

Landscape and Visual

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8. Landscape and Visual

8.1. Summary

- 8.1.1. In August 2023, planning consent was granted for a 17 turbine wind farm, comprising 15 turbines with a blade tip height of 149.9 m and two turbines with a blade tip height of 125 m (the Consented Development). This established wind energy development as an acceptable addition to the landscape of the site. The Proposed Varied Development, comprising 11 turbines each with a blade tip height of 220 m is located on the same site as the Consented Development, on land largely covered with coniferous forest within the Southern Uplands of Dumfries and Galloway approximately 5.2 km to the east of Carsphairn.
- 8.1.2. The site does not fall within a National Scenic Area (NSA) or National Park but does partly fall within the Galloway Hills Regional Scenic Area (RSA). The three north-westernmost turbines fall just within the locally designated landscape. The Core Area of the Galloway Hills International Dark Sky Park is located over 15 km from the site, with the larger part of the designated area over 10 km away. However, a narrow, linear element extends eastwards and is approximately 3.7 km to the south-west of the nearest proposed turbine.
- 8.1.3. The Proposed Varied Development straddles three Assessment Units as described in the Dumfries and Galloway Council Appendix C: Wind Energy Landscape Sensitivity Study (2025), namely: Assessment Unit 22 – Southern Uplands with Forest, Assessment Unit 4 – Narrow Valleys, and Assessment Unit 9 – Upper Dale. All of the proposed turbines are located within Assessment Unit 22. The site access and construction compound are located within Assessment Unit 9.
- 8.1.4. The design of the Proposed Varied Development is the result of a considered iterative process which has sought to minimise landscape and visual effects whilst achieving the technical and commercial requirements to ensure project viability.
- 8.1.5. Appropriate offsets from all properties and settlements have been maintained to ensure that no property would experience an overbearing visual impact. Mitigation has been designed into the proposed aviation lighting to reduce the intensity of the required 2000 candela steady state aviation lights in certain atmospheric conditions by reducing their intensity and attenuating the amount of vertical downwards lighting in order to reduce the visual impact experienced by receptors below the lights.
- 8.1.6. This Landscape and Visual Impact Assessment (LVIA) identifies the likely significant effects arising from the Proposed Varied Development on landscape character and visual amenity in comparison with those previously identified in relation to the Consented Development on the same site. As with almost any onshore wind farm development it is recognised that the Proposed Varied Development would give rise to some additional localised significant effects on landscape character and visual amenity.
- 8.1.7. In terms of effects on landscape character, the Proposed Varied Development would result in direct and significant effects on the part of the landscape character type within which it is located, the Ken area of Assessment Unit 22 – Southern Uplands with Forest.

The Proposed Varied Development would also result in indirect significant effects to Assessment Unit 22 and on the adjacent Carsphairn area of Assessment Unit 21 – Southern Uplands contained within 5 km. This is largely the same as was predicted in relation to the Consented Development. It would also result in indirect significant effects on the Ken area of Assessment Unit 4 - Narrow Valleys, the Glenkens area of Assessment Unit 9 – Upper Dale and on the Carsphairn area of Assessment Unit 21, all contained within 5 km, on the Stroan area of Assessment Unit 20 – Foothills with Forest contained within 4.5 km. The extent of predicted significant effects on these four assessment units has increased by approximately 0.5 km when compared with the Consented Development.

- 8.1.8. In relation to visual effects, the Proposed Varied Development would be visible from several nearby properties as well as parts of the surrounding road network and footpath network.
- 8.1.9. It has been assessed that there would be a significant visual effect at 16 of the 22 representative viewpoints during daylight hours, namely Viewpoints 1-7, 10-16, 19 and 20. This is one more than was identified in the assessment for the Consented Development, in relation to Viewpoint 13 – Beninner. Additionally, at Viewpoint 4 - Smittons Bridge an increased level of effect has been identified. During the hours of darkness there would be significant effects at five of the 22 viewpoints, namely Viewpoints 2, 12, 13, 14 and 15.
- 8.1.10. The assessments of effects on residential properties, found that within 2 km of the Proposed Varied Development, seven would experience a significant effect during daylight hours, namely Smittons, Stroanpatrick, Craigengillan, Moorbrock, Game Keeper's Cottage, Strahanna Farm (including River Ken Cottage) and Bridgemark. This includes four properties that were not previously identified as having significant effects in relation to the Consented Development. An additional property (Craigengillan Cottage) is also predicted to experience a significant effect following felling of woodland. No significant effects are identified from these properties during the hours of darkness.
- 8.1.11. Between 2 and 5 km of the Proposed Varied Development, significant effects are identified at properties to the north-east (accessed from Lorg Road), south-east (accessed from the B729 near Blackmark Hill), south (accessed from the B7000) and west (accessed from the B729 near Water of Deugh). This is the same as predicted in relation to the Consented Development. No significant effects are identified from these properties during the hours of darkness.
- 8.1.12. From the local footpath network significant effects are identified during daylight hours from sections of ten routes, namely the Southern Upland Way, Core Path 16 – Garryhorn Rig, Core Path 23 – Dundough Hill, Core Path 164 – Bardennoch Trail, Core Path 182 – Cairnsmore of Carsphairn by Craig of Knockgray, Core Path 188 – Corlae, Core Path 199 – Kendoon Youth Hostel to Butterhole Bridge, and local footpaths DS15, DS16 and DS17. Significant effects were identified on most of these routes in relation to the Consented Development, except for Core Paths 16, Core Path 182 and 188, which were not previously assessed separately. During the hours of darkness, significant visual effects are predicted on sections of six routes, namely the Southern Upland Way, Core Path 23, Core Path 164, and local footpaths DS15, DS16 and DS17.

- 8.1.13. In relation to visual effects on the Galloway Hills International Dark Sky Park, whilst it is acknowledged that there would be some localised significant effects upon visual amenity during the hours of darkness from Core Path 164, which passes within the boundary of this designated landscape, significant effects would be limited to the narrow 'finger' which extends within 5 km of the site. Theoretical visibility across the majority of the designation, including the Core Area as shown in **Figure 8.12** is not considered to give rise to significant visual effects due to the distance from the proposed turbine lights.
- 8.1.14. From the local road network significant visual effects are predicted during daylight hours for sections of the A713, B729, B7000 and Lorg Road. This is the same as predicted in relation to the Consented Development. During the hours of darkness significant effects are only predicted for receptors on Lorg Road.
- 8.1.15. In relation to cumulative landscape effects, when each of the other consented or in planning wind farms are added into the assessment such that they are considered to already form part of the baseline it is considered that the Proposed Varied Development would reinforce the existing landscape character and would not extend effects beyond the extent already introduced by the other schemes.
- 8.1.16. In relation to cumulative visual effects, where significant effects are identified, they are also predicted in either the solus assessment or would be introduced by the other cumulative schemes even in the absence of the Proposed Varied Development.
- 8.1.17. In terms of the overall totality of the cumulative landscape and visual effects when the Proposed Varied Development is considered alongside the other operational and proposed developments, collectively, the other developments would serve to result in wind energy being seen as a noticeable feature in many views in the local landscape. The addition of the Proposed Varied Development would serve to reinforce this pattern, however, significant cumulative effects would occur in the absence of the Proposed Varied Development.
- 8.1.18. In relation to effects on the special landscape qualities of the Galloway Hills RSA, whilst it is acknowledged there would be some localised significant effects upon landscape character and visual amenity experienced from a small part of the RSA, overall and in views towards the RSA from the landscape beyond its boundary, there would not be significant effects upon the special qualities of the Galloway Hills, its reason for designation, or its integrity.

Conclusion

- 8.1.19. As set out in the table below, during daylight hours, in comparison to the Consented Development, the Proposed Varied Development would represent an increase the level of significant effects experienced within the host Landscape Area, and within four surrounding Landscape Areas. It would represent the introduction of new significant effects at one viewpoint, four properties within 2 km, parts of three core paths / rights of way and one cycle route. It would also represent the introduction of significant effects during the hours of darkness at five viewpoints, parts of six core paths / rights of way, and one local road. All significant effects would be contained within 5 km of the Proposed

Varied Development. The effects predicted are considered proportionate to the scale of the Proposed Varied Development.

- 8.1.20. It is noted that localised significant effects on landscape character and visual amenity are inevitable as a result of commercial wind energy development. Whilst the LVIA identified some significant landscape and visual effects it is considered that the landscape has the capacity to accommodate the effects identified, particularly when the consented but as yet unbuilt wind farms in the surrounding landscape are taken into account in the baseline.

Table 8.1 – Summary of Conclusions – Proposed Varied Development and Consented Development

2018 Section 36 Application, supported by Additional Environmental Information I (2019) and Additional Environmental Information II (2021) - the Consented Development	2026 Section 36C Application - the Proposed Varied Development
The EIA concluded that significant effects would arise as a result of the Consented Development during daylight hours in the Ken unit of LCT 19A – Southern Uplands with Forest within 5 km, and in localised parts of four other closely surrounding LCTS within 4.5 km; from 15 of the 22 viewpoints; from two properties within 2 km, and other scattered properties between 2 – 5 km; from sections of seven core paths / rights of way, including parts of the Southern Upland Way; from four routes within the local road network; and localised parts of the Galloway Hills RSA.	This EIA concludes that significant effects would arise as a result of the Proposed Varied Development during daylight hours in the Ken area of Assessment Unit 22 – Southern Uplands with Forest within 5 km, and in localised parts of four other closely surrounding Assessment Units within 5 km; from 16 of the 22 viewpoints; from seven properties within 2 km (one of which was previously included in the 'scattered properties between 2 – 5 km'), and other scattered properties between 2 – 5 km ; from sections of ten core paths / rights of way, including parts of the Southern Upland Way; from part of the National Byway Cycle Route; from four routes within the local road network; and localised parts of the Galloway Hills RSA. During the hours of darkness there would be significant effects on five of the 22 viewpoints; from sections of six core paths / rights of way, including parts of the Southern Upland Way; and from Lorg Road.

8.2. Introduction

- 8.2.1. This Chapter of the Environmental Impact Assessment (EIA) Report provides an assessment of landscape and visual effects arising from the construction, operation and decommissioning of the Proposed Varied Development. Commentary is provided where

findings differ from those set out in the previous assessment for the Consented Development. Anticipated effects of the two schemes are compared within **Table 8.1**.

8.2.2. The purpose of a Landscape and Visual Impact Assessment (LVIA) when undertaken in the context of EIA is to identify any likely significant landscape and visual effects arising as a result of the proposals. An LVIA must consider both:

- effects on the landscape, as a resource in its own right (the landscape effects); and
- effects on specific views and visual amenity more generally (the visual effects).

8.2.3. Therefore, this LVIA considers the potential effects of the Proposed Varied Development upon:

- individual landscape features and elements;
- landscape character;
- specific views; and
- people who view the landscape.

8.2.4. In this Chapter, landscape and visual effects are assessed separately although the procedure for assessing each of these is closely linked.

8.2.5. The main objectives of the landscape assessment can be summarised as follows:

- to identify, evaluate, and describe the baseline landscape character of the site and its surroundings as well as any notable individual landscape features within the site;
- to determine the nature of the landscape receptor (i.e. the sensitivity of the landscape) through a consideration of its susceptibility to the Proposed Varied Development and any values associated with it;
- to identify and describe any impacts of the Proposed Varied Development, in so far as they affect the landscape resource;
- to evaluate the nature of the landscape effects (i.e. the magnitude, duration and reversibility of the effect);
- to identify and describe mitigation measures that have been adopted to avoid, reduce, and compensate for landscape effects;
- to evaluate the relative significance of residual landscape effects; and
- to determine which landscape effects, if any, are significant.

8.2.6. The main objectives of the visual assessment are similar and can be summarised as follows:

- to identify, evaluate, and describe the baseline visual context of the site and its surroundings with a focus on both specific views and the more general visual amenity experienced by people who have views of the site;
- to determine the nature of the visual receptor (i.e. the sensitivity of the viewpoint or person whose visual amenity is affected) through a consideration of the susceptibility of the viewpoint/person to the Proposed Varied Development and any values associated with either the viewpoint or visual amenity experienced;
- to identify and describe any impacts of the Proposed Varied Development in so far as they affect a viewpoint or views experienced;
- to evaluate the nature of the visual effects (i.e. the magnitude, duration and reversibility of the effect);
- to identify and describe mitigation measures that have been adopted to avoid, reduce, and compensate for visual effects;
- to evaluate the relative significance of residual visual effects; and
- to determine which visual effects, if any, are significant.

8.2.7. The LVIA also considers any cumulative landscape and visual effects which may arise as a result of the Proposed Varied Development in conjunction with other wind farm developments.

8.2.8. The main LVIA presented in this Chapter is supported by:

- **Figures 8.1 to 8.53** in EIA Report **Volume 2**;
- **Visualisations (Figures 8.54 to 8.102)** in EIA Report **Volume 3**; and
- **Appendices 8.1 to 8.9** in EIA Report **Volume 4**.

8.2.9. The location of the Proposed Varied Development and the study area for the LVIA is illustrated on **Figure 8.1**. For reference, other operational, consented and proposed wind farms within 15 km which are referred to throughout this chapter are illustrated on **Figure 8.20**.

8.2.10. This Chapter is structured as follows:

- Legislation, Policy and Guidance;
- Assessment Methodology and Significance Criteria;
- Scoping Responses and Consultation;
- Baseline Conditions;
- Assessment of Potential Effects;

- Assessment of Cumulative Effects;
- Mitigation;
- Residual Effects; and
- Summary.

Project Description

- 8.2.11. A detailed description of the Proposed Varied Development is set out in **Chapter 4: Description of Proposed Varied Development** of this EIA Report. The Proposed Varied Development description below summarises those details of that have particular relevance to the LVIA.
- 8.2.12. The Proposed Varied Development would comprise 11 standalone, three bladed horizontal axis wind turbines, each up to 220 m blade tip height, as well as associated infrastructure. Its total wind generating capacity is anticipated to be in the region of 77 MW, based on the candidate turbine type, and supported by additional battery energy storage provision with a maximum output capacity of approximately 50 MW. The associated infrastructure would include on-site access tracks, hardstanding areas, temporary borrow workings, a substation and BESS compound, on-site underground cabling, a temporary concrete batching plant, a temporary construction compound and habitat enhancement measures.

Project History

- 8.2.13. The Applicant submitted an EIA in November 2018 in support of a Section 36 application for consent for a 19 turbine development: 17 turbines at 149.9 m to tip, and 2 turbines at 125 m to tip. The layout was amended to 17 turbines as presented within an Additional Environmental Information (AEI I) Report submitted in October 2019. Dumfries and Galloway Council (DGC) objected to the Consented Development upon landscape and visual grounds, triggering a Public Inquiry, where the Applicant prepared a further Additional Environmental Information (AEI II) Report (March 2021).
- 8.2.14. The Consented Development was granted Section 36 consent by Scottish Ministers in August 2023 following the Public Inquiry.

Comparative Assessment

- 8.2.15. The Proposed Varied Development is similar to the Consented Development in that they are both situated within the same site, with the same proposed access. Some of the turbines of the Proposed Varied Development are located within the same footprint as those of the Consented Development. The main difference between the two schemes relates to the relative heights of the proposed versus the consented turbines.
- 8.2.16. The purpose of this LVIA is to identify all the significant effects that would arise as a result of the Proposed Varied Development. It is assessed in its own right, which assumes the site to be undeveloped, with comparisons made where findings differ from those set out in the previous assessment for the Consented Development.

- 8.2.17. The Chapter provides an updated baseline scenario including current planning policy and cumulative situation. Updated figures are provided, including comparative Zone of Theoretical Visibility (ZTV) at **Figures 8.6** and **8.9**, which are overlaid with landscape designations at **Figure 8.14**, landscape character at **Figure 8.16** and visual receptors **Figure 8.19**. A set of comparative wirelines for the 22 viewpoints is also provided to support the assessment at **Figures 8.76** to **8.97**.

8.3. Legislation, Policy and Guidelines

- 8.3.1. The European Landscape Convention (ELC) is the first international convention to focus specifically on the landscape as a resource in its own right. The convention promotes landscape protection, management, and planning, as well as European co-operation on landscape issues. Signed by the UK Government in February 2006, the ELC became binding from March 2007. It applies to all landscapes, towns and villages, open countryside, the coast and inland areas, and ordinary or even degraded landscapes, as well as those that are afforded protection.
- 8.3.2. The ELC highlights the importance of developing landscape policies dedicated to the protection, management, and planning of landscapes. In this regard, Dumfries and Galloway Council has a suite of landscape character assessment and landscape capacity studies which enables decisions to be made with due regard to landscape character as promoted by the ELC.

Planning Policy

- 8.3.3. The following current planning policy documents were reviewed as part of the desk study for the LVIA:
- Scottish Government (2023) *National Planning Framework for Scotland 4* (NPF4); and
 - Dumfries and Galloway Council (2019) *Dumfries and Galloway Local Development Plan 2*.
- 8.3.4. The following supplementary guidance and planning guidance documents were reviewed:
- Dumfries and Galloway Council (2018) *Dumfries and Galloway Regional Scenic Areas Technical Paper*;
 - Dumfries and Galloway Council (2020) *Dumfries and Galloway Council Local Development Plan 2, Wind Energy Development: Development Management Considerations*;
 - Dumfries and Galloway Council / Carol Anderson Landscape Associates (2025) *Dumfries and Galloway Wind Energy Landscape Sensitivity Study Assessment of Larger Wind Turbines*; and
 - Dumfries and Galloway Council (2025) *Wind Energy Landscape Sensitivity Study Assessment of Smaller Wind Turbines*

- 8.3.5. A full and detailed consideration of national and local planning policy is contained in **Chapter 5: Planning and Energy Policy Context** of this EIA Report and in the accompanying Planning Statement. This section provides an overview of the local policies and designations of particular relevance to the landscape and visual issues considered in this EIA Report chapter.

Local Policy

Dumfries and Galloway Local Development Plan 2 (October 2019)

- 8.3.6. Policy OP1 is concerned with Development Considerations and includes general amenity. It states that *"Development proposals should be compatible with the character and amenity of the area and should not conflict with nearby land uses"*.

- 8.3.7. Policy NE2: Regional Scenic Areas states that:

"The siting and design of development within a Regional Scenic Area (RSAs) should respect the special qualities of the area. Development within, or which affects Regional Scenic Areas (RSAs), may be supported where the local Council is satisfied that:

- The factors taken into account in designating the area would not be significantly adversely affected; or
- There is a specific need for the development at that location."

- 8.3.8. Policy IN1: Renewable Energy states that:

"The Council will support development proposals for all renewable energy generation and/or storage which are located, sited and designed appropriately. The acceptability of any Proposed Varied Development will be assessed against the following considerations:*

- *landscape and visual impact;*
- *cumulative impact;*
- *impact on local communities and individual dwellings, including visual impact, residential amenity, noise and shadow flicker;*
- *the impact on natural and historic environment (including cultural heritage and biodiversity);*
- *the impact on forestry and woodlands;*
- *the impact on tourism, recreational interests and public access."*

- 8.3.9. Spatial framework guidance is provided under Policy IN1 as follows:

"Group 1: Areas where wind farms will not be acceptable:

NSAs

Group 2: Areas of Significant Protection:

Recognising the need for significant protection, in these areas wind farms may be appropriate in some circumstances. Further consideration will be required to demonstrate that any significant effects on the qualities of these areas can be substantially overcome by siting, design or other mitigation.

- *Ramsar & Natura 2000*
- *World Heritage Sites (not directly)*
- *SPAs/SACS*
- *SSSIs*
- *NNRs*
- *Inventory of Gardens and Designed Landscapes*
- *Inventory of Historic Battlefields*
- *Wild land areas*
- *Carbon rich soils, deep peat and priority peatland (subject to recent SNH consultation)
2 km area around settlements in the Plan with identified settlement envelope or edge*

Group 3: Areas with potential for wind farm development

Areas beyond Groups 1 and 2, where wind farms are likely to be acceptable, subject to detailed consideration against all relevant plan policies."

8.3.10. Policy IN2: Wind Energy states that:

"The Council will support wind energy proposals that are located, sited and designed appropriately. The acceptability of any proposed wind energy development will be assessed against the following considerations [et alia]:*

Landscape and visual impacts

- *The extent to which the landscape is capable of accommodating the development without significant detrimental landscape or visual impacts, including effects on wild land; and*
- *That the design and scale of the proposal is appropriate to the scale and character of its setting, respecting the main features of the site and the wider environment and that it addresses fully the potential for mitigation.*

Cumulative impact

The extent of any cumulative detrimental landscape or visual impact or impacts on existing patterns of development from two or more wind energy developments and the potential for mitigation.

Impact on local communities and residential interests

The extent of any detrimental impact on communities, individual dwellings, residents and local amenity, including assessment of the impacts of noise, shadow flicker, visual dominance and the potential for associated mitigation.

Further details on this assessment process, including its application to smaller wind farms and more detailed development management considerations, are provided through supplementary guidance on Wind Energy Development. This will also include separate mapping of the constraints relevant to the considerations above.

*The Spatial Framework Map** (Map 8) provides strategic guidance. However, it must be read in conjunction with the supplementary guidance and its Appendix, the Dumfries and Galloway Wind Farm Landscape Capacity Study. The landscape capacity study is a supportive study, the consideration of which does not replace the need to assess the landscape or visual impacts of individual proposals.*

** Acceptability will be determined through an assessment of the details of the proposal including its benefits and the extent to which environmental and cumulative impacts can be addressed satisfactorily.*

*** The Spatial Framework Map relates to one turbine or more over 20 metres."*

- 8.3.11. The Wind Energy Spatial Framework Map indicates that the Proposed Varied Development is located within an 'Area with potential for wind farm development'.

Guidance

Dumfries and Galloway Council Local Development Plan 2, Wind Energy Development: Development Management Considerations (February 2020)

- 8.3.12. This supplementary guidance document was adopted in February 2020, at a time when the Dumfries and Galloway Wind Farm Landscape Capacity Study (DGWLCS) was included as an appendix to this Supplementary Guidance. This has subsequently been replaced with the Dumfries & Galloway Wind Energy Landscape Sensitivity Study (DGWLSS).
- 8.3.13. Section C of the document sets out matters with regards to landscape and visual impacts and design of proposals, including guidance on landscape and visual impact assessment, siting, layout, turbine form and design, turbine colour, lighting and associated infrastructure. With regard to landscape and visual; impact assessment, the guidance states that:

"Assessing the potential effects of a Proposed Varied Development can be divided into:

- *landscape impact assessment (LIA)*
- *visual impact assessment (VIA)*
- *cumulative assessment of both landscape and visual effects (see Section D).*

LIA considers potential changes as a result of the proposal on the physical landscape including landscape features, aspects of local distinctiveness, changes in landscape character and on how this is experienced. It also includes assessment of effects on designated landscapes, and in relation to other recognised landscape value such as wild land or promoted trails. VIA considers potential changes to views and visual amenity in a landscape and how people may respond to these changes. The level and extent of landscape and visual assessment required will depend on the scale of a Proposed Varied Development; however any assessment should be based on the principles and techniques set out in GLVIA. Changes to views are an important aspect of residential amenity."

8.3.14. Section D relates to cumulative impacts. It states that

"Cumulative landscape impact' refers to the combined impact of two or more wind energy developments on the surrounding landscape. Cumulative landscape effects can impact on the physical fabric or the character of the landscape, on perceptions of the landscape, or any special values attached to it, for example:

- *Cumulative effects on the physical fabric of the landscape such as woodland, dykes, rural roads or hedgerows.*
- *Cumulative effects on landscape character arise when wind farm development influences the key and defining landscape characteristics to varying degrees.*
- *Cumulative effects on the character of landscapes that are recognised to be of special value (eg; recognised as being rare, unusual, highly distinctive or the best/most representative example in a given area).*

'Cumulative visual impact' can be experienced in different ways and occurs when wind energy developments are visible either:

- *in combination (two or more features seen together, in the same view).*
- *in succession (two or more features visible from the same viewpoint but not in the same angle of view - ie viewer turns to see different objects).*
- *in sequence (not seen from the same viewpoint and therefore, never at the same time; observer has to move to another viewpoint to see second/subsequent feature eg sequential views from a moving vehicle).*

Cumulative visual effects can be significant where the additional effects become overwhelming or dominant, and / or where the wind farm image becomes visually cluttered.

- *Development can become visually dominant / overwhelming due to either turbine scale, as occurs where turbines are either high and / or in close proximity to sensitive visual receptors; or wind farm spread, as occurs where multiple or merged developments give rise to a dominating effect, such as across a sensitive skyline or encountered sequentially.*
- *Where multiple developments are seen in succession, the effect can be to surround visual receptors, for example on either side of a valley.*

Visual 'clutter' occurs where different types of turbines or wind farms with contrasting design rational are seen together, creating a confused and less balanced wind farm image. [See; 'Assessing the Cumulative Impact of Onshore Wind Energy Developments' SNH 2012; also GLVIA]."

- 8.3.15. Section E concerns impact on local communities and residential interests including residential visual amenity and states that:

"The residential visual amenity survey should assess the impact of the proposal from the following parameters:

- *distance of the property from the development*
- *extent of the development in the view from the property*
- *angle of view in relation to orientation of the property*
- *proportion of the view from the property occupied by the development*
- *local context in which the development is seen*
- *extent of other built development visible from the property, in particular vertical elements*
- *screening effect of intervening landscape elements such as local landform and vegetation (woodland tree cover and hedges).*

The residential visual amenity survey and assessment should be undertaken in accordance with best practice guidance: 'Guidelines for Landscape and Visual Assessment, 3rd Edition, SNH'."

Appendix C: Dumfries and Galloway Wind Energy Landscape Sensitivity Study Assessment of Larger Wind Turbines (February 2025)

- 8.3.16. In 2024 Dumfries and Galloway Council commissioned the DGWLSS to replace the DGWLCS. It was approved as Supplementary Guidance in March 2025.
- 8.3.17. The Proposed Varied Development is categorised as very large typology, as it comprises turbines between 150-250 m to tip height. The site is largely located within the Ken unit of Assessment Unit (AU) 22: Southern Uplands with Forest. A detailed review of the of the study is provided within the baseline section of this Chapter.

Landscape Designations

International / National Landscape Designations

- 8.3.18. The Galloway Forest International Dark Sky Park is located within the 20 km study area, the boundary of which extends within 5 km of the Proposed Varied Development (see **Figure 8.13**).
- 8.3.19. There are no national landscape designations within the 20 km study area.

Local Landscape Designations

- 8.3.20. There are several Local Landscape Areas (LLAs) within the 20 km study area. The most pertinent to the LVIA is the Galloway Hills RSA, which partially overlaps the site boundary. Four of the proposed turbines lie within the boundary or are on the cusp of the boundary to this designated area (see **Figure 8.13**).

8.4. Consultation

- 8.4.1. **Table 8.2** provides details of consultations undertaken with relevant regulatory bodies, together with action undertaken by the Applicant in response to consultation comments received in relation to landscape and visual effects.

Table 8.2 – Consultation

Consultee	Key Consultee Comments	Application Action
Energy Consents Unit Scoping Opinion dated 15 November 2024	As the maximum blade tip height of turbines exceeds 150 m the landscape and visual impact assessment (LVIA) as detailed in chapter 6 of the scoping report must include a robust Night Time Assessment with agreed viewpoints to consider the effects of aviation lighting and how the chosen lighting mitigates the effects.	Noted. A night-time assessment with agreed viewpoints is included in this Chapter of the EIA Report. As outlined in the Scoping Report (refer to Appendix 6.1), night-time visualisations at the following viewpoints have been provided: ■ Viewpoint 4 - Smittons Bridge; ■ Viewpoint 11 – B7000 at East Ardarroch; and ■ Viewpoint 22 - Carsphairn War Memorial.
	Notes that DGC have requested additional viewpoints.	Noted. Full consideration has been given to all consultee requested additional viewpoints and the list of viewpoints included in the

Consultee	Key Consultee Comments	Application Action
		assessment is provided at Table 8.5 of this Chapter.
DGC Scoping Response dated 28 October 2024	Consideration should be given to inclusion of a viewpoint within the Archaeological Sensitive Area (ASA) around Polharrow Burn, a little to the west of Polmaddy. Grid reference 575 872 is an approximate location of a cairn at around 180 m above ordnance datum (AOD) within the ASA, although potentially Craigknuckle (just to the west) would provide a better alternative position. The reason for this is because there is a gap in coverage from the south-west, whereas from the south and west views towards the site are represented well. Wirelines may be acceptable to identify intrinsic and cumulative landscape and visual effects from this location.	An additional viewpoint within the ASA has been considered within this Chapter of the EIA Report and provided as a wireline at Figure 8.98.
	Consideration should also be given to inclusion of Blackcraig Hill (Grid reference 648 063) to the north of the site as a full viewpoint, from which it seems 5 to 7 hubs would be visible.	Consultee feedback has been considered and the list of LVIA viewpoints included with this Chapter at Table 8.5. In consideration of the findings from the LVIA for the Consented Development, it is not considered proportionate to bring forward all requested viewpoint locations. Comparative wirelines from each of the 22 LVIA viewpoints have been provided at Figures 8.76 to 8.97.

Consultee	Key Consultee Comments	Application Action
	With regard to cumulative/other schemes, please note that both Divot Hill and Manquhill are now consented (Appeal Allowed). Furthermore, all of the proposed turbines at Glenshimmeroch are consented to 200 m tip height. You should also interrogate the ECU website with regard to Cornharrow, which has been the subject of recent appeal decisions. Troston Loch may also have received consent for turbines with a greater tip height than 149.9 m. Consideration should also be given to inclusion of Blackcraig Hill (Grid reference 648 063) to the north of the site as a full viewpoint, from which it seems 5 to 7 hubs would be visible.	As per the EIA Scoping Report, the cumulative assessment has initially given consideration to a 60 km radius from the site, as recommended by NatureScot best practice guidance. Analysis was then undertaken to refine this list in order to ensure a proportionate approach focused on potentially significant effects, as advocated by NatureScot guidelines 'Assessing the Cumulative Impact of Onshore Wind Energy Developments' (2021) which states that: <i>"We therefore only seek cumulative impact assessments where we consider that a proposal could result in significant cumulative impacts which could affect the eventual planning decision."</i> Therefore, the cumulative assessment is based primarily on schemes within c. 15 km of the Proposed Varied Development which are operational, consented or subject to a valid planning application based on a cumulative cut-off date of 31 March 2026.
	Previous landscape advice has been provided for the Consented Development and is included within the Scoping Response, including the original Scoping Opinion for the Consented Scheme	Previous landscape advice for the Consented Development has been reviewed and considered as appropriate in the design iteration and refinement of

Consultee	Key Consultee Comments	Application Action
	and Grounds for Recommended Refusal. States that the Council anticipates similar concerns to that of the Consented Development.	the Proposed Varied Development.
	Provides table outlining comments on proposed viewpoints and visualisations. Agree the requirement for full photomontage for all viewpoints except VP 09 where a wireline only is required.	The list of viewpoints included with this Chapter provided at Table 8.5 .
	The Residential Visual Amenity Assessment (RVAA) should include visualisations for properties within 2 km which would encounter a potentially moderate to major visual impact from the proposed wind farm; aerial photography identifying the arc of viewing from each property to the turbine area should be included as part of the RVAA.	Wireline visualisations are included as part of Appendix 8.6 – Residential Visual Amenity Assessment (RVAA) . The RVAA undertaken for the Consented Development acknowledged that the residents of two properties within 2 km of a consented turbine would experience a significant visual effect on the view from some part of their house or garden. The properties would however continue to have other views available that are not affected by the turbines, and when the effect upon these properties is considered in the round, it is not considered that their residents would experience such an overbearing or overwhelming effect on their visual amenity that their properties would become unattractive places in which to live.

Consultee	Key Consultee Comments	Application Action
	It is with respect to the DGC landscape scoping it is recommended that three further representative VPs are included for full photomontage visualisation and assessment, where the views of the Cairnsmore of Carsphairn are known to be striking from sensitive receptors. The impacts on these require to be assessed. Please include representative VPs from: the SUW / minor road approaches to Butterbole Bridge, GR: 63 8 87 5. A712 New Galloway western approach, approximately GR: 62 5 77 9. A762 north from New Galloway, approximately GR: 63 0 79 0.	In consideration of the findings from the LVIA for the Consented Development, it is not considered proportionate to bring forward all requested viewpoint locations. Comparative wirelines from each of the 22 LVIA viewpoints have been provided at Figures 8.76 to 8.97.
	Further to scoping and with respect to consideration of the cumulative ZTVs, it is recommended that longer range viewpoint/s is/are taken in. It's suggested these might include from the A75 Castle Douglas bypass, from the Barstobrick Monument, from the A713 / A726 opposite / near Kenmure. The main concern is any potential impacts on views of the Cairnsmore of Carsphairn from these areas. It is anticipated wirelines may be sufficient, although a sample photomontage may be useful.	Consultee feedback has been considered and the list of LVIA viewpoints included in included in this chapter is provided at Table 8.5. In consideration of the findings from the LVIA for the Consented Development, it is not considered proportionate to bring forward all requested viewpoint locations. Comparative wirelines from each of the 22 LVIA viewpoints have been provided at Figures 8.76 to 8.97.
	Outlines 360 cumulative wirelines requirements: ■ Full 360 context is not a priority for VPs 6, 11, 12, 13,	It is noted that full 360 context is not a priority for Viewpoints 6, 11, 12, 13, 21 although wider frame full

Consultee	Key Consultee Comments	Application Action
	21, although wider frame full visualisations are relevant to take in the relevant cumulative context. ■ Larger scale 360 cumulative visualisations (full showing baseline, photomontage with scheme, and wireline with other committed and in-planning schemes) should be produced for the following VPs: VP 7 Culmark Hill and VP 10 Benbrack, and usefully also VP2 Stroanfreggan Crag, and VP 14 Cairnsmore of Carsphairn.	visualisations are relevant to take in the relevant cumulative context. The request for 360 photomontages from VP2, VP7, VP10 and VP14 is not considered proportionate to the level of effect anticipated. Instead, 360-degree cumulative wirelines have been produced from these viewpoints and are provided at Figures 8.99 to 8.102 inclusive.
	Cumulative sequential visual assessments are required to be undertaken in the LVIA for the following important routes: ■ SUW ■ B729 ■ A713 ■ A762 More feedback can be provided on the proposed assessment method and suggested length of these routes to be covered, but it is anticipated that it be informed by the ZTV and areas of theoretical visibility within the 20 km study area, potentially further to the south.	Appendix 8.8 to the Landscape and Visual Chapter of the EIA Report includes additional wirelines from select viewpoints along the outlined routes.
	See Scoping Report 6.2.1: The DGWLCS, or updated LSS if available should be the main source of reference and categorization for the landscape character assessment. It is a more detailed grain than the 2019 NS assessment.	The assessment of landscape character effects is based on the extant DGWLSS.

Consultee	Key Consultee Comments	Application Action
	20 km study area acceptable, although some longer range views to the south merit assessment given the prominence of the Cairnsmore of Carsphairn as a landmark feature, and need to assess potential impacts on this from sensitive visual receptors	As outlined in the Scoping Report, the LVIA will consider an initial 45 km radius LVIA study area and a detailed focused upon a 20 km area. Cairnsmore of Carsphairn will be brought forward for detailed assessment and is included as Viewpoint 14 within the LVIA.
NatureScot Scoping Response dated 29 August 2024	Notes that they are supportive of the intentions to undertake a new LVIA as part of the EIA with regard to the Proposed Varied Development and agrees that the proposed scope of assessment is appropriate. Points to general pre-application and scoping guidance for NS advice on assessing the effects of turbine lighting.	This Landscape and Visual Chapter of the EIA Report details all relevant guidance at Paragraph 8.5.4 considered within the assessment, including reference where relevant to the NatureScot guidance.
RSPB Scotland Scoping Response dated 15 August 2024	RSPB note that the grid connection for Lorg wind farm has not been included in the list of cumulative sites within 15 km of the Proposed Varied Development, although the current location of this overhead line appears to pass directly through Shepherds' Rig. It is recommended that this should also be included in the cumulative assessment of impacts in the EIA.	The list of cumulative sites provided within Table 6.2 of the LVIA section of the Scoping Report related only to wind energy developments. It is acknowledged that the grid connection for the Lorg Wind Farm will pass directly through the site and this has been considered in the Cumulative Assessment at Appendix 8.9 .

- 8.4.2. Further consultation with undertaken with consultees through the Gatecheck 1 process in January 2025, and again with the submission of an Updated Gatecheck 1 Report in April 2026 (refer to the Gatecheck 1 Report included as **Appendix 6.3** and the Updated Gatecheck 1 Report included as **Appendix 6.4**). No further comments in relation to landscape and visual were received.

8.5. Assessment Methodology and Significance Criteria

- 8.5.1. The primary source of best practice for LVIA in the UK is the Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3).
- 8.5.2. The LVIA presented in this chapter has been undertaken in accordance with the principles established in this document. It must however be acknowledged that GLVIA3 establishes guidelines not a specific methodology. The preface to GLVIA3 recognises that *"This edition concentrates on principles and processes. It does not provide a detailed or formulaic 'recipe' that can be followed in every situation – it remains the responsibility of the professional to ensure that the approach and methodology adopted are appropriate to the task in hand."*
- 8.5.3. The methodology for this assessment has therefore been developed specifically for this LVIA to ensure that it is appropriate and fit for purpose.
- 8.5.4. Consideration has also been given to the following documents:
- Landscape Sensitivity Assessment Guidance (Methodology), (2022), NatureScot;
 - Assessing the Cumulative Impact of Onshore Wind Energy Developments (March 2021) NatureScot;
 - Siting and Design of Wind farms in the Landscape, Version 3 (February 2017) SNH;
 - Visual Representation of Wind Farms – Version 2.2 (February 2017), SNH;
 - Guidance on Aviation Lighting Impact Assessment, (November 2024) NatureScot;
 - General pre-application and scoping advice for onshore wind farms. Guidance. (October 2025) NatureScot;
 - LI Technical Guidance Note 2024-01. Notes and Clarifications on aspects of the 3rd Edition Guidelines on Landscape and Visual Impact Assessment (August 2024) Landscape Institute;
 - LI Technical Guidance Note 2/19. Residential Visual Amenity Assessment (RVAA) (March 2019) Landscape Institute;
 - LI Advice Note 02/17 Visual representation of development proposals (March 2017) Landscape Institute; and
 - LI Technical Guidance Note 02/21 Assessing landscape value outside of national designations.

Scope of Assessment

- 8.5.5. The LVIA assesses both the long term effects relating to the operational lifetime of the Proposed Varied Development and the short term temporary effects associated with the construction of the Proposed Varied Development.

- 8.5.6. Where appropriate, the LVIA also considers any residual effects once the proposed wind turbines have been decommissioned and removed (assumed to be 40 years from the date of completed construction).
- 8.5.7. The LVIA considers both direct and indirect landscape and visual effects. It not only assesses the impacts associated with the turbines but also any related impacts resulting from the construction compound, underground cabling, site tracks, substation, and access roads.
- 8.5.8. Consideration has been given to seasonal variations when assessing the visibility of the Proposed Varied Development.
- 8.5.9. The LVIA also considers any cumulative and in combination effects arising in conjunction with other wind farm schemes in the study area defined below. Best practice guidelines identify two principal types of cumulative visual impact:
- combined visibility – where the observer is able to see two or more developments from one viewpoint; and
 - sequential visibility – where two or more sites are not visible at one location but would be seen as the observer moves along a linear route, for example, a road or public right of way.
- 8.5.10. The guidelines state that ‘combined visibility’ may either be ‘in combination’ (where two or more sites are visible from a fixed viewpoint in the same arc of view) or ‘in succession’ (where two or more sites are visible from a fixed viewpoint, but the observer is required to turn to see the different sites). Both types are discussed in this LVIA. The published GLVIA3 also indicates a difference in emphasis between sequential effects that are frequent and those which are occasional.
- 8.5.11. In relation to both the effects of the Proposed Varied Development alone and the cumulative effects with other wind farm schemes in the study area, both beneficial (positive) and adverse (negative) effects are considered. Wind farms give rise to a wide spectrum of opinions, ranging from strongly negative to strongly positive, with a wide range of opinions lying somewhere between these two positions. Some people view wind turbines as incongruous or industrial structures whilst others view them as aesthetically pleasing, elegant structures and a positive response to climate change. This spectrum of opinion has come to be referred to in relation to wind farms as the concept of valency. For the avoidance of doubt, in considering the effects of the Proposed Varied Development, a precautionary approach to the assessment has been adopted and it is assumed that, unless specifically stated otherwise, the effects of the proposal will be adverse in nature even though it is acknowledged that, for some people, the impacts could be considered to be beneficial.

Effects Scoped out of the Assessment

- 8.5.12. Based on the desk study, field work, the professional judgement of the LVIA team and experience of delivering other onshore wind energy projects, the following elements have been scoped out of detailed assessment:

- Effects on receptors located outside of the ZTV;
- Effects of decommissioning the Proposed Varied Development at the end of its operational life as effects would be very similar in nature to those experienced during the construction, except in reverse; and
- Effects on landscape character during dark sky hours when aviation lighting is operating. Without being able to fully appreciate landscape features and components that contribute to landscape character it is not possible to carry out a meaningful landscape character assessment. This precedent was established in the Reporter's decision for Crystal Rig IV (WIN-140-8).

Study Area

- 8.5.13. The extent of the primary study area for the LVIA is 45 km radius from the site in all directions. The extent of this study area is illustrated in **Figure 8.1**. Initial site work informed by analysis of preliminary ZTVs indicated that significant landscape and visual effects are likely to occur within a much narrower radius from the site; therefore, the level of assessment work in this LVIA incrementally decreases with distance from the site, with the greatest focus of assessment being within broadly 20 km of the site. The intention is that the detail of the LVIA remains proportional to the likely significance of effects as advocated in GLVIA3.
- 8.5.14. In terms of cumulative effects, the intention has again been that assessment work is proportional to the likelihood of significant effects arising. The approach adopted in the cumulative LVIA has been to focus on other wind farms which are either operational, under construction, consented or the subject of a full planning application and which have the potential to give rise to significant cumulative effects when considered in combination with the Proposed Varied Development. Rather than simply considering every other wind farm within a set distance of the Proposed Varied Development, the approach has been to focus the assessment on those sites which have the potential to give rise to significant cumulative effects. This is in line with NatureScot guidance 'Assessing the Cumulative Impact of Onshore Wind Energy Developments' (2021). Further details of this approach are set out in the cumulative impact assessment (**Section 8.11**) of this Chapter.

Desk Study

Landscape Assessment Methodology

- 8.5.15. A baseline landscape assessment was carried out to determine the current features and character of the landscape within and surrounding the site.
- 8.5.16. The baseline landscape assessment involved firstly a review of desk material including:
- Ordnance Survey maps at 1:250,000; 1:50,000; 1:25,000 and 1:10,000 scales;
 - aerial photographs of the site and surrounding area;
 - topography;

- current & historical land use;
- geology and soil maps;
- Historic Parks and Designated Landscapes;
- relevant planning policy;
- relevant landscape sensitivity/capacity studies;
- relevant landscape character assessments; and
- relevant Historic Landscape Character Assessments.

- 8.5.17. The baseline assessment identified the existing landscape features on the site and in the immediate vicinity, and how these elements combine to give the area a sense of landscape character. Plans and construction details of the Proposed Varied Development were used to determine the impacts of the scheme on landscape features and character.
- 8.5.18. The LVIA firstly assesses how the Proposed Varied Development would impact directly on any existing landscape features or elements (e.g. removal of trees etc.).
- 8.5.19. The LVIA then considers impacts on landscape character with reference to landscape character areas/types identified in published landscape character documents.
- 8.5.20. The relative significance or level of effect on landscape features and character is determined by considering in tandem the nature (sensitivity) of the feature or character with the nature (magnitude) of change. The assessment criteria used to determine sensitivity and magnitude are set out in **Appendix 8.1**. A professional judgement is then made as to whether the effect is significant or not. The effects which are identified as significant are those which, in the opinion of the professional assessor are likely to be most material in the decision-making process.

Visual Assessment Methodology

- 8.5.21. Potential visual receptors of the Proposed Varied Development were identified through interpretation of digitally generated comparative ZTVs, allowing differences in theoretical visibility between the Consented Development and the Proposed Varied Development to be examined (see **Table 8.3** for an explanation of ZTVs and how they were produced).
- 8.5.22. A selection of viewpoints was chosen for the assessment of the Consented Development, which was agreed with statutory consultees to represent a range of views and viewer types as discussed in Visual Representation of Wind farms – Version 2.2 (February 2017) and in Paragraphs 6.16-6.20 of GLVIA3. The same set of viewpoints was considered appropriate to compare the differing visual effects of the Proposed Varied Development.
- 8.5.23. The viewpoints cover a variety of different character areas, are in different directions from the site, and are at varying elevations. Some of the viewpoints are intended to be representative of the visual experience in a general location whereas other viewpoints illustrate the view from a specific or important vantage point. The viewpoints are located

at a range of distances from the Proposed Varied Development to illustrate the varying magnitude of visual impacts.

