, including Meikle Says Law (536 m AOD) and Willie's Law (499 m AOD). Turbines further west within Fallago Rig are more exposed on the horizon, and form prominent vertical elements within the undulating upland landscape. Other operational wind farms within the Lammermuir Hills are visible on the horizon to the north-east, including Crystal Rig and Aikengall between approximately 9 km and 14 km, partially screened by the prominent landform of Spartleton Edge. Directly east, the operational Black Hill Wind Farm is visible behind Dirrington Great Law, forming vertical features along the horizon at a distance of approximately 11 km.			
Sensitivity: Recreational receptors, whose attention is focused on their surroundings, are considered to be of **high** susceptibility to changes in the view. The viewpoint is located within the Lammermuir Hills SLA and is located along the promoted Southern Upland Way. The value of the view is therefore considered to be **high**. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be **high**.			
Assessment of visual effects: All 15 turbines (hubs and blades) would be theoretically visible from this viewpoint, on the skyline to the north-west at a distance of approximately 2 km to the nearest turbine (T15). The turbines will extend above the skyline, and will extend			

Viewpoint 1: Twin Law Cairns, Southern Upland Way
across the moorland plateau, including across Meikle Law (468 m AOD). Seen against the landform to the north and north-west, the proposed turbines would form notable new features. The Proposed Development would be seen partially in front of Fallago Rig, and there will be a notable contrast between the scale of the Fallago Rig and Dunside turbines. Some stacking would be apparent, and access tracks would be visible. At night, steady red lights would be seen on the hubs of seven turbines (T1, T3, T6, T8, T9, T14 and T15). If a taller hub height of 139 m was used, all 15 turbines (hub and blades) would be theoretically visible from this viewpoint (see **Figure TA4.3.4**). At night, steady red lights would be seen on the hubs of seven turbines (T1, T3, T6, T8, T9, T14 and T15). This is also considered in reaching the conclusions set out below. At a distance of around 2 km, the turbines would form notable and prominent new features across the undulating plateau moorlands, and would occupy most of the horizon in views to the north-west. The scale of visual change would therefore be **large** and experienced over a **medium** geographical extent, as similar views would be gained from other parts of the moorlands to the south-west and south-east. The overall magnitude of change is judged to be **high**, and taking account of the **high** sensitivity, will result in a **Major and Significant** visual effect.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Under Scenario 1, the consented Crystal Rig Phase 4 Wind Farm (11 turbines, 200 m tip height) would be visible over the upland landform of Spartleton Edge (468 m AOD), at a distance of approximately 9 km. It would be seen in combination with the existing wind farm schemes within the Crystal Rig / Aikengall Group, although with a larger tip height. As the above changes would not notably alter the existing baseline, effects under Scenario 1 would be the same as the primary assessment (**Major and Significant**). Under Scenario 2, the proposed Newlands Hill Wind Farm (at Scoping stage) would be visible beyond the Site, with its turbines seen against the skyline. As the Newlands Hill turbines would be seen in the same field of view as the Proposed Development and would be more distant, their introduction would not notably alter the existing baseline. Effects under Scenario 2 would therefore be the same as the primary assessment (**Major and Significant**).

Table 4.23: Viewpoint 2: Nun Rig, Southern Upland Way

Viewpoint 2: Nun Rig, Southern Upland Way			
Grid Reference (NGR)	360067 653747	**Figure Number**	4.2.2
LCT	90: Dissected Plateau Moorland	**Designated Landscape or Wild Land Area**	Lammermuir Hills SLA
Direction of View	North-east	**Distance to nearest turbine (km)**	2.8 km
Number of hubs theoretically visible	12	**Number of turbines with blades theoretically visible**	15
Location, description of existing view and potential receptors: This viewpoint is located along the Southern Upland Way within a subtle and large bowl landform, near Nun Rig. The viewpoint represents recreational receptors and agricultural workers in the surrounding landscape. From this location, views north expand across a gently sloping bowl comprised primarily of rough grassland. In the distance to the north, areas of muirburn can be seen on rising slopes. An isolated farm building forms a vertical element in views to the east, breaking up otherwise continuous grassland and moorland. To the south-east and east, large expanses of forestry of Harecleugh Forest can be seen, with large areas of felling. More distant views south are curtailed by gently rising landform. To the west, the distant hills of Lylestone Hill and Longcroft Hill can be seen among blocks of forestry. The operational Fallago Rig wind farm is perceptible on the horizon to the north-west, seen just above the rising moorland of the Wedder Lairs and forming vertical features in the otherwise gently undulating upland landform.			
Sensitivity:			

Viewpoint 2: Nun Rig, Southern Upland Way
Recreational receptors, whose attention is focused on their surroundings, are considered to be of **high** susceptibility to changes in the view. This viewpoint is located along a promoted long distance footpath, and is within the Lammermuir Hills SLA. The value of the view is therefore considered to be **high**. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be **high**.
Assessment of visual effects: Up to 12 hubs and 15 turbine blades would be theoretically visible from this viewpoint, in views to the north, at a distance of 2.8 km. The turbines would be visible along the horizon to the north, with some stacking of the turbines in the west of the Site occurring. Turbines across the south of the Site (T10, T12, T14) would be closer in views, and therefore would appear more prominent, forming focal features against the underlying landform. Turbines further north would appear partially screened by the landform along the southern site edge. Seen to the east of the operational Fallago Rig, the Proposed Development would extend the horizonal extent of wind farm development along the plateau ridge, and proposed turbines would appear larger than the existing turbines. Tracks and other infrastructure would not be visible due to the intervening landform. At night, steady red lights would be seen on the hubs of six turbines (T1, T6, T8, T9, T14 and T15). If a taller hub height of 139 m was used, up to 12 hubs and 15 turbine blades would be theoretically visible from this viewpoint (see **Figure TA4.3.5**). At night, steady red lights would be seen on the hubs of six turbines (T1, T6, T8, T9, T14 and T15). This is also considered in reaching the conclusions set out below. Given the proximity to visible turbines and proposed scale, the scale of visual change would be **large**. The geographical extent of the change is judged to be **medium** as similar views would be afforded from within the bowl landform and the Southern Upland Way to the north-east and west. The overall magnitude of change is judged to be **high** and taking account of the **high** sensitivity will result in a **Major and Significant** visual effect.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Under Scenario 1, the consented Crystal Rig Phase 4 would be visible to the north-east over the upland landform of Spartleton Edge (468 m AOD), at a distance of approximately 12 km. However, Crystal Rig Phase 4 will be seen as an immediate extension to the Crystal Rig / Aikengall Group. As the above changes would not notably alter the existing baseline, effects under Scenario 1 would be the same as the primary assessment (**Major and Significant**). Under Scenario 2, no proposed wind farms would be visible. As there would be no changes to the existing baseline, effects under Scenario 2 would be the same as the primary assessment (**Major and Significant**).

Table 4.24: Viewpoint 3: Minor road near Wanside Rig junction

Viewpoint 3: Minor road near Wanside Rig junction			
Grid Reference (NGR)	360689 664164	**Figure Number**	4.2.3
LCT	266: Plateau Moorland – Lothians	**Designated Landscape or Wild Land Area**	Lammermuir Moorland SLA
Direction of View	South	**Distance to nearest turbine (km)**	4.0 km
Number of hubs theoretically visible	15	**Number of turbines with blades theoretically visible**	15
Location, description of existing view and potential receptors: This viewpoint is located on a minor road just south of the B6355, following the ridge above Faseny Water. The viewpoint represents road users and the local community from the junction between the B6355 and the minor road which crosses the Lammermuir Hills, providing access to dispersed properties north-east of the Site. Open and extensive views to the south and west are available from this location, across wide stretches of rough grassland and undulating moorland. Post and wire fencing bounds the stretches of heather and grassland in the foreground. Areas of drained peatland can be seen over the middle distance, and estate tracks cut across the landform.			

Viewpoint 3: Minor road near Wanside Rig junction
The operational Fallago Rig wind farm is perceptible on the skyline to the south-west, seen stretching across the elevated landform of Meikle Says Law and Fallago Ridge. Prominent transmission lines can be seen crossing east-west behind the turbines.
Sensitivity: Road users including cyclists are considered to be of **medium** susceptibility to changes in the view. The viewpoint is located within the Lammermuir Moorland SLA, therefore the value of the view is considered to be **medium-high**. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be **medium**.
Assessment of visual effects: Up to 15 hubs and blades will be theoretically visible from this viewpoint, seen across the undulating moorland landform to the south. The scale of the proposed turbines will appear large as compared to the underlying landform, and will form prominent and notable new features when seen against the scale of the plateau hills along the northern edge of the Site within Byrecleugh Ridge. Access tracks will also be visible. At night, steady red lights would be seen on the hubs of seven turbines (T1, T3, T6, T8, T9, T14 and T15). The Proposed Development will be seen in combination with the adjacent Fallago Rig Wind Farm to the west. Given the size of the proposed turbines, the Proposed Development will be perceived as a separate wind farm scheme, and will extend the influence of wind farm development to the east in views from this location. If a taller hub height of 139 m was used, all 15 hubs and blades would be theoretically visible from this viewpoint (see **Figure TA4.3.6**). At night, steady red lights would be seen on the hubs of seven turbines (T1, T3, T6, T8, T9, T14 and T15). This is also considered in reaching the conclusions set out below. Given the proximity of visible turbines, the scale of visual change will be **medium**. The geographical extent is judged to be **medium** as similar views are afforded from along the minor road and from the B6355 to the north. The overall magnitude of change is judged to be **medium**, and taking account of the **medium** sensitivity will result in a **Moderate and Significant** visual effect.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Under Scenario 1, the consented Crystal Rig Phase 4 would be visible to the east seen above the upland landform of Spartleton Edge (468 m AOD), at a distance of approximately 6 km. This would be seen in successive views with Proposed Development. However, Crystal Rig Phase 4 would form part of the Crystal Rig / Aikengall Group. As the above changes would not notably alter the existing baseline, effects under Scenario 1 would be the same as the primary assessment (**Moderate and Significant**). Under Scenario 2, Newlands Hill Wind Farm (at Scoping stage) would be visible in very close views to the north and west. The turbines of Newlands Hill would form dominant features on the skyline, and would be seen in successive views with the Proposed Development to the south. Wind farms would form a notable feature in close views to the north and west, medium distance views to the south and south-west, and more distant views to the east. Therefore, a **Major and Significant** effect is anticipated under Scenario 2.

Table 4.25: Viewpoint 4: Watch Water Reservoir, Southern Upland Way

Viewpoint 4: Watch Water Reservoir, Southern Upland Way			
Grid Reference (NGR)	366438 656399	**Figure Number**	4.2.4
LCT	90 - Dissected Plateau Moorland	**Designated Landscape or Wild Land Area**	Lammermuir Hills SLA
Direction of View	North-west	**Distance to nearest turbine (km)**	4.5 km
Number of hubs theoretically visible	5	**Number of turbines with blades theoretically visible**	10
Location, description of existing view and potential receptors:			

Viewpoint 4: Watch Water Reservoir, Southern Upland Way
This viewpoint is located along the Southern Upland Way, near Watch Water Reservoir to the south-east of the Site. The viewpoint represents recreational receptors along the promoted footpath. Looking across Watch Water Reservoir, the views to the north-west beyond the water extend across rising moorland. Areas of scrub and riparian woodland are found along the water edge, bordered by wire and post fencing, and transitioning into rough grassland and muirburn further up the slopes. Larger pockets of broadleaved woodland line incised watercourses draining into the reservoir, and a farmstead can be seen north of the reservoir, ensconced in forestry. Improved pasture covers the slopes surrounding the farmstead, actively grazed, with hedgerow and scrub boundaries. Wooden electrical poles form vertical elements in views. In the distance, views to the north-west comprise undulating moorland, much of it heavily managed for grouse. Rising landform to the south-west and north curtail longer distance views in these directions. No operational wind farms are visible from this viewpoint.
Sensitivity: Recreational receptors, whose attention is focused on their surroundings, are considered to be of **high** susceptibility to changes in the view. This viewpoint is located along a promoted long distance footpath, and is within the Lammermuir Hills SLA. The value of the view is therefore considered to be **high**. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be **high**.
Assessment of visual effects: Up to 5 hubs and 10 turbine blades would be theoretically visible to the north-west from this location, at a distance of approximately 4.5 km to the closest turbine (T15). The turbines will be visible on the skyline, and stacking would be seen between turbines in the south and west of the Site. Turbines in the centre and north will be almost entirely screened by the rising landform of Dunside Hill and Lamb Hill (396 m AOD). Turbines in the south of the Site will be closest and therefore would appear most prominent, extending along the hills of Blythe Edge. The Proposed Development would introduce visibility of turbines into the view, as no other wind farm developments are visible from this viewpoint. There would be no visibility of access tracks or other ancillary infrastructure which will be screened by the intervening landform. At night, steady red lights would be seen on the hubs of two turbines (T14 and T15). If a taller hub height of 139 m was used, up to 5 hubs and 10 turbine blades would be theoretically visible from this viewpoint (see **Figure TA4.3.7**). At night, steady red lights would be seen on the hubs of two turbines (T14 and T15). This is also considered in reaching the conclusions set out below. Given the proximity to visible turbines, and the introduction of wind farm development into views, the scale of visual change would be **large**. The geographical extent of the change is judged to be **small** as similar views would only be afforded from the immediate vicinity, with intervening landform screening views towards the Site at further distances. The overall magnitude of change is judged to be **medium** and taking account of the **high** sensitivity results in a **Moderate and Significant** visual effect.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): No consented or proposed wind farms would be visible. As there would be no changes to the existing baseline, effects under Scenarios 1 and 2 would be the same as the primary assessment (**Moderate and Significant**).

Table 4.26: Viewpoint 5: Minor road near Wrunk Law

Viewpoint 5: Minor road near Wrunk Law			
Grid Reference (NGR)	367446 659497	**Figure Number**	4.2.5
LCT	90 - Dissected Plateau Moorland	**Designated Landscape or Wild Land Area**	Lammermuir Hills SLA / Lammermuir Moorland SLA
Direction of View	West	**Distance to nearest turbine (km)**	5.5 km
Number of hubs theoretically visible	6	**Number of turbines with blades theoretically visible**	15

Viewpoint 5: Minor road near Wrunk Law
Location, description of existing view and potential receptors: This viewpoint is located along a minor track at the entrance to Byrecleugh, north-west of Longformacus and east of the Site. The viewpoint represents road users and the local community from the junction between the B6355 and the minor road crossing the Lammermuir Hills towards Longformacus. There are open views across the undulating moorland landform to the west, with blocks of forestry and some felling seen within the lower valley landform in proximity to the Dye Water. Rough grassland and heather forms the foreground, with patches of managed pasture visible further down the Dye Valley. Wooden electrical poles cross the landscape in views towards the Site to the south-west, and form notable vertical features within an otherwise low and undulating landscape. The elevated landform of Dunside Hill, Lamb Hill and Byrecleugh Ridge form the eastern edge of the Site, partially screening longer distance views. The operational Fallago Rig wind farm is perceptible on the horizon to the west, seen above the undulating moorland landform and occupying a wide field of view. The Crystal Rig / Aikengall Group can be seen above the horizon to the north-east, seen above blocks of forestry.
Sensitivity: Road users including cyclists are considered to be of **medium** susceptibility to changes in the view. The viewpoint is located at the junction of the Lammermuir Hills SLA and the Lammermuir Moorland SLA, although not on a promoted route or road, and therefore the value of the view is considered to be **medium**. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be **medium**.
Assessment of visual effects: All 15 turbines (hubs and blades) would be theoretically visible from this viewpoint, seen above the horizon in westerly views. The rising landform along the eastern edge of the Site will provide partial screening of the Proposed Development. Turbines in the north of the Site would be most prominent in views at distances of between approximately 3 km and 5 km and will form prominent features on the horizon. Dunside Hill (437 m AOD) and Lamb Hill (396 m AOD) will screen views to turbines in the south, which will be barely perceptible over the landform. Tracks in the southern part of the Site will be visible, with those in the north screened by the intervening topography. At night, steady red lights would be seen on the hubs of seven turbines (T1, T3, T6, T8, T9, T14 and T15). From this viewpoint, the Proposed Development will be seen in combination with the adjacent Fallago Rig Wind Farm, seen on horizons which have been altered by wind farm development. Given the size of the proposed turbines, the Proposed Development will be perceived as a separate wind farm, and will extend the influence of wind farm development to the south in views from this location. If a taller hub height of 139 m was used, all 15 turbines (hubs and blades) would be theoretically visible from this viewpoint (see **Figure TA4.3.8**). At night, steady red lights would be seen on the hubs of seven turbines (T1, T3, T6, T8, T9, T14 and T15). This is also considered in reaching the conclusions set out below. Given the proximity of visible turbines, the scale of visual change will be **medium**. The geographical extent is judged to be **small** as similar views will be gained from the short section of minor road north-west of Longformacus. The overall magnitude of change is judged to be **medium**, and taking account of the medium sensitivity will result in a **Moderate and Significant** visual effect.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Under Scenario 1, the consented Crystal Rig Phase 4 development would be visible in successive views with the Proposed Development, seen approximately 6.5 km to the north-east. However, the consented development is located immediately adjacent to the Crystal Rig / Aikengall Group, albeit with larger turbines. As the above changes would not notably alter the existing baseline, effects under Scenario 1 would be the same as the primary assessment (**Moderate and Significant**). Under Scenario 2, no proposed wind farms would be visible. As there would be no changes to the existing baseline, effects under Scenario 2 would be the same as the primary assessment (**Moderate and Significant**).

Table 4.27: Viewpoint 6: Spartleton Hill

Viewpoint 6: Spartleton Hill			
Grid Reference (NGR)	365317 665542	**Figure Number**	4.2.6

Viewpoint 6: Spartleton Hill			
LCT	99 Rolling Farmland – Borders	**Designated Landscape or Wild Land Area**	Whiteadder SLA
Direction of View	South-west	**Distance to nearest turbine (km)**	6.5 km
Number of hubs theoretically visible	15	**Number of turbines with blades theoretically visible**	15

Location, description of existing view and potential receptors:

This viewpoint is located at the summit of Spartleton Hill and represents recreational receptors south-west of the Site, and along the network of core paths across Spartleton Edge.

The viewpoint offers panoramic views in all directions, including south-westerly views towards the Site. Views towards the Site look over heather capped hill summits, and across Whiteadder Reservoir and associated valley. Glimpses of the reservoir waterbody are available in views directly south-west, fringed by forestry. Areas of muirburn and blocks of forestry can be seen beyond on the hills to the south and south-west, and moorland is extensive across the undulating hills to the west and north. At the base of these hills, belts of riparian woodland are seen meandering along Faseny Water and other smaller incised burns.

To the north and east in successive views, the Crystal Rig / Aikengall Group covers the undulating uplands. Transmission lines are visible on the lower slopes to the west, backclothed by the rising landform. To the south-west, Fallago Rig can be seen on the horizon south of Meikle Law (535 m AOD).

Sensitivity:

Recreational receptors, whose attention is focused on their surroundings, are considered to be of **high** susceptibility to changes in the view. This viewpoint is located at the summit of a notable hill is within the Whiteadder SLA. The value of the view is therefore considered to be **medium-high**. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be **high**.

Assessment of visual effects:

Up to 15 hubs and blades would be theoretically visible from this viewpoint, seen at a distance of 6.5 km in views to the south-west. Given the vantage point, the proposed turbines would appear partially backclothed by landform, although all 15 hubs would be seen to extend above the skyline, appearing high above the underlying landform of the undulating moorland plateau. Some stacking would be apparent (T2 and T6, T3 and T8, T13 and T14), and T15 would appear as an outlier, located further south-east. Access tracks would be perceptible. At night, steady red lights would be seen on the hubs of seven turbines (T1, T3, T6, T8, T9, T14 and T15).

The Proposed Development would appear in front of the operational Fallago Rig, and would increase the horizontal extent and prominence of wind turbines in south-westerly views. Given the scale of the proposed turbines, it is likely they would form a new focus in views out across the moorland, as they would appear larger than those at Fallago Rig. The Proposed Development would appear in successive views with a number of operational wind farms, including the Crystal Rig / Aikengall Group to the west, and Black Hill to the south. While the Proposed Development would increase the horizontal extent of development across the horizon to the south-west, spacing between other clusters of wind farm development would be maintained, avoiding coalescence.

If a taller hub height of 139 m was used, all 15 turbines (hubs and blades) would be theoretically visible from this viewpoint (see Figure **TA4.3.9**). At night, steady red lights would be seen on the hubs of seven turbines (T1, T3, T6, T8, T9, T14 and T15). This is also considered in reaching the conclusions set out below.

The introduction of the Proposed Development would result in a **medium** scale change to the view. Similar views could be obtained from along Spartleton Edge, and therefore the geographical extent is judged to be **medium**.

Overall, the magnitude of change is judged to be **medium**, and taking into account the high sensitivity results in a **Moderate and Significant** effect.

Potential for Effects under Future Baseline Scenarios (Cumulative Assessment):

Under Scenario 1, the consented Crystal Rig Phase 4 Wind Farm would be visible in proximity directly to the east, appearing in successive views with the Proposed Development. However, views to the north and east of Spartleton Hill are already characterised by wind farm development, with the Crystal Rig / Aikengall Group extending across the horizon. For this reason

Viewpoint 6: Spartleton Hill
Crystal Rig Phase 4 would not constitute a notable change to the existing baseline. Effects under Scenario 1 would be the same as the primary assessment (**Moderate and Significant**). Under Scenario 2 the proposed Newlands Hill Wind Farm (at Scoping stage) would be visible on the skyline in views to the west, at a distance of around 4.5 km. Newlands Hill would be seen in combination with the Proposed Development and Fallago Rig, in views to the south-east, but would appear as a separate wind farm. Given that the Proposed Development would be seen in the same direction of view as existing and proposed wind farms, effects under Scenario 2 would be the same as the primary assessment (**Moderate and Significant**).

Table 4.28: Viewpoint 7: B6456, Westruther

Viewpoint 7: B6456, Westruther			
Grid Reference (NGR)	363840 650099	**Figure Number**	4.2.7
LCT	99 Rolling Farmland – Borders	**Designated Landscape or Wild Land Area**	None
Direction of View	North	**Distance to nearest turbine (km)**	7 km
Number of hubs theoretically visible	5	**Number of turbines with blades theoretically visible**	12
Location, description of existing view and potential receptors: This viewpoint is located along the B6456, near Westruther, 6.7 km south of the Site. The viewpoint is representative of road users and residents within and in proximity to Westruther. Views north look out over undulating pastoral and arable fields bound by occasionally gappy drystone walls and scrubby verges, towards the southern slopes of the Lammermuir Hills. Field boundaries are relatively straight with intact drystone walls, with occasional infield trees. Blocks of forestry are scattered throughout, and further north the large scale Harecleugh Forest is seen on the rising slopes of Flass Hill. The landform is gently undulating in the fore and middle ground, before transitioning to rising upland moorland in the distance, where muirburn is seen on the slopes. Beyond the forestry, the two cairns of Twin Law (447 m AOD) are perceptible above the treeline on the horizon. In views east, settlement is sparse, with isolated detached residences ensconced in woodland. Communication towers and transmission lines can be seen on the horizon. To the west along the B6456, the residential facades of Westruther are seen along the roadway, situated within forestry and garden vegetation. To the south, wooden overhead lines cut through the landscape along field boundaries. Larger blocks of forestry provide vertical elements along the rolling horizon lines in the distance. No operational wind farms are perceptible from this location.			
Sensitivity: Road users including cyclists are considered to be of **medium** susceptibility to changes in the view. Residents are considered to be of **high** susceptibility to changes in the view. The viewpoint is not within a designated landscape, however has some scenic qualities, and is considered to be of **medium** value. Taking account of the judgements of susceptibility and value, overall sensitivity of receptors is judged to be **high**.			
Assessment of visual effects: From this viewpoint, 5 hubs and 12 turbine blades would be visible above the horizon line to the north, and would be seen above Harecleugh Forest at a distance of approximately 7 km to the nearest turbine (T14). The turbines would be seen to extend above the skyline, and across a small extent of the moorland plateau, behind Flass Hill and Twin Law. The forestry of Harecleugh Forest and smaller pockets of woodland in closer proximity to the roadway would provide some partial filtering and screening of the proposed turbines, whilst the forestry remains in place. The Proposed Development would be seen in isolation, and would be seen as introducing turbines into the upland landscape. No access tracks or infrastructure would be visible due to screening by the intervening landform. At night, steady red lights would be seen on the hubs of three turbines (T9, T14 and T15).			

