

Euchanhead Renewable Energy Development

**Additional Environmental Information
Chapter 7: Landscape and Visual
Impact Assessment**

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Abbreviations

Euchanhead Renewable Energy Development	Euchanhead
Additional Environmental Information	AEI
Environmental Impact Assessment	EIA
Section 36 (of The Electricity Act 1989)	S36
Landscape and Visual Impact Assessment	LVIA
Residential Visual Amenity Assessment	RVAA
Cumulative Landscape and Visual Impact Assessment	CLVIA
NatureScot	NS
Scottish Natural Heritage	SNH
Dumfries and Galloway Council	DGC
East Ayrshire Council	EAC
Landscape Character Type	LCT
Landscape Character Area	LCA
Dumfries and Galloway Wind Energy Landscape Sensitivity Study	DGWELSS
Dumfries and Galloway Wind Farm Landscape Capacity Study	DGWFLCS
Local Landscape Areas	LLA
Southern Upland Way	SUW
Zone of Theoretical Visibility	ZTV
Cumulative Zone of Theoretical Visibility	CZTV

7. Landscape and Visual Impact Assessment

7.1. Introduction

Stephenson Halliday has been commissioned by the Applicant to undertake an update of the landscape and visual impact assessment contained within the 2020 Euchanhead Renewable Energy Development Environmental Impact Assessment (EIA) Report. This updated landscape and visual impact assessment addresses the following changes since the Euchanhead Renewable Energy Development Section 36 (S36) application was made in 2020:

- The removal of Turbines No.20 and No.21;
- The reduction in turbine blade tip height of Turbines No.9, No.10, No.11, No.18 and No.19, from 230m to 200m;
- Reduced Lighting Scheme; and
- The updated cumulative situation in the surrounding area (primarily Sanquhar II Community Wind Farm being granted consent in August 2023).

This Additional Environmental Information (AEI) Chapter supplements **Chapter 7: Landscape and Visual Impact Assessment** (LVIA) of the 2020 Euchanhead Renewable Energy Development EIA Report (from herein referred to as the 'EIA Report'). The methodology employed in this AEI remains the same as that set out in EIA Report **Chapter 7: LVIA**.

The following table (**Table 7:1**) sets out the status of the documents relevant to the LVIA in the EIA Report and identifies the replacement documents in the AEI Report.

Table 7:1 – Landscape and Visual document status

Original Document	Status following revision	Replacement
EIA Report Volume 2 – Chapter 7: LVIA (2020)	Some aspects superseded, needs to be read in conjunction with AEI.	AEI Report Volume 2 – AEI Chapter 7: LVIA 2025
EIA Report Volume 3a (2020) - Figures 7.1 – 7.26	All EIA Report Chapter 7 Figures superseded. All EIA Report Chapter 7 Figures superseded by layout and cumulative situation. Figures 7.1 – 7.24 and 7.26 superseded. Figure 7.25 is no longer required.	AEI Report Volume 3 AEI Figures 7.1-7.24 and 7.26
-	New figures required for updated cumulative.	AEI Report Volume 3 AEI Figures 7.27-7.33 added

Original Document	Status following revision	Replacement
EIA Report Volumes 3b and 3c – Visualisations (2020)	All EIA Report visualisations superseded.	AEI Report Volume 4 - AEI Visualisations 2025
EIA Report Volume 4a (2020) – Technical Appendices 7.1 to 7.4	These are baseline or have not been affected by the proposed changes	n/a
EIA Report Volume 4a (2020) – Technical Appendices 7.5: Viewpoint Appendix	Superseded by the amended layout and cumulative situation	AEI Report Volume 3 (2025) – AEI Technical Appendices 7.5: Viewpoint Appendix
EIA Report Volume 4a (2020) – Technical Appendix 7.6: Not Significant Effects	Some aspects superseded, needs to be read in conjunction with AEI.	AEI Report Volume 2 – AEI Chapter 7: LVIA 2025
EIA Report Volume 4a (2020) – Technical Appendix 7.7: Night-time Viewpoint Analysis	Superseded by the amended layout, reduced lighting scheme and cumulative situation.	AEI Report Volume 3 (2025) – AEI Technical Appendix 7.7: Night-time Viewpoint Analysis
EIA Report Volume 4a (2020) – Technical Appendix 7.8: RVAA	Superseded by the amended layout, reduced lighting scheme and cumulative situation.	AEI Report Volume 3 (2025) – AEI Technical Appendix 7.8: RVAA
EIA Report Volume 4b – Technical Appendix 15.3 ALLVIMP (2020)	Some aspects superseded. Introduction of the reduced lighting scheme has been included. To be read in conjunction with AEI.	AEI Report Volume 3 – AEI Technical Appendix 15.4 Reduced Aviation Lighting Scheme

7.2. Consultee Responses to 2020 Application

All consultation, regarding the LVIA, with statutory consultees that was received prior to the 2020 S36 application being submitted, is outlined in the EIA Report **Chapter 7: LVIA**.

Table 7:2 sets out the relevant consultee responses to the 2020 S36 application.

Table 7:2 – 2020 S36 Application Consultee Responses

Consultee	Summary of Key Issues	Response to Comments
NatureScot Response Date: February 2021	<i>'Our advice is that adverse and significant effects would occur within a relatively localised area given the proliferation of wind turbine development within a 10 km radius. Turbine lighting would result in significant adverse landscape effects to the Ken unit LCT Southern Uplands with Forest (Dumfries and Galloway), LCT Southern Uplands (Ayrshire) within Glen Afton and Ken unit Narrow Wooded Valley (Dumfries and Galloway).</i>	Further design amends have been undertaken to lessen the effects of the landscape and visual impacts. A reduced lighting scheme has been included to minimise effects at night. Further information was submitted with regard to the 2000cd lighting montages. However, this has now been

Consultee	Summary of Key Issues	Response to Comments
	<p><i>The scope of the assessment, including the viewpoint selection, the Night Time Lighting Assessment and a Residential Visual Amenity Study, is appropriate with the following exception. The turbine lighting illustrated on the night time visualisations is not bright enough and does not illustrate the worst-case scenario. 2000cd lights should have been used as the basis for the visualisation rather than 200cd lights that have been used. The proposed turbines are very large and would cause incongruous effects to the localised landscape area due to disparity in height with all other existing and permitted wind turbines located within 10 km. The height of the turbines would also require visible aviation lighting to be fitted which would be prominent in views from all directions, and particularly from a large number of receptors located to the north and east within Nithsdale. We welcome the proposed condition which requires aviation lighting mitigation to be installed. This would only require the turbines to be lit when aircraft were in close proximity to the proposal. The advice above would apply to the current cumulative baseline of built and consented wind farms, which is subject to change with another large wind, farm proposal close to Euchanhead that is yet to be determined. These potential changes to the cumulative baseline would affect the extent and scale.'</i></p>	<p>superseded by the latest NatureScot guidance regarding the assessment of aviation lighting which suggests 200cd montages are appropriate where this mitigation is embedded. There has been a reduction in the number and size of some turbines to reduce the landscape and visual impacts. The adjacent Sanquhar II development has now been consented and therefore the cumulative baseline has changed notably and will affect the extent and scale of landscape and visual effects cumulatively with the consented baseline.</p>
Dumfries and Galloway Council (DGC) Landscape Architect initial comments Response Date: March 2023	<p><i>'Removal of some consistently problematic turbines would greatly improve the fit of the scheme, both to underlying landscape and also other established wind farm developments. I consider the key problematic turbines to be: 9, 10, 11, and 19, 20, 21. These raise issues across between 4 and 9 viewpoints, and I recommend their removal. Even were these reductions carried out there would still be significant effects. However, in the interests in the best scheme being taken forwards as is possible to achieve, I consider removal of six turbines would still leave a very large scheme, and proportionately achieve a high degree of landscape mitigation. As it stands proportionately these turbines cause a high level of landscape related harm compared to others in the scheme.'</i></p>	<p>Consideration of these suggestions by DGC was undertaken by the Applicant. The amended wind turbine layout (as presented in this AEI) addresses the concerns over the 'key problematic turbines' through removal of turbines No.20 and No.21, and a reduction in tip heights (from 230m to 200m) of turbines No.9, No.10, No.11, No.18, and No.19.</p>
DGC Audit of LVIA by Ironside Farrar Ltd	<p><i>'It is considered that some of these effects could be addressed through design amendments to the proposed scheme, with turbines contributing most to undesirable effects identified by IFL as T9, 10, 11, 18, 19, 20 and 21.'</i></p>	<p>The amended wind turbine layout (as presented in this AEI) addresses the concerns raised by Ironside Farrar through removal of turbines No.20 and No.21, and a</p>

Consultee	Summary of Key Issues	Response to Comments
Response Date: January 2024	<i>'However, there would seem to be opportunities for reducing the adverse effects of lighting further, for example through developing a scheme of lighting mitigation including the lighting of selected turbines only, a measure commonly implemented on other wind farms with lighting.'</i>	reduction in tip heights (from 230m to 200m) of turbines No.9, No.10, No.11, No.18, and No.19. A Reduced Lighting scheme has been implemented as suggested to further reduce effect at night and is presented in AEI Technical Appendix 15.4 Reduced Aviation Lighting .

7.3. Design Amendments

The amendments to the 2020 S36 application Site Layout are detailed in AEI **Chapter 2: Site Description and Design Evolution**. The key amendments with regards the LVIA are:

- The removal of Turbines No.20 and No.21; and
- The reduction in turbine blade tip height of Turbines No.9, No.10, No.11, No.18 and No.19, from 230m to 200m.

These amendments have been made as a result of feedback from consultees regarding the landscape and visual effects presented in EIA Report **Chapter 7: LVIA**.

7.4. Changes to the Baseline Conditions

7.4.1. Changes to Baseline Environment

Since the EIA Report in 2020, a number of windfarms in the area have been commissioned and/or commenced construction and are part of the existing baseline in 2025 which forms the baseline of the main assessment. Those changes within 15km are noted below and further detail is presented within **Table 7:3**.

- South Kyle, now operational (consented at the time of the EIA Report);
- Enoch Hill, now under construction (consented at the time of the EIA Report);
- Windy Rig, now operational (under construction at the time of the EIA Report);
- Twentyshilling Hill, now operational (under construction at the time of the EIA Report);
- Sandy Knowe, now operational (under construction at the time of the EIA Report); and
- Pencloe, now under construction (consented at the time of the EIA Report).

Changes to the above schemes are included within the operational baseline for the purpose of the assessment of landscape and visual effects. The most notable change to baseline conditions are the physical presence of South Kyle, Enoch Hill and Pencloe, which had not yet commenced construction at the time that the EIA Report was written. Sites which were already under construction and are now operational, including Windy Rig, Twentyshilling Hill and Sandy Knowe are included in the operational baseline as they were within the EIA



Report, though are now noted as operational. Whilst these now form part of the existing baseline, the original photography for the AEI has not been replaced and these sites have been included in the photomontages where they would represent a notable change.

Further changes to cumulative sites which are consented or proposed are detailed within relevant scenarios in Section 7.6 below.

7.4.2. Changes to Local Guidance or Baseline Studies

Since the submission of the EIA Report, DGC has updated their supplementary guidance which informs landscape sensitivity assessment. The Dumfries and Galloway Council (February 2020) Wind Energy Development: Development Management Considerations, Supplementary Guidance Appendix 'C' Dumfries & Galloway Wind Farm Landscape Capacity Study (dated 2017), referred to in the EIA Report has been superseded by the Dumfries and Galloway Wind Energy Landscape Sensitivity Study (DGWELSS), Assessment of Larger Wind Turbines (February 2025). The consultation draft from 2024 has been adopted in 2025 without any revisions.