- 8.5.24. Visualisations, including comparative wirelines, were produced for each of the viewpoints; these are presented in EIA Report **Volume 3**. An explanation of how they were produced and information to be read in conjunction with the visualisations is provided in **Appendix 8.2**.
- 8.5.25. Each of the representative viewpoints were visited to gain an understanding of the sensitivity of the viewpoint receptors and to make professional judgements on the likely visual effects arising from the Proposed Varied Development. Furthermore, the entire extent of the study area was visited to appreciate visibility of the Proposed Varied Development as receptors move throughout the landscape.
- 8.5.26. The viewpoints were used as the starting point for considering the effects on visual receptors within the entire study area. The visual assessment does not rely solely on the viewpoint assessments to determine the significance of effects on different visual receptor groups throughout the study area. It should be recognised that the viewpoints illustrated in the LVIA simply represent a series of 22 snapshots from a small selection of the locations within the study area from where the Proposed Varied Development would be visible. Following the viewpoint assessment, the LVIA considers the effect on visual amenity throughout the study area with reference to different visual receptor groups at varying distances from the site.
- 8.5.27. The relative significance or level of effect on views and visual amenity is determined by considering in tandem the nature (sensitivity) of the visual receptor with the nature (magnitude) of change. The assessment criteria used to determine sensitivity and magnitude are set out in **Appendix 8.1**. A professional judgement is then provided as to whether the effect is significant or not. The effects which are identified as significant are those which, in the opinion of the professional assessor, are likely to be a material consideration in the decision-making process.

Table 8.3 – Production of ZTVs

Production of Zone of Theoretical Visibility (ZTV) Maps
A Zone of Theoretical Visibility (ZTV) illustrates the extents from which a feature would theoretically be visible within a defined study area. ZTVs are generated assuming a 'bare ground' terrain model. This means that the ZTVs presented within this LVIA have been generated from topographical data only, and they do not take any account of vegetation or the built environment which may screen views of the Proposed Varied Development. It is, as such, a 'worst case' zone of visual influence and considerably over-emphasises the actual visibility of the proposed scheme. In reality trees, hedges and buildings may restrict views of the development from many of the areas rendered as within the ZTV. A further assumption of the ZTV is that climatic visibility is 100% (i.e. visibility is not impeded by moisture or pollution in the air). In reality, such atmospheric conditions are relatively rare in this part of the country. Mist, fog, rain and snow are all common weather occurrences, which would regularly restrict visibility of the development from

some of the areas within the ZTV; this being an incrementally more significant factor with distance from the site. Atmospheric pollution is not as significant as it is in other parts of the country but is still present and would also restrict actual visibility on some occasions, again more so with distance from the site.

The ZTVs were generated using GIS software. The programme used topographical height data (OS Terrain 50) to build a terrain model. The programme then renders the model using a square grid to illustrate whether the turbines would be visible in each 50 m x 50 m square on the grid for a specified distance in every direction from the site.

Digital ZTVs have been prepared to illustrate the theoretical visibility of the turbine for a radius of 35 km around the site. Two sets of ZTVs have been produced, the first shows visibility of the turbines at hub height and the second shows visibility of the turbines to blade tip when the blade is at its highest possible position. Enlargements of the ZTVs have also been produced.

Cumulative ZTVs have been produced to show locations where the ZTVs of two or more operational, consented or proposed wind turbine sites overlap (in certain cases a number of wind farms which are at the same stage in development have been grouped together). In the cumulative ZTVs, one colour has been used to illustrate the theoretical visibility of the Proposed Varied Development and a second colour to illustrate the visibility of a second site. Where the ZTVs of the two sites overlap, a third colour has been used to illustrate this potential cumulative visual influence.

It should be noted that there are several limitations to the use of ZTVs. For a discussion of these limitations please refer to Visual Representation of Wind farms – Version 2.2 (February 2017). In particular, it should be noted that the ZTV plans simply illustrate theoretical visibility and do not imply or assign any level of significance to those areas identified as being within the ZTV. The ZTVs are a tool to assist the Landscape Architect to identify from where the Proposed Varied Development would potentially be visible. The assessment of landscape and visual effects in this chapter does not rely solely on the accuracy of the ZTVs. The ZTVs have been ground proofed, and professional judgement has been used to evaluate the significance of effects.

Field Surveys

- 8.5.28. Field visits have been conducted in a variety of weather conditions and at different times of the year during the pre-application stage. Prior to the submission of the application for the Consented Development, surveys were undertaken between January and June 2018. Pre-arranged visits to residential properties within 2 km of the proposed turbines were also undertaken during June 2018. In preparation for the Proposed Varied Development application, site visits, including for undertaking photography, were undertaken between August and September 2024 and in April 2026.

Assessment of Likely Effect Significance

- 8.5.29. The purpose of an LVIA when produced in the context of an EIA is to identify any significant landscape and visual effects within the study area to assist the determining authority in deciding the acceptability of the scheme under consideration.
- 8.5.30. In accordance with the GLVIA3, the level (relative significance) of an effect is ascertained by considering in tandem the nature (sensitivity) of the baseline landscape or visual

receptor and the nature (magnitude) of change as a result of the Proposed Varied Development. These two judgements are described as **very high**, **high**, **medium**, **low** or **very low**.

- 8.5.31. The relative significance of landscape or visual effects is described as **major**, **major/moderate**, **moderate**, **moderate/minor**, **minor** or **minor/no effect**. No effect may also be recorded where the effect is so negligible. Professional judgement is then employed to determine whether the effect is significant or not. Those effects described as **major**, **major/moderate** and in some cases, **moderate** may be regarded as significant.
- 8.5.32. The detailed assessment criteria used to determine landscape and visual sensitivity, magnitude of change and significance of effect are set out in **Appendix 8.1**.

Mitigation and Enhancement

- 8.5.33. As discussed in best practice guidance for EIA, mitigation measures may include:
- avoidance of effects;
 - reduction in magnitude of effects; and
 - compensation for effects (which may include enhancements to offset any adverse effects).
- 8.5.34. The primary mitigation adopted in relation to the Proposed Varied Development is embedded within its design and relates to the consideration that was given to avoiding and minimising landscape and visual effects during the evolution of the Proposed Varied Development's layout. This is sometimes referred to as 'mitigation by design'. A detailed discussion of the design evolution and the iterative process underpinning it is provided in **Chapter 3: Alternatives and Scheme Evolution** of this EIA Report. Design evolution is summarised in **Section 8.7** of this Chapter, in so far as landscape and visual matters have influenced the Proposed Varied Development.

Assessment of Residual Effect Significance

- 8.5.35. EIA Regulations require that the significance of potential effects be assessed, mitigation proposals identified, and the residual effect (with mitigation in place) then re-assessed to demonstrate the effectiveness of the mitigation proposed.
- 8.5.36. In the case of LVIA for wind farms this presents two interrelated problems:
- Potential effects cannot be meaningfully assessed in the absence of an assumed layout; and
 - Landscape and visual mitigation principally focus on refinement of the site layout ('mitigation by design').
- 8.5.37. The approach taken in this study has been to build landscape and visual mitigation into the final layout (refer to **Chapter 4**). This embedded mitigation has been considered as

part of the iterative design process, but as this mitigation is integral to the final layout, there is no difference between the assessed effects reported in the main body of this chapter and the residual effects.

Assessment of Cumulative Effects

- 8.5.38. The approach to cumulative methodology is set out at the start of **Section 8.11**.

Limitations to Assessment

- 8.5.39. The assessment of effects within this LVIA has been derived through the use of publicly available information only. Within such a large study area it is not feasible to visit every single location from which the Proposed Varied Development might be visible as illustrated on the ZTVs. The authors of the LVIA have, however, spent a considerable length of time 'in the field' and visited all important viewpoints and locations within the study area.
- 8.5.40. Limitations to the use of ZTVs and in relation to photography, wireframes and photomontages are set out in **Appendix 8.2**.

8.6. Baseline Conditions

Site Location

- 8.6.1. The Proposed Varied Development is located in Dumfries and Galloway, Scotland. The site is centred on approximate national grid reference (eastings) 262319 and (northings) 593591. The closest settlement to the proposed turbines is the village of Carsphairn, located c. 5 km to the west of the site. The town of St Johns Town of Dalry is located c. 10 km to the south of the site.
- 8.6.2. The nearest main highways are the A713 which passes c. 3 km to the south-west of the site, with the B729 passing within 1 km to the south-east. The B7000 is also located c. 1 km to the south.
- 8.6.3. The location of the Proposed Varied Development is illustrated in **Figures 1.1** and **8.1**.
- 8.6.4. The baseline for the site is assumed to be undeveloped and does not include the Consented Development.

Published Landscape Character Descriptions

- 8.6.5. A review was undertaken of the following published sources of information regarding regional landscape character, landscape value and landscape capacity:
- Dumfries and Galloway Council / Carol Anderson Landscape Associates (2025). *Dumfries and Galloway Wind Energy Landscape Sensitivity Study Assessment of Larger Wind Turbines* (DGWLSS – Larger wind turbines);

- Dumfries and Galloway Council (2025). *Wind Energy Landscape Sensitivity Study Assessment of Smaller Wind Turbines (DGWLSS – Smaller wind turbines)*;
- East Ayrshire Council / Carol Anderson Landscape Associates (2018) *East Ayrshire Landscape Wind Energy Capacity Study*;
- NatureScot (2019) *Landscape Character Assessment: Dumfries & Galloway Landscape Evolution and Influences*;
- NatureScot (2019) *Scottish Landscape Character Types Map and Descriptions*;
- NatureScot (2021) *Landscape Character Assessment: Ayrshire – Landscape Evolution and Influences*;
- South Ayrshire Council / Carol Anderson Landscape Associates (2018) *South Ayrshire Landscape Wind Capacity Study Updated August 2018*; and
- South Ayrshire Council / Carol Anderson Landscape Associates (2018) *South Ayrshire Landscape Capacity Study – Appendix Updated August 2018*.

8.6.6. At this point, for clarity, it is necessary to distinguish between two terms that are frequently used in published guidance and this Chapter. They originate from the 'Guidelines for Landscape Character Assessment' (Countryside Agency and SNH, 2002):-

- Landscape Character Types (LCTs) are defined as tracts of landscape, which have a generic unity of character due to the particular combinations of landform, land cover, pattern and elements. The same landscape character type can occur at several different locations throughout a study area; and
- Landscape Character Areas (LCAs) are defined as discrete geographical areas of a particular landscape character type and can only occur at a single location.

8.6.7. At a local level, the Proposed Varied Development site falls within the landscape covered by the DGWLSS, (2025). This replaces the earlier DGWLCS guidance and is referred to throughout this assessment. It is noted that the sensitivity assessment for smaller turbines is currently considered as planning guidance, rather than supplementary guidance, but it may be a material consideration once adopted.

8.6.8. The DGWLSS establishes 25 Assessment Units (AU) for the Dumfries and Galloway area. The AUs as identified in the key landscape character assessments listed above are illustrated on **Figure 8.15** (out to 20 km). Additionally, **Figure 8.16** presents the AUs within 20 km overlaid with the comparative ZTV.

Character Type/Area Covering the Proposed Varied Development Site

8.6.9. Three AUs as defined within DGWLSS (2025) cover the site, 22: Southern Uplands with Forest, 4: Narrow Valleys, and 9: Upper Dale (Valley). These are equivalent to the NatureScot (2019) LCTs 178: Southern Uplands with Forest – Dumfries & Galloway, 160: Narrow Wooded River Valley – Dumfries & Galloway and 165: Upper Dale – Dumfries & Galloway.

- 8.6.10. The turbines of the Proposed Varied Development are entirely located within the Southern Uplands with Forest AU. Some of the ancillary development is located within the Upper Dale AU and some of the access track passing through the Narrow Valleys AU. The key characteristics of these AUs are discussed further below.

AU 22: Southern Uplands with Forest

- 8.6.11. The NatureScot (2019) character assessment records the key characteristics of LCT 178: Southern Uplands with Forest – Dumfries & Galloway as follows:

- *“large, smooth dome-shaped hills with large scale dark green forests on slopes and over lower summits;*
- *Predominantly simple, gently rolling landform.*
- *Some areas of more complex and smaller-scale landscapes, with steep slopes enclosing heads of valleys and/or where uplands remain open.*
- *Changing landscapes with large scale forestry operations and wind farm development.*
- *Forested areas dominated by Sitka Spruce, interspersed with mixed conifers and broadleaf planting, and undergoing felling and replanting in large coupes.*
- *Wind farms are a key characteristic in some areas.*
- *Expansive scale.”*

- 8.6.12. Under the landscape character description in relation to settlement, the character assessment recognises:

“Large scale wind farms are key and at times defining characteristics of this Landscape Character Type. In local areas of more complex and smaller scale landscapes, such as steep slopes enclosing heads of valleys, and/or where uplands remain open, large scale wind farms in terms of turbine height or extent tend to dominate the local drama and scenic interest.”

- 8.6.13. The DGWLSS (2025) considers the four distinct landscape areas of AU 22 together in a single sensitivity assessment. The site falls within the Ken landscape area. The landscape character of Assessment Unit 22: Southern Uplands with Forest is described as follows:

“The Southern Uplands with Forest (22) comprises expansive, gently undulating upland plateaux of smoothly rounded hills. A similar landscape extends into neighbouring Scottish Borders in the Craik Forest area and into East Ayrshire north of the Carsphairn area. Occasional more well-defined hills occur close to the Moffat and Dalwhat Glens on the outer edges of these uplands and these are more prominent in views from surrounding roads and settlement than the more distant and more simple gently undulating interior of these uplands. Extensive productive coniferous forestry masks landform and there is little open ground with this largely confined to areas of grass moorland within valleys and the

higher hill tops and ridges. Operational wind farm development is a key feature within the Carsphairn, Ken and Ewe Hill areas of this Assessment Unit."

8.6.14. In relation to cumulative issues, the DGWLSS states that:

"The potential creation of a concentrated band of wind farm 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."

8.6.15. The DGWLSS lists the following key constraints of the Ken area:

- *"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 area. The presence of the SUW and the landmark sculptures of Striding Arches add to the sensitivity of this area.*
- *The proximity of the dramatic sculptural hill of Cairnsmore of Carsphairn to parts of the Ken and Carsphairn areas.*
- *Potential for cumulative effects to arise with additional wind farm development sited within the Ken, Carsphairn and Ewe Hill landscape areas."*

AU 4: Narrow Valleys

8.6.16. The NatureScot (2019) character assessment records the key characteristics of LCT 160: Narrow Wooded Valley – Dumfries & Galloway as follows:

- *"Narrow incised valleys with wooded slopes enclosing pasture floors.*
- *Small pastures and arable fields enclosed by hedges/fences in lower reaches and drystone dykes in upper reaches.*
- *Dominant broadleaf (semi-natural) woodland character with conifers on higher slopes.*
- *Lush trough-shaped river valleys with pasture/arable floors enclosed by deciduous wooded slopes.*
- *Riparian trees and woodlands following meandering river courses in lower reaches.*
- *Narrow lanes following valleys and linking isolated houses, occasional settlements and providing access to higher moorland.*
- *Clusters of prehistoric landscapes and settlement up some valleys, notably in Eskdale.*
- *Numerous arched stone bridges over the rivers.*
- *Intimate unspoilt landscape focussing on river views with some adjacent policy landscape."*

8.6.17. Under the landscape character description in relation to perception, the character assessment states that *“Generally, these are intimate, small-scale landscapes with enclosed views.”*

8.6.18. The DGWLSS – Smaller wind turbines describes AU 4: Narrow Valleys as follows:

“These valleys are generally sinuous and nearly all long enough to individually wind through a range of different adjoining Assessment Units, from enclosing and forested uplands to more open plateau and lowland landscapes. They include shallow valleys contained by well-defined terraces or barely enclosed by low profiled moorland to narrow incised valleys further enclosed by broadleaved woodland and medium scaled valleys, surrounded by the steep slopes of rounded hills or undulating ridgelines. They are further varied in land cover and settlement pattern, embracing extensive conifer woodlands and arable fields, sparsely populated and secluded upper reaches or well settled landscapes, accommodating narrow single-track roads or even motorways. There are several sensitive viewpoints in these valleys, including those to and from historic sites. Views tend however, to be intermittent and in places curtailed by the land form and tree cover. National and local landscape designations apply to some of these valleys and there are ASAs in Eskdale.”

8.6.19. Having reviewed the key characteristics outlined for the Narrow Valleys AU, it is noted that the Proposed Varied Development lies on the fringes in a transitional zone with the adjacent Southern Uplands with Forest AU and the site shares some of the characteristics.

8.6.20. The Ken Valley in the vicinity of the site is much wider in appearance than the Ken Valley further north. The valley bottom is ‘bowl’ like in appearance rather than a narrow valley as described. The valley slopes are sweeping in nature towards the summits of Marscalloch Hill, Stroanfreggan Craig and Round Craigs rather than deeper cut valleys. This is particularly perceptible where the coniferous forest has been felled off Marscalloch Hill and Shepherds’ Rig. Further discussion with regards to local landscape character is provided below.

AU 9: Upper Dales

8.6.21. The NatureScot (2019) character assessment records the key characteristics of LCT 165: Upper Dale – Dumfries & Galloway as follows:

- *“Wide valleys, enclosed by high peaks and moorland.*
- *Open with long views.*
- *Notable narrower section of Upper Nithsdale between Thornhill and Mennock.*
- *Improved valley pastures becoming rougher up the valley sides.*
- *Medium to large scale enclosures with dry stone dykes.*
- *Riparian woodlands along the main river and up tributary channels.*
- *Medium to large scale forests on the valley sides and extending over horizons from higher ground.*

- *Large scale wind farm development characteristic of some adjacent upland fringes and backdrop skylines.*
- *Mining settlements and remnants of industrial activity such as mine ruins and bings."*

8.6.22. Under the landscape character description in relation to settlement, the character assessment recognises "*Large scale windfarms are characteristic features of the upland fringes and backdrop skylines of the upland dale*".

8.6.23. The DGWLSS – Smaller wind turbines describes the Upper Glenkens area of AU 9: Upper Dales as follows: "*The Upper Glenkens forms a broad valley, contained by high hills, including the distinctive landmark hill of Cairnsmore of Carsphairn which lies in the Southern Uplands (21) Assessment Unit. The gently undulating to flat valley floor gives way to either uneven, but gently graded side slopes, or to more steep-sided and enclosing slopes. While this upper dale is generally wide and open, occasional outcrop hills create 'pinch points' along the floor and lower side slopes. Enclosed pastures extend up to higher, more open rough grazing and bracken covered slopes. Woodlands are a key feature of the Upper Glenkens and these include semi-natural woodlands and the policies of designed landscapes. While the floor of the dale is well settled and linked by major roads, the upper slopes and side valleys are more sparsely settled. The Foothills with Forest Assessment Unit forms generally low upland ridges above the eastern and western sides of this upper dale. The high Rhinns of Kells ridge, which lies in the Rugged Granite Uplands (24) Assessment Unit forms a dramatic rugged skyline seen above forested slopes to the west.*"

Other Character Types/Areas considered in this LVIA

8.6.24. In order to consider the indirect effects of the Proposed Varied Development on landscape character all other AUs, LCTs and LCAs within 20 km of the Proposed Varied Development are illustrated at **Figure 8.15**. The LCTs and LCAs within 20 km have been overlaid on the ZTV at **Figure 8.16**.

8.6.25. An initial filtering exercise has been undertaken to determine which AUs, LCTs and LCAs would have the potential for significant effects to arise and would therefore require detailed consideration in this Chapter. The intention has been to ensure that the level of attention given to each character type is proportionate to the likelihood of significant effects arising. The discussion below summarises the process followed in deciding which character types have the potential to experience significant effects and hence to scope out various character types from further consideration.

8.6.26. All AUs, LCTs and LCAs present within the detailed 20 km LVIA study area have been subject to an initial filtering exercise. The findings of this exercise are presented at **Table 8.3.1 of Appendix 8.3**.

8.6.27. The LCTs assessed in detail in this Chapter are presented below:

Table 8.4 – Landscape Character Types/Areas Considered in Detail

Assessment Unit / Landscape Character Area	Approximate Distance to the Proposed Varied Development from the LCT
Dumfries and Galloway Landscape Character Types	
AU 22: Southern Uplands with Forest - Ken	Proposed Varied Development is primarily located in this area
AU 4: Narrow Valleys - Ken	Part of the access track is located in this area
AU 9: Upper Dale – Upper Glenkens	Part of the access track and the temporary construction compound is located in this area
AU 21: Southern Uplands – Carsphairn	0.1 km to the west (adjacent to western boundary)
AU 20: Foothills with Forest – Stroan	2.9 km to the south
AU 20: Foothills with Forest – Rhinns of Kells	4.7 km to the south-west
AU 24: Rugged Granite Uplands – Rhinns of Kells	6.2 km to the west
AU 8: Flooded Valley – Ken Valley	11.1 km to the south

8.6.28. The ZTV indicates extensive visibility across all five AUs located within 5 km of the proposed turbines, namely Dumfries and Galloway AU 4 – Narrow Valleys, AU 9 – Upper Dale, AU 20: Foothills with Forest, AU 21 – Southern Uplands and AU 22 – Southern Uplands with Forest, and therefore, these AUs are discussed further in the LVIA.

8.6.29. Two further two Dumfries and Galloway landscape character types considered relevant to the assessment are AU 8 – Flooded Valley and AU 24 – Rugged Granite Uplands, which are both located within 15 km of the site.

Impacts Scoped Out of Assessment

8.6.30. With reference to **Figure 8.16**, all LCAs located over 20 km have been scoped out of further assessment, on account of the distance from the Proposed Varied Development, the influence of other closer wind farm development and the relatively limited theoretical visibility. It is acknowledged that there may be very limited potential for effects on the character of available views from these LCAs but there would be no potential for significant effects to arise.

- 8.6.31. As noted in **Table 8.2**, DCG state in the Scoping Opinion (refer to **Appendix 6.2**) that a 20 km study area is acceptable, although some longer range views to the south merit assessment given the prominence of the Cairnsmore of Carsphairn as a landmark feature, and need to assess potential impacts on this from sensitive visual receptors

Local Landscape Description and Character Appraisal

- 8.6.32. A plan illustrating the landscape features/elements within the site and its immediate context (5 km radius of the turbines) is provided in **Figure 8.18**. The following discussion provides an overview of the physical and perceptual characteristics of the site and immediately surrounding landscape without particular reference to established landscape character type/area boundaries.

Landform and Topography

- 8.6.33. Topography and relief within 20 km of the Proposed Varied Development site is illustrated in **Figure 8.17**.
- 8.6.34. The Proposed Varied Development is located on land formed by two hill formations, namely Craigengillan Hill and Marscalloch Hill. Craigengillan Hill forms the northern part of the site, whilst Marscalloch Hill is located on the southwestern boundary of the site.
- 8.6.35. The peak of Craigengillan Hill sits at 401 m AOD, and the summit is marked by a cairn. The hill is steeply sloping to the east, where it meets the Polifferie Burn at c. 200 m AOD. To the north, west and south of the hill summit, the slopes are gentler in comparison and contribute to the general upland landscape.
- 8.6.36. The summit of Marscalloch Hill is 381 m in height. It is more rounded in nature than Craigengillan Hill with steep slopes falling to the south-west through to the east. The lowest slopes meet Kendoon Loch and the Water of Ken at 160 m AOD and 150 m AOD respectively. The landscape to the north of Marscalloch Hill slopes slightly before rising to Furmiston Craig, located beyond the site boundary, at 324 m AOD.
- 8.6.37. The landform between the two hill formations, within the central core of the site, varies between 327 m AOD and 200 m AOD. The land slopes west to east towards the Water of Ken.
- 8.6.38. Beyond the site boundary, the topography is influenced by the presence of watercourses. The Water of Ken passes to the east, through a valley that varies in nature. In the vicinity of the site, the valley is a relatively broad bowl shape in which the landform sweeps down from Meikle Auchrae and Round Craigs to a flat bottomed river valley before sweeping up to Marscalloch Hill and Craigengillan Hill. Further north along the Water of Ken, the valley becomes much narrower, enclosed by the landform of Auchrae Hill, Glenhead Rig and Dodd Hill; the river valley bottom remains relatively wide. Beyond the Head of the Water of Ken car park and picnic site, the watercourse, which becomes Polskeoch Burn, sits in the bottom of a very narrow valley, meandering through the interlocking hills which include Corse Hill, Black Rig, and White Knowe.

- 8.6.39. To the south and south west of the site, the landform is influenced by the presence of Carsphairn Lane, which flows into the Water of Deugh, which in turn flows into Kendoon Loch. The Water of Deugh and Kendoon Loch are located within the bottom of relatively narrow valleys that are strongly planted with coniferous forest. Beyond these valleys, the landform rises to hill summits such as Dundough Hill, Bardennoch Hill, and Quantans Hill. To the north west of Carsphairn, Carsphairn Lane flows through a wider bottomed valley, enclosed by the steep sided peaks of Craig of Knockgray, Holm Hill and Garryhorn Rig.

Watercourses and Drainage

- 8.6.40. Within the site, there are a number of watercourses in which the source is located within the site boundary. Goat Strand originates off Craigengillan Hill and passes over the Hill in a south-easterly direction where it meets Craigengillan Burn, which also has its source on Craigengillan Hill. Craigengillan Burn flows in a southeasterly direction to Black Burn Bridge, where it flows into the Water of Ken.
- 8.6.41. Other watercourses within the site include Hare Strand and Black Burn, which flow within the central core of the site towards the Water of Ken in an easterly and north-easterly direction, respectively. Further south within the site, Dry Burn flows in a south-easterly direction off the lower slopes of Marscalloch Hill towards the Water of Ken.
- 8.6.42. All of these above-named watercourses are located within the coniferous plantation that cover the site and thus do not form noticeable features in the landscape.
- 8.6.43. The Water of Ken is the closest larger watercourse to the site, as previously described above. Located to the east and south-east of the site boundary, it flows through a narrow valley from its origin in the Uplands, north of the site in the vicinity of Altry Hill. The Water of Ken flows in a generally southerly direction into Kendoon Loch, located to the south-west of the site, and continues further south into Loch Ken, south of New Galloway.

Vegetation

- 8.6.44. The site is largely covered with coniferous plantation at various stages of growth, which creates a patchwork of colour and texture in the landscape. The forest within the site has been subject to felling, with areas most recently felled and cleared including the south-eastern periphery of the site, on the lower hill slopes adjacent to the B729, near to Smittons Bridge, the western periphery of the site, and areas to the north and south of Craigengillan Hill. Some of these areas have subsequently been replanted.
- 8.6.45. There are also small areas of rough grassland and moorland within the site, such as on the eastern summit of Marscalloch Hill and along the margins of the woodland blocks. However, such areas are limited, and the primary land cover of the site is forest.
- 8.6.46. Within the wider landscape, vegetation varies relative to topography. The lower river valleys feature riparian vegetation and deciduous woodland. The lower hill slopes are characterised by rough pasture, extending to the fringes of the large-scale coniferous plantation that clothe the hill formations which flank the valleys. The higher reaches of the Uplands are vegetated with large scale moorland and/or tussock grass tracts and bog.

Built Infrastructure

- 8.6.47. There is no built infrastructure of particular note on the site. The landscape forms part of a wider coniferous plantation and features forest tracks. The site is accessed via Lorg Road which runs alongside the Water of Ken to the east of the site and from a point on the B729 east of Muirdrochwood.
- 8.6.48. Within the wider landscape, there are numerous small farmsteads and cottages, largely located within the river valleys and on the lower slopes of the hills. The properties are accessed via single width tracks that wind through the valley landscapes. The primary roads comprise of a number of 'A' and 'B' roads including the A713, B7000 and B729.

Sensory and Perceptual Characteristics

- 8.6.49. As the site is largely covered with coniferous plantation at various stages of growth, there is a great sense of enclosure within the forested areas. However, where there have been areas of felling along the eastern periphery of the site, there is much greater intervisibility with the surrounding landscape, in particular the valley formed by the Water of Ken. From the open higher ground on Marscalloch Hill, there are also long reaching views to the east and south. There are also views available from the western edge of the site across the open moorland of Furmiston Craig towards the notable landscape features of Cairnsmore of Carsphairn and Beninner.
- 8.6.50. The Water of Ken valley has a sense of openness with longer distance views towards the wider Uplands, particularly to the north and north-west. The landscape is relatively simple, wide and open when seen from within the valley, with the patchwork of plantation visible on the lower reaches of the hill formations to the north and north-west. Beyond the forested hill flanks, the summits of Cairnsmore of Carsphairn and Beninner again form notable features in the landscape, alongside Alhang.
- 8.6.51. Intervisibility with the site from the Water of Ken valley is limited to the eastern periphery and the summits of Craigengillan and Marscalloch Hills due to the presence of the plantation. Where the plantation has been felled, views into the site are available, but such views are quickly curtailed by the plantation further into the site.
- 8.6.52. The felled areas of forest have a detrimental effect on the perception of the landscape, with tree stumps and limbs left in, and on, the ground. The remaining exposed forest edge also appears stark and abrupt. This is in contrast to the softer appearance of the rough grassland that forms the valley and slopes of Stroanfreggan Craig and Round Craigs to the east.
- 8.6.53. Overall, the site is located within an Upland landscape typified by large-scale coniferous plantation. It has a perception of being relatively simple, large-scale and open outwith the valley landscapes.

Forces for Future Change in the Landscape

- 8.6.54. The landscape of the site, currently characterised by plantation forestry, is subject to temporal change due to felling regimes. Future policy changes to plantation techniques

and practice may bear influence on the landscape in the future. There is already young deciduous planting implemented within the Ken Valley which will alter the character of the landscape in the long term.

- 8.6.55. The landscape in which the site is located has, in recent years, seen a rise in numbers of trees being infected with *Phytophthora ramorum*. The Forestry Commission have previously named the Dumfries and Galloway region the 'Galloway Red Zone', and a management regime is in place to prevent the movement of infected timber out of the area. The pathogen is referred to as Larch Tree Disease in the U.K., and within the Galloway Forest there have already been large areas of Larch infected by the disease. The affected areas have to be felled and destroyed to prevent further spread, which has an impact upon the character of the landscape. There is concern that the pathogen could go on to infect Sitka Spruce, which would have far reaching effects on the landscape.
- 8.6.56. In the absence of the Proposed Varied Development, the Consented Development, once constructed, would alter the landscape character of the site to one that includes commercial scale wind energy development. In the wider landscape, several additional commercial scale wind energy developments have been consented, with several others currently proposed in planning. Once operational, these would further influence the landscape character of the study area.

Visual Receptors

- 8.6.57. Due to the height of the proposed turbines and the undulating landform in the surrounding study area, there is the potential for the Proposed Varied Development to be visible over longer distances in several directions, most notably to the south of the site. However, at an early stage in the assessment, it was determined that there was little potential for the Proposed Varied Development to result in any significant visual effects at distances over 20 km from the site, and furthermore, that with distance from the site, the likelihood of significant visual effects occurring incrementally decreases. Therefore, whilst the initial study area for this LVIA extends out to 45 km and various figures which accompany this Chapter illustrate a 45 km study area, sensitive visual receptors are identified with a decreasing level of detail with distance from the site.
- 8.6.58. Interpretation of the ZTVs (**Figures 8.4 – 8.11**) assisted to identify potentially sensitive visual receptors of the Proposed Varied Development. Principal visual receptors within the surrounding landscape to 10 km are illustrated at **Figure 8.19** and are identified below.

Residential Receptors and Settlements

- 8.6.59. Residential visual receptors have been identified in bands of distance from the nearest turbine with a greater level of detail provided in relation to properties nearest to the Proposed Varied Development. It is however recognised that there would be views from individual properties and clusters of properties throughout the study area.
- 8.6.60. There are 17 residential properties within approximately 2 km of the proposed turbines, which are discussed in detail within the Residential Visual Amenity Assessment (RVAA) presented at **Appendix 8.6**. In summary, the properties within 2 km that are considered

in detail are as follows (approximate measurements are taken from nearest turbine tower to the nearest façade of the habitable part of the residential building in each case):

- Marbrack (1,917 m to the west);
- Marbrack Cottage (1,867 m to the west);
- Furmiston (1,258 m to the south-west);
- Nether Loskie (1,761 m to the south-west);
- Marscalloch Cottage (1,706 m to the south-west);
- 1 Muirdrochwood (1,080 m to the south);
- 2 Muirdrochwood (1,068 m to the south);
- Smittons (1,248 m to the south-east);
- Stroanpatrick (1,959 m to the east south-east);
- Craigengillan (970 m to the east);
- Craigengillan Cottage (887 m to the east);
- Moorbrock (973 m to the north-east);
- Game Keepers Cottage (889 m to the north-east);
- Strahanna and River Ken Cottage (1,802 m to the east); and
- Bridgemark (1,874 m to the south south-east);
- Knowehead Cottage and Kendoon Cabin (1807 m to the south south-west); and
- Kensglen (2008 m to the south south-west).

8.6.61. Beyond 2 km from the proposed turbines, there are numerous isolated farmsteads and dwellings, many located along tracks within the upland landscape, particularly along the Water of Ken Road, to the east and north-east of the Proposed Varied Development. There are also properties strung along the various 'A' and 'B' roads in the local landscape. Those located within the ZTV for the Proposed Varied Development are considered to have potential for views towards the scheme and will be discussed further within the assessment.

8.6.62. In terms of settlements, there are several villages and small towns within the 20 km study area including:

- Carsphairn – c. 5.2 km to the west;
- Bellsbank – c. 16.2 km to the north-west;
- Dalmellington – c. 16.6 km to the north-west;

- Kirkconnell – c. 19.0 km to the north-east;
- Monaive – c. 14.7 km to the east;
- New Cumnock – c. 16.4 km to the north;
- New Galloway – c. 14.3 km to the south; and
- St John's Town of Dalry (Dalry) – c. 10.7 km to the south

8.6.63. An initial filtering exercise has been undertaken of settlements within the detailed 20 km LVIA study area to determine which have the potential to experience significant effects and would therefore require detailed consideration in this chapter. The intention has been to ensure that the level of attention given is proportionate to the likelihood of significant effects arising. The findings of the initial filtering exercise are presented at **Table 8.4.1** of **Appendix 8.4**.

8.6.64. This filtering exercise identified that following settlements have the potential to experience significant effects:

- Carsphairn – c. 5.2 km to the west; and
- St John's Town of Dalry (Dalry) – c. 10.7 km to the south

Recreational and Long Distance Walking and Cycling Routes

8.6.65. There are a number of recreational and long distance walking and cycling routes within the 20 km study area of the Proposed Varied Development, which are listed within **Appendix 8.4**. Those within 10 km are illustrated at **Figure 8.19** overlaid with the blade tip ZTV.

8.6.66. The Southern Upland Way long distance route passes to the east of the site at a distance of c. 1.8 km to the nearest turbine at its closest point on the B729, west of Stroanpatrick. The route heads in a north-easterly direction, away from the site, from the B729, over Manquil Hill and Benbrack, passing through the Uplands to Sanquhar. In a southerly direction, the route passes over Culmark Hill and Marskaig Hill then on through to Dalry before heading west into the Galloway Hills.

8.6.67. In terms of long-distance cycling routes, National Cycle Network (NCN) 7 runs through the 20 km study area between Dumfries and Ayr via the Galloway Hills. As the majority of the route falls outwith ZTV coverage, NCN 7 is not considered further in this assessment.

8.6.68. A section of the National Byway cycle route runs through the landscape to the south-east of the site, passing along the minor road that leaves the B729 near Auchenstroan Craig, heading south-west to meet the B7000 at Barlaes Hill, via Fingland. As this route falls within the ZTV, further assessment will be undertaken.

Core Paths

- 8.6.69. An initial filtering exercise has been undertaken to determine which have the potential for significant effects to arise and would therefore require detailed consideration in this chapter. The intention has been to ensure that the level of attention given to each core path is proportionate to the likelihood of significant effects arising. The findings of the initial sieving exercise are presented at **Table 8.4.3** of **Appendix 8.4**.

Core paths within 5 km

- 8.6.70. The filtering exercise identified that users of the following routes have the potential to be significantly affected by the Proposed Varied Development:

- Core Path 23 - Dundough Hill;
- Core Path 164 - Bardennoch Trail;
- Core Path 182 - Cairnsmore of Carsphairn by Craig of Knockgray;
- Core Path 188 - Corlae; and
- Core Path 199 - Kendoon Youth Hostel to Butterhole Bridge.

Core paths between 5 to 10 km

- 8.6.71. The filtering exercise identified that users of the following routes have the potential to be significantly affected by the Proposed Varied Development:

- Core Path 16 - Garryhorn Rig; and
- Core Path 190 – Corserine.

Other Rights of Way

- 8.6.72. The Rights of Way identified in the ScotWays Catalogue of Rights of Way (CROW) within 5 km of the site, excluding those which coincide with Core Paths, are listed below and are illustrated at **Figure 8.18**:

- DS15, between Core Path 182 at Knockgray, west of the site and Moorbrock to the north, passing adjacent to the northern Site boundary;
- DS16, between Moorbrock, north of the site and Craigengillan to the east, on the north-eastern site boundary;
- DS17, east of the site at Stroanfreggan Cairn to Auchrae;
- DS19, south of the site, south of Marscalloch Hill;
- DS21, between Muirdrochwood south of the site to the summit of Marscalloch Hill on the south-western Site boundary;

- 8.6.73. All Rights of Way within 5 km of the Proposed Varied Development, where the potential for significant visual effects are likely to occur, are considered within this Chapter. Right of Way DS19 will not be considered as part of the assessment due to its location within

woodland, immediately south of Marscalloch Hill, the presence of which would curtail views towards the proposed turbines.

- 8.6.74. The Knockgray Trail, a promoted tourist route to the summit of Cairnsmore of Carsphairn from Carsphairn, largely falls outside of ZTV coverage and is therefore not assessed further. The summit of Cairnsmore of Carsphairn is considered within the viewpoint assessment at **Appendix 8.5**.

Road and Rail Network

- 8.6.75. The filtering exercise identified that users of the following routes have the potential to be significantly affected by the Proposed Varied Development:

- A712;
- A713;
- A762;
- B729;
- B7000; and
- B7075.

- 8.6.76. The LVIA also considers the effects upon appropriate 'C' roads, and other minor roads, where there is potential for significant visual effects.

Centres of Recreational and Tourism Activity

- 8.6.77. The area in which the site is located is used for recreational based activity, particularly as the route of the Southern Upland Way passes to the east and south-east of the site. There are also other trails and published walking routes within the locality, such as the Knockgray Trail which takes in the summit of Cairnsmore of Carsphairn. The local landscape also features numerous Core Paths promoted for walking. Further afield, the Rhinns of Kells offer challenging walking-based recreational activity.

- 8.6.78. In terms of other tourist activity, within the village of Carsphairn there is a heritage and craft centre, which also provides community based activities. Guided walks of local landscape features, such as the Woodhead Lead Mines, are promoted to locals and tourists alike. There are numerous heritage features/assets within the landscape local to the site with cairns, hillforts and circles which can be visited. The effects upon cultural heritage features are provided within **Chapter 11: Cultural Heritage** of this EIA Report. Views from Woodhead Mines are however considered within the LVIA in relation to **Viewpoint 20** at **Appendix 8.5**.

- 8.6.79. Beyond the locality of the site, the village of Moniaivie has a strong arts based culture, hosting festivals throughout the year. Moniaivie and its local environs are not located within ZTV coverage and thus are not considered relevant to the assessment.

8.6.80. The primary tourist attraction in the wider landscape is the Galloway Forest Park, in particular the Dark Sky Park focused at Clatteringshaws Visitor Centre, the Galloway Kite Trail which can be accessed from Clatteringshaws amongst a number of other places, and the forest drives as promoted by the Forestry Commission. With reference to the Proposed Varied Development Lit Turbine ZTV at **Figure 8.10**, much of the Galloway Dark Skies Core Area, including Glentool Forest, Carrick Forest and Kirroughtree Forest are located outwith theoretical visibility of the Proposed Varied Development, however there is a small area of theoretical visibility in the vicinity of Clatteringshaws Loch. There are also areas of theoretical visibility within the finger of the Galloway Dark Skies Park Boundary which extends to Dundough in the east. Effects on the Dark Sky Park are considered in **Section 8.8** of this Chapter.

8.6.81. The LVIA will assess likely visual effects upon receptors at tourist and recreational locations where considered relevant.

Assessment Viewpoints

8.6.82. The following table (**Table 8.5**) sets out the 22 viewpoints to be assessed. These viewpoints have been derived through desk based and on-site analysis, interpretation of ZTVs and through consultation with statutory consultees, namely NatureScot and the landscape officer at DGC.

8.6.83. The viewpoints are considered to be representative of the range of views towards the Proposed Varied Development. They are not intended to cover every single view but are representative of a range of distances from the site and receptor types (e.g. residents, walkers, road users).

8.6.84. **Table 8.5** identifies the 22 assessment viewpoints. The locations of these assessment viewpoints are illustrated on **Figure 8.19**.

8.6.85. **Appendix 8.5** provides a baseline description of the view from each assessment viewpoint followed by a detailed analysis and assessment of effects on the viewpoint (VP).

Table 8.5 – Assessment Viewpoints

Viewpoint no.	Location	OS Grid Ref	Approx. distance to nearest turbine	Receptor Type
1	Stroanfreggan Bridge (B729)	264537, 591795	2,238 m (T9)	Cyclist, Motorist (Resident and Leisure), Heritage Asset
2	Stroanfreggan Craig	263712, 592073	1,370 m (T9)	Walkers, Heritage Asset
3	Guttery Glen (B729)	265802, 591708	3,464 m (T9)	Walkers, Motorist (Resident and Leisure)

4 (N)	Smittons Bridge (B729)	263405, 591862	1,223 m (T9)	Walkers, Cyclist, Motorist (Resident and Leisure), Heritage Asset
5	Stroanfreggan Cairn	264008, 591424	1,967 m (T9)	Heritage Asset, Walkers
6	Head of Ken Valley	265861, 598017	3,916 m (T2)	Walkers, Motorist (Leisure)
7	Southern Upland Way at Culmark Hill	264468, 589685	3,574 m (T9)	Walkers
8	Minor road south of B729	268514, 590655	6,366 m (T9)	Cyclist, Walkers, Motorist (Resident and Leisure)
9	High Bridge of Ken	261971, 50162	2,042 m (T11)	Cyclist, Motorist (Resident and Leisure)
10	Southern Upland Way, Benbrack (Striding Arch)	268026, 597039	5,457 m (T2)	Walkers
11 (N)	B7000 at East Ardarroch	261845, 589289	2,913 m (T11)	Cyclist, Motorist (Resident and Leisure)
12	Dundeugh Hill	261845, 589289	2,619 m (T11)	Walkers
13	Beninner	260584, 597150	2,002 m (T1)	Walkers
14	Cairnsmore of Carsphairn	259460, 597979	3,398 m (T1)	Walkers
15	Craig of Knockgray	257042, 594380	4,735 m (T8)	Walkers
16	Alhang	264227, 601029	5,438 m (T1)	Walkers
17	Southern Upland Way at Waterside Hill	260837, 582074	10,181 m (T11)	Walkers
18	A713 at Stroangassel	260314, 586823	5,601 m (T11)	Cyclist, Motorist (Resident and Leisure)
19	A713 south of Carsphairn	257699, 592185	3,832 m (T10)	Cyclist, Motorist (Resident and Leisure)

20	Woodhead Mines	252893, 593746	8,665 m (T10)	Walkers
21	Corserine (Hennessey's Shelter)	250448, 587285	12,335 m (T10)	Walkers
22 (N)	Carsphairn War Memorial	256859, 593087	4,652 m (T10)	Heritage Asset, Local population

(N) – Night-time visualisation produced from this viewpoint in addition to daytime visualisation

8.7. Standard Mitigation

8.7.1. As discussed in best practice guidance for EIA, mitigation measures may include:

- avoidance of effects;
- reduction in magnitude of effects; and
- compensation for effects (which may include enhancements to offset any adverse effects).

8.7.2. The primary mitigation adopted in relation to the Proposed Varied Development is embedded within its design and relates to the consideration that was given to avoiding and minimising landscape and visual effects during the evolution of the Proposed Varied Development's layout. This is sometimes referred to as 'mitigation by design'. A detailed discussion of the design evolution and the iterative process underpinning it is provided in **Chapter 3** of this EIA Report. Design evolution is summarised below, in so far as landscape and visual matters have influenced the Proposed Varied Development.

8.7.3. Based on general good practice design principles (as set out in NatureScot / SNH guidelines) and an analysis of site-specific opportunities and constraints, the Proposed Varied Development's layout has evolved to take into consideration a number of landscape and visual constraints whilst maintaining an optimal development. This process resulted in:

- The reduction of the potential for night-time visibility from Galloway Forest Park and other distant receptors through a reduced lighting scheme; and
- The avoidance of inconsistent turbine spacing, outliers or excessive overlapping to minimise visual confusion and ensure a balanced / compact array from key views in the local landscape.

8.7.4. A design rationale has been adopted to avoid inconsistent turbine spacing, outliers or excessive overlapping turbines to minimise visual confusion and ensure a balanced / compact array from key views in the local landscape. The proposed turbines have been positioned to avoid areas of higher ground as far as practical ensuring that the Proposed Varied Development is perceived as being set down in the landscape as far as possible.