Viewpoint 7: B6456, Westruther
If a taller hub height of 139 m was used, up to seven hubs and 12 turbine blades would be theoretically visible from this viewpoint (see Figure **TA4.3.10**). Therefore, with the increased hub height, there would be a marginal increase in the number of turbine hubs perceptible over the horizon to the north. However, the change would be barely perceptible, and would not be notable in views. At night, steady red lights would be seen on the hubs of three turbines (T9, T14 and T15). This is also considered in reaching the conclusions set out below. At a distance of approximately 7 km and partially screened by landform at the southern edge of the Site, the turbines are unlikely to form notable features in views north and would occupy a small portion of the horizon. Therefore, the scale of visual change is judged to be **small**. The geographic extent is judged to be **medium**, as similar views may be obtained along a short section of the B6456. Overall, it is judged that the magnitude of change would be **low**, and considering the high sensitivity, results in a **Minor** and **Not Significant** effect, although it is acknowledged to be just under the threshold of significance. In the future during periods of felling, there is potential for a marginal increase in visibility of turbines, although this would not change the assessment of effect.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): No consented or proposed wind farms would be visible from this viewpoint. As there would be no change to the existing baseline, effects under Scenario 1 and 2 would be the same as the primary assessment (**Minor** and **Not Significant**).

Table 4.29: Viewpoint 8: B6456 near Bedshiel

Viewpoint 8: B6456 near Bedshiel			
Grid Reference (NGR)	368161 651683	**Figure Number**	4.2.8
LCT	105 Upland Fringe Moorland with Hills	**Designated Landscape or Wild Land Area**	None
Direction of View	North-west	**Distance to nearest turbine (km)**	7.7 km
Number of hubs theoretically visible	14	**Number of turbines with blades theoretically visible**	15
Location, description of existing view and potential receptors: This viewpoint is located along the B6456, near Westruther, south of the Site. The viewpoint is representative of road users and local residents. Views in all directions look out over gently undulating, rough permanent grassland, with wire post fencing along the roadway. Small clumps of forestry can be seen to dot the distant fields. To the east, the land cover transitions into more scrub vegetation, with numerous trees. To the north, the landform gradually rises towards the southern edge of the Lammermuir Hills, with Harecleugh Forest seen to the north-west.			
Sensitivity: Road users including cyclists are considered to be of **medium** susceptibility to changes in the view. Residents are considered to be of **high** susceptibility to changes in the view. The viewpoint is not within a designated landscape and is considered to have low value. Taking account of the judgements of susceptibility and value, overall sensitivity of receptors is judged to be **medium**.			
Assessment of visual effects: From this viewpoint, 14 hubs and 15 turbine blades would be visible above the horizon to the north-west, and would be seen above Harecleugh Forest at a distance of approximately 7.8 km to the nearest turbine (T15). The turbines would be seen within a shallow dip in the landform, with gradually rising landform to the east and west. Turbines in the west of the Site would appear more noticeable, sitting above the underlying landform. Turbines in the north and east of the Site would appear more screened by landform at the southern edge of the Site, with only turbine blades being visible. Three turbine blades of Fallago Rig are barely perceptible above the horizon beyond the proposed turbines, and the Proposed Development would be seen as introducing wind farm development into the upland landscape in the middle distance to the north. Access tracks and infrastructure and not likely to			

Viewpoint 8: B6456 near Bedshiel
be visible due to screening by the intervening landform. At night, steady red lights would be seen on the hubs of seven turbines (T1, T3, T6, T8, T9, T14 and T15). If a taller hub height of 139 m was used, up to 14 hubs and 15 turbine blades would be theoretically visible from this viewpoint (see Figure **TA4.3.11**). At night, steady red lights would be seen on the hubs of seven turbines (T1, T3, T6, T8, T9, T14 and T15). This is also considered in reaching the conclusions set out below. At a distance of approximately 8 km and seen across expansive and large scale moorland fringe landscape, the turbines would appear as prominent features above the underlying plateau landform. They would occupy a medium section of the horizon in north-west views. Therefore, the scale of visual change is judged to be **medium**. The geographic extent is judged to be **medium**, as similar views may be obtained along a short section of the B6456. Overall, it is judged that the magnitude of change would be **medium**, and taking into account the **medium** sensitivity, results in a **Moderate and Significant** effect.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): No consented or proposed wind farms would be visible from this viewpoint. As there would be no change to the existing baseline, effects under Scenario 1 and 2 would be the same as the primary assessment (**Moderate and Significant**).

Table 4.30: Viewpoint 9: Dirrington Great Law

Viewpoint 9: Dirrington Great Law			
Grid Reference (NGR)	369800 654925	**Figure Number**	4.2.9
LCT	105 Upland Fringe Moorland with Hills	**Designated Landscape or Wild Land Area**	Lammermuir Hills SLA
Direction of View	North-west	**Distance to nearest turbine (km)**	8.1 km
Number of hubs theoretically visible	15	**Number of turbines with blades theoretically visible**	15
Location, description of existing view and potential receptors: This viewpoint is located at the summit of Dirrington Great Law, east of the Site. The viewpoint represents recreational receptors at the summit and within the surrounding landscape. From this elevated location, views over the surrounding landscape are panoramic and expansive. Muirburn covers the landform and descending slopes in the immediate vicinity. To the west, the Lammermuir Hills stretch out, forming gently undulating landform defined by incised burns. The smaller form of Dirrington Little Law sits to the west, above the surroundings. To the north in the middle distance, a patchwork of farmland and forestry covers the undulating moorland fringe before transitioning into more elevated uplands in the distance. Dispersed residential properties are seen set among blocks of forestry, and the settlement of Lauder is barely perceptible to the north, behind a band of trees. Spartleton Edge rises to the north, screening long distance views. To the east, the medium and large-scale arable fields and forestry continue across the undulating fringe landscape. There are several operational wind farms visible from this location. Fallago Rig sits to the north-west, in front of Meikle Says Law. Directly north, the Crystal Rig / Aikengall Group unfolds behind the elevated landform of Spartleton Edge. To the east, Black Hill sits atop the domed form of its namesake. In the distance beyond this, both Quixwood and the smaller wind farm cluster of Drone Hill and Penmanshiel can be seen. In the far distance to the west, the Toddleburn development can be seen set within the western fringe of the Lammermuirs.			
Sensitivity: Recreational receptors, whose attention is focused on their surroundings, are considered to be of **high** susceptibility to changes in the view. This viewpoint is located within the Lammermuir Hills SLA. The value of the view is therefore considered to be **medium**. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be **medium-high**.			

Viewpoint 9: Dirrington Great Law
Assessment of visual effects: Up to 15 hubs and turbine blades will be theoretically visible from this viewpoint in views to the north-west, at distances of approximately 8 km. The turbines will be visible along the skyline, extending high above the underlying landform. Some stacking would occur across the turbines in the east of the Site (T1, T5). Turbines across the south of the Site would be closer in views, and therefore would appear more prominent, forming notable features against the underlying landform. Turbines further north will appear partially screened by the landform along the southern site edge. Access tracks will be visible but other infrastructure is likely to be screened by the intervening landform. At night, steady red lights would be seen on the hubs of seven turbines (T1, T3, T6, T8, T9, T14 and T15). The Proposed Development would be seen in front of the operational Fallago Rig, and would slightly increase the horizontal field of view occupied by turbines. The scale of the turbines of the Proposed Development would appear large as compared to the existing turbines. Considering the perspective and size, the Proposed Development would appear to bring the influence of wind farm development closer in views. If a taller hub height of 139 m was used, up to 15 hubs and turbine blades would be theoretically visible from this viewpoint (see Figure **TA4.3.12**). At night, steady red lights would be seen on the hubs of seven turbines (T1, T3, T6, T8, T9, T14 and T15). This is also considered in reaching the conclusions set out below. Given the proximity to visible turbines, the scale of visual change would be **medium**. The geographical extent of the change is judged to be **medium** as similar views would be afforded along the footpath to the north-east and west. The overall magnitude of change is judged to be **medium** and taking account of the **high** sensitivity will result in a **Moderate and Significant** visual effect.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Under Scenario 1, the consented Crystal Rig Phase 4 Wind Farm would be visible on the distant skyline to the north, forming part of the larger Crystal Rig / Aikengall Group. For this reason, Crystal Rig Phase 4 would not constitute a notable change to the existing baseline. Effects under Scenario 1 would be the same as the primary assessment (**Moderate and Significant**). Under Scenario 2, the proposed Newlands Hill Wind Farm would be visible on the skyline to the north-west. Newlands Hill would be seen in combination with the Proposed Development and Fallago Rig, but would form a standalone wind farm, separate from other groups. Given the distance to Newlands Hill and the presence of other wind farms in views to the north-west, there would not be a notable change to the existing baseline. Effects under Scenario 2 would be the same as the primary assessment (**Moderate and Significant**).

Table 4.31: Viewpoint 10: Lammer Law

Viewpoint 10: Lammer Law			
Grid Reference (NGR)	352381 661820	**Figure Number**	4.2.10
LCT	266: Plateau Moorland – Lothians	**Designated Landscape or Wild Land Area**	Lammer Law, Hopes to Yester SLA
Direction of View	East	**Distance to nearest turbine (km)**	4.4 km
Number of hubs theoretically visible	15	**Number of turbines with blades theoretically visible**	15
Location, description of existing view and potential receptors: This viewpoint is located at the summit of Lammer Law, and is representative of recreational receptors cycling or walking along the network of core paths in the area. The view from this elevated location is panoramic and looks out over heather capped rolling uplands. Immediately to the south-east, a valley landform cuts across the moorland plateau, creating visual separation between the viewpoint and the broad hilltop which hosts the operational Fallago Rig wind farm. The turbines at Fallago Rig from notable vertical features in south-east views, and extend above the underlying landform.			

Viewpoint 10: Lammer Law
Immediately west, the large stone cairn of Lammer Law is seen, beyond which undulating upland moors unfold towards the Moorfoot Hills. To the east and north, moorland gives way to a transitional fringe landscape, comprising large-scale fields and blocks of forestry across the falling slopes. The Crystal Rig / Aikengall Group can be seen at the northern edge of the Lammermuir looking directly east, above Spartleton Edge. Looking north, arable smaller-scale fields cover the broad plains, interspersed with meandering woodland bands and hedgerows. Dispersed properties are scattered across the arable landscape, with larger settlements set within areas of forestry. The landform to the north appears expansive and flat, excepting isolated elevated landform, including North Berwick Law and Traprain Law, which appear prominent against the Firth of Forth. To the north-west, the sprawling extents of Edinburgh can be seen behind the form of Arthur's Seat. Further west, the elevated forms of the Pentland Hills curtail longer views.
Sensitivity: Recreational receptors, whose attention is focused on their surroundings, are considered to be of high susceptibility to changes in the view. This viewpoint is located at a prominent summit within the locally designated Lammer Law, Hopes to Yester SLA. The value of the view is therefore considered to be **medium-high**. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be **high**.
Assessment of visual effects: The Proposed Development would introduce theoretical visibility of up to 15 turbines (hubs and blades) into south-westerly views. Given the low-lying landcover and elevated position of the viewpoint, there is unlikely to be any screening of the Proposed Development. However, the Proposed Development would appear behind the operational Fallago Rig, and would appear as an immediate extension to this. Due to the perspective and distance, the Proposed Development would not appear out of scale with the existing turbines at Fallago Rig, despite the difference in turbine size. The turbines of the Proposed Development would appear within the horizontal extents of Fallago Rig and would appear as one extended development along the plateau, with no notable gap between the two schemes. However, the Proposed Development would introduce some stacking and overlap with the existing turbines. Given the undulating nature of the Site and the presence of intervening landform, tracks and other ancillary infrastructure would not be perceptible. At night, steady red lights would be seen on the hubs of seven turbines (T1, T3, T6, T8, T9, T14 and T15). If a taller hub height of 139 m was used, up to 15 hubs and turbine blades would be theoretically visible from this viewpoint (see Figure **TA4.3.13**). At night, steady red lights would be seen on the hubs of seven turbines (T1, T3, T6, T8, T9, T14 and T15). This is also considered in reaching the conclusions set out below. Although seen at a close-range distance of approximately 4.5 km with clear views to the Site, the proposed turbines would be seen in the context of moorland plateau which has already been altered by wind farm development. Appearing behind the operational Fallago Rig, set within its horizontal extents and of similar scale, the introduction of proposed turbines would result in a **small**-scale change to the view. The change in view would be experienced at this viewpoint and other surrounding hill summits within the ridgeline running south of Lammer Law. Therefore, the geographical extent of the change is judged to be **medium**. The overall magnitude of change is judged to be **low** and taking account of the high sensitivity will result in a **Mino**r and **Not Significant** visual effect.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Under Scenario 1, the consented Crystal Rig Phase 4 would be visible on the distant skyline to the east, forming part of the larger Crystal Rig / Aikengall Group. For this reason, Crystal Rig Phase 4 would not constitute a notable change to the existing baseline. Effects under Scenario 1 would be the same as the primary assessment (**Minor** and **Not Significant**). Under Scenario 2, the proposed Newlands Hill (at Scoping stage) would be visible on the skyline to the east, in front of the existing Crystal Rig / Aikengall Group. Given that it would occupy the same field of view as existing wind farms, there would not be a notable change to the existing baseline. Effects under Scenario 2 would be the same as the primary assessment (**Minor** and **Not Significant**).

Table 4.32: Viewpoint 11: Edgarhope Wood, Southern Upland Way

Viewpoint 11: Edgarhope Wood, Southern Upland Way			
Grid Reference (NGR)	355819 649263	**Figure Number**	4.2.11
LCT	99 Rolling Farmland - Borders	**Designated Landscape or Wild Land Area**	Lammermuir Hills SLA
Direction of View	North-east	**Distance to nearest turbine (km)**	8.8 km
Number of hubs theoretically visible	15	**Number of turbines with blades theoretically visible**	15

Location, description of existing view and potential receptors:

This viewpoint is located along the Southern Upland Way, approximately 9 km south of the Site. This viewpoint represents recreational receptors on the Southern Upland Way, near Edgarhope Wood.

Looking over sloping pasture with blocks of forestry, the viewpoint holds extensive and broad views over the surrounding landscape to the north and west. In the foreground to the north, the extensive areas of grassland are actively grazed. Pockets of trees can be seen in shallow valleys dividing the hills. Drystone walls and wire post fencing form large-scale enclosures. Looking north and north-east, the Lammermuir plateau unfolds, with rounded hilltops covered in rough grassland and heather. To the west, the forestry of Edgarhope Woods continues down the slope, forming a large block with a sharply defined edge. Areas of felling are seen looking south-west. Looking directly east, views are screened by a smaller block of forestry. To the south-west the dramatic forms of the Moorfoot Hills can be seen on the horizon. Directly south, rising landform screens more distant views.

There are multiple wind farms visible from this viewpoint, including Fallago Rig to the north-east within the Lammermuir Hills, seen at a distance of approximately 8 km along the horizon. To the west Toddleburn can be seen at a distance of approximately 11 km at the edge of the Moorfoot Hills. To the south-west, Longpark is seen across the Tweedsmuir Hills.

Sensitivity:

Recreational receptors, whose attention is focused on their surroundings, are considered to be of high susceptibility to changes in the view. This viewpoint is located within the Lammermuir Hills SLA. The value of the view is therefore considered to be medium-**high**. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be **high**.

Assessment of visual effects:

All 15 turbines (hubs and blades) would be theoretically visible from this viewpoint, seen on the horizon at a distance of 8.8 km to the nearest turbine (T12). The proposed turbines would extend south-east across the undulating forms within Blythe Edge. The proposed turbines do not overlap with existing turbines at Fallago Rig, although no gap would be seen between the developments and they would appear as one block along the horizon. The Proposed Development would be seen to extend the influence of wind farm development further south-east across the horizon, and would form notable new features. Given the size of the proposed turbines, there would be a contrast in scale between the Fallago Rig turbines and proposed turbines, and the Proposed Development would appear to bring turbines closer in views. Given the undulating nature of the Site and the presence of intervening landform, tracks and other ancillary infrastructure would not be perceptible. At night, steady red lights would be seen on the hubs of seven turbines (T1, T3, T6, T8, T9, T14 and T15).

If a taller hub height of 139 m was used, up to 15 hubs and turbine blades would be theoretically visible from this viewpoint (see Figure **TA4.3.14**). At night, steady red lights would be seen on the hubs of seven turbines (T1, T3, T6, T8, T9, T14 and T15). This is also considered in reaching the conclusions set out below.

At a distance of approximately 9 km, the turbines would form notable new features across the undulating plateau moorland, and would occupy a portion of the horizon in views to the north-east. However, the proposed turbines would not appear out of scale seen against the expansive landscape across the undulating moorlands, and views would look out over a landscape which has already been altered by wind farm development. The size/scale of change would therefore be **medium**. The geographical extent is judged to be **medium**, as similar views could be gained from other north facing slopes across Edgarhope Moor.

Viewpoint 11: Edgarhope Wood, Southern Upland Way
The overall magnitude of change is judged to be **medium**, and taking account of the **high** sensitivity would result in a **Moderate and Significant** visual effect.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): No consented or proposed wind farms would be visible from this viewpoint. As there would be no change to the existing baseline, effects under Scenario 1 and 2 would be the same as the primary assessment (**Moderate and Significant**).

Table 4.33: Viewpoint 12: Minor road near Hen Law

Viewpoint 12: Minor road near Hen Law			
Grid Reference (NGR)	372371 654339	**Figure Number**	4.2.12
LCT	99 Rolling Farmland - Borders	**Designated Landscape or Wild Land Area**	None
Direction of View	North-east	**Distance to nearest turbine (km)**	10.6 km
Number of hubs theoretically visible	7	**Number of turbines with blades theoretically visible**	9
Location, description of existing view and potential receptors: This viewpoint is located along a minor road in between Longformacus and Duns, and represents road users and local community members accessing dispersed properties along the route, as well as forestry operations. Located just off the minor road, this viewpoint looks out north-west across rolling moorland. Rough grassland with wire post fencing comprises the foreground of the view. Wood electrical poles follow along the minor road as it winds down the slopes to the north-east. The conical form of Dirrington Great Law forms a prominent feature in the middle distance in the north-west, and muirburn can be seen across its entirety. In the distant north, the gradually rising upland forms of the Lammermuir Hills can be seen, across which Fallago Rig is perceptible. To the east, the landcover comprises large-scale, undulating farmland, interspersed with bands of forestry which is typically concentrated along lower slopes. Small settlements can be seen scattered throughout, with isolated stone farmsteads seen amongst the farmland. To the north-east, the prominent form of Spartleton Edge provides a backdrop, behind which the Crystal Rig / Aikengall Group can be seen across the horizon. Directly east, the operational Black Hill can be seen in the foreground, across the rounded form of Black Hill. To the west and south, rising landform and forestry screen more distant views.			
Sensitivity: Road users including cyclists are considered to be of **medium** susceptibility to changes in the view. This viewpoint is not located within any designated landscapes, but is in proximity to the Lammermuir Hills SLA. The value of the view is therefore considered to be **medium**. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be **medium**.			
Assessment of visual effects: The Proposed Development would introduce up to seven turbine hubs and nine blades into views from this location, seen across the horizon formed by the southern ridge of the Lammermuir plateau, at distances of 10.6 km to the nearest turbine (T15). The proposed turbines would be seen to extend above the horizon, although those in the west and south of the Site would be partially screened by the form of Dirrington Great Law. Appearing in front of the existing Fallago Rig, minimal stacking would be apparent, and the Proposed Development would fill in gaps seen in the existing development. The Proposed Development would marginally extend the influence of wind farm development east, towards the existing Crystal Rig / Aikengall Group. Seen high above the undulating moorlands and behind the form of Dirrington Law, the proposed turbines would appear large in relation to the underlying landform. No tracks or other ancillary infrastructure would be visible, given the distance and undulating landform. At night, steady red lights would be seen on the hubs of four turbines (T1, T3, T6 and T8).			

Viewpoint 12: Minor road near Hen Law
If a taller hub height of 139 m was used, up to seven hubs and nine blades would be theoretically visible from this viewpoint (see Figure **TA4.3.15**). At night, steady red lights would be seen on the hubs of four turbines (T1, T3, T6 and T8). This is also considered in reaching the conclusions set out below. Although the proposed turbines will appear large as compared with the underlying landform, views will be in the context of existing wind farm development, and the scale of visual change will be **small**. The geographical extent of the change is judged to be **medium**, as similar views will be gained intermittently along the road to the north and south. The overall magnitude of change is judged to be **low**, and taking account of the **medium** sensitivity, will result in a **Minor** and **Not Significant** visual effect.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Under Scenario 1 the consented Crystal Rig Phase 4 would be visible on the distant skyline to the north, forming part of the larger Crystal Rig / Aikengall Group. Crystal Rig Phase 4 would not form a notable change to the existing baseline. Effects under Scenario 1 would be the same as the primary assessment (**Minor** and **Not Significant**). Under Scenario 2 the proposed Newlands Hill (at Scoping stage) would be visible on the distant skyline to the north-west. It would be seen in combination with the Proposed Development and Fallago Rig Wind Farm, but would form a standalone wind farm which is separate from other groups. Given that Newlands Hill would be seen in successive views with existing wind farms and on the distant skyline, there would not be a notable change to the existing baseline. Effects under Scenario 2 would be the same as the primary assessment (**Minor** and **Not Significant**).