The 2025 DGWELSS update removes reference to capacity and the study has become a relative sensitivity assessment to wind energy, so that '*it accords with recent guidance on assessing landscape sensitivity issued by NatureScot in 2022. It also updates the assessment in terms of constructed and consented wind energy developments that have occurred in Dumfries and Galloway, and in relevant parts of adjoining local authorities, since 2017.*'¹

As part of this update, it also includes some changes to Landscape Character Types (LCT) boundaries (including some have been re-numbered) and there has also been some consolidation of LCTs into simpler groupings. Where referenced have changed, new references have been updated and included along side previous LCT references within the assessment of effects on landscape character in section 7.5 below. For instance, the EIA Report referenced the host as 'SNH 178/D&G 19a' and the new reference in the AEI text is 'NS 178/D&G 22 (19a)'.

The Site is still within the Ken assessment unit of the Southern Uplands with Forest LCT with no changes to the boundaries (noting the DGC reference number for this unit is now 22 rather than 19a in the previous study). Whilst there have been some updates to the sensitivity assessment within the host Southern Uplands with Forest LCT within the DGWELSS the overall assessment has remained the same.

Some of the guidance for development of the host, Southern Uplands with Forest has also been updated and therefore Table 7:7 of the EIA Report has been updated below (as **Table 7:3**):

Table 7:3 – Review of Design against Sensitivity Study

Concerns raised in DGWFLCS Ken unit 22 (19A)	Response
Cumulative Issues: 'The potential creation of a concentrated band of wind farm	The proposed Development would consolidate and increase the density of turbines within the

¹ *Page 2, Executive Summary, Dumfries and Galloway Wind Energy Landscape Sensitivity Study Assessment of Larger Wind Turbines (February 2025/October 2024), Carol Anderson Landscape Associates*

Concerns raised in DGWFLCS Ken unit 22 (I9A)	Response
<p><i>development visually linking wind farms located in the Ken area with the Blackcraig and Fell wind farms located in the Stroan area of the Foothills with Forest (20) to the south, cumulatively affecting character and views in the Upper Glenkens and extending the influence of wind farms into the well-settled lowlands of Dumfries and Galloway.'</i></p>	<p>operational and consented Harehill grouping which extends down to Lorg and would include Sanquhar, Sandy Knowe, Whiteside Hill, and Sanquhar II but would not extend further south within the Ken unit, maintaining a similar separation distance to the Wether Hill group (including Manquhill and Cornharrow), and Glenshimmeroch group (including Troston Loch, Margree and Divot Hill) and Blackcraig group (including Fell).</p>
<p>Cumulative Issues: 'While the sparsely settled character the relatively low recreational use of the Southern Uplands with Forest (22) reduces visual susceptibility, cumulative effects would arise on more elevated views from nearby popularly accessed hills such as Cairnsmore of Carsphairn, the Rhinns of Kells, the Langholm Hills and Culmark and Benbrack hills crossed by the SUW.'</p>	<p>There would be views of the proposed Development from elevated hill summits and the effect on these are illustrated with Viewpoints 1, 3, 4, 9, 14, 16, 17 and 18. No Significant effects are predicted for users accessing the Cairnsmore of Carsphairn, the Rhinns of Kells or the Langholm Hills but there were significant effects on recreational users on the SUW including Culmark and Bencrack hills.</p>
<p>Cumulative Issues: 'Cumulative effects with other operational and consented wind farms on the setting and on views to and from the landmark hill of Cairnsmore of Carsphairn, which makes an important contribution to the scenic qualities of the Galloway Hills RSA.'</p>	<p>There would be no impact on the setting and views to Cairnsmore of Carsphairn, as illustrated in Viewpoints 1, 3 and 13.</p>
<p>Cumulative Issues: 'Cumulative effects with other operational and consented wind farms on prominent skylines seen above the Esk valley and potentially affecting the special qualities of the Langholm Hills RSA'</p>	<p>Not applicable to the Ken unit.</p>
<p>Key Constraints: 'The arc of hills which includes Benbrack, Cairn and Blackcraig which form a key focus at the head of the Upper Glen (10) of the Dalwhat Water within the Ken unit. The presence of the SUW and the landmark sculptures of Striding Arches add to the sensitivities of this area.'</p>	<p>The proposed Development is located further north of this arc of hills with limited impact on the Upper Glen of the Dalwhat Water and the amended layout reduces impacts even further on the Upper Glen of the Dalwhat Water. The proposed Development shares the Site with the SUW and Striding Arches sculpture at Colt Hill and the amended layout reduces the impacts on users of the SUW and the Striding Arches sculptures.</p>
<p>Key Constraints: 'The rim of open-topped rugged higher hills extending from Loch Fell (688m) north-west of the Eskdalemuir unit, visually prominent from the Corbets of White Coombe and Hart Fell in the Moffat Hills.'</p>	<p>Not applicable to the Ken unit.</p>
<p>Key Constraints: 'The proximity of the dramatic sculptural hill of Cairnsmore of Carsphairn to parts of the Ken and Carsphairn units.'</p>	<p>There is an 8 km separation distance between the proposed Development and the summit of Cairnsmore of Carsphairn with little impact on its setting, as illustrated in Viewpoints 1, 3 and 13.</p>
<p>Key Constraints: 'The open hills lying on the eastern edge of the West Langholm unit which</p>	<p>Not applicable to the Ken unit.</p>

Concerns raised in DGWFLCS Ken unit 22 (I9A)	Response
<i>are important in providing a backdrop to Eskdale and are covered by an RSA.'</i>	
Key Constraints: 'Occasional areas of more complex landform and deeply incised valleys, some of these masked by extensive forest.'	Part of the proposed Development is visible from the head of the Lorg Glen but only a limited number of turbines would be visible from this area and the design amendments have reduced impacts on the incised valleys.
Key Constraints: 'Potential for cumulative effects to arise with additional wind farm development sited within the Ken, Carsphairn and West Langholm landscape units.'	There would be additional cumulative effects as a result of the proposed Development within the Ken unit. However, the proposed Development has been located within an area which is already strongly influenced by renewable energy, thereby moderating an increase in cumulative effects.
Opportunities: 'The expansive scale of this character type and its predominantly simple, gently rolling landform. The sparsely settled nature of this character type and its distance from more populated lowland areas. Extensive productive coniferous forestry which covers a large proportion of these uplands, and which precludes a strong sense of wildness. The relatively lower landscape value associated with much of these uplands.'	The proposed Development takes advantage of these opportunities resulting in limited impacts on settlement and location of the Site within existing commercial forestry site.
Guidance: 'The extent of operational and consented development already generally occupying the less sensitive interior of the Carsphairn, Ken and Ewe Hill areas of this Assessment Unit increases the potential for significant effects to arise on sensitive nearby dales, valleys and glens and on the landmark hill of Cairnsmore of Carsphairn. Cumulative effects with other operational and consented wind farms are also a key constraint to siting very large wind turbines in these areas.'	The proposed Development is located between operational and consented sites amongst the afforested hills within the interior of the Ken unit. The amended design has reduced effects on the adjacent valleys and glens. There is an 8 km separation distance between the proposed Development and the summit of Cairnsmore of Carsphairn with little impact on its setting, as illustrated in Viewpoints 1, 3 and 13 .
Guidance: 'All development should avoid the more pronounced open-topped hills which are present on the outer edges of this Assessment Unit as these provide an important backdrop and containing edge to smaller scale valleys, glens and upper dales. Areas of more complex landform also have an increase susceptibility. Wind turbines should also be sited to avoid impacting on the site and setting of significant and distinctive archaeological sites.'	The proposed Development is located amongst the afforested hills but not amongst the highest summits within the unit. The amended design has reduced effects on the adjacent valleys and glens. No Significant impacts are predicted on the setting of any significant archaeological sites, as stated in Chapter 11: Archaeology and Cultural Heritage .

Overall, the proposed Development responds to much of the updated DGWELESS guidance regarding turbine development within the Ken unit of the LCT 22: Southern Uplands with Forest (NS 178).



Since the submission of the EIA Report, East Ayrshire Council (EAC) has updated and refined boundaries of their designated Local Landscape Areas (LLA), which were formerly titled Sensitive Landscape Areas (SLA). These updates include the omission of the New Cumnock settlement area and an area of upland forestry and moorland between the B741 at Dalleagles, Enoch Hill, Millaneaoch Hill and Askmark Hill from the Uplands and Moorlands LLA. EAC have also updated the boundary for the River Ayr Valley LLA which now includes a track of land between the A70 and B7036 to the west of Cumnock and south of the A70 and Ochiltree surrounding the River Ayr. These updated boundaries are illustrated in **AEI Figure 7.2**.

The revised LLA boundaries covering additional areas which would be subject to limited effects as a result of the proposed Development. The additional area adjoining the River Ayr Valley LLA is located 18.3 km north west of the proposed Development with limited visibility and is focused the landscape surrounding the River Ayr and effects on the additional area would be Not Significant.

7.5. Assessment of Design Amendment Effects

7.5.1. Landscape Effects during Construction

As a result of the removal of Turbines No.20 and No.21 at the eastern end of the Site, the geographic extent of construction effects within the Ken unit of the Southern Uplands with Forest would reduce slightly, but a Moderate and Significant effect on the host Ken unit Southern Uplands with Forest (NS 178/D&G 22 (19a)) and Southern Uplands Ayrshire LCT (NS 81/ EAC 20a) which would host the access track would remain.

7.5.2. Visual Effects during Construction

The construction effects would marginally reduce as a result of the removal of two turbines at the eastern end of the Site, but would remain as reported in the EIA Report (Moderate and Significant for users of the SUW).

7.5.3. Viewpoint Analysis

The viewpoint analysis within **Technical Appendix 7.5: Viewpoint Analysis** has been updated following both the design amends to the proposed Development and the updated cumulative assessment (and is presented as **AEI Technical Appendix 7.5: Viewpoint Analysis**). Due to the design changes, the nature of effects of the proposed Development at the viewpoints has reduced. However, the conclusions with regard to the scale of change for both landscape and visual receptors has remained largely the same as summarised in Table 7.8 of the EIA Report. The only change would occur at Viewpoint 7 where the scale of change reduces from Medium to Small.

The following tables review the viewpoints and summarise the differences as result of the design changes to the proposed Development.

The viewpoint analysis within **Technical Appendix 7.5: Viewpoint Analysis** has been updated (see **AEI Technical Appendix 7.5**) following both the design amends to the proposed Development and the updated cumulative assessment. Due to the design changes, the nature of effects of the proposed Development at the viewpoints has reduced. However, the

conclusions with regard to the scale of change for both landscape and visual receptors has remained largely the same as summarised in Table 7.8 of the EIA Report.