- 8.7.5. The above principles have been applied as a number of iterations to the design were made. Taking all other engineering and environmental constraints into account, the final layout of the turbines on site was specifically designed to achieve a balanced array of turbines when viewed from the surrounding landscape.
- 8.7.6. In considering the layout of other structures and ancillary features of the Proposed Varied Development, the design has sought to utilise some of the existing forestry access tracks. The substation, BESS, construction compound and borrow pits are located so as to minimise their influence on the surrounding area.
- 8.7.7. The turbines themselves would be painted an off-white colour with a low reflectivity semi-matt finish (or similar as agreed with the DGC). Such a finish is widely regarded to be the least intrusive in the landscape when seen against the sky in a host of weather conditions typically experienced within the UK.
- 8.7.8. Mitigation of visible turbine aviation lighting has been designed into the scheme by adopting a reduced visible aviation lighting scheme where only a limited number of turbines are lit (T1, T4, T5, T6, T7, and T11). Visibility meters would be installed on T1, T6 and T11 to measure the prevailing atmospheric conditions and visibility range. Should atmospheric conditions mean that visibility from the turbines within the site is greater than 5 km from the Proposed Varied Development, Civil Aviation Authority (CAA) policy permits lights to operate in a lower intensity mode, being a minimum of 10% of their capable illumination. Therefore, the 2,000 cd steady state lights would operate at 200 cd. However, if visibility is restricted to 5 km or less, the lights would operate at 2,000 cd.
- 8.7.9. Additionally, the inherent directional intensity of 2,000 cd lights can be used to reduce vertical downwards lighting impacts at elevations less than -1° degree vertical angle from the horizontal plane from the aviation light. By ensuring the lights installed comply with the ICAO (International Civil Aviation Organization) recommendations, it is possible to attenuate the vertical downwards light to a level that reduces the visual impact from receptors at ground levels below the lights. Implementing the ICAO recommendations, at -1 degrees the aviation lights should only be 1,125 cd and at -10 degrees should only be 75 cd, when visibility is greater 5 km.
- 8.7.10. These measures are proposed as embedded mitigation. They are likely to reduce the magnitude of visual effects particularly for distant receptors, however this feature would not remove visibility of aviation lighting completely for any nearby receptors.
- 8.7.11. In the long term, when the Proposed Varied Development is decommissioned, the turbines would be removed from site, and the hardstandings would be restored in accordance with a restoration plan to be approved by the local planning authority.

8.8. Potential Effects

Construction

- 8.8.1. Following a brief summary of the Proposed Varied Development, this section of the LVIA considers the effects of the Proposed Varied Development on landscape features, landscape character, and visual amenity. It considers the effects at three different stages

in the lifetime of the Proposed Varied Development, taking into account embedded mitigation described above:

- during construction of the Proposed Varied Development;
- during the operational lifetime of the Proposed Varied Development; and
- during decommissioning of the Proposed Varied Development after 40 years of operation.

8.8.2. Effects during the first and third of these phases are considered to be temporary and would have a short duration. Effects associated with the operational phase of the Proposed Varied Development are considered to be long term, reversible effects.

Effects on Existing Landscape Features

Effects during Construction of the Proposed Varied Development on Existing Landscape Features

8.8.3. Access to the Proposed Varied Development would be via an existing forest track into Smittons Forest off the B729 to the south-west of Smittons. The road currently serves articulated forestry lorries, but it is anticipated some further localised upgrading to the junction with the B729 would be required.

8.8.4. The primary access route to the turbines would partly follow existing forest roads within the site. There would be a requirement to construct further access tracks within the plantation to access each turbine which would result in the loss of coniferous trees. However, the trees are a commercial crop, and the trees would be felled regardless of the Proposed Varied Development.

8.8.5. The 11 proposed turbines and their associated foundations and crane pads, the temporary construction compound and all new access tracks would be located within areas that were commercial plantation. Parts of the plantation would be felled to allow for construction of the Proposed Varied Development, and replanted, where relevant, once the development is completed. Notch (keyhole) felling of the commercial crop, up to 85 m radius from the turbine tower, would be required in areas of existing and retained plantation in order to construct the various ground level components of the Proposed Varied Development. It is highly unlikely that any vegetative cover of biodiversity value would be removed during the construction process.

8.8.6. There are two proposed borrow pit search area within the site. The areas of search have been located to minimise visual effects upon the landscape. The borrow pits would result in the temporary disturbance of the ground, but this would take place within areas of the landscape that have already seen historical disturbance through quarrying and would be disturbed through the felling of plantation. Once the Proposed Varied Development has been constructed, the land would be reinstated, as appropriate. Overall, it is considered that there would be a low magnitude of effect upon landscape features as a result of the proposed borrow pits giving rise no greater than a **moderate/minor** effect which is **not significant**.

- 8.8.7. Therefore, it is considered that there would be no significant effects on existing landscape features during the construction phase.

Effects on Landscape Character

Sensitivity of Landscape Character to Wind Energy Development

- 8.8.8. The first stage in assessing the effects of the Proposed Varied Development on landscape character is to evaluate the sensitivity of the receiving landscape to the type of change proposed. As indicated within GLVIA3, sensitivity of landscape character should be determined through a consideration of both susceptibility to change and any values associated with the landscape.
- 8.8.9. A number of documents assist in this process, including wind energy capacity studies for Dumfries and Galloway and East Ayrshire Councils.
- 8.8.10. The sensitivity judgements provided in this section of the Chapter consider the presence of other operational windfarms and those under construction (where relevant) but does not take account of other consented (but as yet unbuilt) wind farms or those in planning/scoping stage.
- 8.8.11. It should be noted that the sensitivities given within the document relate to the sensitivity to wind energy development located within the character type/unit. However, for the purposes of this assessment the overall sensitivities have been adopted to provide the general sensitivity to wind energy, whether located within or out with the character type.
- 8.8.12. The baseline for the site is assumed to be undeveloped and does not include the Consented Development. However, the principle of a wind farm development has been established within the site with the Consented Development.

Dumfries and Galloway Assessment Units

- 8.8.13. In considering landscape susceptibility and landscape values within Dumfries and Galloway it is helpful to draw upon the analysis contained within the DGWLSS, which forms Appendix C of the Local Development Plan 2 Supplementary Guidance, *Wind Energy Development: Development Management Considerations* (2017, revised 2020). This guidance considers turbines up to 250 m to blade tip.
- 8.8.14. For each Assessment Unit (AU) considered within the DGWLSS, a discussion is provided regarding analysis of landscape sensitivity. The DGWLSS considers the physical and perceptual characteristics of each AU and assesses susceptibility to wind energy development of various typologies (the Proposed Varied Development falls into the very large turbine typology 150-250 m). The landscape value for each AU is also assessed. The susceptibility and value ratings of each characteristic is combined to provide an overall judgement about landscape sensitivity (broadly the same concept as landscape susceptibility as defined in GLVIA3).
- 8.8.15. It should also be noted that these documents may be dated to some degree by wind farm developments which have been either consented or constructed in the intervening period.

It is therefore necessary to evaluate whether changes to the baseline (in terms of recently consented or constructed wind farms) have altered sensitivity as reported in these studies.

- 8.8.16. Key sensitivities and capacity judgements from the DGWLSS are identified where relevant but updated where necessary with reference to recently constructed/consented wind farms if applicable.

Assessment Unit 22 – Southern Uplands with Forest

- 8.8.17. The DGWLSS considers the sensitivities of AU 22 – Southern Uplands with Forest, within which all 11 of the proposed turbines are located. The discussion focuses on four areas of the character type, the site falling within the Ken unit.
- 8.8.18. The DGWLSS recognises that wind farms are present in the landscape stating, “*Operational wind farm development is a key feature within the Carsphairn, Ken and Ewe Hill areas of this Assessment Unit*”. The study also acknowledges the potential cumulative effects within the Ken and Carsphairn areas with operational and consented wind farms in these areas and adjacent landscapes.
- 8.8.19. The landscape appraisal in relation to the very large turbine typology (150 m-250 m) discusses a number of topics such including scale, landform, landcover, built environment, landscape context, perceptual qualities, views and visibility and landscape value and sets out a susceptibility or value rating for each. The LVIA does not repeat the content of the character appraisal; however, the sensitivity ratings for each landscape character criteria are replicated for reference below.

Table 8.6 – Assessment Unit 22 – Ken LCA – Landscape Sensitivity

Topics	DGWLSS Susceptibility / Value Rating for Very Large Typology Turbines (150-250 m)
Scale	Medium
Landform	Medium - Low
Landcover	Medium - Low
Built Environment	High - medium
Landscape Context	High - medium
Perceptual Qualities	Low
Views and Visibility	High - medium

Landscape Value	Medium – Low
SENSITIVITY	High - medium

8.8.20. In relation to landscape value, it should be noted that DGWLSS states that:

“The remaining undeveloped parts of the Ken and Carsphairn areas lie closer to the Galloway Hills RSA Operational and consented wind energy development already influences these areas”.

8.8.21. The guidance for development within AU 22 states that:

“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”.

8.8.22. Within the DGWLSS for AU 22 Southern Uplands with Forest, the sensitivity to very large turbines is rated as high-medium. This assessment also considers the overall sensitivity to be **high-medium**.

Assessment Unit 4 – Narrow Valleys

8.8.23. The Proposed Varied Development is also located, in part, within the Ken area of AU 4 – Narrow Valleys.

8.8.24. The DGWLSS – Smaller turbines planning guidance states in relation to sensitivity and guidance for AU 4 that:

*“These valleys are highly sensitive to most sizes of wind turbine due to their narrow, confined landform and small scale and diverse landcover pattern. The setting of small settlements and cultural heritage features comprise key sensitivities which could be significantly affected by larger wind turbines. NSA and RSA designations cover many parts of this landscape and increase the value associated with these valleys. Sensitivity would be **High** to turbines >50m”.*

8.8.25. It is noted in the key constraints of AU 4 that:

“Cumulative effects with operational and consented wind farms located in nearby upland areas and visible on the skyline of these valleys – the Water of Luce, Eskdale, Ken and Urr valleys are most affected by wind farms sited in other landscapes”.

8.8.26. The overall sensitivity of AU 4 Narrow Valleys to very large turbines is considered within this assessment to be **high**.

Assessment Unit 9 – Upper Dale

- 8.8.27. The Upper Glenkens area of the Upper Dale AU is described as “*a broad valley, contained by high hills, including the distinctive hill of Cairnsmore of Carsphairn which lies in the Southern Uplands (21) Assessment Unit*”. It is recognised that the valley floor is well settled and linked by major roads, whilst the valley slopes are sparsely settled.
- 8.8.28. In terms of cumulative matters, it is recognised within the DGWLSS that the operational Torrs Hill and Blackcraig Wind Farms located within the adjacent Foothills with Forest (20) and Benbrack Wind Farm located within the Southern Upland with Forest (22) “*are visible from the Upper Glenkens but do not generally have a strong influence on character and views*”. However, it also states that “*The consented Shepherd’s Rig wind farm will however be highly visible from this Assessment Unit because of its open location at the foot of the eye-catching landmark hill of Cairnsmore of Carsphairn seen at the head of the Upper Glenkens*”.
- 8.8.29. For Assessment Unit 9 Upper Dale, Glenkens area, the overall sensitivity to very large turbines is considered in both the DGWLSS and in this assessment to be **high**.

Table 8.7 – Assessment Unit 9 – Upper Glenkens - Landscape Sensitivity

Topics	DGWLSS Susceptibility / Value Rating for Very Large Typology Turbines (150-250m)
Scale	High
Landform	High – medium
Landcover	High – medium
Built Environment	High
Landscape Context	High
Perceptual Qualities	Medium
Views and Visibility	High
Landscape Value	High – medium
SENSITIVITY	High

Assessment Unit 8 – Flooded Valley

- 8.8.30. The Ken Valley, located to the south of the site, is characterised as the Flooded Valley type. This is the only occurrence of the character type within Dumfries and Galloway.
- 8.8.31. The DGWLSS – Smaller turbines planning guidance states in relation to sensitivity and guidance for AU 8 that:
- “The small scale of this landform and loch, and the diverse pattern of the water body, vegetation cover and presence of small, and often distinctive, buildings result in a **High** sensitivity to turbines >50m”.*
- 8.8.32. It is noted in the cumulative issues relating to AU 8 that:
- “Cumulative effects are most likely to comprise increased visual clutter and the sense of turbines visually detracting from the complexity of the landform and the focus of Loch Ken where they would become visually dominant”.*
- 8.8.33. The study acknowledges that much of the character type is covered by an RSA designation, and as such, the sensitivity of landscape values is regarded as high-medium for all turbines 50-80 m to blade tip.
- 8.8.34. The overall sensitivity of AU 8 Flooded Valley to very large turbines is considered within this assessment to be **high**.

Assessment Unit 20 – Foothills with Forest

- 8.8.35. There are two landscape character areas of the Forest with Foothills Assessment Unit that concern this LVIA, namely Rhinns of Kells and Stroan. Each of the LCAs form the valleys side to the Upper Dale (Valley) and Flooded Valley character types associated with the Water of Ken and Lock Ken. Each of the LCAs have undergone individual sensitivity appraisal as set out at **Tables 8.8 and 8.9** below.
- 8.8.36. The DGWLSS states in relation to sensitivity and guidance for the Rhinns of Kells area of AU 20 that:
- “Although these forested foothills have a medium to large scale and simple land cover which could relate to larger wind turbines, the proximity of this landscape to the dramatic ridge of the Rhinns of Kells and effects on the special qualities of the Galloway Hills RSA increase sensitivity”.*
- 8.8.37. In relation to cumulative issues the presence of other turbines in the wider landscape is acknowledged, with the operational Torrs Hill wind turbines located within this LCA. The operational Windy Standard and Wether Hill are noted at a distance of 12 km. The visibility of the operational Blackcraig Wind Farm, and the potential visibility of the consented Fell, Margree, Troston Loch and Glenshimmeroch Wind Farms is also discussed.

- 8.8.38. The overall sensitivity to very large turbines in this assessment reflects the DGWLSS as **high**.

Table 8.8 – Assessment Unit 20 – Rhinns of Kells Area - Landscape Sensitivity

Topics	DGWLSS Susceptibility / Value Rating for Very Large Typology Turbines (150- 250m)
Scale	High - medium
Landform	Medium
Landcover	Medium
Built Environment	Medium
Landscape Context	High
Perceptual Qualities	High
Views and Visibility	High
Landscape Value	High - medium
SENSITIVITY	High

- 8.8.39. The Stroan unit of the Foothills with Forest is described as *an undulating area of upland plateau of generally smoothly rounded hills, punctuated by occasional, higher and more well-defined ridges and hills*. The Blackcraig ridge divides the unit into two distinct northern and southern sections. The character unit is generally forested with areas of moorland on the upper slopes and pasture in the lower reaches. Overall, it is a medium to large scale landscape with simple land cover and sparse population.
- 8.8.40. In terms of cumulative matters, it is recognised within the DGWLSS that:
- 'the operational Blackcraig wind farm is located in this landscape area as are the consented Fell, Magree, Trostan Loch and Glenshimmeroch windfarms. The operational Wether Hill wind farm is located approximately 4km to the north-east of this landscape area within the adjacent Ken area of the Southern Uplands with Forest (22)'.*
- 8.8.41. Within the DGWLSS for Assessment Unit 20 Forest with Foothills, Stroan area, the overall sensitivity to very large turbines is assessed as high - medium. This assessment also considers the overall sensitivity of this LCT unit to be **high-medium**.

Table 8.9 – Assessment Unit 20 – Stroan Unit - Landscape Sensitivity

Topics	DGWLSS Susceptibility / Value for to Very Large Typology Turbines (150- 250m)
Scale	High - medium
Landform	Medium
Landcover	Medium
Built Environment	High - medium
Landscape Context	High
Perceptual Qualities	Medium - low
Views and Visibility	High
Landscape Value	Medium - low
SENSITIVITY	High - medium

Assessment Unit 21 – Southern Uplands

- 8.8.42. The Carsphairn area of the Southern Uplands Assessment Unit is located to the immediate west of the site. This area is included within the 'Distinctive Rugged Hills' areas described within the DGWLSS as:

'high hills with an often dramatic sculptural landform. These uplands have an expansive scale and a distinctive landform, where hills are pronounced and often form steep, rugged edges to adjacent dales and upland glens. These uplands have a simple landcover of grass and heather moorland and their openness and absence of built development and large-scale forestry provides a valuable contrast with nearby forested uplands'.

- 8.8.43. In terms of existing wind farms, the DGWLSS acknowledges the presence of Windy Rig wind farm and some of the Windy Standard turbines, which extend into the 'Distinctive Rugged Hills' Carsphairn area.
- 8.8.44. In terms of cumulative matters, it is stated within the DGWLSS that:

'Any additional wind farm development in the Carsphairn area and in the adjacent Southern Uplands with Forest (22) would have significant cumulative effects on the landmark hill of Cairnsmore of Carsphairn'.

- 8.8.45. Within the DGWLSS the overall sensitivity to very large typology turbines is assessed as high for the 'Distinctive Rugged Hills' areas of Assessment Unit 21. The overall sensitivity is also considered to be **high** within this assessment.

Table 8.10 – Assessment Unit 21 –Rugged Hills areas - Landscape Sensitivity

Topics	DGWLSS Susceptibility / Value for to Very Large Typology Turbines (150- 250m)
Scale	High - medium
Landform	High
Landcover	Medium
Built Environment	High
Landscape Context	High
Perceptual Qualities	High
Views and Visibility	High
Landscape Value	High-medium
SENSITIVITY	High

Assessment Unit 24 – Rugged Granite Uplands

- 8.8.46. This Assessment Unit includes two landscape areas, namely Merrick, to the west, and Rhinns of Kells to the east. There is a greater degree of theoretical visibility within the Rhinns of Kells area, which lies closer to the Proposed Varied Development, at approx. 4.7 km as opposed to approx. 15.7 km respectively.
- 8.8.47. The DGWLSS states that *'The dramatic craggy mountainous scenery of the Rugged Granite Uplands is commonly described as being 'Highland' in character and contrasts with the smoother, more rounded hills of the Southern Uplands.'* and that *'A strong sense of remoteness and naturalness is associated with these uplands and they are very popular for recreation'.*

- 8.8.48. In relation to cumulative issues the DGWLSS states that there are no wind farms within this Assessment Unit. However, it states that *'effects on setting and views and on the experience of wildness could [] occur if additional wind farm development was sited closer to the Rhinns of Kells area'*.
- 8.8.49. For Assessment Unit 24 Rugged Granite Uplands, the DGWLSS considers the overall sensitivity to very large turbines to be high. This assessment also considers the overall sensitivity of this Assessment Unit to be **high**.

Table 8.11 – Assessment Unit 24 – Rhinns of Kells Landscape Sensitivity

Topics	DGWLSS Susceptibility / Value for Very Large Typology Turbines (150- 250m)
Scale	Medium
Landform	High
Landcover and Landmark Features	High – medium
Built Environment	Medium - low
Landscape Context	High
Perceptual Qualities	High
Views and Visibility	High
Landscape Value	High
SENSITIVITY	High

Effects on Landscape Character during Construction

- 8.8.50. The Proposed Varied Development is located within Assessment Units 22 – Southern Uplands with Forest (11 turbines, substation and BESS compound and ancillary development), 9 – Upper Dale (site entrance, access and temporary construction compound), and 4 - Narrow Valleys (part of access track). It is recognised that there would be some direct temporary effects during construction upon landscape areas within these Assessment Unit. The effects resulting from construction activities would be localised and relatively incidental when viewed in the context of the turbines being erected. The existing surrounding commercial forest would also screen or interrupt the visual presence of the ground level elements of the Proposed Varied Development.

- 8.8.51. The effects on landscape character would increase incrementally as construction progresses and as more turbines, foundations and hardstandings are constructed.
- 8.8.52. As previously discussed, there would be no effect on any existing landscape features of note. Only the existing commercial tree crop would be affected, which is already temporal in nature.
- 8.8.53. There would be earth movements associated with the construction of foundations, hardstandings, borrow working search areas, and other ancillary features of the Proposed Varied Development. Such activities would all result in some soil disturbance, but this would occur largely within the existing commercial forest. The impact on landscape character would therefore arise from the temporary stockpiling of soil, exposure of relatively small areas of bare earth and the movement of construction vehicles that occur outside of the mature plantation that covers much of the site.
- 8.8.54. The temporary construction compound is located within Assessment Unit 9 - Upper Dale alongside the site entrance. The compound area would be located within an existing small clearing within the plantation, just off the B729. The clearing is not currently perceptible from the road and therefore the compound is unlikely to be noticeable in the landscape.
- 8.8.55. It is noted that while the site entrance and main access track is situated within AU 9, the route is an existing forest track that serves articulated lorries and other forestry vehicles; therefore, there would be no significant direct effects to this landscape character type.
- 8.8.56. Cranes would be involved in the erection of the turbines, but these would be on-site for a relatively short period during the overall construction phase. The cranes would form noticeable vertical features in the landscape for a short period of time but would be relatively incidental to the turbines being erected.
- 8.8.57. Overall, it is considered that there would be a low to medium magnitude of change for the reasons set out above upon the small tracts of Assessment Units 4 and 9 within which the Proposed Varied Development is located. This would result in no greater than a **moderate/minor** to **moderate** temporary effect that would be not significant.
- 8.8.58. With regards to Assessment Unit 22 there would be a localised high to medium magnitude of change in landscape character as a result of the advanced felling of plantation along the western edge of the site, and within central areas to allow for infrastructure. Due to the absence of the trees in the landscape, the construction activities would be perceptible to a relatively high degree at close proximity to the site. The temporary and located effect upon the Ken character type would be **major/moderate** and significant.
- 8.8.59. In terms of indirect effects upon landscape character as a result of construction activities, there would be a localised high to medium magnitude of change upon the Carsphairn area of Assessment Unit 22, which lies immediately west of the site. Due to the felling of plantation along the western site boundary, the construction activities would be highly visible from the eastern portion of the character unit giving rise to a **major/moderate** localised and temporary effect which is significant. The construction effects would be temporary in nature and are unlikely to all occur at the same time during the construction phase.

- 8.8.60. The level of temporary effects on landscape character resulting from the construction of the Proposed Varied Development would be no greater than those identified for the Consented Development, and direct effects upon AU 4 would be lower as no turbines are proposed for this AU, unlike the Consented Development. As illustrated in **Figures 8.16** there is very little difference between the influence of Proposed Varied Development and the Consented Development on the AUs in the immediate vicinity of the site.

Effects on Landscape Character during Operation

- 8.8.61. The effects on landscape character are discussed below in relation to each landscape character type or unit as identified in **Table 8.4**. The magnitude of change on landscape character as a result of the Proposed Varied Development has been determined using professional judgement based on the following factors:
- The percentage of the character type from where the site would theoretically and actually be visible in comparison with the Consented Development;
 - The distance between the character type and the site;
 - The likely prominence of the turbines from the character type taking account of existing locally dominant characteristics in the character type; and
 - The degree to which the physical and perceptual characteristics of the landscape would change as a result of the Proposed Varied Development in comparison with the Consented Development.
- 8.8.62. To reiterate a point made earlier in the LVIA, GLVIA3 requires that the baseline against which the effects are considered in this part of the Chapter to include other wind farms which are operational or under construction but not those which are consented (but not as yet built) and those in planning. Therefore, in the discussion below it is important to recognise that Afton, Benbrack, Blackcraig Hill, Enoch Hill, Hare Hill and Extension, Pencloe, Sanquhar II, South Kyle, Torrs, Whether Hill, Whiteside Hill, Wind Rig and Windy Standard I, II and III (Brockloch Rig 1 and 2) Wind Farms are considered as part of the baseline. All wind farms awaiting construction, including Cloud Hill, Enoch Hill 2, Cornharrow, Divot Hill, Fell, Glenshimmeroch, Lorg, Manquhill, Margree, Troston Loch and Windy Standard Repowering and Extension are addressed in the cumulative impact assessment along with those awaiting a planning decision.
- 8.8.63. To aid the consideration of the differing effects on landscape character, a comparative ZTV has been overlaid on the character types within 20 km of the site. This is shown at **Figure 8.16**.
- 8.8.64. As with the Consented Development, beyond a relatively short distance from the site, the ground level components of the Proposed Varied Development would be less perceptible in the landscape than the turbines. The substation and BESS compound are likely to be perceptible from the landscape to the west due to the gap in this part of the plantation from the outset of the development. A clear area would remain around the BESS for fire safety reasons. The access tracks and other ground level components would also be perceptible, particularly from higher ground, but their presence would gradually decrease on establishment of restocked woodland/plantation. Overall, impacts on landscape

character, as experienced in the wider landscape, arise largely in relation to the introduction of the proposed turbines into the landscape and the resultant impact on the perceptual experience of landscape character.

- 8.8.65. It is noted that in general, the magnitude of change in landscape character would incrementally decrease with distance from the turbines as they become gradually less prominent. Some of the Assessment Units considered in this assessment extend from relatively close proximity to the Proposed Varied Development out to beyond 10 km from the site. This includes the character type in which the proposed turbines are located, which extends to beyond 15 km from the site itself. The same character type also occurs elsewhere in the 20 km detailed study area, from 5 km distance to the north-west. Inevitably, the effect on landscape character in the tracts of landscape types nearest to the site would be more greatly affected than the same landscape character type at a greater distance from the site. As a consequence, it has been necessary to describe the effects on landscape character for some Assessment Units in bands of distance from the site.
- 8.8.66. The Proposed Varied Development is largely located within Assessment Unit 22 – Southern Uplands with Forest, with part of the access track located within Assessment Unit 4 – Narrow Valleys, and the site entrance, access track and construction compound located within Assessment Unit 9 – Upper Dale, and thus the Proposed Varied Development would have a direct effect on the character of these character types. Effects on surrounding character types are considered to be indirect.
- 8.8.67. A summary of the predicted effects on landscape character resulting from the Proposed Varied Development in comparison with those predicted for the Consented Development is presented in **Table 8.12**. Note that for all character types stated within **Table 8.12**, the duration of the Proposed Varied Development is considered to be long-term and reversible.

Dumfries and Galloway Assessment Units

22 – Southern Uplands with Forest – Ken

- 8.8.68. The Proposed Varied Development comprises 11 turbines, all of which are located within the Ken area of Assessment Unit 22. The Ken area is relatively large in size, extending from the B729 at Smittons and Marscalloch Hill to the head of the Ken Valley, located just over 5 km north of the site, and beyond towards the A76 east of New Cumnock, at over 15 km to the north of the site. The Ken area also extends to the east of the site at distances of 12-13 km. The Ken area forms the valley slopes of the Water of Ken, which bisects the landscape area immediately east and north-east of the site as well as the upland landscape of the northern reaches of Dumfries and Galloway.
- 8.8.69. Analysis of **Figure 8.16**, which shows the comparative ZTV to blade tip overlaid on top of the character type boundaries, indicates that there would be theoretical visibility of the proposed turbines from a large proportion of the southern reaches of the landscape area, up to a distance of 6-7 km. However, visibility is influenced by topography, with areas of no visibility present within localised valleys and depressions in the undulating landscape. Beyond this distance, visibility becomes localised to the highest ground within the landscape area and the upper reaches of the valley north of the Water of Ken. There is

little difference between the theoretical visibility of the Consented Development and the Proposed Varied Development within the Ken area of this Assessment Unit.

- 8.8.70. The ground level components of the Proposed Varied Development within this character area (i.e. access tracks and crane hard standing areas) would be visible, particularly from higher ground within the irregular landform, and mainly from upper slopes on the eastern side of the Water of Ken, where views towards the site are generally open outwith forested areas.
- 8.8.71. However, once temporary construction works have taken place and are no longer present on site, the remaining access tracks would not be out of character with the network of existing forest tracks that are prevalent in the area. It should be noted that some of the proposed access tracks utilise existing tracks in the landscape to minimise disturbance to landscape features and minimise adverse effects on the landscape. As a consequence, there would be slight adverse effects on the pattern of tracks across the landscape area.
- 8.8.72. The crane hardstanding areas located outwith the existing coniferous forest would be prominent in their immediate environs and from the elevated parts of this landscape within close proximity to the site. However, the land cover across the local landscape would continue to be dominated by the current underlying coniferous forest, which would heavily filter or screen the presence of the hardstandings where turbines are located within the forest. On the eastern fringes of the site, the young forest planting will continue to grow and mature, and any hardstanding areas visible at this eastern edge would increasingly become less perceptible in the landscape. The young forest on the eastern edge and in the centre of the site would serve to screen views of the western side of the Site on establishment and maturation, particularly as the western areas of forest would be felled to allow for the construction of the Proposed Varied Development. Overall, the presence of the hardstandings in the landscape would give rise to no more than a **moderate/minor** change in the landscape.
- 8.8.73. The substation and BESS compound and the two borrow pits would be perceptible features in the landscape, largely from the opposing side of the Water of Ken valley, from the immediate west of the site, and from higher ground to the north and north-west. However, a proportion of the Proposed Varied Development is located within, or beyond, the existing central forested area of the site which would serve to filter or screen views of ground level components from the wider landscape. Where the forest has been felled and replanted on the eastern side of the site, and within the central area, this young forest will mature, and it would go on to provide filtering or screening to views of any ground level components of the Proposed Varied Development located on the eastern fringes of the site, thus becoming much less perceptible over time. The ground disturbance created by the borrow pits would not appear completely out of character in the landscape. The recently felled forestry areas within the site appear untidy and rather unattractive with ground disturbance perceivable at close proximity.
- 8.8.74. It has already been established that there would be no significant effects on existing landscape features. Therefore, the effects on landscape character within the Ken area of 22 – Southern Upland with Forest arises principally in relation to the introduction of the proposed turbines (located within the landscape area).

- 8.8.75. The turbines have been designed to lie at the same level as the existing ground levels across the site, albeit with some very localised ground levelling to accommodate the hardstandings and crane pads. In this regard, the wind turbines would not largely affect the landform or topography of the surrounding landscape to any significant perceptible degree. The profile of the hill formations of the site and its associated forest would prevail.
- 8.8.76. The structural form of the proposed turbines is such that a degree of visual permeability would be maintained across the landscape and hence the sense of openness experienced within the character area, and its intervisibility with other Assessment Units, would not be greatly altered by the introduction of the turbines. The proposed turbines are relatively slender structures that would not obstruct the longer distance views when experienced from any direction. Whilst undeniably tall structures, the underlying upland landscape is of medium to large scale and relatively simple in terms of land cover and pattern. Within this context, the proposed turbines would not diminish the overall scale of the local landscape although in the immediate vicinity of the turbines the presence of the turbines would be clearly dominant. It is therefore recognised that the introduction of the turbines and the movement of the blades when operating would be highly prominent becoming a characterising influence within the character area.
- 8.8.77. It should be noted that the Proposed Varied Development would be located within the same landscape area as the existing Wether Hill Wind Farm, part of the Sanquhar II Wind Farm and the consented Manquhill and Lorg Wind Farms. The existing Windy Standard Wind Farms, Benbrack and part of South Kyle Wind Farm are also located within the same character type. Wind farms are therefore already a characteristic of the landscape and thus the Proposed Varied Development would not be introducing new elements into the local landscape, and they would not appear in part of the landscape that does not currently feature turbines.
- 8.8.78. The Proposed Varied Development would be perceived as a separate wind farm to existing operational wind farms, due to the separation distances between the schemes.
- 8.8.79. Taking into consideration the above appraisal of the landscape area, with reference to the comparative ZTV at **Figure 8.16**, the Proposed Varied Development would have a **very high magnitude of change** on landscape character when considered against the established baseline up to distance of c. 1 km. This magnitude extends to approximately the same distance as was identified for the Consented Development.
- 8.8.80. From 1 km to c. 3.5 km, there would be a **high magnitude of change** perceived in the landscape, outwith forested areas of the character unit, as illustrated by the visualisation at **Figure 8.54** at Viewpoint 1 - Stroanfreggan Bridge. This magnitude extends slightly further than was identified for the Consented Development by c. 0.5 km.
- 8.8.81. In distances between 3-4 km to the east and south-east of the Proposed Varied Development, the prominence of the turbines would reduce as they would be seen the context of an increasing panorama of the local landscape, as seen in relation to Viewpoint 3 at **Figure 8.56**. The **magnitude of change** at this distance is considered to be **medium to high**. This magnitude is slightly higher than was identified for the Consented Development within the same distance. In distances between 4 – 5 km to the east and

south-east the magnitude would reduce to **medium**, as was predicted for the Consented Development.

- 8.8.82. Beyond 5 km to the east of the site, the existing Wether Hill Wind Farm becomes the more prominent feature of the landscape. Also, beyond approximately 6-7 km distance to the east, theoretical visibility of the Proposed Varied Development becomes intermittent due to the variation in topography. Large areas of coniferous forest would also curtail views towards the site from lower slopes within the landscape area. There would be no greater than a **low to medium magnitude of change** within this part of the landscape. This magnitude extends to the same distance as was identified for the Consented Development.
- 8.8.83. In a north-easterly direction from the site, the magnitude of change upon the Ken landscape area within 3.5 – 4 km of the Proposed Varied Development would be **high** in locations where coniferous forest is absent. Beyond approximately 4 km to the north-east of the site large areas of coniferous forest to the immediate north of the site and beyond the Water of Ken valley to the north-east would limit the extent that the Proposed Varied Development is seen in the landscape, as illustrated by Viewpoint 10 at **Figure 8.63**. The landform also greatly influences the extent of theoretical visibility, as the presence of Mid Hill of Glenhead generally terminates views from further north of this hill formation, although it is recognised that there are a few limited higher peaks allowing visibility, such as Alhang (Viewpoint 16). Overall, the magnitude of change would reduce to **medium** up to approximately 5 km, as was predicted for the Consented Development.
- 8.8.84. At greater distance from the site the magnitude of change would reduce further. The visualisation at **Figure 8.69** at Viewpoint 16 - Alhang depicts the open nature of the landscape from the higher peaks within the landscape area. Although the Proposed Varied Development is clearly visible in the middle ground, it does not dominate the landscape, nor is it considered highly prominent. It is set down in the landscape, within an area of simple forestry. The turbines do not alter the sense of scale or overall pattern of the lower lying ground. The Proposed Varied Development are also seen in the context of existing wind turbines at Windy Rig, Wether Hill and Sanquhar II and thus do not introduce new features into the landscape. There would be no greater than a **low to medium** magnitude of change upon landscape beyond 6 – 7 km from the site in a northerly and north-easterly direction. This magnitude extends to the same distance as was predicted for the Consented Development.
- 8.8.85. In summary, significant effects upon the Ken area of the Southern Upland with Forest character type would occur within c. 5 km of the Proposed Varied Development. There would be a **major** effect upon landscape character within very close proximity of the proposed turbines up to a distance 1 km, a **major/moderate** effect on distances of 1-3.5 km to the east and 1-4 km to the north-east, and a **moderate** effect between 3.5–5 km to the east and between 4-5 km to the north-east, all of which would be significant, long term but non-permanent. Beyond 5 km distance, there would be a **moderate** effect which is **not significant**.
- 8.8.86. As illustrated in the comparative ZTV at **Figure 8.16**, the extent of theoretical visibility and the extent of significant effects resulting from the Proposed Varied Development would be no greater than those identified for the Consented Development. However, the level of

effects would be greater due to the increased turbine height and consequent increased sensitivity of the landscape to this typology.

4 – Narrow Valleys – Ken

- 8.8.87. Although part of the site area is located within the Ken area of the Narrow Valleys Assessment Unit, none of the Proposed Varied Development is located within this area. This differs from the Consented Development, in which one proposed turbine was located within this landscape area.
- 8.8.88. The Ken area is a relatively slender tract of land that follows the Water of Ken valley floor. The landscape area broadens as the valley widens as it follows the watercourse south towards the site from its head located over 5 km to the north-northwest of the site. There is a sense of enclosure at the head of the valley, where the steep valley slopes coupled with the presence of extensive coniferous forest provide a sense of containment. As the watercourse flows south towards the site, there becomes an increasing sense of openness as the valley floor broadens, the valley sides become set back from the watercourse, and there is an absence of coniferous forest due to felling. The lower valley slopes are also increasingly grazed, particularly the south-eastern tract of the landscape area.
- 8.8.89. Analysis of the ZTV to blade tip at **Figure 8.16** indicates that there would be theoretical visibility of the proposed turbines from almost all of the landscape area, with only the northernmost reaches of the landscape area falling outside of ZTV coverage due to the presence of intervening landform.
- 8.8.90. On completion of the temporary construction works, the remaining access tracks would not appear out of character with the existing forest tracks that are seen from the river valley. The proposed access tracks utilise existing tracks in the landscape where feasible to minimise disturbance to the underlying landscape and minimise adverse effects on character.
- 8.8.91. During the operation of the Proposed Varied Development, the land cover across the area would continue to be dominated by the current underlying coniferous forest, which would heavily filter or screen the presence of the hardstandings where turbines are located within the forest. On the eastern fringes of the site, the young forest planting will continue to grow and mature, and any hardstanding areas visible at this eastern edge would increasingly become less perceptible in the landscape. The young forest on the eastern edge of the site would serve to screen views of the western side of the site on establishment and maturation, should the central and western areas of forest be felled during the lifetime of the Proposed Varied Development. When viewed from anywhere except directly adjacent to the hardstanding, there would be no more than a slight change to no effect to land cover or pattern in the landscape.
- 8.8.92. The substation and BESS compound and the two borrow pits would not be readily perceptible features in the landscape due their relative locations beyond intervening plantation. Where the forest has been felled and replanted on the eastern side of the site, this young forest will mature, and it would go on to provide filtering or screening to views

of any ground level components of the Proposed Varied Development located on the eastern fringes of the site, thus becoming much less perceptible over time.

- 8.8.93. It has been established that there would be no significant effects on existing landscape features. Therefore, the effects on landscape character within the Ken area of 4 – Narrow Valleys arises largely in relation to the introduction of the proposed turbines (both those located within the landscape area and those directly adjacent within Assessment Unit 22).
- 8.8.94. The proposed turbines would be located outside of the landscape area on higher ground than the river valley of this landscape area. As a consequence, the turbines would be very prominent features in the landscape when seen from relatively close proximity. Although the turbines would appear as undeniably tall structures in the landscape, they would appear set back from the river valley associated with the forested slopes that form part of the backdrop to the lower reaches of the valley.
- 8.8.95. The underlying landscape within the site boundary is characterised by the recently felled and replanted forest. The scale is medium, and the land is simple in terms of cover and pattern. The river valley in which the site is located adjacent to is much broader in nature than further north within the landscape area and the valley slopes sweep up to form a bowl like valley bottom rather than the 'V' shaped valley further north within the area. Within this context the proposed turbines would not diminish the sense of overall scale of the river valley, although it is acknowledged within close proximity of the turbines, their presence would be dominant.
- 8.8.96. Taking into consideration the above appraisal of the landscape area, the Proposed Varied Development would have a **very high magnitude of change** on landscape character up to distance of c. 1 km from the eastern site boundary. The greatest change in character would occur along the immediate eastern site boundary in the vicinity of Smittons Bridge, where the forest has been recently felled. This magnitude extends to the same distance as was identified for the Consented Development.
- 8.8.97. It is recognised that the introduction of the turbines and the movement of the blades when in operation would become a characterising influence within the southern portion of the landscape area, as illustrated by Viewpoints 2 – Stroanfreggan Craig (**Figure 8.55**), 4 – Smittons Bridge (**Figure 8.57**) and 5 – Stroanfreggan Cairn (**Figure 8.58**). However, the presence of the existing coniferous forest within the site, together with the mixed woodland planting on the western bank of the Water of Ken, would assist in reducing the overall visibility of the turbine towers, particularly those within the western part of the site. The visualisation at Viewpoint 4 - Smittons Bridge (**Figure 8.57**) shows the recently felled area of forest at the south-eastern edge of the site, which was still standing at the time the Consented Development was assessed. Once this area has been replanted, the influence of the new trees on the landscape will once again increase.
- 8.8.98. The Proposed Varied Development would form a highly perceptible feature in the landscape to the south of the enclosed river valley when travelling in a generally southerly direction. The visualisation at Viewpoint 5 (**Figure 8.58**) shows that although visible, the turbines would not greatly alter the scale of the valley, and they respond well to the simple horizon. The overall valley formation remains legible, and the turbines appear upon the forested valley slopes rather than within the valley bottom.

- 8.8.99. In the vicinity of Smittons Bridge and the most southerly reaches of the landscape area, the upper parts of the Proposed Varied Development, and some ground level ancillary development would be clearly visible in the view. Over time, as the newly planted trees grow, the kinetic nature of the turbine blades would be seen at close proximity above the coniferous trees, but overall, the baseline landscape would remain the predominant feature. There would be a **high magnitude of change** within this part of the landscape area, between approximately 1–3 km as shown in the visualisations in relation to Viewpoints 2 and 4 at **Figures 8.55** and **8.57** respectively. This magnitude extends to the same distance as was identified for the Consented Development.
- 8.8.100. Moving north through the landscape area, the valley landscape becomes increasingly enclosed. The route of the watercourse changes direction as it passes the site and begins to meander on a north-east to south-west axis through an increasingly 'V' shaped valley. Coniferous forest flanks the eastern slopes of the valley, adding to the sense of enclosure.
- 8.8.101. The experience of the landscape is generally contained to the valley as one travels north of the site. The landform features of Beninner and Cairnsmore of Carsphairn are prominent above the valley floor and there is a great sense of scale between these hills and valley bottom. The existing turbines of Windy Standard are visible from the river valley bottom, located between the interlocking hills to the north-west, set back from the valley. The Proposed Varied Development would therefore not necessarily introduce new features to the landscape as seen from the valley.
- 8.8.102. Heading north of Craigengillan, where the river valley begins to narrow, the Proposed Varied Development would become increasingly less prominent in the landscape, although clearly visible from within the valley. At distances between approximately 1-3 km there would be a **high magnitude of change** in the character of the valley reducing to **medium to high** between approximately 3–4 km as illustrated at **Figure 8.59** in relation to Viewpoint 6. This magnitude is slightly greater than was predicted for the Consented Development within the same distance. Between approximately 4–5 km, the magnitude of change would reduce to **medium**, which is slightly further than was identified for the Consented Development. Over 5 km, in the vicinity of the head of the Water of Ken, there is a reduction in overall visibility, as shown at **Figure 8.16**, and as such, the magnitude of change reduces further to **low to medium** where effects would be **not significant** upon landscape character.
- 8.8.103. In summary, significant effects upon the Ken area of the Narrow Valleys Assessment Unit would occur within c. 5 km of the Proposed Varied Development. There would be a **major** effect upon landscape character within 3 km, a **major/moderate** effect between 3-4 km, and a **moderate** effect between 4–5 km. Beyond 5 km the effect would become **moderate/minor to moderate** and **not significant** due to the reduced overall level of visibility of the turbines, which would not greatly alter the underlying character of the valley. All effects, which would be long term but non-permanent are equal to those predicted for the Consented Development.

9 – Upper Dale – Upper Glenkens

- 8.8.104. A very small proportion of the site is located within the Upper Dale (Valley) character type, and it extends to just over 10 km to the south, and 11 km to the north-west of the site

along the valley created by the Water of Ken and Water of Deugh. The site entrance and access route are located within the landscape area, and there would be some very localised direct effects upon landscape character. However, overall, the majority of the effects discussed below are indirect.

- 8.8.105. The direct effects upon the character type arise from the siting of the temporary construction compound off the B729, within Smittons Forest. The site entrance and primary access route also pass through a very small proportion of the character type, again within the existing plantation and utilising the existing entrance and forest track. The direct effects upon the character area would be minimal and not there would be no significant effects.
- 8.8.106. Analysis of **Figure 8.16**, which shows the comparative ZTV to blade tip overlaid on top of the character type boundaries, indicates that there is variable coverage across the landscape area, influenced by the valley landscape and the presence of higher hills that form the backdrop to the valley, including the notable Dundeach Hill.
- 8.8.107. As illustrated on **Figure 8.5**, within the central, lower lying portion of the landscape area, between the site boundary and Viewpoint 12, there is a relatively large area of limited ZTV coverage caused by the presence of Marscalloch Hill to the immediate north. The majority of the proposed turbines would be located on lower ground to the north of this hill and thus would not be visible from the valley to the south. There is also an area of no ZTV coverage located to the immediate south of Dundeach Hill which curtails intervisibility in a northerly direction.
- 8.8.108. The visualisations at **Figure 8.64** (Viewpoint 11) and **8.65** (Viewpoint 12) illustrate where open views are available at relative proximity to the Proposed Varied Development. From these locations the Proposed Varied Development would have a **high magnitude of change** on landscape character when considered against the established baseline up to distance of c. 3 km, where commercial plantation does not curtail wider intervisibility in the landscape. This magnitude extends to the same distance as was identified for the Consented Development. Where tree cover provides enclosure of the landscape within proximity of the site, as illustrated by **Figure 8.62** (Viewpoint 9), the magnitude of change would be much lower.
- 8.8.109. Within the wider landscape to the north of the landscape area, the Proposed Varied Development would be most perceptible in the vicinity of Carsphairn and Bardennoch Hill. The visualisation at **Figure 8.72** (Viewpoint 19) shows the likely view from the A713 south of Carsphairn, east of Bardennoch Hill, and **Figure 8.75** (Viewpoint 22) shows the likely view from Carsphairn War Memorial, located on the southern edge of the village. The landscape in which the Proposed Varied Development is seen is typified by commercial plantation and infrastructure such as pylons, and thus the underlying baseline landscape is considered less sensitive than other parts of the landscape area. Nevertheless, the Proposed Varied Development would form a clearly perceptible feature in the landscape to the east.
- 8.8.110. In the southern portion of this area of the Upper Dale Assessment Unit, the Proposed Varied Development would be seen at greater distance, from the western flank of the Water of Ken valley in the vicinity of Waterside Hill and Hannaystoun Hill as depicted at

Figures 8.70 and **8.71** in relation to the visualisations at Viewpoints 17 and 18 respectively.

- 8.8.111. From within the lower lying valley, as seen at Viewpoint 18 (**Figure 8.71**), the Proposed Varied Development would form a feature in the more distant landscape, in part of the view characterised by the presence of the Kendoon Power Station and associated pylons. The Proposed Varied Development would become an additional vertical feature located beyond the valley. Due to the underlying wooded nature of the lower lying valley, intervisibility of the turbines would be intermittent as one travels north along the A713.
- 8.8.112. From locations higher on the valley slopes, such as that at Waterside Hill (Viewpoint 17), shown at **Figure 8.70**, the Proposed Varied Development would be a clearly visible feature in the wider landscape. However, the turbines would be perceived as a more distant feature, set back from the valley, and their presence in the wider area would not alter the underlying baseline landscape.
- 8.8.113. Taking into consideration the above appraisal, within the Glenkens area of this character type, the Proposed Varied Development would give rise to a **medium magnitude of change** on landscape character, when considered against the established baseline within the wider parts of the landscape area, between approximately 3–5 km. This magnitude extends approximately 0.5 km further than was identified for the Consented Development.
- 8.8.114. In summary, significant effects upon the Upper Glenkens area of the Upper Dale Assessment Unit would occur within c. 5 km of the Proposed Varied Development. There would be a **major** effect, which extend to approximately 3 km and a **moderate** effect which would extend to approximately 5 km from the Proposed Varied Development. Beyond this distance, the Proposed Varied Development would be perceived as a more distant feature beyond the valley and effects upon the underlying landscape would reduce to where effects are no longer significant. All effects, which would be long term but non-permanent are equal to those predicted for the Consented Development.