Table 4.34: Viewpoint 13: A6015 near Greenlaw

Viewpoint 13: A6015 near Greenlaw			
Grid Reference (NGR)	371546 647646	**Figure Number**	4.2.13
LCT	102 Upland Fringe with Prominent Hills	**Designated Landscape or Wild Land Area**	None
Direction of View	North-west	**Distance to nearest turbine (km)**	13 km
Number of hubs theoretically visible	15	**Number of turbines with blades theoretically visible**	15
Location, description of existing view and potential receptors: This viewpoint is located along the A6015 near the settlement of Greenlaw. Views north are towards gently rising ground, across rough pasture and moorland. Post fencing forms the foreground of the view, with wooden overhead poles crossing within the field of view. Distant views to the north-west comprise rounded moorland hills. The turbines of Fallago Rig are perceptible on the horizon, along the southern edge of the Lammermuir Hills. The landscape to the west comprises undulating arable fields, interspersed with frequent blocks of forestry. In the distance to the west, the turbines of Longpark can be seen. Further south, the striking forms of the Eildon Hills are visible on the horizon, beyond which the Moorfoot Hills rise. To the east and north-east, rising ground of Greenlaw Moor and Camp Moor screens more distant views, and scrub vegetation and larger blocks of forestry appear across the landscape. The summit of the conical form of Dirrington Great Law is visible over the moors, and the turbines of Black Hill are visible south of this.			
Sensitivity: Road users including cyclists are considered to be of **medium** susceptibility to changes in the view. Residents are considered to be of **high** susceptibility to changes in the view. The viewpoint is not within a designated landscape and is considered to have low value. Taking account of the judgements of susceptibility and value, overall sensitivity of receptors is judged to be **medium.**			
Assessment of visual effects:			

Viewpoint 13: A6015 near Greenlaw
The Proposed Development would introduce up to 15 turbines (hubs and blades) into views along the horizon to the north-west, seen across the southern edge of the Lammermuirs at a distance of 13 km from the nearest turbine (T15). The proposed turbines would extend above the skyline, and would form notable new features above the underlying moorland landform, seen in a shallow bowl form between Flass Hill and Eve Law. Some stacking will occur between turbines T13 and 15. Seen in front of the operational turbines of Fallago Rig, the proposed turbines would appear much larger than the existing turbines, and would appear to bring turbines closer in views. The Proposed Development would extend the influence of wind farm development to the east in views, occupying part of the horizontal field of view. Due to the rising ground seen to the north, and distance, tracks and other ancillary infrastructure would not be visible from this viewpoint location. At night, steady red lights would be seen on the hubs of seven turbines (T1, T3, T6, T8, T9, T14 and T15). If a taller hub height of 139 m was used, up to 15 turbines (hubs and blades) would be theoretically visible from this viewpoint (see Figure **TA4.3.16**). At night, steady red lights would be seen on the hubs of seven turbines (T1, T3, T6, T8, T9, T14 and T15). This is also considered in reaching the conclusions set out below. Considering the distance and existing influence of wind farm development across the horizon, the size/scale of visual change will be **medium**. The geographical extent is judged to be **small**, as similar views will be experienced intermittently along a short stretch of road to the south-west. The overall magnitude of change is judged to be **low** and taking account of the **medium** sensitivity will result in a **Minor** and **Not Significant** visual effect.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): No consented or proposed wind farms would be visible from this viewpoint. As there would be no change to the existing baseline, effects under Scenario 1 and 2 would be the same as the primary assessment (**Minor** and **Not Significant**).

Table 4.35: Viewpoint 14: B6362 above Lauder

Viewpoint 14: B6362 above Lauder			
Grid Reference (NGR)	350920 647099	**Figure Number**	4.2.14
LCT	102 Upland Fringe with Prominent Hills	**Designated Landscape or Wild Land Area**	None
Direction of View	East	**Distance to nearest turbine (km)**	13.7 km
Number of hubs theoretically visible	12	**Number of turbines with blades theoretically visible**	15
Location, description of existing view and potential receptors: This viewpoint is located along the B6362, on the rising slopes west of the settlement of Lauder. The viewpoint represents road users on the B6362 and residential receptors on the outskirts of Lauder. Views east are across the Leader valley, with the road in the foreground, flanked by rounded heather capped hills with pasture and drystone walls. Large scale transmission lines appear in the foreground. Further west, the wooded and arable slopes of the Leader valley appear, Forestry provides some screening of views in this direction. To the north-east, the turbines of Fallago Rig appear over the horizon, forming distant features at the edge of the Lammermuirs. To the north and west, rising and rounded moorland stretches out into the distance and screens more distant views.			
Sensitivity: Road users including cyclists are considered to be of **medium** susceptibility to changes in the view. Residents are considered to be of **high** susceptibility to changes in the view. The viewpoint is not within a designated landscape and is therefore considered to be of **low** value. Taking account of the judgements of susceptibility and value, overall sensitivity of receptors is judged to be **medium.**			
Assessment of visual effects:			

Viewpoint 14: B6362 above Lauder
The Proposed Development would introduce 12 turbine hubs and 15 blades into views from this location, seen across the Leader valley and over the horizon, formed by hills at the edge of the Lammermuirs. Seen at distance of 13.7 km to the nearest turbine (T12) the proposed turbines would appear partially screened behind intervening landform, and the rounded form of Constable Hill (411 m AOD). Some stacking would be apparent between turbines T5, T7 and T9. Given the distance and screening by intervening landform, no tracks or other ancillary infrastructure would be visible from this location. At night, steady red lights would be seen on the hubs of six turbines (T1, T3, T6, T9, T14 and T15). If a taller hub height of 139 m was used, up to 14 turbine hubs and 15 blades would be theoretically visible from this viewpoint (see Figure **TA4.3.17**). Therefore, with the increased hub height, there would be a marginal increase in the number of turbine hubs perceptible over the horizon to the east. However, the change would be barely perceptible, and would not be notable in views. At night, steady red lights would be seen on the hubs of six turbines (T1, T3, T6, T9, T14 and T15). This is also considered in reaching the conclusions set out below. The proposed turbines would not appear out of scale with the underlying landform, seen behind intervening landform and across expansive and undulating moorland. Given the distance, existing influence of wind farm development, and partial screening, the size/scale of visual change will be **small**. The change in view will be experience from a short section of this minor road, and the geographical extent of change is judged to be **small**. The overall magnitude of change is judged to be **low** and taking account of the **medium** sensitivity will result in a **Minor** and **Not Significant** visual effect.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): No consented or proposed wind farms would be perceptible from this viewpoint. As there would be no change to the existing baseline, effects under Scenario 1 and 2 would be the same as the primary assessment (**Minor** and **Not Significant**).

Table 4.36: Viewpoint 15: Traprain Law

Viewpoint 15: Traprain Law			
Grid Reference (NGR)	358167 674659	**Figure Number**	4.2.15
LCT	275 Lowland Farmed Plains – Lothians	**Designated Landscape or Wild Land Area**	Traprain and Tyne Valley SLA.
Direction of View	South	**Distance to nearest turbine (km)**	14.5 km
Number of hubs theoretically visible	10	**Number of turbines with blades theoretically visible**	15
Location, description of existing view and potential receptors: This viewpoint is located at the summit of Traprain Law, approximately 14.8 north-east of the Site. The location represents recreational receptors at the summit of Traprain Law. Views from this location are panoramic, extending over farmland with extensive forestry to the north, south and west, and farmland and coastal plains to the east. In the foreground, the rounded hilltop is covered with rough grassland and areas of heather. To the south-west, gently undulating arable fields extend, with dark bands of forestry and scattered farmsteads forming smaller and frequent features in views. The landform continues to rise gently in the distance towards the northern edge of the Lammermuir plateau. Along this edge, both the Crystal Rig / Aikengall Group and Fallago Rig are visible, appearing as small features along the distant horizon. To the west, the broad arable plains extend across the view, and the Pentland Hills and Moorfoot Hill form distant elevated features. To the east, coastal plains extend in the distance, before reaching the North Sea. Spots of industry can be seen along the coastline. To the north, the arable plains appear more settled, with Haddington and East Linton appearing in views. The Firth of Forth appears beyond, and the striking and isolated forms of Bass Rock and North Berwick Law are visible in the distance.			
Sensitivity:			

Viewpoint 15: Traprain Law
Recreational receptors, whose attention is focused on their surroundings, are considered to be of **high** susceptibility to changes in the view. This viewpoint is located at a notable summit in the Traprain and Tyne Valley SLA. The value of the view is therefore considered to be **high**. Taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be **high**.
Assessment of visual effects: The Proposed Development would introduce theoretical visibility of up to 10 turbine hubs and 15 blades into views from this location, seen at a distance of 14.5 km from the nearest turbine (T1). The proposed turbines will extend above the skyline, and across the moorland plateau. Appearing adjacent to the operational Fallago Rig, the Proposed Development would extend the influence of wind farm development across the horizon to the east. Despite the difference in size, the proposed turbines would not appear significantly larger than the existing turbines, being largely screened by landform, and would not form notable new features in views. Some stacking will occur between turbines T4 and T12. Tracks and other infrastructure would be screened by the intervening landform. At night, steady red lights would be seen on the hubs of five turbines (T1, T3, T6, T9 and T14). If a taller hub height of 139 m was used, up to 12 turbine hubs and 15 blades would be theoretically visible from this viewpoint (see Figure **TA4.3.18**). Therefore, with the increased hub height, there would be a marginal increase in the number of turbine hubs perceptible over the horizon to the south. However, the change would be barely perceptible, and would not be notable in views. At night, steady red lights would be seen on the hubs of five turbines (T1, T3, T6, T9 and T14). This is also considered in reaching the conclusions set out below. Given the distance, existing influence of wind farm development, and partial screening, the size/scale of visual change will be **small**. Similar views will only be experienced in the immediate vicinity, and the geographical extent of change is judged to be **small**. The overall magnitude of change is judged to be **low** and will result in a **Minor** and **Not Significant** visual effect.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): No consented wind farms would be visible from this viewpoint. As there would be no change to the existing baseline, effects under Scenario 1 would be the same as the primary assessment (**Minor** and **Not Significant**). Under Scenario 2, the proposed Newlands Hill (at Scoping stage) would be visible on the skyline formed by the Lammermuir Hills, in front of the Site and the adjacent Fallago Rig. The turbines of Newlands Hill would appear large in scale in comparison with the underlying landform and the visible Fallago Rig turbines. Given that the Proposed Development would be visible in the same field of view and behind Newlands Hill, the effect of the Proposed Development is expected to reduce to **Negligible and Not Significant**.

Table 4.37: Viewpoint 16: Park Lane, Haddington

Viewpoint 16: Park Lane, Haddington			
Grid Reference (NGR)	350451 673707	**Figure Number**	4.2.16
LCT	275 Lowland Farmed Plains – Lothians	**Designated Landscape or Wild Land Area**	None
Direction of View	South	**Distance to nearest turbine (km)**	16.7 km
Number of hubs theoretically visible	0	**Number of turbines with blades theoretically visible**	5
Location, description of existing view and potential receptors: This viewpoint is located along Park Lane within the settlement of Haddington, approximately 17 km to the north of the Site, and represents road users and residents on the outskirts of Haddington. Outward views are screened and filtered from this location by buildings and street trees. To the south, an arable field slopes down into a shallow valley, within which more settlement is visible. Extensive amounts of forestry is visible across the slopes			

Viewpoint 16: Park Lane, Haddington
to the south, framing smaller pasture fields, and encircling individual properties. In the distance, the forms of the Lammermuir Hills are visible. In clear weather conditions, individual turbine blades of Fallago Rig are barely perceptible over the horizon, seen at a distance of approximately 16 km.
Sensitivity: Road users including cyclists are considered to be of **medium** susceptibility to changes in the view. Residents are considered to be of **high** susceptibility to changes in the view. The viewpoint is not within a designated landscape and is considered to have low value. Taking account of the judgements of susceptibility and value, overall sensitivity of receptors is judged to be **medium.**
Assessment of visual effects: Up to five turbine blades will be theoretically visible from this viewpoint, on the horizon to the south at a distance of approximately 16.7 km to the nearest turbine (T1). However, the turbines will be mostly screened by undulating landform along the horizon formed by the Lammermuir plateau. Tracks and other ancillary infrastructure will not be visible due to distance and /or screening by landform. No aviation lighting will be visible. If a taller hub height of 139 m was used, up to five turbine blades would be theoretically visible from this viewpoint (see Figure **TA4.3.19**). No aviation lighting will be visible. This is also considered in reaching the conclusions set out below. The size/scale of visual change will be **barely perceptible**. The geographical extent of the change is judged to be **medium** as similar views may be obtained from Site-facing slopes along the southern edge of Haddington. The overall magnitude of change is judged to be **barely perceptible** and taking account of the **medium** sensitivity will result in a **Negligible and Not Significant** visual effect.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): The consented Crystal Rig Phase 4 would be barely perceptible from this viewpoint, with only blade tips visible. As there would be no notable changes to the existing baseline, effects under Scenario 1 would be the same as the primary assessment (**Negligible and Not Significant**). Under Scenario 2, the proposed Newlands Hill (at Scoping stage) would be visible on the skyline formed by the Lammermuir Hills, to the north of the Site and Fallago Rig. The turbines of Newlands Hill would appear large in scale in comparison with the underlying landform. Given the prominence of the Newlands Hill turbines and limited visibility of the Proposed Development, the effect will be **Negligible and Not Significant**.

Table 4.38: Viewpoint 17: Barney Hill, Garleton Hills

Viewpoint 17: Barney Hill, Garleton Hills			
Grid Reference (NGR)	350451 673707	**Figure Number**	4.2.16
LCT	275 Lowland Farmed Plains – Lothians	**Designated Landscape or Wild Land Area**	Garleton Hills SLA
Direction of View	South-west	**Distance to nearest turbine (km)**	18 km
Number of hubs theoretically visible	5	**Number of turbines with blades theoretically visible**	15
Location, description of existing view and potential receptors: This viewpoint is located at a local summit within the Garleton Hills, north of Haddington and approximately 18 km north of the Site. This location represents recreational receptors in the Garleton Hills. Views from this location are expansive looking south and west across the lowland plains in between the coast and the Lammermuirs. The foreground comprises grassland, dotted with mature trees, as well as a communication tower and ancillary infrastructure and fencing to the east. Directly south-west, the settlement of Haddington unfolds, partially screened by intervening landform and scrub vegetation. Beyond this, the landform gradually rises, and the landcover transitions to a			

Viewpoint 17: Barney Hill, Garleton Hills
mix of rough grassland and moor, interspersed by bands of forestry. The horizon is formed by the northern edge of the Lammermuir Hills, and provides a backdrop to the arable lowlands. Barely perceptible above the horizon, the turbines of the Crystal Rig / Aikengall Group can be seen, as well as the turbines of Fallago Rig. Views north are screened by rising ground.
Sensitivity: Recreational receptors, whose attention is focused on their surroundings, are considered to be of **high** susceptibility to changes in the view. This viewpoint is located in the Garleton Hills SLA. The value of the view is therefore considered to be **medium**. Taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be **medium-high**.
Assessment of visual effects: The Proposed Development would introduce theoretical visibility of up to 5 turbine hubs and 15 blades into views, seen above the horizon at a distance of 18 km. The horizon is formed by the northern edge of the Lammermuir Hills, and the turbines would extend above the skyline, although turbines in the west of the Site will be mostly screened by landform and would not appear out of scale against the expansive underlying landform. Seen adjacent to the existing Fallago Rig, the proposed turbines would appear marginally larger in scale, and would extend the influence of wind farm development to the east along the plateau. Stacking of turbines T7 and T12 will occur, although will be mostly screened by landform and will not be notable. Given distance and screening by intervening landform, tracks and other ancillary infrastructure will not be visible. At night, steady red lights would be seen on the hubs of two turbines (T1 and T3). If a taller hub height of 139 m was used, up to 5 turbine hubs and 15 blades would be theoretically visible from this viewpoint (see Figure **TA4.3.20**). At night, steady red lights would be seen on the hubs of two turbines (T1 and T3). This is also considered in reaching the conclusions set out below. Given the distance, existing influence of wind farm development, and partial screening, the scale of visual change will be **small**. Similar views will only be experienced in the immediate vicinity, and the geographical extent of change is judged to be **small**. The overall magnitude of change is judged to be **low** and taking account of the **medium-high** sensitivity will result in a **Minor** and **Not Significant** visual effect.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): No consented wind farms would be perceptible from this viewpoint. As there would be no change to the existing baseline, effects under Scenario 1 would be the same as the primary assessment (**Minor** and **Not Significant**). Under Scenario 2, the proposed Newlands Hill (at Scoping stage) would be visible on the skyline formed by the Lammermuir Hills, to the north of the Site. The turbines of Newlands Hill would appear large in scale in comparison with the visible Fallago Rig turbines, which are set back from the enclosing ridgeline. Given the visibility of the Newlands Hill turbines and limited visibility of the Proposed Development, the effect will be **Negligible** and **Not Significant**.

Table 4.39: Viewpoint 18: A6112 near Fawcett Wood

Viewpoint 18: A6112 near Fawcett Wood			
Grid Reference (NGR)	380541 663605	**Figure Number**	4.2.18
LCT	100 Plateau Farmland – Borders	**Designated Landscape or Wild Land Area**	n/a
Direction of View	West	**Distance to nearest turbine (km)**	19 km
Number of hubs theoretically visible	6	**Number of turbines with blades theoretically visible**	15
Location, description of existing view and potential receptors:			

Viewpoint 18: A6112 near Fawcett Wood
This viewpoint is located along the A6112, approximately 19 km to the east of the Site. This location represents sequential views of road users along the A198 on the outskirts of Grantshouse. This viewpoint looks north and west out over a varied and undulating landscape, comprised of farmland bound by gappy hedgerows and drystone walls. In the foreground looking north-west, the road is bound by a grassy verge and drystone wall, beyond which arable fields extend over falling slopes into a shallow valley. Areas of forestry are seen along the valley bottom, along with hedgerows and areas of scrub. In the middle distance to the north-west, the operational turbines of Quixwood are prominent vertical features seen above the undulating farmland. Further west, larger blocks of forestry form tall and dark features on the horizon, across Abbey Hill and Cockburn Law. To the east, larger scale farmland is visible, although rising ground screens more distant views. The turbines of Penmanshiel, Drone Hill and Howe Park can be seen over the landform in the distance, approximately 4.5 km to the east. To the south, mature roadside trees partially screen views, beyond which glimpses of rolling farmland and forestry can be seen.
Sensitivity: Road users including cyclists are considered to be of **medium** susceptibility to changes in the view. This viewpoint is not located within any designated landscapes or near recognised viewpoints, and the value of the view is therefore considered to be **low**. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be **medium-low**.
Assessment of visual effects: From this location, the Proposed Development will introduce theoretical visibility of up to six turbine hubs and all 15 blades to the west at a distance of approximately 19 km to the nearest turbine (T3). Turbines in the east of the Site will extend above the horizon, although will not appear prominent above the expansive underlying landform. Turbines in the south and west of the Site will appear mostly screened by intervening landform, barely perceptible above the horizon. In practice, intervening landform and forestry along the horizon will further screen views towards the proposed turbines. The operational turbines of Quixwood form prominent vertical features in views north and north-west, and the Proposed Development will appear as a separate development, maintaining a large gap in views north and west across the rising forms of the Lammermuirs. Given the large intervening distance between the viewpoint and the Proposed Development, tracks and other ancillary infrastructure will not be visible. At night, steady red lights would be seen on the hubs of three turbines (T1, T3 and T6). If a taller hub height of 139 m was used, up to six turbine hubs and 15 blades would be theoretically visible from this viewpoint (see Figure **TA4.3.21**). At night, steady red lights would be seen on the hubs of three turbines (T1, T3 and T6). This is also considered in reaching the conclusions set out below. Despite visibility of all the proposed turbine blades, at this distance they would not form prominent new features within the landscape, and in practice will appear largely screened by forestry, whilst it remains in place. The Proposed Development will occupy a small portion of the skyline, and it is judged that the scale of visual change will be **small**. The geographical extent of the change is judged to be **medium**, as similar views would be gained from along the road further north. The overall magnitude of change is judged to be **low** and taking account of the **high** sensitivity would result in a **Minor** and **Not Significant** visual effect.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): The consented Crystal Rig Phase 4 would be barely perceptible from this viewpoint, being located behind other operational wind farms. As there would be no notable changes to the existing baseline, effects under Scenario 1 would be the same as the primary assessment (**Minor** and **Not Significant**). Under Scenario 2 the proposed Newlands Hill (at Scoping stage) would be visible on the distant skyline, behind the operational Quixwood Wind Farm which is in the middle distance. As there would be no notable changes to the existing baseline, effects under Scenario 2 would be the same as the primary assessment (**Minor** and **Not Significant**).

Table 4.40: Viewpoint 19: A697 near Coldstream

Viewpoint 19: A697 near Coldstream			
Grid Reference (NGR)	377676 642442	**Figure Number**	4.2.19

Viewpoint 19: A697 near Coldstream			
LCT	106 Lowland with Drumlins	**Designated Landscape or Wild Land Area**	n/a
Direction of View	North	**Distance to nearest turbine (km)**	21 km
Number of hubs theoretically visible	9	**Number of turbines with blades theoretically visible**	15

Location, description of existing view and potential receptors:

This viewpoint is located along the A697 north of Coldstream, approximately 21 km to the south of the Site. This location represents sequential views of road users along the A697 between Coldstream and Greenlaw, near Eccles.

This viewpoint looks north and west out over undulating farmland, with hedgerows and scrubby verges to the west throughout the fields. Wooden poles cross the foreground in views north. Isolated farmsteads can be seen dotted across the landscape. Gradually rising hills can be seen in the distance to the north and west, covered by bands of dark forestry. The Lammermuir plateau forms a backdrop to the north and north-west. Transmission lines form prominent vertical features in views, and to the distance in the west the turbines of Longpark can be seen over the horizon. Dense roadside vegetation to the north-east and east screens outward views towards the Site. To the south, undulating farmland continues to unfold with prominent transmission lines, and the rising forms of the Southern Uplands in the distance.

Sensitivity:

Road users including cyclists are considered to be of **medium** susceptibility to changes in the view. This viewpoint is not located within any designated landscapes or near recognised viewpoints, and the value of the view is therefore considered to be **low**. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be **medium-low**.

Assessment of visual effects:

From this location, the Proposed Development will introduce theoretical visibility of up to nine turbine hubs and all 15 blades to the north at a distance of approximately 21 km to the nearest turbine (T14). Turbines in the west of the Site will barely extend above the horizon, and will not appear prominent above the wide expanse of the Lammermuir plateau. Turbines in the west of the Site will appear mostly screened by intervening landform, with only singular blades visible above the horizon. In practice, intervening landform and forestry along the horizon will further screen and filter views towards the proposed turbines, as well as roadside vegetation whilst in place. Given the large intervening distance between the viewpoint and the Proposed Development, tracks and other ancillary infrastructure will not be visible. At night, steady red lights would be seen on the hubs of seven turbines (T1, T3, T6, T8, T9, T14 and T15).

If a taller hub height of 139 m was used, up to nine turbine hubs and 15 blades would be theoretically visible from this viewpoint (see Figure **TA4.3.22**). At night, steady red lights would be seen on the hubs of seven turbines (T1, T3, T6, T8, T9, T14 and T15). This is also considered in reaching the conclusions set out below.

Despite visibility of all the proposed turbine blades, at this distance they would not form prominent new features within the landscape, and in practice views will be largely filtered by roadside vegetation whilst it remains in place. The Proposed Development will occupy a small portion of the skyline, and it is judged that the scale of visual change will be **small**. The geographical extent of the change is judged to be **small**, as similar views will be gained from a small stretch of the road further south.

The overall magnitude of change is judged to be **low** and taking account of the **medium-low** sensitivity would result in a **Minor** and **Not Significant** visual effect.

Potential for Effects under Future Baseline Scenarios (Cumulative Assessment):

No consented or proposed wind farms would be perceptible from this viewpoint. As there would be no change to the existing baseline, effects under Scenario 1 and 2 would be the same as the primary assessment (**Minor** and **Not Significant**).

Table 4.41: Viewpoint 20: B6371, Tranent

Viewpoint 20: B6371, Tranent			
Grid Reference (NGR)	341267 671913	**Figure Number**	4.2.20
LCT	275 Lowland Farmed Plains – Lothians	**Designated Landscape or Wild Land Area**	n/a
Direction of View	South-east	**Distance to nearest turbine (km)**	22 km
Number of hubs theoretically visible	0	**Number of turbines with blades theoretically visible**	10

Location, description of existing view and potential receptors:

This viewpoint is located along the B6371 south of Tranent, approximately 22 km north-west of the Site. This view represents road users and residents on the outskirts of Tranent.