Table 7:4 – Viewpoint Summary of Changes

VP	Viewpoint	Changes
1	Colt Hill (Striding Arches sculpture)	The loss of Turbines No.20 and No. 21 from this viewpoint would mean the nearest turbine was removed and the eastern most was also removed reducing the horizontal extent. The reduction in turbines T9, T10, T11, T18 and T19, from 230m to 200m would be clearly noticeable from this viewpoint as well. No change in level.
2	Lorg Glen	The reduction in Turbines No.9, No.10, and No.11 from 230m to 200m would be clearly noticeable from this viewpoint and would reduce impacts on both landscape and visual receptors at this viewpoint. No change in level.
3	Benbrack, Southern Upland Way (Striding Arches sculpture)	The loss of Turbines No.20 and No.21 from this viewpoint significantly reduces the horizontal spread and removes turbines from the striding arch on Colt Hill to the east. The reduction in Turbines No.9, No.10, No.11, No.18 and No.19, from 230m to 200m would be clearly noticeable from this viewpoint as well. No change in level.
4	Blackcraig Hill (East Ayrshire)	The reduction in Turbines No.9, No.10, and No.11 from 230m to 200m would be clearly noticeable from this viewpoint and would reduce impacts on both landscape and visual receptors at this viewpoint. No change in level.
5	Afton Reservoir	The reduction in Turbines No.9 and No.10 from 230m to 200m would be clearly noticeable from this viewpoint and would reduce impacts on both landscape and visual receptors at this viewpoint. No change in level.
6	Southern Upland Way crossing Cloud Hill	The loss of Turbines No.20 and No.21 from this viewpoint would mean a reduction in the horizontal extent of the array. The reduction in Turbines No.9, No.10, No.11, No.18 and No.19, from 230m to 200m would be noticeable from this viewpoint as well. No change in level.
7	Minor road in upper Shinnel Water, near Auchenbrack	The loss of Turbines No.20 and No.21 and the reduction in height of No.19 from this viewpoint has significantly reduced the visibility and reduced the scale of change from Medium to Small.
8	Kirkconnel	The reduction of Turbine No.9 would reduce the number of tips visible. No design changes visible. No change in level.
9	Cairnsmore of Carsphairn	The loss of Turbines No.20 and No.21 and the reduction in height of No.9, No.10, No.11, No.18 and No.19, from 230m to 200m would be clearly noticeable from this viewpoint and reduce effects. No change in level.
10	Sanquhar High School	Marginal difference due to changes in design. No change in level.
11	Fingland road near Todholes Hill	The loss of Turbines No.20 and No.21 and the reduction in height of No.9, No.10, No.11, No.18 and No.19, from 230m to 200m would be noticeable from this viewpoint and reduce effects. No change in level.
12	Auchengibbert Hill	The loss of Turbines No.20 and No.21 would be clearly noticed from this location and reduce visual effects. The reduction in height of Turbines No.9, No.10, No.11, No.18 and No.19, would be noticeable from this viewpoint as well. No change in level.
13	Culmark Hill, Southern Upland Way	The loss of Turbines No.20 and No.21 would be clearly noticed from this location and reduce visual effects. The reduction in height of Turbines No.9, No.10, No.11, No.18 and No.19, would be noticeable from this viewpoint as well. No change in level.
14	Southern Upland way, above Sanquhar	Marginal difference due to changes in design. No change in level.

VP	Viewpoint	Changes
15	A76, near Mennock	No change
16	East Mount Lowther Hill, near Southern Upland Way	The loss of Turbines No.20 and No.21 would be noticed from this location and reduce horizontal extent. No change in level.
17	Corserine, Rhinns of Kells	The loss of Turbines No.20 and No.21 would reduce horizontal extent. No change in level.
18	Queensberry	Marginal difference due to changes in design. No change in level.

The main change in the level of the scale of change would occur at Viewpoint 7 where the omitted Turbines No.20 and No.21 would no longer be visible above the horizon and the tip height reduction of Turbine No.19 would reduce the visibility to the proposed Development, which would be heavily screened by forestry and woodland, depending on the state of forestry.

7.5.4. Landscape Effects during Operation

One of the main drivers of the design changes was to reduce the landscape effects on the more sensitive valleys to the south including the Ken unit of Narrow Wooded River Valley LCT (NS 160/D&G 4) and Shinnel unit of Upland Glens LCT (NS 166/ D&G 10) both within Dumfries and Galloway.

With regard to the impact on the Ken unit of Narrow Wooded River Valley LCT (NS 160/D&G 4), Viewpoint 2 is located at the head of this valley in the Lorg Glen but is not particularly representative of this landscape character type. Additional wireline at Stroanfreggan Crag in AEI Volume 3 is located within this LCT along with wirelines within **AEI Technical Appendix 7.8 RVAA** for Corlae and Auchrae. The reduction in Turbines No.9 to No.11 from 230m to 200m has reduced the severity of effects on the Ken unit of Narrow Wooded River Valley LCT. However, the magnitude of change would remain at Substantial/ Moderate and a Major/ Moderate (Significant) effect within a 6 km radius. However, these impacts would be contained with the northern part of this LCT and the southern part would be less affected due to screening by landform, tree cover and increasing separation distance.

With regard to the impact on the Shinnel unit of Upland Glens LCT (NS 166/ D&G 10) the removal of Turbines No.20 and No.21 has reduced the effects. Viewpoint 7 is representative of the centre of this glen and the scale of change has reduced from Medium to Small due to the design changes. The removal of those turbines has notably reduced the impact on this unit of the Upland Glens LCT and the magnitude of change has reduced to Slight and the effect would reduce to Moderate/Minor and remain Not Significant.

With regard to the host unit Ken unit Southern Uplands with Forest (NS 178/D&G 22 (19a)) there would be a marginal reduction due to the removal of Turbines No.20 and No.21, but the effects would remain similar. There would be a marginal reduction within the Southern Uplands - Ayrshire (NS 81/ EA 20a), as a result of the reduction in height of Turbines No.9 and No.10 but no change regarding any direct effects of the access route.

With regard to the Carsphairn and Nithsdale units of Southern Uplands - Dumfries and Galloway (NS 177/D&G 21 (19)) there would be a marginal reduction as noted in Viewpoints 6,



9, and 11. The operational baseline has also changed in these two units of this LCT and this would also marginally reduce the scale of change but together this would result in a reduction in the overall magnitude of change to Moderate within a 6 km radius. For this LCT of Medium sensitivity, this would lead to a Moderate effect, which would still be considered Significant. This effect would be contained in nature and focused in a part of the landscape already influenced by wind energy development.

With regard to the Upper Nithsdale unit Upper Dale – Dumfries and Galloway (NS 165/D&G 9), there would be limited change in effect as a result of the design changes, as illustrated in Viewpoints 8, 10, 14 and 15.

With regard to the Upland Glen - Ayrshire (NS 73/ EAC 14), there would be a marginal reduction as a result of the reduction of turbine height for Turbines No.9 and No.10, as illustrated in Viewpoint 5. However, it would not alter the level of effect reported in the EIA Report of Moderate and Not Significant.

With regard to the Tynron, Keir and Dalmacallan units Foothills - Dumfries and Galloway (NS 175/D&G 19 (18)), there would be a reduction in the influence due to the removal of the nearest turbines No.20 and No.21. This is illustrated from the summit of Auchengibbert Hill at Viewpoint 12, but would not alter the level of effect from the EIA Report of Moderate/Minor, Not Significant.

Table 7.5: Updated Summary of Landscape Effects

Landscape Character Type	Sensitivity	Level of Effect	Change in level of effect from EIA Report
Host: Ken unit Southern Uplands with Forest – D&G (NS 178/D&G 22 (19a))	Medium/ low	Construction: Moderate, Significant Operational: Major/Moderate to Moderate and Significant within 6 km radius of the proposed turbines	No change
Host: Southern Uplands - Ayrshire (NS 81/ EA 20a)	Medium	Construction: Moderate, Significant Operational: Major/Moderate and Significant within 6 km radius of the proposed turbines	No change
Carsphairn and Nithsdale units Southern Uplands – D&G (NS 177/D&G 21 (19))	Medium	Major/Moderate and Significant within 6 km radius of the proposed turbines	Moderate and Significant within 6 km radius of the proposed turbines
Ken unit Narrow Wooded River Valley – D&G (NS 160/D&G 4)	Medium	Major/Moderate and Significant within 6 km radius of the proposed turbines	No change

Landscape Character Type	Sensitivity	Level of Effect	Change in level of effect from EIA Report
Upper Nithsdale unit Upper Dale – D&G (NS 165/ D&G 9)	Medium (where impact occurs)	Minor, Not Significant	No change
Shinnel unit Upland Glens - D&G (NS 166/ D&G 10)	High/ medium	Moderate, Not Significant	Moderate/Minor, Not Significant
Upland Glen - Ayrshire (NS 73/ EAC 14)	High/ medium	Moderate, Not Significant	No change
Tynron, Keir and Dalmacallan units Foothills - D&G (NS 175/D&G 19 (18))	Medium	Moderate/Minor, Not Significant	No change

7.5.5. Visual Effects during Operation

One of the other key drivers of the design amendments to the proposed Development was to reduce the visual effects on the residential and recreational receptors located to the south. This was particularly to reduce the severity of effects for those on the Southern Upland Way (SUW), appreciating the Striding Arches sculptures and those in the Shinnel Glen, Lorg Glen and Water of Ken valley to the south of the Site.

For users of the Southern Upland Way, there would be reduced visual effects as illustrated at Viewpoints 1, 3, 6, 13, 14 and 16. Whilst the geographic extent of the route affected would remain the same, the design changes has reduced the prominence of the turbines from the route and reduced the visual effect for users. This is particularly noticeable either from Colt Hill, where the nearest turbine was removed but also in the appreciation of the Striding Arch on Colt Hill from the summit of Benbrack on the SUW itself. However, the magnitude of change which would remain the same as reported for the EIA Report and would range from Substantial to Moderate within 7-8km in either direction and would lead to a Major to Major/Moderate effect which would be Significant.

As for those specific viewpoints at the Striding Arches sculptures, there would be a notable reduction in the severity of effect and this is demonstrated at Viewpoints 1 and 3. Whilst the scale of change at both viewpoints would remain Large, the removal of Turbines No.20 and No.21 from views between Benbrack to Colt Hill would reduce the overall magnitude of change from Substantial to Substantial/Moderate but the overall effect would remain at Major and Significant.

With regard to those within the Shinnel Glen, there would be a notable reduction in the effect within the upper part of the glen, as demonstrated at Viewpoint 7 where the main turbines visible were Turbines No.20 and No.21 which have been removed. There would be little or no effect on the lower Shinnel Glen (no change from EIA Report). Within the upper part of the glen, the scale of change would reduce to Small within the upper part of the glen and the magnitude of effect would reduce to Slight leading to a Moderate/minor effect which would be Not Significant.



Users of core paths within Site and Lorg Glen would continue to experience Significant visual effects as set out within the EIA Report (Major/Moderate, Significant), but the removal of Turbines No.20 and No.21 would reduce the number of turbines visible and the reduction in the heights of Turbines No.9, No.10, No.11, No.18 and No.19 would also be noticeable and reduce the visual effect. This is illustrated with reference to Viewpoints 1 and 2 and wireframes within **AEI Technical Appendix 7.8: RVAA** for Shinnelhead and Euchanbank.

Receptors within the Water of Ken valley (residents and recreational users) would experience reduced visual effects resulting from the reduction in height of Turbines No.9, No.10 and No.11, as illustrated in the Additional Wireline in AEI Volume 3 from Stroanfreggan Crag / Fort as well as wirelines from Auchrae, Corlae, Craigythorn, Nether Holm of Dalquhain and Upper Holm of Dalquhain within **AEI Technical Appendix 7.8: RVAA**. Whilst the visual effects would reduce as a result of these changes, the level of effect would remain as reported within the EIA Report (Moderate, Significant).

For those within the Cairn Water valley and on the local heritage trail Moniaive to Sanquhar Drove Road, the removal of Turbines No.20 and No.21 would be noticeable but the level of effect (Moderate/Minor, Not Significant) would remain as reported for the EIA Report.

With regard to receptors located to the north within the Nith valley at Sanquhar, Kirkconnel/Kelloholm, on the A76 and within the Euchan Water valley there would be no change in the level of visual effects reported in the EIA Report.

With regard to those within Glen Afton (represented by Viewpoint 5), the reduction in the height of Turbines No.9 and No.10 would be noticeable but the level of effect would remain as reported in the EIA Report (Moderate, Not Significant).

