

Environmental Impact Assessment

Sandy Knowe Wind Farm Extension

Chapter 5: Landscape and Visual Impact Assessment

ERG UK Holding Ltd



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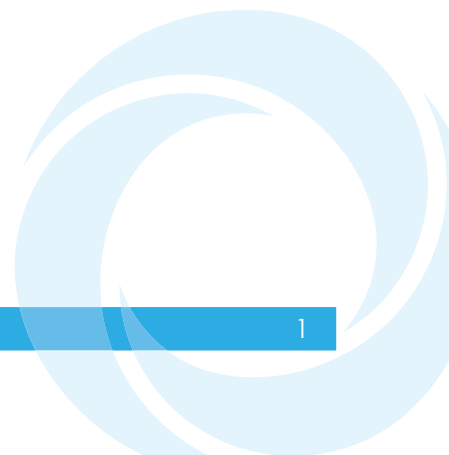
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Glossary of Terms

Term	Definition
The Applicant	ERG UK Holding Limited
The Agent	Atmos Consulting Limited
Environmental Impact Assessment	Environmental Impact Assessment (EIA) is a means of carrying out, in a systematic way, an assessment of the likely significant environmental effects from a development
Environmental Impact Assessment Regulations	The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (EIA Regulations)
Environmental Impact Assessment Report	A document reporting the findings of the EIA and produced in accordance with the EIA Regulations
The Proposed Development	The Sandy Knowe Wind Farm Extension
The Proposed Development Footprint	The area within which the Proposed Development will be located
The Proposed Development Site	The full application boundary including Sandy Knowe Wind Farm and Sandy Knowe Wind Farm Extension

List of Abbreviations

Abbreviation	Description
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
ECU	Energy Consents Unit
GLVIA	Guidelines for Landscape and Visual Impact Assessment
LVIA	Landscape and Visual Impact Assessment
CLVIA	Cumulative Landscape and Visual Impact Assessment
DCG	Dumfries and Galloway Council
EAC	East Ayrshire Council
SLC	South Lanarkshire Council
LCT	Landscape Character Type
ZTV	Zone of Theoretical Visibility
SUW	Southern Upland Way
SLA	Special Landscape Areas



5 Landscape and Visual Impact Assessment

5.1 Introduction

This chapter considers the potential effects of the Proposed Development on the landscape and visual resources of the Proposed Development Site and the surrounding study area, during construction and operation.

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 impact assessment (LVIA) are therefore separate, although linked, processes.

The assessment methodology for the LVIA has been developed in accordance with the Guidelines for Landscape and Visual Impact Assessment (3rd Edition, 2013) (GLVIA3), and is detailed in Appendix 5-1: LVIA and Visualisation Methodology.

This chapter deals with landscape and visual effects separately, including an assessment of cumulative landscape and visual effects in each relevant section. The baseline for the primary LVIA, against which the effects of the Proposed Development are assessed, includes wind farms which are operational and under construction only. As such, Sandy Knowe Wind Farm (under construction) is included in the primary LVIA baseline and shown in the accompanying photomontage visualisations.

The cumulative landscape and visual impact assessment (CLVIA) includes consideration of all wind farms within the study area that are operational, under construction, consented and at application stage.

A large number of wind farm developments at different stages of development (representing different levels of certainty) are located within the study area. The potential future baseline has been split into two possible scenarios for considering cumulative effects:

- Scenario 1 – wind farms that are operational, under construction and consented (for which there is a higher level of certainty); and
- Scenario 2 – Scenario 1 plus projects at application stage and wind farms at appeal (for which there is a lower level of certainty).

The LVIA was undertaken by chartered Landscape Architects (Chartered Members of the Landscape Institute (CMLI)) at LUC with extensive experience in the assessment of landscape and visual effects of wind energy developments.

This chapter should be read in conjunction with the following chapters:

- Chapter 3: Description of Development;
- Chapter 6: Ecology;
- Chapter 10: Cultural Heritage; and
- Chapter 12: Socio-Economics, Tourism and Recreation.

5.1 Scope of the Assessment

5.1.1 Effects Assessed in Full

The following effects have been assessed in full, as identified through the EIA Scoping/consultation process:

- Direct effects on the physical landscape of the Proposed Development Site during construction and operation;
- Direct and indirect effects on landscape character within 15km during construction and operation;
- Indirect effects within 20km which could be of relevance to the reasons for designation as well as the overall integrity of designated landscapes, as required by Scottish Planning Policy (SPP), with reference to key characteristics/special qualities;
- Direct effects on visual receptors at representative viewpoints within 40km during construction and operation;
- Direct effects on visual receptors at settlements (within 15km) and routes (within 10km for transport routes and 15km for important recreational routes) during construction and operation;
- Cumulative landscape and visual effects (including combined, successive and sequential visual effects) during operation across a 40km study area (but focusing on effects within 15km where significant cumulative interactions are more likely to occur); and
- Effects on residential visual amenity for properties within 2km of the Proposed Development. Further information is provided in Appendix 5-2.

5.1.2 Effects Scoped Out

On the basis of the desk based and field survey work undertaken, the professional judgement of the landscape team, experience from other relevant projects, policy guidance or standards, and feedback received from consultees, the following topic areas have been 'scoped out' of detailed assessment, as proposed in the Scoping Report:

- Effects on receptors beyond 40km from the proposed turbines, where it is judged that significant landscape and visual effects are unlikely to occur;
- Effects on receptors at settlements beyond 15km and along transport routes beyond 10km from the proposed turbines (15km for important recreational routes) where it is judged that significant visual effects are unlikely to occur;
- Effects on landscape character beyond a 15km radius from the proposed turbines, where it is judged that potential significant effects on landscape character are unlikely to occur;
- Effects on designated landscapes beyond a 20km radius from the proposed turbines, from where it is judged that potential significant effects on key characteristics and/or special qualities, or recognised views from these areas, are judged unlikely to occur;
- Effects on landscape and visual receptors that have minimal or no theoretical visibility (as predicted by the zone of theoretical visibility (ZTV), minimal or no actual visibility or where, in the case of landscape receptors, the key characteristics indicate that significant effects are unlikely;

- Cumulative effects in relation to turbines under 50m to blade tip height, single turbines beyond 5km from the proposed turbines and wind farms at design/scoping stage (except where otherwise stated);
- Effects on landscape character beyond the Proposed Development Site during the construction phase, visual effects during the construction phase, and cumulative landscape and visual effects during the construction phase. These effects are transient in nature and unlikely to exceed operational phase effects, when the proposed turbines are in place; and
- An assessment of effects during the decommissioning phase, as these are likely to be similar to construction phase effects.

5.2 Methodology and Approach

5.2.1 Legislation and Guidance

The following guidance, legislation and information sources were considered in carrying out this assessment. For planning policy refer to Chapter 4.

Legislation and Assessment Guidance

- The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017;
- Landscape Institute and the Institute of Environmental Management and Assessment (2013) Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3);
- Landscape Institute (2019) Technical Guidance Note 06/19, Visual Representation of Development Proposals;
- Landscape Institute (2019) Technical Guidance Note 2/19, Residential Visual Amenity Assessment (RVAA);
- SNH (2018) A Handbook on Environmental Impact Assessment, Appendix 2: Landscape and Visual Impact Assessment, Version 5;
- SNH (2017) Visual Representation of Wind Farms, Version 2.2; and
- SNH (2012) Assessing the Cumulative Impact of Onshore Wind Energy Developments.

Design and Locational Guidance

- SNH (2019) Good Practice During Windfarm Construction, 4th Edition;
- SNH (2017) Siting and Designing Wind Farms in the Landscape, Version 3a;
- SNH (2015) Constructed Tracks in the Scottish Uplands, 2nd Edition;
- SNH (2015) Spatial Planning for Onshore Wind Turbines – Natural Heritage Considerations;
- SNH (updated 2009) Policy Statement No 02/02: Strategic Locational Guidance for Onshore Windfarms in Respect of the National Heritage;
- Scottish Government (2017) Scottish Energy Strategy: The Future of Energy in Scotland;
- Scottish Government (2021) Energy Strategy: Position Statement;

- Scottish Government (2017) Onshore Wind Policy Statement and Policy Statement Refresh (2021) Consultative Draft;
- Scottish Government (2014) Scottish Planning Policy; and
- Scottish Government (2003) Planning Advice Note (PAN) 68: Design Statements.

5.2.2 Consultation

In undertaking the assessment, consideration was given to the scoping responses and other consultation as undertaken as detailed in Table 5-1.

In addition to Scoping, consultation was carried out in January 2022 regarding the selection of viewpoints, methodology and cumulative developments for inclusion in the CLVIA. Consultees included Dumfries and Galloway Council (DGC), South Lanarkshire Council (SLC), East Ayrshire Council (EAC) and NatureScot.

A number of the viewpoints proposed were informed by the viewpoints used in the LVIA for Sandy Knowe Wind Farm. However, given the location of the Proposed Development, largely to the west of this scheme, there are further viewpoints used from which to assess visual effects from other locations. These viewpoints were determined in accordance with NatureScot and GLVIA3 good practice and guidance and provide representational viewpoint coverage across the LVIA study area.

Table 5-1: Consultation Responses

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken/Outcome
ECU (October 2021)	Scoping Opinion	The final list of viewpoints and visualisations should be agreed following discussion between the company, Dumfries & Galloway Council, Historic Environment Scotland and NatureScot.	Post scoping consultation, undertaken in January 2022, was carried out to agree the final viewpoint list. All visualisations were prepared in accordance with NatureScot standards. Note, no feedback was provided by DGC.
Nature Scot (July 2021)	Scoping Opinion	Consider an additional viewpoint in the region of Cloud Hill on the Southern Upland Way (approx. 274603, 605255).	Included as Viewpoint 16.
ScotWays (July 2021)	Scoping Opinion	Right of Way (RoW) DN2... is close to the application site.... We anticipate that the applicant will take into account both recreational amenity and landscape impacts in developing their proposals for the site.	Sequential effects from RoW DN2 were considered.
NatureScot	Post scoping viewpoint	No additional	N/A

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken/Outcome
(January 2022)	and cumulative consultation	comments	
DGC (January 2022)	Post scoping viewpoint and cumulative consultation	No response	N/A
EAC (January 2022)	Post scoping viewpoint and cumulative consultation	Potential effects on recreational receptors at Lochside Hotel, New Cumnock and on setting of Scheduled cairns on Blackside Hill.	Lochside Hotel added to viewpoint assessment (Viewpoint 17). Blackside Hill included in Cultural Heritage Assessment as no significant landscape or visual effects predicted. This approach was agreed with EAC.
SLC (January 2022)	Post scoping viewpoint and cumulative consultation	Confirmation of receipt. No issues raised.	N/A
DCG (May 2022)	Scoping Opinion	<p>Photomontage Viewpoint Requests</p> <ul style="list-style-type: none"> • St Connel's Chapel, GR: 72 4 15 0. • Sanquhar : suggest either the Sanquhar Academy or preferably the overbridge at the railway station. • SUW, Whing Head. <p>Wireline Requests</p> <ul style="list-style-type: none"> • Todholes Hill, and approach up the Fingland access road • Core path, Auchentaggart Moor, GR: 81 0 09 1 • SUW Coupland Knowe 	<p>Photomontage Viewpoint Requests</p> <ul style="list-style-type: none"> • A photomontage has been provided from St Connel's Church (see Viewpoint 5). • At photomontage has been provided from Sanquhar, outside the church near the academy (see Viewpoint 8) as the elevated position offers greater visibility. • A photomontage has been provided from the SUW, near Cloud Hill (see Viewpoint 16). The view from Whing Head will be comparable. <p>Wireline Requests</p> <ul style="list-style-type: none"> • Wirelines have been provided from Todholes Hill (VP18); Core path, Auchentaggart Moor (VP19) and SUW Coupland Knowe (VP20). Due to timing of request,

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken/Outcome
			it was not possible to provide baseline photography.
DCG (May 2022)	Gatecheck response	DCG have provided comments in the scoping response with regard to viewpoint requests. The Dumfries and Galloway Wind Farm Landscape Capacity Study (DGWLCS should be taken into account in the LVIA.	See above with regard to viewpoint requests. The DGWLCS has been taken into account in the LVIA. The NatureScot national landscape character assessment (2019) provides a more up to date reference point for key characteristics of the landscape, which are listed in this report. The DGWLCS is used alongside this.

5.2.3 Assessment Methodology

This assessment is carried out in accordance with the principles contained within the Landscape Institute Guidelines for Landscape and Visual Impact Assessment (GLVIA3) and is described in detail in Appendix 5-1.

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

- The landscape of the study area was analysed, and landscape receptors identified;
- The area from which the Proposed Development may be theoretically visible was established through creation of a ZTV covering a distance of up to 40km from the proposed turbines, refer to Figures 5-1-2a and b for blade tip ZTV;
- 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 NatureScot, DGC and other relevant consultees;
- 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).

Study Area

The study area for the assessment is defined as 40km radius from the outermost turbines of the Proposed Development, as recommended in NatureScot guidance for turbines of up to 150m to blade tip (SNH, 2017). The study area is shown on Figure 5-1-1.

To consider cumulative effects of the Proposed Development in relation to other schemes in the wider area, wind farms within 40km of the Proposed Development are

included for the purposes of modelling and assessment, as agreed with NatureScot, DGC, EAC and SLC. A review of patterns of wind farm development across the study area is also provided following guidance from NatureScot (SNH, 2012) (see Figure 5-1-6a).

A ZTV map was generated, illustrating areas from where the Proposed Development may be visible in the study area. The ZTV is based on bare earth topography and therefore does not take account of potential screening by vegetation or buildings. The ZTV is used as a tool for understanding where significant visual effects may occur. Receptors which are outside the ZTV will not have visibility of the Proposed Development and are not considered further in this LVIA. The ZTV to blade tip height (up to 149.9m) is shown in Figure 5-1-2a, and the ZTV to hub height (up to 94m) is shown in Figure 5-1-3b. Large A1 format tip and hub height ZTVs were also prepared (refer to Figure 5-1-2b and Figure 5-1-2b).

Desk Based Research and Data Sources

The following data sources informed the assessment:

Designated Areas

- Dumfries and Galloway Council (2018) Dumfries and Galloway Proposed Local Development Plan: Regional Scenic Areas Technical Paper;
- East Ayrshire Council (2015) Local Development Plan Background Paper: Sensitive Landscape Areas; and
- Ironside Farrar (2010) South Lanarkshire: Validating Local Landscape Designations.

Landscape Character Assessments

- SNH (2019 web based resource) Scottish Landscape Character Types Map and Descriptions;
- Dumfries and Galloway Council (2017) Dumfries and Galloway Wind Farm Landscape Capacity Study; and
- Ironside Farrar (2010) South Lanarkshire Landscape Character Assessment.

Mapping

- Ordnance Survey (OS) Maps;
- Landranger 1:50,000 Scale;
- Explorer 1:25,000 Scale;
- Online map search engines; and
- British Geological Society, 1979. Geological Map, Solid, North.

Modelling

- OS Terrain 50 height data;
- Raster Data at 1:50,000 (to show surface details such as roads, forest and settlement detail equivalent to the 1:50,000 scale Landranger maps); and
- Raster Data at 1:250,000 (to provide a more general location map).

Cumulative Assessment

- Data from other wind farm applications; and
- DGC, EAC, SLC, Scottish Borders Council, South Ayrshire Council and the ECU planning portals.

Field Survey

The following field surveys were carried out to inform the assessment:

- Visits to the Proposed Development Site;
- Visits to viewpoints and designated landscapes; and
- Extensive travel around the study area to consider potential effects on landscape character and on experiences of views seen from specific viewpoints, settlements and routes.

Field survey work was carried out during several visits under differing weather conditions between March 2021 and December 2021 and records were made in the form of field notes and photographs.

5.2.4 Assessing Significance

The significance of the potential effects of the Proposed Development was determined by professional consideration of the sensitivity of the receptor and the magnitude of the potential effect.

Sensitivity

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 are recorded as **high, medium or low**. Detailed information about the approach to assessment of sensitivity is provided in Appendix 5-1.

Magnitude

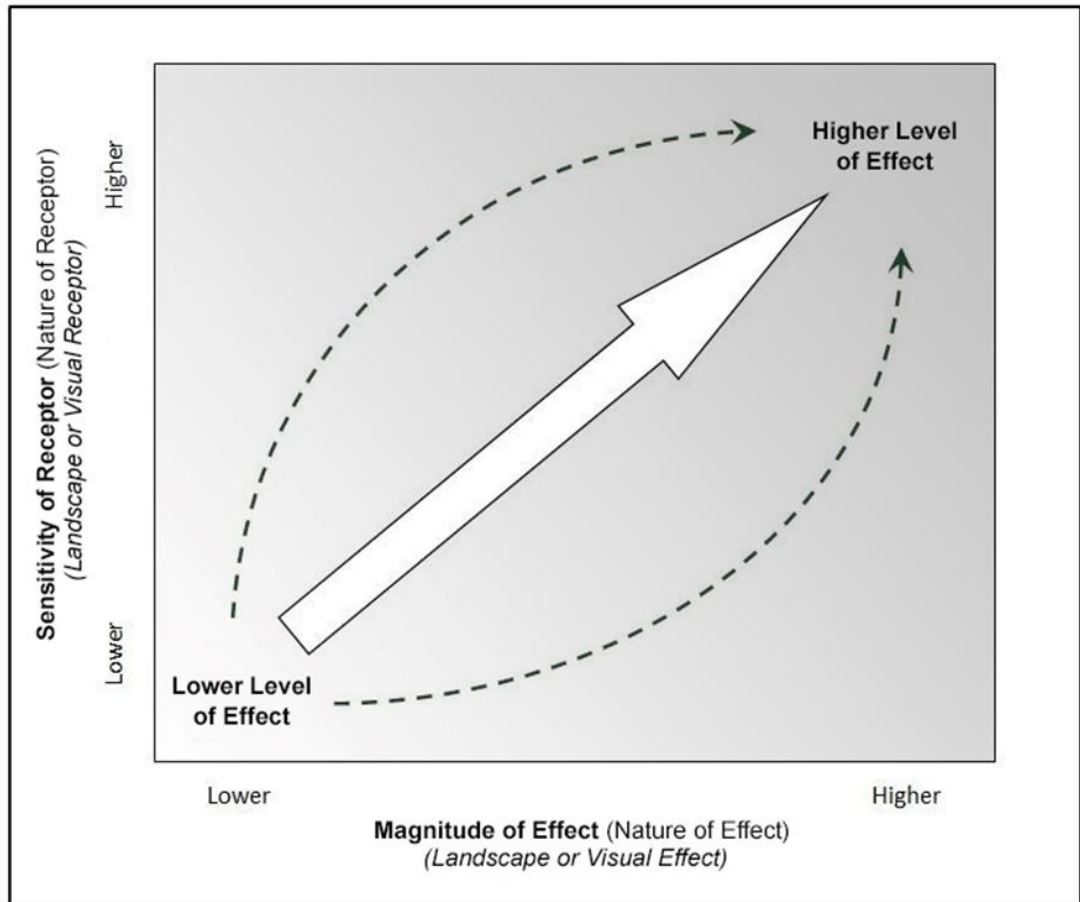
Judgements regarding the magnitude of landscape or visual change are recorded as **high, medium or low** and combine an assessment of the scale and geographical extent of the landscape or visual effect, its duration and reversibility. Detailed information about the approach to assessment of magnitude is provided in Appendix 5-1.

Significance

The predicted significance of the effect was determined through a standard method of assessment based on professional judgement, considering both sensitivity and magnitude of change as detailed in Plate 1. **Major and moderate** effects are considered significant in the context of the EIA Regulations.

Judgements are made on a case-by-case basis. Appendix 5-1 provides full details of the criteria considered in judging the identified aspects of sensitivity (susceptibility and value) and magnitude of change (scale, geographical extent, duration and reversibility), and the grades used to describe each. In terms of the direction of effects (positive or adverse) there is a wide spectrum of opinion with regard to wind energy development. Taking a precautionary stance, effects are assumed to be adverse, unless stated otherwise.

Plate 1 Judging Levels of Effect



5.2.5 Assessment Assumptions / Limitations

No substantial information gaps were identified during the preparation of baseline information or in undertaking the assessment, and 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 impacts on landscape, views and visual amenity.

At the time of taking photography, not all of the Sandy Knowe Wind Farm turbines were constructed. These were modelled into all the baseline views (based on the microsituated turbine layout as provided by the Applicant), with the rotor blades facing the viewer.

5.3 Landscape Baseline

5.3.1 Introduction

This section presents an overview of the landscape baseline covering current landscape character (including constituent landscape elements), landscape condition and any designations attached to the landscape.

5.3.2 The Proposed Development Site and Context

The Proposed Development Site is located on low lying hills to the north of the Southern Uplands hill range, which extend across southern Scotland from Dumfries and Galloway to the Scottish Borders. The Proposed Development Site is on the northern fringes of the Southern Uplands, to the south of the undulating upland hills and plateaux area that extends towards the Clyde Valley to the north. The Proposed Development Site is contained within Dumfries and Galloway, on the hills south of the A76 to the south-west of Kirkconnel.

The Proposed Development Site is focused to the south of the Nithsdale on the lower-lying northern slopes of hills which include High Cairn (553m Above Ordnance Datum (AOD)) and White Hill (418m AOD). The surrounding area is largely characterised by moorland landcover with blocks of coniferous forest cover. Sandy Knowe Wind Farm is located to the immediate south-east of the Proposed Development Footprint, which strongly influences the landscape character. At the time of assessment (spring/summer 2022) this wind farm is currently under construction, with turbines partially erected.

Site access (two access points) will be provided along the existing site access to Sandy Knowe Wind Farm, which links into the A76 to the north of the Proposed Development Footprint. Further details is provided in Chapter 3 – Description of Development.

A number of small upland tributaries pass through the Proposed Development Site, including the Polhote Burn within the western part of the site. Tributaries across the Proposed Development Site flow north into the River Nith, which flows south-east and joins the Solway Firth to the south of Dumfries.

The closest settlement is Kirkconnel, located approximately 2.5km to the north-east of the proposed turbines. The larger settlement of New Cumnock is located approximately 6km to the north-west of the proposed turbines. There are a number of individual properties located within close proximity, located off the A76 to the north.

Core paths within 5km of the Proposed Development Site are shown on Figure 5-1-2. This includes a Core Path along the footpath to Libry Moor, to the east of the Proposed Development Site.

5.3.3 The Study Area

The study area extends to a 40km radius from the outer turbines in all directions, and includes land within Dumfries and Galloway, South Lanarkshire, Scottish Borders, East Ayrshire and South Ayrshire Council areas. The study area extends from Strathaven to the north, the edge of the Scottish Borders Council area to the east, New Galloway in the south and Ayr in the west.

The study area includes urban areas; remoter uplands including the Lowther Hills and Carsphairn Forest; and settled valleys. The landscape across the study area is varied,

with land uses including agriculture and uses associated with moorland. There are extensive areas of coniferous forestry in the study area, particularly across the Southern Uplands. The highest hills in the study area include Corserine (814m AOD), Meikle Millyea (746m AOD), Tinto Hill (707 m AOD), Blackcraig Hill (700m AOD), Green Lowther (732 m AOD) and Cairnsmore of Carsphairn (797 m AOD).

Settlements within the study area are generally located within valleys, typically where watercourses or roads meet. There are larger settlements on the edge of the study area along coastal settlements in Ayrshire to the west.

The area of Dumfries and Galloway, South Lanarkshire and East Ayrshire around the Proposed Development Site has a long history of mineral extraction, including the extraction of coal. In recent years, this extraction has seen many changes, from small scale mineral working and extensive deep mining, through to more modern open cast working methods. This type of extraction, and its associated landscape restoration, has the potential to result in substantial short and long-term effects on the landscape, which are evident throughout parts of the study area.

5.3.4 Other Wind Farm Development

Existing Wind Farm Development

There are a number of operational wind farms and wind farms under construction in the study area which form part of the primary LVIA baseline, as listed in Table 5-2 and shown in Figure 5-1-6a. This includes Sandy Knowe Wind farm, to the immediate south-east of the Proposed Development Site (24 turbines at 125m to tip height).