Views from this location retain long views south and south-east, across undulating lowland plains. The foreground looking south-east comprises arable fields with intact and robust hedgerows, as well as shelterbelts and areas of forestry further south, appearing highly managed. Directly south, the road heads south, and is bordered by light poles and a housing development. In the distance to the south, the rising forms of the Lammermuir Hills are visible and form a backdrop. The turbines of Fallago Rig and Keith Hill are barely perceptible along the horizon, where not screened by intervening landform and built development and forestry. To the north, east and west, views are screened by built development and forestry.

Sensitivity:

Road users including cyclists are considered to be of **medium** susceptibility to changes in the view. Residents are considered to be of **high** susceptibility to changes in the view. The viewpoint is not located within a designated landscape or at a recognised stopping point or promoted view. The value of the view is considered to be **medium**. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be **medium-high**.

Assessment of visual effects:

The Proposed Development would introduce theoretical visibility of up to 10 turbine blades into views and no hubs, seen above the horizon at a distance of 22 km. The horizon is formed by the northern edge of the Lammermuir Hills, and the turbines would barely extend above the horizon. The proposed turbines will be mostly screened by landform and will not appear out of scale against the expansive underlying landform. Seen adjacent to the existing Fallago Rig, the proposed turbines will not appear larger in scale considering the distance and screening by landform, and will appear mostly within the horizontal extents of existing turbines, and will not extend the influence of wind farm development along the plateau. No stacking will occur, and given the distance and screening by intervening landform, tracks and other ancillary infrastructure will not be visible. No aviation lighting would be visible.

If a taller hub height of 139 m was used, up to one turbine hub and 10 turbine blades would be theoretically visible from this viewpoint (see Figure **TA4.3.23**). The visible hub would be barely perceptible at a distance of around 22 km. At night, steady red lights would be seen on the hub of one turbine (T4). This is also considered in reaching the conclusions set out below.

Given the distance, existing influence of wind farm development, and partial screening, the size/scale of visual change will be **barely perceptible**. Similar views will only be experienced in the immediate vicinity, and the geographical extent of change is therefore judged to be **small**.

The overall magnitude of change is judged to be **barely perceptible** and taking account of the **medium-high** sensitivity, will result in a **Negligible and Not Significant** visual effect.

Potential for Effects under Future Baseline Scenarios (Cumulative Assessment):

The consented Crystal Rig Phase 4 would be barely perceptible from this viewpoint, being located behind other operational wind farms. As there would be no notable changes to the existing baseline, effects under Scenario 1 would be the same as the primary assessment (**Minor** and **Not Significant**).

Viewpoint 20: B6371, Tranent
Under Scenario 2 the proposed Newlands Hill (at Scoping stage) would be visible on the distant skyline. The turbines of Newlands Hill would appear large in scale in comparison with the visible Fallago Rig turbines, which are set back from the enclosing ridgeline. Given the visibility of the Newlands Hill turbines and limited visibility of the Proposed Development, the effect will be **Negligible** and **Not Significant**.

Table 4.42: Viewpoint 21: Eildon North Hill

Viewpoint 21: Eildon North Hill			
Grid Reference (NGR)	355510 632840	**Figure Number**	4.2.21
LCT	102 Upland Fringe with Prominent Hills	**Designated Landscape or Wild Land Area**	Eildon and Leaderfoot NSA
Direction of View	North	**Distance to nearest turbine (km)**	24 km
Number of hubs theoretically visible	15	**Number of turbines with blades theoretically visible**	15

Location, description of existing view and potential receptors:

This viewpoint is located at the summit of Eildon North Hill, a popular recreational location and landmark approximately 24.5 km to the south of the Proposed Development. The viewpoint is representative of recreational receptors along the network of Core Paths, and along the long distance footpath St Cuthbert's Way.

The viewpoint offers panoramic views from an elevated location in all directions, over the varied and pastoral landscape of the Scottish Borders and north towards the Lammermuir Hills. Looking north over the heather capped summit, the landform descends sharply into the wide Tweed Valley, through which the River Tweed can be seen meandering west-east at the base of the hill, as can the Leaderfoot Viaduct. Farmland borders the river, and frequent blocks of forestry are scattered across the gently undulating landform, providing visual interest and creating a more enclosed landscape. Settlements are dotted throughout and frequently fringed by trees. Transmission lines pass through the landscape, and single turbines can be seen to form vertical elements. The iconic form of Black Hill interrupts the more lowland arable landscape, seen south-east of the settlement of Earlston. The forms of the Dirringtons can be seen beyond this, as the landscape begins to transition to upland moors and the Lammermuirs. Views east look out over more undulating farmland with regular fields bound by hedgerows and larger blocks of forestry, transitioning into a more varied lowland landscape with drumlins in the distance. To the west, the larger settlement of Tweedbank extends up from the river corridor onto gradually rising slopes, and is enclosed by extensive areas of forestry. Beyond this, the rising landform of the Southern Uplands can be seen.

Numerous operational wind farms are visible from this vantage point. Black Hill and Quixwood are visible to the east. The Crystal Rig / Aikengall Group can be seen behind the Dirringtons and Spartleton Edge in the distance to the north-east. Fallago Rig is seen directly north, above the southern landform at the edge of the Lammermuir Hills. To the north-west, Longpark is clearly visible at 11 km, north of which lies the Dun Law Group at a distance of approximately 25 km.

Sensitivity:

Recreational receptors, whose attention is focused on their surroundings, are considered to be of high susceptibility to changes in the view. This viewpoint is located at a prominent summit within the designated Eildon and Leaderfoot NSA. The value of the view is therefore considered to be **high**. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be **high**.

Assessment of visual effects:

All 15 turbines (hubs and blades) would be theoretically visible from this viewpoint, on the horizon to the north at a distance of approximately 24 km to the nearest turbine (T14). The turbines would extend above the horizon, and east across the moorland plateau. Seen with the adjacent Fallago Rig turbines to the north-west, the proposed turbines would appear larger in scale, although this would not be readily apparent due to the long-distance view. Seen above the uplands, and as they will not be backclothed, the proposed turbines would be noticeable in northerly views. The Proposed Development would extend the influence of wind farm development east, narrowing the gap between Fallago Rig and the Crystal Rig / Aikengall Group. Tracks and other ancillary infrastructure are not anticipated to be perceptible at this distance. At night, steady red lights would be seen on the hubs of seven turbines (T1, T3, T6, T8, T9, T14 and T15).

Viewpoint 21: Eildon North Hill
If a taller hub height of 139 m was used, up to 15 turbines (hubs and blades) would be theoretically visible from this viewpoint (see Figure **TA4.3.24**). At night, steady red lights would be seen on the hubs of seven turbines (T1, T3, T6, T8, T9, T14 and T15). This is also considered in reaching the conclusions set out below. Despite visibility of all the proposed turbines, at this distance they would not form prominent new features within the landscape. The Proposed Development would occupy a small portion of the skyline, and it is judged that the scale of visual change would be **small**. The geographical extent of the change is judged to be **medium**, as similar views would be gained from Eildon Mid Hill and other elevated summits within the NSA. The overall magnitude of change is judged to be **low** and taking account of the **high** sensitivity would result in a **Minor** and **Not Significant** visual effect.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Under Scenario 1, Crystal Rig Phase 4 (consented) would be visible on the distant skyline to the north-east, forming part of the Crystal Rig / Aikengall Group. As the above changes would not notably alter the existing baseline, effects under Scenario 1 would be the same as the primary assessment (**Minor** and **Not Significant**). Under Scenario 2 the proposed Newlands Hill (at Scoping stage) would be visible on the distant skyline to the north. It would be seen in combination with the Proposed Development and Fallago Rig Wind Farm, and would appear as an extension to Fallago Rig Wind Farm, appearing of similar size. Given that Newlands Hill would be seen in successive views with existing wind farms and on the distant skyline, there would not be a notable change to the existing baseline. Effects under Scenario 2 would be the same as the primary assessment (**Minor** and **Not Significant**).

Table 4.43: Viewpoint 22: North Berwick Law

Viewpoint 22: North Berwick Law			
Grid Reference (NGR)	355642 684216	**Figure Number**	4.2.22
LCT	275 Lowland Farmed Plains – Lothians	**Designated Landscape or Wild Land Area**	North Berwick Law SLA
Direction of View	South	**Distance to nearest turbine (km)**	24.6 km
Number of hubs theoretically visible	15	**Number of turbines with blades theoretically visible**	15
Location, description of existing view and potential receptors: This viewpoint is located at the summit of North Berwick Law, approximately 24.5 km north-west of the Site. This view represents recreational receptors at the summit of North Berwick Law. Views are panoramic in all directions from this location. To the north, the Firth of Forth stretches out, across which the rising forms of the Ochils and the Lomond Hills are visible. Views east look out over lowland fields, which end at the confluence of the Firth of Forth and the North Sea, which stretches to the horizon. To the south, arable fields with regular boundaries are seen, bounded by hedgerows. The fields are dotted with large scale farmsteads and farm buildings, and areas of forestry form large and meandering bands in views. In the middle distance, the landform begins to transition to moorland fringe, gradually rising and covered with a matrix of heather and rough grassland, as well as frequent bands of forestry which appear dark against the lighter hues of the slopes. Beyond this the landform continues to rise, forming the northern edge of the Lammermuir plateau, above which the turbines of Fallago Rig, Crystal Rig / Aikengall Group, and Keith Hill can be seen in distant views, dotted along the horizon. To the west, the low-lying plains stretch out, flat and expansive, with areas of settlement and forestry dotted across. In the distance, the Pentland Hills form a dramatic backdrop, and the form of Arthur's Seat can be seen across Gullane Bay.			
Sensitivity: Recreational receptors, whose attention is focused on their surroundings, are considered to be of **high** susceptibility to changes in the view. This viewpoint is located in the North Berwick Law SLA. The value of the view is therefore considered to			

Viewpoint 22: North Berwick Law
be **high**. Taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be **high**.
Assessment of visual effects: The Proposed Development would introduce theoretical visibility of up to 15 turbines (hubs and blades) into views, seen above the horizon to the south at a distance of approximately 24.5 km to the nearest turbine (T2). The horizon line is formed by the northern edge of the Lammermuir Hills, and the Proposed Development will appear just over the moorland edge, partially screened by the undulating landform. Seen adjacent to and partially behind Fallago Rig, the proposed turbines will appear as an extension to the existing development, with a slight overlap between the two schemes. Some stacking will occur between the existing and proposed turbines, with turbines in the south and west of the Proposed Development (T7, T9, T10). The turbines will be of a larger scale than those at Fallago Rig, however given the large intervening distance and the perspective, the scale of the difference will not be obvious in views. The Proposed Development will extend the influence of wind farm development across the horizon line formed by the central Lammermuir Hills, however the Proposed Development will still be distant and will form relatively small features across the extensive panoramic views available from this viewpoint. Given the large intervening distance between the viewpoint and the Proposed Development, tracks and other ancillary infrastructure will not be visible. At night, steady red lights would be seen on the hubs of seven turbines (T1, T3, T6, T8, T9, T14 and T15). If a taller hub height of 139 m was used, up to 15 turbines (hubs and blades) would be theoretically visible from this viewpoint (see Figure **TA4.3.25**). At night, steady red lights would be seen on the hubs of seven turbines (T1, T3, T6, T8, T9, T14 and T15). This is also considered in reaching the conclusions set out below. Given the distance, existing influence of wind farm development, and partial screening, the size/scale of visual change will be **small**. Similar views will only be experienced in the immediate vicinity across the isolated area of elevation, and the geographical extent of change is judged to be **small**. The overall magnitude of change is judged to be **low** and taking account of the **high** sensitivity, will result in a **Minor** and **Not Significant** visual effect.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Under Scenario 1, Crystal Rig Phase 4 (consented) would be visible on the distant skyline to the north-east, forming part of the Crystal Rig / Aikengall Group. As the above changes would not notably alter the existing baseline, effects under Scenario 1 would be the same as the primary assessment (**Minor** and **Not Significant**). Under Scenario 2 the proposed Newlands Hill (at Scoping stage) would be visible on the distant skyline. The turbines of Newlands Hill would appear large in scale in comparison with the Fallago Rig turbines, which are set back from the enclosing ridgeline. Newlands Hill would appear in front of the Proposed Development, in the same field of view. As the above changes would not notably alter the existing baseline, effects under Scenario 2 would be the same as the primary assessment (**Minor** and **Not Significant**).

Table 4.44: Viewpoint 23: A198 near Dirleton

Viewpoint 23: A198 near Dirleton			
Grid Reference (NGR)	350517 683483	**Figure Number**	4.1.23
LCT	278 Coastal Terrace	**Designated Landscape or Wild Land Area**	n/a
Direction of View	South	**Distance to nearest turbine (km)**	25.2 km
Number of hubs theoretically visible	4	**Number of turbines with blades theoretically visible**	15
Location, description of existing view and potential receptors:			

Viewpoint 23: A198 near Dirleton
This viewpoint is located along the A198, approximately 25 km to the north of the Site. This location represents sequential views of road users along the A198 on the outskirts of Dirleton. This viewpoint offers open views to the south and east from along the road, over a lowland landscape comprising large-scale and uniform arable fields. Hedgerows form low-lying dark bands across the fields, with intermittent hedgerow trees. Large scale farm buildings are dotted across the field of view, and surrounded by pockets of trees. Further afield, larger blocks of forestry form vertical elements in the otherwise flat landscape. In the far distance to the south, the Lammermuir Hills form an elevated dark backdrop. To the west, the settlement of Dirleton is visible, and to the north roadside vegetation screens and filters views. Several operational wind farms are barely perceptible along the horizon line which is formed by the northern edge of the Lammermuir Hills, including Fallago Rig, Keith Hill, the Dun Law Group, and the Crystal Rig / Aikengall Group. These turbines form small-scale features, dotted across the elevated landform.
Sensitivity: Road users including cyclists are considered to be of **medium** susceptibility to changes in the view. This viewpoint is not located within any designated landscapes, but is in proximity to the locally designated North Berwick to Seton Sands SLA. The value of the view is therefore considered to be **medium-low**. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be **medium**.
Assessment of visual effects: From this location, 4 turbine hubs and all 15 blades will be theoretically visible to the south at a distance of approximately 26 km to the nearest turbine (T1). Turbines in the east of the Site will extend above the horizon, although will not appear prominent above the expansive underlying landform, and turbines in the south and west of the Site will appear mostly screened by intervening landform. The turbines will be of a larger scale than those at the adjacent Fallago Rig, however given the large intervening distance and the perspective, the scale of the difference will not be obvious in views. The Proposed Development will extend the influence of wind farm development across the horizon line formed by the central Lammermuir Hills, however the Proposed Development will still be distant and will form relatively small features across the extensive panoramic views available from this viewpoint. Given the large intervening distance between the viewpoint and the Proposed Development, tracks and other ancillary infrastructure will not be visible. At night, steady red lights would be seen on the hubs of three turbines (T1, T3 and T6). If a taller hub height of 139 m was used, up to 6 turbine hubs and 15 turbine blades would be theoretically visible from this viewpoint (see Figure **TA4.3.26**). Therefore, with the increased hub height, there would be a marginal increase in the number of turbine hubs perceptible over the horizon to the south. However, the change would be barely perceptible, and would not be notable in views. At night, steady red lights would be seen on the hubs of three turbines (T1, T3 and T6). This is also considered in reaching the conclusions set out below. Despite visibility of all the proposed turbine blades, at this distance they will not form prominent new features within the landscape. The Proposed Development will occupy a small portion of the horizon, and it is judged that the scale of visual change will be **small**. The geographical extent of the change is judged to be **medium**, as similar views will be gained from short sections of the route to the west. The overall magnitude of change is judged to be **low** and taking account of the **high** sensitivity will result in a **Minor** and **Not Significant** visual effect.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Under Scenario 1, Crystal Rig Phase 4 (consented) would be visible on the distant skyline to the south, forming part of the Crystal Rig / Aikengall Group. As the above changes would not notably alter the existing baseline, effects under Scenario 1 would be the same as the primary assessment (**Mino**r and **Not Significant**). Under Scenario 2 the proposed Newlands Hill (at Scoping stage) would be visible on the distant skyline to the south. The turbines of Newlands Hill would appear in front of the existing turbines at Fallago Rig and in comparison would appear large in scale, as well as against the underlying landform. Given the visibility of the Newlands Hill turbines and limited visibility of the Proposed Development, the effect will be **Negligible** and **Not Significant**.

Table 4.45: Viewpoint 24: Torfichen Hill

Viewpoint 24: Torfichen Hill			
Grid Reference (NGR)	333650 653270	**Figure Number**	4.1.24
LCT	266 Plateau Moorland – Lothians	**Designated Landscape or Wild Land Area**	Gladhouse Reservoir and Moorfoot Scarp SLA
Direction of View	East	**Distance to nearest turbine (km)**	26 km
Number of hubs theoretically visible	15	**Number of turbines with blades theoretically visible**	15

Location, description of existing view and potential receptors:

This viewpoint is located at the summit of Torfichen Hill, a hill summit approximately 26 km to the west of the Proposed Development. The viewpoint is representative of recreational receptors along the network of Core Paths across the Moorfoot Hills.

This viewpoint offers panoramic views from an elevated location in all directions, over the undulating rough grassland and rounded summits of the Moorfoot Hills. To the north, rough grassland and heather across the summit transitions into arable fields and bands of forestry along lower lying slopes. Further in the distance, larger blocks of forestry form dark bands against the lighter hues of grassland and moor. Beyond this, larger settlements can be seen, backclothed by the rising forms of the Pentland Hills and the Firth of Forth beyond. To the east, undulating hills stretch out, covered by grassland and areas of heather, and punctuated with darker blocks of forestry. The three turbines of Carcaran are visible in the middle distance, forming relatively prominent vertical features, although entirely backclothed by rolling upland. Beyond this, the Dun Law Group is visible, spreading across Dun Law, and further south the turbines of Toddleburn across Clints Hill. Successive rounded hills are seen beyond these developments, and the operational turbines of Fallago Rig are visible on the far horizon. To the south, rolling moorland continues, covered by extensive heather and muirburn. To the west, Gladhouse Reservoir is visible and fringed by areas of forestry, and set within lower lying farmland. Farmed lowlands continue beyond this, until reaching the Pentland Hills which form a backdrop.

Sensitivity:

Recreational receptors, whose attention is focused on their surroundings, are considered to be of high susceptibility to changes in the view. This viewpoint is located at a summit within the Gladhouse Reservoir and Moorfoot Scarp SLA, however is not . The value of the view is therefore considered to be **high**. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be **high**.

Assessment of visual effects:

All 15 turbines (hubs and blades) would be theoretically visible from this viewpoint, on the horizon to the east at a distance of approximately 26 km to the nearest turbine (T9). The turbines will extend above the horizon, seen to the south-east of the operational Dun Law Group and Fallago Rig. Seen just over the undulating horizon, the proposed turbines will appear as an extension of Fallago Rig, appearing with no gap between the two developments. However, some stacking will occur with turbines in the north of the Site. The Proposed Development will start to bridge the gap between Dun Law and Toddleburn which is apparent from this viewpoint. The proposed turbines will be of a larger scale than those at Fallago Rig, however given the large intervening distance and the perspective, the scale of the difference will not be obvious in views.

The Proposed Development will extend the influence of wind farm development south across the horizon formed by the central Lammermuir Hills, however the proposed turbines will still be distant and will form relatively small features across the extensive panoramic views available from this viewpoint. In views from this location, the proposed turbines will narrow the gap between Fallago Rig and Toddleburn, and increase the presence of development.

Given the large intervening distance between the viewpoint and the Proposed Development, tracks and other ancillary infrastructure will not be visible. At night, steady red lights would be seen on the hubs of seven turbines (T1, T3, T6, T8, T9, T14 and T15).

If a taller hub height of 139 m was used, up to 15 turbines (hubs and blades) would be theoretically visible from this viewpoint (see Figure **TA4.3.27**). At night, steady red lights would be seen on the hubs of seven turbines (T1, T3, T6, T8, T9, T14 and T15). This is also considered in reaching the conclusions set out below.

Despite visibility of all of the proposed turbines, at this distance they will not form prominent new features within the landscape, and will be seen in context of existing wind farm development. The Proposed Development will occupy a small portion of the

Viewpoint 24: Torfichen Hill
horizon, and it is judged that the scale of visual change will be **small**. The geographical extent of the change is judged to be **medium**, as similar views will be gained from the ridgeline which extends to the north-east and south-west. The overall magnitude of change is judged to be **low** and taking account of the **high** sensitivity will result in a **Minor** and **Not Significant** visual effect.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Under Scenario 1, no consented schemes would be visible. As there would be no change to the existing baseline, effects under Scenario 1 would be the same as the primary assessment (**Minor** and **Not Significant**). Under Scenario 2 the proposed Newlands Hill (at Scoping stage) would be visible on the distant skyline to the east. It would be seen mostly screened by intervening landform, and in combination with the Proposed Development and Fallago Rig Wind Farm, and Dun Law Group. Given that Newlands Hill would be seen mostly screened on the distant skyline, there would not be a notable change to the existing baseline. Effects under Scenario 2 would be the same as the primary assessment (**Minor** and **Not Significa**nt).

Effects on Settlements

4.128 Residential receptors in settlements are considered to have a high susceptibility to changes in the view. The settlements in the surrounding area from which potential views of the Proposed Development are available are assessed in **Table 4.46: to Table 4.50** below.

Table 4.46: Westruther (Scottish Borders)

Westruther			
Representative viewpoint	VP 7: Westruther	**Approximate distance from settlement to nearest turbine**	7 km
Description: Westruther is a small village in the Scottish Borders, located along the B6456 to the south of the Site. The settlement is located on the rolling farmland to the south of the Lammermuirs, with rising slopes to the north extending to Flass Hill (375 m AOD) within the Harecleugh Forest. There are properties along both sides of the main road and extending along minor roads to the north and south. Properties within the town have a variety of outlook and degrees of screening, typically provided by surrounding buildings or mature trees and garden vegetation. Shelterbelts running east-west along the northern edge of the settlement provide additional screening to properties north of the B6456. The rising landform to the north is mostly occupied by forestry, with areas of felling, screening longer distance northerly views from parts of the settlement.			
Sensitivity: Residential receptors are considered to be of **high** susceptibility to changes in the view. Westruther is not located within a designated landscape, and views from the settlement are therefore considered to be of **low-medium** value. Taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this settlement is judged to be **high**.			
Assessment of visual effects: The ZTV in **Figure 4.1.2** indicates some theoretical visibility from the village, increasing along the rising valley side and minor roads to the south of the settlement. Bands of deciduous woodland and roadside vegetation across the northern extents of the settlement would filter and screen views towards the Site from the settlement whilst in place, particularly in summer when vegetation is in leaf. Viewpoint 7: B6456, Westruther is broadly representative of views from the settlement, and as shown in **Figure 4.2.7** there will be glimpsed views north towards the proposed turbines, which would appear to extend above the skyline. However the turbines would be partially screened by intervening landform and are unlikely to form notable new features in views from the majority of the settlement. At night, steady red lights would be seen on the hubs of three turbines (T9, T14 and T15) as shown in **Figures 4.2.7e and f** from representative Viewpoint 7 at Westruther. If a taller hub height of 139 m was used, there would be a marginal increase in the number of turbine hubs perceptible over the horizon to the north. However, the change would be barely perceptible, and would not be notable in views. At night, steady red			

Westruther
lights would be seen on the hubs of three turbines (T9, T14 and T15). This is also considered in reaching the conclusions set out below. The majority of the Proposed Development will be screened by intervening rising landform north of the settlement. From more elevated parts of the town in the south the scale of visual change will be **small**. The geographical extent of the change is judged to be **small**. The overall magnitude of change is judged to be **low** for elevated parts of the settlement, and taking account of the **high** sensitivity of residents will result in a **Minor** and **Not Significant** visual effect.
Cumulative: No consented or proposed wind farms (including Newlands Hill Wind Farm) would be perceptible from this settlement. As there would be no change to the existing baseline, effects under Scenario 1 and 2 would be the same as the primary assessment (**Minor** and **Not Significant**).