8 – Flooded Valley – Ken Valley

- 8.8.115. The Ken Valley area of the Flooded Valley Assessment Unit is an elongated area of land that follows the Water of Ken from St Johns Town of Dalry in the north to Townhead of Greenlaw to the south. The closest point of the landscape area is located c. 11 km to the south of the nearest proposed turbine, and it extends to c. 28 km from the nearest proposed turbine.
- 8.8.116. ZTV coverage within the landscape area is intermittent, with theoretical visibility of all 11 of the proposed turbines between St John's Town of Dalry and New Galloway largely restricted to areas of higher ground, including along the A762 to the west of the Water of Ken, and Mulloch Hill to the east. A broader area of theoretical visibility extends from the east of New Galloway across the Water of Ken and along Loch Ken and its western shore. At this distance, the turbines would form an additional smaller element within a much wider landscape. The primary characteristics of the valley would not be altered, nor would the scale of the landscape. The turbines would be perceived to be at distance beyond the valley, associated with the uplands, where other wind farms are already located.

- 8.8.117. The Flooded Valley landscape to the south of New Galloway is also well treed. The banks of Loch Ken are strongly planted, and the route of the A762 passes through numerous woodlands. Such vegetation would interrupt intervisibility of the Proposed Varied Development from the most frequented locations within the valley.
- 8.8.118. Overall, there would be a **low magnitude of change** in the character of the Flooded Valley resulting in a **moderate/minor** effect that is considered to be **not significant**. This magnitude of change and level of effect is the same as was predicted for the Consented Development. The underlying valley landscape would not be notably altered by the presence of the Proposed Varied Development in the distant landscape to the north.

20 – Foothills with Forest – Rhinns of Kells

- 8.8.119. The Rhinns of Kells area of the Foothills with Forest Assessment Unit is a large tract of land located on the western side of the Upper Dale (Valley) character type, to the south-west of the site. The closest point of the landscape area to the site is c. 4.6 km to the south-west, extending to over 19 km distance from the nearest proposed turbine.
- 8.8.120. The comparative ZTV to blade tip overlaid onto character type boundaries at **Figure 8.16** indicates that coverage across the landscape area is most prevalent across the higher slopes and hill summits within the landscape area. Bands of ZTV coverage can be found across large areas of the landscape that are characterised by coniferous plantation, so in reality overall visibility would be restricted by the presence of such plantation.
- 8.8.121. There are few locations within the landscape area from which there would be an open aspect towards the site with high levels of intervisibility, due to the strongly forested nature of the landscape. Beyond Bardennoch Hill on the north-eastern boundary of the landscape area, adjacent to the Upper Glenkens landscape area, the likely visibility is limited to open areas of higher ground, such as Stranfasket Hill at 8.4 km from the nearest proposed turbine, where the Proposed Varied Development is likely to form a less notable feature in the wider landscape.
- 8.8.122. Within the open areas of the landscape there would be a worst-case **medium magnitude of change** in the landscape which would give rise to a **moderate** effect. The underlying forested baseline landscape would not be notably altered by the presence of the Proposed Varied Development, which would appear associated with the upland landscape beyond the Ken valley to the north-east and as such the effect is considered **not significant**. This magnitude of change and level of effect is the same as was predicted for the Consented Development.
- 8.8.123. Within the forested areas, and overall, there would be a **low magnitude of change** in the landscape which would give rise to a **moderate/minor** effect that is considered to be **not significant**. The underlying forested baseline landscape would not be notably altered by the presence of the Proposed Varied Development, which would appear associated with the upland landscape beyond the Ken valley to the north-east. This magnitude of change and level of effect is the same as was predicted for the Consented Development.

20 – Foothills with Forest – Stroan

- 8.8.124. The Stroan area of the Foothills with Forest character type is located c. 2.8 km to the south-east of the nearest proposed turbine and extends over 23 km to the south-east covering a large area of land. None of the elements of the Proposed Varied Development are located within the Assessment Unit / landscape area, and hence, there would be no direct effects upon landscape character.
- 8.8.125. Analysis of **Figure 8.16**, the comparative ZTV to blade tip overlaid onto character type boundaries, indicates that coverage across the landscape area is largely limited to the higher slopes and hill summits, with reduced visibility within the lower lying areas. ZTV coverage within the lower lying areas is slightly greater for the Proposed Varied Development than for the Consented Development, however for both developments ZTV coverage across the landscape area ceases at Blackcraig Hill c. 13 km from the nearest proposed turbine.
- 8.8.126. The visualisation at **Figure 8.60** (Viewpoint 7) shows the likely views available from the higher ground closest to the site, such as Culmark Hill. The Proposed Varied Development forms a prominent feature in the landscape to the north-west, beyond the lower lying valley. It is seen associated with the forested landscape, set below the Southern Uplands and the notable landscape feature of Cairnsmore of Carsphairn, in the same part of the view as the more distant Windy Standard and Windy Rig turbines.
- 8.8.127. At relative proximity to the site, c. 3.5 km, there would be a **high magnitude of change** in the landscape to the north-west. The Proposed Varied Development would be much more notable in the landscape than the existing Windy Standard or Windy Rig turbines. The effect upon landscape character would therefore be **major/moderate** and **significant**. This magnitude of change and level of effect which was predicted for the Consented Development within 3 km, is predicted to reach to 3.5 km for the Proposed Varied Development.
- 8.8.128. As one travels further south and south-east within the landscape area, the presence of large areas of coniferous plantation would greatly reduce the level of intervisibility towards the Proposed Varied Development and thus actual visibility would be less prevalent than that indicated on the ZTV at **Figure 8.16**.
- 8.8.129. Also, with increased distance from the site, one moves closer to the existing Blackcraig Hill Wind Farm, which forms a notable feature located within the landscape area. The Proposed Varied Development would appear as a much smaller feature in the wider landscape in comparison to Blackcraig Hill at distances of c. 10 km and greater.
- 8.8.130. The Stroan area of the Forest with Foothills is extremely varied in terms of topography. Beyond distances of c. 5 km, ZTV coverage is generally limited to hill summits, the majority of which are blanketed by coniferous plantation, such as Glenshimmeroch Hill and Kilnair Hill. Consequently, the availability of intervisibility with the Proposed Varied Development is further reduced, and effects on landscape character are unlikely to be significant.
- 8.8.131. Overall, within the Stroan area of the character type, the effects upon landscape character are limited to the closest open upland grasslands in the vicinity of Culmark Hill and Mackilston Hill. A **medium high magnitude of change** is predicted for the Proposed

Varied Development between c. 3.5 – 4 km and a **medium magnitude of change** between c. 4 – 4.5 km. This would result in **moderate significant** effects upon landscape character experienced between c. 3.5 - 4.5 km from the Proposed Varied Development. This is a slight extension of the magnitude of change and level of effect than was predicted for the Consented Development by c. 0.5 km.

21 – Southern Uplands - Carsphairn

- 8.8.132. The Proposed Varied Development is not located within this landscape area, and there would be no direct effects upon this landscape character. Therefore, the effects discussed below are indirect.
- 8.8.133. The Carsphairn area of the Southern Uplands is located to the immediate west of the site. The landscape area is geographically modest in size and covers the upland landscape including the hill formations of Cairnsmore of Carsphairn, Beninner, Moorbrock Hill, Mid Hill of Glenhead, and Craig of Knockgray.
- 8.8.134. Analysis of the comparative ZTV to blade tip overlaid onto the character types at **Figure 8.16**, shows that there would be visibility of all of the proposed turbines from the eastern slopes of the hills located on the eastern side of the landscape area. The hill summits within the landscape area create large areas of no visibility immediately beyond them and thus the western and north-western portions of the landscape area have virtually no visibility other than from the highest peaks.
- 8.8.135. Within the landscape area to the north of the site, there are areas of coniferous plantation that would interrupt visibility of the Proposed Varied Development. Such areas occur on the lower slopes of Mid Hill of Glenhead and Green Hill. However, it is acknowledged that such vegetation would not limit intervisibility of the Proposed Varied Development from the higher slopes and hill summits to the north, or from areas to the west of the site.
- 8.8.136. The proposed turbines would be most prominent from locations to the immediate west of the site, to approximately 1 km of the nearest proposed turbine, such as Furmiston Craig and the lower slopes of Knockwhirn and Beninner, due to lack of tree cover on the hill slopes and advanced felling on the western boundary of the site. However, recent tree planting across Furmiston Craig will create new tree cover within this area as it becomes established. Where open views are available from within 1 km, the magnitude of change in the landscape would be **very high**, which is the same as was predicted for the Consented Development.
- 8.8.137. With increased distance from the site, the prominence of the Proposed Varied Development would decrease, but the turbines would remain a prominent feature above lower lying areas of plantation up to distances of c. 3 km, particularly from higher ground. The visualisation at **Figure 8.66** in relation to Beninner (Viewpoint 13) shows that although other existing wind farms are visible in the landscape, these are at greater distance and thus the magnitude of change in baseline character is considered to be **high**. This magnitude of change is the same as was predicted for the Consented Development.
- 8.8.138. The visualisation at **Figure 8.67** at Cairnsmore of Carsphairn (Viewpoint 14) indicates the likely experience of the landscape from the primary hill summits within the landscape area

located at distance of over 3 km to the north-west of the Proposed Varied Development. From these hill summits, one is able to appreciate the wider landscape with panoramic vistas available across the uplands to the north and east, and lower settled land to the south. Existing wind farms at Wether Hill and Blackcraig Hill are visible from the summit in combination with the Proposed Varied Development to the south-east, whilst Windy Standard Wind Farm forms a highly visible feature in successive views in the near landscape to the immediate north.

- 8.8.139. The visualisation at **Figure 8.68** in relation to Craig of Knockgray (Viewpoint 15), located 4.7 km to the west of the Proposed Varied Development shows the likely experience of the turbines from higher ground from part of the furthest extent of full theoretical visibility within the landscape area. The introduction of the Proposed Varied Development in the landscape to the east would give rise to a medium as experienced from higher hill summits in the west, and from within the central core of the landscape area. The turbines would be located within a landscape where wind energy development is already a feature, albeit at greater distance. The sense of scale of the landscape would not be greatly altered, and the pattern and form of the landscape would remain legible. There would be a **medium magnitude of change** in baseline character experienced up to distance of approximately 5 km. This is a slightly increased distance in comparison with the Consented Development due to the relative positions of the turbines and increased turbine height.
- 8.8.140. Beyond 5 km from the Proposed Varied Development, theoretical visibility becomes largely intermittent and is limited to smaller numbers of turbines. The scale of the landscape at such distance from the site assists in reducing the presence of the turbines and in turn reduces the overall effect upon the baseline landscape. The magnitude of change would reduce to **low to medium** from this distance.
- 8.8.141. In summary, the magnitude of change in landscape character within the Carsphairn area of the Southern Uplands would vary relative to location from the site. In close proximity to the turbines, the very high magnitude of change would result in a **major** effect. Similarly, the high magnitude of change in character experienced at distances up to 3 km from the Proposed Varied Development would also result in a **major** effect. This level of effect is the same as was predicted for the Consented Development.
- 8.8.142. Beyond distances of 3 km from the proposed turbines, the variation in landform begins to restrict visibility, as does the presence of extensive areas of coniferous vegetation. As the hill summits rise, the distance from the turbines would increase, and the experience of the landscape alters to take in a greater panorama. The Proposed Varied Development would be located within a vast landscape, where wind energy is already present in the landscape to the east. There would be a **medium to high magnitude of change** in landscape character between 3 – 4 km and a **medium magnitude of change** between 4 – 5 km resulting in **moderate** significant effects up to distances of 5 km. Beyond such distance, **moderate/minor** to **moderate** effects are considered to be **not significant**. This is a slightly increased distance in comparison with the Consented Development due to the relative positions of the turbines and increased turbine height.

24 – Rugged Granite Upland – Rhinns of Kells

- 8.8.143. The Rhinns of Kells area of the Rugged Granite Uplands Assessment Unit is a small area of land located c. 6.2 km to the west of the nearest proposed turbine, extending to c. 17.2 km to the south-west. The landscape area covers some of the highest land within the detailed study area and features the Rhinns of Kells summit of Corserine.
- 8.8.144. The comparative ZTV at **Figure 8.16** shows that coverage within the landscape area for the Proposed Varied Development is similar to the Consented Development. ZTV coverage is relatively widespread at closer proximity to the site, where the land is slightly lower lying in relation to the Rhinns of Kells. Further south within the landscape area, ZTV coverage is patchier and related to the eastern facing hill slopes such as Craigrine, North Gairy Top, Meikle Millyea, and Corserine.
- 8.8.145. The visualisation at **Figure 8.73** in relation to Viewpoint 20 at Woodhead Mines shows the relative distance between the site and the landscape area (over 8.6 km). The Proposed Varied Development is located beyond the horizon, associated with the commercial plantation that forms the backdrop to the landscape. It is acknowledged that the proposed turbines are clearly visible, but they appear in the same part of the landscape that already features the existing Wether Hill Wind Farm, alongside other vertical features such as pylons and the existing Blackcraig Wind Farm. The Proposed Varied Development would form a clearly separate and distinguishable wind farm in the wider landscape.
- 8.8.146. At greater distance, and elevation from the site, the visualisation at **Figure 8.74** shows the likely view from the summit of Corserine (Viewpoint 21). The summit sits at 814 m AOD and is the highest peak within the Rhinns of Kells. The landscape as seen from Corserine is vast and the Proposed Varied Development is located on lower ground within the commercial forested landscape east of Cairnsmore of Carsphairn, at a distance of over 12 km. The proposed turbines do not interrupt intervisibility between the Rhinns of Kells and Cairnsmore of Carsphairn; both of which are prominent features of the local landscape and the Galloway Hills RSA.
- 8.8.147. Overall, the Proposed Varied Development would not appear overly prominent from the closest parts of the landscape area to the site, and at greater distance they would appear as a smaller element in a much wider panorama. The Proposed Varied Development would also be located within part of the landscape that already features wind energy development, and thus, it would not introduce turbines into part of the landscape where they are currently absent. There would be a **low to medium magnitude of change** in the character of this area of the Rugged Granite Uplands resulting in a **moderate/minor to moderate** effect that is considered to be **not significant**. This magnitude of change and level of effect is the same as was predicted for the Consented Development.

Table 8.12 – Summary of Landscape Effects – Comparison with Consented Development

Assessment Unit / Landscape Area	Sub Area / Location	Consented Development				Proposed Varied Development			
		Sensitivity to large typology	Magnitude of Change	Level of Effect	Significance	Sensitivity to very large typology	Magnitude of Change	Level of Effect	Significance
Dumfries and Galloway									
22 Southern Uplands with Forest – Ken	0-1 km	Medium	Very high	Major / moderate	Significant	High-medium	Very high	Major	Significant
	1-3 km	Medium	High	Moderate	Significant	High-medium	High	Major / moderate	Significant
	3–3.5 km	Medium	Medium	Moderate	Significant	High-medium	High	Major / moderate	Significant
	3.5-4 km to east	Medium	Medium	Moderate	Significant	High-medium	Medium to high	Moderate	Significant
	4-5 km to east	Medium	Medium	Moderate	Significant	High-medium	Medium	Moderate	Significant
	Beyond 5 km to east	Medium	Low to medium	Moderate / minor to moderate	Not significant	High-medium	Low to medium	Moderate	Not significant
	3.5 - 4 km to north-east	Medium	High	Moderate	Significant	High-medium	High	Major / moderate	Significant

Assessment Unit / Landscape Area	Sub Area / Location	Consented Development				Proposed Varied Development			
		Sensitivity to large typology	Magnitude of Change	Level of Effect	Significance	Sensitivity to very large typology	Magnitude of Change	Level of Effect	Significance
	4 – 5 km to north-east	Medium	Medium	Moderate	Significant	High-medium	Medium	Moderate	Significant
	Beyond 5 km to north-east	Medium	Low to medium	Moderate / minor to moderate	Not Significant	High-medium	Low to medium	Moderate	Not significant
4 Narrow Valleys – Ken	0 – 1 km	High	Very high	Major	Significant	High	Very high	Major	Significant
	1 – 3 km distance	High	High	Major	Significant	High	High	Major	Significant
	3 - 4 km	High	Medium	Moderate	Significant	High	Medium to high	Major / moderate	Significant
	4 – 4.5 km	High	Medium	Moderate	Significant	High	Medium	Moderate	Significant
	4.5 - 5 km	High	Low to medium	Moderate / minor to moderate	Not significant	High	Medium	Moderate	Significant
	Beyond 5 km	High	Low to medium	Moderate / minor to moderate	Not significant	High	Low to medium	Moderate / minor to moderate	Not significant

Assessment Unit / Landscape Area	Sub Area / Location	Consented Development				Proposed Varied Development			
		Sensitivity to large typology	Magnitude of Change	Level of Effect	Significance	Sensitivity to very large typology	Magnitude of Change	Level of Effect	Significance
9 Upper Dale - Upper Glenkens	Up to 3 km	High	High	Major	Significant	High	High	Major	Significant
	3 - 4.5 km	High	Medium	Moderate	Significant	High	Medium	Moderate	Significant
	4.5 – 5 km	High	Low to medium	Moderate / minor to moderate	Not significant	High	Medium	Moderate	Significant
	Beyond 5 km	High	Low to medium	Moderate / minor to moderate	Not significant	High	Low to Medium	Moderate / minor to moderate	Not significant
8 Flooded Valley – Ken	Over 11 km	High	Low	Moderate / minor	Not significant	High	Low	Moderate / minor	Not significant
20 Foothills with Forest – Rhinns of Kells	Over 4.5 km (isolated locations)	High-medium	Medium	Moderate	Not significant	High	Medium	Moderate	Not significant
	Over 4.5 km (overall)	High-medium	Low	Moderate / minor	Not significant	High	Low	Moderate / minor	Not significant
20 Foothills with Forest – Stroan	Up to 3 km	High-medium	High	Major / moderate	Significant	High-medium	High	Major / moderate	Significant

Assessment Unit / Landscape Area	Sub Area / Location	Consented Development				Proposed Varied Development			
		Sensitivity to large typology	Magnitude of Change	Level of Effect	Significance	Sensitivity to very large typology	Magnitude of Change	Level of Effect	Significance
	3 – 3.5 km	High-medium	Medium	Moderate	Significant	High-medium	High	Major / moderate	Significant
	3.5 – 4 km	High-medium	Medium	Moderate	Significant	High-medium	Medium to high	Moderate	Significant
	4 – 4.5 km	High-medium	Not specified	Not specified	Not significant	High-medium	Medium	Moderate	Significant
21 Southern Uplands – Carsphairn	Up to 1 km	High	Very high	Major	Significant	High	Very high	Major	Significant
	1 – 3 km	High	High	Major	Significant	High	High	Major	Significant
	3 - 4 km	High	Medium	Moderate	Significant	High	Medium to high	Major / moderate	Significant
	4 – 4.5 km	High	Medium	Moderate	Significant	High	Medium	Moderate	Significant
	4.5 – 5 km	High	Low	Moderate / minor	Not significant	High	Medium	Moderate	Significant
	Over 5 km	High	Low	Moderate / minor	Not significant	High	Low	Moderate / minor	Not significant

Assessment Unit / Landscape Area	Sub Area / Location	Consented Development				Proposed Varied Development			
		Sensitivity to large typology	Magnitude of Change	Level of Effect	Significance	Sensitivity to very large typology	Magnitude of Change	Level of Effect	Significance
24 Rugged Granite Upland – Rhinns of Kells	Over 6 km	High	Low to medium	Moderate / minor to moderate	Not significant	High	Low to medium	Moderate / minor to moderate	Not significant

Bold text indicates a significant effect

Red text indicates an increase in significant effect between the Consented Development and the Proposed Varied Development

Decommissioning

- 8.8.148. It is recognised that there would be some additional temporary effects during decommissioning of the Proposed Varied Development after 40 years over and above those assessed under the heading of Operational Effects above. The effects resulting from decommissioning activities would be localised and relatively incidental when viewed in the context of the wind farm being removed.
- 8.8.149. The effects on landscape character would therefore decrease incrementally as decommissioning progresses and as more turbines and associated foundations and hardstanding are removed.
- 8.8.150. The effects would be similar to those during the construction phase but in reverse.
- 8.8.151. Overall, it is considered that there would be a low magnitude of change for the reasons outlined above. This would result in no greater than a **moderate/minor** temporary effect on the Southern Uplands with Forest character type within which the Proposed Varied Development is located. The decommissioning effects would be temporary in nature and are unlikely to all occur at the same time during this phase. The decommissioning effects of the Proposed Varied Development on landscape character are deemed to be **not significant**.
- 8.8.152. The level of effect on the Southern Uplands with Forest Assessment Unit (AU 22 – Ken area), identified in relation to the Proposed Varied Development, is equal to that identified in relation to the Consented Development. However, the effect on the Narrow Valleys Assessment Unit (AU 4 – Ken area) identified in relation to the Consented Development is not relevant to the Proposed Varied Development, as no turbines are proposed within this landscape area.

Assessment of Visual Effects

- 8.8.153. Effects on visual amenity arise from changes to views resulting from the introduction of the Proposed Varied Development. It comprises:
- An assessment of visual effects from the representative viewpoints; and
 - An assessment of visual effects on receptor groups such as settlements, roads and core paths brought forward into detailed assessment.
- 8.8.154. The assessment has been carried out through a combination of site visits and desk study using the ZTVs, wirelines and photomontages.
- 8.8.155. In accordance with Civil Aviation Authority (CAA) CAP 764 turbines taller than 150 m require visible aviation lighting. As set out in **Section 8.7**, a reduced visible aviation lighting scheme is being agreed with the CAA that incorporates vertical directional intensity lighting. An adjusted visible aviation lighting scheme has been agreed with the CAA. In total six of the 11 turbines (T1, T4, T5, T6, T7 and T11) are proposed to be fitted with visible medium intensity steady red 2,000/200 candela (cd) lights on the nacelle of each turbine. These would operate in the reduced 200 cd intensity where meteorological

visibility is greater than 5 km and where visibility is less than 5 km the lights would operate at 2,000 cd. The lights are also required to be able to shine a beam that reduces in intensity above and below the horizontal. The lights are required to be at maximum intensity at 3 degrees above and 1 degree below horizontal. Light intensity reduces beyond those parameters. It is important to highlight that when not obscured by cloud, the visibility in the area of the turbines can be expected to exceed 5 km for the majority of the time and as such, the lights would be dimmed to 200 cd. Furthermore, it is important to note that intensity of the lights would reduce with increased distance from the aviation lights and the intensity at which a viewer perceives them at would also be dependent on how adapted their eye was to the dark.

- 8.8.156. It is being agreed with the CAA that infra-red lights (that are not visible to the human eye) would be installed on all turbines for operators that carry night vision capability. It is also being agreed with the CAA that there would be no requirement for intermediate lighting to be installed halfway between the nacelle and the ground-level.
- 8.8.157. Should the relevant regulatory actions concerning the mandatory carriage of a compatible Electronic Conspicuity system on aircraft be completed and signed into law, the project could consider the installation an Electronic Conspicuity (i.e. transponder) based Aircraft Detection Lighting System (ADLS). The installation of such a suitable ADLS would significantly reduce the occasions when the lighting would be visible. A planning condition could be attached to the consent which requires investigation of such a scheme, if regulatory approval for such systems becomes available. For the purposes of assessment, the worst-case scenario has been assumed, in that turbines would require visible aviation lighting as set out above.
- 8.8.158. In order to carry out an assessment of the effects of visible aviation lighting the following assumptions have been made and applied in the figures and visualisations that have informed the assessment:
- Lighting is only shown on the hubs of the six turbines proposed to be fitted with visible aviation lights;
 - No intermediate lighting is illustrated halfway between the nacelle and the ground-level;
 - As the photography was taken in clear weather conditions when visibility was greater than 5 km the visualisations illustrate the reduced 200 cd intensity to reflect the lighting that would arise in those conditions as a result of the mitigation proposed (i.e. that the lighting would operate in the reduced 200 cd intensity where meteorological visibility is greater than 5 km and where visibility is less than 5 km the lights would operate at 2,000 cd). Nonetheless, these images represent the worst-case as should visibility be less than 5 km such that the 2,000 cd lighting was active, then these poor conditions would of themselves be such as to restrict the visibility of the lighting to no more than that of the 200 cd lighting seen in clear conditions;
 - The reduction in the intensity of lights above and below the horizon has been illustrated on **Figure 8.11**. This ZTV shows the theoretical reduction in the candela

intensity of the lights at vertical angles above and below the horizon to illustrate the reduction in the intensity of the lights at elevations below the level of the turbine lights;

- Whilst the lighting would reduce in intensity above and below the horizontal this reduction has not been illustrated in the night-time visualisations. As such the visualisations are a worst-case. This matter has however been considered within the assessment judgements;
- The visualisations illustrate the period after the commencement of Evening Civil Twilight, when sufficient ambient light remains for the landform of the landscape on which the wind farm is proposed, to remain partially visible;
- Whilst the implementation of a suitable Aircraft Detection Lighting System would significantly reduce the occasions when the lighting would be visible, this has not been factored into the judgements of lighting effects which focus on the 'worst-case' scenario of the period when the lighting would be visible. The benefits of a reduction in the lighting associated with the Aircraft Detection Lighting System are nonetheless a matter for the wider planning balance exercise, addressed separately in the application submission;
- It is noted that the matter of darkness adaption is also a relevant consideration, with some receptors, in particular car drivers, not perceiving the lighting in the same manner as if they were in a fully dark environment, due to their vision being influenced by lighting sources in their proximity (i.e. car headlights). The same would apply to residents of residential properties who were viewing the aviation lighting from a location with existing lighting present (i.e. it is unlikely that residents would themselves be fully in a dark environment and their eyes therefore adapted to take in the full extent of the light from the turbines). This serves to further reduce the effects compared to how they are set out in the assessment, which again can be considered to represent a 'worst-case' position compared to what would be experienced by receptors in practice;
- The frequency in which a viewpoint is likely to be visited during the hours of darkness is not a factor which is considered within the assessment of magnitude or sensitivity. However, it should be noted that viewpoints at hills summits and on long distance footpaths would be unlikely to be visited after daylight hours. Any assessment of these receptors should therefore be considered a 'worst-case' scenario as in many cases the actual numbers of individuals who would be likely to experience the view would be very limited, although it is recognised that there will be a few individuals such as landscape photographers who may visit hilltops to take photographs at sunset or sunrise; and
- It is understood that the value and susceptibility of visual receptors during the night-time period, may differ from during the day time period. For example, the value of views during the night-time period may be reduced due to the transient nature of views as people travel through the landscape, or that they may have some form of personal light for their safety, which would create an element of baseline light. It also reflects the limited time period during which the lights would be on when the features of the

landscape could be perceived and appreciated before full darkness occurs. In this regard, the findings of the Reporters concerning this matter in the Crystal Rig IV Wind Farm Report to the Scottish Ministers are noted. Here it was concluded by the Reporters in paragraph 4.146 that 'we agree with the applicant that the value that can be attributed to a view at night is low'. In turn, the susceptibility of people experiencing night-time outdoors would depend in part on the degree to which their perception is affected by existing baseline lighting. In brightly lit areas, or when travelling on roads from where sequential views of lighting may already be experienced, the susceptibility of receptors is likely to be lower than from areas where the baseline contains no or limited existing lighting. It is noted that the matter of value and susceptibility of night-time views is not specifically addressed in the Guidelines for Landscape and Visual Impact Assessment due to the relatively new nature of this issue and that a bespoke approach to considering the value of night-time views is therefore required.

- 8.8.159. Further details about the approach and the methodology to the assessment of visible aviation lighting are set out in **Appendix 8.7**.

Construction Effects

- 8.8.160. The ground level activity associated with the turbine construction would not be particularly prominent from the vast majority of the study area, beyond the local environs to the site up to c. 2 km distance. Therefore, from the majority of the assessment viewpoints, the only additional visual effects, over and above those addressed under the heading of Operational Effects, would arise in relation to views of the cranes erecting the turbines. The cranes would be visible for a relatively short period and would be incidental when considered in the context of the turbines being erected. There are a number of locations within the study area that may experience views of construction activity at ground level, such as from higher ground to the east and the landscape to the immediate west and south-west. However, it is assessed that any view of these works would also be incidental and not significant, in relation to the overall effects identified as a result of the Proposed Varied Development.

Operational Effects

- 8.8.161. A detailed viewpoint assessment of the operational phase effects is presented at **Appendix 8.5** and this considers the long-term visual effects during the operational phase of the Proposed Varied Development for each of the 22 assessment viewpoints agreed with DGC and NatureScot.
- 8.8.162. For each of the representative viewpoints, a short description is given of the baseline view, and a judgement is provided regarding the sensitivity of the key receptors likely to experience the view.
- 8.8.163. This is followed by a description of the features of the Proposed Varied Development that would be visible from that viewpoint. This includes a description of how many turbine hubs and blades would be visible and also, where relevant, whether any ground level components of the Proposed Varied Development would be visible. For each viewpoint, there is a comment on how vegetation, buildings or topography would affect the actual

visibility of the turbines. A judgement is then provided as to the assessed magnitude of change that would be experienced at each viewpoint.

- 8.8.164. Following this, a judgement is then provided regarding the resulting level of effect on the view, and a statement is provided to clarify whether the effect is deemed to be significant or not.
- 8.8.165. A summary of the sensitivity of the view, magnitude of change in the view and level/significance of effect is given in **Table 8.13**. Where a viewpoint is representative of more than one type of visual receptor, the assessment carried forward to **Table 8.13** is that which represents the most sensitive receptor group represented by the viewpoint.
- 8.8.166. It has been assessed that during daylight hours there would be significant visual effects experienced at 16 of the 22 representative viewpoints as follows:
- Viewpoints 1-7;
 - Viewpoints 10 - 16; and
 - Viewpoints 19 and 20.
- 8.8.167. The only additional viewpoint with significant effects in comparison with the Consented Development is in relation to Viewpoint 13 – Benniner, due to increased turbine height and the greater visibility above landform.
- 8.8.168. It is recognised that there is a high proportion of viewpoints from which there would be significant effects during daylight hours, but it is not a consequence of high ZTV coverage across the study area as a whole. A large proportion of the viewpoints are located within 10 km of the Proposed Varied Development, and it is this area in which primary ZTV coverage is found. Viewpoints located at closer proximity to the proposed turbines are inevitably going to be locations from where receptors are more likely to experience significant effects.
- 8.8.169. During the hours of darkness, the Proposed Varied Development is predicted to give rise to significant effects at five of the 22 viewpoints as follows:
- Viewpoint 2; and
 - Viewpoints 12 to 15.
- 8.8.170. The Consented Development did not require aviation lighting due to the height of the turbines. As such, no assessment of the effects of visible aviation lighting was necessary.

Table 8.13 – Summary of Visual Effects at Viewpoint Locations – Comparison with Consented Development

Name / Receptor	OS Grid Ref	Distance to nearest turbine	Sensitivity	Consented Development			Proposed Varied Development		
				Magnitude of Change	Level of Effect	Significance	Magnitude of Change	Level of Effect	Significance
1. Stroanfreggan Bridge (B729)	264537, 591795	2,238 m (T9)	High	High	Major	Significant	High	Major	Significant
2. Stroanfreggan Craig	263712, 592073	1,370 m (T9)	High	High	Major	Significant	Very high	Major	Significant
3. Guttery Glen (B729)	265802, 591708	3,464 m (T9)	High	High	Major	Significant	High	Major	Significant
4. Smittons Bridge	263405, 591862	1,223 m (T9)	High	Medium to high	Major / moderate	Significant	High	Major	Significant
5. Stroanfreggan Cairn	264008, 591424	1,967 m (T9)	High	High	Major	Significant	High	Major	Significant
6. Head of Ken Valley	265861, 598017	3,916 m (T2)	High	Medium to high	Major / moderate	Significant	Medium to high	Major / moderate	Significant
7. Southern Upland Way at Culmark Hill	264468, 589685	3,574 m (T9)	High	High	Major	Significant	High	Major	Significant
8. Minor Road south of B729	268514, 590655	6,366 m (T9)	High	Low	Moderate / minor	Not significant	Low	Moderate / minor	Not significant
9. High Bridge of Ken	261971, 50162	2,042 m (T11)	Medium	No effect	No effect	Not significant	No Effect	No effect	Not significant

Name / Receptor	OS Grid Ref	Distance to nearest turbine	Sensitivity	Consented Development			Proposed Varied Development		
				Magnitude of Change	Level of Effect	Significance	Magnitude of Change	Level of Effect	Significance
10. Southern Upland Way, Benbrack (Striding Arch)	268026, 597039	5,457 m (T2)	High	Medium to high	Major / moderate	Significant	Medium to high	Major / moderate	Significant
11. B7000 at East Arndarroch	261845, 589289	2,913 m (T11)	High*	High	Moderate	Significant	High	Major	Significant
12. Dundough Hill	261845, 589289	2,619 m (T11)	High	Medium to high	Major / moderate	Significant	Medium to high	Major / moderate	Significant
13. Beninner	260584, 597150	2,002 m (T1)	High	Low to medium	Moderate / minor to moderate	Not significant	Medium	Moderate	Significant
14. Cairnsmore of Carsphairn	259460, 597979	3,398 m (T1)	High	Medium	Moderate	Significant	Medium	Moderate	Significant
15. Craig of Knockgray	257042, 594380	4,735 m (T8)	High	High	Major	Significant	High	Major	Significant
16. Alhang	264227, 601029	5,438 m (T1)	High	Medium	Moderate	Significant	Medium	Moderate	Significant
17. Southern Upland Way at Waterside Hill	260837, 582074	10,181 m (T11)	High	Low to medium	Moderate / minor to moderate	Not significant	Low to medium	Moderate / minor to moderate	Not significant

Name / Receptor	OS Grid Ref	Distance to nearest turbine	Sensitivity	Consented Development			Proposed Varied Development		
				Magnitude of Change	Level of Effect	Significance	Magnitude of Change	Level of Effect	Significance
18. A713 at Stroangassel	260314, 586823	5,601 m (T11)	Medium	Medium	Moderate	Not significant	Medium	Moderate	Not significant
19. A713 south of Carsphairn	257699, 592185	3,832 m (T10)	Medium	Medium to high	Moderate	Significant	High	Moderate	Significant
20. Woodhead Mines	252893, 593746	8,665 m (T10)	High	Medium	Moderate	Significant	Medium	Moderate	Significant
21. Corserine (Hennessey's Shelter)	250448, 587285	12,335 m (T10)	High	Low to medium	Moderate / minor to moderate	Not significant	Low to medium	Moderate / minor to moderate	Not significant
22. Carsphairn War Memorial	256859, 593087	4,652 m (T10)	High	Medium	Moderate	Not significant	Medium	Moderate	Not significant

Bold text indicates a significant effect

Red text indicates an increase in significant effect between the Consented Development and the Proposed Varied Development

Table 8.14 – Summary of Visual Effects at Viewpoint Locations During Hours of Darkness

Name / Receptor	Sensitivity	Magnitude of Change	Level of Effect	Significance
1. Stroanfreggan Bridge (B729)	Medium	Medium	Moderate	Not significant
2. Stroanfreggan Craig	Medium	Medium to high	Moderate	Significant
3. Guttery Glen (B729)	Medium	Medium	Moderate	Not significant
4. Smittons Bridge (N)	Medium	Medium	Moderate	Not significant
5. Stroanfreggan Cairn	Medium	Medium	Moderate	Not significant
6. Head of Ken Valley	Medium	Medium	Moderate	Not significant
7. Southern Upland Way at Culmark Hill	Medium	Medium	Moderate	Not significant
8. Minor Road south of B729	Medium	Low	Moderate / minor	Not significant
9. High Bridge of Ken	Medium	No effect	No Effect	Not significant
10. Southern Upland Way, Benbrack (Striding Arch)	Medium	Medium	Moderate	Not significant
11. B7000 at East Arndarroch (N)	Medium	Medium	Moderate	Not significant
12. Dundough Hill	Medium high	Medium	Moderate	Significant
13. Beninner	Medium high	Medium	Moderate	Significant
14. Cairnsmore of Carsphairn	Medium high	Medium	Moderate	Significant
15. Craig of Knockgray	Medium high	Medium	Moderate	Significant
16. Alhang	Medium high	Medium	Moderate	Significant
17. Southern Upland Way at Waterside Hill	Medium high	Low	Moderate / minor	Not significant

Name / Receptor	Sensitivity	Magnitude of Change	Level of Effect	Significance
18. A713 at Stroangassel	Medium	Low	Moderate / minor	Not significant
19. A713 south of Carsphairn	Medium	Low	Moderate / minor	Not significant
20. Woodhead Mines	Medium high	Low to medium	Moderate	Not significant
21. Corserine (Hennessey's Shelter)	High	Low	Moderate / minor	Not significant
22. Carsphairn War Memorial (N)	Medium high	Low	Moderate / minor	Not significant

Bold text indicates a significant effect

(N) – Night-time visualisation produced from this viewpoint in addition to day-time visualisation.

N.B. The Consented Development did not require aviation lighting due to the height of the turbines.

Assessment of Effects on Visual Receptor Groups

8.8.171. From analysis of the assessment viewpoints, it is possible to draw some conclusions about the level of effect on views and visual amenity experienced by different receptor groups at different distances from the Proposed Varied Development.

8.8.172. In this section, the effects of the Proposed Varied Development on various different visual receptor groups are considered, including:

- Residential Properties and Settlements;
- Recreational and Long-Distance Walking and Cycling Routes;
- Core Paths;
- Other Rights of Way;
- Roads; and
- Regional Scenic Areas.

Construction Effects on Visual Receptor Groups

8.8.173. It is recognised that there would be some additional temporary visual effects during the construction of the Proposed Varied Development over and above those assessed under the operational phase.

8.8.174. The vast majority of effects, of note, when considering the construction phase would be experienced within the local environs of the site, with views largely experienced from the

landscape to the north-east through to south-east due to the nature of the landform of the site and immediate surroundings.

- 8.8.175. The construction works would be visible from a number of properties within the local landscape, particularly those located to the east and south-east where views towards the site are open. The construction works would also be visible from properties located to the west, beyond woodland within the intervening landscape. Views of the construction phase are likely to comprise both ground-work elements and the cranes as they construct the turbines.
- 8.8.176. A small number of local public rights of way pass through or within proximity of the site, namely DS15, DS16, DS17, DS19 and DS21. The Southern Upland Way passes within c. 730 m to the east of the site boundary, as illustrated at **Figure 8.18**, although the nearest turbine is located c. 1.8 km from this long-distance route. The route of the Southern Upland Way is also Core Path 504.
- 8.8.177. Receptors using these routes would experience views of the Proposed Varied Development, although they would be intermittent relative to location within or adjacent to the existing mature coniferous plantation. The clearest views would be experienced from right of way DS17 and Core Path 504/Southern Upland Way as they pass the site to the east between the B729 and Round Craigs. The open aspect of the view across the valley towards the site would allow the ground level works to be seen where forestry is absent. From other routes, the presence of the plantations in the landscape would interrupt and curtail visibility of much of the ground level works.
- 8.8.178. There are rights of way adjoining the site; namely DS15, DS16 and DS21. These routes pass through, or adjacent to, dense coniferous forest, and views of the ground level components of the construction phase would be visible to varying degrees, with views across the entirety of the site unlikely to be available.
- 8.8.179. Overall, it is assessed that during daylight hours there would be a worst-case medium magnitude of additional effect during construction over and above the operational phase effects assessed below. This would result in a temporary **moderate** additional effect which would be **significant**. This is equal to the level of effect predicted in relation to the Consented Development. These effects need to be considered in conjunction with the operational effects identified below.

Operational Effects on Visual Receptor Groups

- 8.8.180. Views of the ground level components of the Proposed Varied Development would be limited to a relatively short radius around the site. Except where indicated, the discussion below relates primarily to views of the turbines of the Proposed Varied Development.

Residential Properties and Settlements

Residential Properties within 2 km of the Proposed Turbines

- 8.8.181. There are 17 residential properties within 2 km of the proposed turbines, which have been assessed in detail within the Residential Visual Amenity Assessment (RVAA) presented at **Appendix 8.6**.

- 8.8.182. The RVAA concludes that during daylight hours, of the 17 properties assessed, there would be significant visual effects experienced at seven of the dwellings and/or their associated garden curtilage or private access; namely Smittons, Stroanpatrick, Craigengillan, Moorbrock, Game Keeper's Cottage, Strahanna Farm (including River Ken Cottage) and Bridgemark. An additional property (Craigengillan Cottage) is also predicted to experience a significant effect following felling of woodland. Of these, only Strahanna Farm and Bridgemark were identified as experiencing significant effects in relation to the Consented Development.
- 8.8.183. Significant effects were predicted in relation to the Consented Development from Smittons private access track following the felling of intervening plantation, which has now occurred. Significant effects were also previously predicted from Craigengillan Cottage, following felling of woodland, which are predicted in relation to the Proposed Varied Development. Game Keeper's Cottage was previously assessed as an annexe to Moorbrock.
- 8.8.184. Although significant effects have been assessed in relation to the properties listed above, there would be no overwhelming or overbearing effects upon the properties, and they would remain attractive places to live.
- 8.8.185. During the hours of darkness, no significant effects were identified from any of the properties.

Properties Located between 2 km and 5 km of the Proposed Turbines

- 8.8.186. Between 2 – 5 km of the proposed turbines, the residential properties are individual farmsteads and small clusters of properties scattered throughout the surrounding landscape. There are no primary villages or towns within 5 km of the proposed turbines.
- 8.8.187. The residential properties are largely located along, or just off, the minor road network within the local area, namely the B729 and the B7000. There are also a small number of properties located along the northern section of Lorg Road, to the north-east of the site.
- 8.8.188. The ZTV to blade tip at **Figure 8.5** shows that theoretical visibility of the turbines is variable to the south-west of the site, south-west of the B729, and in the vicinity of Dundegh, due to the presence of landforms of Marscalloch Hill and Dundegh Hill curtailing visibility towards the site. To the south-east of the site there is an area of no ZTV coverage within the valley associated with Fingland Burn. To the east of the site, Carroch Hill and Manquhill Hill create pockets of no theoretical visibility within valleys.
- 8.8.189. The landscape to the north-west of the site, between 2 – 5 km, is not settled, and there are very few properties located to the north-east. The few farmsteads that are present are nestled in valley locations where ZTV coverage is limited or does not occur. It is acknowledged that there would be views towards the Proposed Varied Development from the farmsteads located along Lorg Road, including Auchrae, Sauchs, Polcheskie Brae, and the cluster of properties at Corlae. The views would be similar to that shown on **Figure 8.59** in relation to the visualisation at **Viewpoint 6**, which was taken just north of Craigythorn.

Properties to the north-east

- 8.8.190. The turbines of the Proposed Varied Development would be seen as additional features along the Ken valley to the south, seen in the context of the coniferous forest that flanks the valley. None of the properties are orientated directly towards the site, but it is acknowledged that the turbines would be seen from the property curtilages, and as receptors are travelling to and from their dwellings. During daylight hours there would be an overall medium magnitude of change in the view from the properties themselves, with a high to medium change in views from the curtilage. All residential receptors are considered to be of high sensitivity and thus effects would be **moderate** and **major** respectively, which are **significant**. This is equal to the levels of effect predicted in relation to the Consented Development.
- 8.8.191. During the hours of darkness, residents are considered to have medium susceptibility to changes in views. The value of views within this part of the landscape, outside of designated areas, are considered medium, therefore residents within these properties are considered to have an overall medium sensitivity during hours of darkness.
- 8.8.192. With reference to the lit turbine ZTV at **Figure 8.10**, up to all six turbine lights would be theoretically visible from these properties. A medium magnitude of change is anticipated, resulting in a **moderate** effect that would be **not significant**.

Properties to the south-east – The Old School House

- 8.8.193. The landscape to the south-east of the site is relatively well-settled due to the lower lying nature of the landform and the presence of the Water of Ken and associated tributaries. The nearest residential dwelling of the Old School House, at just over 2 km distance from the proposed turbines, is located within an area of reduced ZTV coverage in proximity to RVAA property 9 - Stroanpatrick, as illustrated at **Figure 8.6.19** up to six turbines to blade tip. The visualisation at **Figure 8.54** in relation to Viewpoint 1 shows the nature of the view from the east of The Old School House; the dwelling at Stroanpatrick is visible in the photograph. The proposed turbines would not be seen from the primary orientation of either property but would be visible from the curtilage. The four southernmost turbines would be seen to the west of Stroanfreggan Craig.
- 8.8.194. Other properties to the south-east of the site, where views of the Proposed Varied Development would be available, include Blackmark, located at Guttery Glen, nestled within coniferous plantation where views from the site are curtailed by the presence of the thick forest.
- 8.8.195. It is considered that during daylight hours the magnitude of change in the view from the Old School House would be high as seen from the residential curtilage, with a medium magnitude of change as seen from within the property itself, giving rise to **major** and **moderate significant** effects respectively. This is equal to the levels of effect predicted in relation to the Consented Development.
- 8.8.196. During the hours of darkness, the magnitude of change in the view would be medium from the curtilage of the Old School House, and low from within the property, with only one to two of the nacelle lights theoretically visible. This would result in a **moderate** level of effect

on medium sensitivity receptors during the hours of darkness that is considered **not significant**.