Identification of Developments to be included in the CLVIA

In accordance with NatureScot guidance (SNH, 2012), the scope for the assessment of cumulative landscape and visual effects included wind farms and wind farm proposals within an initial 60km radius search area from the Proposed Development, to identify the distribution of wind energy development in the wider area.

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 with other operational, consented and Proposed Developments (i.e. developments with a valid application or awaiting determination following appeal/public inquiry). In this instance it was not considered necessary to include other developments located beyond the 40km study area, because of the limited possibility for significant cumulative interactions, which are more likely to be focused to wind farms within the more immediate landscape context. Proposals that have not yet progressed beyond scoping stage are not considered within the assessment.

Wind energy developments located within the 40km radius study area, which may potentially give rise to significant cumulative effects, and therefore included in the CLVIA, have been selected as follows:

- Single wind turbines ≤ 50 m blade tip height within a 5km radius of the proposed outermost wind turbines; and
- Wind farms (e.g. clusters of 2 or more wind turbines) with wind turbines of ≥ 50 m blade tip height within a 40km radius of the proposed outermost wind turbines.

Consented wind farms and wind farms currently in the planning system are considered as part of the assessment of potential future cumulative effects and included in the CLVIA.

A cut-off date of 1st February 2022 was applied for the inclusion of developments within the cumulative assessment and the final list was agreed with statutory consultees (see Table 5-1 for details). These developments are listed in Table 5-2 and 5-3 below and shown on Figure 5-1-6a.

Table 5-2: Operational and Under Construction Wind Farms Considered in The Primary LVIA Baseline

Distance (km) ¹	Name	Status	Blade Tip Height (m)	Number of Turbines
Operational				
3.3	Hare Hill Extension	Operational	91	35
3.6	Hare Hill	Operational	62.5	20
3.6	Sanquhar	Operational	126.5	9
6.3	Whiteside Hill	Operational	121.2	10
7.9	Sunnyside Farm	Operational	62	2
9.5	Afton	Operational	120	25
11.7	Brockloch Rig I	Operational	54	36
11.8	Twentyshilling Hill	Under Construction	140	9
12.7	Brockloch Rig	Operational	120	30
13.0	Windy Rig	Operational	125	12
17.0	Wether Hill	Operational	93	14
21.2	Andershaw	Operational	140	11
21.4	Galawhistle	Operational	121	22
22.0	Middle Muir	Operational	149.9	15
22.3	Hagshaw Hill	Operational	57	26
22.4	Hagshaw Hill Extension	Operational	80	20
22.8	Bankend Rig	Operational	76	11
23.4	Nutberry	Operational	125	6
25.0	Douglas West	Operational	149.9	13
25.6	Dungavel	Operational	102	13
25.9	Kype Muir Extension	Under Construction	220	15
27.8	Dersalloch	Operational	125	23
27.9	Blackcraig Hill	Operational	110	23

¹ This is an approximate distance taken between the approximate centre point of each wind farm

28.0	Kype Muir	Operational	132	26
28.1	Auchrobert	Operational	132	12
31.2	Clyde	Operational	125	152
31.4	Ladehead Farm	Operational	74	3
31.6	Calder Water	Operational	145	14
32.8	West Browncastle	Operational	129.9	12
33.3	Dalswinton	Operational	121	15
35.0	Harestanes	Operational	121.5	68
35.0	Whitelee Extension Phase II	Operational	140	39
36.0	Clyde Extension	Operational	142	54
36.1	Whitelee Extension Phase I	Operational	140	36
36.7	Minnycap	Operational	125	10
37.2	Whitelee	Operational	110	140
37.3	Lochhead Farm	Operational	100	3
37.6	Myres Hill	Operational	87	2
39.5	Ardoch and Over Enoch	Operational	110	5
Under Construction				
0.8	Sandy Knowe	Under Construction	125	24
14.8	Kennoxhead	Under Construction	180	19
14.9	South Kyle	Under Construction	149.5	50
22.8	Cumberhead Tip Increase	Under Construction	180	14
24.62	Dalquhandy	Under Construction	149.9	10

Table 5-3: Consented and Proposed Wind Farms

Distance (km) ²	Name	Status	Blade Tip Height (m)	Number of turbines
Consented (included in Scenario 1 and 2 cumulative baseline)				
4.4	Magheuchan Rig (Sanquhar Six)	Consented	130	6
5.3	Glenmuckloch	Consented	149.9	8
5.9	Lethans	Consented	220	22
9.8	Pencloe	Consented	149.9	19
12.8	Enoch Hill	Consented	149.9	16

² This is an approximate distance taken between the approximate centre point of each wind farm

Distance (km) ²	Name	Status	Blade Tip Height (m)	Number of turbines
14.3	Brockloch Rig III	Consented	177.5	20
15.4	Kennoxhead Extension	Consented	180	8
17.2	Overhill	Consented, Variation Submitted	149.9 (180)	10
17.8	North Kyle	Consented	149.9	49
18.1	Benbrack Variation	Consented	149.9	18
21.4	Troston Loch	Consented	149.9	14
21.7	Polquhairn	Consented, Variation Submitted	100 (145)	9
22.0	Hagshaw Hill Repowering	Consented	200	14
20.8	Hare Craig	Consented	230	8
22.9	Glenshimmeroch	Consented, Variation Submitted	149.9 (180)	10
23.1	Bankend Rig Extension	Consented, Variation Submitted	126.5 (250)	3
24.0	Douglas West Extension	Consented	200	13
24.2	Cumberhead West	Consented	200	21
25.7	Knockshinnoch	Consented	126.5	2
26.8	Fell	Consented	200	9
27.2	Knockman Hill	Consented	81	5
27.7	Crookedstane	Consented	126.5	4
28.9	Lion Hill	Consented	126.5	4
29.5	Birkhill	Consented	99.9	2
29.8	Broken Cross Surface Mine	Consented	55.7	2
30.4	Priestgill	Consented	200	7
30.8	Broken Cross	Consented	149.9	10
35.6	Sneddon Law	Consented	130	15
38.0	Kittymuir Farm	Consented	77	2
39.4	Whitelaw Brae	Consented, Variation Submitted	133.5 (136.5)	14
Application Submitted (included in Scenario 2 cumulative baseline)				
8.0	Lethans Extension	Application Submitted	251	10
8.8	Euchanhead	Application Submitted	230	21
12.1	Kennoxhead Extension II	Application Submitted	220	8
14.0	Greenburn Wind Park	Application Submitted	149.9	16
16.3	Cornharrow	Application Submitted	180	7

Distance (km) ²	Name	Status	Blade Tip Height (m)	Number of turbines
24.5	Mill Rig	Application Submitted	250	6
30.3	Daer	Application Submitted	180	17
33.4	Knockronal	Application Submitted	200	9
37.4	Harestanes South	Application Submitted	200	8
39.1	Craigimoddie	Application Submitted	200	14
Appeal/Public Enquiry (included in Scenario 2 cumulative baseline)				
7.7	Sanquhar II	Appeal/Public Inquiry	200	44
18.21	Shepherd's Rig	Appeal/Public Inquiry	149.9	17
20.3	Auchenlongford	Appeal/Public Inquiry	149.5	5
23.22	Margree	Appeal/Public Inquiry	200	9
31.3	Garcrogo	Appeal/Public Inquiry	200	9
35.4	Mochrum Fell	Appeal/Public Inquiry	149.9	7

It should be noted that the baseline situation for the cumulative assessment is constantly evolving, and there may be changes to the status or list of wind energy developments considered between carrying out the assessment and the 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 10k m radius of the Proposed Development), it is considered that the cumulative assessment undertaken within this LVIA will remain relevant. Wind farms which have not been assessed that enter the consenting process post this assessment will assess their effects with Sandy Knowe Wind Farm Extension.

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, as identified on Figure 5-1-6b.

Given the varied status, and therefore uncertainty, associated with un-built wind farms across the study area the CLVIA is structured so as to report on two potential development scenarios:

- Scenario 1: Higher level of certainty: the addition of the Proposed Development to a landscape with operational, under construction and consented wind farms; and
- Scenario 2: Lower level of certainty: the addition of the Proposed Development to a landscape with operational, under construction, consented and undetermined valid applications.

The CLVIA focused on the assessment of 'additional' cumulative effects, i.e. the effect of adding the Proposed Development to a baseline of other built or unbuilt wind farms. Where 'total' cumulative effects (i.e. assessment which considers the effects if all current, past and future proposals are deemed present, including the Proposed Development) are considered to be significant, then reference is also made to these.

Combined ZTVs (Figures 5-1-7 to 5-1-14) for other wind farms were prepared to show where ZTVs overlap and where cumulative views may occur. This includes combined

views – two wind farms seen at the same time in a similar direction, and successive views – two wind farms seen from the same location but in different directions.

5.3.5 Landscape Character Types

Within the 2019 NatureScot Scottish Landscape Character Types Map and Descriptions (NatureScot, 2019), southern parts of the Proposed Development Site are classified as Southern Uplands with Forest landscape character type (LCT). Northern parts of the Proposed Development Site extend into the Upper Dale LCT.

The wider study area includes many different LCTs from lowland and urban areas to high plateaux and hills. These are described in further detail in the NatureScot Scottish Landscape Character Types Map and Descriptions and the South Lanarkshire Landscape Character Assessment.

The NatureScot LCTs within 40km of the Proposed Development are illustrated on Figure 5-1-4a. Figure 5-1-4b shows the ZTV at blade tip height (up to 149.9m to tip height) across LCTs within the study area. The theoretical visibility 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 as a result of the Proposed Development.

LCTs beyond 15km from the proposed turbines, and from which the Proposed Development is likely to be seen in combination with Sandy Knowe Wind Farm (and potentially other operational and under construction wind farms) in longer distance outward views, are unlikely to be subject to significant effects on landscape character so are scoped out of Table 5-4.

Those LCTs within 15km of the Proposed Development but with limited actual visibility or where key characteristics are unlikely to be significantly affected are not considered further within the assessment, with justification provided in Table 5-4. LCT which are considered in further detail are highlighted in bold.

Table 5-4: Landscape Character Types

Landscape Character Type	Theoretical visibility of Proposed Development (ZTV coverage) and other considerations to determine if LCT should be carried forward for detailed assessment
66: Agricultural Lowlands - Ayrshire	Theoretical visibility beyond 10km to the south of Cumnock; woodland cover within the LCT will reduce actual visibility and the Proposed Development will be seen in the context of surrounding development including Sandy Knowe and Hare Hill Wind Farm – not considered further.
69: Upland River Valleys - Ayrshire	Widespread theoretical visibility within 5km to the north of Nithsdale – considered further.
73: Upland Glen - Ayrshire	Very limited theoretical visibility within 15km – not considered further.
74: Upland Basin - Ayrshire	Theoretical visibility within 10km and focused to the north of this LCT. Built form, woodland and hedgerows in the LCT will help to somewhat limit actual visibility. The Proposed Development will largely be seen beyond Hare Hill Wind Farm and in the context of Sandy Knowe Wind Farm. The

	Proposed Development will extend the influence of the under construction Sandy Knowe, with greater visibility of turbines seen above horizons to the south of Nithsdale. However, further turbines are seen in this context, outside the LCT and on horizons which have been altered by wind turbines. Unlikely to result in significant effects on landscape character – not considered further.
76: Foothills - Ayrshire	Some limited theoretical visibility to the north-east of this LCT, beyond 10km. The Proposed Development will largely be seen beyond existing development including Hare Hill Wind Farm and in the context of Sandy Knowe – not considered further.
78: Plateau Moorland - Ayrshire	Intermittent pattern of visibility within 15km; Proposed Development will be seen in context of existing wind farm development to the south of Nithsdale. This is unlikely to result in significant effects on landscape character from this LCT, which has a lower sensitivity to wind farm development due to its larger scale, simpler landcover and less settled nature – not considered further.
81: Southern Uplands - Ayrshire	Limited theoretical visibility within 15km. Hare Hill Wind Farm has altered the landscape character to the north of this LCT. Sandy Knowe Wind Farm also visible from parts with theoretical visibility of the Proposed Development - not considered further.
82: Southern Uplands with Forest - Ayrshire	Very limited theoretical visibility within 15km - not considered further.
160: Narrow Wooded River Valley – Dumfries & Galloway	Very limited theoretical visibility within 15km – not considered further.
165: Upper Dale – Dumfries & Galloway	The Proposed Development is located within this LCT – considered further.
166: Upland Glens – Dumfries & Galloway	Limited theoretical visibility beyond 10km. From limited areas with visibility, the Proposed Development will be seen in context of existing wind farm development to south of Nithsdale – not considered further.
175: Foothills – Dumfries & Galloway	Very limited theoretical visibility within 15km – not considered further.
177: Southern Uplands – Dumfries & Galloway	Widespread theoretical visibility within 5km. Wind Farm development has altered the landscape character to the north of this LCT. When visible the Proposed Development will be seen beyond and in the context of under construction Sandy Knowe Wind Farm – not considered further.
178: Southern Uplands with Forest – Dumfries & Galloway	The Proposed Development is located within this LCT – considered further.
207: Upland River Valley – Glasgow & Clyde Valley	Very limited visibility within 15km – not considered further.
213: Plateau Moorlands – Glasgow & Clyde	Limited theoretical visibility beyond 10km;

Valley	Proposed Development will be seen in context of existing wind farm development to south of Nithsdale – not considered further.
217: Southern Uplands – Glasgow & Clyde Valley	Very limited theoretical visibility within 15km – not considered further.

5.3.6 Designated Landscapes

The Proposed Development Site is not within any landscape designations although there are several landscape designations within the 40km study area, including local level designations. These are shown on Figure 5-1-5a.

Examination of the ZTV for the Proposed Development, along with an understanding of the special qualities of each area is used as a means of identifying which Designated Landscapes require further assessment. Figure 5-1-5b shows the ZTV at blade tip height (3 No. turbines up to 125m and 3 No. up to 149.9m to tip height) across designated landscapes within the 40km study area.

Table 5-5 sets out which Designated Landscapes require further consideration. Those beyond 20km from the Proposed Development, and those with limited actual visibility within 20km of the Proposed Development Site, or where the context in which the Proposed Development is seen is unlikely to compromise the reasons for designation, are not considered further within the assessment.

Table 5-5: Designated Landscapes

Designated Landscape	Theoretical visibility of Development (ZTV coverage) and other considerations to determine if Landscape Designation carried forward for detailed assessment
Dumfries and Galloway	
Thornhill Uplands Regional Scenic Area	Theoretical visibility largely beyond 10km; Proposed Development will be seen in the context of (and behind) the under construction Sandy Knowe Wind Farm. In this context the Proposed Development is considered unlikely to compromise the reasons for designation. The role the upland areas in the RSA play in providing a setting to the Nith Valley will not be altered by wind farm development at the Proposed Development Site – not considered further.
Galloway Hills RSA	Very limited theoretical visibility – not considered further.
East Ayrshire	
Southern Uplands Sensitive Landscape Area	Theoretical visibility within 5km – considered further.
Doon Valley Sensitive Landscape Area	Very limited theoretical visibility – not considered further.
River Ayr Sensitive Landscape Area	Widespread theoretical visibility beyond 15km; actual visibility reduced in places by woodland cover. Proposed Development will be seen beyond intervening wind farm development (including Kennoxhead Wind Farm) and in the context of wind farm development to the south

	of Nithsdale, and is considered unlikely to compromise the reasons for designation – not considered further.
South Lanarkshire	
Douglas Valley Special Landscape Area	Very limited theoretical visibility within 20km – not considered further.
Leadhills and Lowther Hills Special Landscape Area	Limited theoretical visibility beyond 15km – not considered further.

5.3.7 Wild Land Areas

The Proposed Development Site is not covered by any Wild Land Areas (WLA). There is one WLA just within 30km to the south-west, Merrick (WLA 01). The ZTV (Figure 5-1-5b) identifies a limited and intermittent pattern of theoretical visibility along a steep ridge to the north of the Merrick, within the northern part of the WLA.

However, any wind farm development at the Proposed Development Site will be seen beyond closer proximity views of wind farms including South Kyle, Windy Rig, Brockloch Rig and Afton Wind Farms and in the context of long distance views which have already been altered by wind farm development. As such, effects on WLA are not considered further within this assessment.

5.3.8 Dark Skies Park

Galloway Forest Park was designated as a Dark Sky Park in 2009, by the International Dark-Sky Association. The Dark Sky Park is located beyond 20km to the south-west of the proposed turbines and Figure 5-1-5b identifies a very limited pattern of theoretical visibility. As the proposed turbines are under the height which require permanent aviation lighting, effects on the Dark Sky Park have been scoped out of the assessment.

5.3.9 Gardens and Designed Landscapes, Regional Parks and Country Parks

There are no Gardens and Designed Landscapes (GDL) within 15km of the Proposed Development Site although there are several within the 40km study area, as shown on Figure 5-1-5a.

The closest GDL is Dumfries House which lies beyond 15km to the north-west and has limited theoretical visibility as shown in Figure 5-1-5b. Woodland cover within the estate will further limit actual visibility.

Within 20km, there is one other GDL, Drumlanrig Castle, which has very limited theoretical visibility as shown in Figure 5-1-5b. As such, landscape and visual effects on GDLs are scoped out of this assessment. Effects on the setting of GDL (and non Inventory GDL) are considered further in the Cultural Heritage Chapter.

There are no Regional Parks or Country Parks within the 40km study area, and as such these are not considered further within the LVIA.

5.4 Visual Baseline

5.4.1 Introduction

This section identifies the extent of potential visibility of the Proposed Development and identifies visual receptors that are assessed as part of the LVIA. This section also introduces the viewpoints that are used to assess effects on receptors, including reasons for their selection.

5.4.2 Analysis of Visibility of the Proposed Development

The ZTVs in Figure 5-1-2a and 5-1-3a show theoretical visibility of the Proposed Development to turbine blade tip height (3 No. turbines up to 125m and 3 No. up to 149.9m to tip height) and hub height (up to 94m) respectively, across the 40km study area. Figure 5-1-3a and Figure 5-1-3b provide the ZTV to blade tip height and hub height respectively, at A1 paper size on 1:50,000 scale base mapping.

The ZTV indicates that across the 40km study area, visibility of the Proposed Development is more widespread throughout low-lying areas within Nithsdale within approximately 15km of the proposed turbines.

Across the wider study area, the pattern of visibility is quite intermittent and generally focused across site-facing hills within the Southern Uplands and hills to the north of Nithsdale to the north, south and east of the Proposed Development Site. There is also an intermittent pattern of theoretical visibility from the north-west, from the Ayrshire Lowlands. Elsewhere, theoretical visibility of the Proposed Development is limited.

5.4.3 Key Visual Receptors

Potential visual receptors include:

- Residents, including views from isolated properties and settlements;
- Those engaged in recreational activities (e.g. hill walkers and cyclists);
- Road users (including tourists); and
- Those working on the land.

5.4.4 Selection of Viewpoints for Assessment

This section sets out the viewpoints that are used to represent and assess the visual effects of the Proposed Development. The viewpoint list is a representative selection of locations agreed with the statutory consultees that have responded; it is not an exhaustive list of locations from which the Proposed Development will be visible. Many of the viewpoints reflect the viewpoints used for the consented Sandy Knowe Wind Farm LVIA.

Seventeen viewpoints (and three wireline only viewpoints) were selected across the 40km study area through desk study, field work and discussions with statutory consultees. These viewpoints are all publicly accessible and include:

- Viewpoints selected to represent the experience of different types of receptor;
- Specific viewpoints selected because they are important and sometimes promoted viewpoints within the landscape; and

- Illustrative viewpoints chosen specifically to demonstrate a particular visual effect or specific issue.

The viewpoints were selected to represent a range of receptors, viewing directions, distances and elevations. The viewpoints are listed in Table 5-6 and shown on Figure 5-1-2.

Table 5-6: Viewpoint Locations

No.	Location	Reason for Selection	Grid Reference (NGR)		Approx. Distance ³
1	A76 at Cairn Bridge	Represents views experienced by road users travelling in both directions along the A76	268128	612751	1.48km
2	Libry Moor Footpath	Represents views experienced by recreational receptors in vicinity of Proposed Development Site	271876	611822	1.64km
3	The Knowe	Represents views experienced by farm workers at the Knowe and scattered residential receptors to the north of Nithsdale	271685	612873	2.20km
4	Lagrae	Represents views experienced by workers at the mineral extraction site at Lagrae	270865	614065	2.65km
5	St Connel's Church	Represents views experienced by visitors to the church to the north of Kirkconnel	272343	614998	4.42km
6	Kirkconnel	Represents views experienced from the western edge of the settlement of Kirkconnel (from a small memorial garden)	272812	612217	2.65km
7	Kirkland Hill	Represents views experienced by recreational receptors on the hill summit	272808	615994	5.52km
8	Sanquhar	Represents views experienced from the western edge of the settlement of Sanquhar. The viewpoint is located in the church yard, to the east of the school, and is slightly elevated	277893	610168	7.48km

³ Distance between viewpoint and nearest turbine of the Proposed Development.

9	Southern Upland Way, north-east approach to Sanquhar	Represents views experienced by recreational receptors travelling south-west along the long-distance route	278258	610338	8.32km
10	Crawick Artland	Represents views experienced by recreational receptors visiting the attraction	277639	611836	7.23km
11	East Mount Lowther	Represents views experienced by recreational receptors at the hill summit	287855	609992	14.42km
12	Blackcraig Hill	Represents views experienced by recreational receptors at the hill summit	264804	606506	5.10km
13	New Cumnock	Represents views experienced from northern parts of the settlement of New Cumnock. The view is taken from a slightly elevated vantage point at a bridge over the railway, near the entrance to the railway station	261929	614169	7.14km
14	Ochiltree	Represents views experienced from the southern edge of the settlement of Ochiltree	250148	620908	20.70km
15	Cairn Table	Represents views experienced by recreational receptors at the hill summit	272401	624223	13.23km
16	Southern Upland Way, east of Cloud Hill	Requested by NatureScot. Represents views experienced by recreational receptors on the long distance route, south of Sanquhar	274728	605340	7.08km
17	Rear of Lochside Hotel, New Cumnock	Requested by EAC. Represents views experienced by recreational receptors at the hotel	260261	614759	8.90km
18	Todholes Hill	Requested by DCG, provided as a wireline only visualisation.	274514	615025	5.72km
19	Core Path, Auchntaggart Morr	Requested by DCG, provided as a wireline only visualisation.	281000	609125	10.7km

20	SUW, Coupland Knowe	Requested by DCG, provided as a wireline only visualisation.	281301	611697	10.9km
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5.4.5 Settlements

Theoretical visibility of the Proposed Development from settlements across the study area is illustrated by Figure 5-1-2, with potential views from settlements discussed in Table 5-7.

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. In order to focus on potentially significant effects, settlements from which there is no theoretical visibility are not considered further in this assessment.

Furthermore, settlements with limited visibility over a longer distance i.e. beyond 15km from the Proposed Development; or where views of the surrounding landscape (including the Proposed Development Site) are not important to the landscape setting of the settlement, and where it is unlikely that significant effects could occur, are not considered further in the assessment. Due to viewing distance and reduced likelihood of significant visual effects, settlements beyond 15km have been scoped out of the following table. Settlements considered in more detailed have been highlighted in bold, in the table below.

Table 5-7: Settlements within 15km

Settlement	Theoretical Visibility of Proposed Development (ZTV Coverage)
Kirkconnel and Kelloholm	Widespread theoretical visibility within 5km – considered further.
New Cumnock, Pathhead and Mansfield	Theoretical visibility across parts to the north within 10km – considered further.
Sanquhar	Widespread theoretical visibility within 10km – considered further.
Mennock	Widespread theoretical visibility within 10km; actual visibility limited by woodland along the River Nith and coniferous forest cover to the west – not considered further.
Cumnock and Netherthird	Limited theoretical visibility beyond 10km – not considered further.

5.4.6 Routes

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. These changes depend on the surrounding topography, buildings, structures, tree cover and vegetation pattern alongside the route. Theoretical visibility of the Proposed Development from routes across the study area (Core Paths have been mapped to within 5km of the proposed turbines) is illustrated by Figure 5-1-2. They include a hierarchy of roads, railways and recreational routes (promoted long distance footpaths 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.