For any recreational hillwalkers in the hills surrounding Glen Afton, the reduction in these turbines would also be noticeable, as illustrated in Viewpoint 4, but the level of effect would remain as reported in the EIA Report (Major/Moderate, Significant). For those hillwalkers on Cairnsmore of Carsphairn the effects would remain as reported for the EIA Report (Moderate, Not Significant). For those hillwalkers on the Lowther Hills and the at the summit of East Mount Lowther, the removal of Turbines No.20 and No.21 would be noticeable but the level of effect would remain as reported for the EIA Report.

Table 7.6: Updated Summary of Visual Effects

Visual receptor	Sensitivity	Level of Effect and Significance	Change in level of effect from EIA Report
Sanquhar	High/ medium	Minor and Not Significant	No change
Kirkconnel/Kelloholm	High/ medium	Minor and Not Significant	No change
Euchan Water valley	High/ medium	Construction: Major/Moderate, Significant – with access route B only Operational: Moderate and Not Significant	No change
Glen Afton	High/ medium	Moderate and Not Significant	No change

Visual receptor	Sensitivity	Level of Effect and Significance	Change in level of effect from EIA Report
Hillwalkers above Glen Afton	High/ medium	Major/Moderate and Significant	No change
Tynron and lower Shinnel Glen	High/ medium	Minor and Not Significant	No change
upper Shinnel Glen	High/ medium	Moderate and Significant	Moderate/Minor, Not Significant
Core Paths within Site and Lorg Glen	High/ medium	Major/Moderate and Significant	No change
Water of Ken valley	High/ medium	Moderate and Significant	No change
Hillwalkers Cairnsmore of Carsphairn	High/ medium	Moderate and Not Significant	No change
Local Heritage Trail Moniaive to Sanquhar Drove Road	High/ medium	Moderate/Minor – Not Significant	No change
Cairn Water valley	High/ medium	Moderate/Minor – Not Significant	No change
Hillwalkers in Lowther Hills	High/ medium	Moderate/Minor – Not Significant	No change
A76 – Dumfries to Kilmarnock	Medium	Moderate/Minor – Not Significant	No change
Southern Upland Way	High	Construction: Moderate – Significant Operational: Major - Significant	No change
Striding Arches Sculptures	High/ medium	Major - Significant	Magnitude of change reduced to Substantial/Moderate but still a Major effect.
East Mount Lowther	High	Moderate/Minor – Not Significant	No change

7.5.6. Effect on Designated Landscapes during Operation

Due to the reduction in number and height of some of the proposed turbines, the effect on the designated landscapes would reduce and would be Not Significant as reported within the EIA Report.

Table 7.7: Updated Summary of Effect on Designated Landscapes

Designated Area	Sensitivity	Significant effect?	Change from EIA Report
Uplands and Moorlands Local Landscape Area (East Ayrshire)	High/ medium	Not Significant	No change
Galloway Hills Regional Scenic Area (Dumfries and Galloway)	High/ medium	Not Significant	No change

Designated Area	Sensitivity	Significant effect?	Change from EIA Report
Thornhill Uplands Regional Scenic Area (Dumfries and Galloway)	High/ medium	Not Significant	No change

7.6. Updated Cumulative Assessment

7.6.1. Introduction

The Cumulative and Visual Impact Assessment (CLVIA) describes the likely combined cumulative effects of the proposed Development in association with operational, consented and other proposed Developments.

It is important to differentiate between the assessment of cumulative effects arising from the proposed Development with other developments that are:

- **Scenario 1** (current baseline): Operational or under construction, which have been included as part of the baseline assessed above in section 7.5;
- **Scenario 2** (future baseline): Consented, which can be considered as part of a scenario with some certainty; and
- **Scenario 3**: Proposed, of which there can be little certainty.

The cumulative scenarios assessed in the cumulative assessment are Scenario 2 and Scenario 3. Scoping and pre planning windfarms have little or no fixed proposals and, therefore, are not considered in detailed assessments or illustrations. The burden of assessment would fall with subsequent applications.

Given the volume of development in and around the area, cumulative effects are a key issue for this proposed Development. In line with the agreed scope of cumulative assessment in the EIA Report, a cumulative search area out to a 30 km radius has been produced and is shown in **AEI Figure 7.5**.

It was agreed with NatureScot that the main influencing distance for the potential for Significant cumulative effects are those windfarms located within approximately 10 km of the proposed Development and which formed part of the detailed cumulative assessment. These mainly include those south of the A76 to the Carsphairn Forest and south to the B729 (between Moniaive and Knowehead) and are listed in **Table 7:8** and on **AEI Figure 7.6**. As some developments fall into clusters, the impacts of the proposed Development with these clusters are considered in the assessment. To align with the assessment scope of the EIA Report, the above approach is carried through within this updated assessment.

In this section, the proposed Development is referred to as Euchanhead in order to prevent confusion and differentiate it from other proposed Developments that are being considered.

Table 7.8: Windfarms considered within the detailed cumulative assessment (1 June 2025)

Windfarm	Status	Number of Turbines	Tip Height	Distance (nearest turbine)
Scenario 1: Operational and Under Construction (2025 baseline)				
Sanquhar	Operational	9	130	adjacent
Whiteside Hill	Operational	10	121.2	2.8 km
Hare Hill and Ext	Operational	20 + 39	64 + 70 to 91	2.0 km
Afton	Operational	25	100/120	2.8 km
Sandy Knowe	Operational (previously under construction)	24	125	3.4 km
Windy Standard 1 & 2	Operational	36 + 30	53.5 + 100/120	4.1 km
Windy Rig	Operational (previously under construction)	12	125	4.5 km
Wether Hill	Operational	14	91	4.9 km
Pencloe	Under construction (previously consented, tip height changed)	19	149.9	5.3 km
Twentyshilling Hill	Operational (previously under construction)	9	124.9	8.3 km
South Kyle	Operational (previously consented)	50	149.9	9.2km
Enoch Hill	Under construction (previously consented)	16	149.9	9.4 km
Sunnyside	Operational	2	62	10 km
Scenario 2: Consented (future baseline)				
Lorg	Consented	9	130/149.9	adjacent
Sanquhar II	Consented (previously proposed)	44	200/149	adjacent
Manquhill	Consented (previously not included)	8	200	3.6 km
Cornharrow	Consented (tip height changed)	7	200	4.3 km
Shepherds Rig	Consented (previously proposed)	17	125/149.9	7.6 km
Troston Loch	Consented (previously not included)	14	149.9	8.7 km
Lethans + Extension	Consented (extension now consented)	22 + 10	220/200/176 + 250	9.4 km
Glenmuckloch	Consented	8	149.9	9.0 km
Windy Standard 3	Consented (previously proposed)	20	125/177.5	9.9 km
Scenario 3: Proposals (with submitted/validated Planning Application or at Appeal)				
Lorg (2022)	Proposed	10	200	adjacent
Appin	Proposed	9	200	adjacent
Sandy Knowe Extension	Proposed	6	149.9/125	3.8 km
Herds Hill	Proposed	3	149	3.9 km
Windy Standard 1 Repowering	Proposed	8	200	4.3 km
Cloud Hill	Proposed	10	180	4.4 km
Rowancraig	Proposed	6	180	5.2 km

Windfarm	Status	Number of Turbines	Tip Height	Distance (nearest turbine)
Pencloe Extension	Proposed	19	149.9	7.7 km
Enoch Hill 2	Proposed	2	149.9	8.3 km
Quantans Hill	Proposed	14	200	9.5 km

As noted in section 7.4.1, there have been some changes to Scenario 1: Operational and Under Construction which is included within the LVIA baseline.

The changes to Scenario 2: Fully consented baseline now include Sanquhar II, Shepherds Rig, Manquhill, Troston Loch, Lethans Extension and WIndy Standard 3, which have been consented, and the tip heights of Cornharrow and Pencloe have been increased.

With regard to Scenario 3: Proposals in planning, these are all new with the exception of the proposed Lorg which has been amended since 2020.

Due to the scale of cumulative changes, this assessment replaces the assessment within the EIA Report.

7.6.2. Assessment Scenarios

It is important to differentiate between the assessment of cumulative effects arising from Euchanhead with projects that are operational or under construction and have been included as part of the baseline; and those which are consented and can be considered as part of a scenario with some certainty; and those that are proposed and about which there can be little certainty. Accordingly, the assessment distinguishes between: the predicted cumulative effects arising from Euchanhead with operational/under construction windfarms (Scenario 1 which has been included in Section 7.5); the effects arising from Euchanhead with the operational, under construction and consented wind turbines (Scenario 2); and finally, the effects arising from Euchanhead with operational, consented and other proposed windfarms (Scenario 3). The assessment has not included consideration of proposals at scoping stage, as there is no certainty that these proposals will progress to planning submissions and the nature of the proposed schemes may be subject to change.

The scenarios considered within the cumulative assessment are as follows:

- Scenario 2 (future baseline) – this considers the proposed Development along with all operational and consented developments; and
- Scenario 3 – this considers the proposed Development along with all operational, consented and proposed Developments with a submitted planning application.

The cumulative ZTVs presented in **AEI Figures 7.18-7.24** and **7.26-7.33** replicate the various grouped assessment scenarios to be assessed. The full cumulative situation in the direction of the proposed Development is presented within the visualisations for all viewpoints, within Volume 4. The updated cumulative analysis for each viewpoint is presented in **AEI Technical Appendix 7.5: Viewpoint Analysis**.

7.6.3. Cumulative Landscape and Visual Effects

In landscape terms, Significant cumulative effects can occur when the introduction of the proposed Development would: extend the geographic limits of existing character effects; or when its presence would influence prevailing local characterising effects to such an extent whereby the baseline landscape character type/area would be transformed or redefined, resulting in a change to its classification. Euchanhead is located within the Ken unit of Southern Uplands with Forest – D&G (LCT NS 178/D&G 21 (19a)). The location of other windfarm projects in relation to LCTs within an approximate 10 km radius is illustrated within **AEI Figure 7.15**.

Significant cumulative effects on visual amenity would potentially arise where, either in combination or sequentially with the assessment scenario, the additional effect of Euchanhead would become visually Significant for the receptor. The location of other windfarm projects in relation to visual receptors is illustrated within **AEI Figure 7.16**.

Notable cumulative interactions in Scenario 2, with the consented sites would primarily consist of Sanquhar II and Lorg, which are located adjacent to Euchanhead. Interactions with the consented Sandy Knowe, Manquhill, Cornharrow and Shepherds Rig turbines tend to only occur from elevated areas where Euchanhead would be viewed with the consented schemes including from the Southern Upland Way and hillwalkers on summits including Blackcraig, Cairnsmore of Carsphairn or the Rhinns of Kells, though effects would be limited due intervening distance and the broad views available from the area. There would be some, albeit limited cumulative interactions with the Lethans/Glenmuckloch group (on the north side of Nithsdale) from within Nithsdale itself. Cumulative interactions with Windy Standard 3 would be limited due to intervening landform and operational schemes within the Windy Standard group, which create a degree of separation to the proposed Development.

Cumulative interactions in Scenario 3, with other proposals would most notably include Appin, with interactions also arising with Cloud Hill, Rowancraig and Herds Hill. Due to the limited nature of the proposed change of the increased tip height of Lorg, the potential for Significant impacts would be much more limited. Cumulative interactions with proposed windfarms to the south including Quantans Hill and the proposed increased height of both Glenshimmeroch and Margree would be more limited due to the separation distance and screening effects of topography and forestry. Cumulative interactions with those to the west including Pencloe Extension and Windy Standard 1 Repowering would also be limited due to the screening effects of topography forestry and existing wind energy. Cumulative effects with the Sandy Knowe Extension would be similarly limited due to distance, screening and the Sandy Knowe Extension turbines being more closely spatially related to the operational Sandy Knowe turbines.