Properties to the south-east – Culmark

- 8.8.197. Culmark is a farmstead located on the mid slopes of Culmark Hill where direct and open views towards the site area available from the front elevation of the property. The dwelling is located c. 2.9 km to the south-east of the nearest proposed turbine, and views would be similar to that shown in relation to Viewpoint 7 at **Figure 8.60**, the dwelling can be seen in the middle ground of the photograph, beyond the mature deciduous trees that form the southern curtilage boundary. During daylight hours there would be a high magnitude of change in the view to the north-west giving rise to a **major** effect that is **significant**. This is equal to the level of effect predicted in relation to the Consented Development.
- 8.8.198. During the hours of darkness, the magnitude of change in the view would be medium from Culmark, with up to all six of the nacelle lights theoretically visible. This would result in a **moderate** level of effect on medium sensitivity receptors during the hours of darkness that is considered not significant.

Properties to the south – Along the B7000

- 8.8.199. The B7000 has a number of farmsteads and dwellings located along its route within 5 km of the Proposed Varied Development. A cluster of properties is located at Arndarroch, with College Glen located to the north. The ZTV suggests that all of the proposed turbines would be visible. The visualisation at **Figure 8.64** is located just north of East Arndarroch farmstead and shows the proposed turbines located beyond the hill formation of Dundough, to the east of Cairnsmore of Carsphairn. The southernmost turbines would be the most pronounced in the view with turbines further north located beyond the tree line. The properties are generally orientated towards the B7000, or they overlook Kendoon Loch to the north-west. The Proposed Varied Development would be located away from the primary views from the properties but would be seen from the curtilages. Where the turbines would be seen, they would occupy a small part of the overall view, seen as a cluster beyond Marscalloch Hill.
- 8.8.200. Overall, during daylight hours, there would be a medium to high magnitude of change in the view from the properties located along the B7000 within 5 km of the Proposed Varied Development resulting in a **major/moderate** effect that is **significant**. This is equal to the level of effect predicted in relation to the Consented Development.
- 8.8.201. During the hours of darkness, the magnitude of change in views from properties along the B7000 would be medium, with up to all six of the nacelle lights theoretically visible. This would result in a **moderate** level of effect on medium sensitivity receptors during the hours of darkness that is considered **not significant**.

Properties to the west – Along the B729

- 8.8.202. To the west of the site, the residential properties are located along the B729 in the vicinity of Knockgray Park. The dwellings are located within the valley or on the hill slopes. The

ZTV coverage for all 11 of the proposed turbines at Knockgray Park is patchy, and there is large amount of coniferous woodland in the landscape surrounding the dwellings.

- 8.8.203. It is acknowledged that there are a number of properties from where there is an open aspect in the direction of the site, such as Marbrae at Scar Knowe, and properties around Burnfoot, including Burniston and Polwhirn. The southernmost proposed turbines would be visible above the horizon to the east and would form notable features in the view to the east. There would be high magnitude of change in the view during daylight hours giving rise to a **major** and **significant** effect. This is equal to the level of effect predicted in relation to the Consented Development.
- 8.8.204. Where views towards the site are restricted or curtailed by vegetation and landform within the intervening landscape, the effects would be minimised and are unlikely to be significant.
- 8.8.205. During the hours of darkness, the sensitivity of residential receptors within this area is considered medium high, due to the high value LLA designation within which they are located combined with the medium susceptibility of residents during darkness hours. The worst-case magnitude of change in the view would be medium from properties accessed from the B729. This would result in a **moderate** level of effect that is considered **significant**.

Summary

- 8.8.206. In summary, where there are open aspect views from dwellings or their curtilage within 4 km to 5 km of the site the visual effects are likely to be significant. This is equal to the extent of significant effects predicted in relation to the Consented Development.

Primary Settlements beyond 5 km

- 8.8.207. Beyond 5 km of the proposed turbines, opportunities for clear views of the turbines from within the primary settlements within the 20 km detailed study area would be increasingly limited. It should be noted that there is no ZTV coverage across New Galloway, Balmaclellan, and Moniaivie.
- 8.8.208. The ZTVs imply a degree of visibility across Carsphairn and St John's Town of Dalry at distances of c. 5.2 km and 10.7 km respectively. In relation to theoretical visibility within St John's Town of Dalry, it is limited to up to three turbines at its northern edge, with up to six turbines theoretically visible within the centre of the settlement. The blade tips of the turbines would be difficult to distinguish from within the settlement or its lower lying fringes due to the presence of layers of vegetation within the intervening landscape. Similarly, from properties north of the town located along the B7000, where there is limited ZTV coverage, the Proposed Varied Development would barely be visible.
- 8.8.209. The eastern side of Carsphairn is located within ZTV coverage of up to 11 turbines with the western side of the village located within coverage of up to nine turbines. The turbines of the Proposed Varied Development would not form highly noticeable features from within the central and western parts of the village as the settlement itself would form the primary focus of views, with open views available to the south across the Water of Deugh.

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- 8.8.210. From the eastern edge of the village, illustrated by Viewpoint 22 at **Figure 8.75**, the Proposed Varied Development would be seen along the valley beyond the immediate context of large pylons that cross the landscape immediately east of Carsphairn. The southernmost turbines would be the most visible, set down in the landscape adjacent to Marscalloch Hill.
- 8.8.211. At distances of almost 5 km from the nearest turbine, during daylight hours there would be a worst-case medium magnitude of change in the view resulting in a **moderate** visual effect which is considered to be **not significant** due to the context in which the turbines would be seen. This is equal to the level of effect predicted in relation to the Consented Development.
- 8.8.212. During the hours of darkness, the sensitivity of residential receptors within Carsphairn is considered medium high, due to the high value LLA designation within which they are located combined with the medium susceptibility of residents during darkness hours. The magnitude of change in the view would be low from Carsphairn. This would result in a **moderate/minor** level of effect that is considered **not significant**.

Table 8.15 – Summary of Worst-Case Visual Effects on Residential Receptors During Daylight Hours – Comparison with Consented Development

Name / Receptor	Sensitivity	Consented Development			Proposed Varied Development		
		Magnitude of Change	Level of Effect	Significance	Magnitude of Change	Level of Effect	Significance
Residential Properties within 2 km of the Proposed Turbines							
1 - Marbrack	High (property)	Medium	Moderate	Not significant	Very low to low	Moderate / minor	Not significant
	Medium (access)	Medium	Moderate	Not significant	Medium	Moderate	Not significant
2 - Marbrack Cottage	High (property)	Low	Moderate	Not significant	Low to medium	Moderate	Not significant
	Medium (access)	Medium	Moderate	Not significant	Medium	Moderate	Not significant
3 - Furmiston	High (property)	Very low	Moderate / minor	Not significant	Low to medium	Moderate	Not significant
	Medium (access)	Medium	Moderate / minor (for 40 m)	Not significant	Medium	Moderate (for 40 m)	Not significant
4 - Nether Loskie	High (property)	Medium	Moderate	Not significant	Medium	Moderate	Not Significant
	Medium (access)	No change	No effect	Not significant	No change	No effect	Not significant

5 - Marscalloch Cottage	High (property)	Low	Moderate	Not significant	Low	Moderate / minor	Not significant
	Medium (access)	Very low	Minor	Not significant	Very low	Minor	Not significant
6 - 1 Muirdrochwood	High (property)	Very low	Minor	Not significant	Low	Moderate / minor	Not significant
	Medium (access)	Medium	Moderate	Not significant	Medium	Moderate	Not significant
7 - 2 Muirdrochwood	High (property)	Low	Moderate / minor	Not significant	Low	Moderate / minor	Not significant
	Medium (access)	Medium	Moderate	Not significant	Medium	Moderate	Not significant
8 - Smittons	High (property)	Low	Moderate / minor	Not significant	Low	Moderate / minor	Not significant
	Medium (access)	High	Moderate* ¹	Not significant	High	Moderate	Significant
9 - Stroanpatrick	High (property)	Medium	Moderate	Not significant	Medium	Moderate	Not significant
	Medium (access)	Medium	Moderate	Not significant	Medium to high	Moderate	Significant
10 - Craigengillan	High (property)	Medium	Major / moderate	Significant	Medium	Moderate*²	Significant

	Medium (access)	Low	Moderate / minor	Not significant	Low to medium	Moderate / minor* ³	Not significant
11 - Craigengillan Cottage	High (property)	Low	Moderate / minor	Not significant	Low	Moderate / minor* ¹	Not significant
	Medium (access)	Medium	Moderate	Not significant	Low to medium	Moderate / minor* ³	Not significant
12 - Moorbrock	High (property)	Low	Moderate	Not significant	Medium to high	Major / moderate	Significant
	Medium (access)	Medium	Moderate	Not significant	High	Moderate	Significant
13 – Game Keeper's Cottage	High (property)	Low to medium	Moderate / minor	Not significant	High	Major / moderate	Significant
	Medium (access)	Low	Moderate / minor	Not significant	High	Moderate	Significant
14 – Strahanna Farm and River Ken Cottage	High (property)	Medium to high	Major / moderate	Significant	Medium	Moderate*⁴	Significant
	Medium (access)	N/A	N/A	N/A	N/A	N/A	N/A
15 - Bridgemark	High (property)	High	Major	Significant	High	Major	Significant
	Medium (access)	Medium	Moderate	Significant	Medium	Moderate	Significant

16 – Knowhead Cottage and Kendoon Cabin	High (property)	Very low (Knowehead Cottage) No change to very low (Kendoon Cabin)	Minor, not significant (Knowehead Cottage) Minor / no effect (Kendoon Cabin)	Not significant	Low (Knowehead Cottage) No change to very low (Kendoon Cabin)	Moderate / minor (Knowehead Cottage) Minor / no effect (Kendoon Cabin)	Not significant
	Medium (access)	N/A	N/A	N/A	N/A	N/A	N/A
17 – Kensglen	High (property)	Medium	Moderate	Not significant	Medium	Moderate	Not significant
	Medium (access)	Medium	Moderate	Not significant	Medium	Moderate	Not significant
Properties Located between 2 km and 5 km of the Proposed Turbines							
Properties to NE (accessed from Lorg Road)	High	High	Major	Significant	High	Major	Significant
Properties to SE (accessed from the B729 near Blackmark Hill)	High	High	Major	Significant	High	Major	Significant
Properties to S (accessed from the B7000)	High	High	Major	Significant	High	Major	Significant

Properties to W (accessed from the B729 near Water of Deugh)	High	High	Major	Significant	High	Major	Significant
Primary Settlements between 5 km and 20 km							
Carsphairn	High	Medium	Moderate	Not significant	Medium	Moderate	Not significant
St John's Town of Dalry (Dalry)	High	No change	No effect	Not significant	No change	No effect	Not significant

Bold text indicates a significant effect

Red text indicates an increase in significant effect between the Consented Development and the Proposed Varied Development

*1 Increasing to **moderate significant** following felling of woodland

*2 increasing to **major significant** following felling of woodland

*3 increasing to moderate not significant following felling of woodland

*4 increasing to **major / moderate significant** following felling of woodland

Recreational and Long-Distance Walking and Cycling Routes

- 8.8.213. Throughout the 20 km detailed study area as a whole, there are numerous recreational routes. The purpose of this assessment is to consider those where significant visual effects are likely to be experienced.
- 8.8.214. It has already been acknowledged within the assessment of construction effects that there are a number of routes which pass through or within close proximity to the Proposed Varied Development. When in very close proximity to a commercial turbine such as the type proposed at the site, turbines can have a locally dominating impact on the view. It is anticipated that the proposed turbines would have such an effect on a few sections of some of the paths which traverse and run through the landscape within which the turbines are proposed.
- 8.8.215. It should be noted that receptors using public rights of way are of high sensitivity to change in the view.

Southern Upland Way

- 8.8.216. The Southern Upland Way passes through the 20 km detailed study area from the south-west to the north-east. The landscape in which the route passes in and out of ZTV coverage as shown on **Figure 8.19**.
- 8.8.217. When travelling in a north-easterly direction along this route, ZTV coverage is patchy until c. 7.1 km south-south-east of the nearest proposed turbine. Occasional glimpses of the Proposed Varied Development available would be available at greater distances, such as at Shield Rig, c. 13 km south south-west (see location A at **Appendix 8.8, Figure 8.8.1.1**). From this isolated location the proposed turbines would form a small cluster of vertical elements in the distant view, resulting in a low magnitude of change in views during daylight hours, and a **moderate/minor** level of effect that would be **not significant**.
- 8.8.218. As the path descends to the north-east of Shield Rig it passes outside of the ZTV for approximately 7.0 km. Where the route ascends Waterside Hill, it briefly passes through the edge of the ZTV where there would potentially be a long-distance view available of the Proposed Varied Development at c. 10.3 km to the north. The view is represented by Viewpoint 17 at **Figure 8.70** and location B at **Appendix 8.8, Figure 8.8.1.2**, which shows that the proposed turbines would form a small cluster of vertical elements in distant view, which takes in a wide panorama over the Water of Ken valley. From this location there would be a low to medium magnitude of change in the view, during daylight hours, and a **moderate/minor to moderate** effect that would be **not significant**.
- 8.8.219. As the route descends to the east of Waterside Hill towards St John's Town of Dalry, ZTV coverage becomes intermittent and variable. Views of the turbines would be further restricted by the presence of built form and layers of vegetation in the local landscape. To the north-east of St John's Town of Dalry, clearer views become available in the direction of the site in the north. At c. 10.3 km away, up to all 11 proposed turbines would briefly be theoretically visible in distant views for approx. 300 m before visibility decreases over approx. 500 m as the route descends. the route again passes out of the ZTV for c. 1.4 km. Where the route reaches the lower slopes of Ardoch Hill, at c. 8.5 km from the nearest

proposed turbine, direct view would be available of up to all 11 proposed turbines for c. 200 m (see location C at **Appendix 8.8, Figure 8.8.1.3**). At this location it is anticipated that there would be a medium magnitude of change to views during daylight hours and a **moderate** level of effect that would be considered **not significant** due to the transient nature of the view in this location.

- 8.8.220. Theoretical visibility gradually reduces over c. 800 m as the route descends towards Earlstoun Burn, until it passes out of the ZTV for c. 700 m. At c. 7.1 km south south-east of the Proposed Varied Development, an almost continuous section of ZTV coverage, c. 2.8 km in length, extends from Corseglass to Butterhole Bridge as it passes over plateau grassland (see locations D and E in **Appendix 8.8 at Figures 8.8.1.4 and 8.8.1.5**). The turbines would be seen at distances of c. 5 – 7 km and would form relatively small features within much wider views. From this section of the route a medium magnitude of change to views are anticipated during daylight hours and a **moderate** level of effect. This effect is deemed to be **significant** due to the notable presence of the turbines in the view.
- 8.8.221. The route briefly exits the ZTV for c. 600 m before re-entering it as it begins to climb Culmark Hill from c. 4.5 km to the south south-east of the nearest proposed turbine. Open views towards the Proposed Varied Development would be available for c. 3.5 km when travelling in a northerly direction from Culmark Hill towards Stroanfreggan Cairn and the B729. This section of the route is illustrated by Viewpoint 7 (location F, **Figure 8.8.1.6 in Appendix 8.8**) at **Figure 8.60** and Viewpoint 5 (location G, **Figure 8.8.1.7 in Appendix 8.8**) at **Figure 8.59**. From this section of the route a high magnitude of change is anticipated during daylight hours, resulting in a **major** level of effect, which is **significant**.
- 8.8.222. North of the B729, ZTV coverage becomes patchier due to the variation in landform. The route passes immediately east of a ridge formed by Stroanfreggan Craig, Round Craigs, and Dunnans Craig which limit or prevent views towards the proposed turbines. It is however acknowledged that the turbines, particularly the blades, would be visible in the landscape to the west where there is an open aspect (see location H, **Figure 8.8.1.8 in Appendix 8.8**). As the route continues north-eastwards from Dunnans Craig, it enters coniferous forest and briefly passes out of the ZTV coverage. The route then passes through a series of clearings as it follows the ridgeline along Manquhill Hill. From this part of the route the turbines would appear behind the receptor as they travel in a north-easterly direction.
- 8.8.223. When travelling in a southerly direction along this route, ZTV coverage begins at Black Hill, from which open views are available towards the site at c. 7.0 km to the east north-east of the Proposed Varied Development (see location J, **Figure 8.8.1.10 in Appendix 8.8**). Open views of up to all 11 proposed turbines continue for c. 2.7 km as the route passes over Cairn Hill and Mid Hill to Benbrack, illustrated by **Figure 8.63** in relation to Viewpoint 10, and location I in **Appendix 8.8 (Figure 8.8.1.9)** at c. 5.5 km away. The visualisation in relation to Benbrack shows that the turbines would be seen on the opposing side of the Ken Valley, set down in the landscape south of the landform feature of Cairnsmore of Carsphairn. There would remain uninterrupted views of the Rhinns of Kells, and the Proposed Varied Development would be seen in the context of the lower forested slopes. A similar view would be experienced at the Striding Arch sculpture on Benbrack. As the route turns towards the direction of the site it descends Benbrack before entering an area of coniferous plantation after c. 1.0 km. From this section of the route,

totalling c. 3.7 km, during daylight hours a medium to high magnitude of change is anticipated, resulting in a **major/moderate** level of effect, which would be **significant**.

- 8.8.224. The route continues towards Manquhill Hill, passing through areas of conifer plantation before emerging into a clearing along the ridge, from which up to all 11 of the proposed turbines would be visible in oblique views at c. 3 – 4 km to the west. Where clear views are available from this section of the route, for c. 1.7 km, a high magnitude of change to views is anticipated, resulting in a **major** level of effect that would be **significant**.
- 8.8.225. As the route descends the south-western slopes of Manquhill Hill, it exits the plantation (see location H, **Figure 8.8.1.8** in **Appendix 8.8**). Theoretical visibility then becomes patchy on the approach to Stroanfreggan Craig until the proposed turbines would pass behind the receptor's line of sight.
- 8.8.226. Overall, the greatest visual effects would occur within 5 km of the proposed turbines where there are open views available in the direction of the Proposed Varied Development. When travelling in a northerly direction, this would be experienced for c. 3.3 km on the section of route between Viewpoints 7 and 5. When travelling in a southerly direction, this would be experienced from the open ridge of Manquhill Hill, c. 1.7 km in length. From these limited sections of the route there would be **major** effects which are **significant**. The effects predicted at Viewpoints 5 and 7 are equal to those found in relation to the Consented Development. Beyond distances of 5 km, ZTV coverage becomes intermittent, coniferous forest curtails views towards the site, and the Proposed Varied Development becomes an increasingly smaller element in the wider views available from the route. Significant visual effects on the Southern Upland Way are not found to extend beyond c. 7.5 km from the nearest proposed turbine.
- 8.8.227. During the hours of darkness, the worst-case level of effect would be experienced from the section of the route with open views within c. 4 km of the proposed turbines. Receptors using this section of the Southern Upland Way are considered to have medium sensitivity to a change in the view as this part of the route is not located within an International Dark Sky Park. With reference to **Figure 8.10**, all six nacelle lights would be visible from the section of the route within c. 4 km of the nearest turbine. With reference to the turbine lighting intensity ZTV at **Figure 8.11**, the lower elevation of the road in relation to the turbine lights would result in a low level of lighting intensity. However, due to the proximity of the lights and the lack of existing light sources in this area, this would result in a medium to high magnitude of change during the hours of darkness and a **moderate** level of effect that would be considered **significant**.

The National Byway

- 8.8.228. The National Byway cycle route runs through the south-eastern part of the study area, between Tynron and Moniaive in the east to Clatteringshaws Loch in the south. Receptors using the route are considered to be of high sensitivity.
- 8.8.229. The comparative ZTV at **Figure 8.19** shows that the route has a greater degree of coverage than the Consented Development, however the hub height ZTV at **Figure 8.8** shows that coverage is generally limited to blade tips only. When travelling in a south-westerly direction along the route, theoretical visibility begins where the route leaves the

B729 at Fingland Moss, c. 6.8 km from the nearest proposed turbine. From the following section of route, c. 600 m in length, theoretical visibility gradually increases on the approach to Viewpoint 8. Up to all 11 turbines are theoretically visible for c. 200 m at an oblique angle of view (see National Byway location A at **Appendix 8.8, Figure 8.8.2.1**). From this part of the route there are open views available in the direction of the site across rolling grassland. The upper parts of the turbines would appear as small vertical features within the fold of the interlocking hills, set down beneath the higher slopes as a cluster of vertical elements. The turbines would not form a prominent feature in the view, and they would not greatly detract the recreational pleasure gained from cycling the route. During daylight hours there would be a worst-case low to medium magnitude of change in the view from this section of the route, giving rise to a **moderate/minor to moderate** effect that is considered **not significant**.

- 8.8.230. The route exits the ZTV close to Viewpoint 8, shown at **Figure 8.61** (National Byway location B at **Appendix 8.8, Figure 8.8.2.2**). There would be no theoretical visibility for c. 800 m, then as the route passes Lochlee Hill, there would be visibility of up to three turbine blade tips for c. 400 m. Theoretical visibility then gradually increases as the route climbs towards Lochwhinnie Hill and Clachadow Rig. There would be variable degrees of visibility of the turbines in oblique angles of view for c. 2.1 km at c. 4.6 - 5.4 km away (see National Byway locations C and D in **Appendix 8.8, Figures 8.8.2.3 and 8.8.2.4**). From the highest point of the route, near White Knowe, the upper parts of up to all 11 turbines would be visible in oblique views above the distant horizon. Views of the proposed turbines would generally be restricted to blade tips due to the intervening undulating landform, with only 1-3 hubs visible, except for the summit near White Knowe where 4 - 6 hubs are theoretically visible. From this section of the route there would be a low to medium magnitude of change during daylight hours and a **moderate/minor** level of effect that is **not significant**. After c. 1.6 km the route exits the ZTV coverage, before bearing towards the south where the turbines would pass behind the receptor's line of sight.
- 8.8.231. When travelling in a north-easterly direction along this route, theoretical visibility begins at Glenlee, to the south-west of St John's Town of Dalry, c. 12.6 km south of the nearest proposed turbine, however intervening woodland in this location would restrict actual views of the turbines. The route continues northwards along the A762 to the west of St John's Town of Dalry. This section of the route passes along the edge of the ZTV with variable theoretical visibility of up to all 11 turbines. The Proposed Varied Development would be theoretically visible within a direct line of sight, however roadside vegetation and woodland on the horizon are likely to screen views. As the route passes through St John's Town of Dalry, it turns away from the direction of the site, turning east, then south, then east again before heading north along the B7000 and out of the ZTV coverage.
- 8.8.232. Patchy ZTV coverage commences at c. 9.9 km to the south of the nearest proposed turbine near Betty's Plantation on the B7000. From this section of the route, for c. 3.6 km, the turbines would be seen in a direct line of sight (see National Byway location E at **Appendix 8.8, Figure 8.8.2.5**). With reference to the ZTV at **Figure 8.5**, generally only the upper parts of four to six of the proposed turbines would be theoretically visible. At distances over 6.6 km away, considering screening from roadside trees, it is anticipated that during daylight hours there would be no greater than a low magnitude of change in views from this section of the route, resulting in a **moderate/minor** level of effect, which is considered **not significant**.

- 8.8.233. At Cuckoostone Cottage the route leaves the B7000 and bears towards the east until it meets the Southern Upland Way at Old Hill of Mackilston, c. 5.8 km from the nearest proposed turbine. There is continuous theoretical visibility of up to all 11 proposed turbines for the following 1.0 km section of the route, which quickly reduces as the route descends to Butterhole Bridge. As described above in relation to the Southern Upland Way location E in **Appendix 8.8** at **Figure 8.8.1.5**), the turbines would form relatively small features within much wider views. From this section of the route a medium magnitude of change to views are anticipated during daylight hours and a **moderate** level of effect. This effect is deemed to be **significant** due to the notable presence of the turbines in the view.
- 8.8.234. At Butterhole Bridge the route bears towards the east and passes out of the ZTV. Where it re-enters ZTV coverage, after c. 1.6 km, the Proposed Varied Development would pass behind the line of sight of receptors.
- 8.8.235. During the hours of darkness, with reference to the lit turbine ZTV at **Figure 8.10**, up to all six nacelle lights would be visible from the section of the route to the south of Butterhole Bridge. With reference to the turbine lighting intensity ZTV at **Figure 8.11**, the relative elevation of this part of the National Byway in relation to the turbine lights would result in a low to medium level of lighting intensity. In part of the landscape with few existing light sources, this would result in a worst-case medium magnitude of change. Receptors using this route are considered to have medium sensitivity during the hours of darkness. There would be a worst-case **moderate** level of effect from this route which would be considered **not significant**.

Core Paths

- 8.8.236. An assessment of visual effects upon the following Core Paths is considered due to their proximity to the Proposed Varied Development and location within ZTV coverage:

Core paths within 5 km

- Core Path 23 - Dundough Hill, 2.2 km south south-west;
- Core Path 164 - Bardennoch Trail, 4.7 km south-west;
- Core Path 182 - Cairnsmore of Carsphairn by Craig of Knockgray, 3.6 km west north-west;
- Core Path 188 – Corlae, 4.5 km east north-east; and
- Core Path 199 – Kendoon Youth Hostel to Butterhole Bridge, 3.6 km south south-east.

Core Path 23

- 8.8.237. There is a cluster of rights of way that form Core Path 23 located to the south of the site at Dundough Hill within the Galloway Hills LLA. The ZTV at **Figure 8.5** suggests that coverage varies, with an area of no theoretical visibility to the south-west side of the hill, but the at the summit there is theoretical visibility of all 11 turbines. The route passes through areas of dense coniferous forest which curtails views out over the surrounding landscape. However, a large area of forest at the location of Viewpoint 12 at Dunbeg and

sloping down towards Loch Kendoon has recently been felled. An open aspect is experienced for c. 0.4 km of elevated footpath, which allows views in a northerly direction across the Loch towards the site. The visualisation at **Figure 8.65** in relation Viewpoint 12 shows the likely view available from this location on Dundegh Hill.

- 8.8.238. During daylight hours, as set out in the Viewpoint Assessment at **Appendix 8.5**, in relation to Viewpoint 12, and for the open, elevated section of footpath to the south (c. 0.4 km in length) during the hours of darkness there would be a worst-case medium magnitude of change and **moderate** effect on this part of Core Path 23, which is considered **significant**. This is equal to the level of effect predicted in relation to the Consented Development.
- 8.8.239. From elsewhere on Dundegh Hill, the Proposed Varied Development is unlikely to be visible as the route passes through the plantation and therefore the magnitude of change during daylight hours would be low to very low giving rise to a worst case **moderate/minor** effect which is **not significant**. These effects are equal to the those predicted in relation to the Consented Development.
- 8.8.240. For the majority of Core Path 23, during the hours of darkness the reduced visibility of the nacelle lights would result in no greater than a low magnitude of change and a **minor** level of effect that is **not significant**.

Core Path 164

- 8.8.241. The Bardennoch Pack Trail is a Core Path that is located within the Galloway Hills LLA that passes between Carsphairn and Dundegh via Bardennoch Hill. As the area is an Archaeology Aensitive Area, the Cultural Heritage Chapter of the EIA Report (**Chapter 11**) provides a number of visualisations from points along, or just off the route.
- 8.8.242. With reference to the blade tip ZTV at **Figure 8.5**, there is theoretical visibility of all 11 turbines from the northern end of the route at Carsphairn, however, the middle section along the ridge at Bardennoch Hill passes out of ZTV coverage, whilst the southern portion of the Trail passes through coniferous woodland from where the Proposed Varied Development would not be visible. Where the proposed turbines would be visible, at the northern end of the route, for c. 2.1 km, on the north face slope of Bardennoch Hill towards Carsphairn (represented by Viewpoint 22 at **Figure 8.75**), the Proposed Varied Development would form a noticeable feature in the view to the north-east to east at c. 4.6 - 5.4 km. The turbines would be seen beyond the line of pylons that occupy the foreground view. During daylight hours there would be a worst-case medium magnitude of change in the view from the Bardennoch Trail giving rise to a **moderate** effect that is considered **significant**. This is equal to the level of effect predicted in relation to the Consented Development.
- 8.8.243. During the hours of darkness, with reference to the lit turbine ZTV at **Figure 8.10**, all six nacelle lights would be visible from the northern slope of Bardennoch Hill. With reference to the turbine lighting intensity ZTV at **Figure 8.11**, the relative elevation of this part of Core Path 164 in relation to the turbine lights would result in a moderate level of lighting intensity. In part of the landscape with few existing light sources, this would result in a worst-case medium magnitude of change. Core Path 164 passes within the boundary of the Galloway International Dark Sky Park and therefore receptors using this path are

considered to have high sensitivity during the hours of darkness. Therefore, the consequent worst-case **moderate** level of effect from this path would be considered **significant**.

Core Path 182

- 8.8.244. Core Path 182 is located within the Galloway Hills LLA and runs southwards from Quantans Hill, at c. 3.6 km to the west of the nearest proposed turbine at the foot of Quantans Hill to Knockgray Park where it meets the B729. The ZTV at **Figure 8.5** suggests that coverage varies but the southern end of the route falls within an area of visibility of all 11 turbines. Theoretical visibility gradually reduces further north, where it passes to the west of Quantans Hill.
- 8.8.245. Potential views of the turbines would be gained when travelling from the B729 at Knockgray Farm northwards. At the southern end of the route woodland around Knockgray Farm would screen potential views of the turbines, however, north of Heathery Wood, glimpsed views of up to all 11 turbines would be available between blocks of woodland for c. 0.1 km. Where open views become available over the open upland grassland landscape, the Proposed Varied Development would be visible in oblique views for c. 0.3 km, with the southernmost turbines appearing most prominent in the view, before the path turns northwards and the turbine would pass behind the line of sight of receptors.
- 8.8.246. Due to the proximity of the Proposed Varied Development at under 4 km away, during daylight hours there would be a worst-case medium to high magnitude of change in the view from limited sections of Core Path 182, giving rise to a **major/moderate** visual effect which is considered **significant** due to the proximity of the turbines. From much of the route however, effects would be much lower and not significant. This is lower than the level of effect predicted in relation to the Consented Development, as that assessment incorporated footpath DS15, which connects Core Path 182 with the site boundary.
- 8.8.247. Receptors travelling in a southerly direction would have the Proposed Varied Development located behind them for much of the route, except for a section, c. 0.5 km in length, on the southern slope of Quantan's Hill. Visibility of the proposed turbines would gradually increase in oblique views to the east, until the path turns towards the south-west. From this short section of footpath, the magnitude of change in the view during daylight hours would be no greater than medium, and the visual effect would be no greater than **moderate** which is considered significant due to the proximity of the turbines.
- 8.8.248. During the hours of darkness, receptors using this path are considered to have medium sensitivity to a change in the view. With reference to the lit turbine ZTV at **Figure 8.10**, up to four of the nacelle lights would be theoretically visible from this core path, however intervening woodland would screen much of the route. Where visible, with reference to the turbine lighting intensity ZTV at **Figure 8.11**, the relatively lower elevation of the core path in comparison with the turbine lights would result in a relatively low level of lighting intensity, so the lights would appear as faint red dots against the backdrop of the sky. This change would occur in a part of the landscape with few existing light sources except for isolated distant properties. This would result in a low magnitude of change during the hours of darkness and a **moderate/minor** level of effect that would be **not significant**.

Core Path 188

- 8.8.249. Core Path 188 connects the Southern Upland Way to the north of Benbrack, with the Holm of Dalquhairn Bridge via an area of coniferous forest. For much of the route potential views of the Proposed Varied Development would be screened by trees, however, open views are available at the eastern end of the route near to the Southern Upland Way, c. 5.9 km from the nearest proposed turbine. From this part of the route, when travelling in a westerly direction, there would be direct views towards the northernmost turbines within the site. Up to all 11 proposed turbines would be visible in the middle-distance, set down in the landscape (similar to the view presented at **Figure 8.63** for Viewpoint 10). For a very limited part of the route, c. 0.5 km in length, before it descends to the forested slopes, there would be a worst-case medium to high magnitude of change during daylight hours, resulting in a **major/moderate** level of effect that would be **significant**. For most of the route however, effect would be much lower and not significant.
- 8.8.250. During the hours of darkness, receptors using this path are considered to have medium sensitivity to a change in the view. With reference to the lit turbine ZTV at **Figure 8.10**, up to all six of the nacelle lights would be theoretically visible from this core path, however intervening woodland would screen much of the route. Where visible at the eastern end of the route, with reference to the turbine lighting intensity ZTV at **Figure 8.11**, the elevation of the core path in relation to the turbine lights would result in a high level of lighting intensity, so the lights would appear brightly lit against the landform. This change would occur in a part of the landscape with few existing light sources except for isolated distant properties. This would result in a medium magnitude of change during the hours of darkness and a **moderate** level of effect that would be considered **not significant** due to the lower sensitivity of receptors.

Core Path 199

- 8.8.251. Core Path 199 heads east from the B7000 north of Glenhoul, and passes over open grassland, following the northern bank of Black Water at the foot of Mackilston Hill, before joining the Southern Upland Way at Butterbole Bridge. It is located c. 3.6 km to the south of the nearest proposed turbine. The blade tip ZTV at **Figure 8.5** shows theoretical visibility of up to all 11 turbines along most of the route, however the hub height ZTV at **Figure 8.8** shows that at the eastern end of the route, visibility would largely be restricted to blade tips, with only 4 to 6 hubs visible. There would be oblique views available towards the Proposed Varied Development, when travelling in either direction, similar to the view represented at Viewpoint 11 at **Figure 8.64** albeit at greater distance.
- 8.8.252. During daylight hours there would be a worst-case medium to high magnitude of change in the view to the north of the route where the aspect is open. The Proposed Varied Development would however occupy a relatively small part of the much wider panoramic view available. It is considered that there would be a **major/moderate** visual effect which is significant, limited to the western part of the route to c. 1.5 km in length. This is slightly greater than the level of effect predicted for the Consented Development due to the increased turbine height.
- 8.8.253. From the eastern part of route, views of the Proposed Varied Development would be interrupted by vegetation and the variation in landform. The magnitude of change in the

view during daylight hours would be no greater than medium from this section of the route, c. 0.9 km in length, and therefore the visual effect would be no greater than **moderate** which is considered **significant** due to the proximity of the turbines. This is slightly greater than the level of effect predicted for the Consented Development due to the increased turbine height.

- 8.8.254. During the hours of darkness, receptors using this path are considered to have medium sensitivity to a change in the view. With reference to the lit turbine ZTV at **Figure 8.10**, up to all six of the nacelle lights would be theoretically visible from the western part of this core path, with gradually reducing visibility further east. With reference to the turbine lighting intensity ZTV at **Figure 8.11**, the relatively lower elevation of the path in comparison with the turbine lights would result in a relatively low level of lighting intensity, so the lights would appear as faint red dots against the backdrop of the sky. This change would occur in a part of the landscape with few existing light sources except for isolated distant properties. This would result in a low magnitude of change during the hours of darkness and a **moderate/minor** level of effect that would be **not significant**.

Core paths between 5 to 10 km

- Core Path 16 - Garryhorn Rig, 6.7 km west; and
- Core Path 190 – Corserine, 9.9 km south-west.

Core Path 16

- 8.8.255. Core Path 16 is located within the Galloway Hills LLA. It includes two sections of route, the westernmost section runs south from Lamloch to Woodhead Mines (represented by Viewpoint 20 at **Figure 8.73**) via an area of conifer plantation. The easternmost section of the route heads east from Woodhead Mines, descending the southern side of Garryhorn Rig across open moorland towards Garryhorn.
- 8.8.256. The blade tip ZTV at **Figure 8.5** shows variable theoretical visibility along the route, with up to all 11 turbines visible from the eastern section of the route. No significant effects are anticipated from the western section of route due to screening from the conifer plantation which encloses the core path. When walking in an easterly direction from Woodhead Mines, however, there would open views towards the Proposed Varied Development, which would be visible within a direct line of sight, channelled between the sloping landform either side of Garryhorn Burn.
- 8.8.257. It is anticipated that during daylight hours there would be a worst-case medium magnitude of change from this core path, when walking in an easterly direction for c. 2.3 km. This would result in a **moderate** level of effect, which is considered **significant** due to the notable presence of turbines within a direct line of sight. However, no significant effects would be experienced when walking in a westerly direction along this route, or from the section of core path to the north of Woodhead Mines.
- 8.8.258. During the hours of darkness, with reference to the lit turbine ZTV at **Figure 8.10**, four of the six nacelle lights would be theoretically visible from this location. With reference to the turbine lighting intensity ZTV at **Figure 8.11**, the relative elevation of the viewpoint in comparison with the turbine lights would result in a moderate to relatively high level of

lighting intensity. The lights would appear small red dots, against the backdrop of the landform or sky. This change would occur in a part of the landscape with very few existing light sources except for distant scattered properties. This would result in a low to medium magnitude of change during the hours of darkness and a **moderate/minor to moderate** level of effect that is considered **not significant** due to the lower sensitivity of receptors during the hours of darkness.

Core Path 190

- 8.8.259. Core Path 190 ascends Corserine, a Corbett, the highest peak of the Rhinns of Kells ridge located within the Galloway Hills LLA, from Polharrow Burn to the east. When walking in a westerly direction along this path, the Proposed Varied Development would be located behind the receptor and therefore there would be no visual effects. However, when descending the path, there would initially be open views of the proposed turbines before the path enters coniferous plantation on the lower slopes. The view at the summit is represented by Viewpoint 21, shown at **Figure 8.74**.
- 8.8.260. As described in **Appendix 8.5**, the summit of Corserine allows long-distance sweeping panoramic views. Up to all 11 proposed turbines would be visible from the summit, and as the path passes Hennesey's Shelter and Cairn, with a short section of reduced visibility between.
- 8.8.261. It is anticipated that during daylight hours there would be a worst-case low to medium magnitude of change from this core path, when walking in an easterly direction. This would result in a **moderate/minor to moderate** level of effect, which is considered **not significant**.
- 8.8.262. The western end of Core Path 190 extends to the boundary of the Galloway International Dark Sky Park, and as such receptors are **considered** high sensitivity during the hours of darkness. With reference to the lit turbine ZTV at **Figure 8.10**, all six nacelle lights would be visible from the most elevated part of the route. With reference to the turbine lighting intensity ZTV at **Figure 8.11**, the turbine lights would have a high level of lighting intensity, so they would appear brightly lit, albeit very small red dots against the backdrop of the landform. This change would occur in a part of the landscape with very few existing light sources except for distant lights of scattered properties and transient lights of road users. Due to the intervening distance, this would result in a low magnitude of change and a **moderate/minor** level of effect that is considered **not significant**.

Other Rights of Way

- 8.8.263. An assessment of visual effects upon the following other Rights of Way is considered due to their proximity to the Proposed Varied Development and location within ZTV coverage:
- DS15, between Core Path 182 at Knockgray, west of the site and Moorbrock to the north, passing adjacent to the northern site boundary;
 - DS16, between Moorbrock, north of the site and Craigengillan to the east, on the north-eastern site boundary;
 - DS17, 1.8 km east of the site at Stroanfreggan Cairn to Auchrae;

- DS19, 1.3 km south-west, south of Marscalloch Hill;
- DS21, between Muirdrochwood south of the site to the summit of Marscalloch Hill on the south-western site boundary;

8.8.264. The nature of views from rights of way DS15, DS16 and DS21 will vary over the lifetime of the Proposed Varied Development due to the temporal nature of the commercial plantation that covers the site. Chapter 7 of the EIA Report sets out the baseline forest conditions.

DS15

8.8.265. Route DS15 is located within the Galloway Hills LLA. The route bears south-west from Moorbrock, to the north of the site, and connects with Core Path 182 at Knockgray. At the north-eastern end of this route, on approach to Knockgray, views into the northern part of the site are largely screened by the presence of plantation. However, advanced felling is proposed for the western edge of the site, which would open up views of the Proposed Varied Development.

8.8.266. During daylight hours there would be a high magnitude of change in the view from this footpath as the turbines would form prominent features in the near landscape, giving rise to a **major** effect that is **significant**. This is equal to the worst-case level of effect predicted in relation to the Consented Development post-felling. This effect would gradually reduce at the northern end of the route as the plantation is restocked and begins to establish and mature, with views of the ground level components of the Proposed Varied Development filtered or screened from view.

8.8.267. Views from the remainder of DS15 generally become increasingly open with distance from the site, as one moves away from the plantation that currently covers much of the site, however a large area of new forestry plantation extends across Fumiston Craig towards Quantans Hill. It is proposed that the western edge of the southern part of the site would remain open, with views available of the lower portions of turbines T6 and T8, however views of the proposed Substation and BESS compound would gradually become screened as new and proposed planting becomes established. When walking in a north-easterly direction from Knockgray Park, during daylight hours there would be a high magnitude of change in the view to the east, which would result in a **major** effect that is **significant**. This is equal to the level of effect predicted in relation to the Consented Development.

8.8.268. During the hours of darkness, as the path does not pass within a Dark Sky Park, receptors are considered to have medium sensitivity to a change in the view. With reference to the lit turbine ZTV at **Figure 8.10**, only one to two lit hubs would be visible from the northern site boundary at Moorbrock, however to the west of the site all six nacelle lights would be visible. With reference to the turbine lighting intensity ZTV at **Figure 8.11**, the relative lower elevation of the footpath in comparison with the turbine lights would result in a low level of lighting intensity, so the lights would appear as faint red dots against the backdrop of the sky. This change would occur in a part of the landscape with very few existing light sources except for lights from scattered properties in other views, and transient lights of road users. This would result in a worst-case medium to high magnitude of change during

the hours of darkness, which would result in a **moderate** level of effect that would be considered **significant** due to the proximity of the turbines.

DS16

- 8.8.269. In views from DS16, when travelling in a north-westerly direction from the Lorg Road to Moorbrock around the north-eastern site boundary, the Proposed Varied Development would be visible in oblique views to the west across an area of recent tree planting. The turbines would be prominent features in the landscape as they would be seen above the plantation within the site. During daylight hours there would be a high magnitude of change in the view, giving rise to a **major** effect which is **significant**. This is equal to the level of effect predicted in relation to the Consented Development.
- 8.8.270. When travelling in a southerly direction along the DS16 to the north of the site, there would be distant elevated views of the Proposed Varied Development from the eastern slope of Dod Hill. The route then passes through an area of conifer plantation before emerging at Moorbrock, close to the northern site boundary. From Moorbrock, there are views available into the site across a recently felled area towards the summit of Craigengillan Hill. It is proposed that the plantation at the northern edge of the site will be restocked, which over time will provide screening of the ground level components of the development. The Proposed Varied Development would be seen on higher ground above the route, but the turbines would be set back from the footpath at a distance c. 0.9 km and thus would not appear overwhelming in the view.
- 8.8.271. During daylight hours, when travelling southwards along the DS16 there would be a worst-case high magnitude of change in the view resulting in a **major** and significant effect. Such effects would again gradually reduce as the restocked forest establishes and matures, curtailing views into the site. This is equal to the level of effect predicted in relation to the Consented Development.
- 8.8.272. During the hours of darkness, as the path does not pass within a Dark Sky Park, receptors are considered to have medium sensitivity to a change in the view. With reference to the lit turbine ZTV at **Figure 8.10**, only three to four lit hubs would be visible from the northern site boundary at Moorbrock, however to the north-east of the site at Dod Hill, all six nacelle lights would be visible. With reference to the turbine lighting intensity ZTV at **Figure 8.11**, the changing elevation of the path in comparison with the turbine lights would result in varying lighting intensity. At the most elevated part of the route, this would result in a worst-case medium to high magnitude of change during the hours of darkness, which would result in a **moderate** level of effect that would be considered **significant** due to the proximity of the turbines.

DS17

- 8.8.273. Route DS17 bears in a south-westerly direction, crossing the landscape to the east of the site between Corlae in the north (represented by Viewpoint 6 at **Figure 8.59**) and the B729 in the south. At its northern end it follows the edge of an area of conifer plantation along the eastern side of the Water of Ken. When travelling in a southerly direction along this section of path from Corlae to Strahanna (c. 2.8 km in length), there would be direct views of the Proposed Varied Development and a medium to high magnitude of change to views, resulting in a **major/moderate significant** effect. However, when walking in a northerly

direction along this northerly section of footpath, the Proposed Varied Development would lie behind the receptor and thus there would be no visual effect.

- 8.8.274. Continuing southwards through the plantation, the footpath crosses the south-western slope of Auchrae Hill, from which views of the Proposed Varied Development would be screened. As the route emerges to the south of Auchrae Hill, there is theoretical visibility of up to all 11 proposed turbines at c. 2.0 km from the nearest proposed turbine. The route then bears south towards the Southern Upland Way where it passes to the south-east of Stroanfreggan Craig. The nature of views from the southern part of the route are similar to that shown in relation to Viewpoint 2 at **Figure 8.55**, although at a lower elevation. From this part of the route the Proposed Varied Development would form prominent features in oblique views to the west and north-west, which include the more distant Windy Standard turbines.
- 8.8.275. During daylight hours there would be a worst-case high magnitude of change in the view from the southern end of this footpath, c. 1.4 km in length, where the open aspect allows views across the Ken Valley towards the site. This would result in a **major** visual effect which is **significant**. This is equal to the level of effect predicted in relation to the Consented Development.
- 8.8.276. During the hours of darkness, as the path does not pass within a Dark Sky Park, receptors are considered to have medium sensitivity to a change in the view. With reference to the lit turbine ZTV at **Figure 8.10**, there is variable theoretical visibility of the nacelle lights along the route of the footpath. From the section of the path that coincides with the Southern Upland Way there is no theoretical visibility of turbine lights, however, up to all six lights would be visible to the immediate south of Auchrae Hill. With reference to the turbine lighting intensity ZTV at **Figure 8.11**, the changing elevation of the path in relation to the turbine lights would result in varying levels of lighting intensity, with greater intensity at the most elevated part of the route to the north-east. This would result in a worst-case medium to high magnitude of change to the immediate south of Auchrae Hill during the hours of darkness, which would result in a **moderate** level of effect that would be considered **significant** due to the proximity of the turbines.