Based on an analysis of theoretical visibility and potential views, Table 5-8 provides information on which routes have been carried forward for detailed assessment. Due to the lower susceptibility of receptors typically using roads and railways, those beyond 10km from the proposed turbines were scoped out of the assessment. Minor B roads and country lanes were also scoped out of the assessment as they tend to be less frequently used by large numbers of road users.

Due to the higher susceptibility of receptors using promoted long-distance footpaths and cycle routes, these are included at up to 15km from the proposed turbines. 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 as the likelihood for significant sequential effects is limited. Routes which have been considered in more detail have been highlighted in bold, in the table below.

Due to their more localised use a detailed sequential assessment on Core Paths and Rights of Way is focused on those within 5km of the proposed turbines only.

Table 5-8: Routes

Route	Theoretical Visibility of Proposed Development (ZTV Coverage)
Major Roads	
A76	Widespread theoretical visibility within 10km – considered further.
Recreational Routes	
Southern Upland Way	Theoretical visibility across parts within 10km – considered further.
Core Paths and Rights of Way within 5km	Core Paths and RoW (including RoW DN2) within 5km of the Proposed Development are shown on Figure 5-1-2 in relation to ZTV coverage – considered further.

5.5 The 'Do Nothing' Scenario

In the absence of the Proposed Development, it is likely that the Proposed Development Site would continue under the same land use associated with the management of farmland and adjacent coniferous forestry. Land to the immediate south-east of the Proposed Development Site is developed as a wind farm and this land use will continue over the operational phase of the wind farm. The wider surrounding landscape and visual amenity is likely to be further influenced by a number of 'forces for change'.

Forces for change are those factors affecting the evolution of the landscape and which may, consequently, 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 briefly below.

Due to the effects of climate change, summer and winter temperatures are likely to be higher than the current baseline (greater for summer), with winter rainfall increasing and summer rainfall decreasing. The Landscape Institute's Landscape for 2030 (Landscape Institute, 2021) acknowledges that increases in average temperature and more severe weather events will have an effect on the landscape. However, whilst changes in rainfall and rising temperatures are anticipated, it is not considered that this will appreciably change the baseline landscape conditions.

Wind farm development is a clear force for change and is likely to continue within the study area. Figure 5-1-6a shows wind farms which are operational or under construction within the study area, as well as consented developments and proposals for further wind farms. In addition to these commercial scale wind farms there are many domestic-scale operational, consented and proposed wind turbines of varying heights and rotor diameters. These tend to be associated with farms and located within lower lying agricultural areas, as farmers diversify income and seek opportunities to generate energy for domestic and commercial use. Given the wind resource in this area, there is likely to be ongoing interest in wind farm development in this part of Dumfries and Galloway and surrounding local authority areas, particularly in the upland areas.

Commercial forestry across the study area, especially on the slopes surrounding upland areas, is likely to remain an important land use along with open cast coal working operations (and associated landscape remediation) located within 15km of the proposed turbines. Housing and light industrial development, particularly on the edges of settlements, is also likely to continue.

5.6 Wind Farm Design Considerations

Landscape and visual effects formed a key consideration in the progression of the layout design of the Proposed Development. The interaction of the Proposed Development with Sandy Knowe Wind Farm was a key factor. Two turbine heights, which reflect those of the consented wind farm (125m to tip height) and utilising slightly taller turbines (149.9m to tip height) on the higher ground further south from Nithsdale, have been used so that the Proposed Development reads as a sensitive extension, whilst maximizing wind yield. Views from the nearest residential receptors have also been a key consideration in design development. Further detail on the design evolution of the Proposed Development is described in Chapter 3: Description of Development and the design and access statement.

5.7 Micrositing Allowance

Micrositing of turbines (up to 100m as specified in Chapter 3 Description of Development) is considered unlikely to result in changes to predicted landscape or visual effects, and therefore will not materially affect the findings of this assessment.

5.8 Assessment of Effects and Mitigation

The assessment of effects is based on the project description as outlined in Chapter 3: Description of Development and follows the methodology detailed in Appendix 5-1. Unless otherwise stated, potential effects identified are considered to be negative.

The proposed extension will utilise a number of features associated with Sandy Knowe Wind Farm including the site access tracks. The Proposed Development **consists of three turbines up to a maximum 125m tip height; three turbines up to a maximum of 149.9m; battery storage;** and associated infrastructure (see Chapter 3: Description of Development and Figure 1-2 and Figure 3-1).

5.9 Construction Effects

5.9.1 Predicted Construction Landscape Effects

The changes arising from the construction of the Proposed Development, as outlined in Chapter 3: Description of Development, will include:

- The introduction of construction activity and vehicular/personnel movements around the Proposed Development Site and on local roads;
- The potential need for lighting during construction if work extends into hours of darkness;
- The disturbance of areas of land and surface vegetation at the locations of borrow pits, turbine bases and along the access track routes;
- The use of construction compounds; and
- The introduction of tall vertical structures (turbines and a monitoring mast) and the use of cranes.

The effect of the construction of the Proposed Development on the Proposed Development Site is set out in Table 5-9. Wider construction stage effects on landscape character and designated landscapes will be short term and transient in nature. These effects are assumed to be no greater than those effects identified in the operational landscape assessment.

Table 5-9: Effects of Construction on the Proposed Development Site

Receptor	The Proposed Development Site
Description and Sensitivity	<p>The Proposed Development Site is described in detail in Chapter 1: Introduction – 'Proposed Development Site and Setting'.</p> <p>The Proposed Development Site is contained within the 165. Upper Dale and 178. Southern Uplands with Forest LCTs. Landcover within the Proposed Development Site is largely moorland, and there are adjacent blocks of coniferous forest. The sloping landform contributes to the skyline in views south from Nithsdale and higher ground to the north. The influence of human activity is apparent at the Proposed Development Site through the presence of Sandy Knowe Wind Farm and nearby through coniferous forest cover, forest operations and open cast coal mining operations.</p> <p>The Proposed Development Site forms the immediate backdrop to the settled valley of Nithsdale. However, it is not designated, and human influence over the landscape is very apparent.</p> <p>The Dumfries and Galloway Wind Farm Landscape Capacity Study (2017) states that there is no scope for turbines greater than 50m to tip within the Upper Dale LCT. It states there is no scope for turbines greater than 150m to tip within the Southern Uplands LCT due to the potential effects on the more sensitive Upper Dale LCT. It states that the Nithsdale unit of the LCT is close to capacity for wind farm development of 80 – 150m to tip.</p> <p>Judgements: Susceptibility: medium; Value: medium; Sensitivity: medium.</p>
Changes	<p>Construction activities will result in direct landscape effects on the Proposed Development Site. Changes primarily relate to excavations and track construction; the presence of tall cranes and partially built towers whilst turbines are being erected; and construction activity including the movement of construction vehicles and plant. There will therefore be large scale changes to the Proposed Development Site</p>

	<p>relating to construction activity including the removal/ clearance of features and disturbance to landcover (mainly moorland); introduction of new features (turbines and infrastructure); additional movement and activity through construction vehicles and plant; as well as a perceived change from a moorland site to a construction site.</p> <p>The geographic extent of these changes will be at the site level (small). The construction works are expected to last approximately 12 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 infrastructure that forms part of the operational scheme.</p> <p>Judgements: Scale: large; Geographical Extent: small; Duration: short term; Reversibility: fully reversible to irreversible; Magnitude of Change: high</p>
Effect and Significance	<p>Overall, the effects of construction on the Proposed Development Site are judged to be Significant (Major). These effects will be temporary and very localised, largely contained within the geographical extent of the Proposed Development Site where turbines and new sections of track associated with the Proposed Development will result in wider disturbance.</p>

5.9.2 Predicted Construction Visual Effects

In terms of visual effects during the construction phase, beyond those experienced at the Proposed Development Site level where low level construction activity will be apparent in certain views, these will largely relate to views of tall cranes and turbine construction experienced from the wider study area. These effects will be transient and will 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.

5.9.3 Proposed Mitigation

Measures such as arrangements for vegetation and soil removal, storage and replacement and the restoration of disturbed areas after construction are detailed in the Outline Construction Environmental Management Plan (CEMP) contained in Appendix 14-1, which includes reference to Construction Method Statements.

5.9.4 Residual Construction Effects

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.

There will be no significant landscape or visual effects associated with ground disturbance after restoration works have been completed, and vegetation has regenerated.

5.10 Predicted Operational Landscape Effects

5.10.1 Predicted Operational Landscape Effects

Although all operational and under construction wind farms (Figure 5-1-6a) are considered in the baseline for the assessment, interactions with wind farms/ larger emerging wind farm groups in the more immediate landscape context are of most relevance. These include Sandy Knowe, Hare Hill Wind Farm Phase 1 & 2 within 2km to the south and south-west; Sanquhar Community and Whiteside Hill Wind Farms within 5km to the south-east; Twentysilling Hill within 15km to the south-east; and South Kyle, Brockloch Rig, Windy Rig within 15km to the south-west.

These wind farm clusters extend under the cumulative baseline, with further consented and proposed schemes (Figure 5-1-6b). All operational effects are judged to be long term and reversible, unless specified otherwise.

5.10.2 Predicted Cumulative Effects during operation

Existing wind farms and those under construction were assessed as part of the LVIA baseline (these are listed in Table 5-2). The subsequent cumulative assessment sets out the assessment of effects arising from the Proposed Development in a potential future landscape in which proposed wind farms are assumed to be present. The list of wind farms was derived using the following parameters and agreed through consultation:

- Turbines below 50m to tip omitted;
- Scoping/Design stage schemes omitted; and
- Single turbines beyond 5km omitted.

The potential future baseline is split into two possible scenarios:

- Scenario 1 – operational, under construction **and consented wind farms** (for which there is a higher level of certainty); and
- Scenario 2 – Scenario 1 **plus application stage and wind farms at appeal** (for which there is a lower level of certainty).

These developments are listed in Table 5-2 and 5-3 and shown on Figures 5-1-6a and 5-1-6b.

Certain developments which are consented are now subject to a revised application, typically to increase the size of turbine used within the proposed wind farm. Where this is the case, the larger application scheme is considered within the CLVIA, as identified in the following table. This is an emerging pattern in wind energy development where consented schemes with smaller turbines may not now be financially viable. To avoid an overly complex cumulative assessment, the CLVIA assumes that the consented scheme is unlikely to be built and focuses on the maximum-case scenario and larger scale application stage scheme.

Although all these wind farms are considered in the cumulative assessment, the assessment focused primarily on the relationship of the Proposed Development with the closest wind farms or groups of wind farms. For the cumulative assessment, these expanded wind farm groupings include:

- Lethans (consented) Glenmuckloch (consented) and Lethans Extension (application) referred to as the **northern wind farm group**;

- Kennoxhead (under construction), Kennoxhead Extension (consented), Kennoxhead Extension II (application) referred to as the **north-eastern wind farm group**;
- Sandy Knowe (under construction), Hare Hill and Extension (operational), Sanquhar (operational), Whiteside Hill (operational), Magheuchan Rig (Sanquhar Six) (consented), Eucharhead (application) and Sanquhar II (appeal/public inquiry) referred to as the **southern wind farm group**;
- Afton, Brockloch Rig, Brockloch Rig I, Windy Rig (all operational), South Kyle (under construction), Pencloe, Brockloch Rig III and Enoch Hill (all consented) referred to as the **south-western wind farm group**.
- North Kyle (consented) and Greenburn (application) referred to as the **western wind farm group**.

5.10.3 Effects on Landscape Character of the Proposed Development Site

Table 5-10: Landscape Character of the Proposed Development Site

Receptor	The Proposed Development Site
Description and Sensitivity	The Proposed Development Site is described in detail in Table 5.8 above. Overall sensitivity is considered to be medium .
Changes	There will be large scale changes to the Proposed Development Site relating to the physical loss of features (typically moorland cover) and introduction of new features (turbines and infrastructure), as well as a perceived change from a moorland site on the edge of a wind farm, to an active energy generating site. Judgements: Scale: large; Geographical Extent: small; Magnitude of Change: medium
Effect and Significance	Overall, the effects of the wind farm on the Site will be Significant (Moderate) .
Cumulative Effects	Additional cumulative effects, at the site level, are not judged to be significant. The Proposed Development will extend the influence of turbines in relation to the under construction Sandy Knowe, which is considered in the landscape baseline.

5.10.4 Effects on Landscape Character Types

The following tables provide a detailed assessment of effects on LCT which have been carried forward for detailed assessment, as set out in Table 5-3.

Table 5-11: Operational Effects on Upland River Valleys (69) LCT – Ayrshire Proposed Development Site

Receptor	69. Upland River Valleys – Ayrshire
Description and Sensitivity	The Upland River Valleys (69) LCT comprises a number of valleys within Ayrshire, including the Upper Nithsdale Valley within 5km to the north-west of the Proposed Development. This valley is relatively broad and flat along this stretch, and sparsely settled. Key characteristics of the LCT include: <ul style="list-style-type: none"> • “Varying river valley landform with broad open sections which

	<p><i>contrast with steeper valley slopes and narrow, more enclosed valleys.</i></p> <ul style="list-style-type: none"> • <i>Varied underlying geology which includes sandstone, millstone, coal measures and a volcanic plug, Loudoun Hill, which forms a distinctive landmark from the Upper Irvine Valley.</i> • <i>Characterised by moorland vegetation, with increasing amounts of improved pasture on lower slopes and valley floors.</i> • <i>Confined landscape scale.</i> • <i>Together with adjacent moorlands, these valleys often provide the focus for opencast coal mining activity.</i> • <i>A focus for industrial settlement in all but the Upper Nithsdale valley, where settlement is scarce, confined to farmsteads on the lower valley slopes.</i> • <i>Often act as a focus for transport routes.</i> • <i>Open views in the broad valley sections, changing to quite enclosed and intimate views within narrow sections." (SNH, 2019)</i> <p>Wind energy development within the LCT is limited to small-scale turbines associated with individual farms. There are views towards the operational Hare Hill and Sandy Knowe Wind Farm, to the south-east of the Nithsdale Unit of this LCT.</p> <p>The Nithsdale unit of the Upland River Valleys LCT includes an area within the Southern Uplands SLA designation in East Ayrshire. The East Ayrshire Landscape Wind Energy Capacity Study (2018) indicates that this LCT is of higher sensitivity to wind energy development, and highlights the role hills including Corsencon Hill to the north of Nithsdale play in forming a backdrop to the valley landscape. This is a smaller scale landscape with a more complex pattern of landcover and topography. However, the influence of humans through transport corridors, open cast mining operations and surrounding wind farms has lowered the susceptibility.</p> <p>Judgements: Susceptibility: medium; Value: medium; Sensitivity: medium.</p>
<p>Changes</p>	<p>There will be no direct effects on the landscape features of this LCT. The Proposed Development will be theoretically visible from the northern valley side and eastern fringes of the Nithsdale Unit of this LCT. The valley floor and southern side of the valley is largely outside the ZTV. Localised woodland, vegetation and built form within the valley floor will also help reduce actual visibility from lower elevations and limit perceptual landscape effects on the experience of the valley. From the higher northern valley sides, the Proposed Development will introduce further turbines above the enclosing horizon in views to the south-east. However, when visible the Proposed Development will typically be seen in the context of enclosing horizons which are now altered by wind energy development, including the operational Hare Hill which is on higher ground directly south of the LCT, and the under construction Sandy Knowe, to which the scheme will read as an extension to. This will slightly extend the influence of wind farms seen outside this LCT, but this is not judged to translate into significant effects on landscape character as horizons to the south-east of this LCT are already altered by wind farm development.</p> <p>Theoretical visibility from the River Ayr and Glenmuir Water Units of this LCT is very limited.</p> <p>Judgements: Scale: small; Geographical Extent: medium-small for the Nithsdale Unit, small for other valleys; Magnitude of Change: low.</p>

Effect and Significance	Overall, the effect of the Proposed Development on this LCT is judged to be Not Significant (Minor).
Cumulative Effects	<p>The assessment focuses on the Nithsdale unit of this LCT. Turbines from the southern wind farm group, at Hare Hill (operational) and Sandy Knowe (under construction) lie outside the LCT, but are visible from the valley.</p> <p>Scenario 1:</p> <p>The key change to the baseline under this scenario will be Lethans and Glenmuckloch in the northern wind farm group. These schemes will introduce new wind farm development and large turbines (220m and 149.9m respectively) to the north of Nithsdale, and will be visible to the north-east of the LCT.</p> <p>Scenario 2:</p> <p>Additional proposed wind farms visible from the LCT will include Lethans Extension within the northern wind farm group to the north-east of the LCT and Eucharhead in the southern wind farm group to the south-east of the LCT.</p> <p>Scenario 1 and 2:</p> <p>The Proposed Development will result in views of additional turbines set outside this LCT on the enclosing horizon to the south-east, which will be seen within the context of the southern wind farm group, including Sandy Knowe, Hare Hill, Sanquhar and Eucharhead.</p> <p>Whilst the Proposed Development will bring turbines in slightly closer proximity to the LCT, it will not alter or notably extend effects on the perceptual rural qualities of this LCT. Under both cumulative baseline scenarios, turbines are visible on the enclosing horizons to the south-east and north-east and this will remain the case when considering the Proposed Development.</p> <p>Furthermore, the separation provided by the Nith Valley between the southern wind farm group and the northern wind farm group will remain intact, even under the scenario 2 assessment in which Lethans Extension, Eucharhead and Sanquhar II will increase the geographical extent of the two groupings.</p> <p>As such, no significant additional cumulative landscape effects are predicted, under either scenario.</p>

Table 5-12: Operational Effects on Upper Dale (165) LCT – Dumfries & Galloway

Receptor	165. Upper Dale – Dumfries & Galloway (reflects the boundary of the Upper Dale (Upper Nithsdale Unit) LCT in the DGWFLCS)
Description and Sensitivity	<p>The Upper Dale (165) LCT includes the gently undulating and flat valley floors of two valleys, including Nithsdale within the vicinity of the Proposed Development. The landform of the valleys varies from broad to narrow in sections, and steep hills rise up to the north and south. The valley features settlement including Kirkconnel and Sanquhar. Northern parts of the Proposed Development are located within this LCT.</p> <p>Key characteristics include:</p> <ul style="list-style-type: none"> • <i>“Wide valleys, enclosed by high peaks and moorland.</i> • <i>Open with long views.</i> • <i>Notable narrower section of Upper Nithsdale between Thornhill and Mennock.</i> • <i>Improved valley pastures becoming rougher up the valley sides.</i>

	<ul style="list-style-type: none"> • Medium to large scale enclosures with dry stone dykes. • Riparian woodlands along the main river and up tributary channels. • Medium to large scale forests on the valley sides and extending over horizons from higher ground. • Large scale wind farm development characteristic of some adjacent upland fringes and backdrop skylines. • Mining settlements and remnants of industrial activity such as mine ruins and bings." (SNH, 2019) <p>Parts of the Thornhill Uplands RSA are located within this LCT, approximately 10km to the south-east of the Proposed Development. Turbines within Sandy Knowe Wind Farm are located within this LCT. The Dumfries and Galloway Wind Farm Landscape Capacity Study (2017) indicates that this LCT is of higher sensitivity to wind energy development. It states that:</p> <p><i>"The Sandy Knowe wind farm will be contrary to the established pattern of wind farms associated with more extensively scaled upland landscapes because of its location on the lower hill slopes within the Nith valley. This development will blur the differences between the more settled and diverse Upper Dale (9) and the Southern Uplands (19)/Southern uplands with Forest (19a) and it may also emphasise the perceived negative aspects of landscape character associated with former mining activity in the Sanquhar and Kirkconnel area."</i></p> <p>This is a smaller scale landscape with a more complex landcover and topography. However, the influence of humans through transport corridors, open cast mining operations and the presence of Sandy Knowe Wind Farm has lowered the susceptibility.</p> <p>Judgements: Susceptibility: medium; Value: medium; Sensitivity: medium.</p>
Changes	<p>Three turbines of the Proposed Development will be located within this LCT, on the south-western fringes and to the south of the River Nith. The Proposed Development will theoretically be visible from most parts of western half of this LCT. Areas of riparian woodland and built form in the valley floor, and areas of forest on the valley sides, will help to reduce actual visibility.</p> <p>The presence of Sandy Knowe Wind Farm means that wind turbines have already directly altered and influenced parts to the south-west of this LCT. The Proposed Development will introduce turbines along the northern and western edge of the Sandy Knowe Wind Farm, which will marginally extend the influence of turbines on this LCT. The site will change from an area of moorland on the edge of a wind farm to an area of moorland with wind turbines. Overall, this is judged to be a large scale of change to the Proposed Development Site and across areas of this LCT within approximately 3km.</p> <p>Beyond approximately 3km, the Proposed Development will increase the presence of wind turbines in wider views from areas of the LCT. This will slightly alter the rural perceptual qualities of this LCT. However, and given that <i>"large scale wind farm development characteristic of some adjacent upland fringes and backdrop skylines"</i> and as the Proposed Development will read as a small extension to Sandy Knowe Wind Farm, this is not judged to result in wider significant effects on landscape character.</p> <p>Judgements: Scale: large to small; Geographical Extent: medium overall;</p>

	Magnitude of Change: high for the Site area and within 3km, reducing with distance to low for other areas.
Effect and Significance	Significant (Moderate) for the site area and within 3km, Not Significant (Minor) for wider areas.
Cumulative Effects	<p>The assessment focuses on the Nithdale unit of this LCT. Turbines within the southern wind farm group are located within this LCT (Sandy Knowe).</p> <p>Scenario 1:</p> <p>The key change to the baseline under this scenario will be the presence of Lethans and Glenmuckloch as part of the northern wind farm group. These schemes will introduce new wind farm development and large turbines (220m and 149.9m respectively) to the north of Nithsdale, and will be visible on the enclosing horizon to the north of the LCT.</p> <p>Scenario 2:</p> <p>Additional proposed wind farms visible from the LCT will include Lethans Extension within the northern wind farm group, to the north of the LCT, and Eucharhead and Sanquhar II in the southern wind farm group to the south of the LCT.</p> <p>Scenario 1 and 2:</p> <p>The Proposed Development will introduce additional turbines within the LCT, and on the enclosing horizon to the south. The turbines will be seen in the context of the southern wind farm group, including Sandy Knowe, Hare Hill, Sanquhar and Eucharhead.</p> <p>Whilst the Proposed Development will bring turbines in slightly closer proximity to the Nith Valley, it will not alter or notably extend effects on the rural perceptual qualities of this LCT. Under both cumulative baseline scenarios turbines are visible on the enclosing horizons to the south-west and north-west and this will remain the case under consideration of the Proposed Development. Furthermore, the separation between the northern and southern wind farm groups, apparent in views from the LCT, will remain intact even under the scenario 2 assessment.</p> <p>As such, no significant additional cumulative landscape effects are predicted, under either scenario.</p>

Table 5-13: Operational Effects on Southern Uplands with Forest (178) LCT – Dumfries & Galloway

Receptor	178. Southern Uplands with Forest – Dumfries & Galloway (reflects the boundary of the Southern Uplands with Forest (Ken Unit) LCT in the DGWFLCS, to the south of the River Nith)
Description and Sensitivity	<p>The Southern Uplands with Forest LCT is found across large parts of the study area to the south and north-east of the Proposed Development. Southern parts of the Proposed Development are located within this LCT.</p> <p>Key characteristics include:</p> <ul style="list-style-type: none"> • “Large, smooth dome-shaped hills with large scale dark green forests on slopes and over lower summits. • Predominantly simple, gently rolling landform. • Some areas of more complex and smaller-scale landscapes, with steep slopes enclosing heads of valleys and/or where uplands remain open. • Changing landscapes with large scale forestry operations and wind