Table 4.47: Longformacus (Scottish Borders)

Longformacus			
Representative viewpoint	n/a	**Approximate distance from settlement to nearest turbine**	7.3 km
Description: Longformacus is a small village in the Scottish borders, situated along the Dye Water, approximately 7.5 km east of the Proposed Development. Located within a steep valley landform, outward views from the north of the settlement are constrained by sharply rising landform. To the south, the landform more gradually rises away from Dye Water, eventually rising to Dirrington Hill and Dirrington Great Law. Along the watercourse and roads, dense broadleaved and riparian woodland provides an enclosed feeling throughout the settlement, and limits outward views. Properties to the south of Dye Water along the more elevated Duns Road are marginally more open, with views to the north-west and west.			
Sensitivity: Residential receptors are considered to be of **high** susceptibility to changes in the view. Longformacus is located within the locally designated Lammermuir Hills SLA, and the Southern Upland Way passes through the settlement. The value of the view is considered to be **high**. Taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this settlement is judged to be **high**.			
Assessment of visual effects: The ZTV in **Figure 4.1.2** indicates no theoretical visibility in the centre of the village, with more widespread theoretical visibility of up to 15 turbines from some of the properties along Duns Road south of the settlement core. Bands of forestry and roadside vegetation across the centre, north and western extents of the settlement would filter and screen views towards the Site, particularly in summer when vegetation is in leaf. The majority of the Proposed Development would be screened by intervening rising landform north and west of the settlement. If a taller hub height of 139 m was used, there would be a marginal increase in theoretical visibility of turbine hubs from the settlement, south of the settlement core and where north-westerly views are available. Views from the majority of the settlement will be filtered and screened by vegetation and buildings. As shown in **Figure A4.3.1** there would be very limited theoretical visibility of turbine lighting from the settlement and surrounds at night. This is also considered in reaching the conclusions set out below. Where visible, the Proposed Development would appear in glimpsed views along the horizon, above the landform to the west. Intervening landform would provide significant screening of the Proposed Development, as would buildings and deciduous woodland along the river. From more elevated parts of the village in the south, moving turbine blades may be visible above the underlying landform, and above the treeline. The scale of visual change would be **small**, and the geographical extent of the change is judged to be **small**.			

Longformacus
The overall magnitude of change is judged to be **low** for elevated parts of the settlement to the south, and taking account of the **high** sensitivity of residents, would result in a **Minor** and **Not Significant** visual effect.
Cumulative: Under Scenario 1, **Figure 4.1.11** indicates that Crystal Rig Phase 4 (consented) would be visible on the distant skyline to the north, forming part of the Crystal Rig / Aikengall Group. However, in practice it is likely that intervening landform and vegetation would largely screen the consented development. As the above changes would not notably alter the existing baseline, effects under Scenario 1 would be the same as the primary assessment (**Minor** and **Not Significant**). Under Scenario 2, no proposed developments would be visible. As there would be no change to the existing baseline, effects under Scenario 2 would be the same as the primary assessment (**Minor** and **Not Significant**).

Table 4.48: Lauder (Scottish Borders)

Lauder			
Representative viewpoint	VP 14: B6362 above Lauder	**Approximate distance from settlement to nearest turbine**	12.5 km
Description: Lauder is a small town in the Scottish borders, situated along Leader Water west of the Site. Located within a valley landform at the western edge of the Lammermuir Hills, outward views from the east of the settlement are constrained by gradually rising landform. To the west, the landform sharply rises away from Leader Water, to Staunchley Hill (293 m AOD) and Lauder Common (322 m AOD). Properties are generally arranged along the A69, which passes north-south through town, and present a variety of outlooks and degrees of screening. Dense woodland along the eastern edge of the settlement associated with Thirlestane Castle and rising landform at Dabshead Hill and Edgarhope Moor curtail long distance views to the east from within the settlement. More dispersed properties along minor roads to the west of the settlement have more expansive views, with rising landform giving improved vantage.			
Sensitivity: Residential receptors are considered to be of **high** susceptibility to changes in the view. The settlement is not located within any designated landscapes, but is in proximity to the locally designated Lammermuir Hills SLA, and the Southern Upland Way passes through the settlement. Thirlestane Castle GDL is adjacent along the eastern edge of the settlement. The value of the view is considered to be **medium-high**. Taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this settlement is judged to be **high**.			
Assessment of visual effects: The ZTV in **Figure 4.1.2** indicates limited theoretical visibility from the centre or east of the settlement within 11 km of the nearest turbine, with more widespread theoretical visibility from the rising slopes west of the village, at a distance of approximately 12 km. Bands of woodland and roadside vegetation across the centre and northern extents of the settlement will filter and screen views towards the Site, particularly in summer when vegetation is in leaf. In views from the more elevated parts of the settlement to the west, as represented by Viewpoint 14: B6362 above Lauder, there will be glimpsed views across the town towards the Proposed Development extending across the hills which form the distant skyline. In these views, the Proposed Development will be seen in combination with the existing Fallago Rig, which forms vertical elements across the skyline, and will extend the influence of wind farm development further south in views. Fallago Rig is closer, and the larger size of the proposed turbines will lead to the perception of a similar turbine height between the two developments. If a taller hub height of 139 m was used, there would be a marginal increase in theoretical visibility of turbine hubs from the rising ground west of the settlement, where easterly views are available and not screened by intervening landform, buildings, or vegetation. Views from the majority of the settlement will be filtered and screened by vegetation and buildings. As shown in **Figure A4.3.1** there would be very limited theoretical visibility of turbine lighting from the settlement and surrounds at night. This is also considered in reaching the conclusions set out below. From more elevated parts of the town in the south the scale of visual change will be **small**. The geographical extent of the change is judged to be **medium**¸ as similar views will be found across the rising slopes west of the A68 between Oxton and Earlston.			

Lauder
The overall magnitude of change is judged to be **small** for elevated parts of the settlement to the west and for areas across the centre and east of the settlement, and taking account of the **medium-high** sensitivity of residents will result in a **Minor** and **Not Significant** visual effect.
Cumulative Effects: No consented or proposed wind farms would be perceptible from this settlement. As there would be no change to the existing baseline, effects under Scenario 1 and 2 would be the same as the primary assessment (**Minor** and **Not Significant**).

Table 4.49: Gordon (Scottish Borders)

Gordon			
Representative viewpoint	N/A	**Approximate distance from settlement to nearest turbine**	12.5 km
Description: Gordon is a small town in the Scottish borders, situated at the junction of the A6105 and A609, approximately 13 km south of the Site. Relatively compact and nucleated, the settlement is located on a gentle knoll within the surrounding landscape, which continues to gently rise to the north. Within the settlement core outward views are likely to be screened by buildings, and vegetation. The northern settlement edge is more exposed, however outward views are filtered by the bands of woodland along Tower Burn and the dismantled railway along the northern settlement boundary, as well as rising landform, including Knock Hill (272 m AOD). Views to the south are less constrained as the landform falls away from the A6105, and views are gained over the undulating farmland.			
Sensitivity: Residential receptors are considered to be of **high** susceptibility to changes in the view. Gordon is not located within any designated landscapes, although Mellerstain GDL is in proximity to the south. The value of the view is considered to be **medium**. Taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this settlement is judged to be **medium-high**.			
Assessment of visual effects: The ZTV in **Figure 4.1.2** indicates widespread theoretical visibility across the settlement within 12.5 km of the nearest turbine, with theoretical visibility extending to the north and east along the A6105 and A609. Built development and vegetation is likely to reduce actual visibility, particularly when vegetation is in leaf. Rising ground north of the settlement will partially screen the Proposed Development, but glimpses of the turbine blades will be seen in views from the more exposed northern settlement edge across the hills which form the distant skyline. Similar views will be gained from more dispersed settlement to the east along the A6105, with less screening from vegetation and built development. If a taller hub height of 139 m was used, there would be a marginal increase of turbine hubs theoretically visible from the settlement where northerly views are available and not screened by intervening landform, built development, or vegetation. However, seen at distance and with partial screening from intervening landform, the increased hub height would not appear notable. Where visible, steady red lights would be seen on the hubs of the turbines. This is also considered in reaching the conclusions set out below. From more exposed parts of the town in the north the size/scale of visual change will be **small**. The geographical extent of the change is judged to be **small**. The overall magnitude of change is judged to be medium for elevated parts of the settlement to the south, and taking account of the **medium-high** sensitivity of residents will result in a **Minor** and **Not Significant** visual effect.			
Cumulative Effects: No consented or proposed wind farms would be perceptible from this settlement. As there would be no change to the existing baseline, effects under Scenario 1 and 2 would be the same as the primary assessment (**Minor** and **Not Significant**).			

Table 4.50: Nether Blainslie (Scottish Borders)

Nether Blainslie			
Representative viewpoint	N/A	**Approximate distance from settlement to nearest turbine**	14.5 km
Description: Nether Blainslie is a small hamlet, located approximately 2.5 km to the south of Lauder on the rising slopes west of Leader Valley. Dispersed settlement is situated across the undulating grasslands of East Gala, and where views are available they are focused across the Leader Valley to the east. To the east the landform drops away towards the A68 and Leader Water, and long distance views are gained across the Lammermuir Hills to the north-east. Farmland surrounds the settlement, and intact hedgerows with mature trees provide a rural and pastoral feel. Longer distance views to the north and east comprise the rising upland hills which form the forested Edgarhope Moor, Harelaw Moor, and Knock Hill. There are no operational wind farms visible in outward views from the settlement.			
Sensitivity: Residential receptors are considered to be of **high** susceptibility to changes in the view. Nether Blainslie is not located within any designated landscapes, although the Southern Upland Way is in proximity to the west. The value of the view is considered to be **medium**. Taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this settlement is judged to be **medium-high**.			
Assessment of visual effects: The ZTV in **Figure 4.1.2** indicates widespread theoretical visibility across the settlement and surroundings, and views towards the Site are generally open and unconstrained by buildings or vegetation. The Proposed Development will be seen in glimpsed views to the north-east at a distance of approximately 14.5 km, over the rising landform which form the distant skyline, and will increase the perceptibility of wind farm development in outward views. Occasional roadside vegetation will provide some filtering of views, however most outward views from the settlement will be unobstructed. Along the rising landform to the south-west of the Site at Boon Hill and Edgarhope Moor, extensive areas of forestry will provide partial screening, however the tops of the turbines blades will be seen above the landform. If a taller hub height of 139 m was used, there would be a marginal increase of turbine hubs theoretically visible above the skyline where north-easterly views are available and not screened by intervening landform, or vegetation. However, seen at distance and with partial screening from intervening landform, the increased hub height would not appear notable. Where visible, steady red lights would be seen on the hubs of the turbines. This is also considered in reaching the conclusions set out below. The size/scale of visual change will be **low**. The geographical extent of similar views is judged to be **small**. The overall magnitude of change is judged to be **low** for elevated parts of the settlement to the south, and taking account of the **medium-high** sensitivity of residents will result in a **Minor** and **Not Significant** visual effect.			
Cumulative Effects: No consented or proposed wind farms would be perceptible from this settlement. As there would be no change to the existing baseline, effects under Scenario 1 and 2 would be the same as the primary assessment (**Minor** and **Not Significant**).			

Effects on Routes

4.129 Sequential visual effects are assessed through considering the likely effects of the Proposed Development both in isolation, and in the context of other existing, consented and proposed wind energy developments on key routes through the study area. The routes to be assessed were identified through analysis of the ZTVs shown on **Figures 4.1.2 and 4.1.3**. The assessment of likely effects on sequential views from these routes is detailed in **Table 4.51: to Table 4.59:** below.

4.130 Given the variable nature of views along roads and recreational routes, where visibility of the Proposed Development will change depending on a number of factors including landform and vegetation, it is considered that the candidate turbine with the tallest hub (with hub height 139 m and rotor diameter 162 m) is not likely to result in a notable difference in visibility or effects on the route than is identified for the candidate turbine with the largest rotor. Therefore the candidate turbine with the tallest hub has not been reported against separately for each of the following route assessments.

Table 4.51: Minor Road via Longformacus

Minor road via Longformacus			
Representative viewpoint	VP3	**Approximate distance from route to nearest turbine**	2 km
Description: The minor road connects the settlement of Longformacus to the south-east with the B6355 to the north-west. The route is approximately 2 km to the east of the nearest turbine at its closest point, near Penshiel Hill. The route winds through upland moorland, cutting across the Lammermuir Hills, and there is limited roadside vegetation. Open views can be obtained towards the Site along large sections of the route, where not constrained by the rising landform at the north-eastern edge of the Site, including Black Hill and Killpallet.			
Sensitivity: Road users including cyclists are considered to be of **medium** susceptibility to changes in the view. The minor road is entirely within the locally designated Lammermuir Hills SLA and Lammermuir Moorland SLA, and as such views from the road are considered to be **medium** in value. Taking account of the judgements of susceptibility and value, overall sensitivity is judged to be **medium.**			
Assessment of visual effects: The ZTV (**Figure 4.1.2**) indicates widespread visibility of up to 15 turbines across large sections of the route, over a distance of approximately 10 km. Where visible, the Proposed Development will appear in glimpsed and oblique views on the skyline, formed by hills within the Site within 2.5 km to the west. Turbines in the north-east of the Site will be most visible, with the majority of the Proposed Development partially screened by intervening landform. Viewpoint 3 is representative of views from the roadway, and from which a medium scale of change is predicted. As shown in **Figure A4.3.1** there would be intermittent theoretical visibility of steady red lights on the hubs of up to seven turbines from parts of the route. This is considered in reaching the conclusions set out below. Night-time photomontages are provided from two locations along the route, at Viewpoint 3 (see **Figure 4.2.3g and h**) and Viewpoint 12 (see **Figure 4.2.12f and g**). The position of lighting is also indicated in the wirelines in **Figure TA4.3.8** at Viewpoint 5 on the route. Due to the oblique and typically glimpsed nature of views, seen in the context of horizons which have been altered by wind farms, and limited overall section of the route, the scale of change will be no greater than **medium**. The geographical extent is judged to be **medium**. The overall magnitude of change is judged to be **medium**, and taking account of the **medium** sensitivity of road users will result in a **Moderate and Significant** visual effect.			
Cumulative Effects: Under Scenario 1, the consented Crystal Rig Phase 4 Wind Farm (11 turbines, 200 m tip height) would be visible over the form of Spartleton Edge, from distances between approximately 5 km and 10 km. It would be seen in combination with the existing wind farm schemes within the Crystal Rig / Aikengall Group, although with a larger tip height. Seen in successive views with the Proposed Development by road users travelling north-west along the minor road, the above changes would not notably alter the existing baseline, and effects under Scenario 1 would be the same as the primary assessment (**Moderate and Significant**). Under Scenario 2, the proposed Newlands Hill Wind Farm (at Scoping stage) would be theoretically visible directly in front of road users travelling north-west along the minor road as they approach the B6355 junction. The turbines would be seen along the skyline and would be seen in successive views with the Proposed Development in oblique views to the south-west, and oblique views of the Crystal Rig / Aikengall Group to the north-east. As the Newlands Hill turbines would not be seen in the same field of views as the Proposed Development and would be more distant, their introduction would not notably alter the existing baseline. Road users travelling south-east along the minor road would experience no change from the existing baseline. Effects under Scenario 2 would therefore be the same as the primary assessment (**Moderate and Significant**).			

Table 4.52: B6355

B6355			
Representative viewpoint	VP3	**Approximate distance from route to nearest turbine**	5 km

Description:

This B-road originates south from Tranent, approximately 22 km north-west of the Site, travelling through to Eyemouth to the east of the study area. The road crosses the River Tyne south of Tranent, and skirts along the Lammermuir Hills along the eastern fringes for most of its route, passing through Gifford before crossing into the Whiteadder Valley. The route comes within 4.5 km of the nearest turbine, just south of Gifford. Outward views are intermittently contained by roadside vegetation, until Gifford where the landcover shifts from arable countryside into expansive moorland and grassland, offering more unobstructed views over the landscape.

Sensitivity:

Road users including cyclists are considered to be of **medium** susceptibility to changes in the view. The road passes through multiple locally designated SLAs, including the Whiteadder SLA, Lammermuir Hills SLA and Lammermuir Moorland SLA in proximity to the Site, and as such views from the road are considered to be **medium** in value. Taking account of the judgements of susceptibility and value, overall sensitivity of receptors is judged to be **medium.**

Assessment of visual effects:

The ZTV indicates intermittent visibility of up to 15 turbines across sections of the route, over a distance of approximately 8 km. Where visible, the Proposed Development will appear in glimpsed views on the skyline formed by hills within the Site, within 4.5 km to the south-west. Turbines in the north-east of the Site will be most visible, with the majority of the Proposed Development partially screened by intervening landform. Viewpoint 3 is somewhat representative of views from the roadway, being located just south of the B6355, and from which a medium scale of change is predicted.

Travelling south, as the road ascends into the upland landscape and passes Newlands Hill (423 m AOD), there is theoretical visibility of up to 15 turbine blades for a short distance of approximately 2 km, seen beyond the existing Fallago Rig turbines. Within this stretch, the proposed turbines will appear large, and will form notable new features within the upland landscape. Beyond this, theoretical visibility grows more limited and intermittent, screened by intervening landform as the road descends into the Whiteadder valley (although there are brief stretches of theoretical visibility of up to 11 turbine blades and 7 hubs along the eastern rising slopes of Whiteadder Reservoir), along the eastern side of Cranshaws Hill, and to Duns.

As shown in **Figure A4.3.1** there would be limited and intermittent theoretical visibility of steady red lights on the hubs of up to seven turbines from parts of the route. This is considered in reaching the conclusions set out below. The night-time photomontage from Viewpoint 3 (see **Figure 4.2.3g and h**) is broadly representative of the closest views from the route.

The scale of change will be **medium** and the geographical extent of similar views will be **small**.

The magnitude of visual change will be **low**, and taking account of the **medium** sensitivity of road users will result in a **Minor** and **Not Significant** visual effect.

Cumulative Effects:

Under Scenario 1, the CVTV in **Figure 4.1.11** indicates intermittent theoretical visibility of the Proposed Development in combination with other operational and consented wind farms from short sections of the route. The consented Crystal Rig Phase 4 Wind Farm (11 turbines, 200 m tip height) would be visible over the form of Spartleton Edge, from distances between approximately 2.5 km and 10 km. It would be seen in combination with the existing wind farm schemes within the Crystal Rig / Aikengall Group, although with a larger tip height. Theoretical visibility of both the Proposed Development and consented development is limited from within the Whiteadder valley, extending to Duns. Seen in successive and glimpsed views with the Proposed Development by road users travelling both ways along the B6355, the above changes would not notably alter the existing baseline, and effects under Scenario 1 would be the same as the primary assessment (**Minor** and **Not Significant**).

Under Scenario 2, the proposed Newlands Hill Wind Farm (17 turbines, 200 m tip height, at Scoping stage) would be visible in close proximity from a short section of the route approaching Newlands Hill, situated on either side of the B-road. The turbines would be seen as prominent and notable features, and would be seen in combined and successive views with the Proposed Development in glimpsed views to the south-west, and glimpsed views with the Crystal Rig / Aikengall Group to the north-east. The Newlands Hill turbines would intensify the influence of wind farm development in close range views from an approximate 2 km section of the road around Newlands Hill, and the Proposed Development would be visible beyond these turbines in the distance

B6355
to the south-west. The Newlands Hill turbines would form new focal features in views of road users travelling both directions along the B-road, and the Proposed Development would appear more distant and less notable in views. As such, effects under Scenario 2 would be the same as the primary assessment (**Minor** and **Not Significant**).

Table 4.53: B6456

B6456			
Representative viewpoint	VP7, VP8	**Approximate distance from route to nearest turbine**	7 km
Description: This B road connects Thirlestane to Polwarth, branching off the A697 and passes through the settlement of Westruther, approximately 7 km south of the Site. The road crosses undulating farmland, interspersed by dense pockets of woodland, and is generally bound by mature roadside vegetation. The route comes within 7 km of the nearest turbine, near Westruther. Outward views west of Westruther towards the Site are generally contained by roadside vegetation and built development, however to the east of the settlement views open up towards the Site.			
Sensitivity: Road users including cyclists are considered to be of **medium** susceptibility to changes in the view. The road passes through the Lammermuir Hills SLA and as such views from the road are considered to be **medium** in value. Taking account of the judgements of susceptibility and value, overall sensitivity of receptors is judged to be **medium.**			
Assessment of visual effects: The ZTV indicates intermittent visibility of up to 15 turbines across sections of the route, over a distance of approximately 12 km. Where visible, the Proposed Development will appear in glimpsed and oblique views within 6.8 km on the skyline to the north, which is formed by hills within and along the southern edge of the Site. Turbines in the south of the Site will be most visible, with the majority of the Proposed Development partially screened by intervening landform. Viewpoint 7 is representative of views from the roadway, passing east and west of Westruther. The Proposed Development will be seen in oblique northerly views when travelling in both directions, partially screened by intervening landform and forestry, and a low magnitude of change was identified from this viewpoint. Viewpoint 8 is located further east along the B6546, and a medium magnitude of change was identified from this location, due to the more open views north. However, views from along the roadway towards the Proposed Development will be oblique and glimpsed. As shown in **Figure A4.3.1** there would be intermittent theoretical visibility of steady red lights on the hubs of up to seven turbines from parts of the route. This is considered in reaching the conclusions set out below. A night-time photomontage is provided from Viewpoint 7 (see **Figure 4.2.7e and f**). The position of lighting is also indicated in the wirelines in **Figure TA4.3.11** at Viewpoint 8 on the route. The overall magnitude of change is judged to be **low**, and taking account of the **medium** sensitivity of road users will result in a **Minor** and **Not Significant** visual effect.			
Cumulative Effects: Under Scenario 1, the CVTV in **Figure 4.1.11** indicates intermittent theoretical visibility of the Proposed Development in combination with other operational and consented wind farms from short sections of the route. The consented Crystal Rig Phase 4 Wind Farm (11 turbines, 200 m tip height) would be visible in the distance to the north over the form of Spartleton Edge, from distances between approximately 16 km and 20 km. It would be seen in combination with the existing wind farm schemes within the Crystal Rig / Aikengall Group, although with a larger tip height. Seen in successive and oblique views with the Proposed Development by road users travelling west along the route, the above changes would not notably alter the existing baseline, and effects under Scenario 1 would be the same as the primary assessment (**Minor** and **Not Significant**). Under Scenario 2, as indicated by **Figure 4.1.12**, the proposed Newlands Hill Wind Farm (at Scoping stage) would be visible beyond the Site, with its turbines seen against the skyline at a distance of approximately 15 km. Combined theoretical visibility of both the Proposed Development and Newlands Hill would be limited to east of Wesruther, as the road gently rises and gains more extensive northerly views. The Newlands Hill turbines would be seen in the same field of view as the Proposed Development but			

B6456
would appear more distant, and their introduction would not notably alter the existing baseline. Effects under Scenario 2 would therefore be the same as the primary assessment (**Minor** and **Not Significant**).