DS21

- 8.8.277. Footpath DS21 is located within the Galloway Hills LLA, within an area of coniferous plantation on the south-western slope of Marscalloch Hill on the south-western boundary of the site. The most elevated part of the route closest to the site boundary is enclosed by mature trees, whilst the lower sections of the route, with reduced ZTV coverage pass within areas of recently planted young trees. Views of the southernmost turbines would be partially screened by the landform of Marscalloch Hill would with the upper parts of the turbines visible above intervening trees.
- 8.8.278. It is anticipated that during daylight hours there would be a worst-case low to medium magnitude of change giving rise to a **moderate/minor** to **moderate** effect which is **not significant**. This is equal to the level of effect predicted in relation to the Consented Development.

- 8.8.279. During the hours of darkness, as the path does not pass within a Dark Sky Park, receptors are considered to have medium high susceptibility to a change in the view. With reference to the lit turbine ZTV at **Figure 8.10**, only one to two of the nacelle lights would be visible from this route. With reference to the turbine lighting intensity ZTV at **Figure 8.11**, the lower elevation of the path in relation to the turbine lights would result in a low levels of lighting intensity. This would result in a worst-case low magnitude of change during the hours of darkness, which would result in a **moderate/minor** level of effect that would be considered **not significant**.

Table 8.16 – Summary of Worst-Case Visual Effects on Recreational Receptors During Daylight Hours – Comparison with Consented Development

Name / Receptor	Sensitivity	Consented Development			Proposed Varied Development		
		Magnitude of Change	Level of Effect	Significance	Magnitude of Change	Level of Effect	Significance
Recreational and Long Distance Walking and Cycling Routes							
Southern Upland Way (within 5 km – heading south)	High	Not specified (High at VP 5 and VP 7)	Major / moderate (Major at VP 5 and VP 7)	Significant	High for 1.7 km (on Manquhill Hill)	Major	Significant
Southern Upland Way (within 5 km – heading north)	High	Not specified (High at VP 5 and VP 7)	Major / moderate (Major at VP 5 and VP 7)	Significant	High for 3.3 km (from VP 7 – VP 5)	Major	Significant
Southern Upland Way (5 - 7.5 km – heading south)	High	Not specified (Medium to high at VP 10)	Not specified (Major / moderate at VP10)	Not specified (significant at VP 10)	Medium to high for 3.7 km (2.7 km from Cairn Hill to Benbrack, VP 10)	Major / moderate	Significant
Southern Upland Way (5 - 7.5 km – heading north)	High	Not specified	Not specified	Not significant	Medium for 2.8 km (from Corseglass to Butterhole Bridge)	Moderate	Significant

Name / Receptor	Sensitivity	Consented Development			Proposed Varied Development		
		Magnitude of Change	Level of Effect	Significance	Magnitude of Change	Level of Effect	Significance
The National Byway Cycle Route (within 6 km)	High	Low to medium	Moderate to moderate / minor	Not significant	Medium for 1.0 km (at Old Hill of Mackilston)	Moderate	Significant
Core Paths within 5 km							
Core Path 23 - Dundegh Hill	High	Medium to high	Major / moderate	Significant	Medium to high for 0.4 km (at Dunbeg, VP 12)	Major / moderate	Significant
Core Path 164 - Bardenoch Trail	High	Medium	Moderate	Significant	Medium for 2.1 km (on north face of Bardenoch Hill)	Moderate	Significant
Core Path 182 – Cairnsmore of Carsphairn by Craig of Knockgray (heading north)	High	Not assessed separately	Not assessed separately	Not assessed separately	Medium to high for 0.4 km (north of Heathery Wood)	Major / moderate	Significant

Name / Receptor	Sensitivity	Consented Development			Proposed Varied Development		
		Magnitude of Change	Level of Effect	Significance	Magnitude of Change	Level of Effect	Significance
Core Path 182 – Cairnsmore of Carsphairn by Craig of Knockgray (heading south)	High	Not assessed separately	Not assessed separately	Not assessed separately	Medium for 0.5 km (south face of Quantan's Hill)	Moderate	Significant
Core Path 188 - Corlae (heading west)	High	Not assessed	Not assessed	Not assessed	Medium to high for 0.5 km (at eastern end of route nr SUW)	Major / moderate	Significant
Core Path 199 - Kendoon Youth Hostel to Butterhole Bridge	High	Medium	Moderate	Significant	Medium to high for 1.5 km (at western part of route)	Major / moderate	Significant
Core Paths between 5 km and 10 km							
Core Path 16 - Garryhorn Rig	High	Not assessed	Not assessed	Not assessed	Medium for 2.3 km (south of Garryhorn Rig)	Moderate	Significant
Core Path 190 - Corserine	High	Not assessed	Not assessed	Not assessed	Low to medium	Moderate / minor to moderate	Not significant

Name / Receptor	Sensitivity	Consented Development			Proposed Varied Development		
		Magnitude of Change	Level of Effect	Significance	Magnitude of Change	Level of Effect	Significance
Other Rights of Way within 5 km of the Proposed Turbines							
DS15	High	High	Major	Significant	High	Major	Significant
DS16	High	High	Major	Significant	High	Major	Significant
DS17 (southern end of route – both directions)	High	High	Major	Significant	High for 1.4 km (south of plantation on Auchrae Hill to SUW)	Major	Significant
DS17 (northern end of route - heading south)	High	Not specified (Medium to high at VP 6)	Not specified (Major / moderate at VP 6)	Not specified (significant at VP 6)	Medium to high for 2.8 km (from Corlae, VP 6, to Strahanna)	Major / moderate	Significant
DS21	High	Low to medium	Moderate / minor to moderate	Not significant	Low to medium	Moderate / minor to moderate	Not significant

Bold text indicates a significant effect

Red text indicates an increase in significant effect between the Consented Development and the Proposed Varied Development

Table 8.17 – Summary of Worst-Case Visual Effects on Recreational Receptors During Hours of Darkness

Name / Receptor	Sensitivity	Consented Development			Proposed Varied Development		
		Magnitude of Change	Level of Effect	Significance	Magnitude of Change	Level of Effect	Significance
Recreational and Long Distance Walking and Cycling Routes							
Southern Upland Way*	Medium	N/A	N/A	N/A	Medium to high	Moderate	Significant
The National Byway Cycle Route	Medium	N/A	N/A	N/A	Medium	Moderate	Not significant
Core Paths within 5 km							
Core Path 23 - Dundegh Hill	Medium high	N/A	N/A	N/A	Medium	Moderate	Significant
Core Path 164 - Bardennoch Trail	High	N/A	N/A	N/A	Medium	Moderate	Significant
Core Path 182 – Cairnsmore of Carsphairn by Craig of Knockgray	Medium high	N/A	N/A	N/A	Low	Moderate / minor	Not significant
Core Path 188 - Corlae	Medium	N/A	N/A	N/A	Medium	Moderate	Not significant

Core Path 199 - Kendoon Youth Hostel to Butterhole Bridge	Medium	N/A	N/A	N/A	Low	Moderate / minor	Not significant
Core Paths between 5 km and 10 km							
Core Path 16 - Garryhorn Rig	Medium high	N/A	N/A	N/A	Low to medium	Moderate / minor to moderate	Not significant
Core Path 190 - Corserine	Medium high	N/A	N/A	N/A	Low	Moderate / minor	Not significant
Other Rights of Way within 5 km of the Proposed Turbines							
DS15	Medium	N/A	N/A	N/A	Medium to high	Moderate	Significant
DS16	Medium	N/A	N/A	N/A	Medium to high	Moderate	Significant
DS17	Medium	N/A	N/A	N/A	Medium to high	Moderate	Significant
DS21	Medium high	N/A	N/A	N/A	Low	Moderate / minor	Not significant

Bold text indicates a significant effect

*Worst-case effect within 5 km only

Red text indicates an increase in significant effect between the Consented Development and the Proposed Varied Development

Roads

A712

- 8.8.280. The A712 is located 13.5 km to the south of the Proposed Varied Development at its nearest point at Balmaclellan. To the east of Balmaclellan, the road connects to the A75 at Crocketford with the A713 at the Water of Ken, whilst to the west it connects with the A713. To the west of the Water of Ken, the A712 passes through New Galloway, connecting with the A75 at Newton Stewart via the Galloway Forest Park. Receptors using this road, which is a popular tourist route, passing through the Galloway Forest Park, are considered to have medium sensitivity to a change in their view.
- 8.8.281. The ZTV at **Figure 8.5** shows that the majority of the route is located outside of ZTV coverage, with only a small section of the road falling within theoretical visibility of all 11 proposed turbines at The Queens Way, to the south-west of West Riskpark. From this location, glimpsed open views are available either side of the property at Laighfield. There is also scattered visibility between New Galloway and Balmaclellan, from where deciduous trees allow filtered views during winter. Where glimpsed or filtered views are available of the proposed turbines, they would form incidental features in the distance. During daylight hours it is anticipated that there would be a low magnitude of change in views resulting in a **moderate/minor** level of effect upon receptors using the A712, which is considered **not significant**. This is a slight increase with respect to the effects predicted for the Consented Development due to the increased turbine height.
- 8.8.282. During the hours of darkness, receptors are considered to have medium sensitivity to a change in the view as the road passes within an International Dark Sky Park. With reference to **Figure 8.10**, up to all six of lit hubs would be theoretically visible from the section of road to the south-west of West Riskpark, whilst only one to two lit hubs would be theoretically visible from the section of road to the east of New Galloway. With reference to the turbine lighting intensity ZTV at **Figure 8.11**, there would be a moderate level of lighting intensity from these locations. The lights would appear as small red dots against the backdrop of the sky. It is considered that at a distance of over 14 km away, this would result in a very low magnitude of change upon the low sensitivity receptors, and a worst-case **minor** level of effect, which is **not significant**.

A713

- 8.8.283. The A713, Ayr Road, is the closest primary road to the site, located to the south-west at distance of c. 3.6 km. The route passes through Dalmellington, Carsphairn, and St John's Town of Dalry and on to Castle Douglas via the eastern shores of Loch Ken. The route is a signed tourist route to Ayr, and as such, receptors are considered to be of medium sensitivity.
- 8.8.284. The ZTV at **Figure 8.19** shows that there is virtually no coverage between Dalmellington and Carsphairn. There is also no ZTV coverage between St John's Town of Dalry and the Ken Bridge Hotel east of New Galloway. The primary views that concern this assessment are those experienced from St John's Town of Dalry to Carsphairn. The ZTV at **Figure 8.19** suggests that there are long sections of the route in which the Proposed Varied Development would be fully visible, however, as illustrated at **Figure 8.5**, ZTV coverage is variable.

- 8.8.285. When travelling in a south-easterly direction along this road, theoretical visibility of the Proposed Varied Development begins on the approach to Carsphairn. Oblique views of the turbines would be brief before being quickly curtailed by housing in Carsphairn and surrounding woodland. From this section of road, less than 1.0 km in length (illustrated by **Figure 8.8.3.1**, A713 location A at **Appendix 8.8**) there would be no higher than a low magnitude of change during daylight hours and a **moderate/minor** effect on views within and to the north-west of Carsphairn, which is **not significant**.
- 8.8.286. As the road exits the settlement to the south-east, views towards the site are partially screened by landform and roadside vegetation provides additional filtering. Where views open out, electricity pylons form prominent vertical features in the near to middle-distance views. From this section of road (illustrated by Viewpoint 22 at **Figure 8.75** and A713 location B at **Appendix 8.8**, **Figure 8.8.3.2**) which extends from the east of Carsphairn, over Liggat Bridge across the Water of Deugh, for up to c. 1.0 km, there would be a medium magnitude of change and a **moderate** level of effect during daylight hours, which is considered **not significant** due to the existing influence of electrical infrastructure.
- 8.8.287. As the road bears towards the east south-east, approaching Cumnock Knowes, on the north-east slope of Bardennoch Hill, it climbs in elevation and the prominence of the Proposed Varied Development would increase. Slightly oblique views from this section of road, c. 0.6 km in length, would experience a medium to high magnitude of change, resulting in **moderate** effects which would be considered significant.
- 8.8.288. As the road bears towards the south-east, near the entrance to Tir nan Og, views are available across the recently planted trees at Culmark Knowes plantation towards the site. This section of road is illustrated by the visualisation at **Figure 8.72** in relation to Viewpoint 19 (A713 location C at **Appendix 8.8**, **Figure 8.8.3.3**). The Proposed Varied Development would form a noticeable feature above the near horizon at a distance of c. 3.8 km to the nearest turbine in oblique views. During daylight hours there would be a high magnitude of change to views from a short section of road for less than 0.5 km, until mature conifer plantation curtails views near to Bardennoch. This would result in a **moderate** effect which is considered **significant**. This is equal to the worst-case level of effect predicted in relation to the Consented Development.
- 8.8.289. As the road approaches Dundough from the north-west coniferous plantation continues to screen views under the Proposed Varied Development would pass behind the line of sight of the receptor.
- 8.8.290. When travelling in a north-westerly direction along the road, theoretical visibility begins at c. 20 km from the nearest proposed turbine, on the eastern shore of Loch Ken and to the east of Kenmure Holms (see A713 locations H and I at **Appendix 8.8**, **Figures 8.8.3.8** and **8.8.3.9**). Visibility on the approach to New Galloway is variable and intermittent, as illustrated by the ZTVs at **Figures 8.5** and **8.8**. The landscape in this location is well treed, which would further restrict actual visibility. From this section of road, filtered views of the Proposed Varied Development at over 15 km away would result in a very low magnitude of change during daylight hours, and a **minor** level of effect, which is **not significant**.
- 8.8.291. There is no theoretical visibility between New Galloway and St John's Town of Dalry. At St John's Town of Dalry, initially, theoretical visibility is intermittent and variable.

Continuous ZTV coverage begins at Allangibbon Bridge over the Water of Ken. In this location, dense tree cover adjacent to Earlstoun Loch strongly contains views for c. 1.3 km. There would be no greater than a very low magnitude of change from this section of road during daylight hours, resulting in a **minor** level of effect, which is **not significant**.

- 8.8.292. Where the road reaches Barskeoch Wood Lodge, views open out across Earlstoun Loch in the direction of the site to the north (see A713 location G at **Appendix 8.8, Figure 8.8.3.7**). From this location, the Proposed Varied Development would appear as a minor feature in the distance at c. 8.7 km from the nearest proposed turbine. From the following section of road, as it continues north to Carsfad Loch, during daylight hours there would be a low magnitude of change in views for c. 2.4 km, resulting in a **moderate/minor** effect, which is **not significant**.
- 8.8.293. Where the road emerges from tree cover adjacent to Carsfad Loch, the Proposed Varied Development would be visible at c. 6.5 km from the nearest turbine. The turbines would begin to appear as more prominent features in a direct angle of view, as illustrated by **Figure 8.71** in relation to Viewpoint 18 at Stroangassel (A713 location F in **Appendix 8.8, Figure 8.8.3.6**). From this location there is theoretical visibility of up to all 11 proposed turbines for approximately 1.7 km. Views of the Proposed Varied Development from this section of road would be filtered through roadside trees, giving rise to a medium magnitude of change to views during daylight hours, resulting in a **moderate** level of effect, which is considered **not significant** due to the existing influence of Kendoon Power Station in the same part of the view.
- 8.8.294. As the A713 approaches Dundee, the Proposed Varied Development would become less visible due to a combination of screening by Dundee Hill and tree cover. To the north of Dundee, the road briefly passes out of the ZTV, before theoretical visibility begins to increase again at c. 4.2 km from the nearest proposed turbine. The following section of road with theoretical visibility of all 11 proposed turbines which passes Dalshangan, is lined with trees which filter views in the direction of the site at an oblique angle of view in the north-east for c. 0.6 km (A713 location E at **Appendix 8.8, Figure 8.8.3.4**). A brief glimpsed view is available towards Dundee Hill in the east, before the road passes adjacent to conifer plantation which screens views for c. 0.5 km. To the north of the plantation, at Polquhanity, roadside trees filter views in the direction of the site for c. 0.2 km before the road passes another conifer plantation for c. 0.5 km. During daylight hours there would be no greater than a low magnitude of change in views from this section of road, resulting in a **moderate/minor** effect, which is **not significant**.
- 8.8.295. The road emerges from tree cover adjacent to a recently felled and re-planted area of conifer plantation. Further areas of conifer plantation remain in the intervening landscape between the road and the site, which would partially screen the lower parts of the Proposed Varied Development, until such time that they are felled. As the road approaches Bardenoch and Laird's Hill (A713 location D at **Appendix 8.8, Figure 8.8.3.4**), up to all 11 proposed turbines would be theoretically visible in very oblique views, however, small areas of roadside woodland heavily filter views in some locations. Where open views are available between roadside trees and above the intervening conifer plantation, there would be a medium magnitude of change during daylight hours for c. 2.0 km, which would result in a **moderate** level of effect, that is considered **not significant** due to the existing influence of electricity pylons in the view.

- 8.8.296. To the north of Laird's Hill, as the road approaches Cumnock Knowes, very oblique views towards the site open up as illustrated at **Figure 8.72** in relation to Viewpoint 19 (A713 location C at **Appendix 8.8, Figure 8.8.3.3**). For c. 0.5 km there would be a high magnitude of change in views during daylight hours, resulting in a **moderate significant** effect, until the proposed turbines pass behind the receptor's line of sight. This is equal to the worst-case level of effect predicted in relation to the Consented Development.
- 8.8.297. During the hours of darkness, receptors using the A713 are considered to have low sensitivity to a change in their view. With reference to the lit turbine ZTV at **Figure 8.10**, there is variable theoretical visibility along the A713, with up to all six turbine lights theoretically visible within 5 km of the nearest proposed turbine. With reference to the turbine lighting intensity ZTV at **Figure 8.11**, the lower elevation of the road in relation to the turbine lights would result in a low level of light intensity. Where open views are available of the turbine lights at relative proximity to the road, there would be a worst-case low magnitude of change and a **minor** effect that is considered **not significant**.

A762

- 8.8.298. The A762 connects with the A75 to the south, passing alongside the western shores of Loch Ken and heading north to New Galloway and St John's Town of Dalry where it meets the A713. The closest point of the route to the Proposed Varied Development is over 10 km distance at Allangibbon Bridge. Receptors using this road, which passes within the boundary of the Galloway Forest Park, are considered to have medium sensitivity to a change in their view.
- 8.8.299. The A762 enters the 20 km study area adjacent to the west shore of Loch Ken. In this location within the boundary of the Galloway Forest Park, there is theoretical visibility of up to all 11 of the proposed turbines, however deciduous trees adjacent to the loch shore filter views in the direction of the site to the north. At distances of over 16 km to the nearest proposed turbine, the Proposed Varied Development would appear as a minor feature within wider views of the loch and opposite shore. During daylight hours there would be a very low magnitude of change to views from the section of road to the south of New Galloway, resulting in a **minor** level of effect, which is **not significant**.
- 8.8.300. As one travels northwards along the A762, Kirkbrae Road, from New Galloway towards the A713 and A702 at Allangibbon Bridge, the low elevation of the road encloses views within the Water of Ken valley. This is reflected by the hub height ZTV at **Figure 8.8**, which shows reduced theoretical visibility from this section of road. Where open views are available, the Proposed Varied Development would appear as a minor element in a much wider view at c. 10.5 – 13.5 km away, and the turbines would appear set down in the landscape beyond layers of wooded hills. From this section of the road, c. 4.3 km in length, there would be a low magnitude of change to views during daylight hours, resulting in a **moderate/minor** level of effect that is **not significant**. This is equal to the worst-case level of effect predicted in relation to the Consented Development.
- 8.8.301. During the hours of darkness, receptors using the A762 are considered to have medium sensitivity to a change in the view as the road passes within an International Dark Sky Park. With reference to **Figure 8.10**, the section of road with open views between New Galloway and St John's Town of Dalry has theoretically visibility of between one to four lit

hubs. With reference to the turbine lighting intensity ZTV at **Figure 8.11**, there would be a moderate level of lighting intensity from this location. The lights would appear as small red dots against the backdrop of the sky. It is considered that at a distance of over 11 km away, this would result in a very low magnitude of change upon the low sensitivity receptors, and a worst-case **minor** level of effect, which is **not significant**.

B729

- 8.8.302. The B729 connects the A702 at Moniaive with the A713 at Carsphairn. The sensitivity of receptors using this road is considered to be high due to its use for tourism purposes, particularly as it provides access to the Southern Upland Way.
- 8.8.303. The ZTV at **Figure 8.19** suggests that there is a continuous high level of theoretical visibility along the entire section of road within 5 km of the Proposed Varied Development. However, the ZTVs at **Figures 8.5** and **8.8** show that undulations in landform cause a large amount of variation in visibility.
- 8.8.304. When travelling in a westerly direction along the B729 from Moniaive, theoretical visibility begins at c. 6.7 km from the nearest proposed turbine, at the junction with the minor road at Fingland Hill (B729 location A at **Appendix 8.8, Figure 8.8.4.1**). The intervening landform of Carroch Hill in this location would restrict views of the proposed turbines within the northern part of the site largely to blade tips, with four to six hubs within the southern part of the site visible in a direct line of sight along the road. For the following section of road, c. 3.0 km in length, until the road reaches the south-western foot of Carroch Hill, there would be a medium magnitude of change to views during daylight hours. This would result in a **moderate significant** effect.
- 8.8.305. As the road bears north-westwards towards Guttery Glen, represented by Viewpoint 3 at **Figure 8.56** (B729 location B at **Appendix 8.8, Figure 8.8.4.2**), views open out towards the Proposed Varied Development as theoretical visibility increases to include up to all 11 turbines. The northernmost turbines would become a prominent feature against the backdrop of Beninner and Cairnsmore of Carsphairn, however the turbines within the southern part of the site would be partially screened by conifer plantation at Blackmark Hill. From this location, at c. 4.1 km to the nearest proposed turbine, there would be a high magnitude of change in views during daylight hours, resulting in a **major significant** effect. This worst-case level of effect, which is equal to that predicted in relation to the Consented Development, would continue for c. 3.7 km, past Viewpoint 1 at Stroanfreggan Bridge (**Figure 8.54** and B729 location C at **Appendix 8.8, Figure 8.8.4.3**), and Viewpoint 4 at Smittons Bridge (**Figure 8.57** and B729 location D at **Appendix 8.8, Figure 8.8.4.4**), to the south-east site boundary where the road bears to the south-west and the Proposed Varied Development would pass behind the receptor.
- 8.8.306. To the south of Marscalloch Hill the B729 meets the B7000 and bears towards the north-west. This section of road is enclosed by trees on either side including Carsphairn Community Woodland to the south and coniferous plantation to the north. As the road continues north-west it passes through deciduous woodland adjacent to the Water of Deugh, which heavily filter views towards the site, except for glimpses at Marscalloch. The road emerges from tree cover to the south-west of the site, where the Proposed Varied Development would move behind the receptor. Along the section of road to the immediate

south-west of the site there would be no greater than a low magnitude of change and a **moderate/minor** effect on views when travelling in either direction, which is not significant.

- 8.8.307. When travelling in an easterly direction along the B729 from the junction with the A713 at Carsphairn, there would be direct views of the Proposed Varied Development for c. 0.5 km, below overhead power lines, as represented by Viewpoint 22 at Figure 8.75 (B729 location F at **Appendix 8.8, Figure 8.8.4.6**). The lower parts of the proposed turbines would be partially screened by the landforms of Furmiston Craig and Marscalloch Hill, whilst intervening small blocks of woodland would provide further partial screening. However, at distances of under c. 4.7 km, during daylight hours there would be a worst-case medium magnitude of change to views, resulting in a **moderate** level of effect, which is considered not significant due to intervening features in the view.
- 8.8.308. The road passes through areas of woodland, until, at Scar Knowe, marked by the entrance to Marbrae, approximately 3.3 km from the nearest proposed turbine, filtered views become available through roadside trees. For the following section of road, c. 0.4 km in length, filtered, slightly oblique views of the Proposed Varied Development would give rise to a medium magnitude of change and a **moderate** level of effect, which would be considered significant due to the proximity of the turbines.
- 8.8.309. As the road bears towards the south-east on the approach to Burnfoot, roadside trees and intervening landform would reduce **moderate** visual effects to a level that is considered not significant. Open views in the direction of the Proposed Varied Development become available as the road passes Polwhirn, for a section of road c. 0.3 km in length. From this location, only turbine T10 would be prominent in the view, with the majority of the Proposed Varied Development only visible as blade tips. Therefore, effects would remain not significant until the road once again becomes enclosed by tree cover. As illustrated by the hub height ZTV at **Figure 8.8**, the visibility of the Proposed Varied Development reduces as the road passes to the south-west of Marscalloch Hill (see B729 location E at **Appendix 8.8, Figure 8.8.4.5**).
- 8.8.310. During the hours of darkness, receptors using the B729 are considered to have medium high sensitivity to a change in the view as the road passes within an LLA but is not located within an International Dark Sky Park. With reference to **Figure 8.10**, the section of road with direct, open views between Carroch Hill and the site boundary has theoretically visibility of up to all six lit hubs. With reference to the turbine lighting intensity ZTV at **Figure 8.11**, there would be a relatively low level of lighting intensity. The lights would appear as faint red dots against the backdrop of the landform or sky. It is considered that due to the proximity of the turbines this would result in a medium magnitude of change, and a worst-case **moderate** level of effect, which is not considered significant.

B7000

- 8.8.311. The B7000 connects the A702 at St John's Town of Dalry to the B729 at Knowehead. It is located c. 1.9 km to the south of the nearest turbine at the closest point. Receptors using this road are considered to have high sensitivity due to its use for tourism purposes, particularly as it provides access to the Southern Upland Way.

- 8.8.312. As described in relation to the National Byway above, when travelling in a northerly direction along the road, theoretical visibility is initially intermittent and variable. Roadside vegetation would provide further filtering or screening of direct views towards the site in the north. There would be no greater than a low magnitude of change and a **moderate/minor not significant** effect from views south of Cuckoostone Cottage.
- 8.8.313. From Glenhoul Hill to the west of Mackilston Hill to the High Bridge of Ken, a section of the B7000, c. 3.5 km length, is located within ZTV coverage of up to all 11 of the proposed turbines. At its furthest point this section of road is located c. 5.1 km from the nearest proposed turbine, whilst the northern end is located c. 1.9 km away. The Proposed Varied Development would be seen beyond Marscalloch Hill in direct views to the north, beyond the lower lying Glenhoul Glen and Kendoon Loch in the intermediate view. The southernmost turbines would be most visible to the east of the hill formation, with the lower parts of the northernmost turbines screened by Marscalloch Hill, as shown at **Figure 8.64** in relation to Viewpoint 11.
- 8.8.314. At the southern end of this section of road there would be a greater degree of screening by landform and the proposed turbines would appear as notable, though not prominent features in the view. There would therefore be a medium magnitude change for c. 1.0 km, resulting in a **moderate** effect that is **significant**. As the road passes over relatively high ground at White Hill, the proposed turbines would become more prominent in the view. From this point for c. 2.0 km (see Viewpoint 11 at **Figure 8.64**), until views of the turbines are obscured by trees on the approach to High Bridge of Ken (see Viewpoint 9 at **Figure 8.62**) there would be a high magnitude of change in the direct localised view to the north giving rise to a **major** effect that is **significant**. This is equal to the worst-case level of effect predicted for the B7000 in relation to the Consented Development.
- 8.8.315. As the road passes over the High Bridge of Ken, it briefly passes outside of ZTV coverage. Where the road meets the B729 at College Brow, east of Kendoon Loch, the junction of the two roads is located within dense coniferous forest, and as such the Proposed Varied Development would not be visible from this closest location. There would also be no effect on views when travelling in a southerly direction along this road.
- 8.8.316. During the hours of darkness receptors using the B7000 are considered to have medium high sensitivity to a change in the view as the road passes within an LLA but is not located within an International Dark Sky Park. With reference to **Figure 8.10**, the section of road with direct, open views between White Hill and High Bridge of Ken has theoretically visibility of up to all six lit hubs. With reference to the turbine lighting intensity ZTV at **Figure 8.11**, there would be a relatively low level of lighting intensity. The lights would appear as faint red dots against the backdrop of the sky. It is considered that due to the proximity of the turbines this would result in a medium magnitude of change, and a worst-case **moderate** level of effect, which is considered **not significant**.

Lorg Road

- 8.8.317. Lorg Road passes to the immediate east of the site, leaving the B729 at Smittons Bridge, heading north, before bearing north-west towards the Head of Ken Valley where there is a small car park and picnic site. The road provides access to several isolated residential properties.

- 8.8.318. The ZTV at **Figure 8.19** shows that there is theoretical visibility of the Proposed Varied Development for the majority of the route, except for the northernmost section within the Head of Ken Valley.
- 8.8.319. It is acknowledged that the Proposed Varied Development would be visible from most of Lorg Road as one travels both north and south immediately past, and up to approximately 4 km from, the site. The turbines would be prominent features in oblique views. With increasing distance from the site to the north, the Proposed Varied Development would reduce in prominence and would only be seen when travelling southbound. However, the turbines would remain highly perceptible in the view along the valley (see Viewpoint 6 at **Figure 8.59**).
- 8.8.320. During daylight hours the sensitivity of users of the Lorg Road are considered to be high as they are most likely to be local residents accessing their properties and tourists/walkers visiting the Head of Ken. During daylight hours, due to the proximity of the turbines, there would be a very high magnitude of change as one passes the site to the immediate east up to 750 m – 1 km distance from the proposed turbines, and a high magnitude of change from 1 – 3.7 km, resulting in a **major** effect which is **significant**. This is equal to the worst-case level of effect predicted in relation to the Consented Development.
- 8.8.321. For users of Lorg Road travelling south between Holm of Dalquahairn and Corlae (represented by Viewpoint 6 at **Figure 8.59**) at c. 3.7 - 5 km from the nearest proposed turbine a medium to high magnitude of change to views is anticipated during daylight hours. This would result in a **major/moderate** level of effect, which is **significant**.
- 8.8.322. Beyond c. 5 km from the nearest proposed turbine, as illustrated by the ZTV at **Figure 8.5**, intervening landform at Dodd Hill would screen the closest turbines within the northern part of the site. This would result in no greater than a medium magnitude of change within c. 5.5 km, and a **moderate significant** effect during daylight hours.
- 8.8.323. During the hours of darkness, receptors using Lorg Road are considered to have medium sensitivity to a change in the view as the road is not located within an International Dark Sky Park. With reference to **Figure 8.10**, all six nacelle lights would be visible from the section of the route within c. 4 km of the nearest turbine. With reference to the turbine lighting intensity ZTV at **Figure 8.11**, the lower elevation of the road in relation to the turbine lights would result in a low level of lighting intensity. However, due to the proximity of the lights and the lack of existing light sources in this area, this would result in a medium to high magnitude of change during the hours of darkness and a **moderate** level of effect that would be considered **significant**.

Table 8.18 – Summary of Worst-Case Visual Effects on Roads During Daylight Hours – Comparison with Consented Development

Table One – Summary of Worst Case Road Effects on Roads During Daylight Hours – Comparison with Consented Development							
Name / Receptor	Sensitivity	Consented Development			Proposed Varied Development		
		Magnitude of Change	Level of Effect	Significance	Magnitude of Change	Level of Effect	Significance
A Roads							
A712	Medium	Very low	Minor	Not significant	Low	Moderate / minor	Not significant
A713	Medium	High	Moderate	Significant	High for 0.5 km (nr Tir nan Og) Medium to high for 0.6km (nr Cumnock Knowes)	Moderate	Significant
A762	Medium	Low	Moderate / minor	Not significant	Low	Moderate / minor	Not significant
B Roads							
B729 (within 3.5 km – heading west)	High	High	Major	Significant	High for 3.7 km (from Guttery Glen, Vp 3 to Smittons Bridge Vp 4)	Major	Significant

B729 (3.5 – 7 km - heading west)	High	Not specified	Not specified	Not specified	Medium for 3.0 km (from Fingland Hill to Carroch Hill)	Moderate	Significant
B729 (within 3.5 km - heading east)	High	Not specified	Not specified	Not specified	Medium for 0.4 km (at Scar Knowe)	Moderate	Significant
B7000 (within 3 km - heading north)	High	High	Major	Significant	High for 2.0 km (from White Hill, Vp 11 to High Bridge of Ken, Vp 9)	Major	Significant
B7000 (3.5 – 5 km – heading north)	High	Not specified	Not specified	Not specified	Medium for 1.0 km (from Glenhoul Hill to White Hill)	Moderate	Significant
Minor Roads							
Lorg Road (within 3.7 km - both directions)	High	Very high	Major	Significant	Very high (within 1 km) High (1 - 3.7 km)	Major	Significant
Lorg Road (3.7 – 5 km - heading south)	High	Not specified	Not specified	Not specified	Medium to high (between Holm of Dalquahairn and Corlae)	Major / Moderate	Significant

Long Road (5 – 5.5 km - heading south)	High	Not specified	Not specified	Not specified	Medium (south of Dodd Hill)	Moderate	Significant
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Table 8.19 – Summary of Visual Effects on Roads During Hours of Darkness

Name / Receptor	Sensitivity	Consented Development			Proposed Varied Development		
		Magnitude of Change	Level of Effect	Significance	Magnitude of Change	Level of Effect	Significance
A Roads							
A712	Medium	N/A	N/A	N/A	Very low	Minor	Not significant
A713	Low	N/A	N/A	N/A	Low	Minor	Not significant
A762	Medium	N/A	N/A	N/A	Very low	Minor	Not significant
B Roads							
B729	Medium high	N/A	N/A	N/A	Medium	Moderate	Not significant
B7000	Medium high	N/A	N/A	N/A	Medium	Moderate	Not significant

Minor Roads							
Lorg Road	Medium	N/A	N/A	N/A	Medium to high	Moderate	Significant

Bold text indicates a significant effect

Red text indicates an increase in significant effect between the Consented Development and the Proposed Varied Development

Effects upon Regional Scenic Areas

- 8.8.324. As illustrated in **Figure 8.13**, within the detailed 20 km study area, there are two Dumfries and Galloway RSA's; namely the Galloway Hills, and the Thornhill Uplands.
- 8.8.325. The LVIA has already established that there would be no significant effects upon the Thornhill Uplands as it falls largely outside of ZTV coverage to blade tip, with very limited coverage of the proposed turbines.
- 8.8.326. The Proposed Varied Development is partially located within the Galloway Hills RSA, with three of the proposed turbines located on the eastern periphery of the designated landscape. The ZTV at **Figure 8.14** shows that theoretical visibility of the Proposed Varied Development is largely contained to a 15 km radius, particularly from north-eastern and eastern areas of the RSA with limited ZTV coverage from a small number of higher hill locations at distances over 15 km to the south.
- 8.8.327. It is considered, for the purposes of this assessment, that the potential for significant effects would not occur within the Galloway Hills RSA beyond 15 km from the proposed turbines.
- 8.8.328. In order to consider the likely effects of the Proposed Varied Development upon the RSA, an understanding of adopted policy context in relation to the designated landscape is necessary.
- 8.8.329. The current Dumfries and Galloway Local Development Plan 2 (October 2019), adopted October 2023, provides guidance on Regional Scenic Areas (RSAs), as follows:
- "Policy NE2: Regional Scenic Areas*
- The siting and design of development within a Regional Scenic Area should respect the special qualities of the area. Development within, or which affects Regional Scenic Areas (RSAs), may be supported where the local Council is satisfied that:*
- the factors taken into account in designating the area would not be significantly adversely affected; or*
 - there is a specific need for the development at that location."*
- 8.8.330. The matter of RSAs is considered within the adopted Local Development Plan Technical Paper: Regional Scenic Areas, January 2018. The RSA Technical Paper does not set out a definitive list of special qualities in relation to any of the RSAs within Dumfries and Galloway. It states that the RSAs are based on earlier designations that were based on the subjective judgement of planning officers rather than a systematic evaluation of the landscape. Subsequent landscape assessment, including the DGWLCS, provided a systematic and objective framework from which to evaluate scenic interest.
- 8.8.331. A section of descriptive and background contextual information is provided for the Galloway Hills RSA within the Technical Paper from which the special qualities and reason for designation may be derived.

8.8.332. It is understood that the following factors form the relevant considerations for the purposes of this LVIA in relation to the Proposed Varied Development and its location:

- *“Sweeping and dramatic views of hills”;*
- *“Dramatic and sculptural peaks”;* and
- *“Narrow wooded valleys” and their “scenic juxtaposition with the uplands”.*

8.8.333. The LVIA has already considered effects upon landscape character and visual amenity within the Galloway Hills RSA and a brief summary of the effects is provided below.

Landscape character

8.8.334. The LVIA has considered the potential for significant effects upon the relevant landscape areas of a number of Dumfries and Galloway Assessment Units within the RSA, including:

- Assessment Unit 8: Flooded Valley – Ken Valley;
- Assessment Unit 9: Upper Dale – Upper Glenkens;
- Assessment Unit 20: Foothills with Forest – Rhinns of Kells;
- Assessment Unit 21: Southern Uplands – Carsphairn;
- Assessment Unit 22: Southern Uplands with Forest – Ken and Carsphairn areas; and
- Assessment Unit 24: Rugged Granite Upland – Rhinns of Kells.

8.8.335. The assessment has concluded that there would be direct and significant effects upon the character of the Ken area of the Southern Uplands with Forest Assessment Unit where the Proposed Varied Development is located. As four of the proposed turbines are also located on the periphery of the RSA, there would also be direct effects upon this confined part of the overall landscape, which is an inevitable consequence of type of development proposed.

8.8.336. There would be indirect significant effects upon landscape character the small part of the Ken unit of the Southern Uplands with Forest that lies inside the RSA but outwith the site to the west. There would also be indirect significant landscape effects experienced from neighbouring Assessment Unit 9: Upper Dale - Upper Glenkens and Assessment Unit 21: Southern Uplands - Carsphairn area up to a distance of c. 5 km. This is a slight extension to the landscape effect on the RSA predicted in relation to the Consented Development by approximately 0.5 km.

8.8.337. Beyond 5 km distance from the proposed turbines, within the Galloway Hills RSA, effects upon landscape character would have dissipated to below the significant threshold due to a combination of landform, vegetation, and distance.

Visual Amenity

- 8.8.338. The LVIA has considered the potential for significant visual effects upon ten viewpoints located within the RSA, alongside the visual experience from other receptors such as users of rights of way and public roads. There are also a number of viewpoint locations located outside of the RSA boundary from which the RSA can be seen.
- 8.8.339. Overall, the assessment of visual effects concludes that there would be some inevitable significant effects experienced within the RSA, largely within 8 – 9 km of the proposed turbines. Such effects would occur where there are relatively open views towards the site, and a large proportion of the Proposed Varied Development is visible.
- 8.8.340. It should be noted that although localised significant visual effects would occur, the Proposed Varied Development would be perceived to be located in the landscape beyond the RSA due to its location beyond the ridgeline created by Marscalloch Hill, and to a certain extent Craigengillan Hill, sited within the working coniferous plantation landscape. The Proposed Varied Development would also be seen set down in the landscape below the horizon created by Cairnsmore of Carsphairn and Beninner in all but the very closest locations to the site.
- 8.8.341. There would also be some localised significant visual effects experienced from locations outside of the RSA boundary looking towards the RSA. Such effects would largely occur in the landscape to the east and south-east of the site from where Cairnsmore of Carsphairn can be seen beyond the Proposed Varied Development.
- 8.8.342. In considering the above summary of effects upon character and visual amenity, analysis against the three special qualities identified concludes that although the Proposed Varied Development would be seen from, and in views towards the Galloway Hills RSA, the proposed turbines would not affect an appreciation of the dramatic and sculptural peaks within the designated landscape. In particular, the notable landform of Cairnsmore of Carsphairn would still be able to be appreciated when seen from other parts of the RSA, and from the landscape beyond the designated area, as shown on **Figure 8.74** in relation to Viewpoint 21, Corserine and **Figure 8.56** in relation to Viewpoint 3, Guttery Glen.
- 8.8.343. There will also remain sweeping and dramatic views of hills both from within and towards the RSA. The presence of the Proposed Varied Development would not take away from the appreciation of the Rhinns of Kells ridgeline in distant views across the landscape, such as those experienced from hill summits such as Benbrack and Alhang (Viewpoint 10 at **Figure 8.63** and Viewpoint 16 at **Figure 8.69** respectively) and the hill summits within the north eastern part of the RSA will also still be seen above the valley landscape of The Glenkens as seen in **Figure 8.64** in relation to Viewpoint 11.
- 8.8.344. The scenic juxtaposition between the narrow valley of the Water of Ken and the surrounding upland landscape will also remain to be appreciated. As can be seen in **Figure 8.59** in relation to Viewpoint 6 located within the narrow valley, the valley landform and its surrounding hill slopes are clearly appreciable, with the Proposed Varied Development set back from the valley floor, and the turbines located away from the highest parts of the site. The sense of scale in the valley, which will be altered by the temporal nature of the coniferous plantation present within the valley throughout the

lifetime of the Proposed Varied Development, would not be greatly altered when seen from the narrow valley north of the site.

- 8.8.345. In summary, whilst it is acknowledged there would be some localised significant effects upon landscape character and visual amenity experienced from a small part of the RSA overall and in views towards the RSA from the landscape beyond its boundary, there would not be significant effects upon the special qualities of the Galloway Hills, its reason for designation or its integrity.

Visual Effects during Decommissioning

- 8.8.346. It is recognised that there would be some additional temporary effects during decommissioning of the turbines after 40 years over and above those assessed under the heading of Operational Effects above. The additional effects resulting from decommissioning activities would be localised and relatively incidental when viewed in the context of the turbines being removed.
- 8.8.347. The effects on visual amenity would therefore decrease incrementally as decommissioning progresses and as more turbines and associated foundations and hardstanding is removed. Users of the Southern Upland Way, Core Paths and other recreational routes as well as the local road network, as mentioned above which pass within close proximity or through the site, would experience the greatest effects during decommissioning. Receptors using these routes would have largely unobstructed views of the decommissioning activities associated with the wind turbine elements of the Proposed Varied Development.
- 8.8.348. The effects would be similar to those during the construction phase but in reverse.
- 8.8.349. Overall, it is considered that there would be a low magnitude of additional change (over that during the operation phase) for the reasons outlined above. This would result in no greater than a **moderate/minor** temporary effect on the visual amenity of people using the routes mentioned above. The decommissioning effects would be temporary in nature and are unlikely to all occur at the same time during this phase.
- 8.8.350. The decommissioning effects of the Proposed Varied Development on visual amenity are considered to be **not significant**.

8.9. Additional Mitigation and Enhancement

- 8.9.1. Mitigation is embedded within the design of the Proposed Varied Development. Please refer to details of Standard Mitigation at **Section 8.7** above.

8.10. Residual Effects

- 8.10.1. Best practice for EIA in general terms requires that the significance of potential effects be assessed, mitigation proposals identified and the residual effect (with mitigation in place) then re-assessed to demonstrate the effectiveness of the mitigation proposed.

8.10.2. In the case of LVIA for wind farms this presents two interrelated problems:

- Potential effects cannot be meaningfully assessed in the absence of an assumed layout; and
- Landscape and visual mitigation principally focus on the refinement of the site layout ('mitigation by design').

8.10.3. The residual landscape and visual effects have been assessed as a result of the primary mitigation embedded within the design of the Proposed Varied Development, relating to avoiding and minimising landscape and visual effects during the evolution of the Proposed Varied Development layout. Therefore, the residual landscape and visual effects are largely the same as those assessed in the main part of the LVIA.

Construction

8.10.4. As mitigation is embedded within the design of the Proposed Varied Development, there is no change to those effects described above within **Section 8.8** above.

Operation

8.10.5. As mitigation is embedded within the design of the Proposed Varied Development, there is no change to those effects described above within **Section 8.8** above.

Decommissioning

8.10.6. As mitigation is embedded within the design of the Proposed Varied Development, there is no change to those effects described above within **Section 8.8** above.

8.11. Cumulative Assessment

8.11.1. The following section provides an assessment of potential cumulative landscape and visual effects. The approach and methodology is set out below.

Cumulative Baseline

8.11.2. The initial step of the cumulative assessment is to establish the existing cumulative baseline. All other wind energy developments that are operational, under construction, consented or subject to a valid full planning application within 15 km of the Proposed Varied Development were identified and reviewed as part of the cumulative assessment, as illustrated in **Figure 8.20**. This includes the Lorg Wind Farm 132 kV grid connection, which passes through the centre of the site. Cumulative ZTVs have been produced for all relevant wind farms at **Figures 8.21 – 8.53**.

8.11.3. At the request of the Local Authority, a review of scoping sites within the vicinity of the Proposed Varied Development has also been undertaken. GLVIA3 advises that ordinarily such sites should not be included in the assessment largely due to the uncertainty that these schemes will come forward as a full application and the lack of adequate information about project details.