	<p><i>farm development.</i></p> <ul style="list-style-type: none"> • <i>Forested areas dominated by Sitka Spruce, interspersed with mixed conifers and broadleaf planting, and undergoing felling and replanting in large coupes.</i> • <i>Wind farms are a key characteristic in some areas.</i> • <i>Expansive scale."</i> (SNH, 2019) <p>Wind farms including Sanquhar Community and Whiteside Hill are located within the unit of the LCT to the south. Other wind farms including those within the South-western Group are visible from parts of this LCT in views to the west.</p> <p>There are no Designated Landscapes within this LCT across the study area. The Dumfries and Galloway Wind Farm Landscape Capacity Study (2017) highlights "expansive scale" and "sparsely settled nature", indicating the opportunity to accommodate larger typologies of wind turbine, although the extent of cumulative development increases the sensitivity of these areas.</p> <p>This is a large-scale landscape with a simple landscape pattern. The topographic variety and contribution to skylines is of higher susceptibility. However, the influence of human activity is apparent through prominent areas of forestry and wind farm development.</p> <p>Judgements: Susceptibility: medium; Value: low; Sensitivity: medium-low.</p>
Changes	<p>Three turbines of the Proposed Development will be located within this LCT, on the northern edge of the LCT, to the south of the River Nith. The Proposed Development will theoretically be visible from a relatively small part of the overall LCT, to the north of the host unit of the LCT. A unit of this LCT is also located to the north of Nithsdale, and the ZTV indicates visibility from its southern extents. Areas of coniferous forest cover, whilst these remain in place, will help to reduce actual visibility.</p> <p>The presence of Sandy Knowe and Hare Hill Wind Farm means that wind turbines have already directly altered the host LCT, and influenced areas of the wider LCT to the north and south of Nithsdale. The Proposed Development will introduce turbines along the western edge of the Sandy Knowe Wind Farm, which will slightly extend the influence of turbines on the host LCT unit. The site will change from an area of moorland on the edge of a wind farm to an area of moorland wind turbines. Overall, this is judged to be a large scale of change to the Site area.</p> <p>Beyond the site boundary, the Proposed Development will increase the presence of wind turbines in wider views from areas of the LCT, to the north and south of Nithsdale, where breaks in forest cover offer longer distance views towards the site. This will slightly alter the remote perceptual qualities of this LCT. However, and given that "wind farms are a key characteristic in some areas" and the Proposed Development will generally read as a small extension to Sandy Knowe Wind Farm, this is not judged to result in wider significant effects on landscape character. Furthermore, the presence of Hagshaw Hill Wind Farm, on the western edge of this LCT to the west of the Proposed Development, means that wind farms have already altered the character of this area of the LCT.</p> <p>Judgements: Scale: large to small; Geographical Extent: small overall; Magnitude of Change: high for the Site area and, low for other areas.</p>
Effect and Significance	<p>Significant (moderate) for the site area, Not Significant (Minor) for wider areas of the LCT, in the units to the north and south of Nithsdale.</p>

Cumulative Effects	<p>Turbines within the southern wind farm group are located within this LCT (Sandy Knowe, Hare Hill and Sanquhar Wind Farms).</p> <p>Scenario 1:</p> <p>The key change to the baseline under this scenario will be the presence of Magheuchan Rig (Sanquhar Six), as part of the southern wind farm group, which will introduce additional turbines within the LCT. In addition, Lethans and Glenmuckloch, in the northern wind farm group, will introduce new wind farm development and large turbines (220m and 149.9m respectively) to the north of Nithsdale. These turbines will be visible across the Nith Valley from elevated locations within the LCT, where views are unobstructed by extensive coniferous forestry cover.</p> <p>Scenario 2:</p> <p>Sanquhar II and Eucharhead will notably extend the southern wind farm group and introduce large turbines (200m and 230m blade tip height respectively) within the LCT and in near and middle distance views from it. Additional proposed wind farms visible from the LCT will include Lethans Extension within the northern wind farm group and more distant views towards Kennoxhead Extension and Kennoxhead Extension II in the north-eastern wind farm group.</p> <p>Scenario 1 and 2:</p> <p>The Proposed Development will introduce additional turbines within the LCT, and in views south from this LCT on the adjacent valley side above Nithsdale to the north. The turbines will be seen in the context of the southern wind farm group, including Sandy Knowe, Hare Hill, Sanquhar and Eucharhead,</p> <p>The Proposed Development will slightly increase the influence of wind turbines across the LCT. However, the Proposed Development will read as a small extension to an established and growing wind farm group. Direct effects on the landscape will be localised and, under either cumulative baseline scenario, the additional effects of the Proposed Development will not notably alter the more remote perceptual qualities of this upland landscape.</p> <p>Furthermore, the separation between the northern and southern wind farm groups, apparent in views from the LCT, will remain intact even under the scenario 2 assessment.</p> <p>As such, no significant additional cumulative landscape effects are predicted, under either scenario.</p>
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5.10.5 Effects on Designated Landscapes

The Proposed Development Site is not covered by any landscape designations. However, there are landscape designations within the 40km study area, as listed in Table 5-5 and shown on Figure 5-1-5. This section describes the implications of the Proposed Development for the Southern Uplands SLA within East Ayrshire which is the only designated landscape taken forward for detailed assessment, as outlined in Table 5-5.

Table 5-14: Operational Effects on Southern Uplands SLA

Receptor	Southern Uplands SLA
Description and Sensitivity	The Southern Uplands SLA lies to the west of the Proposed Development Site boundary, within approximately 2km of the proposed turbines at its nearest point. The designation covers upland areas to the north and south of Nithsdale, reaching between

	<p>Carsphairn Forest in the south to the River Ayr Valley in the north.</p> <p>There are no published special qualities for this landscape designation. To the north-east of the Proposed Development the SLA is mainly focussed around Plateau Moorland – Ayrshire (78) LCT. To the south it incorporates land within Upland Glen – Ayrshire (73) LCT, Southern Uplands – Ayrshire (81) LCT and Southern Uplands with Forest – Ayrshire (82) LCT. The Nithsdale unit of the Upland River Valleys – Ayrshire (69) LCT is covered by the SLA to the west of the Proposed Development.</p>
Changes	<p>There will be no direct effects on the landscape features of this SLA. Within 15km, the Proposed Development will be visible from the valley floor and northern valley side of Nithsdale, and then in a more intermittent pattern from upland areas to the north and south of Nithsdale.</p> <p>From the valley floor, localised woodland, vegetation and built form will help reduce actual visibility from lower elevations and limit perceptual landscape effects on the experience of the valley. From the higher northern valley sides, the Proposed Development will introduce further turbines above the enclosing horizon in views to the south-east. However, when visible the Proposed Development will typically be seen in the context of enclosing horizons which have been altered by wind energy development.</p> <p>From more upland areas to the north and south of Nithsdale, views are typically more expansive and have been altered by wind farm development. From the areas with visibility, the Proposed Development will read as small extension to Sandy Knowe Wind Farm, and seen beyond turbines within the operational Hare Hill (and its extension) which has directly altered the eastern edge of the SLA, to the south of Nithsdale. The Proposed Development will not alter the underlying landscape character of this large SLA nor significantly affect the integrity of the designation.</p>
Cumulative Effects	<p>Scenario 1 and 2:</p> <p>Under both scenarios, whilst the Proposed Development will further increase the influence of wind farms just outside this SLA, this will be seen in the context of under construction and operational schemes (Sandy Knowe and Hare Hill) considered in the primary assessment, seen to the north of the larger southern wind farm group. The Proposed Development will read as a small extension to Sandy Knowe, seen in outward views beyond Hare Hill Wind Farm, which has directly altered the SLA on the eastern edges to the south of Nithsdale.</p> <p>In terms of additional cumulative effects, this is not judged to affect the overall integrity of the SLA designation.</p>

5.11 Predicted Operational Visual Effects

The assessment of operational visual effects considers the appearance of the Proposed Development Site, and how it will change existing views. Visual effects are assessed by examining effects on views from settlements, or when travelling through the area (sequential views), and also considering views from static locations (representative viewpoints). The assessment considers the 'maximum case scenario' in terms of visibility, but it is important to note that visibility may be reduced by screening afforded by buildings and woodland, particularly from built-up and lowland areas and also weather conditions. Views from roads and in rural areas are often limited by woodland and

hedgerows. The degree of filtering of views may vary seasonally where trees are deciduous. The likely extent of screening is noted for each assessed effect.

All visual effects are long-term effects and reversible, unless specified otherwise.

5.11.1 Effects on Viewpoints

The potential operational (long-term) effects on views and visual amenity from specific representative viewpoints, as outlined in Table 5-6, are detailed below.

The viewpoint locations are shown on Figure 5.1.2. Visualisation Figures (Figure 5.2.1 to Figure 5.2.17) accompany each viewpoint by means of a photograph of the existing view, a wireframe illustrating the wind farm and associated photomontage.

Table 5-15: Viewpoint 1: A76 at Cairn Bridge

Viewpoint 1: A76 at Cairn Bridge				
Grid Reference	268128	612751	Figure Number	5-2-1
LCT	Upper Dale – Dumfries and Galloway		Landscape designation	N/A
Direction of view	South-east		Distance to nearest turbine	1.48km
Number of hubs theoretically visible	6		Number of turbines with blades theoretically visible	6
Description and Sensitivity	<p>This viewpoint is located on the A76 between Kirkconnel and New Cumnock. The viewpoint represents views experienced by road users travelling east, as they pass the junction with a minor road that provides access to Glen Hall.</p> <p>Existing views towards the Proposed Development Site are to the south-east. The near distance comprises the view along the A76, which cuts across rising terrain to the south of Nithsdale. There are areas of rough grassland, pasture and woodland along Polhote Burn. The undulating lower northern ridge of White Hill contributes to the short distance horizon to the south-east. Turbines in Sandy Knowe are visible above the horizon to the south-east.</p> <p>In wider views the rising terrain and cutting associated with the A76 contains views to the south. Views to the west look back along a short section of the A76. To the north, the view is more open, looking over farmland and areas of woodland in Nithsdale. The moorland covered slopes of hills including Corsencon and Niviston contribute to the middle distance horizon to the north.</p> <p>In terms of value the viewpoint is not located in any designated landscapes, and does not represent a recognised or promoted view. The A76 is a well used route to Dumfries. The influence of human activity is apparent, through forestry, built form and street signage.</p> <p>Judgements: Susceptibility: medium; Value: medium, Sensitivity: medium.</p>			
Changes	<p>Six turbine hubs and six turbine blades will be visible above the skyline, seen at a distance of 1.5km, behind and through deciduous woodland along Polhote Burn in direct sequential views to the south-east. This woodland will provide a greater level of screening during the summer months. The turbines will be seen either side of operational turbines at Sandy Knowe Wind Farm. This will extend the horizontal field of view occupied by turbines in relation to this scheme, seen in views on the horizon to the south-east. No ancillary infrastructure will be visible from this viewpoint.</p> <p>Whilst the Proposed Development will read as an extension to an existing scheme, it</p>			

	<p>will increase the influence of wind turbines in views on the horizon to the south-east, occupying a notable proportion of the view in this direction. The geographical extent of the change is limited to a shorter section of the A76NCN. Roadside vegetation and local undulations in the landform provide a level of screening as road users travel east between New Cumnock and the Proposed Development Site.</p> <p>Judgements: Scale: medium; Geographical Extent: small in the context of fleeting views experienced, when travelling east on the A76; Magnitude of Change: medium.</p>
Effect and Significance	Significant (Moderate)
Cumulative Effects	<p>Scenario 1</p> <p>Under scenario 1 the key change will be the presence of Lethans and Glenmuckloch, as part of the northern wind farm group, which will introduce visibility of turbines on enclosing horizons to the north of Nithsdale, in views to the north-east. The Proposed Development will continue to read as an extension to an existing scheme (Sandy Knowe), seen on the enclosing horizons to the south of Nithsdale, in views to the south-east. Whilst the Proposed Development will extend the horizontal field of view occupied by turbines in relation to Sandy Knowe (under construction) there will be clear separation between the northern wind farm group, and Sandy Knowe and the Proposed Development. These clusters of wind farms will also be seen in successive views. As such, no significant additional cumulative visual effects are predicted, under scenario 1.</p> <p>Scenario 2</p> <p>Euchanhead and Lethans Extension will add some further, relatively limited, additional visibility of turbines seen in the context of the northern and southern wind farm groups. However, the nature of additional cumulative visual effects under scenario 2 will be similar to that considered under scenario 1. As such, no significant additional cumulative visual effects are predicted, under scenario 2.</p>

Table 5-16: Viewpoint 2: Libry Moor Footpath

Viewpoint 2 : Libry Moor Footpath				
Grid Reference	271876	611822	Figure Number	5-2-2
LCT	Upper Dale – Dumfries and Galloway		Landscape designation	N/A
Direction of view	South-west		Distance to nearest turbine	1.64km
Number of hubs theoretically visible	6		Number of turbines with blades theoretically visible	6
Description and Sensitivity	<p>This viewpoint is located on a minor road/footpath just south of Kirkconnel cemetery. The viewpoint represents views experienced by local recreational receptors walking between Kirkconnel and Libry Moor.</p> <p>Existing views towards the site are to the south-west. The near distance comprises the view along the minor road as it travels south towards the conifer plantations around Libry Moor, with a field of pasture below seen beyond a post and wire fence with very occasional hedgerow vegetation. The middle</p>			

	<p>distance of the view is defined by a belt of coniferous forestry on Libry Moor, which screens direct views towards the site. Beyond this forestry, an area of upland plateau around the summit of High Cairn is visible. Turbines within Sandy Knowe Wind Farm are visible above the skyline and occupy a wide horizontal field of view in the view to the south-west. Beyond Sandy Knowe Wind Farm some further wind turbines located on the high ground are visible on the skyline (associated with the operational Hare Hill Wind Farm).</p> <p>In wider views to the west the outlook is more open looking along the Nith Valley and the backdrop of rolling uplands to the north of Nithsdale defines views in this direction.</p> <p>In terms of value, the viewpoint has some scenic rural qualities but is not located in any designated landscapes, and does not represent a recognised or promoted view. The influence of human activity is apparent, through fencing/gates/sheep hurdles, commercial forestry and operational wind turbines.</p> <p>Judgements: Susceptibility: medium; Value: medium, Sensitivity: medium</p>
Changes	<p>Six turbine hubs and six turbine blades will be visible above the skyline, seen at a distance of 1.6km, beyond the forestry plantations of Libry Moor and in front of the more distant turbines of Hare Hill Wind Farm. The turbines will be seen in front of, and behind, operational turbines at Sandy Knowe. This will bring turbines slightly closer to the viewer, and slightly extend the horizontal field of view occupied by turbines in relation to this scheme, as seen from this viewpoint. No ancillary infrastructure will be visible from this viewpoint due to intervening forestry.</p> <p>Whilst the Proposed Development will read as an extension to an existing scheme, it will increase the influence of wind turbines in views on the horizon to the south-west, which currently occupy a notable proportion of the view in this direction.</p> <p>The geographical extent of the change is limited to a short section of the minor road/footpath within approximately 1km of the A76. As the road travels south towards the higher ground of Sandy Knowe, the surrounding forestry plantations of Libry Moor will largely screen views towards the Proposed Development.</p> <p>Judgements: Scale: medium; Geographical Extent: small; Magnitude of Change: medium.</p>
Effect and Significance	<p>Significant (Moderate)</p>
Cumulative Effects	<p>Scenario 1</p> <p>Under scenario 1 the key change will be Lethans and Glenmuckloch, in the northern wind farm group, which will introduce visibility of turbines on enclosing horizons to the north of Nithsdale, in views to the north-west. The Proposed Development will continue to read as an extension to an existing scheme (Sandy Knowe), seen on the enclosing horizons to the south of Nithsdale and in front of Hare Hill and its extension and the consented Macheuchan Rig. Whilst the Proposed Development will extend the horizontal field of view occupied by turbines in relation to Sandy Knowe (under construction) there will be clear separation between the northern wind farm group, and the southern wind farm group. These clusters of wind farms will also be seen in successive views.</p> <p>As such, no significant additional cumulative visual effects are predicted, under scenario 1.</p>

	<p>Scenario 2</p> <p>Lethans Extension (northern wind farm group) and Euchanhead and Sanquhar II (southern wind farm group) will add some further, relatively limited, additional visibility of turbines seen in the context of the north and south wind farm groups. However, the nature of additional cumulative visual effects under scenario 2 will be similar to that considered under scenario 1. As such, no significant additional cumulative visual effects are predicted, under scenario 2.</p>
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Table 5-17: Viewpoint 3: The Knowe

Viewpoint 3: The Knowe				
Grid Reference	271685	612873	Figure Number	5-2-3
LCT	Upper Dale – Dumfries and Galloway		Landscape designation	N/A
Direction of view	South-west		Distance to nearest turbine	2.20km
Number of hubs theoretically visible	6		Number of turbines with blades theoretically visible	6
Description and Sensitivity	<p>This viewpoint is located adjacent to a minor road and track, which heads north-west up the northern side of Nithsdale, immediately west of the Knowe farmstead. The viewpoint represents views experienced by farm workers at the Knowe and scattered residential receptors to the north of Nithsdale.</p> <p>Existing views towards the site are to the south-west. The near distance comprises a complex of gates and fencing either side of a farm access track. The view extends across the broad valley of the River Nith and is largely characterised in the middle distance by pasture and arable fields, hedgerow boundaries, drystone dykes and blocks of coniferous forest and broadleaved woodland. Scattered properties and farmsteads are visible on the southern valley side of the River Nith and distribution powerlines traverse the view on a north-south and east-west axis in the near and middle distance. The enclosing horizon in the far distance is formed by upland plateau (with some areas of coniferous forest cover) between Black Hill and Hare Hill with a number of operational turbines visible across the skyline, including Sandy Knowe on the southern valley side and Sanquhar Community Wind Farm and Hare Hill and Whiteside Wind Farms which are visible beyond and on the horizon.</p> <p>To the east and west, the undulating valley side landform, stone walls, woodland and built form largely contains views along the Nith Valley. To the south, rolling uplands define the horizon above sloping pasture fields and occasional forestry blocks. Distribution overhead lines are also apparent.</p> <p>In terms of value, the viewpoint has some scenic rural qualities but is not located in any designated landscape, and does not represent a recognised or promoted view. The influence of human activity is apparent, through fencing/drystone dykes, built settlement, commercial forestry, distribution overhead lines and operational wind turbines.</p> <p>Judgements: Susceptibility: medium-high; Value: medium; Sensitivity: medium-high</p>			
Changes	Six turbine hubs and six turbine blades will be visible above the skyline, seen at			

	<p>a distance of 2.2km, in front of the more distant turbines at Sanquhar Community Wind Farm and Hare Hill Wind Farm that stretch across the enclosing upland horizon. The turbines will be seen in front and to the west of operational turbines at Sandy Knowe. This will bring turbines slightly closer to the viewer, and slightly extend the horizontal field of view occupied by turbines in relation to this scheme, as seen from this viewpoint. Ancillary infrastructure and access tracks will be visible from this viewpoint, though blocks of coniferous forestry and broadleaved woodland on the valley floor may provide some partial screening.</p> <p>Whilst the Proposed Development will read as an extension to an existing scheme, it will increase the influence of wind turbines in views on the horizon to the south-west, which currently occupy a notable proportion of the view in this direction. The geographical extent of the change will primarily be focused on farmsteads along the minor road which terminates at Lagrae. The view also represents views from the lower lying valley sides to the north of the site from Nithsdale.</p> <p>Judgements: Scale: medium; Geographical Extent: medium; Magnitude of Change: medium</p>
Effect and Significance	Significant (Moderate)
Cumulative Effects	<p>Scenario 1</p> <p>Under scenario 1, the key change will be the presence of Lethans and Glenmuckloch, in the northern wind farm group, which will introduce visibility of turbines on enclosing horizons to the north of Nithsdale, in views to the north-west. Dry stones walls and verge side vegetation will provide a level of screening in this direction of view, from this viewpoint. The Proposed Development will continue to read as an extension to an existing scheme (Sandy Knowe), seen on the enclosing horizons to the south of Nithsdale and in front of wind farms in the southern wind farm group including the consented Macheuchan Rig. The horizontal field of view occupied by the Proposed Development will be contained within the horizontal field of view occupied by the southern wind farm group. There will be clear separation between the northern wind farm group, and the southern wind farm group. These clusters of wind farms will also be seen in successive views. As such, no significant additional cumulative visual effects are predicted, under scenario 1.</p> <p>Scenario 2</p> <p>Lethans Extension (northern wind farm group) and Echanhead and Sanquhar II (southern wind farm group) will add some further additional visibility of turbines seen in the context of the larger north and south wind farm groups. However, the nature of additional cumulative visual effects under scenario 2 will be similar to that considered under scenario 1. As such, no significant additional cumulative visual effects are predicted, under scenario 2.</p>

Table 5-18: Viewpoint 4: Lagrae

Viewpoint 4: Lagrae				
Grid Reference	270865	614065	Figure Number	5-2-4
LCT	Upper Dale – Dumfries and Galloway		Landscape designation	N/A
Direction of view	South		Distance to nearest	2.65km

		turbine	
Number of hubs theoretically visible	6	Number of turbines with blades theoretically visible	6
Description and Sensitivity	<p>This viewpoint is located adjacent to the site office of Glenmuckloch Surface Coalmine, at Lagrae. The viewpoint represents views experienced by workers accessing the works, and from areas within the workings with open views south over Nithsdale.</p> <p>Existing views towards the Proposed Development Site are oriented to the south. The view extends over rough grassland in the near distance, which falls away from the viewpoint. A band of riparian woodland defines the passage of the Lagrae Burn to the south-west and the profile of a wedge-shaped bing (Blue Scar) rises above, partly containing views in this direction. A distribution overhead line is prominent in the near distance, decreasing in scale as it drops downslope towards the valley floor.</p> <p>The view extends over the River Nith valley, which is characterised by rough pasture and small blocks of coniferous forest and broadleaved woodland on the valley floor in the middle distance. The horizon in the far distance is defined by the upland plateau between Black Hill and Hare Hill and the landcover is characterised by large swathes of coniferous forestry and areas of open moorland/ rough grassland. Numerous turbines at Sanquhar Community and Whiteside Hill Wind farm are visible on the skyline to the south-east, while turbines at Hare Hill Wind Farm are partially visible to the south-west, appearing comparatively smaller in scale. Sandy Knowe Wind Farm extends across the skyline on the upper valley side, seen between and in front of these schemes.</p> <p>Views to the west are relatively contained by mine workings, though two small turbines are visible at Glenmuckloch Community Energy Park on higher ground above. To the north, views are foreshortened by a block of coniferous forestry. To the east the view extends along the minor road and is characterised by the open pastoral and wooded valley of the River Nith valley and the uplands around the Lowther Hills in the far distance. Twentyshillling Hill Wind Farm reads as a distinct scheme in longer distance views to the south-east.</p> <p>In terms of value, the viewpoint has some scenic rural qualities, but is not located in any designated landscapes, and does not represent a recognised or promoted view. The influence of human activity is apparent in this working landscape, through fencing/drystone dykes, built settlement, commercial forestry, opencast mine workings, distribution overhead lines and operational wind turbines.</p> <p>Judgements: Susceptibility: medium-low; Value: medium-low, Sensitivity: medium-low</p>		
Changes	<p>The Proposed Development will introduce six turbine hubs and six turbine blades, seen at a distance of 2.7km, in views south across the River Nith valley. Three turbine hubs and all six turbine blades will be visible on the skyline, with towers partially back clothed by coniferous forest/ open moorland on the slopes of White Hill and White Knowe. The Proposed Development will be seen in front of and to the west of operational turbines at Sandy Knowe. This will extend the horizontal field of view occupied by turbines in relation to this scheme, and bring turbines slightly closer to this viewpoint.</p> <p>Whilst the Proposed Development will read as an extension to an existing scheme, it will increase the influence of wind turbines in views on the horizon to</p>		