Table 4.54: A697

A697			
Representative viewpoint	VP 19	**Approximate distance from route to nearest turbine**	10 km
Description: This A-road passes west and south of the Site, connecting from Coldstream, north through Greenlaw and passing east of Lauder, mainly passing through undulating fringe farmland. Heading north from Coldstream, extensive forestry screens northerly views, although views west are more open across undulating farmland. Continuing north-west towards Greenlaw, the road gradually rises and the surrounding landform becomes more open, transitioning to undulating farmland with pockets of woodland and roadside vegetation, and large scale transmission lines crossing the field of view. Past Greenlaw on the west-east stretch of the route towards Houndslow, views across the fields become more open, passing within 10 km of the nearest turbine and retaining oblique views towards the Site. Past Houndslow, roadside vegetation grows more extensively again, and outward views are heavily screened by both forestry and intermittent built form. Approaching Whiteburn, views are more filtered by roadside vegetation, with occasional glimpses towards the Lammermuir Hills. The western extents of the route past Thirlestane are contained within the Leader Valley with views towards the Site lost, being entirely screened by intervening landform and forestry. Views towards the Site along the entirety of the route are oblique and will be experienced in glimpsed views.			
Sensitivity: Road users including cyclists are considered to be of **medium** susceptibility to changes in the view. The road passes through the Lammermuir Hills SLA and as such views from the road are considered to be **medium** in value. Taking account of the judgements of susceptibility and value, overall sensitivity of receptors is judged to be **medium.**			
Assessment of visual effects: The ZTV in **Figure 4.1.2** indicates intermittent visibility of up to 15 turbines across sections of the route, over a distance of approximately 13 km between Whiteburn and Greenlaw, and leaving Coldstream. However, roadside vegetation will screen visibility along extensive sections of the route near Coldstream, and between Whiteburn and Houndslow. Where visible, the Proposed Development will appear in oblique glimpsed views within approximately 9 km, seen on the horizon to the north as road users travel in a westerly direction towards Whiteburn. The proposed turbines will appear above the skyline which is formed by hills within and along the southern edge of the Site. Turbines in the south of the Site will be most visible, with the majority of the Proposed Development partially screened by intervening landform. The following viewpoint is located just off this route, and is representative of views likely to be experienced: ■ Viewpoint 19: A697 near Coldstream, represents views experienced by road users on the outskirts of Eccles, as people travel in a north-westerly direction. A **low** magnitude of change was identified from this viewpoint. As shown in **Figure A4.3.1** there would be intermittent theoretical visibility of steady red lights on the hubs of up to seven turbines from parts of the route. This is considered in reaching the conclusions set out below. The position of lighting is indicated in the wirelines in Figure **TA4.3.22** at Viewpoint 19 on the route. The overall magnitude of change is judged to be **low**, and taking account of the **medium** sensitivity of road users will result in a **Minor** and **Not Significant** visual effect.			
Cumulative Effects: Under Scenario 1, **Figure 4.1.11** indicates intermittent theoretical visibility of the Proposed Development in combination with other operational and consented wind farms from intermittent sections of the route. The consented Crystal Rig Phase 4 Wind Farm (11 turbines, 200 m tip height) would be visible behind the distant form of Spartleton Edge, from distances between approximately 18 km and 21 km. It would be seen in combination with the existing wind farm schemes within the Crystal Rig /			

A697
Aikengall Group, although with a larger tip height. Seen in successive and glimpsed views with the Proposed Development by road users travelling north-west along the A697, the above changes would not notably alter the existing baseline, and effects under Scenario 1 would be the same as the primary assessment (**Minor** and **Not Significant**). Under Scenario 2, **Figure 4.1.12** indicates the proposed Newlands Hill Wind Farm (at Scoping stage) would be visible beyond the Site at a distance of approximately 16 km and 18 km, with its turbines seen against the distant skyline. As the Newlands Hill turbines would be seen only in glimpsed and oblique views in the same field of view as the Proposed Development and would be more distant, their introduction would not notably alter the existing baseline. Effects under Scenario 2 would therefore be the same as the primary assessment (**Minor** and **Not Significant**).

Table 4.55: A6089

A6089			
Representative viewpoint	n/a	**Approximate distance from route to nearest turbine**	10 km
Description: This A-road connects between Whiteburn and Kelso, passing through Gordon, approximately 10 km to the south of the Site at its closest point. The route primarily passes through dramatically undulating farmland, with pastoral and arable fields punctuated by blocks woodland and forestry. Views north towards the Site are generally unconstrained by roadside vegetation or built development, however sharply rising landform and pockets of woodland across rising slopes within the surrounding landscape partially filter views north.			
Sensitivity: Road users including cyclists are considered to be of **medium** susceptibility to changes in the view. The road passes briefly through the Tweed Lowlands SLA near Kelso and as such views from the road are considered to be **medium** in value. Taking account of the judgements of susceptibility and value, overall sensitivity of receptors is judged to be **medium**			
Assessment of visual effects: The ZTV in **Figure 4.1.2** indicates widespread visibility of up to 15 turbines across sections of the route closer in proximity to Whiteburn and Gordon, over a distance of approximately 11 km. Where visible, the Proposed Development will appear in glimpsed views within 9 km to 12 km on the horizon to the north, formed by hills within the southern edge of the Lammermuir plateau. The proposed turbines will appear directly in front of road users travelling north along the A6089 between Mellerstain House and just north of Gordon, although given the distance and undulating landform are unlikely to form notable new features within views. Elsewhere, views towards the Site will be glimpsed and oblique. Turbines in the south of the Site will be most visible, with the majority of the Proposed Development partially screened by intervening landform. As shown in **Figure A4.3.1** there would be intermittent theoretical visibility of steady red lights on the hubs of up to seven turbines from parts of the route. This is considered in reaching the conclusions set out below. The overall magnitude of change is judged to be **low**, and taking account of the **medium** sensitivity of road users will result in a **Minor** and **Not Significant** visual effect.			
Cumulative Effects: Under Scenario 1, **Figure 4.1.11** indicates intermittent theoretical visibility of the Proposed Development in combination with other operational and consented wind farms from sections of the route between Mellerstain House and Whiteburn. The consented Crystal Rig Phase 4 Wind Farm (11 turbines, 200 m tip height) would be visible behind the distant form of Spartleton Edge, from distances between approximately 20 km and 27 km. It would be seen in combination with the existing wind farm schemes within the Crystal Rig / Aikengall Group, although with a larger tip height. Seen in glimpsed views with the Proposed Development by road users travelling north along the A697, the above changes would not notably alter the existing baseline, and effects under Scenario 1 would be the same as the primary assessment (**Minor** and **Not Significant**). Under Scenario 2, **Figure 4.1.12** indicates the proposed Newlands Hill Wind Farm (at Scoping stage) would be visible beyond the Site at a distance of approximately 16 km and 28 km, with its turbines seen against the distant skyline. As the Newlands Hill turbines would be seen only in glimpsed and distant views in the same field of view as the Proposed			

A6089
Development, their introduction would not notably alter the existing baseline. Effects under Scenario 2 would therefore be the same as the primary assessment (**Minor** and **Not Significant**).

Table 4.56: A198

A198			
Representative viewpoint	VP 23	**Approximate distance from route to nearest turbine**	18 km
Description: A popular tourist road, the A198 runs generally along the coast of the Firth of Forth for approximately 36 km, connecting between Tyninghame and Tranent. The route passes through several SLAs within the Study Area, including North Berwick to Seton Sands Coast SLA, Whitekirk and Balgone Outcrops SLA, Tantallon Coast SLA and Belhaven Bay SLA. The route passes within 18 km to the north of the nearest turbine, at the route's end point in Tyninghame. Heading north-east and east from Tranent off the A1, visibility from the road is largely restricted by roadside forestry and vegetation. Travelling east towards Gullane, forestry and banked landform screens oblique views south towards the Site, although views north towards the Firth of Forth are more open. This continues until the approach to Dirleton, upon which southerly views open up and oblique views towards the Lammermuir Hills are available, seen across flat and low-lying farmland. The stretch between Dirleton and North Berwick is the most open along the route, with southerly views towards the Lammermuirs. On the approach to Tyninghame, views south are out over undulating landform and pockets of forestry, with glimpses towards the northern upland fringe and Lammermuir plateau beyond. Those travelling south-bound between North Berwick and Tyninghame will have occasional views south-west directly towards the Site.			
Sensitivity: Road users including cyclists are considered to be of **medium** susceptibility to changes in the view. The route passes through several SLAs, although there are not recognised stopping points or promoted views along the route. However, the route is recognised as a popular tourist route, and the value of the view is considered to be **medium-high**. On balance, taking account of the judgements of susceptibility and value, overall sensitivity of receptors at this viewpoint is judged to be **medium**.			
Assessment of visual effects: The ZTV in **Figure 4.1.2** indicates that there would be intermittent and limited theoretical visibility from the route, between approximately 18 km and 25 km from the nearest turbine (T2), concentrated along short sections between Dirleton and Tyninghame. The route within the vicinity of Dirleton, and between Tantallon Castle and Auldhame, will have theoretical visibility of up to 15 turbine blades and 5 hubs. However roadside vegetation and built development will screen portions of this. Heading south between Auldham and Tyninghame, the section of the route with direct views towards the Site, theoretical visibility is more limited with up to 13 turbine blades visible, becoming more limited between the area immediately north of Whitekirk and Tyninghame. Theoretical visibility between Longniddry and Gullane is intermittent with limited theoretical visibility, and views towards the Site are glimpsed and oblique, with theoretical visibility of up to 10 turbine blades and no hubs. Where visible, the Proposed Development will appear in distant glimpsed views along the horizon to the south, appearing above the northern edge of the Lammermuir Hills. The Proposed Development will be visible in oblique southerly views along most stretches of this road when travelling both east and west bound. The Proposed Development will be visible in direct views in some southerly views from Auldham, as people travel south-bound. Viewpoint 23 is located just off this route and represents views experienced by road users on the outskirts of Direlton. A low magnitude of change was identified from this viewpoint. As shown in **Figure A4.3.1** there would be intermittent theoretical visibility of steady red lights on the hubs of up to four turbines from parts of the route. This is considered in reaching the conclusions set out below. The position of lighting is indicated in the wirelines in **Figure TA4.3.26** at Viewpoint 23 on the route.			

A198
Overall, the Proposed Development will give rise to a **low** magnitude of change at Auldhame and Dirleton. Elsewhere along the route, the magnitude of visual change will be **low** due to screening by roadside vegetation and intervening landform, resulting in a **Negligible and Not Significant** visual effect.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Under Scenario 1, **Figure 4.1.11** indicates intermittent theoretical visibility of the Proposed Development in combination with other operational and consented wind farms from large sections of the route between Aberlady and North Berwick. The consented Crystal Rig Phase 4 Wind Farm (11 turbines, 200 m tip height) would be visible behind the distant form of Spartleton Edge, from distances between approximately 14 km and 24 km. It would be seen in combination with the existing wind farm schemes within the Crystal Rig / Aikengall Group, and would appear of a similar scale as the existing turbines. Seen in glimpsed and oblique views with the Proposed Development by road users travelling east-west along the A198, and in direct views of road users travelling south between Auldham and Tyninghame, the above changes would not notably alter the existing baseline, and effects under Scenario 1 would be the same as the primary assessment (**Minor** and **Not Significant**). Under Scenario 2, **Figure 4.1.12** indicates the proposed Newlands Hill Wind Farm (at Scoping stage) would be visible in front of the Proposed Development and the existing turbines of Fallago Rig, seen against the distant skyline formed by the Lammermuir plateau. The Newlands Hill turbines would appear large in scale against the underlying landform and in comparison to the existing turbines of Fallago Rig. Given the prominence of the Newlands Hill turbines, and the glimpsed and oblique nature of views, their introduction would not notably alter the existing baseline, and effects under Scenario 2 would be the same as the primary assessment (**Minor** and **Not Significant**).

Table 4.57: Southern Upland Way

Southern Upland Way			
Representative viewpoint	VP 1, VP 2, VP 4, VP 11	**Approximate distance from route to nearest turbine**	1 km
Description: One of Scotland's Great Trails, the Southern Upland Way is approximately 341 km long, running from Portpatrick on the west coast of Scotland to Cockburnspath on the east coast. The route passes through several SLAs within the Study Area, including Tweedsmuir Uplands SLA, the Tweed, Ettrick and Yarrow Confluences SLA, the Lammermuir Hills SLA, and the Berwickshire Coast SLA. The route passes within 1 km to the south of the nearest turbine at its closest point, near Twin Law Cairns. Within approximately 15 km of the Site, the route passes north through the Leader Valley and Lauder, before heading east through areas of forestry and rough grassland near Edgarhope Wood (VP 11). Here, the route heads north-east towards Scoured Rig over Edgarhope Moor before descending into a shallow bowl landform near Nun Rig (VP 2), within 4 km of the Site. After this the route climbs again to the east, passing Twin Law Cairns (VP 1) before descending again towards the more sheltered Watch Water Reservoir (VP 4). After this, the route continues east towards Longformacus, entering contained valleys and areas of forestry.			
Sensitivity: Recreational receptors, whose attention is focused on their surroundings, are of **high** susceptibility to changes in the view. The Southern Upland Way is a promoted route which passes through several SLAs. The value of the view is therefore considered to be **high**. Taking account of the judgements of susceptibility and value, overall sensitivity of receptors using this route is judged to be **high**.			
Assessment of visual effects: The ZTV in **Figure 4.1.2** indicates that there would be widespread theoretical visibility from short sections of the route within 15 km including: between Scoured Rig and Watch Water Reservoir; and across Edgarhope Moor. The Proposed Development would appear on the horizon in views from the upland fringe landscapes east of Lauder, including in the vicinity of Twin Law. Elsewhere along the route the Proposed Development would be increasingly distant and screened by intervening landform, reducing its perceptibility in views.			

Southern Upland Way
The following viewpoints are located just off this route, and are representative of views likely to be experienced: ■ Viewpoint 1: Twin Law Cairns, represents views experienced by recreational receptors at this local summit and along the Southern Upland Way. A **high** magnitude of change was identified from this viewpoint. ■ Viewpoint 2: Nun Rig, represents sequential views experienced by recreational receptors walking along the Southern Upland Way. A **high** magnitude of change was identified from this viewpoint. ■ Viewpoint 4: Watch Water Reservoir, represents sequential views experienced by recreational receptors along the Southern Upland Way. A **medium** magnitude of change was identified from this viewpoint. ■ Viewpoint 11: Edgarhope Wood, represent views experienced by recreational receptors on the Southern Upland Way. A **medium** magnitude of change was identified from this viewpoint. As shown in **Figure A4.3.1** there would be theoretical visibility of steady red lights on the hubs of up to seven turbines from parts of the route. This is considered in reaching the conclusions set out below. The position of lighting is indicated in the wirelines in **Figure TA4.3.4** (Viewpoint 1), **Figure TA4.3.5** (Viewpoint 2), **Figure TA4.3.7** (Viewpoint 4) and **Figure TA4.3.14** (Viewpoint 11) which are all on this route. The magnitude of visual change would be **high** within 5 km, reducing to **medium** between 5 km and 10 km, and reducing to **low** beyond this. Taking account of the high sensitivity of the receptor, this would result in a **Major and Significant** visual effect for a short section of the route within 5 km as it crosses the expansive moorland near Nun Rig and Twin Law Cairns. Beyond 5 km, this reduces to **Minor** and **Not Significant**. Elsewhere along the route there will be a **Negligible** and **Not Significant** visual effect.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Under Scenario 1, **Figure 4.1.11** indicates there will be theoretical visibility of the Proposed Development in combined and successive views with the consented development at Crystal Rig Phase 4. Actual visibility of these wind farms however will be reduced along much of the route due to forestry, which will provide intermittent screening whilst in situ. Additionally, the consented development would be seen in distant and glimpsed views, and in the context of existing wind farm development. Given that there will be no notable change to the existing baseline, the effect will be the same as in the primary assessment (**Major and Significant** within around 5 km, reducing to **Minor** and **Not Significant**). Under Scenario 2, **Figure 4.1.12** indicates widespread theoretical visibility of the Proposed Development in combined and successive views with the proposed Newlands Hill (at Scoping stage) from Edgarhope Moor and between Scoured Rig and Watch Water Reservoir. The Newlands Hill turbines would extend the influence of wind farm development north-east in views from along the route, narrowing the gap between the existing turbines of Fallago Rig and the Crystal Rig / Aikengall Group. While the introduction of the Newlands Hill turbines would intensify the influence of wind farm development in outward views from the Southern Upland Way between Edgarhope Moor and Watch Water Reservoir, they would not notably alter the existing baseline in relation to the Proposed Development. The Proposed Development would appear in front of the Newlands Hill turbines, and would appear large-scale in comparison. Actual visibility of these wind farms however will be reduced along much of the route due to forestry, which will provide intermittent screening. Therefore, the effect will be the same as in the primary assessment (**Major and Significant** within around 5 km, reducing to **Minor** and **Not Significant** elsewhere).

Table 4.58: John Muir Way

John Muir Way			
Representative viewpoint	VP 22	**Approximate distance from route to nearest turbine**	17 km
Description: One of Scotland's Great Trails, the John Muir Way is approximately 215 km long, running from Helensburgh on the west coast of Scotland to Dunbar on the east coast. The route passes through several SLAs within the Study Area, including Prestonpans Coast SLA, North Berwick to Seton Sands Coast SLA, Whitekirk and Balgone Outcrops SLA, and Belhaven Bay SLA.			

John Muir Way
The route passes approximately 17 km to the north of the nearest turbine at its closest point, near East Linton. Beyond this, the route stays mainly along the coast north of the Site, passing through Musselburgh and North Berwick.
Sensitivity: Recreational receptors, whose attention is focused on their surroundings, are of **high** susceptibility to changes in the view. The John Muir Way is a promoted route which passes through several SLAs. The value of the view is therefore considered to be **high**. Taking account of the judgements of susceptibility and value, overall sensitivity of receptors using this route is judged to be **high**.
Assessment of visual effects: The ZTV in **Figure 4.1.2** indicates that there would be theoretical visibility of up to 2 turbine hubs and 11 blades from a short section of the route that is within 20 km of the Proposed Development, between Tyninghame and North Berwick. The Proposed Development would appear on the distant skyline in views south from the coastal route south of North Berwick, including in the vicinity of North Berwick Law. Elsewhere along the route the Proposed Development would be increasingly distant and screened by intervening landform and built development, reducing its perceptibility in views. The following viewpoint is located just off this route, and is representative of views likely to be experienced, although represents a worst-case scenario due to the elevated location which is not typical of the rest of the route: ■ Viewpoint 22: North Berwick Law represents views experienced by recreational receptors at this local summit and along the John Muir Way. A **low** magnitude of change was identified from this viewpoint. As shown in **Figure A4.3.1** there would be limited and intermittent theoretical visibility of steady red lights on the hubs of up to six turbines from parts of the route. This is considered in reaching the conclusions set out below. The magnitude of visual change would be **low**, and taking account of the **high** sensitivity of the receptor, will result in a **Minor** and **Not Significant** visual effect for a section of the route as it crosses between North Berwick and Tyninghame, over a distance of approximately 20 km. Elsewhere along the route there will be a **Negligible** and **Not Significant** visual effect.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Under Scenario 1, **Figure 4.1.11** indicates there will be theoretical visibility of the Proposed Development in combined and successive views with the consented development at Crystal Rig Phase 4 (11 turbines, 200 m tip height). Actual visibility of these wind farms however will be reduced along much of the route due to intervening landform, built development and forestry, which will provide intermittent screening. Additionally, the consented development would be seen in distant and glimpsed views, and in the context of existing wind farm development. Given that there will be no notable change to the existing baseline, the effect will be the same as in the primary assessment (**Minor** and **Not Significant** between Tyninghame and North Berwick, reducing to **Negligible and Not Significant** elsewhere). Under Scenario 2, **Figure 4.1.12** indicates the proposed Newlands Hill Wind Farm (at Scoping stage) would be visible in front of the Proposed Development and the existing turbines of Fallago Rig, seen against the distant skyline to the south formed by the Lammermuir plateau. The Newlands Hill turbines would appear large in scale against the underlying landform and in comparison to the existing turbines of Fallago Rig. Given the prominence of the Newlands Hill turbines, the distance, and the glimpsed and oblique nature of views, effects under Scenario 2 would be the same as the primary assessment (**Minor** and **Not Significant** between Tyninghame and North Berwick, reducing to **Negligible** and **Not Significant** elsewhere).

Table 4.59: Core Paths and Rights of Way within 5 km

Core Paths and Rights of Way within 5 km			
Representative viewpoint	VP1, VP 2, VP 4, VP 5	**Approximate distance from route to nearest turbine**	1 km
Description: Four Rights of Way pass through the Site, along Dye Water, through the neighbouring Fallago Rig wind farm site, across Scar Law, and north across Byrecleugh Ridge. These routes are shown on **Figures 4.1.2 and 4.1.3**. There are three Core Paths within 5 km which pass to the west and south of the Proposed Development, from Hogs Law to Nine Stone Rig, and			

Core Paths and Rights of Way within 5 km

from Nun Rig to Longformacus via Watch Water Reservoir, and Longformacus to Priestlaw Hill. Visual receptors on this network would include walkers, cyclists and horse riders.

As indicated by the cumulative ZTV in **Figure 4.1.10**, from some of the routes, other operational wind farms within approximately 20 km of the nearest proposed turbine are likely to be visible. These will include Fallago Rig, Black Hill, the Crystal Rig / Aikengall Group, and the Dun Law Group.

Sensitivity:

Recreational receptors, whose attention is focused on their surroundings, are of **high** susceptibility to changes in the view. These paths are within the Lammermuir Hills SLA, and those north of the Site fall within the Lammermuir Moorland SLA, and the overall value of views is therefore considered to be **medium**. Taking account of the judgements of susceptibility and value, overall sensitivity of receptors using this route is judged to be **medium-high**.

Assessment of visual effects:

The Proposed Development would introduce visibility of up to 15 turbines into the landscape, seen at close range and within sequential views. These views would be obtained when travelling along the Core Paths and Rights of Way within and in the immediate vicinity of the Site. The ZTV in **Figure 4.1.2** indicates that there would be widespread theoretical visibility of all turbines from all of the routes as they pass up and over the plateau, with reduced theoretical visibility of up to 6 turbines north and south of the Proposed Development as they pass over the plateau ridge and into more visually contained valleys. Views from the Core Paths and Rights of Way are typically open and unrestrained by vegetation within 5 km of the Site however, the undulating and rolling landform introduces intermittent partial screening.

Where visible, the Proposed Development would introduce additional turbines into the rolling moorland of the central Lammermuir Hills however, the proposed turbines would appear in the context of existing wind farm development, seen alongside the operational Fallago Rig. The proposed turbines would appear large in scale compared to the operational turbines, and in relation to the underlying landscape when seen at close range. The Proposed Development would be experienced by recreational receptors travelling at slow speeds along these routes, and as such would be visible for an extended period of time.The following viewpoints are located along these routes, and are representative of views likely to be experienced:

- Viewpoint 1: Twin Law Cairns, represents views experienced by recreational receptors at this local summit and along the Southern Upland Way. A **high** magnitude of change was identified from this viewpoint.
- Viewpoint 2: Nun Rig, represents sequential views experienced by recreational receptors walking along the Southern Upland Way. A **high** magnitude of change was identified from this viewpoint.
- Viewpoint 4: Watch Water Reservoir, represents sequential views experienced by recreational receptors along the Southern Upland Way. A **medium** magnitude of change was identified from this viewpoint.
- Viewpoint 5: Minor road near Wrunk Law, represents road users and the local community on the minor road which crosses the Lammermuir Hills, north-east of the Site. A **medium** magnitude of change was identified from this viewpoint.