The following assessment focuses on the likely Significant cumulative interactions on landscape character and key visual receptors including local residents, settlements, key routes and recreational receptors. The steepness of landform which is characteristic of the Southern Uplands leads to a pattern of visibility where either panoramic views are possible on open high ground or from lower ground where the views are very constrained. This reduces the potential for likely Significant cumulative interactions with many landscape and visual receptors.

Scenario 2: Fully Consented Future Baseline Assessment

Landscape Character

The following assessment assumes that all the consented development would be constructed as proposed and is present in the assessment baseline. The assessment considers the additional changes which would result from the introduction of Euchanhead to that baseline.

The fully consented baseline without Euchanhead would consist of a group of turbines which include Sandy Knowe, Hare Hill (and Extension), Sanquhar, Sanquhar II, Whiteside Hill and Lorg and extends from the upper Nithsdale LCT to the Southern Uplands (with and without forestry) LCTs. The addition of Euchanhead, located adjacent to Sanquhar II and in between Sanquhar and Lorg, would increase the density of turbines within this pre-existing group. Due to the presence of the Sanquhar II turbines, which are of similar scale to the proposed Euchanhead turbines, the addition of Euchanhead would not notably increase the scale of wind energy development within this Hare Hill/Sanquhar group.

As illustrated in visuals from all directions, the proposed Euchanhead turbines would appear aligned to the scale and layout, and would read as an extension of Sanquhar II and Lorg within the already continuous cluster of turbines. It should be noted that this group already contains a variety of turbine sizes seen in both operational and consented arrays, and generally, the larger the group the easier it tends to be to integrate different turbine sizes effectively. The design ethos remains relatively consistent amongst this group, with some variation due to the differing situations and design parameters required with the larger scale turbines.

The Hare Hill/Sanquhar group (with Euchanhead) would remain separate from Twentyshilling Hill to the east of the Scaur Water valley and Lethans/Glenmuckloch to the north of Nithsdale. It would also remain separate from Cornharrow, Manquhill and Wether Hill, which are located within the same LCT but would remain separate due to the clear separation distance of 3.5 km from Lorg / Euchanhead. The Hare Hill/Sanquhar group would not coalesce with the Windy Standard group (between Afton Reservoir and the A713) to the southwest as this would still be separated by Glen Afton.

Due to the strong characterising presence of Sanquhar II and Lorg, and Euchanhead's position amongst those arrays, the addition of Euchanhead to the fully consented baseline would reduce the magnitude of change from Substantial/Moderate with Scenario 1 to Moderate with Scenario 2 for the host LCTs (NS 178/D&G 22 (I9a)) and (NS 81/ EA 20a). This would result in a reduced effect from Major/Moderate to Moderate and Significant in Scenario 1 to Moderate and Not Significant in Scenario 2.

The effect on neighbouring LCTs would also notably reduce in Scenario 2, compared with Scenario 1 including a reduction on the Carsphairn and Nithsdale units Southern Uplands - D&G (NS 177/D&G 21 (I9)) and Ken unit Narrow Wooded River Valley - D&G (NS 160/D&G 4) to both Moderate and Not Significant.

Visual Effects

The following assessment assumes that all the consented development would be constructed as consented and present in the assessment baseline. The assessment



considers the additional changes which would result from the introduction of Euchanhead to this baseline.

Due to the extent of screening by landform and tree cover, and the extent of consented baseline development located between Euchanhead and the receptors to the north and east (settlement in upper Nithsdale, A76, receptors within the Lowther Hills), the potential for increased additional effects as a result of Euchanhead would be rather limited. This is evident in the visualisations from these positions including Viewpoints 8, 10, 11, 14, 15, 16, and 18.

Given the influence of the fully consented baseline on the Euchan Water valley, Glen Afton and the Water of Ken valley by Sanquhar II and Lorg, the addition of Euchanhead would not result in any increased effects compared to Scenario 1.

The locations where visual receptors would experience the most noticeable cumulative visual effects with the fully consented baseline would be from surrounding open elevated locations where panoramic views are typical. The receptors would be predominantly recreational hillwalkers in the surrounding area including those on the Southern Upland Way, upland Striding Arches, Core Paths within the Site, above Glen Afton (Blackcraig), and on Cairnsmore of Carsphairn. As illustrated in Viewpoints 1, 3, 4, 6, and 9, from these open summits there would be open views; and the higher the viewpoint, the more extensive the visibility. The addition of Sanquhar II and Lorg to the existing baseline would have the most notable cumulative interaction with Euchanhead, whereas Cornharrow, Manquhill and Shepherds Rig would be viewed as separate schemes to the south. Windy Standard 3 would appear within the existing Windy Standard group, which is often screened by landform. Lethans and Glenmuckloch would also be visible appearing as a separate group north of Nithsdale.

From the SUW (a long distance route) there would be sequential views of wind energy developments along the route. This would include several instances locally where users of the route would come into close view of groups of turbines. This would include the Glenshimmeroch/Troston Loch/ Margree group and Manquhill/Cornharrow/Wether Hill groups to the south of the Site. There would also be views of the Hare Hill/Sanquhar group which includes Lorg and Sanquhar II. These consented sites will introduce turbines in close proximity to the route, and these would be combined views with Euchanhead which would add more turbines across the SUW (including within an afforested section). Assuming the prior presence of the fully consented baseline, the addition of Euchanhead would reinforce and extend the strong influence of renewable energy development on a section of the route through the Site from both Lorg and Sanquhar II. Given the influence of Euchanhead, this would remain as reported for Scenario 1 and the level of impact would remain at Major and Significant.

A similar experience would occur for those visiting the upland Striding Arches, as illustrated at Viewpoints 1 and 3. However, the addition of Lorg would add new turbines in closer proximity in some cases and Sanquhar II would be clearly visible to the north and north east. The addition of the revised Euchanhead to this fully consented baseline would reduce the additional effect from Major to Major/Moderate but still a Significant effect.

For users of the core paths within the Site and within Lorg Glen, the extent of forestry present along the routes would change the visual amenity which might be available at any one time in any one direction. But given the proximity of Lorg to routes in the south of the Site, and Sanquhar II to routes in the north and east, turbines will be visible at close range from parts



of these routes. These consented developments will have more influence than the operational sites on these routes due to the scale and proximity of the turbines. The Euchanhead turbines would appear in close proximity to these routes and would increase the potential for wind turbines being present when views out are available. As a result, the addition of Euchanhead to this baseline would still result in a Major/Moderate and Significant effect.

Those hillwalking above Glen Afton, as illustrated in Viewpoint 4 on the summit of Blackcraig, would experience views to Sanquhar II and Lorg to the south and east. The addition of Euchanhead would add to an already strong influence of Sanquhar II and Lorg on the Site. Assuming the prior presence of the fully consented baseline, the addition of Euchanhead would add to the density but not add another occurrence of wind energy and would result in a reduced Moderate effect which would be Significant.

From Cairnsmore of Carsphairn, as illustrated in Viewpoint 9 on the summit, is an elevated summit and would experience views over a large extent. The consented baseline would be readily visible with Sanquhar II and Lorg to the east and northeast. Windy Standard 3 a little closer to the north and Shepherds Rig, Cornharrow and Manquhill to the south east. Euchanhead would appear to the northeast within the extent of consented renewable energy, thereby not increasing its extent but increasing the density. There will be a variety of different turbines sizes already present in this view and the variation tends to be easier to accommodate in these expansive landscapes which include numerous windfarms. Euchanhead would appear to align with the scale and spacing of the adjacent Sanquhar II. The addition of Euchanhead to this baseline would result in a reduced Moderate/Minor effect which would be Not Significant, given the context of the baseline.

Landscape Designations

With regard to the East Ayrshire Local Landscape Areas, a few of the consented Sanquhar II turbines extend into the Uplands and Moorlands LLA to the south of Blackcraig Hill, with Afton and Hare Hill turbines already present. The addition of Euchanhead would attribute less impacts than those schemes which are or will be within the LLA, with the Euchanhead turbines located at over 400 metres away on Meikledodd Hill. The Euchanhead turbines would add density to the consented Sanquhar II and Lorg turbines visible to the south east from the LLA. As a result, the impact would reduce compared to the operational baseline (Scenario 1) and remain Not significant.

For the Galloway Hills and Thornhill Uplands Regional Scenic Areas, the impact as a result of adding Euchanhead to the fully consented baseline, would result in Euchanhead adding density to the Hare Hill/ Sanquhar group (most notably with Lorg and Sanquhar II) where views would be possible. The result would be less influential than assessed for the operational baseline (Scenario 1) and the additional effect would remain Not Significant

Scenario 3: Fully Consented Baseline with other Proposals

The following assessment assumes that all the operational, under construction and consented development would be constructed as consented (Scenario 2) plus either individual proposals or clusters of proposals, and that these proposals are present within the baseline. The assessment considers the additional changes which would result from the introduction of Euchanhead to that baseline.



Given that Pencloe Extension and Enoch Hill 2 were on the northwest side of the Windy Standard group, there would be no Significant cumulative effects with the proposed Development and therefore these have not been assessed in further detail. An assessment of the other proposals within 10 km of the proposed Development are presented below.

Lorg (2022) redesign.

Landscape Character

Lorg is included in Scenario 2, the changes from the consented scheme to this redesign are a tip height increase of all turbines to 200 m to tip, with an amended layout of 10 turbines, pushing the array into a wider extent to the west and north.

The proposed Lorg (2022) redesign turbines would sit in the same LCT as Sanquhar II, Cornharrow, Manquhill, Wether Hill and the proposed Development. And would expand the Sanquhar II group (compared to that described in scenario 2) slightly, due to the wider array and taller turbines in the redesigned scheme. The addition of Euchanhead to this baseline would result in the same level of effect as Scenario 2 (Moderate and Not Significant).

Visual Effects

The change from the consented turbines to the 2022 redesign would be most noticeable for a few visual receptors including residents and walkers within the Water of Ken valley / Lorg Glen where the redesign turbines would be clearly visible above the horizon, and on the SUW across the Site, where the tip height increase would result in Lorg and the proposed development appearing as a single array across either side of the SUW

Changes from scenario 2 to the 2022 redesign would also be apparent from elevated locations including Benbrack, Blackcraig Hill, Cairnsmore of Cairsphain, which have clear views to the Sauquhar II group. From these areas, the Lorg (2022) redesign turbines would appear at a similar scale and distribution to the consented turbines in the group, and would more visually cohesive with Sanquhar II, Appin and the proposed Development..

The changes from scenario 2 to the 2022 redesign would be noticeable, but less apparent from more distant elevated areas such as Culmark Hill and the Rhinns of Kells and would not increase the influence wind energy on views due to the presence of Sanquhar II. As a result of the very limited changes the addition of Euchanhead to the fully consented baseline with Lorg Increased Tip Height would remain the same as that assessed for Scenario 2 for both landscape and visual receptors.

Appin

Landscape Character

This development would sit in the same LCT as Sanquhar II, Lorg, Cornharrow, Manquhill, Wether Hill and the proposed Development. The Appin turbines would extend to the south of the Hare Hill/Sanquhar group. The Proposed development would add to the centre of Hare Hill/Sanquhar group within the northern part of this LCT. Appin would extend the group to the south but would remain separate from the Cornharrow, Manquhill, Wether Hill group. The addition of Euchanhead to this baseline would result in the same level of effect as Scenario 2 (Moderate and Not Significant).