	<p>the south-west. Due to the lack of intervening landform and screening towards the site from this viewpoint, ancillary infrastructure and access tracks will be visible.</p> <p>The geographical extent of the change will primarily be focused along the minor road which provides access to Glenmuckloch Surface Coalmine and from areas of the workings with open views south over Nithsdale.</p> <p>Judgements: Scale: medium; Geographical Extent: small; Magnitude of Change: medium</p>
Effect and Significance	Minor (not significant) due to the lower sensitivity of viewers at this location
Cumulative Effects	<p>Scenario 1</p> <p>Under scenario 1, the key change will be the presence of Lethans and Glenmuckloch, as part of the northern wind farm group, which will introduce theoretical visibility of turbines on enclosing horizons to the north of Nithsdale, in views to the north-west. However, evergreen vegetation will screen views towards these schemes, from this viewpoint. The Proposed Development will continue to read as an extension to an existing scheme (Sandy Knowe), seen on the enclosing horizons to the south of Nithsdale and in front of wind farms in the southern wind farm group including the consented Macheuchan Rig. The horizontal field of view occupied by the Proposed Development will be contained within the horizontal field of view occupied by the southern wind farm group. There will be clear separation between the northern wind farm group (screened from this location but visible on the approach to the viewpoint) and the southern wind farm group. These clusters of wind farms will also be seen in successive views. As such, no significant additional cumulative visual effects are predicted, under scenario 1.</p> <p>Scenario 2</p> <p>Lethans Extension (northern wind farm group and screened from this location by evergreen vegetation) and Eucharhead and Sanquhar II (southern wind farm group) will add some further additional visibility of turbines seen in the context of the larger north and south wind farm groups. However, the nature of additional cumulative visual effects under scenario 2 will be similar to that considered under scenario 1. As such, no significant additional cumulative visual effects are predicted, under scenario 2.</p>

Table 5-19: Viewpoint 5: St Connel's Church

Viewpoint 5: St Connel's Church				
Grid Reference	272343	614998	Figure Number	5-2-5
LCT	On the boundary between Upper Dale – Dumfries and Galloway and Southern Uplands – Dumfries and Galloway		Landscape designation	N/A
Direction of view	South-west		Distance to nearest turbine	4.42km
Number of hubs theoretically visible	6		Number of turbines with blades theoretically visible	6
Description and	This viewpoint is adjacent to the medieval remains of St Connel's Church and			

<p>Sensitivity</p>	<p>graveyard, located approximately 2.5km north of Kirkconnel at the foot of Kirkland Hill, on the northern valley side above the River Nith. The site is a designated Scheduled Monument. The viewpoint represents views experienced by visitors to the church and recreational receptors using the core path that provides access to it from Kirkconnel.</p> <p>Existing views towards the Proposed Development Site are to the south-west. The near distance comprises large pasture fields with post and wire fencing. The undulating fields are incised by the sloping upper banks of the Steel Sike and the Glenaylmer Burn as they converge to the south-west. In the middle distance a dark band of coniferous forest, including the Milldam Plantation, stretches across the view, with glimpsed views of Glenwharrie Farmstead through surrounding broadleaf trees available to the west. The horizon in the far distance is defined by the upland plateau between Black Hill and Hare Hill and the landcover is characterised by large swathes of coniferous forestry and areas of open moorland/ rough grassland. Numerous turbines at Sanquhar Community Wind Farm and Whiteside Hill are visible on the skyline to the south, while turbines at Hare Hill Wind Farm are partially visible to the south-west, appearing comparatively smaller in scale. Sandy Knowe Wind Farm extends across the skyline on the upper valley side, seen between and in front of these schemes.</p> <p>To the west and north-west, views extend over pasture fields and coniferous forestry to higher ground around Niviston Hill where two small turbines are visible at Glenmuckloch Community Energy Park. To the south-east views are largely foreshortened by rising landform at Vennel farmstead. Twentyshillling Hill Wind Farm is apparent on a section of the distant horizon beyond, to the south-east. To the north-east the bulk of Kirkland Hill dominates the view.</p> <p>In terms of value, the viewpoint is not in any designated landscapes, and does not represent a recognised or promoted view. It does however possess scenic rural qualities and is associated with the designated Scheduled Monument of St Connel's Church and Graveyard (with associated interpretive signage), and is representative of open higher views from the Kirkconnell Heritage Trail, which increases its value. The influence of human activity is apparent in the landscape through fencing and livestock, built settlement, commercial forestry and operational wind turbines in the far distance.</p> <p>Judgements: Susceptibility: medium-high; Value: medium-high, Sensitivity: medium-high</p>
<p>Changes</p>	<p>The Proposed Development will introduce six turbine hubs and six turbine blades, seen at a distance of 4.4km, in views south-west across the River Nith valley. Three turbine hubs and five turbine blades will be visible on the distant skyline, with towers partially back clothed by coniferous forest/ open moorland on the slopes of White Hill, White Knowe and High Cairn. The Proposed Development will be seen centrally and to the west of operational turbines at Sandy Knowe. This will slightly extend the horizontal field of view occupied by turbines in relation to this scheme, and bring turbines slightly closer to this viewpoint.</p> <p>Whilst the Proposed Development will read as an extension to an existing scheme, it will increase the influence of wind turbines in views on the horizon to the south-west. The band of coniferous forestry in the middle distance of this viewpoint will provide some partial screening of the Proposed Development, though some ancillary infrastructure and access tracks will be visible above</p>

	<p>the forest treeline.</p> <p>The geographical extent of the change will primarily be focused at St Connel's Church and along sections of the minor road/core path that provides access to it from Kirkland. It will also extend to the walking path adjacent to the Glenaylmer Burn that provides access to hill summits above such as Kirkland Hill and Todholes Hill.</p> <p>Judgements: Scale: medium; Geographical Extent: medium-high; Magnitude of Change: medium</p>
Effect and Significance	Moderate (significant)
Cumulative Effects	<p>Scenario 1</p> <p>Under scenario 1, the key change will be the presence of Lethans and Glenmuckloch, as part of the northern wind farm group, which will introduce visibility of turbines on enclosing horizons to the north of Nithsdale, in views to the north-west. The Proposed Development will continue to read as an extension to an existing scheme (Sandy Knowe), seen on the enclosing horizons to the south of Nithsdale and in front of wind farms in the southern wind farm group including the consented Macheuchan Rig. Some limited and distant visibility of Enoch Hill (consented) will be apparent in views to the south-west. The horizontal field of view occupied by the Proposed Development will be contained within the horizontal field of view occupied by the southern wind farm group. There will be clear separation between the northern wind farm group and the southern wind farm group. These clusters of wind farms will also be seen in successive views. As such, no significant additional cumulative visual effects are predicted, under scenario 1.</p> <p>Scenario 2</p> <p>Euchanhead and Sanquhar II (southern wind farm group) will add some further additional visibility of turbines seen in the context of the larger south wind farm groups. However, the nature of additional cumulative visual effects under scenario 2 will be similar to that considered under scenario 1. As such, no significant additional cumulative visual effects are predicted, under scenario 2.</p>

Table 5-20: Viewpoint 6: Kirkconnel

Viewpoint 6: Kirkconnel				
Grid Reference	272812	612217	Figure Number	5-2-6
LCT	Upper Dale – Dumfries and Galloway		Landscape designation	N/A
Direction of view	South-west		Distance to nearest turbine	2.65km
Number of hubs theoretically visible	6		Number of turbines with blades theoretically visible	6
Description and Sensitivity	This viewpoint is located in a small memorial garden at the western edge of the settlement of Kirkconnel. The viewpoint represents views experienced from the western edge of the settlement of Kirkconnel and by visitors to the memorial garden. Views from within the core of the settlement tend to be screened by local built form.			

	<p>Located at the edge of the memorial garden, the near distances comprises grasses, wildflowers and other vegetation. In the middle distance the banks of the River Nith are visible with rough pasture fields, intermittent hedgerows and scattered broadleaved trees. A ribbon of broadleaved forestry is visible to the north-west, located between the River Nith and the A76. A thin band of coniferous forestry separates the middle and far distance, which is defined by the uplands of Hart Hill and landcover of coniferous forestry and open moorland.</p> <p>A small number of turbine hubs and blades at Sanquhar Community Wind Farm are visible above the forestry line to the south and turbines in Hare Hill Wind Farm are visible on the skyline to the south-west. Sandy Knowe Wind Farm extends across the skyline on the upper valley side, seen between and in front of these schemes. Wider views are largely contained by vegetation in the memorial garden and built settlement in Kirkconnel.</p> <p>In terms of value, the viewpoint is not in any designated landscapes, and does not represent a recognised or promoted view. It does however possess scenic rural qualities and is within a memorial/recreational space. The influence of human activity is apparent in the landscape through field pattern, commercial forestry and operational wind turbines in the far distance.</p> <p>Judgements: Susceptibility: medium-high; Value: medium-high, Sensitivity: medium-high</p>
Changes	<p>The Proposed Development will introduce six turbine hubs and six turbine blades, seen at a distance of 2.7km, in views south-west along the River Nith valley. Six turbine hubs and six turbine blades will be visible on the distant skyline, with towers partially back clothed by coniferous forest/ open moorland on the slopes of White Hill, White Knowe and High Cairn. The Proposed Development will be seen to the front, behind and slightly to the north of operational turbines at Sandy Knowe Wind Farm. This will slightly extend the horizontal field of view occupied by turbines in relation to this scheme, and bring turbines marginally closer to this viewpoint. However, due to the viewing angle changes will largely be contained within the horizontal field of view occupied by turbines in Sandy Knowe. As such, the Proposed Development will result in a small change upon the rural qualities of the view and occupy a small proportion of the available view.</p> <p>The coniferous forestry in the middle distance of this viewpoint will provide some partial screening of the Proposed Development and lower level ancillary infrastructure though some access tracks may be visible above the forest treeline.</p> <p>The geographical extent of the change will primarily be within the memorial garden and a limited geographical area at the western edge of Kirkconnel, where sightlines are available.</p> <p>Judgements: Scale: medium-low; Geographical Extent: small; Magnitude of Change: low.</p>
Effect and Significance	<p>Minor (not significant). Due to the viewing angle the proposed turbines will largely be contained within the horizontal field of view occupied by turbines in Sandy Knowe, with the change in view harder to discern.</p>
Cumulative Effects	<p>Scenario 1 and 2</p> <p>Under both scenarios visibility of further consented and proposed wind farms is relatively limited, and when visible seen in the context of the existing southern wind farm group. The Proposed Development will continue to read as an</p>

	<p>extension to an existing scheme (Sandy Knowe) on the northern edge of the southern wind farm group, seen on the enclosing horizons to the south of Nithsdale, in views to the south-west. Given the relatively limited changes to the cumulative baseline, from this viewpoint, no significant additional cumulative effects are predicted, under either scenario.</p>
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Table 5-21: Viewpoint 7: Kirkland Hill

Viewpoint 7: Kirkland Hill				
Grid Reference	272808	615994	Figure Number	5-2-7
LCT	Southern Uplands – Dumfries and Galloway		Landscape designation	N/A
Direction of view	South-west		Distance to nearest turbine	5.52km
Number of hubs theoretically visible	6		Number of turbines with blades theoretically visible	6
Description and Sensitivity	<p>This viewpoint is located on the summit of Kirkland Hill (507 AOD), located approximately 3.5km to the north of Kirkconnel. The viewpoint represents views experienced by recreational receptors on the hill summit.</p> <p>The foreground of views south-west, towards the site, extends over the flanks of Kirkland Hill and the farmstead of Kirkland below, to the settled valley of Nithsdale in the middle distance. A network of pasture/arable fields and scattered farmsteads are visible between large geometric blocks of coniferous forestry on the valley floor and sides. To the south the incised landform of the Polbower Burn is visible as it flows towards Kirkconnel in the middle distance. In the middle distance to the west, the workings of the Glenmuckloch Surface Coalmine at Lagrae are visible, as are two small turbines at Glenmuckloch Community Energy Park on higher ground above. The far distance comprises the broad upland area to the south of Nithsdale with landcover characterised by large forestry blocks, open moorland and rough grassland. Numerous wind turbines extend across the skyline, including Whiteside Hill, Sanquhar Community and Hare Hill Wind Farm with further schemes apparent beyond. Sandy Knowe Wind Farm extends across the higher valley sides of Nithsdale, seen below and between these schemes. The larger peaks of Blackcraig Hill and Blacklorg Hill are prominent above Hare Hill Wind Farm.</p> <p>In an arc between the north-west and south-east, the view is predominantly one of undulating rounded hills of open moorland, with the communications mast on neighbouring Todholes Hill (481 AOD) visible. Numerous operational wind farms are visible in longer distance views.</p> <p>In terms of value, the viewpoint is not in any designated landscapes, and does not represent a recognised or promoted view. It does however possess scenic rural qualities and is located on a recreational hill summit. The influence of human activity is apparent in the landscape through opencast mine workings, field patterns, extensive commercial forestry and operational wind turbines seen across the skyline.</p> <p>Judgements: Susceptibility: medium-high; Value: medium, Sensitivity: medium</p>			
Changes	<p>The Proposed Development will introduce six turbine hubs and six turbine blades, seen at a distance of 5.5km, in views south-west across the River Nith</p>			

	<p>valley. Six turbine hubs and six turbine blades will be visible below the skyline against a back cloth of coniferous forest/open moorland on the slopes of White Hill, White Knowe and High Cairn. The Proposed Development will be seen to the front and to the north-west of operational turbines at Sandy Knowe. From this viewpoint the Proposed Development will extend the horizontal field of view occupied by turbines in relation to this scheme (T25-T28), and bring turbines marginally closer to this viewpoint (T29 and T30).</p> <p>Whilst the Proposed Development will read as an extension to an existing scheme, it will increase the influence of wind turbines in views to the south-west. Due to the elevated nature of the viewpoint and the proximity of the turbines (between 6km-8km) ancillary infrastructure and access tracks will be visible. The Proposed Development will occupy a relatively small proportion of the available panoramic view, and the change to this view will affect a relatively limited geographical area around the viewpoint location and neighbouring (more accessible) hills on the core path network on the northern side of Nithsdale.</p> <p>Judgements: Scale: medium; Geographical Extent: medium; Magnitude of Change: medium</p>
Effect and Significance	Moderate (significant)
Cumulative Effects	<p>Scenario 1 and 2</p> <p>Due to the elevated, open and panoramic nature of this viewpoint under both scenarios consented and proposed wind farms would increase the influence of turbines seen in multiple viewing directions. Under both scenarios the Proposed Development will read as an extension to an existing wind farm (Sandy Knowe) seen in front of the larger southern wind farm group to the south of Nithsdale. The proposed turbines will be contained within the horizontal field of view occupied by turbines in the southern wind farm group. Furthermore, turbines in the northern wind farm group are most likely to draw the eye, from this viewpoint. As such, additional cumulative effects are not considered to be significant.</p> <p>In terms of total cumulative effects, wind farms occupy a large proportion of the view to the north, west and south and effects are considered to be significant. However, this would be the case without the Proposed Development in place, which makes a relatively limited contribution to the overall cumulative picture.</p>

Table 5-22: Viewpoint 8: Sanquhar

Viewpoint 8: Sanquhar				
Grid Reference	277893	610168	Figure Number	5-2-8
LCT	Upper Dale – Dumfries and Galloway		Landscape designation	N/A
Direction of view	West		Distance to nearest turbine	7.48km
Number of hubs theoretically visible	6		Number of turbines with blades theoretically visible	6
Description and	This viewpoint is located in the churchyard of St Bride's Parish Church on the			

Sensitivity	<p>western edge of Sanquhar. The viewpoint is slightly elevated above built form in the settlement, to the south of the viewpoint. The viewpoint represents views experienced from the western edge of the settlement.</p> <p>Existing views towards the Proposed Development Site are to the west. The foreground comprises the church graveyard which slopes down towards street level and the adjacent Sanquhar Academy Playing Field and Lorimer Park, either side of the intermittently tree-lined A76. Streetlights, floodlights and other built form are prevalent in the near distance. The middle distance is more rural in nature as the landform rises to the south of the River Nith, characterised by well-defined drystone dykes/pasture fields, belts of broadleaved woodland and blocks of coniferous. In the far distance, the upland plateau between Black Hill and Hare Hill is visible. Multiple wind turbines are visible on this high ground, at Whiteside Hill, Sanquhar Community Wind Farm and more distantly, at Hare Hill. Sandy Knowe Wind Farm is also visible across the higher valley sides of Nithsdale, seen below and north of Hare Hill. To the north and east the view is foreshortened by built form, while to the south the view is glimpsed between church yard vegetation, looking across the River Nith valley to the surrounding rolling uplands.</p> <p>In terms of value, the viewpoint is not in any designated landscape, and does not represent a recognised or promoted view. It does however possess some scenic rural qualities from the middle distance onwards, from a historical vantage point at the edge of the settlement. Outside the townscape of Sanquhar, the influence of human activity is apparent in the landscape through well-defined drystone dykes and pasture fields, extensive commercial forestry and operational wind turbines across the skyline.</p> <p>Judgements: Susceptibility: medium; Value: medium, Sensitivity: medium</p>
Changes	<p>The Proposed Development will introduce six turbine hubs and six turbine blades, seen at a distance of 7.5km, in views west along the River Nith valley. Six turbine hubs and six turbine blades will be visible above the skyline, with broadleaved woodland in the middle distance playing a partial screening role. The Proposed Development will be seen in front (T29 and T30), and behind (T25-T28), existing turbines at Sandy Knowe, and contained within the horizontal field of view occupied by turbines in this scheme. As such, from this viewpoint the Proposed Development will read as a subtle extension to Sandy Knowe and represent a small scale change in the available view. The geographical extent of the change will be limited to the western fringes of Sanquhar, with built form obscuring views further within the settlement. Due to the lower elevation of the viewpoint in relation to the site and intervening landform and landcover, no ancillary infrastructure will be visible.</p> <p>Judgements: Scale: small; Geographical Extent: small; Magnitude of Change: low.</p>
Effect and Significance	<p>Minor (not significant)</p>
Cumulative Effects	<p>Scenario 1</p> <p>Under scenario 1 the key change will be the presence of Lethans and Glenmuckloch, as part of the northern wind farm group, which will introduce visibility of turbines on enclosing horizons to the north of Nithsdale, in views to the north-west. The Proposed Development will continue to read as an extension to an existing scheme (Sandy Knowe), seen on the enclosing</p>

	<p>horizons to the south of Nithsdale and to the north of wind farms in the southern wind farm group including the consented Macheuchan Rig. The horizontal field of view occupied by the Proposed Development will be contained within the horizontal field of view occupied by the southern wind farm group. There will be clear separation between the northern wind farm group and the southern wind farm group, seen in combined views to the west.</p> <p>As such, no significant additional cumulative visual effects are predicted, under scenario 1.</p> <p>Scenario 2</p> <p>Euchanhead and Sanquhar II (southern wind farm group) will add further additional visibility of turbines seen in the context of the larger southern wind farm group. However, the nature of additional cumulative visual effects under scenario 2 will be similar to that considered under scenario 1 (with the Proposed Development contained within the horizontal field of view of an existing wind farm). As such, no significant additional cumulative visual effects are predicted, under scenario 2.</p>
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Table 5-23: Viewpoint 9: Southern Upland Way, north-east approach to Sanquhar

Viewpoint 9: Southern Upland Way, north-east approach to Sanquhar				
Grid Reference	278258	610338	Figure Number	5-2-9
LCT	Upper Dale – Dumfries and Galloway		Landscape designation	N/A
Direction of view	West		Distance to nearest turbine	8.32km
Number of hubs theoretically visible	6		Number of turbines with blades theoretically visible	6
Description and Sensitivity	<p>This viewpoint is located approximately 500m to the north-east of Sanquhar at the top of Cow's Wynd, on the SUW. The viewpoint represents views experienced by recreational receptors travelling south-west along the long-distance route, on the descent into Sanquhar.</p> <p>Existing views towards the Proposed Development Site are to the west, along the open expanse of the River Nith valley. The near distance comprises a rough pasture field bounded by a post and wire fence and drystone dyke. The field is bound by a wide footpath to the north, fringed by wild grasses. The settlement of Sanquhar is seen below, to the south-west. The middle distance comprises the settled river valley of Nithsdale, characterised by a mosaic of pasture/arable fields delineated by drystone dykes. Woodland cover is extensive with blocks of coniferous forest and broadleaved/ riparian woodland along the course of the River Nith. To the north of the River Nith, three large, grey coloured bings at Sunnyside Workings are visible above surrounding woodland and two wind turbines at Sunnyside Wind Cluster are visible on the hillside above. The communication mast at the summit of Todholes Hill is visible on the skyline beyond, approximately 6km to the north-west.</p> <p>The settlement of Kirkconnel is visible in the far distance, occupying the flat valley floor. Broad rolling uplands rise above the settled valley to the north-west, with the two turbines of Glenmuckloch Community Energy Park visible below Niviston Hill. To the south of Nithsdale, the upland plateau extends</p>			

	<p>between Whiteside Hill, Black Hill, and Hare Hill, characterised by coniferous forestry blocks and open moorland. A wide band of wind turbines is visible on the skyline above, including Whiteside Hill Wind Farm, Sanquhar Community Wind Farm and Hare Hill Wind Farm (which utilises a comparably smaller scale of turbine). Sandy Knowe Wind Farm is also visible on the upper valley side of Nithsdale, seen in views to the south-west below and north of Hare Hill.</p> <p>Wider views to the north and east are largely foreshortened by the surrounding hillside, though the expanse of the River Nith valley to the east can be inferred in the far distance.</p> <p>In terms of value, the viewpoint is not in any designated landscape, and does not represent a recognised or promoted view. It does however possess scenic rural qualities and an expansive view along Upper Nithsdale to the west. It is also located on the SUW, a long-distance route, which increases its value. The influence of human activity is apparent in the landscape through opencast mine workings, field patterns, built settlement, extensive commercial forestry and operational wind turbines across the skyline</p> <p>Judgements: Susceptibility: medium; Value: medium-high, Sensitivity: medium</p>
Changes	<p>The Proposed Development will introduce six turbine hubs and six turbine blades, at a distance of 8.3km, in views west along the River Nith valley. Three turbine hubs and all six turbine blades will be visible above the distant skyline with towers partially back clothed by coniferous forest/ open moorland on the slopes of White Hill and High Cairn. The Proposed Development will be seen in front (T29 and T30), and behind (T25-T28), existing turbines at Sandy Knowe, and contained within the horizontal field of view occupied by turbines in this scheme. As such, from this viewpoint the Proposed Development will read as a sympathetic extension to Sandy Knowe and represent a small scale change in the view. Due to the elevated position of the viewpoint, access tracks and any larger scale ancillary infrastructure will be visible (but harder to discern at this distance). The Proposed Development will not notably alter the rural qualities of the view. The geographical extent of the change will primarily be focused along the SUW, from a short section of the route as it descends into Sanquhar.</p> <p>Judgements: Scale: small; Geographical Extent: medium-small; Magnitude of Change: low.</p>
Effect and Significance	<p>Minor (not significant)</p>
Cumulative Effects	<p>Scenario 1</p> <p>Under scenario 1, the key change will be the presence of Lethans and Glenmuckloch, as part of the northern wind farm group, which will introduce visibility of turbines on enclosing horizons to the north of Nithsdale, in views to the north-west. The Proposed Development will continue to read as an extension to an existing scheme (Sandy Knowe), seen on the enclosing horizons to the south of Nithsdale and to the north of wind farms in the southern wind farm group including the consented Macheuchan Rig. The horizontal field of view occupied by the Proposed Development will be contained within the horizontal field of view occupied by the southern wind farm group. There will be clear separation between the northern wind farm group and the southern wind farm group, seen in combined views to the west.</p> <p>As such, no significant additional cumulative visual effects are predicted,</p>

	<p>under scenario 1.</p> <p>Scenario 2</p> <p>Euchanhead and Sanquhar II (southern wind farm group) will add further additional visibility of turbines seen in the context of the larger southern wind farm group. Greenburn (western wind farm group) will add further visibility of distant turbines on the skyline looking west along Nithsdale, somewhat reducing the separation between the northern and southern wind farm groups in scenario 1. The Proposed Development will be contained within the horizontal field of view of Sandy Knowe. As such, no significant additional cumulative visual effects are predicted, under scenario 2.</p>
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Table 5-24: Viewpoint 10: Crawick Artland