- 8.11.4. It is acknowledged that this cumulative situation is constantly changing and therefore the 31st March 2026 was used as an effective 'cut off' date after which no further research was undertaken on the evolving status of wind energy development in the study area.
- 8.11.5. As there are several wind farms (either operational, consented or in planning) in the vicinity of the Proposed Varied Development, to the north-west through to the east, it was recognised that in this context wind farms over 15 km away were highly unlikely to give rise to significant cumulative effects which would not occur in any case with the existing distribution of immediately surrounding wind farms (i.e. in the absence of the Proposed Varied Development). It was also deemed appropriate to scope out small scale turbines as there are very few present within the local landscape. This approach was agreed at Scoping stage.
- 8.11.6. The cumulative impact assessment therefore focuses primarily on those schemes within c. 15 km of the Proposed Varied Development to ensure that the assessment remains proportionate and deals only with the key developments that have the potential to give rise to significant cumulative effects when considered in combination with the Proposed Varied Development.
- 8.11.7. Analysis was then undertaken to refine this list in order to ensure a proportionate approach focused on potentially significant effects, as advocated by NatureScot guidelines 'Assessing the Cumulative Impact of Onshore Wind Energy Developments' (2021) which states that:
- "The key principle for all assessments is to focus on the likely significant impacts and those which are likely to influence the outcome of the consenting process."*
- 8.11.8. It should be noted that not all other wind farms within 15 km are considered within the CLVIA. The CZTVs at **Figure 8.24** (Enoch Hill), **Figure 8.25** (Hare Hill and Hare Hill Extension), **Figure 8.26** (Pencloe), **Figure 8.31** (Whiteside Hill), **Figure 8.34** (Cloud Hill), **Figure 8.37** (Enoch Hill 2), **Figure 8.49** (Hare Hill Repowering and Extension), **Figure 8.50** (Pencloe Extension), **Figure 8.52** (Rowancraig) and **Figure 8.53** (South Kyle II) show that there is very little intervisibility between the Proposed Varied Development and wind farms located in this wider area.
- 8.11.9. The wind farms identified within **Table 8.20** are the schemes on which the discussion of the cumulative landscape and visual impact effects are focused. The in-planning Lorg Wind Farm grid connection is discussed separately in **Appendix 8.8 Cumulative Assessment with Lorg Wind Farm 132 kV Grid Connection**.
- 8.11.10. For the purposes of clarification, it should be noted that other wind farms within 15 km of the Proposed Varied Development are shown on the visualisations where relevant.

Table 8.20 – Other Wind Farms Considered in Detail in the Cumulative LVIA

Site	Blade Tip Height of Turbines	Number of Turbines
Operational / Under Construction		
Afton	118 m	25
Benbrack	149.9 m	15
Blackcraig Hill	110 m	23
Sanquhar II	149 m (x 2) - 200 m (x 42)	44
South Kyle	150 m	50
Torrs Hill	100 m	2
Wether Hill	91 m	14
Windy Rig	125 m	12
Windy Standard I	53.5 m	36
Windy Standard II	100 m (x 12), 114.75 m (x 9) & 119.5 m (x 9)	30
Windy Standard III (Brockloch Rig 2)	125.5 m (x 8) - 180 m (x 12)	20
Consented		
Cornharrow	200 m	7
Divot Hill	200 m	9
Fell	220 m	8
Glenshimmeroch (revised scheme)	200 m	9
Knockman Hill	81 m	5

Site	Blade Tip Height of Turbines	Number of Turbines
Lorg (revised scheme)	200 m	10
Manquhill	200 m	8
Margree	220 m	9
Troston Loch	149.9 m	14
Windy Standard I Repowering	200 m	8
In Planning		
Appin	200 m	9
Cornharrow (Revised)	220 m	7
Euchanhead	230 m	19
Quantans Hill	200 m	14

- 8.11.11. The baseline against which the solus effects of the Proposed Varied Development has been assessed includes all operational wind farms. An assessment of the Proposed Varied Development with consideration of other operational or under construction wind farms has already therefore been presented in **Section 8.8** of this Chapter.
- 8.11.12. The primary purpose of the cumulative impact assessment is therefore to consider the additional effects that might arise as a result of the Proposed Varied Development if the other consented and in planning (awaiting determination) schemes were also operational. In addition, this cumulative assessment also includes a further consideration of the overall totality of the effect, when the Proposed Varied Development is considered alongside the other operational or proposed schemes across the study area.
- 8.11.13. The baseline in the cumulative impact assessment is therefore extended to consider other schemes that are not yet present in the landscape but are at various stages in the planning process. Two scenarios are considered which reflect the different degrees of certainty that these schemes will be constructed:
- **Scenario 1** - assumes that other consented (but as yet unbuilt) wind farms are operational;

- **Scenario 2** - extends this further to assume that all schemes in planning are also operational. In reality, it is possible that all other schemes that are in planning may not be approved and constructed but this scenario assumes all planning schemes are operational as this presents the 'worst case'.

Cumulative ZTVs, Wireframes and Photomontages

- 8.11.14. Cumulative ZTVs (CZTVs) have been produced to illustrate the theoretical visibility of various other wind farms and combinations of wind farms with the Proposed Varied Development.
- 8.11.15. It should be reiterated that ZTVs imply a much greater geographical extent of influence on the landscape and views of it than would actually be the case. It follows that the cumulative ZTVs also exaggerate the actual impacts of the turbines on landscape character and visual amenity, as they do not take account of vegetation or buildings in the landscape, which may restrict the nature and extent of views.
- 8.11.16. Cumulative ZTVs have been produced for completeness for all of the following combinations of existing, consented wind farm sites and other wind farm sites in planning:

CZTVs with Operational Windfarms:

- Cumulative ZTV with Afton (**Figure 8.21**);
- Cumulative ZTV with Benbrack (**Figure 8.22**);
- Cumulative ZTV with Blackcraig Hill (**Figure 8.23**);
- Cumulative ZTV with Enoch Hill (**Figure 8.24**);
- Cumulative ZTV with Hare Hill and Hare Hill Extension (**Figure 8.25**);
- Cumulative ZTV with Pencloe (**Figure 8.26**);
- Cumulative ZTV with Sanquhar II (**Figure 8.27**);
- Cumulative ZTV with South Kyle (**Figure 8.28**);
- Cumulative ZTV with Torrs Hill (**Figure 8.29**);
- Cumulative ZTV with Wether Hill (**Figure 8.30**);
- Cumulative ZTV with Whiteside Hill (**Figure 8.31**);
- Cumulative ZTV with Wind Rig (**Figure 8.32**); and
- Cumulative ZTV with Windy Standard I, II & III (Brockloch Rig 1 & 2) (**Figure 8.33**).

CZTVs with Consented Windfarms:

- Cumulative ZTV with Cloud Hill (**Figure 8.34**);
- Cumulative ZTV with Cornharrow (**Figure 8.35**);

- Cumulative ZTV with Divot Hill (**Figure 8.36**);
- Cumulative ZTV with Enoch Hill 2 (**Figure 8.37**);
- Cumulative ZTV with Fell (**Figure 8.38**);
- Cumulative ZTV with Glenshimmeroch (**Figure 8.39**);
- Cumulative ZTV with Knockman Hill (**Figure 8.40**);
- Cumulative ZTV with Lorg (**Figure 8.41**);
- Cumulative ZTV with Manquhill (**Figure 8.42**);
- Cumulative ZTV with Margree (**Figure 8.43**);
- Cumulative ZTV with Troston Loch (**Figure 8.44**); and
- Cumulative ZTV with Windy Standard I Repowering (**Figure 8.45**).

CZTVs with Other Wind Farm Schemes in Planning

- Cumulative ZTV with Appin (**Figure 8.46**);
- Cumulative ZTV with Cornharrow (revised) (**Figure 8.47**);
- Cumulative ZTV with Eucharhead (**Figure 8.48**);
- Cumulative ZTV with Hare Hill Repowering and Extension (**Figure 8.49**).
- Cumulative ZTV with Pencloe (revised) (**Figure 8.50**);
- Cumulative ZTV with Quantans Hill (**Figure 8.51**);
- Cumulative ZTV with Rowancraig (**Figure 8.52**); and
- Cumulative ZTV with South Kyle II (**Figure 8.53**).

- 8.11.17. Full 360-degree cumulative wireframes have been produced to show all operational, under construction, consented and in planning schemes for a selection of the viewpoints, namely four of the hill summit locations from which 360-degree views are available and where the most likely cumulative effects would be experienced from. These are presented in **Figures 8.99 – 8.102**.

Cumulative Effects on Landscape Character

- 8.11.18. It is acknowledged that wherever more than one wind farm is visible at any given location in the landscape, there would be a greater overall or cumulative effect on landscape character than if just one wind farm was visible in the landscape.
- 8.11.19. However, it is also noted that in any given landscape where turbines are already present, the additional effect on landscape character of introducing further turbines may not be as significant as the initial introduction of turbines. Furthermore, in general, the greater the number of turbines in the baseline landscape the less significant the addition of further

turbines may be in landscape character terms as the landscape would be more heavily characterised by turbines in the baseline situation.

- 8.11.20. It has been assessed in the assessment of the solus effects of the Proposed Varied Development set out earlier in this chapter that there would be some limited significant effects on landscape character as a result of the Proposed Varied Development. The purpose of this section of the cumulative assessment is therefore to identify whether there would be any change to the assessments of significance previously set out in relation to the Proposed Varied Development, once the other wind turbines which are not already operational are considered to form part of the baseline landscape.
- 8.11.21. Generally speaking, such additional cumulative effects would arise when the addition of the Proposed Varied Development to the baseline results in an increase in effects, when viewed in combination with the other wind turbines forming part of the baseline landscape.
- 8.11.22. The assessment is considered in two parts, firstly in relation to the scenario where the additional consented developments are also considered to be operational, and secondly when the consented and in-planning schemes are also considered to be operational.

Cumulative Scenario 1

- 8.11.23. In the first cumulative scenario, the following ten wind farms would be present in the baseline landscape, including Windy Standard I Repowering Wind Farm, which would replace the operational Windy Standard I Wind Farm:
- Cornharrow – 4.1 km east, located within AU 22 – Southern Uplands with Forest – Ken;
 - Divot Hill – 7.7 km south-east, located within AU 20 – Foothills with Forest – Stroan;
 - Fell – 13.5 km south-east, located within AU 20 – Foothills with Forest – Stroan;
 - Glenshimmeroch – 5.3 km south-east, located within AU 20 – Foothills with Forest – Stroan;
 - Knockman Hill – 9.7 km south-south-east, located within AU 20 – Foothills with Forest – Stroan;
 - Lorg – 6.3 km north-east, located within AU 22 – Southern Uplands with Forest – Ken;
 - Manquhill – 4.1 km east, located within AU 22 – Southern Uplands with Forest – Ken;
 - Margree – 7.4 km south-east, located within AU 20 – Foothills with Forest – Stroan;
 - Troston Loch – 6.2 km east-south-east, located within AU 20 – Foothills with Forest – Stroan unit; and
 - Windy Standard I Repowering – 5.5 km north, located within AU 22 – Southern Uplands with Forest – Ken.

Assessment Unit 22 – Southern Uplands with Forest – Ken

- 8.11.24. This is the host LCT unit where the Proposed Varied Development would be located. This LCT is represented by Viewpoints 1, 3, 10 and 16 at Stroanfreggan Bridge, Guttery Glen, Benbrack (Striding Arch) and Alhang. The assessment of the solus effect identified a significant effect on the Southern Uplands with Forest – Ken unit extending to approximately 5 km to the east and north-east.
- 8.11.25. In Cumulative Scenario 1, there would be three additional wind farms located within this unit, Cornharrow located 4.1 km to the east, Lorg located 6.3 km to the north-east, and Manquhill located 4.1 km to the east of the Proposed Varied Development. These schemes would further reinforce wind energy as a characteristic feature of the landscape area, which already includes Wether Hill Wind Farm and part of Sanquhar II.
- 8.11.26. Cornharrow and Manquhill Wind Farms, together with the existing Wether Hill Wind Farm would form a cluster of wind energy development. Referring to the CZTVs at **Figures 8.30, 8.35 and 8.42**, the three wind farms within this group show a similar pattern of theoretical visibility, with Manquhill displaying the greatest degree of coverage. The addition of these consented wind farms into the baseline would extend the influence of wind energy development towards the Proposed Varied Development in the west. It is considered that in Cumulative Scenario 1, the addition of Manquhill and Cornharrow wind farms into the baseline would reduce the extent of the significant effect introduced by the Proposed Varied Development to approximately 2 km to the east.
- 8.11.27. Referring to the CZTV at **Figure 8.41**, the addition of Lorg into the baseline, in proximity to Sanquhar II Wind Farm, would have greater influence on the northern part of the landscape area than the Proposed Varied Development. The addition of Lorg into the baseline would reduce the extent of the significant effect of the Proposed Varied Development to approximately 3 km to the north-east.
- 8.11.28. In Cumulative Scenario 1, the presence and influence of the consented wind farms described above would reduce the extent of the significant effect introduced by the Proposed Varied Development. Within approximately 2 km to the east and 3 km to the north-east of the Proposed Varied Development the predicted significant effects upon landscape character would arise in response to the Proposed Varied Development in its own right. Between approximately 2 – 4 km to the east, and 3 – 5 km to the north-east, **moderate significant** effects would be a result of cumulative effects with the other schemes (see 360 wirelines at **Figure 8.101** in relation to Viewpoint 10). Beyond approximately 4 km to the east or 5 km to the north-east, effects would not be considered significant due to the greater influence of other wind farms.
- 8.11.29. In this context, the introduction of the Proposed Varied Development would not greatly alter the defining characteristics of this landscape area but would instead reinforce the existing characteristics of the baseline landscape.
- 8.11.30. The addition of the Proposed Varied Development to the landscape to the south-west of the unit would extend the presence of turbines in a south-westerly direction away from the cluster of wind farms at Sanquhar II and Lorg, and in a westerly direction, away from the cluster of wind farms at Wether Hill, Cornharrow and Manquhill. Combined visibility of the

wind farms would be generally limited to the highest hill summits. The Proposed Varied Development would not introduce turbines into part of the landscape where they do not already exist; therefore, at distances over 4 km to the east and 5 km to the north-east from the Proposed Varied Development, and overall within this unit, the magnitude of change would be low giving rise to a **moderate/minor** effect that is **not significant**. This is lower than the level of effect predicted in relation to the Consented Development due to the updated cumulative situation.

Assessment Unit 22 – Southern Uplands with Forest – Carsphairn

- 8.11.31. The assessment of the solus effects identified no significant effects within the Carsphairn area of the Southern Uplands with Forest Assessment Unit.
- 8.11.32. In Cumulative Scenario 1, Windy Standard I Repowering would replace the existing Windy Standard I turbines, which are located immediately adjacent to existing commercial wind energy development and would add to the clustering of turbines within Assessment Unit 22. The Proposed Varied Development would be located separate from this cluster beyond Assessment Unit 21 Southern Uplands – Carsphairn area.
- 8.11.33. There would be some intervisibility between Assessment Unit 22 - Southern Uplands with Forest – Carsphairn area and wind energy development in the intervening landscape at Quantans Hill (see **Figure 8.68** in relation to Viewpoint 15). This would reduce the influence of the Proposed Varied Development, which would be situated beyond, appearing as a more distant extension. The introduction of the Proposed Varied Development to cumulative scenario 1 would therefore not give rise to any significant cumulative effects within this unit.

Assessment Unit 4 – Narrow Valleys – Ken

- 8.11.34. This landscape area is represented by Viewpoints 2, 4, 5 and 6 at Stroanfreggan Craig, Smittons Bridge, Stroanfreggan Craig and Head of Ken Valley. The assessment of the solus effects identified a significant effect on this unit, extending to approximately 5 km.
- 8.11.35. In Cumulative Scenario 1 there are no consented wind farms within this landscape area, however the consented Lorg Wind Farm would be located beyond the head of the Ken valley, with theoretical intervisibility with this unit.
- 8.11.36. The presence and influence of this wind farm would reduce the extent of the significant effect introduced by the Proposed Varied Development. Within approximately 3 km of the Proposed Varied Development the predicted significant effects upon landscape character would arise in response to the Proposed Varied Development in its own right. Between approximately 3 - 5 km **moderate significant** effects would be a result of cumulative effects with the other scheme.

Assessment Unit 9 – Upper Dale – Glenkens

- 8.11.37. The site entrance, access track and temporary construction compound are located within a small area of the Upper Dale Assessment Unit. This Assessment Unit is represented by

Viewpoints 9, 11, 12, 17, 18, 19 and 22. The assessment of the solus effects identified a significant effect on the on this unit, extending to approximately 5 km.

- 8.11.38. In Cumulative Scenario 1 there are no consented wind farms within this Assessment Unit. The presence and influence of wind farms within the wider landscape would not significantly alter the defining character of the landscape due to distance and lack of actual overall intervisibility between the Proposed Varied Development and the other schemes. The distance and intervening landform between the schemes would not give rise to any significant cumulative effects upon landscape character within this character type.

Assessment Unit 20 – Foothills with Forest – Stroan

- 8.11.39. This landscape area is represented by Viewpoint 7 at Culmark Hill. The assessment of the solus effects identified a significant effect on this unit, extending to approximately 4.5 km.
- 8.11.40. In Cumulative Scenario 1 there would be six additional wind farms within this unit, Divot Hill 7.7 km to the south-east, Fell 13.5 km to the south-east, Glenshimmeroch 5.3 km to the south-east, Knockman Hill 9.7 km to the south-south-east, Margree 7.4 km to the south-east, and Troston Loch 6.2 km to the east south-east of the Proposed Varied Development.
- 8.11.41. This group of wind farms into the baseline would extend the influence of wind energy development across the character unit, giving rise to significant effects within its own right (see 360-degree cumulative wirelines at **Figure 8.100**).
- 8.11.42. The most relevant of these wind farms to the Proposed Varied Development is Glenshimmeroch (see the CZTV at **Figure 8.39**). It is considered that in cumulative scenario 1, the addition of Glenshimmeroch Wind Farm into the baseline would reduce the significant effect introduced by the Proposed Varied Development to approximately 2.5 km to the south-east, such that there would be no significant landscape effects within this character unit.
- 8.11.43. The addition of these six schemes into the baseline would reduce the influence of the Proposed Varied Development on this unit such that the cumulative magnitude of change to the character would be low, resulting in a **moderate/minor** cumulative effect that is **not significant**.

Assessment Unit 20 – Foothills with Forest – Rhinns of Kells

- 8.11.44. The assessment of the solus effects identified a significant effect within isolated locations of this unit over 4.5 km.
- 8.11.45. The Rhinns of Kells area of the Foothills with Forest Assessment Unit includes the operational Torrs Hill wind turbines, but no other consented wind farms. The other consented wind farms outwith this unit are located at such a distance that there would be no cumulative effects within this unit in Scenario 1 above the solus effects identified within **Section 8.8** of this Chapter.

Assessment Unit 21 – Southern Uplands – Carsphairn

- 8.11.46. This landscape area is represented by Viewpoints 12, 13 and 14 at Dundough Hill, Beninner and Cairnsmore of Carsphairn. The assessment of the solus effects identified a significant effect within the Southern Uplands – Carsphairn area, extending to approximately 5 km to the west.
- 8.11.47. In Cumulative Scenario 1 there would be no additional wind farms within the baseline, which already includes Windy Rig Wind Farm, however there would be some intervisibility with consented wind farms within the neighbouring character type to the east of the Proposed Varied Development (see **Figures 8.66, 8.67 and 8.68**). The other consented wind farms outwith this unit are located at such a distance that the solus effects identified within **Section 8.8** of this Chapter would remain unchanged.

Assessment Unit 24 – Rugged Granite Upland – Rhinns of Kells

- 8.11.48. This landscape area is represented by Viewpoints 20 and 21 at Woodhead Mines and Corserine (Hennessy's Shelter). The assessment of the solus effects identified no significant effects within this Assessment Unit.
- 8.11.49. The Rhinns of Kells area of the Rugged Granite Upland Assessment Unit does not contain any consented wind energy development, The other consented wind farms outwith this unit are located at such a distance that there would be no cumulative effects introduced as a result of the Proposed Varied Development.

Totality of the Combined Effect including the other Operational and Consented Developments

- 8.11.50. Consideration has also been given to the overall totality of the effect, when the Proposed Varied Development is considered alongside the other operational and consented developments.
- 8.11.51. The closest operational development to the Proposed Varied Development is Windy Rig Wind Farm, which forms part of a cluster of operational wind farms that extend across the boundary of Assessment Unit 21 Southern Uplands – Carsphairn area into Assessment Unit 22 Southern Uplands with Forest – Carsphairn area to the north-west. This cluster of wind energy development includes Windy Standard I, II and III (Brockloch Rig 1 and 2). The next closest operational wind farm is at Wether Hill Wind Farm, located within Assessment Unit 22 Southern Uplands with Forest – Ken area, to the east. Collectively, these operational schemes have already had a characterising effect on Assessment Units 21 and 22, irrespective of the addition of the Proposed Varied Development.
- 8.11.52. In this regard, the Proposed Varied Development would fit in with the established pattern of wind energy development and would consolidate the existing effects on landscape character that have already been brought about by these other schemes and would not extend these effects beyond the extent already introduced by the other schemes.
- 8.11.53. The Carsphairn area of Assessment Unit 22 is one of the primary locations for existing and consented wind farms within the detailed study area. The existing Benbrack, South

Kyle Wind Farms are located within this landscape area along with the aforementioned Windy Standard I, II and III (Brockloch Rig 1 and 2). The consented Windy Standard I Repowering Wind Farm, would fit into this pattern of wind energy development.

- 8.11.54. The addition of the Proposed Varied Development to the wider landscape away from this concentration of wind farms would not give rise to any significant cumulative effects as there is an overall lack of intervisibility between this character type and the Proposed Varied Development due to topographical variation and presence of plantation. Combined visibility of these schemes would be limited to the highest peaks within the local landscape, from which wind energy development is already a characteristic of the landscape.
- 8.11.55. Wind energy development within the Ken area of Assessment Unit 22, which includes Wether Hill Wind Farm to the south, and part of Sanquhar II Wind Farm to the north, would expand to form two clusters of wind farms. The consented Cornharrow and Manquhill Wind Farms would form a cluster with Wether Hill, whilst the consented Lorg Wind Farm would form a cluster with Sanquhar II.
- 8.11.56. For all other landscape areas / Assessment Units considered within the LVIA, the Proposed Varied Development would be perceived as being located within the part of the landscape where wind farms are already concentrated. The clustering of wind farms within the Southern Uplands will be located at relative distance from the Rhinns of Kells areas of Assessment Units 20 and 24, and intervisibility of the wind farms will vary relative to topography and presence of dense vegetation. Overall, it is considered that the combined effect of the wind farms considered within scenario 1 would not be significant.
- 8.11.57. In considering the totality of effects upon landscape character in Cumulative Scenario 1, there would inevitably be a concentration of wind energy development within Assessment Unit 22 of both the Ken and Carsphairn areas, and within the Stroan area of 20, and there would be no doubt some localised significant effects. However, such effects would occur in the absence of the Proposed Varied Development. This is the same conclusion as was predicted in relation to the Consented Development.

Cumulative Effects on the Galloway Hills RSA

- 8.11.58. For the Assessment Units / Landscape Character Areas within the Galloway Hills RSA, considering Cumulative Scenario 1, and considering the above cumulative assessment in relation to landscape character, there would be no additional significant effects when compared to the situation prior to the introduction of any of the consented turbines in the landscape. Wind energy development is already a characteristic of the landscape beyond the RSA and any significant effects arising as a result of the introduction of the Proposed Varied Development to the landscape would arise because of the scheme in its own right rather than due to cumulative effects.
- 8.11.59. It is acknowledged that consented wind farms at Divot Hill, Glenshimmeroch and Windy Standard III are located within 5 km of the boundary of the RSA, and there would be some intervisibility from within the RSA. However, these schemes are situated at over 5 km from the Proposed Varied Development, and as such, there would be sufficient separation that there would be no greater than a low magnitude of cumulative change resulting in

moderate/minor effects upon the Galloway Hills RSA, which are considered to be **not significant**.

Cumulative Scenario 2

8.11.60. In the second cumulative scenario, the following four wind farms would be present in the baseline landscape, including the revised Cornharrow scheme, which would replace the consented Cornharrow Wind Farm:

- Appin - 10.1 km north-east, located within AU 22 Southern Uplands with Forest - Ken;
- Cornharrow (revised) - 4.1 km east, located within AU 22 Southern Uplands with Forest - Ken;
- Eucharhead - 7.5 km north-east, located within AU 22 Southern Uplands with Forest - Ken; and
- Quantans Hill – 0.75 km west, located within AU 21 – Southern Uplands – Carsphairn.

Assessment Unit 22 – Southern Uplands with Forest – Ken

8.11.61. This is the host landscape area where the Proposed Varied Development would be located. The assessment of the solus effect identified a significant effect on the Southern Uplands with Forest – Ken area extending to approximately 5 km to the east and north-east, however it was considered in Cumulative Scenario 1 that the addition of consented wind farms into the baseline would reduce the significant effect introduced by the Proposed Varied Development to approximately 2 km.

8.11.62. In Cumulative Scenario 2, Cornharrow (revised) Wind Farm would be located in a group with Manquhill and Wether Hill Wind Farms at 4.1 km to the east. Appin and Eucharhead Wind Farms would be located adjacent to Lorg and Sanquhar II Wind Farms, from 10.1 km and 7.5 km respectively to the north-east of the Proposed Varied Development. Referring to the CZTVs at **Figure 8.46** and **8.48**, the introduction of the Appin and Eucharhead schemes into the baseline would have greater influence on the northern part of the LCT unit than the Proposed Varied Development. In Cumulative Scenario 2, the presence and influence of these wind farms would reduce the extent of the significant effect introduced by the Proposed Varied Development. Within approximately 2 km of the Proposed Varied Development the predicted significant effects upon landscape character would arise in response to the Proposed Varied Development in its own right. As in Cumulative Scenario 1, between approximately 2 – 4 km to the east, and 3 – 5 km to the north-east **moderate significant** effects would be a result of cumulative effects with other schemes (see 360-degree wireline at **Figure 8.97** in relation to Viewpoint 10).

8.11.63. The introduction of the consented and in-planning wind farms into the baseline would give rise to significant cumulative effects on the landscape character in their own right without the addition of the Proposed Varied Development (see 360-degree wirelines at **Figure 8.97**, in relation to Viewpoint 10). The addition of the Proposed Varied Development to this baseline scenario would further reinforce the wind energy as an existing characteristic feature within this unit of the LCT, by extending wind development to the south-west.

- 8.11.64. At distances over 4 km to the east or 5 km to the north-east, effects would not be considered significant due to the greater influence of other wind farms. Overall, across the unit, the Proposed Varied Development would give rise to a low magnitude of change on the Ken unit of the LCT and a **moderate/minor** cumulative effect that is **not significant**. This is lower than the level of effect that was predicted in relation to the Consented Development due to the updated cumulative situation.

Assessment Unit 22 – Southern Uplands with Forest – Carsphairn

- 8.11.65. The assessment of the solus effects identified no significant effects within the Carsphairn area of the Southern Uplands with Forest Assessment Unit.
- 8.11.66. In Cumulative Scenario 2, Windy Standard I Repowering would replace the existing Windy Standard I turbines, which are located immediately adjacent to existing commercial wind energy development. South Kyle II would form an extension to the operational South Kyle Wind Farm and would add to the clustering of turbines within Assessment Unit 22. The Proposed Varied Development would be located separate from this cluster beyond Assessment Unit 21 Southern Uplands – Carsphairn area.
- 8.11.67. There would be some intervisibility between Assessment Unit 22 - Southern Uplands with Forest – Carsphairn area and wind energy development in the intervening landscape at Quantans Hill (see **Figure 8.68** in relation to Viewpoint 15). This would reduce the influence of the Proposed Varied Development, which would be situated beyond, appearing as a more distant extension. The introduction of the Proposed Varied Development to cumulative scenario 2 would therefore not give rise to any significant cumulative effects within this unit.

Assessment Unit 4 – Narrow Valleys – Ken

- 8.11.68. The assessment of the effects in Scenario 1, which accounted for intervisibility with the consented Lorg Wind Farm located beyond the head of the Ken valley, identified a significant effect on the on this landscape area, extending to approximately 4.5 km. Within approximately 3 km of the Proposed Varied Development the predicted significant effects upon landscape character would arise in response to the Proposed Varied Development in its own right. Between approximately 3 - 4.5 km **moderate significant** effects would be a result of cumulative effects with the other scheme.
- 8.11.69. In cumulative scenario 2 no wind farms would be introduced into this Assessment Unit. The introduction of the Proposed Varied Development to cumulative scenario 2 would therefore not give rise to any significant cumulative effects.

Assessment Unit 9 – Upper Dale – Glenkens

- 8.11.70. The site entrance, access track and temporary construction compound are located within a small area of the Upper Dale Assessment Unit. The assessment of the solus effects identified a significant effect on this landscape area, extending to approximately 5 km.
- 8.11.71. In Cumulative Scenario 2 there would be no wind farms within this Assessment Unit, however there would be intervisibility with Quantans Hill Wind Farm, which would be

located immediately adjacent to the Proposed Varied Development within the neighbouring Assessment Unit 21 – Carsphairn area, creating a cluster of wind energy development (see **Figure 8.64** in relation to Viewpoint 11, **Figure 8.65** in relation to Viewpoint 12, and **Figure 8.72** in relation to Viewpoint 19).

- 8.11.72. The Proposed Varied Development would appear as an extension to Quantans Hill Wind Farm and thus the effects on landscape character would be less than predicted in the solus assessment. The addition of the Proposed Varied Development to this baseline would reinforce the wind energy as an existing characteristic feature along the northern boundary of this landscape area. The cumulative magnitude of change introduced by the Proposed Varied Development would be medium with cumulative effects considered to be **moderate** and **not significant** due to the increased influence introduced by Quantans Hill to the west. This is lower than the level of effect identified within the solus assessment.

Assessment Unit 20 – Foothills with Forest – Stroan

- 8.11.73. The assessment of the solus effects identified a significant effect on this landscape area, extending to approximately 5 km, however it was considered in Cumulative Scenario 1 that the addition of consented wind farms into the baseline would reduce the significant effect introduced by the Proposed Varied Development to approximately 2.5 km to the south-east. Between approximately 2.5 – 4.5 km the significant effect would be as a result of cumulative effects with the other schemes.
- 8.11.74. In Cumulative Scenario 2 there would be no additional wind farms within this unit, however there would be intervisibility with Quantans Hill Wind Farm to the west of the Proposed Varied Development (see **Figure 8.60** in relation to Viewpoint 7). The presence and influence of this wind farm would change the significance of the **moderate** effect introduced by the Proposed Varied Development between approximately 2.5 – 4.5 km to not significant.

Assessment Unit 20 – Foothills with Forest – Rhinns of Kells

- 8.11.75. The assessment of the solus effects identified a significant effect within isolated locations of this unit over 4.5 km.
- 8.11.76. In Cumulative Scenario 2 there would be no additional wind farms within this unit, however there would be intervisibility with the in-planning Quantans Hill Wind Farm. As illustrated by the CZTV at **Figure 8.51**, the influence of Quantans Hill Wind Farm across this landscape area would be similar to that of the Proposed Varied Development. Therefore, any significant effects experienced within this landscape area would be as a result of cumulative effects with the neighbouring scheme.

Assessment Unit 21 – Southern Uplands – Carsphairn

- 8.11.77. The assessment of the solus effects identified a significant effect within the Southern Uplands – Carsphairn area, extending to approximately 5 km to the west.
- 8.11.78. In Cumulative Scenario 2, Quantans Hill Wind Farm would form part of the baseline of Assessment Unit 21 at the southern end of the Carsphairn landscape area, along with the

operational Windy Rig Wind Farm to the north. Due to the proximity of Quantans Hill Wind Farm, the Proposed Varied Development in the adjacent Assessment Unit would no longer give rise to a significant effect within its own right. Significant cumulative effects would occur within this unit as a result of the combination of Quantans Hill and Windy Rig Wind Farms, without the addition of the Proposed Varied Development.

Assessment Unit 24 – Rugged Granite Uplands – Rhinns of Kells

- 8.11.79. The assessment of the solus effects identified no significant effects within this character type.
- 8.11.80. In Cumulative Scenario 2 there would be no wind farms, however Quantans Hill Wind Farm would bring wind energy development closer than in the previous scenarios. The presence of Quantans Hill Wind Farm would reduce the influence of the Proposed Varied Development on this Assessment Unit by making it appear as a more distant extension (see **Figures 8.73** and **8.74** in relation to Viewpoints 20 and 21). There would therefore be no significant effects introduced by the Proposed Varied Development into this baseline scenario.

Totality of the Combined Effect including the other Operational, Consented and In-Planning Developments

- 8.11.81. Consideration has also been given to the overall totality of the effect, when the Proposed Varied Development is considered alongside the other operational, consented, and proposed developments.
- 8.11.82. This scenario, which includes Quantans Hill within the adjacent Assessment Unit 21 Southern Uplands – Carsphairn area, would give rise to some localised significant cumulative effects, but these would occur in the absence of the Proposed Varied Development. Overall, within Assessment Unit 21 this is not considered significant as presence of wind energy at Wind Rig Wind Farm is a characteristic of the Southern Uplands area, which would only be reinforced.
- 8.11.83. In this regard, the Proposed Varied Development would fit in with the established pattern of wind energy development and would consolidate the existing effects on landscape character that have already been brought about by these other schemes and would not extend these effects beyond the extent already introduced by the other schemes.

Cumulative Effects on the Galloway Hills RSA

- 8.11.84. In relation to Cumulative Scenario 2, the currently undetermined Quantans Hill Wind Farm is located within the boundary of the Galloway Hills RSA. The introduction of this scheme to the baseline would result in a significant effect upon the RSA within its own right.
- 8.11.85. The addition of the Proposed Varied Development outwith the boundary of the RSA would create a cluster of wind energy development straddling the boundary. This would give rise to a medium magnitude change, resulting in a **moderate** cumulative effect. This is considered **not significant**, as Quantans Hill Wind Farm would have a greater influence on the RSA than the addition of the Proposed Varied Development.

Table 8.21 – Summary of Cumulative Visual Effects

		Visibility of Wind Farms at Each Viewpoint Location Key: X = In Combination, O = In Succession, [] = theoretically visible only (i.e. not actually visible)																						
		Operational									Consented										In Planning			
Viewpoint		Afton	Benbrack	Blackcraig Hill	Sanquhar II	South Kyle	Torr's Hill	Wether Hill	Windy Rig	Windy Standard I, II & III	Cornharrow	Divot Hill	Fell	Glenshimmeroch	Knockman Hill	Lorg	Manquhill	Margree	Troston Loch	Windy Standard I Repowering	Appin	Cornharrow (Revised)	Euchanhead	Quantans Hill
1	Stroanfreggan Bridge (B729)				O		O	O			O			O		O	O				O			X
2	Stroanfreggan Craig	X			O		O	O	X	X	O	O		O		O		O	O	X		O	O	X
3	Guttery Glen (B729)	X			[X]			O	X		O			O		O	O		O	X	O	O	O	X
4	Smittons Bridge	[X]							[X]	[X]		O		O		X		O	O	[X]			O	X
5	Stroanfreggan Cairn				O		O	O	[X]	[X]	O			O		X	O		O		O	O		X

		Visibility of Wind Farms at Each Viewpoint Location Key: X = In Combination, O = In Succession, [] = theoretically visible only (i.e. not actually visible)																						
		Operational									Consented										In Planning			
Viewpoint		Afton	Benbrack	Blackcraig Hill	Sanquhar II	South Kyle	Torr's Hill	Wether Hill	Windy Rig	Windy Standard I, II & II	Cornharrow	Divot Hill	Fell	Glenshimmeroch	Knockman Hill	Lorg	Manquhill	Margree	Troston Loch	Windy Standard I Repowering	Appin	Cornharrow (Revised)	Euchanhead	Quantans Hill
6	Head of Ken Valley				X											O	O			O			O	[X]
7	Southern Upland Way at Culmark Hill	X		O	O		O	O	X	X	O	O	O	O	O	X	O	O	O	X	O	O	X	X
8	Minor Road south of B729				X			O			X	O		O		X	X	O	O			X	O	[X]
9	High Bridge of Ken				[X]		O	O			O					[X]	[X]				[X]	[O]	[X]	[X]
10	Southern Upland Way,	O		O	O		X	O	X	X	O	O	O	O	O	O	X	O	O	O	O	O	O	X

		Visibility of Wind Farms at Each Viewpoint Location																						
		Key: X = In Combination, O = In Succession, [] = theoretically visible only (i.e. not actually visible)																						
		Operational									Consented										In Planning			
Viewpoint		Afton	Benbrack	Blackcraig Hill	Sanquhar II	South Kyle	Torrs Hill	Wether Hill	Windy Rig	Windy Standard I, II & II	Cornharrow	Divot Hill	Fell	Glenshimmeroch	Knockman Hill	Lorg	Manquhill	Margree	Troston Loch	Windy Standard I Repowering	Appin	Cornharrow (Revised)	Euchanhead	Quantans Hill
	Benbrack (Striding Arch)																							
11	B7000 at East Ardarroch	X	X	O	X		O	O	X		O	O		O	O	X	X		O	X	X	O	X	X
12	Dundeugh Hill		O		X			X	X		X			O		X	X	O	O	X	X	X	X	X
13	Beninner	O		X	O	O	O	X	O	O	X	X	X	X	X	O	X	X	X	O	O	X	O	X
14	Cairnsmore of Carsphairn	O	O	X	O	O	O	X	O	O	X	X	X	X	X	O	X	X	X	O	O	X	O	X

		Visibility of Wind Farms at Each Viewpoint Location Key: X = In Combination, O = In Succession, [] = theoretically visible only (i.e. not actually visible)																						
		Operational									Consented										In Planning			
Viewpoint		Afton	Benbrack	Blackcraig Hill	Sanquhar II	South Kyle	Torr's Hill	Wether Hill	Windy Rig	Windy Standard I, II & II	Cornharrow	Divot Hill	Fell	Glenshimmeroch	Knockman Hill	Lorg	Manquhill	Margree	Troston Loch	Windy Standard I Repowering	Appin	Cornharrow (Revised)	Euchanhead	Quantans Hill
15	Craig of Knockgray		O	X	O	O	O	X		O	X	X	X	X	X		X	X	X		X	X		X
16	Alhang			X	X	O		O	X	O	X	X	X	X	X	O	X	X	X	O	O	X	O	X
17	Southern Upland Way at Waterside Hill	X	X	O	X	X	O	X	X	X	X	O	O	X	O	X	X	O	X	X	X	X	X	X
18	A713 at Stroangassel				X	X		X	X		X	O				X	X			X	X	X	X	X
19	A713 south of Carsphairn							X			X	X	X	X		X	X	X	X		X	X	X	X

		Visibility of Wind Farms at Each Viewpoint Location																						
		Key: X = In Combination, O = In Succession, [] = theoretically visible only (i.e. not actually visible)																						
		Operational									Consented									In Planning				
Viewpoint		Afton	Benbrack	Blackcraig Hill	Sanquhar II	South Kyle	Torrs Hill	Wether Hill	Windy Rig	Windy Standard I, II & II	Cornharrow	Divot Hill	Fell	Glenshimmeroch	Knockman Hill	Lorg	Manquhill	Margree	Troston Loch	Windy Standard I Repowering	Appin	Cornharrow (Revised)	Euchanhead	Quantans Hill
20	Woodhead Mines			X	X			X			X	X	X	X	X		X	X	X		X	X		X
21	Corserine (Hennessey's shelter)	X	X	X	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
22	Carsphairn War Memorial			X			O	X			X	X		X			X	X				X		X

(Key: X = Simultaneous, O = Successive)

Combined Cumulative Effects on Visual Amenity

- 8.11.86. As with cumulative landscape character effects, it is acknowledged that the addition of the Proposed Varied Development to the baseline has the potential to result in an increase in effects, when viewed in combination with other wind turbines forming part of the visual baseline.
- 8.11.87. However, it is also noted that in any given view where turbines are already present, the additional effect on visual amenity of introducing further turbines may not have as greater effect as the initial introduction of turbines. Furthermore, in general the greater the number of turbines in the baseline view, the less significant the addition of further turbines may be. It is also recognised however that a slight additional effect on top of an existing effect, which at present is not quite significant, could in theory tip the balance such that the overall effect is deemed to be significant. Again, generally speaking, such additional cumulative effects would arise where a visual receptor would now lie between a cumulative wind farm in one direction and the Proposed Varied Development in a different direction, such that the visibility of turbines as a result of the addition of the Proposed Varied Development would become notable in multiple, usually directly opposite, directions.

Cumulative 'in combination' visual effects

- 8.11.88. An 'in combination' cumulative visual effect is the term used to refer to the situation where a viewer is able to see one or more further wind farms, in addition to the Proposed Varied Development, whilst standing in the one location. These effects are either 'simultaneous', where the viewer can see the additional turbines in the same angle of view, or 'successive', where the view can see the additional turbines in a different angle of view by turning their head.
- 8.11.89. As set out in the main assessment, there are many locations where other existing wind turbines are seen in views from the landscape in and around the Proposed Varied Development. In particular, the more elevated viewpoints such as Viewpoints 10, 13, 14, 16 and 21 views of numerous existing developments at various more distant locations across the extent of the wider landscape.
- 8.11.90. **Table 8.21** above summarises the occurrence of 'simultaneous' and 'successive' effects at each of the 22 assessment viewpoints.

Cumulative Scenario 1

- 8.11.91. In the first cumulative scenario, as listed above in **Paragraph 8.11.23**, ten other consented wind farms would be present in the baseline landscape.
- 8.11.92. The addition of these schemes would serve to further establish wind energy as a visual component in the wider landscape to the north-west, north, north-east, east and south-east of the Proposed Varied Development.
- 8.11.93. Through analysis of **Table 8.21** and the cumulative visualisations, a few observations can be made. It is noted that the Proposed Varied Development would, from the vast majority of locations, be visible either in combination or in succession with the consented

Manquhill, Cornharrow, Glenshimmeroch and Lorg Wind Farms, and to a slightly lesser degree to Troston Loch, Divot Hill, Margree and Windy Standard I Repowering Wind Farms. This is in addition to the existing operational Wether Hill wind farm, which would form a cluster with Cornharrow and Manquhill Wind Farms to the east, the Windy Rig and Windy Standard cluster, which would be partially replaced with Windy Standard I Repowering to the north, and Sanquhar II which would form a cluster with Lorg Wind Farm to the north-east.

- 8.11.94. It is noted that the Proposed Varied Development would introduce turbines into some views from which currently there are no or limited views of other turbines. However, these are generally restricted to the landscape within proximity of the site, particularly lower-lying ground from which the existing distant turbines to the north of the site, are not visible. From elevated parts of the local landscape, there is already a perceived presence of turbines, and the introduction of the Proposed Varied Development would reinforce this perception.
- 8.11.95. It is acknowledged that where more than one wind farm is present in the view there would be a greater overall or combined effect on visual amenity than if just one wind farm was visible in the landscape. Likewise, it is acknowledged that the more wind turbines that are visible in any given landscape, the greater will be the magnitude of overall (or combined) change to the visual amenity that prevailed prior to the introduction of the first turbines.
- 8.11.96. However, it is also noted that in any given view where turbines are already present the additional effect on visual amenity of introducing further turbines may not be as significant as the initial introduction of turbines. Furthermore, in general, the greater the number of turbines in the baseline view the less significant the addition of further turbines may be in visual amenity terms as the landscape will be more heavily characterised by turbines in the baseline situation.
- 8.11.97. Measured against this baseline, the additional effects arising as a result of introducing the Proposed Varied Development would typically be equal to or less significant than reported earlier in the solus assessment.
- 8.11.98. Referring to the Viewpoint Assessment at **Appendix 8.5**, during daylight hours, there would generally be no change to the effects identified in the solus assessment except for from Viewpoints 3, 7 and 10. From Viewpoint 3, at Guttery Glen (B729), turbines at Cornharrow and Manquhill Wind Farms would be visible in successive views at similar proximity to the Proposed Varied Development, all within 5 km. From Viewpoint 7, at Culmark Hill, existing turbines at Troston Loch and Lorg Wind Farm would be visible at closer proximity than the Proposed Varied Development in successive views. From Viewpoint 10, located on Benbrack, the Lorg turbines would be visible in successive views and turbines at Manquhill Wind Farm would also be visible in combination with the Proposed Varied Development at closer proximity. From these three viewpoints, the effect of adding the Proposed Varied Development into this baseline scenario would result in a medium magnitude of change and a **moderate** level of effect, which is considered **not significant** due to the proximity of the other turbines. During daylight hours this would reduce the number of significant effects from 16 to 13 of the 22 representative viewpoints.

8.11.99. During the hours of darkness, the cumulative effects would remain the same as identified in the main assessment for Viewpoints 1, 2, 4, 5, 6, 9, 11, 18, 19 and 22. At Viewpoints 12, 13, 14 and 15 the cumulative effect would reduce to **moderate** and **not significant**, at Viewpoints 3, 7, 10, 16 and 20 the cumulative effect would reduce to **moderate/minor** and **not significant** and at Viewpoints 8, 17 and 21 the cumulative effect would reduce to **minor** and **not significant** due to the presence of other, sometimes more prominent aviation lights in the baseline landscape.

8.11.100. Except where stated below the significance of effects reported in the **Section 8.8** of this Chapter would still apply in Cumulative Scenario 1; however, the following observations are noted.

Residential properties within 2 km

8.11.101. In relation to the properties within 2 km of the Proposed Varied Development (as discussed in the RVAA in **Appendix 8.6**), Properties 6 and 7 (1 and 2 Muirdrochwood), 9 (Stroanpatrick), 12 (Moorbrock), and 13 (Game Keeper's Cottage) would have views of both the Manquhill and Glenshimmeroch wind farm clusters. Property 5 (Marscalloch Cottage), and 8 (Smittons) would have partial views of the Glenshimmeroch Wind Farm cluster.