As shown in **Figure A4.3.1** there would be widespread theoretical visibility of steady red lights on the hubs of up to seven turbines within around 5 km of the Site. This is considered in reaching the conclusions set out below. The position of lighting is indicated in the wirelines in **Figure TA4.3.4** (Viewpoint 1), **Figure TA4.3.5** (Viewpoint 2), **Figure TA4.3.7** (Viewpoint 4) and **Figure TA4.3.8** (Viewpoint 5) which are all on Core Paths and Rights of Way within 5 km.

Overall, the magnitude of visual change will be **high**, and taking account of the **medium-high** sensitivity of the receptor, will result in a **Major and Significant** visual effect for Core Paths and Rights of Way within 5 km.

Potential for Effects under Future Baseline Scenarios (Cumulative Assessment):

Under Scenario 1, **Figure 4.1.11** indicates there would be widespread theoretical visibility of the consented Crystal Rig Phase 4 Wind Farm (11 turbines, 200 m tip height), seen over the upland landform of Spartleton Edge (468 m AOD), at distances of between approximately 3 km and 14 km. It would be seen in combination with the existing wind farm schemes within the Crystal Rig / Aikengall Group, although with a larger tip height. As the above changes would not notably alter the existing baseline, effects under Scenario 1 would be the same as the primary assessment (**Major and Significant**).

Under Scenario 2, **Figure 4.1.12** indicates widespread theoretical visibility of the proposed Newlands Hill Wind Farm (at Scoping stage), which would extend the influence of wind farm development north-east in views from along the network of paths, narrowing the gap between the existing turbines of Fallago Rig and the Crystal Rig / Aikengall Group. While the

Core Paths and Rights of Way within 5 km
introduction of the Newlands Hill turbines would intensify the influence of wind farm development in outward views, it would not notably alter the existing baseline in relation to the Proposed Development. The Proposed Development would appear large-scale in comparison to the turbines at Fallago Rig and Newlands Hill. Therefore, the effect will be the same as in the primary assessment (**Major and Significant**).

Designated Landscapes

4.131 This section describes the implications of the Proposed Development for designated landscapes in the study area. Designated landscapes are shown on **Figure 4.1.6** and with the ZTV overlain on **Figure 4.1.7**.

4.132 Based on the analysis in **Table 4.3:** the designated landscapes listed below have been considered in the assessment and observations are drawn from the assessment sections for landscape and visual effects, including cumulative effects:

- Eildon and Leaderfoot NSA;
- Lammermuir Hills SLA (Scottish Borders Council);
- Lammermuir Moorland SLA (East Lothian Council);
- Whiteadder SLA (East Lothian Council); and
- Mellerstain Garden and Designed Landscape.

Table 4.60: Eildon and Leaderfoot NSA

Eildon and Leaderfoot NSA	
Representative viewpoint	VP 21
Description: The Eildon and Leaderfoot NSA is located east of the confluence of the Ettrick and Teviot rivers, approximately 18.5 km to the south of the nearest turbine within the Proposed Development. The NSA spans the Tweed Valley, from the village of Newtown St Boswells in the south to Black Hill in the north and encompassing the town of Melrose. There are three LCTs within the NSA (102: Upland Fringe with Prominent Hills, 118: Settled Upland Fringe Valley, and 120: Lowland Valley with Farmland). The Special Qualities of the NSA that may potentially be affected by the Proposed Development include the following: ■ *"Spectacular view from the hills summits;* ■ *Strongly united landscape pattern of lively rhythm and colour;* ■ *The Tweed, an iconic river of international renown;* ■ *A richly wooded sense of great variety;* ■ *Harmonious and varied prospect from unequalled viewpoints;* ■ *The historic crossings of Leaderfoot;* ■ *Scott's View;* and ■ *The Wallace Statue"*[52] There are no operational wind farms within the NSA. However as illustrated by the cumulative ZTV in **Figure 4.1.10**, there is widespread theoretical visibility of operational wind farms from areas of elevation, particularly from the Eildon Hills.	

[52] Scottish Natural Heritage (2010). The special qualities of the National Scenic Areas. SNH Commissioned Report No. 374

Eildon and Leaderfoot NSA
Overall, and taking into account the value assigned to the relevant LCTs within the NSA, the landscape value is considered to be **high**.
Potential for the Proposed Development to affect Special Qualities of the NSA: The Proposed Development would be located approximately 18.5 km south of the NSA, so any effects would be indirect and relate to wider effects on the perceptual qualities of the landscape. The ZTV indicates intermittent theoretical visibility of up to 15 turbines across the elevated northern facing slopes within the NSA, including from Black Hill (314 m AOD), Eildon Hill North (404 m AOD), Eildon Mid Hill (422 m AOD), Bemersyde Hill (299 m AOD) and from Bowden Moor (248 m AOD). Within the NSA the following indirect effects on landscape character have been identified: ■ Upland Fringe with Prominent Hills (LCT 102): Theoretical visibility of up to 15 turbines indicated from north-facing slopes, including the Eildon Hills, as well as near Selkirk. Reduces to limited or no theoretical visibility within the arable lowlands in the south – a **Minor** and **Not Significant** effect is identified. ■ Settled Valley Upland Fringe (LCT 118): Very limited and distant theoretical visibility of up to 15 turbines from upper slopes of Tweed Valley – scoped out of the assessment as no potential for significant effects identified (see **Table 4.2**:. ■ Lowland Valley with Farmland (LCT 120): Very limited and distant theoretical visibility of up to 15 turbines from north-facing slopes near Newton St Boswells – not considered in the assessment as no potential for significant effects identified. Assessment viewpoint within the NSA comprises: ■ Viewpoint 21: Eildon North Hill, from the summit of the Eildon Hills, which represents long distance views northwards from a popular recreational summit, and for which a low magnitude of change was identified, resulting in a **Minor** and **Not Significant** visual effect. The introduction of the Proposed Development has the potential to affect some of the special qualities of the NSA, notably the "*harmonious and varied prospect from unequalled viewpoints"* as identified by the NatureScot LCA. Seen from long ranging distances of between 18 km and 24 km, the Proposed Development would be seen along the southern ridge of the Lammermuir Hills within the influence of existing wind farms and would not form new prominent features in views. The Proposed Development would not affect the *"spectacular views from the hills summits"*. As illustrated by the ZTV in **Figure 4.1.7**, there would be no theoretical visibility from within the Tweed Valley and across Melrose. As such, the Proposed Development would not affect the setting of the historic Leaderfoot Crossings, and there is no theoretical visibility from the Wallace Statue. A **Negligible** and **Not Significant** effect is identified for these features. From Scott's View, the ZTV indicates theoretical visibility of up to 15 turbines in northerly views. However, the primary outlook is to the west towards the Eildon Hills, and not towards the Proposed Development. A **Minor** and **Not Significant** effect is identified. Given that the Proposed Development would not adversely affect any of the special qualities of the NSA, it is concluded that there would be **no significant effect on the integrity** of the NSA.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Consented and proposed schemes would alter and intensify the influence of wind farms to the distant north of the Eildon and Leaderfoot NSA. In this future baseline scenario, the Proposed Development would continue to intensify the influence of wind farms, in certain northerly views from elevated locations within the NSA. This is not judged to result in materially different effects than under the current baseline.

Table 4.61: Lammermuir Hills SLA

Lammermuir Hills SLA	
Representative viewpoint	VP 1, VP 2, VP 4, VP 5, VP 9, VP 11
Description: The Lammermuir Hills SLA within the Scottish Borders covers "*open moorland of the main Lammermuir Plateau, from Lauderdale in the west to Abbey St Bathans in the east. It includes the Lammermuir plateau, the upper Whiteadder,*	

Lammermuir Hills SLA

Dirrington Laws and the fringes of upper Lauderdale." It encompasses the Site, and adjoins the Lammermuir Moorland SLA in the north. Several LCTs are partially covered by this SLA, including LCT 90, LCT 91, LCT 105, and LCT 115.

The SLA designation statement does not include a list of special qualities but describes the SLA thus (emphasis added): "*This large area of open upland is representative of the moorlands and the valleys of the northern Borders. It is the largest area of moorland in the Borders, with **remote, wild qualities, despite its managed nature**.*

*Within the plateau there is little visual diversity aside from the mottled patchwork resulting from muirburn, and views often present a seemingly endless succession of moorland ridges. **The extent and uninterrupted openness of the landscape lend scenic value**.*

*To the south **the moorland extends on the striking conical Dirrington Laws, unique landscape features**. The upper Whiteadder is a broad relatively shallow upland valley, which serves as a visual foreground to the Lammermuir Plateau.*

*Although the area is very sparsely settled, the wider Lammermuir plateau forms an important part of the setting of settlements in East Lothian. **Visually, the edges of the hills are important to the Leader and Whiteadder valleys**"*[53]

There are a number of existing wind farms visible across the SLA, including the Crystal Rig / Aikengall Group located at the north-eastern edge of the SLA, Dun Law Group at the western edge, and Fallago Rig in the centre.

Overall, and taking into account the value assigned to the relevant LCTs within the SLA, the landscape value is considered to be **medium**.

Potential for the Proposed Development to affect the Special Qualities of the SLA:

The Proposed Development would be located in the centre of the SLA, so effects would be direct.

The ZTV in **Figure 4.1.2** indicates widespread theoretical visibility across the centre of the SLA, as well as Site facing slopes to the east and west. There is more limited theoretical visibility indicated within the valleys, where intervening landform screens views towards the Proposed Development. The ZTV in **Figure 4.1.2** indicates theoretical visibility across the LCTs within the SLA, and the following direct effects on landscape character have been identified:

- Dissected Moorland Plateau (LCT 90): Widespread theoretical visibility of up to 15 turbines indicated across the centre of the plateau in the immediate vicinity of the Proposed Development. More limited theoretical visibility to the edges of the plateau and within valleys – a **Major and Significant** effect is identified within the Site, and a **Moderate and Significant** effect within 5 km of the Site.
- Plateau Grassland – Borders (LCT 91): theoretical visibility of up to 15 turbines concentrated across elevated eastern facing slopes, namely Collie Law, Dun Law, Sell Moor, with more limited visibility elsewhere – a **Minor** and **Not Significant** effect is identified (east of the Leader Water Valley).
- Upland Fringe Moorland with Hills (LCT 105): Theoretical visibility of up to 15 turbines across north-facing moorland slopes and from areas of isolated elevation such as Dirrington Great Law – a **Moderate and Significant** effect is identified within around 7 km, reducing to **Minor** and **Not Significant** elsewhere.
- Upland Valley with Mixed Farmland (LCT 115): Intermittent theoretical visibility of up to 15 turbines across west facing slopes and elevated hilltops – a **Minor** and **Not Significant** effect is identified.
- Wooded Upland Fringe Valley (LCT 119): Limited and distant theoretical visibility from Site-facing slopes near Abbey St Bathans – not considered in the assessment as no potential for significant effects identified.

Assessment viewpoints within the SLA include:

- Viewpoint 1: Twin Law Cairns, represents views experienced by recreational receptors at this local summit and along the Southern Upland Way. A **high** magnitude of change was identified from this viewpoint.
- Viewpoint 2: Nun Rig, represents sequential views experienced by recreational receptors walking along the Southern Upland Way. A **high** magnitude of change was identified from this viewpoint.

[53] Scottish Borders Council (2012) Supplementary Planning Guidance: Local Landscape Designations.

Lammermuir Hills SLA
■ Viewpoint 4: Watch Water Reservoir, represents sequential views experienced by recreational receptors along the Southern Upland Way. A **medium** magnitude of change was identified from this viewpoint. ■ Viewpoint 9: Dirrington Great Law, represents recreational receptors at this local summit. A **medium** magnitude of change was identified. ■ Viewpoint 11: Edgarhope Wood, represent views experienced by recreational receptors on the Southern Upland Way. A **medium** magnitude of change was identified from this viewpoint. The introduction of the Proposed Development would have the potential to affect some of the identified qualities of the SLA, notably the *"extent and uninterrupted openness of the landscape* [which] *lend scenic value."* Seen from close and mid-range views of between approximately <1 km and 10 km, the Proposed Development would be seen high above the rolling moorland plateau, and would form prominent and notable new features in views. The ZTV in **Figure 4.1.2** indicates there to be widespread theoretical visibility from the rounded hilltops, with more limited visibility within incised burns and valleys. Steady red lighting on the hubs of some of the turbines will be apparent at night, and will extend the effects across a dark landscape into hours of darkness, albeit there are unlikely to be many people present in this area at night. In close-range views the Proposed Development would affect the perception of the open and extensive landscape with its "*remote, wild qualities"*, although this effect would be lessened due to the existing influence of the Fallago Rig Wind Farm immediately adjacent. As such, a **Moderate and Significant** effect is identified for this quality. From further distance to the east and west within the SLA this effect is lessened. This is due to the existing wind farm clusters to the north-east and west which would be more visible. The Proposed Development would not be seen in close range views, and would not form new focal features in views across the plateau. Along the plateau hill edges, which provide an important setting to both the Leader and Whiteadder valleys, the ZTV indicates limited and intermittent theoretical visibility, which is contained to upper Site-facing slopes within the valleys. A **Minor** and **Not Significant** effect is identified for this quality. The Proposed Development would be seen along the horizon of the northern plateau edge, which forms an important backdrop and setting to settlements to the north within East Lothian. However, the ZTV indicates limited theoretical visibility at distances within 15 km north of the Proposed Development, and the proposed turbines would not form prominent features along the horizon. A **Minor** and **Not Significant** effect is identified. Overall, and noting that there would be significant effects upon some qualities for which the area is designated, it is predicted that there would be **no significant effects on the overall integrity** of the SLA.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Within the immediate context, the key cumulative changes relates to the proposed Newlands Hill Wind Farm, which would introduce large scale wind turbines into the neighbouring Lammermuir Moorland SLA to the north. In this context, the Proposed Development would continue to intensify the influence of wind farm development in views north, seen alongside the existing Fallago Rig and in front of Newlands Hill. This is not judged to result in materially different effects than under the current baseline.

Table 4.62: Lammermuir Moorland SLA

Lammermuir Moorland SLA	
Representative viewpoint	VP 3
Description: The Lammermuir Moorland SLA within East Lothian covers "*open, upland moorland in the heart of the Lammermuir Hills, located generally to the south of East Lothian and set back from Southern Uplands fault"*. It lies immediately north of the Site, and adjoins the Lammermuir Hills SLA to the south. There is one LCT contained within the SLA, LCT 266: Plateau Moorland – Lothians. The Special Qualities of the SLA that may potentially be affected by the Proposed Development include the following:	

Lammermuir Moorland SLA

- "*Expansive, open moor with rounded hills leading to summits of similar height, typical of the uplands in the wider region;*
- *The Lammermuirs form the backdrop to East Lothian, an often dark band with a strong horizon line contrasting with the lighter, more varied colours of the fertile farmland below and the open sky above;*
- *The skyline, especially where unbroken, characterises East Lothian;*
- *Strong aesthetic appeal of the moorland, with a patchwork pattern of muirburn producing a mosaic of texture and muted colour;*
- *Qualities of both peacefulness and wildness in particular deriving from the areas openness to the elements, remoteness, and limited built development, roads or plantation forestry, as well as limited light pollution;*
- *Views are often of the moorland itself, giving the feeling of being 'in the moor' but open out from higher ground to give panoramic vistas. Meikle Says Law is a good viewpoint looking east, west, and particularly north"*[54]

There are no operational wind farms within the SLA, although a number of existing wind farms are visible in the adjacent Lamemrmuir Hills SLA, including the Crystal Rig / Aikengall Group, the Dun Law Group and Fallago Rig in the centre.

Overall, and taking into account the value assigned to the relevant LCT within the SLA, the landscape value is considered to be **medium-high**.

Potential for the Proposed Development to affect the Special Qualities of the SLA:

The Proposed Development would be located along the southern edge of the SLA, within the adjacent Lammermuir Hills SLA, so effects would be indirect, and relate to wider effects on the perceptual qualities of the landscape.

The ZTV in **Figure 4.1.7** indicates widespread theoretical visibility across the southern extents of the SLA, as well as Site facing slopes to the east and west. There is more limited theoretical visibility indicated within the valleys, where intervening landform screens views towards the Proposed Development. Within the SLA, the following effects on landscape character have been identified:

- Plateau Moorland – Lothians (LCT 266): Widespread theoretical visibility of up to 15 turbines across the moorland plateau in proximity to the Proposed Development, and higher slopes to the east near Spartleton Edge, and for which a **Moderate and Significant** effect was identified within around 5 km, reducing to **Minor** and **Not Significant** between 5 km and 10 km.

Assessment viewpoints within the SLA include:

- Viewpoint 3: Minor road near Wanside Rig junction, represents road users and the local community from the junction between the B6355 and the minor road which crosses the Lammermuir Hills to the north of the Site, and for which a **medium** magnitude of change was identified.

The introduction of the Proposed Development would have the potential to affects some of the identified qualities of the SLA, notably the "*expansive and open moor with rounded hills"* and *"qualities of both peacefulness and wildness* [derived from the] *remoteness and limited built development"*. The Proposed Development would introduce large-scale vertical elements into the undulating moorland landscape, seen at close range from the southern edge of the plateau within the SLA between Meikle Says Law, Wanside Rig, and Penshiel Hill. The ZTV indicates theoretical visibility of up to 15 turbines within 5 km from this elevated plateau, and in close range views the proposed turbines would appear high above the underlying landform. The Proposed Development would not affect the "*panoramic vistas"* including from Meikle Says Law with its identified long-distance views looking east, west, and "*particularly north*" away from the Proposed Development. A **Minor** and **Not Significant** effect is identified. From further distances to the north, the Proposed Development would be seen along the horizon of the Lammermuir Hills, which "*form the backdrop to East Lothian, an often dark band with a strong horizon line"*. However, the ZTV indicates limited and intermittent theoretical visibility from distances within 15 km north of the Proposed Development, and the proposed turbines would not form prominent features along the horizon. A **Minor** and **Not Significant** effect is identified for this quality. Steady red lighting on the hubs of some of the turbines will be apparent at night, and will

[54] East Lothian Council (2018) Local Development Plan. Supplementary Planning Guidance: Special Landscape Areas.

Lammermuir Moorland SLA
extend the effects across a dark landscape into hours of darkness, albeit there are unlikely to be many people present in this area at night. Existing wind farms, including Fallago Rig and the Lammermuir wind farm clusters, are already visible from parts of the SLA, and there will be no direct effects on key landscape features, therefore it is considered that the Proposed Development will **not significantly affect the integrity** of the SLA by adversely impacting on the qualities for which it was designated.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Within the immediate context, the key cumulative changes relate to the proposed Newlands Hill Wind Farm, which would bring wind turbines into the eastern edge of the Lammermuir Moorland SLA. In this context, the Proposed Development would continue to intensify the influence of wind farm development in views south from the SLA, seen beyond the Newlands Hill Wind Farm and Fallago Rig. This is not judged to result in materially different effects than under the current baseline, although the potential for significant visual effects in some views is recognised.

Table 4.63: Whiteadder SLA

Whiteadder SLA (East Lothian Council)	
Representative viewpoint	VP 6
Description: The Whiteadder SLA within East Lothian is "*set in a wide valley of interwoven ridges of rounded hills, with improved pasture in the lower lying parts, rising to tussocky heather moorland dappled with waving grasses towards the tops."* It is situated to the north-east of the Site within the Whiteadder Valley, and adjoins the Lammermuir Moorland SLA in the west. It is set within the larger LCT 266: Plateau Moorland – Lothians. The Special Qualities of the SLA that may potentially be affected by the Proposed Development include the following: ■ "*Peaceful remote atmosphere due to the enclosure of the surrounding hills, which prevent views out to the lowland area;* ■ *Very limited light pollution within the area.. adding to the remote feel of the area;* ■ *Spartleton… gives good views with moorland in the foreground;* ■ *Whiteadder reservoir is important in views from within the area and from the surrounding hills;* ■ *Expansive, open moor with rounded hills leading to summits of similar height, typical of the uplands in the wider region"* There are a number of existing wind farms visible from the SLA, including the Crystal Rig / Aikengall Group immediately to the east, seen behind Spartleton Edge, and Fallago Rig seen to the west within the Lammermuir Hills SLA. Overall, and taking into account the value assigned to the relevant LCTs within the SLA, the landscape value is considered to be **medium-high**.	
Potential for the Proposed Development to affect the Special Qualities of the SLA: The Proposed Development would be located approximately 3 km north-east of the SLA, so any effects would be indirect and relate to wider effects on the perceptual qualities of the landscape. The ZTV in **Figure 4.1.7** indicates widespread theoretical visibility across the centre of the SLA, as well as Site facing slopes to the east and west between approximately 3 km and 6 km from the nearest turbine. There is more limited theoretical visibility indicated within the valleys, where intervening landform screens views towards the Proposed Development. Within the SLA, the following direct effects on landscape character have been identified: ■ Plateau Moorland – Lothians (LCT 266): Widespread theoretical visibility of up to 15 turbines across the moorland plateau in proximity to the Proposed Development, and higher slopes to the east near Spartleton Edge, and for which a **Moderate and Significant** effect was identified within around 5 km, reducing to **Minor** and **Not Significant** between 5 km and 10 km.	

Whiteadder SLA (East Lothian Council)
Assessment viewpoints within the SLA include: ■ Viewpoint 6: Spartleton Summit, represents views experienced by recreational receptors at this local summit and along the network of core paths in the area. A **medium** magnitude of change was identified from this viewpoint. The introduction of the Proposed Development would have the potential to affects some of the identified qualities of the SLA, notably the *"peaceful remote atmosphere due to the enclosure of the surrounding hills".* However, as illustrated by the ZTV in **Figure 4.1.7** there would be limited theoretical visibility of up to 8 turbine blades from within the valley and around the reservoir, with views towards the Proposed Development partially screened by intervening landform. A **Minor** and **Not Significant** effect is identified. From elevated hilltops across the SLA, notably Spartleton Edge and Priestlaw Hill, there would be theoretical visibility of up to 15 turbines blades and hubs, although views from these locations also have extensive visibility towards existing wind farm developments to the north-east and south-west. Views from Spartleton are noted as a special quality within the SLA, giving wide views over the moorlands. As indicated in the ZTV and the photomontage in **Figure 4.2.6**, there is theoretical visibility of up to 15 turbines from this location. A **Moderate and Significant** effect is anticipated. The Proposed Development will not detract from the "*expansive, open moor with rounded hills leading to summits of similar height, typical of the uplands in the wider region*", and Whiteadder valley will remain intimate and remote. Steady red lighting on the hubs of some of the turbines will be apparent at night, and will extend the effects across a dark landscape into hours of darkness. Existing wind farms, including Fallago Rig and the Crystal Rig / Aikengall Group are already visible from parts of the SLA, and there will be no direct effects on key landscape features. Therefore it is considered that the Proposed Development will **not significantly affect the integrity** of the SLA by adversely impacting on the qualities for which it was designated.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): Within the immediate context, the key cumulative changes relate to the consented Crystal Rig Phase 4 and the proposed Newlands Hill Wind Farm. The consented Crystal Rig Phase 4 would be visible above Spartleton Edge to the east, seen behind the landform and largely screened. Seen in successive views with the Proposed Development from limited areas of elevation along the western edge of the reservoir, the above changes would not notably alter the existing baseline. The proposed Newlands Hill (at Scoping stage) would be located around 1 km to the west of the SLA and would likely be visible in close views, particularly from elevated summits including Spartleton Hill. Given that existing wind farms are characteristic in views from the SLA, the above changes would not notably alter the existing baseline. The Proposed Development would continue to intensify the influence of wind farm development in views west, but is not judged to result in materially different effects than under the current baseline, although the potential for significant visual effects in some views along the western edge of the SLA is recognised.