Viewpoint 10: Crawick Artland				
Grid Reference	277639	611836	Figure Number	5-2-10
LCT	Upper Dale – Dumfries and Galloway		Landscape designation	N/A
Direction of view	West		Distance to nearest turbine	7.23km
Number of hubs theoretically visible	6		Number of turbines with blades theoretically visible	6
Description and Sensitivity	<p>This viewpoint is located at Crawick Multiverse, a landscaped art installation on the site of a former opencast coal mine at Crawick, approximately 1.5km north of Sanquhar. The viewpoint represents views experienced by recreational receptors at a high point visiting the attraction.</p> <p>Existing views towards the Proposed Development Site are to the west. The near distance comprises the western edge of the Crawick Multiverse, with the foot of a sculpted slope and a line of arranged stonework visible. Bushy vegetation and a line of broadleaved trees at the edge of the attraction are apparent. Beyond this, in the middle distance the view extends over rising landform either side of the River Nith. The landcover is characterised by a mosaic of rough grassland and pasture/ arable fields delineated by drystone dykes and post and wire fencing. Broadleaved trees are visible along field boundaries and watercourses as well as the more geometric shapes of conifer plantations which tend to be located on the higher valley sides. The large shale bings at Sunnyside Workings rise above surrounding woodland and the two turbines of Sunnyside Wind Cluster are visible on the hillside above. A few distribution overhead lines are also apparent in the middle distance as they traverse the Nith valley. The settlement of Kirkconnel is distinct in the middle/far distance on the flat valley floor. The far distance is characterised primarily by the upland plateau to the south of Nithsdale, between Whiteside Hill, Black Hill and High Cairn. Landcover comprises open moorland/ rough grassland and large conifer plantations. Wind turbines extend across the skyline of this upland plateau, at Sanquhar Community Wind Farm and (at a comparatively smaller scale) Hare Hill Wind Farm. Sandy Knowe Wind Farm is also visible across the higher valley sides of Nithsdale, seen below and north of Hare Hill.</p> <p>In wider views to the north, the view is of the broad sloping hillsides of Black Hill, and the more distant Lowther Hills are visible to the east. To the south the view extends over the open expanse of the River Nith Valley to the uplands</p>			

	<p>beyond.</p> <p>In terms of value, the viewpoint is not in any designated landscape. It does however possess scenic rural qualities and is within a promoted landscaped visitor attraction, which increases its value. The influence of human activity is apparent in the landscape through opencast mine workings, field patterns, built settlement, commercial forestry and operational wind turbines across the skyline</p> <p>Judgements: Susceptibility: medium-high; Value: medium-high, Sensitivity: medium-high.</p>
Changes	<p>The Proposed Development will introduce six turbine hubs and six turbine blades, at a distance of 7.2km, in views west along the River Nith valley. One turbine hub and four turbine blades will be visible above the distant skyline with towers partially back clothed by coniferous forest/ open moorland on the slopes of White Hill and High Cairn. The Proposed Development will be seen in front (T29 and T30), and behind (T25-T28), existing turbines at Sandy Knowe, and contained within the horizontal field of view occupied by turbines in this scheme. As such, from this viewpoint, the Proposed Development will read as a subtle extension to Sandy Knowe and represent a small scale change in the view. Due to the elevated position of the viewpoint access tracks and any larger scale ancillary infrastructure will be visible (though harder to discern at this viewing distance). The Proposed Development will not notably alter the rural qualities of the view. The geographical extent of the change will primarily be focused on the visitor attraction of Crawick Multiverse, from areas of higher ground with open views west over Nithsdale.</p> <p>Judgements: Scale: small; Geographical Extent: small; Magnitude of Change: low.</p>
Effect and Significance	<p>Minor (not significant)</p>
Cumulative Effects	<p>Scenario 1</p> <p>Under scenario 1, Lethans and Glenmuckloch will form part of the northern wind farm group, which will introduce visibility of turbines on enclosing horizons to the north of Nithsdale, in views to the north-west. The clear separation between the northern wind farm group and the southern wind farm group will be reduced due to the visibility of distant turbines at the consented North Kyle (west wind farm group) on the skyline looking west along Nithsdale. The Proposed Development will continue to read as an extension to an existing scheme (Sandy Knowe), seen on the enclosing horizons to the south of Nithsdale and to the north of wind farms in the southern wind farm group, including the consented Macheuchan Rig. The horizontal field of view occupied by the Proposed Development will be contained within the horizontal field of view occupied by the southern wind farm group. As such, no significant additional cumulative visual effects are predicted, under scenario 1.</p> <p>Scenario 2</p> <p>Euchanhead and Sanquhar II will add further visibility of turbines seen in the context of the larger southern wind farm group. Greenburn (western wind farm group) will be seen in front and to the north of North Kyle adding further visibility of turbines on the skyline looking west along Nithsdale, reducing the</p>

	separation between the northern and southern wind farm groups in scenario 1. The Proposed Development will be contained within the horizontal field of view of Sandy Knowe Wind Farm. As such, no significant additional cumulative visual effects are predicted, under scenario 2.
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Table 5-25: Viewpoint 11: East Mount Lowther

Viewpoint 11: East Mount Lowther				
Grid Reference	287855	609992	Figure Number	5-2-11
LCT	Southern Uplands - Dumfries & Galloway		Landscape designation	N/A
Direction of view	West		Distance to nearest turbine	14.42km
Number of hubs theoretically visible	6		Number of turbines with blades theoretically visible	6
Description and Sensitivity	<p>This viewpoint is located on the summit of East Mount Lowther (631 AOD), located approximately 9km east of Sanquhar, in the Lowther Hills. The viewpoint represents views experienced by recreational receptors at the hill summit, which is a promoted OS viewpoint.</p> <p>Existing views towards the Proposed Development Site are to the west. The near distance comprises the broad, grassy summit plateau of East Mount Lowther, beyond which lower hill summits are visible. The middle distance to the west is focused on the open expanse of Upper Nithsdale, which from this distance appears as a mosaic of arable and pasture fields. Small blocks of broadleaved woodland on the valley floor with large coniferous forests on the higher valley sides are characteristic. On the rolling uplands above Nithsdale, to the south-west, wind turbines stretch across the horizon and include Whiteside Hill Wind Farm, Sanquhar Community Wind Farm and Hare Hill Wind Farm (partially back clothed by higher summits in the Carsphairn and Scaur Hills in the far distance). On these more distant hills, turbines at Afton Wind Farm are visible, approximately 25km to the south-west. Sandy Knowe Wind Farm is visible on the higher valley side above Nithsdale, seen below and to the north of Hare Hill. The uplands to the north of Nithsdale appear comparatively less developed aside from the communications mast on Todholes Hill and distant turbine blades on the skyline to the north-west.</p> <p>Wider views to the east extend over the Lowther Hills, with the summit of Lowther Hill and its communications infrastructure providing a focal point. To the south the view extends along the valley into Lower Nithsdale.</p> <p>In terms of value, this is a promoted OS viewpoint, which indicates a higher value. There are man-made elements in the view, including coniferous forestry, wind farm development and the nearby radar infrastructure at Lowther Hill, which increase the influence of human activity over the view.</p> <p>Judgements: Susceptibility: medium-high; Value: high; Sensitivity: medium-high.</p>			
Changes	<p>The Proposed Development will introduce six turbine hubs and six turbine blades, at a distance of 14.4km, in views west along the River Nith valley. The turbines will be largely backclothed against the open moorland and coniferous forest of the site and surrounding hills. The Proposed Development will be seen in front (T29 and T30), and behind (T25-T28), existing turbines at</p>			

	<p>Sandy Knowe, and contained within the horizontal field of view occupied by turbines in this scheme. As such, from this viewpoint the Proposed Development will read as a sympathetic extension to Sandy Knowe and represent a small scale change in the view. Due to the elevated position of the viewpoint, access tracks and any larger scale ancillary infrastructure will be visible (though harder to discern at this viewing distance). The Proposed Development will not alter the rural qualities of this promoted viewpoint, reading as a small extension to an existing wind farm (as opposed to introducing a new wind farm into part of the view). The geographical extent of the change will extend to surrounding hill summits in the western reaches of the Lowther Hills.</p> <p>Judgements: Scale: small; Geographical Extent: medium; Magnitude of Change: low.</p>
Effect and Significance	Minor (not significant)
Cumulative Effects	<p>Scenario 1 and 2</p> <p>Due to the elevated, open and panoramic nature of this viewpoint, under both scenarios consented and proposed wind farms would increase the influence of distant turbines to the north, west and south. Under both scenarios the Proposed Development will read as an extension to an existing wind farm (Sandy Knowe) seen in front of the larger southern wind farm group to the south of Nithsdale. The proposed turbines will be contained within the horizontal field of view occupied by turbines in the southern wind farm group and will be backclothed against the open moorland/ rough grassland and large conifer plantations of White Hill. Furthermore, the larger scale turbines in the northern wind farm group visible on the skyline to the north and south of Nithsdale are most likely to draw the eye, from this viewpoint. As such, additional cumulative effects are not considered to be significant.</p> <p>In terms of total cumulative effects, wind farms occupy a large proportion of the view to the north, west and south and effects are considered to be significant. However, this would be the case without the Proposed Development in place, which makes a relatively limited contribution to the overall cumulative picture.</p>

Table 5-26: Viewpoint 12: Blackcraig Hill

Viewpoint 12: Blackcraig Hill				
Grid Reference	264804	606506	Figure Number	5-2-12
LCT	Southern Uplands - Ayrshire		Landscape designation	East Ayrshire SLA
Direction of view	North-east		Distance to nearest turbine	5.10km
Number of hubs theoretically visible	5		Number of turbines with blades theoretically visible	6
Description and Sensitivity	This viewpoint is located on the summit of Blackcraig Hill (700m AOD), approximately 6.5km south-east of the settlement of New Cumnock. The viewpoint represents views experienced by recreational receptors at the hill			

	<p>summit.</p> <p>Existing views towards the Proposed Development Site are to the north-east. The summit plateau of Blackcraig Hill and its rocky outcrops comprise the immediate foreground of the view. Just beyond in the near distance, turbines at Sanquhar Community Wind Farm and Hare Hill Wind Farm are visible on the lower hill summits of Black Hill and Hare Hill. There are areas of coniferous forestry blocks between the two schemes, which are separated by the Kello Water valley. The middle distance comprises of the River Nith valley and broad uplands beyond, with the Lowther Hills containing the horizon to the east. In the far distance, more elevated Southern Upland hill summits such as Broad Law can be seen, foregrounded by numerous wind turbine clusters at Hagshaw Hill, Andershaw, Middle Muir and Clyde Wind Farms in a narrow band, north to south.</p> <p>In wider 360 degree views to the south-east and south-west long distance views are available across the Carsphairn and Scour Hills, and to the north-east the flat agricultural basin of East Ayrshire extends into the far distance below the summit plateau.</p> <p>In terms of value, the viewpoint is located within the East Ayrshire SLA, providing a moderately scenic outlook with extensive and panoramic views from the summit. However, there are numerous man-made elements in the view, including coniferous forestry, extensive wind farm development and radar infrastructure at Lowther Hill to the north-east, which increase the influence of human activity over the view.</p> <p>Judgements: Susceptibility: medium; Value: medium; Sensitivity: medium.</p>
Changes	<p>The Proposed Development will introduce five turbine hubs and six turbine blades, at a distance of 5.1km, in views north-east towards Nithsdale. The turbines will appear behind and at a lower elevation than existing turbines at Hare Hill Wind Farm and will be backclothed against the open moorland and coniferous forest to the north of Nithsdale.</p> <p>The hubs and blades of T29 and T30 will be visible, though seen behind existing turbines at Sandy Knowe Wind Farm. T25-T28 will be at a similar elevation to turbines on the southern edge of Sandy Knowe, though decreasing in scale downslope to the north-west with three turbine hubs and four turbine blades visible. While broadly reading as an extension to Sandy Knowe Wind Farm (seen beyond operational turbines in Hare Hill), T25-T28 will slightly extend the field of view occupied by turbines to the west. No ancillary infrastructure will be visible due to intervening landform. The Proposed Development will have a small effect upon the rural qualities of the view and will be seen in the context of existing man-made elements in the landscape. The geographical extent of the change will be focused primarily on the summit of Blackcraig Hill which is most often climbed from Glen Afton to the west, as well as neighbouring hilltops to the south.</p> <p>Judgements: Scale: small-medium; Geographical Extent: small; Magnitude of Change: low.</p>
Effect and Significance	Minor (not significant)
Cumulative Effects	<p>Scenario 1 and 2</p> <p>Due to the elevated, open and panoramic nature of this viewpoint, under both scenarios consented and proposed wind farms would increase the</p>

	<p>influence of turbines in multiple viewing directions. Under both scenarios the Proposed Development will read as an extension to an existing wind farm (Sandy Knowe) seen to the north (and behind) Hare Hill Wind Farm and the larger southern wind farm group. The proposed turbines will be contained in the horizontal field of view occupied by turbines in the southern wind farm group and will be back clothed against the open moorland/ rough grassland of upland to the north of Nithsdale. Furthermore, the more proximate turbines of Eucharhead and Sanquhar II in the southern wind farm group to the south-east are most likely to draw the eye from this viewpoint. As such, additional cumulative effects are not considered to be significant.</p> <p>In terms of total cumulative effects, wind farms occupy a large proportion of the view in multiple directions and effects are considered to be significant.</p> <p>However, this would be the case without the Proposed Development in place, which makes a relatively limited contribution to the overall cumulative picture.</p>
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Table 5-27: Viewpoint 13: New Cumnock

Viewpoint 13: New Cumnock				
Grid Reference	261929	614169	Figure Number	5-2-13
LCT	Upland Basin - Ayrshire		Landscape designation	East Ayrshire SLA
Direction of view	South-east		Distance to nearest turbine	7.14km
Number of hubs theoretically visible	2		Number of turbines with blades theoretically visible	6
Description and Sensitivity	<p>This viewpoint is located to the north of New Cumnock. The viewpoint represents views experienced from northern parts of the settlement with open views south-east along Nithsdale. The view is taken from a slightly elevated vantage point at a bridge over the railway, near the entrance to New Cumnock train station.</p> <p>Existing views towards the Proposed Development Site are to the south-east. The immediate foreground consists of the A76 and an adjacent traffic barrier. The River Nith valley forms the near and middle ground of views, with long grasses and wildflowers occupying the flat river basin in the foreground. A distribution overhead line can be seen on the valley bottom, back clothed by woodland. Broadleaved trees are located along the course of the River Nith with shelterbelts on higher ground in the middle distance, alongside pasture fields and drystone dykes. Built settlement can be seen at the edges of the view at Mansfield to the north and New Cumnock to the south. To the north-east the distinct shape of Corsencon Hill (475 AOD) draws the eye, with extensive forestry plantations at its base. To the south-east the landform rises towards Burnt Hill/ Hare Hill with six turbine hubs and multiple turbine blades visible over the horizon at Hare Hill Wind Farm. In far distance views east along Nithsdale, Lowther Hill is visible .</p> <p>In terms of value, the viewpoint is not located in any designated landscapes. While providing a moderately scenic rural outlook from the settlement edge along Nithsdale, there are man-made elements in the view, including road and railway infrastructure, built settlement, coniferous forestry and wind farm</p>			

	<p>development which increase the influence of human activity over the view.</p> <p>Judgements: Susceptibility: medium-high; Value: medium; Sensitivity: medium.</p>
Changes	<p>The Proposed Development will be visible at a distance of 7.1kmkm, with two turbine hubs (T27 and T28) and five turbine blades seen above the horizon to the south-east.</p> <p>The turbines will be seen in the context of a horizon which has been altered by turbines in Sandy Knowe. While the Proposed Development will broadly read as an extension to Sandy Knowe, from this viewpoint T25-T28 will appear in front of existing turbines at Sandy Knowe, appearing to bring wind farm development slightly closer to the viewpoint and introducing greater visibility of turbine hubs above the horizon. They will also slightly extend the horizontal field of view occupied by turbine blades to the south of this viewpoint. No ancillary infrastructure will be visible due to intervening landform. The Proposed Development will occupy a small proportion of the available view. The Proposed Development will also be seen in the context of existing man-made elements in the landscape. The geographical extent of the change is limited to a short section of the A76 between Pathhead/Mansefield and New Cumnock and represents views from limited areas with an open outlook on the eastern edge of the settlement.</p> <p>Judgements: Scale: small; Geographical Extent: small; Magnitude of Change: low.</p>
Effect and Significance	<p>Minor (not significant)</p>
Cumulative Effects	<p>Scenario 1</p> <p>Under scenario 1, consented schemes in the northern wind farm group will be apparent on the northern side of Nithsdale in views east. Consented schemes in the south-western wind farm group (Pencloe, Brockloch Rig III and Enoch Hill) will increase the influence of turbines in views on the horizon beyond the settlement in views to the south. The Proposed Development will marginally increase the influence of wind turbines, seen in the context of the southern wind farm group. This change will be seen in combined views with the northern wind farm group, when looking east along Nithsdale. Turbines within the Proposed Development will be contained within the horizontal field of view occupied by the southern wind farm group, and the separation between this group and the northern wind farm group will not alter. As such, no significant additional cumulative visual effects are predicted, under scenario 1.</p> <p>Scenario 2</p> <p>Under scenario 2 theoretical visibility of additional schemes in the western wind farm group will be screened by intervening woodland and built form on the western edge of New Cumnock. Aside from the introduction of two blade tips at Sanquhar II on the enclosing horizon to the south of New Cumnock cumulative visual effects under scenario 2 will be similar to those considered under scenario 1. As such, no significant additional cumulative visual effects are predicted, under scenario 2.</p>

Table 5-28: Viewpoint 14: Ochiltree

Viewpoint 14: Ochiltree				
Grid Reference	250148	620908	Figure Number	5-2-14
LCT	Agricultural Lowlands - Ayrshire		Landscape designation	N/A
Direction of view	South-east		Distance to nearest turbine	20.70km
Number of hubs theoretically visible	4		Number of turbines with blades theoretically visible	6
Description and Sensitivity	<p>This viewpoint is located in the village of Ochiltree in East Ayrshire, approximately 5km west of Cumnock. The viewpoint represents views experienced from the southern edge of the settlement, where more open views to the south-east are available.</p> <p>Existing views towards the Proposed Development Site are to the south-east. The foreground comprises the minor road of Ochiltree Main Street which provides access to the village from the A70. The Main Street recedes into the distance west to east with a few roadside properties visible to the east of view. An overhead distribution line and telegraph poles are visible at close proximity, running adjacent to the road. A hedgerow adjacent to the road and a small stand of broadleaved trees partially screen views towards surrounding farmland in the middle distance. This farmland rises in elevation to the south and is characterised by scattered farmsteads and pasture/ arable fields separated by hedgerows. Broadleaved woodland cover is frequent between the field system and along watercourses, and in areas to the east. In the far distance, the uplands of High Cairn/ Hare Hill are visible, with a number of turbines at Hare Hill Windfarm visible on the skyline, though appearing small in scale at approximately 18km distance. Turbines in Sandy Knowe Wind Farm are also visible on the lower horizon to the north-east of Hare Hill (though woodland on the horizon plays a screening role).</p> <p>In wider views to the south-west, the nearby A70 can be seen in front of undulating farmland in the middle distance. To the west, the view is short distance, focused along the minor road and adjacent housing. To the north the views are contained by a housing estate.</p> <p>In terms of value, the viewpoint is not located within any designated landscapes though it does provide a moderately scenic outlook from the periphery of a conservation village. There are man-made elements in the view, including the road and overhead lines in the foreground, built settlement, coniferous forestry and distant wind farm development.</p> <p>Judgements: Susceptibility: medium-high; Value: medium; Sensitivity: medium.</p>			
Changes	<p>The Proposed Development will introduce four turbine hubs and six turbine blades, seen at a distance of 20.7km, in views to the south-east. Four turbine hubs and six turbine blades will appear on the skyline, above a dip in the landform to the east of existing turbines at Hare Hill Wind Farm, and appear closer and larger in scale where hubs are visible.</p> <p>T25-T28 will appear in front of existing turbines at Sandy Knowe Wind Farm, appearing to bring wind turbines slightly closer to the viewpoint. While the blade tips of T29 and T30 will slightly extend the horizontal field of view occupied by wind turbines from this viewpoint, they will be screened by the extensive woodland cover seen in views to the south-east. Where visible from</p>			

	<p>this viewpoint above woodland cover on the horizon, the Proposed Development will read as a subtle extension to Sandy Knowe Wind Farm. No ancillary infrastructure will be visible. The geographical extent of the change will be limited to a short section of the minor road/Main Street as it leaves the A70 and enters the village of Ochiltree.</p> <p>Judgements: Scale: small; Geographical Extent: small; Magnitude of Change: low.</p>
Effect and Significance	Minor (not significant)
Cumulative Effects	<p>Scenario 1</p> <p>Under scenario, 1 the key change will be the introduction of turbines on enclosing horizons to the south of Ochiltree through the consented North Kyle (western wind farm group) and more distantly and partially, turbines at the south-western wind farm group. Looking towards the Proposed Development in views to the east, Lethans and Glenmuckloch, in the northern wind farm group will introduce visibility of turbines on enclosing horizons to the north of Nithsdale. The Proposed Development will continue to read as an extension to an existing scheme (Sandy Knowe), seen on the enclosing horizons to the south of Nithsdale and to the north of wind farms in the southern wind farm group including the consented Macheuchan Rig. The horizontal field of view occupied by the Proposed Development will be contained within the horizontal field of view occupied by the southern wind farm group. There will be clear separation between the northern wind farm group and the southern wind farm group, seen in combined views to the east. As such, no significant additional cumulative visual effects are predicted, under scenario 1.</p> <p>Scenario 2</p> <p>Euchanhead and Sanquhar II will add further partial visibility of turbines seen in the context of the larger southern wind farm group, while Greenburn and Overhill will add further visibility of turbines seen in the context of the western wind farm group. However, the nature of additional cumulative visual effects under scenario 2 will be similar to that considered under scenario 1 (with the Proposed Development contained within the horizontal field of view of an existing wind farm). As such, no significant additional cumulative visual effects are predicted, under scenario 2.</p>

Table 5-29: Viewpoint 15: Cairn Table

Viewpoint 15: Cairn Table				
Grid Reference	272401	624223	Figure Number	5-2-15
LCT	Plateau Moorland – Ayrshire, Plateau Moorland – Glasgow and Clyde Valley		Landscape designation	East Ayrshire SLA – Plateau Moorland
Direction of view	South		Distance to nearest turbine	13.23km
Number of hubs theoretically visible	6		Number of turbines with blades theoretically visible	6
Description and Sensitivity	This viewpoint is located at the summit of Cairn Table (593 AOD) to the south of the River Ayr Valley, approximately 4km south-east of Muirkirk. The viewpoint lies on the boundary of an East Ayrshire SLA which covers the Plateau			

	<p>Moorland – Ayrshire (78) LCT to the west. The viewpoint represents views experienced by recreational receptors at the hill summit.</p> <p>Existing views towards the site are to the south. The open moorland slopes of the nearby summit of Stony Hill (562 AOD) are visible in the foreground. Large coniferous forestry blocks can be seen to the east, representative of an extensive band of coniferous forestry plantations that traverse the plateau, north-east to south-west between the River Ayr Valley and Upper Nithsdale, visible in the middle and far distance. The view extends over layers of rolling upland summits, characterised by open heathland. The Carsphairn and Scour Hills form the horizon to the south-west. Existing turbines at Hare Hill Wind Farm are back clothed by these higher summits. Sanquhar Community Wind Farm is visible on the skyline to the east of Hare Hill. Sandy Knowe Wind Farm is visible below and to the west of Sanquhar Community Wind Farm, contained below the horizon.</p> <p>The open moorland slopes of Cairn Table and its secondary summit of Little Cairn Table (517m AOD) form the foreground and middle ground of views north-east, screening views into the Douglas Valley, with the rounded hills beyond forming the skyline north of Glespin. Tinto Hill is visible at distance to the north-east.</p> <p>A large number of operational wind farms are visible from this panoramic viewpoint in multiple viewing directions as highlighted in Figure 5-2-15b to e. In terms of value, the viewpoint is located on the boundary of the East Ayrshire SLA and represents a well frequented summit for walkers. However, there are man-made elements in the view, including operational wind turbines, forestry, built form and telecommunication masts.</p> <p>Judgements: Susceptibility: medium; Value: medium; Sensitivity: medium.</p>
Changes	<p>The Proposed Development will introduce six turbine hubs and six turbine blades, seen at a distance of 13.2km, in views to the south. The Proposed Development will be back clothed against the open moorland and coniferous forest of the site and surrounding hills. T29 and T30 of the Proposed Development will appear in front of existing turbines at Sandy Knowe while T25-T28 will appear as a small cluster to the west of Sandy Knowe. Though this will slightly extend the horizontal view occupied by wind turbines to the south from this viewpoint, the Proposed Development will broadly read as an extension to Sandy Knowe seen in a direction of view which has been altered by wind farms. The Proposed Development will not notably alter the rural qualities of the view. Given the elevated nature of this view overlooking the Proposed Development, access tracks and infrastructure will be visible (though difficult to discern at this viewing distance). The turbines of the Proposed Development will be screened by the summit on the ascent to this viewpoint and will become visible only upon approach. As such, the geographical extent of the changes will be small.</p> <p>Judgements: Scale: small; Geographical Extent: small; Magnitude of Change: low.</p>
Effect and Significance	Minor (not significant)
Cumulative Effects	<p>Scenario 1 and 2</p> <p>Due to the elevated, open and panoramic nature of this viewpoint under both scenarios consented and proposed wind farms would increase the influence of turbines seen in multiple viewing directions. Under both scenarios the</p>