Visual Effects

Appin and Euchanhead would be visible together from mainly elevated viewpoints as illustrated in CZTV **AEI Figure 7.27**. Theoretically, the two sites would be visible from the Shinnel valley as illustrated in Viewpoint 7 and upper Water of Dalwhat valley. However, there would be very limited visibility of Euchanhead therefore there would be No Significant cumulative effects.

Walkers on the SUW, as illustrated in Viewpoints 1, 3, 6, 13, 14 and 16, would experience views to both schemes alongside the consented baseline. This would be most notable between Benbrack and Black Hill / Colt Hill. From this section Appin would appear in relatively close proximity and extend the influence of wind energy within the view, whereas the addition of Euchanhead would be to increase the density but would not increase the extent of wind energy in the view. However, given the influence of Euchanhead on the SUW, the level of effect resulting from the addition of Euchanhead would remain at Major and Significant.

In terms of the effect on recreational receptors appreciating the Striding Arches, the addition of Appin would have a similarly Significant effect as Euchanhead. As illustrated in Viewpoints 1 and 3, Appin would extend along the ridge between the sculpture on Colt Hill towards the Bail Hill sculpture, but would appear in front of either sculpture from Benbrack. Assuming the prior presence of the fully consented baseline and Appin, addition of the revised Euchanhead would result in a Major/Moderate and Significant effect (same as Scenario 2).

For users of the core paths within the Site, Appin would be visible from some of these, depending on the state of the forestry. However, views within Lorg Glen would not occur. The Euchanhead turbines would increase the potential for wind turbines being present when views out are available. As a result, the addition of Euchanhead to the fully consented baseline with Appin would result in a Major/Moderate and Significant effect (same as Scenario 2).

Those hillwalking above Glen Afton, as illustrated in Viewpoint 4 on the summit of Blackcraig and at Cairnsmore of Carsphairn as illustrated in Viewpoint 9, both sites would be visible adjacent to each other. Appin would appear to extend the Hare Hill/Sanquhar group to the south. Euchanhead would appear to increase the density of turbines within the group. The addition of Euchanhead to the fully consented baseline with Appin would be the same as Scenario 2.

Sandy Knowe Extension

Landscape Character

The Sandy Knowe Extension comprises 6 turbines which adjoin the operational Sandy Knowe to the north and west. This would marginally increase the density of turbines within the Hare Hill/Sanquhar group. The operational scheme is already a characterising feature of upper Nithsdale, with the Extension marginally increasing its spread within Upper Dale LCT and Southern Uplands LCT. The Extension would be well separated from the proposed Development by both distance but predominantly by the number of operational and consented turbines located between these two proposed Developments. Assuming the prior presence of the fully consented baseline and Sandy Knowe Extension, the addition of Euchanhead to this baseline would result in the same level of effect as Scenario 2 (Moderate and Not Significant) within the Ken unit of the LCT.

Visual Effects

Whilst there would be areas of combined visibility, as noted in CZTV **AEI Figure 7.33**, the visualisations will be of more assistance when considering the potential cumulative impact of these two proposals.

Within upper Nithsdale at Sanquhar, Kirkconnel/Kelloholm and A76 and from the hills above Nithsdale, as illustrated with Viewpoints 8, 10, 11, 14, and 15, both proposals would be visible, but they would appear well separated. The Sandy Knowe Extension would increase the density of turbines at the northern end of the grouping, whilst Euchanhead would increase the density of turbines within the southern part of the grouping. Assuming the prior presence of the fully consented baseline and Sandy Knowe Extension, the addition of Euchanhead to this baseline would result in the same level of effect as Scenario 2.

Rowancraig and Herds Hill

Landscape Character

Rowancraig and Herds Hill are two separate proposals but sited near each other to the immediate east of Sanquhar and Sanquhar II in the Southern Uplands LCT. Given their proximity to each other, the cumulative effects would be similar and therefore assessed together. The Southern Uplands LCT is already characterised by both operational and consented wind energy including Twentyshilling Hill, Sanquhar/Sanquhar II and Whiteside Hill. Due to existing and consented wind energy in both the host LCT and the Southern Uplands LCT, there would be very limited additional cumulative landscape effects as a result of the addition of Euchanhead into a fully consented baseline with Rowancraig and Herds Hill. The level of effect on landscape character would remain as reported with Scenario 2.

Visual Effects

Whilst there would be areas of combined visibility, as noted in CZTVs **AEI Figures 7.29 and 7.30**, the visualisations will be of more assistance when considering the potential cumulative impact of these two proposals.

Within upper Nithsdale at Sanquhar, Kirkconnel/Kelloholm and A76 and from the hills above Nithsdale, as illustrated with Viewpoints 8, 10, 11, 14, and 15, the proposals would be visible together in a similar part of the view but the Euchanhead turbines would be in the background of views, beyond Rowancraig and Herds Hill. Rowancraig and Herds Hill would increase the density of turbines at the northern end of the grouping, closer to Nithsdale, whereas Euchanhead would increase the density of turbines within the southern part of the grouping in the background of the view. Assuming the prior presence of the fully consented baseline, Rowancraig and Herds Hill, the addition of Euchanhead to this baseline would result in the same level of effect as Scenario 2.

Cloud Hill

Landscape Character

This development is located in the Southern Uplands LCT, adjacent to the host LCT Southern Uplands with Forestry. The Southern Uplands LCT is already characterised by both operational and consented wind energy at Twentyshilling Hill, Sanquhar/Sanquhar II and Whiteside Hill, which the Cloud Hill turbines would adjoin to the east. Due to existing and



consented wind energy in both the Southern Uplands (with and without forestry) LCTs, there would be very limited cumulative effects as a result of the addition of Euchanhead into a fully consented baseline with Cloud Hill. The level of effect on landscape character would remain in line with Scenario 2.

Visual Effects

Whilst there would be areas of combined visibility, as noted in CZTVs **AEI Figure 7.28**, the visualisations will be of more assistance when considering the potential cumulative impact of these two proposals.

Within upper Nithsdale at Sanquhar, Kirkconnel/Kelloholm and A76 and from the hills above Nithsdale, as illustrated with Viewpoints 8, 10, 11, 14, and 15, both proposals would be visible together in a similar part of the view but the Euchanhead turbines would be in the background of views, beyond Cloud Hill. Cloud Hill would increase the density of turbines at the northern end of the grouping, closer to Nithsdale, whereas Euchanhead would increase the density of turbines within the southern part of the grouping in the background of the view. Assuming the prior presence of the fully consented baseline, Cloud Hill, the addition of Euchanhead to this baseline would result in the same level of effect as Scenario 2.

Windy Standard 1 Repowering

Landscape Character

This development would replace some of the existing turbines within the Windy Standard group, which is in the same Southern Uplands LCTs with and without Forestry (NS 177/ 178 / D&G 22/21) but within the Carsphairn units. The proposed Windy Standard 1 Repowering would sit within the existing Windy Standard group and the proposed Development would be located within the Hare Hill /Sanquhar group. The proposed Development would not change the distance between the groups. The addition of Euchanhead would increase the density of turbines within the Ken unit of the LCT, as noted in Scenario 2, but would not result in any significant cumulative landscape effects within the Carsphairn unit with the fully consented baseline and Windy Standard 1 Repowering.

Visual Effects

The locations where both Windy Standard 1 Repowering and Euchanhead would be visible would be from elevated locations, as illustrated in CZTV **AEI Figure 7.32**. There would be no significant cumulative effects from any valleys. In these elevated situations, they would generally appear in different parts of the view and would appear within their separate turbine groupings.

From the SUW, Striding Arches sculptures and core paths on the Site, Viewpoints 1 and 3 (Colt Hill and Benbrack) the two developments would be occasionally visible together in the same panoramic view, but in different directions and within their respective turbines groupings. Windy Standard 1 Repowering would reduce the density of turbines but increase their scale. Whereas Euchanhead would increase the density and appear as a similar scale to Windy Standard 1 Repowering. Assuming the prior presence of the fully consented baseline and Windy Standard 1 Repowering, the addition of Euchanhead would remain as reported for Scenario 2.



For those hillwalking above Glen Afton, as illustrated in Viewpoint 4 on the summit of Blackcraig and at Cairnsmore of Carsphairn as illustrated in Viewpoint 9, both sites would be visible in the view but within their respective turbine groupings. Windy Standard I Repowering would reduce the density of turbines but increase their scale. Whereas Euchanhead would increase the density and appear as a similar scale to Windy Standard I Repowering. The addition of Euchanhead to the fully consented baseline with Windy Standard I Repowering would be the same as Scenario 2.

Quantans Hill

Landscape Character

This development would sit adjacent to Shepherds Rig, on the southern slopes of Cairnsmore of Carsphairn, within the Southern Uplands LCTs (NS 177 / D&G 21) within the Carsphairn unit. The proposed Quantans Hill would sit within a separate wind cluster to Euchanhead (which would be located within the Hare Hill /Sanquhar group). Euchanhead would not change the distance between the groups. The addition of Euchanhead would increase the density of turbines within the Ken unit of the LCT, as noted in Scenario 2, but would not result in any significant cumulative landscape effects within the Carsphairn unit with the fully consented baseline.

Visual Effects

The locations where both Quantans Hill and Euchanhead could be visible would mainly occur at elevated locations and within the Water of Ken valley, as illustrated in CZTV **AEI Figure 7.31**. In these situations, they would generally appear in different parts of the view and would appear within their separate turbine groupings.

From the SUW Viewpoints 1, 3, and 13 the two developments would be seen in different directions and within their respective turbines groupings. Quantans Hill would be seen adjacent to Shepherds Rig to the west whilst Euchanhead would appear within the Hare Hill/Sanquhar group to the north. Assuming the prior presence of the fully consented baseline and Quantans Hill, the addition of Euchanhead would remain as reported for Scenario 2.

For those hillwalking on Cairnsmore of Carsphairn as illustrated in Viewpoint 9, both sites would be visible in the view from the summit but within their respective turbine groupings. Quantans Hill would have a greater effect than Euchanhead and its addition to the fully consented baseline with Quantans Hill would be the same as Scenario 2.

Within the Water of Ken valley, Quantans Hill would be visible to the west whilst Euchanhead would be visible to the north, as illustrated in the **Additional Wireline in Volume 4** from Stroanfreggan Crag / Fort. Assuming the prior presence of the fully consented baseline and Quantans Hill, the addition of Euchanhead would remain as reported for Scenario 2.

7.7. Night-time Effects

7.7.1. Summary of visible aviation lighting requirements and updated mitigation

The proposed Development will require visible aviation lighting. As set out within **AEI Technical Appendix 15.4: Reduced Aviation Lighting Scheme** and the aviation section of **AEI Chapter 15**, the proposed Development now includes for a reduced lighting scheme which comprises visible lights on the nacelles of twelve of the proposed nineteen turbines (Turbines No.1, No.3, No.5, No.6, No.8, No.9, No.11, No.12, No.13, No.17, No.18, and No.19) but none of the towers, thereby reducing the number of visible lights required from 44 in the previous scheme to 12 in the revised proposed Development.

As noted in **AEI Technical Appendix 15.4: Reduced Aviation Lighting Scheme**, further mitigation includes automatic (controlled by sensors installed on the turbines) dimming of the lights to a nominal intensity of 200 candela during periods of meteorological visibility in excess of 5 km. The switching on and off of lights would be controlled by a timer 30 minutes after sunset until 30 minutes before sunrise, and not by photocells or similar that respond to particular light levels, thereby not incurring effects in the daytime. The reduced lighting scheme and this embedded mitigation is included within this assessment.