Figure 4.1: Mellerstain Garden and Designed Landscape

Mellerstein Garden and Designed Landscape	
Representative viewpoint	n/a
Description: The Mellerstain Garden and Designed Landscape is associated with the Mellerstain Estate, and is an example of 18th century formal landscape design. It is located approximately 14 km south of the Site, within LCT 109: Lowland Margin with Hills. As noted by Historic Environment Scotland (HES), the gardens and areas of archaeological sites within the designed landscape are concentrated towards the south. Designed views are oriented south, with "*long-ranging views… encouraged over the undulations of the ground by means of the long axial vistas and the ridge-top Hundy Mundy folly at the southern edge of the designed landscape. Today, much of this design survives and there are impressive views over the fertile countryside of the Tweed lowlands, most notably towards the Cheviots to the south.*"[55] The principal outlook of the house with iconic façade and overlooking the designed garden and lake, is oriented to the south-east away from the Site. Policy woodland is located to the north-west and north-east of the house, and provides a contrast to the surrounding farmland.	

[55] Historic Environment Scotland (2011) Inventory Garden & Designed Landscape: Mellerstain, GDL00280. <http://portal.historicenvironment.scot/designation/GDL00280>

Mellerstein Garden and Designed Landscape
Overall, and taking into account the value assigned to the relevant LCT, the landscape value is considered to be **medium-high**.
Potential for the Proposed Development to affect the Special Qualities of the GDL: The Proposed Development will be located 14 km south of the GDL, so any effects will be indirect. The ZTV in **Figure 4.1.7** indicates widespread theoretical visibility across the north and east of the GDL, across areas of policy woodland and along the A6089. There is no theoretical visibility indicated across the centre, south, or west of the GDL. Within the GDL, the following indirect effects on landscape character were identified: ■ Lowland Margin with Hills (LCT 109): Theoretical visibility from distant elevated and north-facing slopes near Earlston and Hume – not considered in the assessment as no potential for significant effects identified. There are no representative viewpoints in proximity to the GDL, the closest being Viewpoint 21: Eildon North Hill approximately 9 km to the south-west, and from which a **low** magnitude of change was identified. The introduction of the Proposed Development will have the potential to affects some of the identified qualities of the GDL, including the "*long ranging* and *impressive views"* from the estate. However, principal and designed views are oriented away from the Proposed Development, and there is no theoretical visibility indicated from the south of the GDL or from Mellerstain House. Therefore, it is unlikely that that the introduction of the Proposed Development will have an adverse impact on the setting of the house, or on the integrity of the designed landscape or its key features. It is considered that the Proposed Development **will not significantly affect the integrity** of the GDL by adversely impacting on the landscape qualities for which it was designated.
Potential for Effects under Future Baseline Scenarios (Cumulative Assessment): No consented or proposed wind farms would be visible. As such, materially different effects than under the current baseline are not anticipated.

Combined Cumulative Effects

4.133 With regard to combined cumulative effects, GLVIA3 states that this should include "*all past, present and future proposals together with the new project*". GLVIA3 (paragraph 7.13) acknowledges that "*assessing combined effects involving a range of different proposals at different stages in the planning process can be very complex*". The following assessment of combined effects provides a high-level appraisal of all built and unbuilt wind farms, including the Proposed Development.

4.134 As shown on **Figure 4.1.9**, wind farms within the study area are focused within areas of open and elevated plateau moorland and plateau grassland which run east-west across the central part of the study area, within the Moorfoot Hills and Lammermuir Hills. There are also wind farms associated with areas of coastal moorland in the east of the study area. When looking at the broad pattern of wind farm development, the combined effects of all operational, consented and proposed wind farms will notably influence landscape character across these areas.

4.135 The main groups in the Lammermuir Hills are the Crystal Rig / Aikengall Group in the east and the Dun Law Group in the west, with these groups mainly being formed of operational wind farms which are part of the current baseline. Crystal Rig – Phase 4 (consented) would form a southerly extension to the Crystal Rig / Aikengall Group when built. The Proposed Development and Fallago Rig would form a smaller group in the central part of the Lammermuirs. Newlands Hill (at Scoping) would form a separate wind farm to the north of the Dunside / Fallago Rig Group.

4.136 In combination with operational, consented and proposed wind farms, the Proposed Development will intensify the effects of wind turbines on the Dissected Plateau Moorland LCT and adjacent Plateau Moorland – Lothians LCT. At a landscape scale, the Proposed Development will read as part of a small group with Fallago Rig Wind Farm. There will be a separation between the Dunside/Fallago Group and Newlands Hill Wind Farm, the latter appearing as a standalone scheme. There will be a larger separation with the Crystal Rig/Aikengall Group and the Dun Law Group. Large areas in the Lammermuir Hills will remain free of wind farm development, although theoretical intervisibility with wind farms will occur across most areas as shown in **Figure 4.1.2**. Overall, combined cumulative landscape effects are not judged to be significant when considered against the existing baseline, as there are a small number of consented and proposed schemes (ie the consented Crystal Rig – Phase 4 and the

Scoping stage Newlands Hill) and mostly these will extend existing wind farms or wind farm groups, when considered at the landscape scale. Combined effects which take other Scoping stage wind farms into account are considered in **Appendix 4.4**.

4.137 In terms of combined cumulative effects on designated landscapes, the Lammermuir Hills SLA is directly affected by existing and consented wind farms within the Dun Law Group, Crystal Rig/Aikengall Group and Fallago Rig. The Proposed Development will directly affect the central part of the SLA, albeit in an area which is already influenced by Fallago Rig. The Lammermuir Moorland SLA and Whiteadder SLA will also be affected by these groups as well as the standalone Newlands Hill Wind Farm which is located within the former. The Proposed Development will contribute to an intensification of wind farms within these locally designated landscapes. In practice, it is unlikely that all proposed wind farms will progress.

4.138 It is generally from the more elevated and open plateau moorland locations where larger numbers of operational, consented and proposed wind farms will be visible, that combined cumulative visual effects are likely to be significant. Where visible, the Proposed Development will often be seen in combination with Fallago Rig, and separate from other groups at the eastern and western ends of the Lammermuirs. In most views the scale difference between these wind farms will be apparent. The Proposed Development and Fallago Rig will appear separate from Newlands Hill in most views, with the exception of close views from Twin Law to the south of the Site and more distant views from East Lothian to the north, where the Proposed Development and Fallago Rig will be seen behind Newlands Hill. The contribution of the Proposed Development to this total effect will be as reported in the LVIA.

4.139 As noted in paragraph 4.52, the Scottish Borders Capacity Study identifies the Dissected Plateau Moorland: Lammermuir Plateau LCT (the 'host' LCT) as being of medium landscape sensitivity, with low capacity for very large (100 m+ to tip height) turbines. The study outlines that the character area is reaching capacity, but also notes *"… there is still capacity for limited development within small areas around Fallago Rig taking advantage of areas with lower intervisibility and topographical containment for further windfarm developments of large or very large sized turbines*"[56]. Given the broad and expansive scale of the landscape, some of which is already characterised by wind farm development, it is considered that the Proposed Development would not result in capacity being reached or exceeded.

Decommissioning Phase

4.140 At the end of the Proposed Development's operational life (approximately 35 years), a decision will be made as to whether to refurbish, remove, or replace the generating plant installed. If refurbishment or replacement were to be chosen, then the relevant consent applications will be made. If a decision were to be taken to decommission the Proposed Development, this will entail the removal of all the turbine components, transformers, the switching station and associated buildings. Access tracks and underground cables would be left in place and foundations removed to a depth of 0.5 m below ground level to avoid environmental effects from removal. A Decommissioning Plan will set out environmental protection measures and restoration principles which will be implemented. This Decommissioning Plan would be agreed with SBC.

Mitigation and Monitoring

Mitigation and Monitoring During Construction

4.141 Measures such as arrangements for vegetation and soil removal, storage and replacement and the restoration of disturbed areas after construction will be detailed in a Construction Environmental Management Plan (CEMP) produced following consent and prior to construction, which will also include reference to a Construction Method Statement.

Mitigation and Monitoring During Operation

4.142 Measures to reduce effects upon the landscape resource and visual amenity were predominantly achieved through the design of the Proposed Development (embedded mitigation). The appearance of the Proposed Development in views from nearby properties, settlements and hills formed a key consideration in the design development. The approach to the design is detailed further in **Chapter 2**.

4.143 A reduced lighting scheme has been designed and agreed with the Civil Aviation Authority (CAA) as set out in Appendix 11.1 Wind Farm Aviation Lighting and Mitigation Report. Appendix 11.1 details proposed mitigation measures associated with

[56] Scottish Borders Council (2016) Update of Wind Energy Landscape Capacity and Cumulative Impact Study

aviation lighting. The lights will be controlled such that when the meteorological visibility is greater than 5 km from the points of measurement on the turbine hubs, the lights will be reduced to 200 cd (10% of normal power). The required design of the lights is also such that the brightness reduces in intensity when seen from above and below the horizontal, resulting in a reduction in brightness being experienced for the lower-lying and closer receptors.

Summary

4.144 It should be noted that wind turbines, as tall man-made structures, introduce features which are likely to bring about landscape and visual changes. Measures to reduce effects upon the landscape resource and upon views and visual amenity are predominantly achieved through the design of the Proposed Development, as described in **Chapter 2** and the supporting Design and Access Statement. As all mitigation for landscape and visual effects is embedded within the final design for the Proposed Development, all effects summarised in this section are effectively residual effects as no additional mitigation is proposed.

Landscape Effects

4.145 Significant effects on the landscape of the Site will be experienced during the construction period. During operation, significant effects on landscape character are predicted to extend across the Site and the surrounding landscapes within approximately 7 km of the nearest turbine. There will be **Major and Significant** effects on the 'host' LCT (LCT 90 - Dissected Plateau Moorland) within the Site, through the introduction of up to 15 turbines and ancillary infrastructure including tracks into the open moorland landscape. The effect on LCT 90 will reduce to **Moderate and Significant** outside of the Site, where effects will be indirect. **Moderate and Significant** effects will also extend to the adjacent LCTs 105 - Upland Fringe Moorland with Hills and 266 – Plateau Moorland – Lothians.

Visual Effects

4.146 Significant effects have been identified at nine of the 24 representative viewpoints, up to a distance of around 9 km from the Site. Significant effects will be experienced by recreational receptors on the Southern Upland Way (Viewpoints 1, 2, 4 and 11) including at Twin Law Cairns which overlooks the Site. Significant effects will also be experienced by users of the local road network, travelling on the minor roads (Viewpoints 3 and 5) and the B6456 (Viewpoint 8). Recreational receptors at local hill summits will also experience significant effects, including Spartleton Hill (Viewpoint 6) and Dirrington Great Law (Viewpoint 9). Users of Core Paths and Rights of Way within around 5 of the Site will also experience a significant effect. No significant effects will be experienced from settlements, including the closest settlements of Westruther and Longformacus. Effects on residential visual amenity are discussed further below.

Effects on Designated Landscapes

4.147 The Proposed Development will result in direct and indirect changes to the landscape character of the Lammermuir Hills SLA, due to the location of up to 15 turbines and associated tracks and infrastructure within the designated area. This is recorded as a **Major and Significant** effect on landscape character within the Site, and a **Moderate and Significant** effect on landscape character outside of the Site, up to a distance of around 7 km. Significant visual effects are also recorded within the SLA, including from locations along the Southern Upland Way and at the summit of Dirrington Great Law. The Proposed Development would affect some of the special qualities of the SLA, most notably its "*remote, wild qualities, despite its managed nature*" and "*The extent and uninterrupted openness of the landscape lend scenic value*". However, effects on these qualities are not anticipated to affect the integrity of the designated landscape. This is due in part to the local area being affected by wind farm development at Fallago Rig. The Proposed Development will not affect the integrity of any other locally designated landscapes within the study area.

4.148 At a distance of over 18 km away, the Proposed Development would not adversely affect any of the special qualities of the Eildon and Leaderfoot NSA, or its integrity.

Additional Cumulative Effects

4.149 The cumulative assessment focuses on the additional cumulative change which may result from the introduction of the Proposed Development into the present or future baseline (i.e. in addition to other development which may or may not be present). The Proposed Development is located within the central part of the Lammermuir Hills which contains the operational

Fallago Rig Wind Farm, such that the character of the local landscape is influenced by this type of development. Other groups of operational and planned wind farms lie at the eastern and western ends of the Lammermuir Hills, and are separate both spatially and visually.

4.150 The consented Crystal Rig Phase 4 scheme which is considered in Scenario 1 will form part of an existing group, resulting in minimal changes to the future baseline when considered against the existing baseline. Thus, effects in Scenario 1 are typically found to be the same as in the primary assessment.

4.151 Cumulative landscape effects are most likely to arise when the Proposed Development is considered in addition to Newlands Hill, which is at Scoping stage and located around 4 km to the north of the Proposed Development. This relationship is considered in Scenario 2. In most views the effect will remain as in the primary assessment, except where Newlands Hill is in front of the Proposed Development and they occupy the same field of view. In this scenario the additional effect of the Proposed Development is typically lessened.

Summary of Effects on Residential Visual Amenity

4.152 The Residential Visual Amenity Assessment (RVAA) in **Appendix 4.2** describes the change in views likely to be experienced by residents of properties up to 3 km from the nearest turbine of the Proposed Development. The Landscape Institute's RVAA Technical Guidance Note 2/19 (LI TGN 2/19) explains that: "*the purpose of RVAA is to provide an informed, well-reasoned answer to the question: "is the effect of the development on Residential Visual Amenity of such nature and / or magnitude that it potentially affects 'living conditions' or 'Residential Amenity'?*" (LI TGN 2/19, Page 5, Para. 2.1). Although receptors at several properties assessed in the RVAA have the potential to experience a significant visual effect, none of these will be subject to effects on residential visual amenity which are judged to breach the Residential Visual Amenity Threshold described in LI TGN 2/19. As set out in the RVAA, the reason for this is typically a combination of factors including distance from the nearest visible turbine, screening of views of turbines by the intervening landform, screening or filtering of views of turbines by vegetation, and / or the availability of open views in other directions from the property, its curtilage / gardens or access track.

Summary of Effects relating to Aviation Lighting

4.153 As noted above, a reduced lighting scheme has been designed and agreed with the CAA as set out in Appendix 11.1 Wind Farm Aviation Lighting and Mitigation Report. The Aviation Lighting Assessment in **Appendix 4.3** considers the operational landscape and visual effects resulting from the proposed aviation lighting scheme.

4.154 No significant effects on landscape character or designated landscapes are anticipated as a result of aviation lighting.

4.155 When visible, aviation lighting on the turbine nacelles would tend to be seen in closer proximity views from the minor roads which cross the Lammermuir moorland plateau to the east of the Site, or from the rolling farmland to the south, beyond forested horizons. In terms of visual effects, significant visual effects are predicted for one assessment viewpoint, but under the 2,000 cd situation only. In the 200 cd situation, which is more likely to be experienced by people at this viewpoint, no significant effects are predicted.

Tabulated Summary of Effects

4.156 Table 4.64: below sets out the summary of predicted effects on landscape and visual receptors within the study area. Significant effects are highlighted in **bold**.

Table 4.64: Summary of predicted significant effects of the Proposed Development

Predicted Significant Effect	Sensitivity of Receptor	Magnitude of Change	Residual Effect (Primary Assessment)	Residual Effect (Scenario 1)	Residual Effect (Scenario 1)
Construction Effects					
The Site	Medium	High	**Major and Significant**	N/A	N/A
Operational Effects on Landscape Character					

Predicted Significant Effect	Sensitivity of Receptor	Magnitude of Change	Residual Effect (Primary Assessment)	Residual Effect (Scenario 1)	Residual Effect (Scenario 1)
The Site	Medium	High	**Major and Significant**	N/A	N/A
LCT 90 - Dissected Plateau Moorland	Medium	High (within the Site) Medium (within 5 km)	**Major and Significant (within the Site)** **Moderate and Significant (within 5 km)**	**Major and Significant (within the Site)** **Moderate and Significant (within 5 km)**	**Major and Significant (within the Site)** **Moderate and Significant (within 5 km)**
LCT 91 - Plateau Grassland - Borders	Medium	Low	**Minor and Not Significant** (east of Leader Water Valley) **Negligible and Not Significant** elsewhere.	**Minor and Not Significant** (east of Leader Water Valley) **Negligible and Not Significant** elsewhere.	**Minor and Not Significant** (east of Leader Water Valley) **Negligible and Not Significant** elsewhere.
LCT 99 - Rolling Farmland – Borders	Medium-high	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**
LCT 100 - Plateau Farmland – Borders	Medium-high	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**
LCT 102 - Upland Fringe with Prominent Hills	Medium	Medium	**Minor and Not Significant** (within 10 km) **Negligible and Not Significant** (beyond 10 km)	**Minor and Not Significant** (within 10 km) **Negligible and Not Significant** (beyond 10 km)	**Minor and Not Significant** (within 10 km) **Negligible and Not Significant** (beyond 10 km)
LCT 103 - Undulating Upland Fringe	Medium	Low	**Minor and Not Significant** (within 15 km) **Negligible and Not Significant** (beyond 15 km)	**Minor and Not Significant** (within 15 km) **Negligible and Not Significant** (beyond 15 km)	**Minor and Not Significant** (within 15 km) **Negligible and Not Significant** (beyond 15 km)
LCT 105 - Upland Fringe Moorland with Hills	Medium	Medium (within 7 km) Low (beyond 7 km)	**Moderate and Significant (within 7 km)** **Minor and Not Significant** (beyond 7 km)	**Moderate and Significant (within 7 km)** **Minor and Not Significant** (beyond 7 km)	**Moderate and Significant (within 7 km)** **Minor and Not Significant** (beyond 7 km)
LCT 108 - Lowland Margin	Medium	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**

Predicted Significant Effect	Sensitivity of Receptor	Magnitude of Change	Residual Effect (Primary Assessment)	Residual Effect (Scenario 1)	Residual Effect (Scenario 1)
LCT 117 - Pastoral Upland Fringe Valley	Medium	Barely perceptible	**Negligible and Not Significant**	**Negligible and Not Significant**	**Negligible and Not Significant**
LCT 115 - Upland Valley with Mixed Farmland	Medium-high	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**
LCT 266 – Plateau Moorland – Lothians	Medium	Medium	**Moderate and Significant (within 5 km)** **Minor and Not Significant** (5 km – 10 km)	**Moderate and Significant (within 5 km)** **Minor and Not Significant** (5 km – 10 km)	**Moderate and Significant (within 5 km)** **Minor and Not Significant** (5 km – 10 km)
LCT 275 - Lowland Farmed Plain – Lothians	Medium-high	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**
Operational Effects on Views and Visual Amenity					
Viewpoint 1: Twin Law Cairns, Southern Upland Way	High	High	**Major and Significant**	**Major and Significant**	**Major and Significant**
Viewpoint 2: Nun Rig, Southern Upland Way	High	High	**Major and significant**	**Major and significant**	**Major and significant**
Viewpoint 3: Minor road near Wanside Rig junction	Medium	High	**Moderate and Significant**	**Moderate and Significant**	**Major and Significant**
Viewpoint 4: Watch Water Reservoir, Southern Upland Way	High	Medium	**Moderate and Significant**	**Moderate and Significant**	**Moderate and Significant**
Viewpoint 5: Minor road near Wrunk Law	Medium-high	Medium	**Moderate and Significant**	**Moderate and Significant**	**Moderate and Significant**
Viewpoint 6: Spartleton Hill	High	Medium	**Moderate and Significant**	**Moderate and Significant**	**Moderate and Significant**
Viewpoint 7: B6456 Westruther	Medium	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**
Viewpoint 8: B6456 near Bedshiel	Medium	Medium	**Moderate and Significant**	**Moderate and Significant**	**Moderate and Significant**

Predicted Significant Effect	Sensitivity of Receptor	Magnitude of Change	Residual Effect (Primary Assessment)	Residual Effect (Scenario 1)	Residual Effect (Scenario 1)
Viewpoint 9: Dirrington Great Law	Medium-high	Medium-high	**Moderate and Significant**	**Moderate and Significant**	**Moderate and Significant**
Viewpoint 10: Lammer Law	High	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**
Viewpoint 11: Edgarhope Wood, Southern Upland Way	High	Medium	**Moderate and Significant**	**Moderate and Significant**	**Moderate and Significant**
Viewpoint 12: Minor road near Hen Law	Medium	Medium	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**
Viewpoint 13: A6015 near Greenlaw	Medium	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**
Viewpoint 14: B6362 above Lauder	Medium	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**
Viewpoint 15: Traprain Law	High	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Negligible and Not Significant**
Viewpoint 16: Park Lane, Haddington	Medium	Barely perceptible	**Negligible and Not Significant**	**Negligible and Not Significant**	**Negligible and Not Significant**
Viewpoint 17: Barney Hill, Garleton Hills	Medium-high	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Negligible and Not Significant**
Viewpoint 18: A6112 near Fawcett Wood	Medium-low	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**
Viewpoint 19: A697 near Coldstream	Medium-low	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**
Viewpoint 20: B6371 near Tranent	Medium-high	Barely perceptible	**Negligible and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**
Viewpoint 21: Eildon North Hill	High	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**
Viewpoint 22: North Berwick Law	High	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**

Predicted Significant Effect	Sensitivity of Receptor	Magnitude of Change	Residual Effect (Primary Assessment)	Residual Effect (Scenario 1)	Residual Effect (Scenario 1)
Viewpoint 23: A198 near Dirleton	Medium	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**
Viewpoint 24: Torfichen Hill	High	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**
Operational Effects on Settlements					
Westruther	High	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**
Longformacus	High	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**
Lauder	High	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**
Gordon	Medium-high	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**
Nether Blainslie	Medium-high	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**
Operational Effects on Routes					
Minor road via Longformacus	Medium	Medium	**Moderate and Significant**	**Moderate and Significant**	**Moderate and Significant**
B6355	Medium	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**
B6456	Medium	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**
A697	Medium	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**
A6089	Medium	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**
A198	Medium-high	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**
Southern Upland Way	High	High (within 5 km) Medium (5 km to 10 km) Low (beyond 10 km)	**Major and Significant (within 5 km)** **Minor and Not Significant** (5 km to 10 km) **Negligible and Not Significant** (beyond 10 km)	**Major and Significant (within 5 km)** **Minor and Not Significant** (5 km to 10 km)	**Major and Significant (within 5 km)** **Minor and Not Significant** (5 km to 10 km)

Predicted Significant Effect	Sensitivity of Receptor	Magnitude of Change	Residual Effect (Primary Assessment)	Residual Effect (Scenario 1)	Residual Effect (Scenario 1)
John Muir Way	High	Low	**Minor and Not Significant**	**Minor and Not Significant**	**Minor and Not Significant**
Core Paths and Rights of Way within 5 km	Medium-high	High	**Major and Significant**	**Major and Significant**	**Major and Significant**

Glossary/Abbreviations

Table 4.65: Glossary and abbreviations

Abbreviation	Term in Full
AOD	Above Ordnance Datum
EIA	Environmental Impact Assessment
GDL	Garden and Designed Landscape
GLVIA3	Guidelines for Landscape and Visual Impact Assessment Third Edition
LCA	Landscape Character Assessment
LCT	Landscape Character Type
LVIA	Landscape and Visual Impact Assessment
NCN	National Cycle Network
NSA	National Scenic Area
SLA	Special Landscape Area
SNH	Scottish Natural Heritage (now NatureScot)
ZTV	Zone of Theoretical Visibility