	<p>Proposed Development will be seen behind consented and proposed wind farms in the northern wind farm group, which due to their proximity are more likely to draw the eye in views to the south. The Proposed Development will read as an extension to an existing wind farm (Sandy Knowe) seen in front of the larger southern wind farm group, in longer distance views to the south of Nithsdale. As such, additional cumulative effects are not considered to be significant.</p> <p>In terms of total cumulative effects, wind farms occupy a large proportion of the view to the north, east and south and effects are considered to be significant. However, this would be the case without the Proposed Development in place, which makes a relatively limited contribution to the overall cumulative picture.</p>
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Table 5-30: Viewpoint 16: SUW, east of Cloud Hill

Viewpoint 16: SUW, east of Cloud Hill				
Grid Reference	274728	605340	Figure Number	5-2-16
LCT	Southern Uplands - Dumfries and Galloway		Landscape designation	On edge of Thornhill Uplands RSA
Direction of view	North-west		Distance to nearest turbine	7.08km
Number of hubs theoretically visible	6		Number of turbines with blades theoretically visible	6
Description and Sensitivity	<p>This viewpoint is located east of the summit of Cloud Hill (451 AOD) on the SUW, approximately 6km south-west of Sanquhar. The viewpoint represents views experienced by recreational receptors travelling north-east along the long-distance route.</p> <p>Existing views towards the Proposed Development Site are to the north-west. The near and middle distance of the view consists of the broad parallel hillsides of Mid Rig (437 AOD), Whiteside Hill (516 AOD) and Bank Hill (530 AOD) separated by incised river valleys. The land cover is characterised by open heathland and a large coniferous forestry block. In the near distance a broad winding access track is visible on the hillside of Mid Rig with numerous turbines at Whiteside Hill Wind Farm and Sanquhar Wind Farm visible on the skyline above. Downslope to the north in the middle distance, turbines are visible at Sandy Knowe above the skyline, and backclothed by uplands to the north of Nithsdale. The landform drops from south to north as it approaches Nithsdale in the middle distance. The western extents of the settlement of Sanquhar can be seen on the valley floor amongst a mosaic of pasture fields and coniferous forestry. To the north of Nithsdale the landform rises to rolling uplands which comprise the far distance view, characterised by open moorland/ rough grassland and coniferous forestry.</p> <p>In wider views to the east the view is foreshortened by surrounding hillsides. To the south longer distance views are available across rolling uplands towards to hill summits in the Scaur Hill range, with the upland plateau of Blackcraig Hill (500 AOD) visible in the far distance.</p> <p>In terms of value, the viewpoint is located on the SUW and on the edge of an RSA and possesses scenic rural qualities. However, there are man-made elements in the view, including operational wind turbines, forestry, and built form.</p>			

	<p>Judgements: Susceptibility: medium; Value: medium-high Sensitivity: medium-high.</p>
Changes	<p>The Proposed Development will introduce six turbine hubs and six turbine blades, seen at a distance of 7.1km, in views to the north-west. The Proposed Development will be partially backclothed by upland to the north of Nithsdale (T29 and T30) and visible on the skyline (T25-T28). The Proposed Development will appear behind existing turbines at Sandy Knowe with the exception of T6 which will appear slightly to the east. Though this will slightly extend the horizontal view occupied by wind turbines to the east from this viewpoint, the Proposed Development will read as an extension to Sandy Knowe seen in a direction of view which has been altered by wind farms. The Proposed Development will not notably alter the rural qualities of the view. Due to intervening landform, no access tracks or infrastructure will be visible. The turbines of the Proposed Development will be screened by surrounding hillsides on the ascent to this viewpoint (from the south-west) and will become visible only upon approach and along the descent to Sanquhar. As such, the geographical extent of the changes will be small.</p> <p>Judgements: Scale: small; Geographical Extent: small; Magnitude of Change: low.</p>
Effect and Significance	<p>Minor (not significant)</p>
Cumulative Effects	<p>Scenario 1</p> <p>Under scenario 1 the key change will be the introduction of wind turbines on enclosing horizons to the north of Nithsdale at the northern wind farm group. The Proposed Development will continue to read as an extension to an existing scheme (Sandy Knowe), seen on the enclosing horizons to the south of Nithsdale and to the north of wind farms in the southern wind farm group including the consented Macheuchan Rig. The Proposed Development will slightly extend the horizontal field of view occupied by the southern wind farm group. Due to the orientation of the view north-west towards the Proposed Development the separation between the southern and northern wind farm groups will appear small, with turbines visible on both the middle distance and far distance enclosing horizons in a wide horizontal field of view. However, this would be the case without the Proposed Development in place, which makes a relatively limited contribution to the overall cumulative picture. As such, no significant additional cumulative visual effects are predicted, under scenario 1.</p> <p>Scenario 2</p> <p>Under scenario 2 wind farms in the northern and north-eastern wind farm groups will further increase the visibility of turbines across the enclosing horizon to the north of Nithsdale. To the west and south-west, the southern wind farm group will extend the influence of wind turbines on enclosing horizons, with turbines at Sanquhar II appearing notably larger in scale than existing turbines under scenario 1. While the horizontal field of view occupied by the southern wind farm group will be slightly extended by the Proposed Development to the north, it will continue to read as an extension to Sandy Knowe and will be seen in the context of the southern wind farm group. As such, no significant additional cumulative visual effects are predicted, under scenario 2.</p>

Table 5-31: Viewpoint 17: Rear of Lochside Hotel

Viewpoint 17: Rear of Lochside Hotel				
Grid Reference	260261	614759	Figure Number	5-2-17
LCT	Upland Basin - Ayrshire		Landscape designation	N/A
Direction of view	South-east		Distance to nearest turbine	8.90km
Number of hubs theoretically visible	4		Number of turbines with blades theoretically visible	6
Description and Sensitivity	<p>This viewpoint is located at Lochside Hotel, south of the A76 and to the north-west of New Cumnock. The viewpoint represents views experienced by visitors/tourists at the hotel, which is also a popular venue for weddings.</p> <p>Existing views towards the Proposed Development Site are to the south-east. The immediate foreground consists of Loch Lowes and a footpath around the loch shore. Beyond the loch the view looks down the undulating valley landform of the River Nith, which is characterised by farmland and woodland. Built form in the settlement of New Cumnock is apparent in middle distance views, seen on the southern valley side and on the horizon on a knoll to the centre of the valley. In the longer distance the rising landform to the north and south of Nithsdale contain the view. Hills including 'The Knipe' contribute to the horizon, in views to the south-east, with operational turbines at Hare Hill seen across the summit plateau, and turbines in Sandy Knowe visible on the horizon on the lower northern flank of the hill. In wider views, to the south and south-west, the hills further south of Nithsdale contribute to the longer distance horizon, in views looking over Loch Lowes. Afton and views of longer distance wind farms are apparent on the horizon. From this vantage point the hotel itself limits views to the east and north-east.</p> <p>Judgements: Susceptibility: medium-high; Value: medium; Sensitivity: medium.</p>			
Changes	<p>The Proposed Development will be visible at a distance of 8.9km, with two turbine hubs and six turbine blades seen above the horizon to the south-east.</p> <p>The turbines will be seen in the context of a horizon which has been altered by turbines in Sandy Knowe. While the Proposed Development will broadly read as an extension to Sandy Knowe, from this viewpoint T25-T28 will appear in front of existing turbines at Sandy Knowe, appearing to bring wind farm development slightly closer to the viewpoint and introducing greater visibility of turbine hubs above the horizon. They will also slightly extend the horizontal field of view occupied by turbine blades to the south of this viewpoint, in relation to this scheme. No ancillary infrastructure will be visible due to intervening landform. The Proposed Development will occupy a small proportion of the available view. The Proposed Development will also be seen in the context of existing man-made elements in the landscape including turbines in Hare Hill Wind Farm, which is closer to the view and appear more prominently on the summit plateau to the south-east of view. The geographical extent of the change is limited to a small area near Lochside Hotel.</p> <p>Judgements: Scale: small; Geographical Extent: small; Magnitude of Change: low.</p>			
Effect and Significance	Minor (not significant)			

Cumulative Effects	<p>Scenario 1</p> <p>Under scenario 1, consented schemes in the northern wind farm group will be apparent on the northern side of Nithsdale in views east. Foreground vegetation will play a partial screening role from this location, more so during the summer months. Consented schemes in the south-western wind farm group (Pencloe, Brockloch Rig III and Enoch Hill) will increase the influence of turbines in views on the horizon to the south. The Proposed Development will marginally increase the influence of wind turbines, seen in the context of the southern wind farm group. This change will be seen in combined views with the northern wind farm group, when looking east along Nithsdale. Turbines within the Proposed Development will be contained within the horizontal field of view occupied by the southern wind farm group, and the separation between this group and the northern wind farm group will not alter. As such, no significant additional cumulative visual effects are predicted, under scenario 1.</p> <p>Scenario 2</p> <p>Under scenario 2 theoretical visibility of additional schemes in the western wind farm group will be screened by the hotel, from this vantage point. Aside from the introduction of a small number of blade tips at Sanquhar II on the enclosing horizon to the south-east, cumulative visual effects under scenario 2 will be similar to those considered under scenario 1. As such, no significant additional cumulative visual effects are predicted, under scenario 2.</p>
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Table 5-32: Viewpoint 18: Todholes Hill

Viewpoint 18: Todholes Hill				
Grid Reference	274514	615025	Figure Number	5-2-18
LCT	Southern Uplands with Forest		Landscape designation	N/A
Direction of view	South-west		Distance to nearest turbine	5.72km
Number of hubs theoretically visible	6		Number of turbines with blades theoretically visible	6
Description and Sensitivity	<p>This viewpoint is located on the summit of Todholes Hill, (481m AOD). The viewpoint represents views experienced by recreational receptors on the hill summit.</p> <p>This viewpoint has been provided as a wireline only visualisation, at the request of DGC.</p> <p>In terms of value, the viewpoint is not in any designated landscapes, and does not represent a recognised or promoted view. Similar to the view from Kirkland Hill, it does possess scenic rural qualities and is located on a recreational hill summit.</p> <p>Judgements: Susceptibility: medium-high; Value: medium, Sensitivity: medium</p>			
Changes	<p>The Proposed Development will introduce six turbine hubs and six turbine blades, seen at a distance of 5.72km, in views south-west across the River Nith valley. Six turbine hubs and four turbine blades will be visible below the skyline. The Proposed Development will be seen to the front and to the north-west of operational turbines at Sandy Knowe. From this viewpoint the Proposed</p>			

	<p>Development will extend the horizontal field of view occupied by turbines in relation to this scheme (T25-T28), and bring turbines marginally closer to this viewpoint (T29 and T30).</p> <p>Whilst the Proposed Development will read as an extension to an existing scheme, it will increase the influence of wind turbines in views to the south-west. The Proposed Development will occupy a relatively small proportion of the available panoramic view, and the change to this view will affect a relatively limited geographical area around the viewpoint location and neighbouring (more accessible) hills on the core path network on the northern side of Nithsdale.</p> <p>Judgements: Scale: medium; Geographical Extent: medium; Magnitude of Change: medium</p>
Effect and Significance	Moderate (significant)
Cumulative Effects	<p>Scenario 1 and 2</p> <p>Due to the elevated, open and panoramic nature of this viewpoint under both scenarios consented and proposed wind farms would increase the influence of turbines seen in multiple viewing directions. Under both scenarios the Proposed Development will read as an extension to an existing wind farm (Sandy Knowe) seen in front of the larger southern wind farm group to the south of Nithsdale. As such, additional cumulative effects are not considered to be significant.</p> <p>In terms of total cumulative effects, wind farms occupy a large proportion of the view to the north, west and south and effects are considered to be significant. However, this would be the case without the Proposed Development in place, which makes a relatively limited contribution to the overall cumulative picture.</p>

Table 5-33: Viewpoint 19: Core Path, Auchentaggart Moor

Viewpoint 19: Core Path, Auchentaggart Moor				
Grid Reference	281000	609125	Figure Number	5-2-19
LCT	Upper Dale – Dumfries and Galloway		Landscape designation	Thornhill Uplands RSA
Direction of view	West		Distance to nearest turbine	10.7km
Number of hubs theoretically visible	6		Number of turbines with blades theoretically visible	6
Description and Sensitivity	<p>This viewpoint is located on the Core Path network, as it crosses Auchentaggart Moor to the north and above Nithsdale. The viewpoint represents views experienced by recreational receptors travelling north-west. This viewpoint has been provided as a wireline only visualisation, at the request of DGC.</p> <p>In terms of value, the viewpoint is in the Thornhill Uplands RSA, indicating a higher value.</p> <p>Judgements: Susceptibility: medium; Value: medium-high, Sensitivity: medium</p>			

Changes	<p>The Proposed Development will introduce six turbine hubs and six turbine blades, at a distance of 10.7km, in views west along the River Nith valley. Two turbine hubs and all six turbine blades will be visible above the distant skyline. The Proposed Development will be seen in front (T29 and T30), and behind (T25-T28), existing turbines at Sandy Knowe, and contained within the horizontal field of view occupied by turbines in this scheme. As such, from this viewpoint the Proposed Development will read as a sympathetic extension to Sandy Knowe and represent a small scale change in the view. The geographical extent of the change will primarily be focused along a short section of the Core Path network as it crosses the open hillside.</p> <p>Judgements: Scale: small; Geographical Extent: medium-small; Magnitude of Change: low.</p>
Effect and Significance	Minor (not significant)
Cumulative Effects	<p>Scenario 1 and 2</p> <p>The Proposed Development will continue to read as an extension to an existing scheme (Sandy Knowe), seen on the enclosing horizons to the south of Nithsdale and to the north of wind farms in the now larger southern wind farm. The horizontal field of view occupied by the Proposed Development will be contained within the horizontal field of view occupied by the southern wind farm group. There will be clear separation between the larger northern wind farm group and the southern wind farm group, seen in combined views to the west. As such, no significant additional cumulative visual effects are predicted.</p>

Table 5-34: Viewpoint 20: Southern Upland Way, Coupland Knowe

Viewpoint 9: Southern Upland Way, Coupland Knowe				
Grid Reference	281301	611697	Figure Number	5-2-20
LCT	Edge of Upper Dale – Dumfries and Galloway		Landscape designation	N/A
Direction of view	West		Distance to nearest turbine	10.9km
Number of hubs theoretically visible	6		Number of turbines with blades theoretically visible	6
Description and Sensitivity	<p>This viewpoint is located approximately 3km to the north-east of Sanquhar on the SUW. The viewpoint represents views experienced by recreational receptors travelling south-west along the long-distance route, on the descent into Sanquhar.</p> <p>This viewpoint has been provided as a wireline only visualisation, at the request of DGC.</p> <p>In terms of value, the viewpoint is not in any designated landscape, and does not represent a recognised or promoted view. It is located on the SUW, a long-distance route, which increases its value.</p> <p>Judgements: Susceptibility: medium; Value: medium-high, Sensitivity: medium</p>			
Changes	The Proposed Development will introduce six turbine hubs and six turbine			

	<p>blades, at a distance of 10.9km, in views west along the River Nith valley. All the turbine hubs will be contained below the horizon and four upper turbine blades will be visible above the distant skyline. The Proposed Development will be seen in front (T29 and T30), and behind (T25-T28), existing turbines at Sandy Knowe, and contained within the horizontal field of view occupied by turbines in this scheme. As such, from this viewpoint the Proposed Development will read as a sympathetic extension to Sandy Knowe and represent a small scale change in the view. The geographical extent of the change will primarily be focused along the SUW, from a short section of the route as it descends into Sanquhar.</p> <p>Judgements: Scale: small; Geographical Extent: medium-small; Magnitude of Change: low.</p>
Effect and Significance	Minor (not significant)
Cumulative Effects	<p>Scenario 1 and 2</p> <p>The Proposed Development will continue to read as an extension to an existing scheme (Sandy Knowe), seen on the enclosing horizons to the south of Nithsdale and to the north of wind farms in the now larger southern wind farm. The horizontal field of view occupied by the Proposed Development will be contained within the horizontal field of view occupied by the southern wind farm group. There will be clear separation between the larger northern wind farm group and the southern wind farm group, seen in combined views to the west. As such, no significant additional cumulative visual effects are predicted.</p>

5.11.2 Effects on Settlements

Theoretical visibility of the wind farm from settlements across the study area is illustrated by Figure 5-1-2. Visual effects from settlements which have been taken forward for detailed assessment, as outlined in Table 5-7, are discussed below. A number of settlements are also represented by viewpoints.

Table 5-35: Effects on Settlements: Kirkconnel and Kelloholm

Kirkconnel and Kelloholm			
Representative viewpoint	VP6: Kirkconnel	Approximate distance to nearest turbine	2.5km
Description and Sensitivity	<p>These adjacent settlements lie within Nithsdale on the route of the A76 to the north-east of the Proposed Development Site. Kirkconnel is located to the north and south of the A76. Kelloholm is located to the south-east of Kirkconnel, focussed to the southern side of the A76.</p> <p>Outward views towards the site from the centre of Kirkconnel are typically contained by built form in the settlement and woodland in Nithsdale to the west of the settlement. Some longer distance views out of the settlement are available. Where outward views are available, the southern valley sides of Nithsdale have been altered by operational wind farm development, due to Hare Hill and Sandy Knowe.</p> <p>In Kelloholm properties on the western edge are located on rising terrain to the south of Nithsdale, oriented with views north over the valley to moorland hills beyond. The undulating valley landform to the west, somewhat limits longer distance views to the west from the edge of Kelloholm.</p> <p>In terms of value, the settlements are not within a designated landscape.</p>		

	<p>However, some value will be attached to the rural outlook, where breaks in built form and vegetation offer outward views to the surrounding hills. There are man-made elements in many outward views, including operational wind turbines. As noted above, turbines within Sandy Knowe Wind Farm are visible to the south-west from part of the south-western edge of Kirkconnel, where open views are available over the River Nith (refer to Viewpoint 6).</p> <p>Judgements: Susceptibility: high; Value: medium-low; Sensitivity: high</p>
Changes	<p>Viewpoint 6 represents one of the closest proximity and worst case scenario views from Kirkconnel. In this view, the Proposed Development reads as a small extension to an existing wind farm (Sandy Knowe) marginally extending the horizontal field of view occupied by turbines. Given the limited availability of views from the wider settlement, and nature of change in views when visible, the overall scale of change is judged to be small.</p> <p>Judgements: Scale: small; Geographical Extent: small; Magnitude of Change: low</p>
Effect and Significance	Minor (not significant)
Cumulative Effects	<p>In terms of additional cumulative effects, Viewpoint 6 represents one of the closest proximity and worst case scenario views from Kirkconnel. In this view no significant additional cumulative effects have been identified. Under both scenarios visibility of further consented and proposed wind farms is relatively limited, and when visible seen in the context of the existing southern wind farm group. The Proposed Development will continue to read as an extension to an existing scheme (Sandy Knowe) on the northern edge of the southern wind farm group, seen on the enclosing horizons to the south of Nithsdale, in views to the south-west. There may be points in the settlement, including from Kelloholm, where views to the northern side of Nithsdale are more open and the northern wind farm group is more visible. However, it is unlikely there are many points in the settlement where open views to wind farms on the northern and southern side of Nithsdale are available.</p> <p>No significant additional cumulative effects are predicted, under either scenario from this settlement.</p>

Table 5-36: Effects on Settlements: New Cumnock, Pathhead and Mansfield

New Cumnock, Pathhead and Mansfield			
Representative viewpoint	VP13: New Cumnock	Approximate distance to nearest turbine	6km
Description and Sensitivity	<p>These settlements are situated along the A76 to the north-west of the Proposed Development Site. New Cumnock forms the majority of the wider settlement area, and is focussed along the A76 with a larger residential area to the south of the road on rising terrain to the south of the River Nith. The Afton Water meets the River Nith between the settlements, with the northern parts of New Cumnock located on lower ground within the valley. Pathhead and Mansfield are smaller residential areas on rising terrain to the north of the River Nith, focussed to the north and east of the A76.</p> <p>Built form often screens outward views from New Cumnock. There are views to the east along Nithsdale from northern parts of the settlement, including where the A76 crosses the river. From higher ground within the south of the settlement, there are more opportunities for longer distance</p>		

	<p>views between buildings. These views tend to be focused to the north-west, with undulating high ground to the east of this area limiting views towards the Proposed Development Site.</p> <p>Views from the eastern extents of Pathhead and Mansfield tend to be more open, looking down Nithsdale.</p> <p>In terms of value, the settlement is on the western edge of the Southern Uplands SLA. Value will be attached to the rural outlook, where breaks in built form offer outward views to the surrounding hills.</p> <p>There are man-made elements in many outward views, including operational wind turbines. Where views looking east along Nithsdale are available, turbines within Hare Hill Wind Farm and Sandy Knowe are typically visible on the horizon to the south-east.</p> <p>Judgements: Susceptibility: high; Value: medium; Sensitivity: high</p>
Changes	<p>Viewpoint 13 represents one of the maximum case scenario more open views from the northern extents of New Cumnock. Similar views will be available from the eastern extents of Pathhead and Mansfield. In this view, the Proposed Development is visible in front of the under construction Sandy Knowe, increasing the influence of wind turbines seen on the horizon to the south-east. Given the viewing distance, limited availability of views from the wider settlement, and nature of change in views when visible, the overall scale of change is judged to be small.</p> <p>Judgements: Scale: small; Geographical Extent: small; Magnitude of Change: low</p>
Effect and Significance	Minor (not significant)
Cumulative Effects	<p>Viewpoint 13 represents one of the maximum case scenario more open views from the northern extents of New Cumnock. In this view the key changes will be under scenario 1, where consented schemes in the northern wind farm group will be apparent on the northern side of Nithsdale in views east. Consented schemes in the south-western wind farm group (Penclose Forest, Brockloch Rig III and Enoch Hill) will increase the influence of turbines in views on the horizon beyond the settlement in views to the south.</p> <p>From the limited parts of the settlement with open views of this nature, the Proposed Development will marginally increase the influence of wind turbines, seen in the context of the south wind farm group. This change will be seen in combined views with the north wind farm group, when looking east along Nithsdale. Turbines within the Proposed Development will be contained within the horizontal field of view occupied by the south wind farm group, and the separation between this group and the north wind farm group will not alter. As such, no significant additional cumulative effects are predicted from New Cumnock.</p>

Table 5-37: Effects on Settlements: Sanquhar and Mennock

Sanquhar and Mennock			
Representative viewpoint	VP8: Sanquhar	Approximate distance to nearest turbine	7km
Description and Sensitivity	<p>This settlement is located along the route of the A76 to the east of the Proposed Development Site. The settlement lies on the northern and southern sides of the A76, close to the River Nith and Crawick Water.</p> <p>Views from the lower lying centre of the settlement tend to be contained by built form. Woodland along the River Nith and to the west of the settlement somewhat limits views to west, looking up Nithsdale. From higher ground to the north of the settlement, including from St Brides</p>		

	<p>Parish Church, the more elevated nature of the ground increases potential for views up Nithsdale. However, woodland in the foreground continues to provide a level of screening and filtering of outward views. In terms of value, the settlement is not within a designated landscape. However, some value will be attached to the rural outlook, where breaks in built form and vegetation offer outward views to Nithsdale. There are man-made elements in many outward views, including operational wind turbines. Where views looking west up Nithsdale are available, turbines within Hare Hill Wind Farm and Sandy Knowe are typically visible on the horizon to the west.</p>
Changes	<p>Viewpoint 8 represents one of the more open and maximum case scenario views from more elevated ground to the north of Sanquhar. In this view, the Proposed Development is contained within the horizontal field of view occupied by Sandy Knowe, marginally extending the influence of wind turbines on the horizon to the west. Given the viewing distance; limited availability of views from the wider settlement, and nature of change in views when visible, the overall scale of change is judged to be small.</p> <p>Judgements: Scale: small; Geographical Extent: small; Magnitude of Change: low</p>
Effect and Significance	Minor (not significant)
Cumulative Effects	<p>In terms of additional cumulative effects, Viewpoint 8 represents one of the maximum case scenario views from Sanquhar. In this view no significant additional cumulative effects have been identified.</p> <p>Under scenario 1 the key change will be Lethans and Glenmuckloch, in the northern wind farm group, which will introduce visibility of turbines on enclosing horizons to the north of Nithsdale, in views to the north-west. Under scenario 2 Eucharhead and Sanquhar II (southern wind farm group) will add further additional visibility of turbines seen in the context of the larger south wind farm group. From the limited parts of the settlement with open views of this nature, and under both scenarios, the Proposed Development will continue to read as an extension to an existing scheme (Sandy Knowe), seen on the enclosing horizons to the south of Nithsdale and to the north of wind farms in the southern wind farm group. The horizontal field of view occupied by the Proposed Development will be contained within the horizontal field of view occupied by the southern wind farm group. There will be clear separation between the northern wind farm group and the southern wind farm group, seen in combined views to the west. As such, no significant additional cumulative visual effects are predicted from Sanquhar.</p>

5.11.3 Effects on Routes

Visibility from a route is not uniform along its entire length. This is because views of the surrounding landscape change due to the landform, buildings, and vegetation cover as the viewer moves along the route. Sequential effects from the key routes which have been taken forward for detailed assessment, as outlined in Table 5-8, are set out below.