The approach to the assessment is as set out within the EIA Report, in sections 7.9.2 – 7.9.5.

7.7.2. Cumulative Night-time

With regard to the potential cumulative night-time impacts, some of these have changed due to the cumulative changes and are as the following table (**Table 7:9**):

Table 7.9: Windfarms considered within the night-time cumulative assessment.

Windfarm	Tip Height	Distance from Proposal	Lighting Scheme
Scenario 1: Operational and Under Construction			
Windy Standard 1 & 2	53.5 + 100/120	4.1 km	Operational site of 100 m & 120 m to tip turbines fitted with 25 cd flashing nacelle light in a cardinal arrangement (N,S,E & W) but due to the flashing not being synchronised, all four may not be shown illuminated on the baseline night-time photography so this is illustrated in the cumulative night-time montages
Scenario 2: Consented			
Sanquhar II	200/149	adjacent	Reduced lighting scheme of 19 turbines with nacelle lights only, no tower lighting required.
Manquhill	200	3.6 km	No reduced lighting scheme, so standard CAA requirement of 8 turbines will require nacelle and tower lighting
Cornharrow	200	4.3 km	No reduced lighting scheme, so standard CAA requirement of 7 turbines will require nacelle and tower lighting

Lethans + Extension	220/200/17 6 + 250	9.4 km	No reduced lighting scheme, so standard CAA requirement of 32 turbines will require nacelle and tower lighting
Windy Standard 3	125/177.5	9.9 km	No reduced lighting scheme, so standard CAA requirement of 12 turbines (of 20) at 200 m to tip will require nacelle and tower lighting
Scenario 3: Proposals			
Lorg (2022)	200	adjacent	Reduced lighting scheme of 5 turbines with nacelle lights only, no tower lighting required.
Appin	200	adjacent	Reduced lighting scheme of 4 turbines with nacelle lights only, no tower lighting required.
Windy Standard 1 (repowering)	200	4.3 km	Reduced lighting scheme of 5 turbines with nacelle lights only, no tower lighting required.
Cloud Hill	180	4.4 km	Reduced lighting scheme of 4 turbines with nacelle lights only, no tower lighting required.
Rowancraig	180	5.2 km	Reduced lighting scheme of 4 turbines with nacelle lights only, no tower lighting required.
Quantans Hill	200	9.5 km	Reduced lighting scheme of 5 turbines with nacelle lights only, no tower lighting required.

Technical Appendix 7.7: Night-time Viewpoint Analysis of the EIA Report has been updated (see AEI Technical Appendix 7.7: Night-time Viewpoint Analysis) with the reduced lighting scheme and the updated cumulative. This replaces the appendix within the EIA Report. The following assessment should be read in conjunction with the night-time assessment within the EIA Report, particularly with regard to the baseline and sensitivity of receptors which has not been repeated here.

Night-time effects on Landscape Character

Ken unit Southern Uplands with Forest – Dumfries and Galloway LCT: NS 178/D&G 21 (19a)

In Scenario 1 (the operational baseline), the introduction of aviation lighting would influence the Ken unit of this landscape, especially within the open areas. However, the extent of commercial forestry would limit areas where lights may be experienced and moderate this influence. Given the reduced lighting scheme of 12 lights, there would be a Medium/Small scale of change over an Intermediate extent of this unit. These changes are considered to be Permanent which would lead to a Moderate/Slight magnitude of change within the Ken unit. For this LCT of Medium/low sensitivity, this would lead to a Moderate effect, which would be Not Significant.

For Scenario 2, the consented baseline, night-time cumulative effects with the consented Lethans would be limited due to the separation distance and differing landscape units. Windy Standard 3 would be located in the same LCT but in the Carsphairn unit rather than the Ken unit and, therefore, cumulative night-time impacts are likely to be limited. There



would be the potential for notable cumulative night-time impacts with Sanquhar II, as this is also located within the Ken unit and would add 19 lit turbines into the northern part of the Ken unit with a further 15 lit turbines to the south at Cornharrow/Manquhill. The addition of Euchanhead would increase the number present, but they would be located amongst the Sanquhar II turbines, concentrating the impact rather than extending it. Assuming the prior presence of the fully consented baseline, the addition of Euchanhead would lead to a Small scale of change over a Localised extent of this unit. These changes are considered to be Permanent which would lead to a Slight magnitude of change within the Ken unit. For this LCT of Medium/low sensitivity, this would lead to a Moderate/Minor effect, which would be Not Significant.

For Scenario 3, four additional lights on both Rowancraig and Cloud Hill would expand the cluster of lights at Sanquhar II into the Southern Uplands LCT towards Nithsdale. Assuming the prior presence of the fully consented baseline, Rowancraig and Cloud Hill, the addition of Euchanhead would lead to the same effect as with Scenario 2.

Lighting on four of the Appin turbines and 5 of the Lorg turbines would extend the spread of turbine lighting south within the Ken unit of the Southern Uplands with Forest LCT, from the main group at Sanquhar II, with Euchanhead again seen to increase the concentration of lights but not the spread. Assuming the prior presence of the fully consented baseline and Appin, the addition of Euchanhead would lead to the same effect as with Scenario 2.

There would be five lights on Quantans Hill located in a separate group within the Carsphairn unit. Assuming the prior presence of the fully consented baseline and Quantans Hill, the addition of Euchanhead would lead to the same effect as with Scenario 2.

Southern Uplands – Ayrshire LCT: NS 81/ EA20a)

In Scenario 1 (the operational baseline), the introduction of aviation lighting would reduce this part of the landscape expressing the '*remote and largely untamed*' characteristics at night, which is part of the baseline landscape character for this landscape type as a whole. Given the reduced lighting scheme of 12 lights, there would be a Medium/Small scale of change over an Intermediate extent of this unit. These changes are considered to be Permanent which would lead to a Moderate/Slight magnitude of change within the Southern Uplands-Ayrshire. For this LCT of Medium sensitivity, this would lead to a Moderate effect, which would be Not Significant.

For Scenario 2, the consented baseline, night-time cumulative effects with the consented Lethans would be limited due to the separation distance and differing landscape units. Windy Standard 3 will be located in a different LCT over 4.5 km away on the southwestern side of the Windy Standard group and combined visibility of both sites is unlikely to be widespread and, therefore, the impacts would be more limited. There would be the potential for notable cumulative night-time impacts with Sanquhar II, in the same area as Euchanhead which would add 19 lit turbines into this and the adjacent landscape unit. Lit turbines at Cornharrow and Manquhill may be visible in the far distance to the south from elevated areas in the south of the LCT around Blackcraig Hill, with the proposed Development seen in front of these, mixed in with lights from Sanquhar II. The addition of Euchanhead would increase the number of lights present in scenario 2, but would be located amongst the Sanquhar II turbines, thereby concentrating the impact rather than extending it. Assuming the prior presence of the fully consented baseline, the addition of Euchanhead would lead to a Small scale of change over a Localised extent of this unit. These changes are considered to be



Permanent which would lead to a Slight magnitude of change within this LCT. For this LCT of Medium sensitivity, this would lead to a Moderate/Minor effect, which would be Not Significant.

For Scenario 3, additional lights on Cloud Hill, Rowancraig, Lorg, Appin and Quantans Hill would be seen in the distance at the rear of the main clusters. The addition of Euchanhead to a fully consented with any or all of these proposed developments would have a Slight magnitude of change leading to the same level of effect as Scenario 2.

Nithsdale unit Southern Uplands – Dumfries and Galloway LCT: NS 177/D&G 21 (19)

In Scenario 1 (the operational baseline), the introduction of aviation lighting would reduce this part of the landscape expressing the '*strong wild character*' at night, which is part of the baseline landscape character for this landscape type as a whole. Given the reduced lighting scheme, there would be a Medium/Small scale of change within a Wide extent of this area. These changes are considered to be Permanent which would lead to a Moderate magnitude of change. For this LCT of Medium sensitivity, this would lead to a Moderate effect, which would be Not Significant.

For Scenario 2, the consented baseline, night-time cumulative effects with the consented Lethans would be limited due to the separation distance and differing landscape units. There would be the potential for notable cumulative night-time impacts with Sanquhar II, where it would add 19 lit turbines into this and the adjacent landscape Ken unit, with Cornharrow and Manquhill adding a further 15 lights to the south at distance. The addition of Euchanhead within the Ken unit would increase the number of lights present but they would be located amongst the Sanquhar II turbines. Assuming the prior presence of the fully consented baseline, the addition of Euchanhead would lead to a Small scale of change over an Intermediate extent of this unit. These changes are considered to be Permanent which would lead to a Slight magnitude of change. For this LCT of Medium sensitivity, this would lead to a Moderate/Minor effect, which would be Not Significant.

For Scenario 3, Cloud Hill and Rowancraig would add four lights each in front of the lights on Sanquhar II turbines within this landscape unit. Assuming the prior presence of the fully consented baseline, Rowancraig and Cloud Hill, the addition of Euchanhead would lead to the same effect as with Scenario 2.

The addition of the four Appin lights and five Lorg lights would extend the Sanquhar II cluster to the south within the Ken unit. Assuming the prior presence of the fully consented baseline and Appin, the addition of Euchanhead would lead to the same effect as with Scenario 2.

Carsphairn unit Southern Uplands – Dumfries and Galloway LCT: NS 177/D&G 21 (19)

In Scenario 1 (the operational baseline), the introduction of aviation lighting would reduce, this part of the landscape expressing the '*strong wild character*' at night, which is part of the baseline landscape character for this landscape type as a whole. There would be a Medium/Small scale of change within an Intermediate extent of this unit. These changes are considered to be Permanent which would lead to a Moderate/Slight magnitude of change within the Carsphairn. For this LCT of Medium sensitivity, this would lead to a Moderate effect, which would be Not Significant.



For Scenario 2, the consented baseline, night-time cumulative effects with the consented Lethans would be limited due to the separation distance and differing landscape units. Windy Standard 3 would be located within the adjacent LCT, on the southwestern side of the Windy Standard group and would have some influence the Carsphairn unit. There would be the potential for some cumulative night-time impacts with Sanquhar II, where it would add 19 lit turbines into a nearby landscape unit, with Cornharrow and Manquhill adding a further 15 lights. The addition of Euchanhead within the Ken unit would increase the number present but would be located amongst the Sanquhar II turbines. Assuming the prior presence of the fully consented baseline, the addition of Euchanhead would lead to a Small scale of change over a Wide extent of this unit. These changes are considered to be Permanent which would lead to a Moderate/Slight magnitude of change. For this LCT of Medium sensitivity, this would lead to a Moderate/Minor effect, which would be Not Significant.

For scenario 3, four lights on Appin to the south of Sanquhar II would be visible within the Ken unit. Assuming the prior presence of the fully consented baseline and Appin, the addition of Euchanhead would lead to the same effect as with Scenario 2.

Five lights on Quantans Hill would also be present in lower areas of the uplands of this landscape unit. Assuming the prior presence of the fully consented baseline and Quantans Hill, the addition of Euchanhead would lead to the same effect as with Scenario 2.

Ken unit Narrow Wooded River Valley – Dumfries and Galloway LCT: NS 160/D&G 4

In Scenario 1 (the operational baseline), the introduction of aviation lighting would influence the Ken unit of this landscape, especially within the valley bottom. However, the extent of screening by landform and extent of commercial forestry and tree cover would moderate this influence. Given only a few of the lights would be visible, there would be a Small scale of change over an Intermediate extent of this unit. These changes are considered to be Permanent which would lead to a Slight magnitude of change within the Ken unit. For this LCT of High/Medium sensitivity, this would lead to a Moderate effect, which would be Not Significant.