Table 5-38: Effects on Routes: A76

A76			
Representative viewpoint	VP1: A76 at Cairn Bridge VP6: Kirkconnel	Approximate distance to nearest turbine	1km (at its closest point)

<p>Description and Sensitivity</p>	<p>VP13: New Cumnock</p> <p>The A76 passes through the study area from south-east to north-west. It links Dumfries, to the south-east of the study area, with Kilmarnock to the north-west. It passes within approximately 1km of the Proposed Development Site to the north. Receptors include road users travelling in both directions on this fast-moving route.</p> <p>Close to medium distance views of the Proposed Development Site are available when travelling in both directions along a stretch of the route around and between New Cumnock and Sanquhar. Built form; roadside vegetation, including larger areas of coniferous forest cover and woodland through Nithsdale; and the undulating valley topography to the south of Nithsdale somewhat limits views towards the Proposed Development Site from wider section of the route. When travelling along the route the viewers eye tends to be drawn over and along Nithsdale, to the north of the route, rather than looking towards the rising valley terrain to the south of the route (and in the direction of the Proposed Development Site).</p> <p>Sequential visibility of the operational and under construction wind turbines including those within Sandy Knowe, Hare Hill (and its extension) and Twentyshillig Hill Wind Farm is possible from sections of this route.</p> <p>This route is experienced by road users often travelling at speed, with the key focus of views being the road ahead and over Nithsdale. The route passes through a number of locally designated landscapes in East Ayrshire and Dumfries and Galloway.</p> <p>Judgements: Susceptibility: medium-low; Value: medium, Sensitivity: medium-low.</p>
<p>Changes</p>	<p>When travelling east, actual visibility of the Proposed Development becomes notable from glimpsed sections of the route to the north and through New Cumnock (refer to Viewpoint 13) and then from a short section of the route to the north-west of the Proposed Development Site as the route passes the site (refer to Viewpoint 1). The ZTV indicates wider visibility from short sections of the route through Mauchline and near Auchinleck. However, built form through Mauchline and roadside vegetation (the road passes through a well vegetated cutting as it passes Auchinleck) limit actual visibility. When visible, the Proposed Development is generally seen in the context of, and read as an extension to, Sandy Knowe Wind Farm increasing the influence of this scheme. In closer proximity views, when travelling east, this is judged to result in a medium to larger scale of change, reducing from longer distance viewpoints.</p> <p>When travelling west, the ZTV indicates more widespread visibility between the Proposed Development Site and through and east of Sanquhar. Built form through the settlements of Kirkconnel and Sanquhar; woodland in Nithsdale and coniferous forest cover on the valley sides will limit the extent of actual visibility and views towards the Proposed Development will be more fleeting and glimpsed than the ZTV suggests. When visible, on the approach to the site, the Proposed Development will be seen largely contained within the horizontal field of view occupied by Sandy Knowe (refer to Viewpoint 6 from Kirkconnel). The scale of change will increase as road users pass the site, where close proximity oblique views of the Proposed Development is more likely to result in a larger scale of change, albeit from a very short section of the overall route (roadside woodland to west of Kirkconnel limit potential for views when travelling west, on approach to the Proposed Development Site).</p> <p>Judgements: Scale: medium to large as road users pass the site and from a short section of the road to the west of the site, generally small elsewhere; Geographical Extent: small in the context of the overall route:</p>

	Magnitude of Change: medium when passing the site, low elsewhere
Effect and Significance	Moderate (significant) as road users pass the site and from a short section approximately 1km to the west, Minor (not significant) elsewhere
Cumulative Effects	<p>Key changes to the cumulative baseline under Scenario 1 will include the consented Lethans and Glenmuckloch, which will create a new wind farm group seen from sections of the A76 with open views to the northern side of Nithsdale.</p> <p>Under Scenario 2, the key change to the cumulative baseline will be Lethans Extension, which will increase the influence of turbines in relation to the northern wind farm group. Eucharhead and Sanquhar II will increase the influence of turbines in relation to the southern wind farm group, seen from sections of the road with open views to the southern side of Nithsdale.</p> <p>When travelling in both directions along this route, and when visible, the Proposed Development will read as an extension to Sandy Knowe Wind Farm, seen in the context of a horizon which has been altered by the southern wind farm group. There will be points along the road, with open views to the south and north of Nithsdale, where the northern and larger southern wind farm groups will be visible in successive sequential views. However, the additional cumulative effects of the Proposed Development are not judged to materially alter the cumulative sequential experience of travelling along the A76, which will have groups of wind farms to the north and south under both scenarios.</p> <p>No significant additional cumulative effects are predicted under either scenario, from this route.</p>

Table 5-39: Effects on Routes: Southern Upland Way

Southern Upland Way			
Representative viewpoint	VP9: SUW NE approach to Sanquhar VP11: East Mount Lowther VP16: SUW, east of Cloud Hill VP20: SUW, Coupland Knowe	Approximate distance to nearest turbine	7km (at its closest point)
Description and Sensitivity	<p>The Southern Upland Way (SUW) passes across the south-east of the study area, from near Moffat in the east to near St John's Town of Dalry in the south, passing approximately 7km to the south-east of the Proposed Development Site, near Sanquhar. Receptors include recreational users walking in both directions, along this long distance trail.</p> <p>Middle distance views of the Proposed Development Site are possible from higher ground and hill tops, concentrated mainly along short sections of the route as it passes through Nithsdale near Sanquhar, within approximately 12.5km and as represented by Viewpoints 9, 16 and 20. There are also longer distance views from the summit of Lowther Hill and surrounding smaller summits to the east of Sanquhar, within approximately 20km, as represented by Viewpoint 11.</p> <p>The SUW passes in closer proximity to a number of operational and under construction wind farms through the study area, including Whiteside Hill and Twentyshilling Hill, to the south of Sanquhar. There is also visibility of Sandy Knowe from sections of the route, including where it passes</p>		

	<p>through Nithsdale.</p> <p>This route is experienced by recreational users travelling slowly, whose attention is likely to be focused on views of the surrounding landscape. In terms of value, the SUW is a nationally recognised long distance trail, and passes through sections of locally designated landscapes throughout the study area. This indicates a higher value.</p> <p>Judgements: Susceptibility: medium-high; Value: high; Sensitivity: medium-high.</p>
Changes	<p>When travelling north-east, the Proposed Development will be generally be visible within 10km, as recreational receptors descend towards Sanquhar, to the south of Nithsdale. Viewpoint 16 is representative of this view and highlights that the Proposed Development will be seen behind, and largely contained within, the horizontal field of view occupied by turbines in Sandy Knowe. When travelling north-east a scale of change no greater than small is anticipated from sections of the SUW within 10km.</p> <p>When travelling west and south-west, the Proposed Development will be generally be visible within 12.5km, as recreational receptors descend towards Sanquhar, to the north of Nithsdale. Viewpoint 9 and 20 are representative of these views and highlight that the Proposed Development will be seen largely contained within the horizontal field of view occupied by turbines in Sandy Knowe. Longer distance views, beyond 15km, from short sections of the SUW as it crosses hill summits further east indicate a similar small scale of change (refer to Viewpoint 11). When travelling west and south-west a scale of change no greater than small is anticipated from sections of the SUW.</p> <p>Judgements: Scale: small; Geographical Extent: small in the context of the overall route; Magnitude of Change: low.</p>
Effect and Significance	<p>Minor (not significant)</p>
Cumulative Effects	<p>Under both scenarios, and when travelling in both directions on the SUW Viewpoints 9, 11, 16 and 20 highlight the increased visibility of consented and proposed wind farms, seen in multiple viewing directions from more open and upland sections of the SUW either side of Nithsdale.</p> <p>From sections of the route with visibility, the Proposed Development is typically seen in views over 7km distance or longer and reads as an extension to an existing wind farm (Sandy Knowe) seen along the northern edge of the larger southern wind farm group to the south of Nithsdale. Depending on the viewing angle the proposed turbines will generally be contained within/ marginally increase the horizontal field of view occupied by turbines in the southern wind farm group. The additional cumulative effects of the Proposed Development are not judged to materially alter the cumulative sequential experience of travelling along the SUW, as the additional influence of turbines associated with the Proposed Development is small (and experienced from a relatively short section of the overall route, as it passes through the study area). No significant additional cumulative effects are predicted under either scenario, from this route.</p> <p>In terms of total cumulative effects, and due to the number of wind farms seen in multiple viewing directions the likelihood for significant total effects, from certain open upland sections of the SUW, is acknowledged. However, this would be the case without the Proposed Development in place, which makes a relatively limited contribution to the overall cumulative picture.</p>

Table 5-40: Effects on Routes: Core Paths and Rights of Way within 5km

Core Paths and Rights of Way within 5km			
Representative viewpoint	VP2: Libry Moor Footpaths VP5: St Connel's Church	Approximate distance to nearest turbine	Within 1km
Description and Sensitivity	<p>Core Paths and Rights of Way (RoW) within 5km of the Proposed Development are mapped on Figure 5-1-2. This includes Core Paths to the north and south of Kirkconnel, and a RoW (DN2) which passes along the forest track to Libry Moor, to the immediate east of the Proposed Development Site.</p> <p>When traveling on Core Paths to the north of Kirkconnel the Proposed Development Site will be visible from sections of the Core Path network with open views to the south. This includes a section of the Core Path network as it passes near St Connel's Church, as represented by Viewpoint 5. Forest and woodland cover will somewhat limit visibility from section of the Core Path network to the north of Kirkconnel, as well undulations in the valley landform to the south of Kirkland.</p> <p>When travelling on Core Paths and RoW to the south of Kirkconnel, local coniferous forest cover will notably reduce the potential for open views towards the Proposed Development Site. Some oblique glimpses between breaks in forest cover will be available, as represented by Viewpoint 2.</p> <p>These routes are experienced by recreational users travelling slowly, whose attention is likely to be focused on views of the surrounding landscape. In terms of value, these routes do not pass through designated landscapes, within 5km. However, their connection and proximity to the settlement of Kirkconnel will mean the routes are valued by local residents.</p> <p>Judgements: Susceptibility: medium-high; Value: medium-high Sensitivity: medium-high.</p>		
Changes	<p>When travelling south on the Core Path network to the north of Kirkconnel, on the northern valley side above the River Nith, the Proposed Development will be visible from open sections of the network within 5km. Viewpoint 5 is representative of this view and highlights that the Proposed Development will be seen within the context of Sandy Knowe, extending the influence of this wind farm. When travelling south a scale of change of medium is anticipated, when visible. Forest and woodland cover will somewhat limit actual visibility from sections of the Core Path network to the north of Kirkconnel, as well undulations in the valley landform to the south of Kirkland.</p> <p>When travelling north on the Core Path and RoW network to the south of Kirkconnel, the Proposed Development will be visible from fleeting sections of the network, through breaks in coniferous forest cover within 5km. Viewpoint 2 is representative of a fleeting view from the Libry Moor Footpath, as it passes to the east of the Proposed Development Site. This view highlights that the Proposed Development will be seen largely contained within the horizontal field of view occupied by Sandy Knowe, marginally extending the influence of this wind farm. From the footpath network further south, the Proposed Development will largely be seen behind turbines in Sandy Knowe, when visible. When travelling north a scale of change of medium is anticipated, but this will be from very limited sections of the footpath network.</p> <p>Judgements: Scale: medium; Geographical Extent: small; Magnitude of Change: medium-low.</p>		

Effect and Significance	Moderate (significant) from open sections of the Core Path Network to the north of Kirkconnel, within 5km. Due to the fleeting nature of views from the footpath network to the south of Kirkconnel, Minor (not significant)
Cumulative Effects	<p>Key changes to the cumulative baseline under scenario 1 will include the consented Lethans and Glenmuckloch, which will create a new wind farm group seen from sections of the footpath network with open views to the northern side of Nithsdale.</p> <p>Under scenario 2, the key change to the cumulative baseline will be Lethans Extension, which will increase the influence of turbines in relation to the northern wind farm group. Euchanhead and Sanquhar II will increase the influence of turbines in relation to the southern wind farm group, seen from sections of the footpath network with open views to the southern side of Nithsdale.</p> <p>When travelling in both directions along this route, and when visible, the Proposed Development will read as an extension to Sandy Knowe Wind Farm, seen in the context of a horizon which has been altered by the southern wind farm group. There will be points along the footpath network, with open views to the south and north of Nithsdale, where the northern and larger southern wind farm groups will be visible in successive sequential views. However, the additional cumulative effects of the Proposed Development are not judged to materially alter the cumulative sequential experience of travelling on the footpath network to the north and south of Nithsdale, which will have groups of wind farms to the north and south under both scenarios. Coniferous forest cover to the south of Nithsdale will also limit the potential for open successive views.</p> <p>No significant additional cumulative effects are predicted under either scenario.</p>

5.13 Proposed Mitigation

Measures to reduce effects upon the landscape resource and upon views and visual amenity were predominantly achieved through the design of the Proposed Development, as described in Chapter 3: Description of Development and the Design and Access Statement. As all mitigation for landscape and visual effects is embedded within the final design for the Proposed Development, all effects identified in this Chapter are residual effects.

5.14 Summary and Statement of Significance

Table 5-41 summarises the predicted landscape and visual effects.

Table 5-41: Summary of Significant Effects

Receptor	Primary LVIA Assessment Findings	Cumulative Assessment Findings
Construction Effects on Landscape Receptors		
The Proposed Development Site	Significant (Major)	Not significant
Operational Effects on Landscape Receptors		
The Proposed Development Site	Significant (Moderate)	Not significant
Upland River Valleys - Ayrshire	Not significant (Minor)	Not significant
Upper Dale LCT – Dumfries & Galloway	Significant (Moderate) for the site and area of the LCT to the north and west of Sandy Knowe Wind	Not significant

Receptor	Primary LVIA Assessment Findings	Cumulative Assessment Findings
	Farm, within approximately 3km. Not Significant (Minor) for wider areas.	
Southern Uplands with Forest LCT – Dumfries & Galloway	Significant (Moderate) for the Proposed Development Site, Not Significant (Minor) for wider areas of the LCT, in the units to the north and south of Nithsdale.	Not significant
Southern Uplands SLA	The Proposed Development will not significantly affect the integrity of the designation	Additional cumulative effects not judged to affect the overall integrity of the SLA designation
Operational effects on Visual Receptors		
Viewpoint 1: A76 at Cairn Bridge	Significant (Moderate)	Not significant
Viewpoint 2: Libry Moor Footpath	Significant (Moderate)	Not significant
Viewpoint 3: The Knowe	Significant (Moderate)	Not significant
Viewpoint 4: Lagrae	Minor (not significant)	Not significant
Viewpoint 5: St Connel's Church	Significant (Moderate)	Not significant
Viewpoint 6: Kirkconnel	Minor (not significant)	Not significant
Viewpoint 7: Kirkland Hill	Significant (Moderate)	In terms of total cumulative effects, these are considered to be significant. However, this would be the case without the Proposed Development in place.
Viewpoint 8; Sanquhar	Minor (not significant)	Not significant
Viewpoint 9: Southern Upland Way, north-east approach to Sanquhar	Minor (not significant)	Not significant
Viewpoint 10: Crawick Artland	Minor (not significant)	Not significant
Viewpoint 11: East Mount Lowthera	Minor (not significant)	In terms of total cumulative effects, these are considered to be significant. However, this would be the case without the Proposed Development in place.
Viewpoint 12: Blackcraig Hill	Minor (not significant)	In terms of total cumulative effects, these are considered to be significant. However, this would be the case without the Proposed Development in place.
Viewpoint 13: New Cumncok	Minor (not significant)	Not significant
Viewpoint 14: Ochiltree	Minor (not significant)	Not significant
Viewpoint 15: Cairn Table	Minor (not significant)	In terms of total cumulative effects, these are considered to be significant. However, this would be the case without the Proposed

Receptor	Primary LVIA Assessment Findings	Cumulative Assessment Findings
		Development in place.
Viewpoint 16: SUW, east of Cloud Hill	Minor (not significant)	Not significant
Viewpoint 17: Rear of Lochside Hotel	Minor (not significant)	Not significant
Viewpoint 18: Todholes Hill	Significant (Moderate)	In terms of total cumulative effects, these are considered to be significant. However, this would be the case without the Proposed Development in place.
Viewpoint 19: Core Path, Auchntaggart Morr	Minor (not significant)	Not significant
Viewpoint 20: SUW, Coupland Knowe	Minor (not significant)	Not significant
Kirkconnel and Kelloholm	Minor (not significant)	Not significant
New Cumnock, Pathhead and Mansfield	Minor (not significant)	Not significant
Sanquhar and Mennock	Minor (not significant)	Not significant
A76	Significant (Moderate) as road users pass the site and from a short section approximately 1km to the west. Not significant elsewhere.	Not significant
Southern Upland Way	Minor (not significant)	In terms of total cumulative effects, and due to the number of wind farms seen in multiple viewing directions the likelihood for significant total effects, from certain open upland sections of the SUW, is acknowledged. However, this would be the case without the Proposed Development in place.
Core Paths and Rights of Way within 5km	Significant (Moderate) from open sections of the Core Path Network to the north of Kirkconnel and within 5km.	Not significant

Significant Landscape Effects

Significant effects are predicted on the landscape resource of the Proposed Development Site during construction (Major) and operation (Moderate).

During operation significant effects on landscape character (Moderate) are predicted for the Upper Dale and Southern Uplands with Forest LCTs. This will be from areas across the Proposed Development Site (the site is on the transition between the two) and areas of the Upper Dale LCT to the north and west of Sandy Knowe Wind Farm, within approximately 3km. The Proposed Development Site is a larger scale landscape on the valley side above Nithsdale, which is characterised by a simple moorland landcover and has been altered by wind farm development through the Sandy Knowe Wind Farm which is under construction (and further operational wind farms in the southern wind farm group, to the south of Nithsdale).

Significant effects on landscape character at the site level are usually unavoidable for wind farm developments. A small number of further turbines to the north (2 No. turbines) and west (4 No. turbines) of Sandy Knowe Wind Farm will slightly intensify the landscape effects of turbines over the Upper Dale LCT beyond the Proposed Development Site, and within 3km. However, and through Sandy Knowe Wind Farm, turbines have altered the character of the 'host' LCT's, and the Proposed Development will read as a small extension to this scheme. As such, landscape effects will not be as great as effects associated with the introduction of a new wind farm in an area not subject to development of this type.

No significant effects on other LCTs are predicted. Furthermore, the Proposed Development will not alter the integrity of any landscape designations by affecting the qualities for which they have been designated.

Significant Visual Effects

Significant (Moderate) effects on views are predicted at six of the 20 representative viewpoints; refer to Table 5-41. All of the viewpoints are within 6km to the north and north-east of the Proposed Development, and represent either close proximity views (Viewpoints 1 and 2) or higher sensitivity views from the northern side of Nithsdale (Viewpoints 3, 5, 7 and 18).

In general terms the Proposed Development reads as a small extension to Sandy Knowe Wind Farm. The proposed turbine size has been selected to reflect the height of the turbines in Sandy Knowe (turbines 28 to 30 at up to 125m to tip height). Turbines 25 to 27 are up to 149.9m to tip height. The greater offset of these turbines from more sensitive lower lying receptors in Nithsdale, to the north, helps to mask the increased height of these turbines.

Moderate sequential effects on views from short sections of the A76, as it passes the Proposed Development Site, and from open sections of the Core Path Network to the north of Kirkconnel (within 5km) are also predicted.

No significant effects on views from any settlements are predicted.

Cumulative Landscape and Visual Assessment Summary

There are many operational wind farms across the landscape of the study area (refer to Figure 5-1-6). The number of wind farms will increase should all consented and application stage wind farms be built.

The emerging pattern of wind farms typically sees larger developments located on upland areas with groups separated by settled valleys. In lowland settled areas, the pattern of wind farm development is smaller scale, with turbines typically associated with farms.

The key cumulative interactions between the Proposed Development and other wind farms is typically with the closest groups of wind farms. These include Sandy Knowe and wind farms to the south (the southern wind farm group); Lethans, its extension and Glenmuckloch, to the north of Nithsdale (the northern wind farm group) plus further schemes visible in lower lying views from Nithsdale, including Twentysilling, Sunnyside Farm and wind farms to the west of Nithsdale. From more elevated locations the large number of wind farms across the LVIA study area becomes apparent.

Under a theoretical cumulative baseline, the Proposed Development will be located adjacent to Sandy Knowe (under construction), slightly extending the influence of turbines to the north and west of this scheme. Sandy Knowe is located to the north of a larger emerging group of wind farms to the south of Nithsdale. The scale of turbines in the Proposed Development will reflect the scale of the turbines in Sandy Knowe. This size of turbine is at the smaller end of the spectrum for turbines in the southern wind farm group, which include schemes with turbines up to 230m to blade tip height (the proposed Eucharhead).

Overall, the Proposed Development will create a slightly larger cluster of turbines within the southern wind farm group, marginally intensifying the influence of turbines to the south of Nithsdale.

Significant Cumulative Landscape Effects

No significant additional cumulative landscape effects are predicted.

Significant Cumulative Visual Effects

No significant additional cumulative visual effects are predicted.

In terms of total cumulative effects, and from a number of upland viewpoints and hill tops (Viewpoints 7, 11, 12, 15 and 18) where the large number of operational, consented and proposed wind farms across the study area become apparent, the likelihood for significant total cumulative effects is recognised. Significant total cumulative effects are also predicted from certain elevated sections of the SUW, as it passes through the study area. However, the contribution the Proposed Development makes to this situation (typically reading as an extension to Sandy Knowe seen in the context of the larger southern wind farm group) is not judged to tip total effects beyond the threshold of significance. For all these views, significant total effects are predicted without the Proposed Development in place.

5.12 References

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