For Scenario 2, the consented baseline, there would be no night-time cumulative effects with the consented Lethans, Windy Standard 3 due to screening by landform. There would only be a very limited number of aviation lights visible from Sanquhar II, being predominantly screened by landform. As a result, there would be no Significant night-time cumulative effects.

Cumulative Night-time visual effects

Residents and Settlements

In Scenario 1 (the operational baseline), from Kirkconnel/Kelloholm and Sanquhar only a few of the nacelle lights would be visible to the south 7.5-10 km away. Residents in these settlements would experience only a Small/Negligible scale of change given the extent of lighting within each of the settlements, over an Intermediate extent of the settlements which would be Permanent. The magnitude of change would be Slight/Negligible which, for a receptor of High/Medium sensitivity, would result in a Minor effect (Not Significant).



For Scenario 2, the consented baseline, there would be some night-time cumulative effects with Sanquhar II, most notably from settlements at Sanquhar and Kirkconnell/Kelloholm, where lights on Sanquhar II turbines would be visible, on the horizon. A few of the Euchanhead lights would be seen to mix in with the Sanquhar II lights, creating a greater concentration of turbine lighting southwest of the settlements within Nithsdale. Assuming the prior presence of the fully consented baseline, the addition of Euchanhead would lead to a Negligible scale of change over an Intermediate extent of this group and the Permanent change would result in a Negligible magnitude of change. For this receptor of High/medium sensitivity, this would result in a Minor and Not Significant effect, given the presence of other lighting.

For Scenario 3, lights on Rowancraig and Cloud Hill would be seen in front of Sanquhar II, with some of the lights on Lorg and Appin occasionally visible to the southwest and south of Sanquhar II. Euchanhead lights again would be seen to mix in with Sanquhar II, increasing the number of lights though not the spread. The addition of Euchanhead to a fully consented and proposed baseline would result to a Negligible scale of change, leading to a Minor impact which would be Not Significant.

For the few isolated properties within upper Shinnel Glen the reduction in the turbines and the reduced lighting scheme would mean the scale of change would be Negligible, as illustrated with the night-time montage for Viewpoint 7 near Auchenbrack.

For the few residents within the Water of Ken valley of high/medium sensitivity, the baseline is very dark and only limited lights would be visible with the reduced lighting scheme. The scale of change would be Small over an Intermediate extent of this group and the Permanent change would result in a Slight magnitude of change. For this receptor of High/medium sensitivity, this would result in a Moderate/Minor and Not Significant effect.

Galloway Dark Sky Park

In Scenario 1 (the operational baseline), given the reduced lighting scheme, the scale of change would be Small/Negligible over a Limited extent of the Deer Range and the Permanent change would result in a Slight/Negligible magnitude of change. For this receptor of High/medium sensitivity, this would result in a Minor and Not Significant effect.

For Scenario 2, the consented baseline, there would be very limited visibility of Euchanhead from visual receptors within the Dark Sky Park, which would limit the potential for cumulative effects. From Brockloch Hill within the Galloway Red Deer Range, there would also be a few lights visible from Sanquhar II but would not result in a Significant cumulative effect.

Crawick Multiverse

In Scenario 1 (the operational baseline), views of turbine lights are only likely to be visible from on top of the mounded landforms and elevated northern end of the site from which settlement lighting at Sanquhar and Kelloholm/Kirkconnel is visible in the same direction. The impact would be similar in nature to that illustrated in Viewpoint 14 and the night-time visualisation from Viewpoint 11, but there would be fewer lights visible from this latter location. The scale of change would be Small over an Intermediate extent of this receptor and the Permanent change would result in a Slight magnitude of change. For this receptor of High/Medium sensitivity, this would result in a Moderate/Minor effect (Not Significant).

For Scenario 2, the consented baseline, a few of the consented Lethans nacelle lights may be theoretically visible to the west, but likely to be partially screened by woodland to the west of the site. Many of the Sanquhar II lights will be visible where open views are possible to the southwest. The addition of Euchanhead would increase the number visible amongst the Sanquhar II group. The impact would be similar in nature to that illustrated in Viewpoint 14 and the night-time visualisation from Viewpoint 11, but there would be fewer lights visible from this location. Assuming the prior presence of the fully consented baseline, the addition of Euchanhead would lead to a Small/Negligible scale of change over an Intermediate extent of this receptor. These changes are considered to be Permanent which would lead to a Slight/Negligible magnitude of change. For this receptor of High/Medium sensitivity, this would result in a Minor (Not Significant) effect.

For scenario 3, additional lights on Rowancraig and Cloud Hill would be visible in front of the main group at Sanquhar II. Assuming the prior presence of the fully consented baseline, Rowancraig and Cloud Hill, the addition of Euchanhead would lead to the same effect as with Scenario 2.

Windy Standard 1 Repowering lights would be visible to the rear of the northern end of the group. The addition of Euchanhead lighting into this group would increase concentration of light in the centre, though would not expand the spread and would lead to the same effect as with Scenario 2.

7.8. Summary and Conclusions

The proposed Development has undergone an amendment whereby Turbines No.20 and No.21 have been removed from the proposal and Turbines No.9, No.10, No.11, No.18 and No.19 have been reduced from 230m to 200m maximum blade tip height. The proposed Development now also include a reduced lighting scheme. These changes have followed on from post-application consultation with DGC in order to lessen some of the landscape and visual effects.

This assessment has identified where the changes have lessened the impact on both landscape and visual receptors and in some cases, these changes have been sufficient to reduce the level of effect. In other situations, the effect would be reduced but the level of effect has remained the same, however this does not mean that the design changes have not been effective at reducing the effect.

In terms of landscape effects, there would still be a Significant effect on the two host landscapes Ken unit Southern Uplands with Forest – D&G and Southern Uplands – Ayrshire as well as nearby Ken unit Narrow Wooded River Valley – D&G. There would also be a Significant effect on the adjacent Carsphairn and Nithsdale units Southern Uplands – D&G but the level of effect would reduce to Moderate and Significant. The other reduction in level of effect would occur on the Shinnel unit Upland Glens - D&G which would drop to Moderate/Minor and Not Significant.

In terms of visual effects, all of those within the community of the Shinnel Glen would reduce their visual effects to Moderate/Minor or less and Not Significant. The effect on those appreciating the Striding Arches Sculptures would also lessen to a degree but would remain Significant. The other levels of effect would remain the same as reported in the EIA Report, however there would be a clearly noticeable reduction from some receptors, particularly those located to the east of the proposed Development.



There would be no changes on the designated landscapes and the proposed Development would result in No Significant effects.

7.8.1. Updated Cumulative

This AEI also provides an updated cumulative landscape and visual assessment following changes to the cumulative situation since the EIA Report was prepared.

The steepness of landform, which is characteristic of the Southern Uplands, leads to a pattern of visibility where either panoramic views are possible on open high ground or from lower ground the views are very constrained. This reduces the potential for likely Significant cumulative interactions with many landscape and visual receptors. The cumulative assessment assumes that all the windfarms within each of the Scenarios (2 and 3) would be constructed as proposed and these are present baseline. The cumulative assessment considers the additional changes which would result from the introduction of Euchanhead.

With regard to the fully consented baseline (Scenario 2), the addition of the consented sites to the operational baseline would result in a renewable energy group Hare Hill/Sanquhar, which will extend from Hare Hill to Lorg and also include Sandy Knowe, Sanquhar II and Whiteside Hill. The addition of Euchanhead would increase the density of turbines within the group but would not extend the geographic extent of the group. Euchanhead would appear at a more similar scale to Sanquhar II and Lorg turbines. The Euchanhead turbines would appear evenly spaced and interwoven with Sanquhar II. Due to the strong characterising presence of Sanquhar II and Lorg, and Euchanhead's position amongst those arrays, the addition of Euchanhead to the fully consented baseline would reduce the effect on landscape character from Major/Moderate to Moderate and Significant in Scenario 1 to Moderate and Not Significant in Scenario 2. The effect on neighbouring LCTs would also notably reduce in Scenario 2, compared with Scenario 1 including a reduction on the Carsphairn and Nithsdale units Southern Uplands – D&G and Ken unit Narrow Wooded River Valley – D&G to both Moderate and Not Significant.

Given the influence of the fully consented baseline on the Euchan Water valley, Glen Afton and the Water of Ken valley by Sanquhar II and Lorg, the addition of Euchanhead would not result in any increased effects compared to Scenario 1.

The locations where visual receptors would experience the most noticeable cumulative visual effects with the fully consented baseline would be from surrounding open elevated locations where panoramic views are typical. From the Southern Upland Way there would be sequential views of wind energy developments along the route. Assuming the prior presence of the fully consented baseline, the addition of Euchanhead would reinforce and extend the strong influence of renewable energy development on a section of the route through the Site from both Lorg and Sanquhar II. Given the influence of Euchanhead, this would at Major and Significant. A similar experience would occur for those visiting the upland Striding Arches, but the addition of the revised Euchanhead would reduce the additional effect from Major to Major/Moderate (still Significant) to the fully consented baseline. For users of the core paths within the Site and within Lorg Glen, the addition of Euchanhead to this baseline would still result in a Major/Moderate and Significant effect. Those hillwalking above Glen Afton the addition of Euchanhead would add to the density but not add another occurrence of wind energy and would result in a reduced Moderate effect which would be Significant. From Cairnsmore of Carsphairn, addition of Euchanhead to this baseline would result in a reduced Moderate/Minor effect which would be Not Significant, given the context of the baseline.



With regard to the other proposals, these are considered in turn, in combination with the fully consented baseline. The most notable cumulative effects would occur with Appin which would be adjacent to Euchanhead and would extend the Hare Hill/Sanquhar group to the southeast. Given that Euchanhead would be located within the core of the enlarged Hare Hill/Sanquhar group with Appin, the addition of Euchanhead to that baseline would not result in any change to that assessed with Scenario 2. With regard to the proposals of Sandy Knowe Extension, Rowancraig, Herds Hill and Cloud Hill, these would be located on the northern end of the Hare Hill/Sanquhar group and marginally extend it to the north. There would be views of these proposals in combination with Euchanhead from Nithsdale but Euchanhead would tend to appear in the background of those views and would result in the same level of effect as Scenario 2.

The proposal of Windy Standard 1 Repowering would sit within a separate wind turbine cluster and would replace existing turbines thereby reducing the density but increasing the scale of turbines within the Windy Standard group. Given that they would remain in separate groups the addition of Euchanhead would result in the same level of landscape and visual effects as reported for Scenario 2.

The proposal of Quantans Hill would also sit within a separate wind turbine cluster with Shepherds Rig. Given that they would remain in separate groups the addition of Euchanhead would result in the same level of landscape and visual effects as reported for Scenario 2.

7.8.2. Night Time

The night-time effects would be notably reduced as a result of the reduced lighting scheme agreed with the CAA. This would reduce the number of visible lights required from 44 in the previous scheme to 12 in the revised proposed Development. The cumulative situation has also changed and there have been 5 consented sites which would also include lighting and therefore the consented baseline has notably changed from the EIA Report.

There would be reduced levels of night-time effects as a result of the revised proposed Development and the consented baseline and now there would be No Significant effects at night as a result of the revised proposed Development.

References

The below references superseded policy and guidance documents used and referred to in the EIA Report, as noted in section 7.4.2 above. They, along with documents reference documents listed in the EIA Report were employed as guidance in this assessment.

- Wind Energy Landscape Sensitivity Study: Assessment of larger Wind Turbines (Appendix C), Dumfries and Galloway Council, February 2025.
- Local Landscape Areas Supplementary Guidance (Local Development Plan 2), East Ayrshire Council, 2024