8.11.102. Although there would be significant visual effects experienced by residential receptors within the local landscape to the site, including properties 12 (Moorbrock) and 13 (Game Keeper's Cottage) to the north of the site, and the access of properties 8 (Smittons) and 9 (Stroanpatrick) to the south-east, such effects would largely arise from the introduction of the Proposed Varied Development in its own right, due to its proximity.

8.11.103. Significant effects are not predicted in the solus assessment for properties 5 (Marscalloch Cottage), 6 or 7 (1 and 2 Muirdrochwood) to the south of the site. The effects of the introduction of the Proposed Varied Development within a landscape that features the consented schemes alongside existing wind farms would not be notably different to the effects already reported within the solus assessment.

Residential properties between 2 km and 5 km

8.11.104. When the other consented schemes are considered to be present in the baseline landscape, it is assessed that the consented schemes within this area would give rise to significant visual effects without the addition of the Proposed Varied Development. It would not introduce any additional significant cumulative effects.

8.11.105. During the hours of darkness, the cumulative effects would remain the same as identified in the main assessment.

8.11.106. Throughout the local landscape, within 5 km of the Proposed Varied Development, the proposed turbines would be seen as an additional wind farm within a landscape where turbines are an existing feature. The proposed turbines would be seen as a separate development on the fringes of the Southern Uplands, as part of a larger cluster of schemes.

Primary settlements between 5 km and 20 km

- 8.11.107. From other residential areas in the wider landscape, as indicated above, the proposed turbines would generally be seen in conjunction or in succession with the other distant wind farms located within the Southern Uplands. In this context, the additional effects resulting from the introduction of the Proposed Varied Development would not be significant.

Totality of the Combined Effect including the other Operational, Consented and In-Planning Developments

- 8.11.108. Consideration has been given to the overall totality of the effect, when the Proposed Varied Development is considered alongside the other operational and consented developments.
- 8.11.109. The closest consented schemes are Manquhill and Cornharrow to the east, Glenshimmeroch and Troston Loch to the south-east, Lorg to the north-east and Windy Standard I Repowering to the north north-west.
- 8.11.110. The pattern of wind farm development established and reported above in relation to cumulative scenario 1 would not be greatly altered by the introduction of these schemes, largely as these schemes are extensions to existing wind farms or are located in areas where wind farms are already a characteristic of the landscape.

Cumulative Scenario 2

- 8.11.111. In the second cumulative scenario, as listed above in **Paragraph 8.11.60**, Appin, Eucharhead and Quantans Hill Wind Farms would also be present in the baseline landscape, and the Consented Cornharrow Wind Farm would be replaced with the in planning Cornharrow (revised) Wind Farm.
- 8.11.112. Referring to the Viewpoint Assessment at **Appendix 8.5**, during daylight hours, from Viewpoints 4, 6, 8, 9 and 14 there would be no change to the effects identified in the assessment of the solus effects. From Viewpoints 1, 2, 3, 5, 7, 11, 12 and 13 the cumulative effect of adding Quantans Hill Wind Farm into the baseline scenario would slightly reduce the magnitude of change caused by the Proposed Varied Development, and consequent levels of effect, however they would remain significant. From Viewpoints 17, 18, 21 and 22 the magnitude of change and consequent levels of effect would be slightly reduced, and they would remain not significant. From Viewpoints 10, 15, 16, 19 and 20, the addition of Quantans Hill, Appin and Eucharhead Wind Farms into the baseline would reduce the significant effects to a level that is considered not significant.
- 8.11.113. It has been assessed that in Cumulative Scenario 2, during daylight hours there would be significant visual effects experienced at 11 of the 22 representative viewpoints as follows:
- Viewpoints 1-7; and
 - Viewpoint 11-14.

- 8.11.114. During the hours of darkness, the cumulative effects would remain the same as identified in Cumulative Scenario 1 at the majority of viewpoints with the exception of Viewpoint 11, 12 and 15 where the cumulative effect would reduce to **moderate/minor** and **not significant**, and Viewpoints 19, 20 and 22 where the cumulative effect would reduce to **minor** and **not significant** due to the presence of more other, sometimes more prominent, aviation lights in the baseline landscape.

Residential properties within 2 km

- 8.11.115. In relation to the properties within 2 km of the Proposed Varied Development (as discussed in the RVAA in **Appendix 8.6**), from most of these properties the in-planning wind farms would not be prominent in views, except for Properties 1 (Marbrack), 2 (Marbrack Cottage), 3 (Furmiston), 4 (Nether Loskie), 5 (Marscalloch Cottage) and 17 (Kensglen), which would have greater theoretical visibility of Quantans Hill Wind Farm than of the Proposed Varied Development due to its closer proximity.
- 8.11.116. Significant effects are not predicted from any of these properties in the solus assessment.
- 8.11.117. It is anticipated that the proximity of Quantans Hill wind farm to properties 1 (Marbrack), 2 (Marbrack Cottage), 3 (Furmiston), and 17 (Kensglen) would give rise to significant effects without the addition of the Proposed Varied Development. Due to the level of screening by vegetation around property 5 (Marscalloch Cottage), it is not anticipated that the totality of effect would increase to such a level that it would be considered significant.
- 8.11.118. From other properties within 2 km, Quantans Hill Wind Farm would be partially visible beyond the Proposed Varied Development, but not to such a degree that it would change the level of effect identified in the solus assessment.

Residential properties between 2 km and 5 km

- 8.11.119. From properties to the west of the Proposed Varied Development, along the B729, including Marbrae and Burniston, during daylight hours the magnitude of change would reduce to medium and the cumulative effect to **moderate significant**. This is due to the closer proximity of these properties to the proposed Quantans Hill Wind Farm. The totality of the effect, however, would be **major significant**, due to the very high magnitude of change brought about by the Quantans Hill scheme. This level of effect is irrespective of the additional impact of the Proposed Varied Development.
- 8.11.120. During the hours of darkness, the cumulative effects would remain the same as identified in the main assessment with the exception of properties to the west where open views are available, including Marbrae and Burniston. From these locations the cumulative effect would reduce to **moderate/minor** and **not significant** due to the presence of closer aviation lights in the baseline landscape at Quantans Hill.

Primary settlements between 5 km and 20 km

- 8.11.121. From Carsphairn, as assessed in relation to Viewpoint 22, during daylight hours the addition of Quantans Hill Wind Farm into the baseline would slightly reduce the visual change caused by the Proposed Varied Development to a low to medium magnitude, and

the cumulative consequent effect to a **moderate/minor** to **moderate** level, which would remain **not significant**. During the hours of darkness, the magnitude of change would reduce to low and the level of effect to **minor**, which is **not significant**.

- 8.11.122. No other settlements were assessed as having potential for significant effects as a result of the Proposed Varied Development.

Totality of the Combined Effect including the other Operational, Consented and In-Planning Developments

- 8.11.123. Consideration has also been given to the overall totality of the effect, when the Proposed Varied Development is considered alongside the other operational, consented, and proposed developments.
- 8.11.124. The closest in-planning scheme is Quantans Hill immediately to the west. In this regard, the Proposed Varied Development would fit in with the established pattern of wind energy development and would consolidate the existing effects on landscape character that have already been brought about by these other schemes and would not extend these effects beyond the extent already introduced by the other schemes.
- 8.11.125. Overall, collectively these developments would serve to reinforce the existing pattern of wind energy in the landscape of the site within approximately 5 km. The addition of the Proposed Varied Development would serve to reinforce this pattern of wind energy.

Sequential Cumulative Effects on Visual Amenity

- 8.11.126. A 'sequential' cumulative visual effect is the term used to refer to the situation where a viewer is able to see one or more wind farms in addition to the Proposed Varied Development, whilst travelling along a linear route. This could be either on foot, whilst walking on a footpath, or by bicycle or car along the public highway. The main assessment considered receptors had the potential to experience significant effects on sections of the following routes as a result of the Proposed Varied Development:
- The Southern Upland Way;
 - The National Byway;
 - Core Paths within 5 km: 23, 164, 182, 188, 199;
 - Core Paths between 5 to 10 km: 16, 190;
 - Other Rights of Way within 5 km: DS15, DS16, DS17, DS21;
 - A712;
 - A713;
 - A762;
 - B729;

- B7000;
- B7075; and
- Lorg Road.

8.11.127. The main assessment identified significant effects on sections of the following routes:

- The Southern Upland Way;
- The National Byway;
- Core Paths within 5 km: 23, 164, 182, 188, 199;
- Core Paths between 5 to 10 km: 16;
- Other Rights of Way within 5 km: DS15, DS16, DS17;
- A713;
- B729;
- B7000; and
- Lorg Road.

Cumulative Scenario 1

Southern Upland Way

- 8.11.128. The Southern Upland Way passes through the Southern Uplands where there are numerous existing wind farms already present in the landscape, including at Whiteside Hill Wind Farm to the west of the route, and Sanquhar II Wind Farm, which straddles the route. The addition of the consented Lorg, Cornharrow, Manquhill, Troston Loch, Glenshimmeroch, Divot Hill, Margree and Knockman Hill Wind Farms would further contribute to the existing clustering of wind farms in the landscape, particularly to the east of the route where currently only the operational Wether Hill and Blackcraig Hill Wind Farms are present (see 360-degree wirelines at **Figures 8.100 and 8.101**). Lorg Wind Farm would reinforce the visual presence of turbines to the west of the route in closer proximity than existing wind energy development at Windy Rig. Further north-east, Cloud Hill Wind Farm would add to the clustering of wind turbines near to the operational Whiteside Hill Wind Farm.
- 8.11.129. The addition of the Proposed Varied Development to views experienced from the Southern Upland Way would introduce a further wind farm within a localised part of the landscape, to the west of the route. It would appear at a similar distance to the consented Troston Loch Wind Farm but would appear visually separate from other existing and consented wind farms.
- 8.11.130. As illustrated in the cumulative ZTVs at **Figures 8.35, 8.39, 8.41, 8.42 and 8.44** in relation to the consented wind farms at Cornharrow, Glenshimmeroch, Lorg, Manquhill and Troston Loch, there is theoretical visibility of several wind farms at proximity to the

Southern Upland Way within 5 km of the Proposed Varied Development. Therefore, significant sequential cumulative effects would be experienced from this part of the route in the absence of the Proposed Varied Development.

- 8.11.131. The Proposed Varied Development would introduce localised significant visual effects upon the route due to the proximity of the site to the footpath, but the additional cumulative effect would not be significant. The Proposed Varied Development would be seen in the context of numerous other wind farms located within the Southern Uplands. It would form a distinctly separate development to those existing and consented.

The National Byway

- 8.11.132. In the main LVIA a moderate significant effect is predicted for a 1.2 km section of the National Byway that coincides with the Southern Upland Way to the south of Butterhole Bridge. In Cumulative Scenario 1, this section of the route would experience views of Glenshimmeroch Wind Farm in proximity to the east, as illustrated at **Figure 8.39**. The consented Manquhill Wind Farm would also be visible to the north-east, as illustrated at **Figure 8.42**, and the operational Windy Rig Wind Farm to the north, as illustrated in **Figure 8.32**. The addition of the Proposed Varied Development to this baseline scenario would not give rise to any significant cumulative effects above those already present. The section of the National Byway that passes through Fingland Moss would experience significant effects as a result of the consented Troston Loch Wind Farm to the south (see **Figure 8.44**), but this would be due to the other wind farm, rather than cumulative effects with the Proposed Varied Development.

Core Paths

- 8.11.133. No significant cumulative effects are predicted from any core paths as a result of the Proposed Varied Development in Cumulative Scenario 1. The Proposed Varied Development would introduce localised significant visual effects upon sections of Core Paths 16, 23, 164, 182 and 199 as described in the main assessment, but the additional cumulative effect would not be significant. There would be significant visual effects on Core Path 199 due to its proximity to the consented Glenshimmeroch Wind Farm to the east (see **Figure 8.39**), but these effects would occur in the absence of the Proposed Varied Development, which would appear as a separate development to the north.

Other Rights of Way

- 8.11.134. In the main LVIA major significant visual effects are predicted from local footpaths DS15, and DS16 which pass within proximity of the site boundaries, and DS17 located approximately 2 km to the east. Any significant effects identified from these routes are from the Proposed Varied Development in its own right, rather than the cumulative effect with any other development in Cumulative Scenario 1.

B729

- 8.11.135. As the B729 runs between Moniaive and the B7000, there are currently intermittent and glimpsed views of the existing Wether Hill turbines to the north. There are also distant and intermittent glimpsed views of the existing Windy Rig turbines and wind energy development beyond to the north-west. The introduction of the Troston Loch wind turbines

to the landscape (see **Figure 8.44**) would bring wind energy development within closer proximity to the south of the route, whilst turbines at Cornharrow and Manquhill Wind Farms (see **Figures 8.35** and **8.42**) would form a cluster with Wether Hill to the north. There would be significant cumulative effects to this part of the B729 in Cumulative Scenario 1 in absence of the Proposed Varied Development.

- 8.11.136. The addition of the Proposed Varied Development to this baseline scenario would give rise to significant visual effects from the route as it passes between Guttery Glen and Carsphairn. At Guttery Glen it would also contribute to a perception of wind farm clustering in the landscape, giving rise to a medium magnitude of change and a **moderate significant** cumulative visual effect, however this would only be experienced for a limited section of the route, where significant visual effects are already predicted.

B7000

- 8.11.137. In views from the B7000, the existing wind farms in the landscape are seen intermittently and at distance as the road winds along the edge of the Water of Ken. The introduction of the consented developments to the east of the road at Divot Hill and Glenshimmeroch would affect views from the section of road to the north of Mackilston Hill (see CZTVs at **Figures 8.36** and **8.39**). The Proposed Varied Development would be visible from the same section of road at similar proximity to the north, giving rise to localised significant visual effects in its own right as already discussed within the main part of the LVIA.
- 8.11.138. The cumulative magnitude of change from this section of road as a result of the Proposed Varied Development in this scenario would be medium, resulting in a **moderate** level of effect. However, this would be considered **not significant** as open views without wind energy development would continue to be available to the west.

A713

- 8.11.139. The A713 passes through The Glenkens, where there are distant and glimpsed views of existing wind farms to the north, with the two Torrs Hill wind turbines to the south-west. The introduction of the consented schemes to the north, north-east and east would not greatly alter views from the road due to their distant locations in the landscape relative to the road.
- 8.11.140. In the main LVIA moderate significant effects are predicted from a limited section of the A713 near Bardennoch Hill where the Proposed Varied Development would be clearly visible. In Cumulative Scenario 1 other wind farms would give rise to successive cumulative effects as one travels along the road. However, the visual separation of the other schemes would result in no greater than a low to medium magnitude of change and a **moderate/minor** to **moderate** additional cumulative effect that is considered **not significant**.

Cumulative Scenario 2

Southern Upland Way

- 8.11.141. In Cumulative Scenario 2, Eucharhead Wind Farm would straddle the Southern Upland Way, whilst Appin and Cornharrow (revised) Wind Farms would be located to the east

side of the route, both increasing the visual presence of turbines within proximity of the route (see CZTVs at **Figures 8.46, 8.47 and 8.48**, and 360-degree wireline at **Figure 8.101**). The Proposed Varied Development would be seen to the west of the route in the context of other wind energy development at Quantans Hill Wind Farm, which would be visible beyond the Proposed Varied Development (see **Figure 8.58** in relation to Viewpoint 5). There are likely to be some significant sequential visual effects upon views from the Southern Upland Way, but these would occur in the absence of the Proposed Varied Development. The significance of introducing the Proposed Varied Development into this baseline scenario would not be notably greater than that assessed above, and no additional significant effects are predicted.

The National Byway

- 8.11.142. In Cumulative Scenario 2 views from the National Byway would be similar to Cumulative Scenario 1, with additional turbines at Quantans Hill visible beyond the Proposed Varied Development. No significant cumulative effects are predicted.

Core Paths

- 8.11.143. In Scenario 2, Quantans Hill Wind Farm would be visible from Core Paths 16, 23, 164, 182 and 199 (see CZTV at **Figure 8.51**). From these core paths, which are located to the south, south-west and west of the Proposed Varied Development, the two wind farms would appear as a continuous wind energy development (see visualisations at **Figures 8.65 and 8.74**). In views from the west, such as from Core Paths 16, 164 and 182, Quantans Hill turbines would appear more prominent and so the addition of the Proposed Varied Development would not be significant. In views from the south, from Core Paths 23 and 199, the Proposed Varied Development would extend the visual presence of turbines across the view (see **Figure 8.65**, Viewpoint 12 in relation to Core Path 23). The cumulative visual effects in Cumulative Scenario 2 from Core Paths 23 and 199 would be lower than the solus effects of the Proposed Varied Development, but there would be a medium magnitude of change to views, resulting in **moderate significant** effects.

Other Rights of Way

- 8.11.144. In Cumulative Scenario 2 Quantans Hill Wind Farm would be visible adjacent to the Proposed Varied Development from local footpaths DS15, DS16 and DS17. Footpath DS15, which is located to the west of the Proposed Varied Development would pass through Quantans Hill Wind Farm, and as such there would be significant effects on the route. The addition of the Proposed Varied Development to this scenario would result in a lower magnitude of change than was predicted in the main assessment, resulting in a **moderate** cumulative visual of effect that is considered **not significant** due to the greater visual influence of the Quantans Hill turbines.
- 8.11.145. From footpaths DS16 and DS17 Quantans Hills Wind Farm would be visible beyond the turbines of the Proposed Varied Development. The introduction of the Proposed Varied Development to this baseline would slightly reduce the visual impact, but visual effects would remain significant. Any significant effects identified from footpaths DS16 and DS17 would be as a result of the Proposed Varied Development in its own right, rather than the cumulative effect with any other development.

B729

- 8.11.146. The sequential experience from the B729 in Cumulative Scenario 2 between Carsphairn and the B7000 would include views of Quantans Hill Wind Farm to the north of the road, which would be continued with views of the Proposed Varied Development. This would result in a medium magnitude of change to views and **moderate** cumulative visual effects that would be considered **significant**. However, this would only be experienced where significant visual effects are already predicted.
- 8.11.147. In views from the B729, approach the Proposed Varied Development from the east, the Quantans Hill turbines would be visible in beyond the proposed turbines, which would not give rise to any significant cumulative effects.

B7000

- 8.11.148. In views to the north from the B7000 in Cumulative Scenario 2, the Quantans Hill turbines would be visible to the west of the Proposed Varied Development (see **Figure 8.64** in relation to Viewpoint 11). The Proposed Varied Development would be visible at similar proximity, extending the presence of turbines across the view. This would give rise to a medium magnitude of change to views from the B7000 to the north of Mackilston Hill, and localised **moderate** cumulative visual effects that would be considered **significant**. However, this would only be experienced where significant visual effects are already predicted.

A713

- 8.11.149. Along the A713, in Cumulative Scenario 2, the proposed Quantans Hill turbines would be visible between St Johns Town of Dalry and Carsphairn (see CZTV at **Figure 8.51**). The Proposed Varied Development would be visible adjacent to the east of this scheme (see cumulative wirelines at **Figures 8.71** and **8.72**). The Proposed Varied Development would reinforce the presence of turbines within views. Within this context, the addition of the Proposed Varied Development would not result in any significant effects.

Summary

- 8.11.150. The potential for the effects of the Proposed Varied Development to result in significant cumulative effects once the other consented and in-planning schemes are also included has been considered above. Although some moderate significant cumulative effects have been identified, these are all in locations where significant visual effects have already been identified within the main LVIA.
- 8.11.151. The majority of the above routes have some periodic visibility of existing wind energy, but the relatively limited additional effect introduced by the Proposed Varied Development would in no instance lead to an overall significant effect alongside the other developments, where such a significant effect does not already arise from either the Proposed Varied Development or the other development in isolation.

8.12. Summary

- 8.12.1. The Proposed Varied Development is located on land largely covered with coniferous forest within the Southern Uplands of Dumfries and Galloway c. 5 km to the east of Carsphairn.
- 8.12.2. The site does not fall within a NSA or National Park but does partly falls within the Galloway Hills RSA. The three north-westernmost turbines just fall within the locally designated landscape.
- 8.12.3. The Proposed Varied Development straddles three Assessment Units as described in the Dumfries and Galloway Council Wind Energy Landscape Sensitivity Study (2025), namely: Assessment Unit 22 – Southern Uplands with Forest, Assessment Unit 4 – Narrow Valleys, and Assessment Unit 9 – Upper Dale. All of the proposed turbines are located within Assessment Unit 22. The site access and temporary construction compound are located within Assessment Unit 9.
- 8.12.4. The structures of the Proposed Varied Development have been designed to avoid any existing notable landscape features, and as such, there would be no effect on any existing elements of the landscape which positively contribute to landscape character. The design of the Proposed Varied Development is the result of a considered iterative process which has sought to minimise landscape and visual effects whilst achieving the technical and commercial requirements to ensure project viability.
- 8.12.5. As with almost any onshore wind farm development it is recognised that the Proposed Varied Development would give rise to some localised significant effects on landscape character and visual amenity. These effects would arise primarily as a result of the introduction of the wind turbines and met mast into the landscape. The ground level components of the Proposed Varied Development are located within the existing plantation which would screen or backcloth these structures depending on the direction of view. It is not considered that these components of the Proposed Varied Development would give rise to any significant effects in their own right on landscape character or visual amenity.
- 8.12.6. In the main part of the LVIA, the baseline against which the scheme is considered includes other wind farms which are operational but not those which are consented or the subject of a planning application. This accords with the requirements of GLVIA3, and in this scenario, the following observations have been made.

Effects on Landscape Character

- 8.12.7. The Proposed Varied Development would result in a direct significant effect on landscape character within the unit of the character type in which the site is located, i.e. the Ken area of Assessment Unit 22 – Southern Uplands with Forest. This is a change from the Consented Development, which identified direct significant effects within two different character types. As the Proposed Varied Development does not include turbines within Assessment Unit 4 – Narrow Valleys, effects on this area are indirect.

- 8.12.8. Within Assessment Unit 22 – Southern Uplands with Forest significant effects would occur up to 5 km from the Proposed Varied Development, equal to that predicted for the Consented Development. The structural form of the proposed turbines is such that a high degree of visual permeability would be maintained across the character types and the existing sense of openness within the Southern Uplands would not be greatly altered by the introduction of the turbines. The proposed turbines are relatively slender structures which would not obstruct the longer distance views when experienced from any direction. Whilst undeniably tall structures, the scale of a large proportion of the underlying landscape is medium to large and is dominated by coniferous plantation and upland grassland, creating a simple landscape pattern. Within this context the proposed turbines would not diminish the overall scale of the local landscape although in the immediate vicinity of the turbines the presence of the turbines would be clearly dominant. It is therefore recognised that the introduction of the turbines and the movement of the blades when operating would be highly prominent becoming a characterising influence on the character type during the lifetime of the Proposed Varied Development.
- 8.12.9. The Proposed Varied Development would have a significant indirect effect in some adjoining character types, including the Ken area of Assessment Unit 4 – Narrow Valleys, and Assessment Unit 9 – Upper Dale. It is assessed that significant effects on landscape character would extend up to 5 km from the proposed turbines. The extent of the significant effects is a slight increase on those predicted in relation to the Consented Development, by approximately 0.5 km.
- 8.12.10. There would be indirect significant effects upon the Stroan area of Assessment Unit 20 – Foothills with Forest up to 4.5 km from the proposed turbines, an increase of 0.5 km on that predicted for the Consented Development. In addition, there would be indirect significant effects within isolated locations within the Rhinns of Kells area of Assessment Unit 20.
- 8.12.11. Within the Carsphairn area of Assessment Unit 21 – Southern Uplands there would also be indirect significant effects up to 5 km. This is a slight increase in the extent predicted for the Consented Development, up from 4.5 km.

Effects on Visual Amenity

- 8.12.12. In relation to visual effects, it is accepted that the Proposed Varied Development would be visible from various nearby properties and settlements as well as the surrounding road network, public footpaths and recreational spaces. However, it has been assessed that the significant effects on visual amenity would be localised to within approximately 9 km of the proposed turbines.
- 8.12.13. During daylight hours there would be a significant visual effect experienced at 16 of the 22 representative viewpoints as follows:
- Viewpoints 1-7;
 - Viewpoints 10 - 16; and
 - Viewpoint 19 and 20.

- 8.12.14. This is an increase of one viewpoint in comparison with the Consented Development, which identified 15 (not including Viewpoint 13).
- 8.12.15. It should be noted that there is a high proportion of viewpoints from which there would be significant effects due to the constrained nature of the ZTV, influenced by surrounding hill summits and valley locations. A large proportion of the viewpoints are located within 5 km of the Proposed Varied Development as this area has the greatest amount of ZTV coverage. Viewpoints located at closer proximity to the proposed turbines are inevitably going to be locations from where receptors are more likely to experience significant effects.

Residential Properties and Settlements

- 8.12.16. There are 17 properties within 2 km of the proposed turbines, which have been assessed in detail within the RVAA. The RVAA, presented at **Appendix 8.6**, concludes that of the 17 properties assessed, during daylight hours, there would be major significant visual effects experienced at one of the dwellings and/or their associated garden curtilages, namely Property 15 – Bridgemark, major/moderate significant effects at two properties, namely 12 – Moorbrock and 13 - Game Keeper's Cottage, and moderate significant effects at four properties, namely Properties 8 - Smittons, 9 – Stroanpatrick, 10 – Craigengillan, 14 – Strahannah Farm and River Ken Cottage. This is an increase of five from the two properties identified as having significant effects in the RVAA produced in relation to the Consented Development.
- 8.12.17. It is concluded that when the experience from each property is considered in the round, there would be no residents of occupied properties which would experience such an overbearing or overwhelming effect on their visual amenity that their properties would become unattractive places in which to live.
- 8.12.18. During the hours of darkness, no significant effects were identified from any of the properties within 2 km of the proposed turbines.
- 8.12.19. It is recognised that certain other residential properties scattered within the local landscape, situated between c. 2 – 5 km of the proposed turbines, largely located to the east, south-east and west, would experience some major significant visual effects as a result of the Proposed Varied Development. However, such views would not result in the properties becoming an unattractive place to live.
- 8.12.20. During the hours of darkness, it is assessed that there would be moderate significant effects on properties to the north-east accessed from Lorg Road including Strahanna Farm, Auchrae, and Corlae, properties to the south-east accessed from the B729 including The Old School House and Culmark, properties to the south accessed from the B7000 including Bridgemark, College Glen and Arndarroch, and properties to the west accessed from the B729 near Water of Deugh including and Burniston and Kensglen.
- 8.12.21. The nearest settlements to the Proposed Varied Development are located at distance from the site, and as such, visual effects experienced from within Carsphairn and St John's Town of Dalry would not be significant. The Proposed Varied Development would not be visible from Moniaive.

Recreational and Long Distance Walking and Cycling Routes

- 8.12.22. It is assessed that during daylight hours there would be significant effects experienced from the Southern Upland Way for a total of approximately 6.3 km when travelling in a northerly direction, and approximately 5.4 km when travelling in a southerly direction. **Major significant** effects of would be experienced within 4 – 5 km of the proposed turbines. This is equal to the extent of significant effects predicted for the Consented Development. Beyond distances of 5 km, ZTV coverage becomes intermittent, coniferous forest curtails views towards the site, and the Proposed Varied Development becomes an increasingly smaller element in the wider views available from the route. **Moderate significant** effects are predicted to approximately 7.5 km of the proposed turbines. During the hours of darkness, it is assessed that there would be significant effects on views from the Southern Upland Way within approximately 4 – 5 km of the Proposed Varied Development.
- 8.12.23. It is assessed that during daylight hours there would be **moderate significant** effects experienced from the National Byway for a total of approximately 1.0 km when travelling in a north-easterly direction where the route coincides with the Southern Upland Way. However, there would be no significant effects during the hours of darkness.

Core Paths

- 8.12.24. It is assessed that during daylight hours there would be significant effects experienced from sections of Core Paths 16, 23, 164, 182, 188 and 199. These findings are generally the same as those predicted in relation to the Consented Development, except for Core Paths 16 and 188, which were not previously assessed, Core Path 182, which was previously assessed in combination with local footpath DS15, and Core Path 199, from which a greater level of effect is anticipated than in the previous assessment.
- 8.12.25. From Core Path 16 **moderate significant** effects are anticipated from the eastern end of the route, c. 2.3 km in length, when travelling in an easterly direction. From Core Path 23 **major/moderate** significant effects are predicted from an open, elevated section of route (c. 0.4 km). From Core Path 164 moderate significant effects are predicted for c. 2.1 km at the northern end of the route. From Core Path 182 **major/moderate significant** effects are predicted where glimpsed open views are available for a total of c. 0.4 km when travelling westwards, and **moderate significant** effects are anticipated for c. 0.5 km when travelling southwards. From Core Path 188 **major/moderate significant** effects are anticipated for c. 0.5 km when travelling westwards. From Core Path 199 **major/moderate significant** effects are anticipated at the western end of the route (c. 1.5 km) and **moderate significant** effect sat the eastern end (c. 0.9 km).
- 8.12.26. During the hours of darkness **moderate significant** effects are anticipated for c. 0.4 km on Core Path 23, and for c. 2.1 km to the north of Bardennoch Hill on Core Path 164. Core Path 164 passes within the boundary of the Galloway Hills International Dark Sky Park, however the section of route described lies outside of the designated area.

Other Rights of Way

- 8.12.27. It is assessed that during daylight hours there would be **major significant** effects experienced from local footpaths DS15, DS16 and DS17 due to their proximity to the Proposed Varied Development. This finding is the same as predicted in relation to the Consented Development.
- 8.12.28. During the hours of darkness **moderate significant** effects are anticipated from DS15, DS16 and DS17.

Roads

- 8.12.29. It is assessed that during daylight hours there would be significant effects experienced from sections of the A713, B729, B7000 and Lorg Road due to their proximity to the Proposed Varied Development. This finding is the same as predicted in relation to the Consented Development.
- 8.12.30. From the A713 **moderate significant** effects would be experienced during daylight hours from a total of approx. 1.1 km in the vicinity of Cumnock Knowes, between Carsphairn and Bardennoch, represented by Viewpoint 19, when travelling south-east. This level of effect is the same as was predicted in relation to the Consented Development.
- 8.12.31. From the B729 **major significant** effects would be experienced during daylight hours for a 3.7 km section of road between Guttery Glen (Viewpoint 3) and Smittons Bridge (Viewpoint 4), when travelling west. **Moderate significant** effects would also be experienced from a 3.0 km section of the B729 when travelling west between Fingland Hill and Carroch Hill. When travelling east on the B729, moderate significant effects would be experienced from a 0.4 km section of road to the east of Scar Knowe. These levels of effect are the same as was predicted in relation to the Consented Development.
- 8.12.32. From the B7000 **major significant** effects would be experienced during daylight hours from a 2.0km section of road, represented by Viewpoint 11, between White Hill and High Bridge of Ken when travelling in a northerly direction. This worst-case level of effect is the same as was predicted in relation to the Consented Development. **Moderate significant** effects would also be experienced during daylight hours for a 1.0 km section of road between Glenhoul Hill and White Hill when travelling north.
- 8.12.33. From the southern section of Lorg Road between the B729 and Craigengillan Bridge, **major significant** effects would be experienced during daylight hours when travelling in either direction. When travelling in south-westerly direction along this road, **major** effects would begin approximately 3.7 km from the nearest proposed turbine, near to Corlae Bridge. Further north, **major/moderate significant** effects would extend to approximately 5 km, whilst **moderate significant** effects would extend to approximately 5.5 km from the nearest turbine. **Moderate significant** effects would be experienced during the hours of darkness within approximately 4 km of the Proposed Varied Development.

Effects on the Galloway Hills RSA

- 8.12.34. A small part of the site is located on the periphery of the Galloway Hills RSA and as such it is acknowledged there would be some localised significant effects, both direct and indirect within a relatively small part of the RSA, in the vicinity of Cairnsmore of Carsphairn. Direct significant effects on the landscape character of the Ken area of the Southern Uplands with Forest (AU 22) would be experienced within the site. Indirect significant effects would be experienced from the small part of the Ken unit that lies inside the RSA but outwith the site to the west, and from within neighbouring Assessment Unit 21: Southern Uplands – Carsphairn area and Assessment Unit 9: Upper Dale – Upper Glenkens, extending to a distance of 5 km. This is a slight extension to the effect predicted in relation to the Consented Development by approximately 0.5 km.
- 8.12.35. There would also be some significant visual effects experienced from the RSA looking east and north-east towards the Proposed Varied Development up to a distance of c. 8 – 9 km. This is equal to the distance predicted for the Consented Development.
- 8.12.36. As concluded in relation to the Consented Development, despite the identified significant effects upon views and landscape character, there would not be any significant effects upon the special qualities of the Galloway Hills nor its reason for designation.

Cumulative Effects

- 8.12.37. The cumulative assessment has considered the effects of the Proposed Varied Development in relation to two scenarios;
- Scenario 1 - assumes that other consented (but as yet unbuilt) wind farms are operational; and
 - Scenario 2 - extends this further to assume that all schemes in planning are also operational.

Cumulative Landscape Character Effects - Scenario 1

- 8.12.38. In Cumulative Scenario 1 there would be a concentration of wind energy development within Assessment Unit 22: Southern Uplands with Forest. In the Ken area this would include Cornharrow, Manquhill and Lorg Wind Farms in combination with part of Sanquhar II and the existing Wether Hill Wind Farm. In the Carsphairn area this would include Windy Standard I Repowering Wind Farm, in combination with the existing operational wind farms at Benbrack, South Kyle and Windy Standard II and III. Collectively, the operational schemes have already had a characterising effect on Assessment Unit 22, together with the operational Windy Rig Wind Farm in the neighbouring Carsphairn area of Assessment Unit 21: Southern Uplands, irrespective of the addition of the Proposed Varied Development.
- 8.12.39. The Proposed Varied Development would fit in with the established pattern of wind energy development and would consolidate the existing effects on landscape character that have already been brought about by these other schemes and would not extend these effects beyond the extent already introduced by the other schemes. This is the same conclusion that was reached with respect to the Consented Development.

- 8.12.40. There would also be a concentration of wind energy development within the neighbouring Stroan area of Assessment Unit 20: Foothills with Forest, which would include Divot Hill, Fell, Glenshimmeroch, Knockman Hill, Margree and Troston Loch Wind Farms in combination with the existing Blackcraig Hill Wind Farm. Localised cumulative effects would occur within this character type in the absence of the Proposed Varied Development.

Cumulative Landscape Character Effects - Scenario 2

- 8.12.41. In Cumulative Scenario 2 the proposed Appin Wind Farm would be located within the Ken area of Assessment Unit 22: Southern Uplands with Forest. This would add to the cluster of wind energy development around Lorg and Sanquhar II Wind Farms. The Proposed Varied Development would fit in with the established pattern of wind energy development and would consolidate the existing effects on landscape character that have already been brought about by these other schemes and would not extend these effects beyond the extent already introduced by the other schemes. This is the same conclusion that was reached with respect to the Consented Development.
- 8.12.42. The proposed Quantans Hill Wind Farm would be located within the adjacent Carsphairn area of Assessment Unit 21: Southern Uplands, which would form a cluster of wind energy development with the Proposed Varied Development. This would give rise to some localised significant cumulative effects, however, the overall effect on Assessment Area 21 is not considered significant as the presence of wind energy is already a characteristic of the Southern Uplands at the operational Windy Rig Wind Farm, which would only be reinforced.

Cumulative Visual Effects - Scenario 1

- 8.12.43. In Cumulative Scenario 1 the Proposed Varied Development would not introduce any significant cumulative visual effects where significant visual effects have not already been identified within the main LVIA.
- 8.12.44. Generally, any sequential cumulative visual effects, introduced by the Proposed Varied Development on the local footpath and road network in Cumulative Scenario 1, would not be significant. However, for a limited section of the B729 at Guttery Glen, sequential views of Troston Loch, Wether Hill, Cornharrow and Manquhill Wind Farms would give rise to a **moderate significant** cumulative visual effect. As discussed within the main LVIA, the Proposed Varied Development would introduce significant visual effects on this section of road regardless of other developments.
- 8.12.45. When the Proposed Varied Development is considered in totality with all other operational and consented schemes, any significant effects identified would occur in the absence of the Proposed Varied Development. It would not result in the overall cumulative visual effect of wind turbines being dominant or oppressive in views experienced within the surrounding area.

Cumulative Visual Effects - Scenario 2

- 8.12.46. In Cumulative Scenario 2, the addition of the Proposed Varied Development would give rise to **moderate significant** cumulative visual effects on properties to the west of the Proposed Varied Development, including Marbrae and Burniston. However, significant visual effects are already identified from these properties within the solus assessment.
- 8.12.47. The addition of the Proposed Varied Development to Scenario 2 would result in **moderate significant** sequential cumulative visual effects from the B729 between Carsphairn and the B7000, from the B7000 north of Mackilston Hill, and from Core Paths 23 and 199. The main assessment identified significant visual effects from these routes regardless of other developments.
- 8.12.48. When the Proposed Varied Development is considered in totality with all other operational, consented and in planning schemes, any significant effects identified would occur in the absence of the Proposed Varied Development. It would not result in the overall cumulative visual effect of wind turbines being dominant or oppressive in views experienced within the surrounding area.

Cumulative Effects on Galloway Hill RSA

- 8.12.49. In relation to cumulative effects upon the Galloway Hills RSA, considering Cumulative Scenario 1, there would be no significant effects upon Assessment Units 21 and 22 when compared to the situation prior to the introduction of any of the consented turbines in the landscape. Wind energy development is already a characteristic of the landscape beyond the RSA, and any significant effects arising as a result of the introduction of the Proposed Varied Development to the landscape would arise because of the scheme in its own right rather than due to cumulative effects.
- 8.12.50. In relation to Cumulative Scenario 2 it is acknowledged that the proposed Quantans Hill Wind Farm is located within the RSA to the west of the Proposed Varied Development, and this scheme alongside the proposed turbines would extend the array of turbines within the boundary of the RSA. The addition of the Proposed Varied Development to a baseline which includes Quantans Hill Wind Farm would give rise to a **minor** additional effect that is **not significant**. Any significant effects arising as a result of the introduction of the Proposed Varied Development to this landscape would arise because of the scheme in its own right rather than due to cumulative effects.
- 8.12.51. When the operational, consented and in planning schemes are considered in totality with the Proposed Varied Development, it is assessed that there would be some **moderate** cumulative effects upon the Galloway Hills RSA due to the encroachment of wind energy within its boundaries. These effects are considered to be **significant**, however they would occur in the absence of the Proposed Varied Development due to the location of Quantans Hill Wind Farm.
- 8.12.52. It is noted that whilst the reported effects are considered to be long term, they are not ultimately permanent, and upon decommissioning the Proposed Varied Development, the effects are almost entirely reversible. Therefore, there would be no permanent or

irreversible effects on landscape character or visual amenity, and these residual effects would not be significant.

- 8.12.53. Wind turbines give rise to a wide spectrum of opinions, ranging from strongly adverse to strongly positive, with a wide range of opinions lying somewhere between these two positions. Some people view wind turbines as incongruous or industrial structures whilst others view them as aesthetically pleasing, elegant structures and a positive response to climate change. In the case of the Proposed Varied Development the turbines and associated development may be viewed by some as a symbol of continued progress by society towards a low carbon future.
- 8.12.54. However, in considering the effects of the Proposed Varied Development, a precautionary approach has been adopted, and it is therefore assumed that the effects identified would be adverse in nature even though it is recognised that for some people the impacts could be perceived to be beneficial.
- 8.12.55. The following provides a summary of the conclusions of the impact assessment with respect to each receptor taking into consideration embedded mitigation measures.

Table 8.22 – Summary of Effects

Description of Effect	Significance of Potential Effect		Mitigation and/or Enhancement Measure	Significance of Residual Effect		Change to Consented Development Conclusion
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse	
Construction						
Effects on existing landscape features in development area	Worst-case minor/moderate not significant.	Adverse	Standard best-practice construction methods. No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Worst-case minor/moderate not significant.	Adverse	No change
Effects on landscape character within AU 22: Southern Uplands with Forest – Ken	Worst-case major/moderate significant.	Adverse	Standard best-practice construction methods. No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Worst-case major to moderate significant.	Adverse	No change
Effects on landscape character within AU 4: Narrow Valleys – Ken	Worst-case moderate/minor not significant.	Adverse	Standard best-practice construction methods. No additional mitigation – consideration of landscape and visual	Worst-case moderate/minor not significant.	Adverse	No change

Description of Effect	Significance of Potential Effect		Mitigation and/or Enhancement Measure	Significance of Residual Effect		Change to Consented Development Conclusion
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse	
			matters was inherent in the design process.			
Effects on landscape character within AU 9: Upper Dale – Upper Glenkens	Worst-case moderate/minor not significant.	Adverse	Standard best-practice construction methods. No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Worst-case moderate/minor not significant.	Adverse	No change
Visual effects	Worst-case moderate significant from section of Southern Upland Way and local footpaths DS15, DS16 and DS21.	Adverse	Standard best-practice construction methods. No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Worst-case moderate significant from section of Southern Upland Way and local footpaths DS15, DS16 and DS21.	Adverse	No change

Description of Effect	Significance of Potential Effect		Mitigation and/or Enhancement Measure	Significance of Residual Effect		Change to Consented Development Conclusion
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse	
Operation						
Effects on landscape character of AU 22: Southern Uplands with Forest – Ken	Worst-case major within 1 km, major/moderate 1 – 3.5 km, major/moderate 3.5 – 4 km to north-east, major/moderate, 3.5 - 5 km to east moderate significant, 4 – 5 km moderate significant.	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent at the design process.	Worst-case major within 1 km, major/moderate 1 – 3.5 km, major/moderate 3.5 – 4 km to north-east, major/moderate, 3.5 – 4 km to east moderate significant, 4 – 5 km moderate significant.	Adverse	Increase from major/moderate. within 1 km, increase from moderate and significant 1 – 3.5 km to east, increase from moderate and significant 1 – 4 km to north-east, moderate significant effects extended to 5 km.
Effects on landscape character of AU 4: Narrow Valleys – Ken	Worst-case major within 3 km, major/moderate 3 - 4 km, moderate	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent at the design process.	Worst-case major within 3 km, major/moderate 3 - 4 km, moderate significant 4 -5 km	Adverse	Increase from moderate and significant 3 – 4 km, extension of moderate significant effect by 0.5 km.

Description of Effect	Significance of Potential Effect		Mitigation and/or Enhancement Measure	Significance of Residual Effect		Change to Consented Development Conclusion
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse	
	significant 4 - 5 km.					
Effects on landscape character of AU9: Upper Dale – Glenkens	Worst-case major within 3 km, moderate significant 3 - 5 km.	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent at the design process.	Worst-case major within 3 km, moderate significant 3 -5 km.	Adverse	Extension of moderate. significant effect by 0.5 km.
Effects on landscape character of AU 20: Foothills with Forest – Stroan	Worst-case major/moderate within 3.5 km, moderate significant 3.5 - 4.5 km.	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent at the design process.	Worst-case major/moderate within 3.5 km, moderate significant 3.5 -4.5 km.	Adverse	Extension of major/moderate and moderate significant effects by 0.5 km.
Effects on landscape character of AU 21: Southern Uplands – Carsphairn	Worst-case major within 3 km, major/moderate 3 – 4 km, moderate significant 4 - 5 km.	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent at the design process.	Worst-case major within 3 km, major/moderate to 3 – 4 km, moderate significant 3 -5 km.	Adverse	Increase from moderate significant effect 3 – 4 km, extent of moderate significant effect increased from 4.5 km.

Description of Effect	Significance of Potential Effect		Mitigation and/or Enhancement Measure	Significance of Residual Effect		Change to Consented Development Conclusion
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse	
Effects on representative viewpoints during daylight hours	Worst-case major (Viewpoints 1, 2, 3, 4, 5, 7 and 15), major/moderate (Viewpoints 6, 10 and 12), moderate significant (Viewpoints 11, 13, 14, 16, 19, 20 and 22).	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent at the design process.	Worst-case major (Viewpoints 1, 2, 3, 4, 5, 7 and 15), major/moderate (Viewpoints 6, 10 and 12), moderate and significant (Viewpoints 11, 13, 14, 16, 19, 20 and 22).	Adverse	Viewpoint 4 increased from major/moderate level of effect, due to recent tree felling and increased height of turbines.
Effects on representative viewpoints during hours of darkness	Worst-case moderate significant (Viewpoints 2 Stroanfreggan Craig, Viewpoint 12 Dundough Hill, Viewpoint 13 Beninner, Viewpoint 14	Adverse	No additional mitigation – mitigation of effects of visible aviation lighting embedded into the design of to include dimming (2000cd/200cd) when atmospheric visibility is greater than 5 km and vertical directional intensity which	Worst-case moderate significant (six viewpoints as listed).	Adverse	N/A

Description of Effect	Significance of Potential Effect		Mitigation and/or Enhancement Measure	Significance of Residual Effect		Change to Consented Development Conclusion
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse	
	Cairnsmore of Carsphairn, Viewpoint 15 Craig of Knockgray, and Viewpoint 16 Alhang).		reduces the perceived intensity of lighting at angles below. the level of the visible aviation lights.			
Visual effects on residential properties within 2 km of the proposed turbines during daylight hours	Worst-case major (Properties 13 – Game Keeper's Cottage and 15 - Bridgemark), major/moderate (Property 12 – Moorbrock), moderate significant (Properties 4 – Nether Loskie, 8 – Smittons, 9 – Stroanpatrick, 10 – Craigengillan	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent at the design process.	Worst-case major (Properties 13 – Game Keeper's Cottage and 15 - Bridgemark), major/moderate (Property 12 – Moorbrock), moderate significant (Properties 4 – Nether Loskie, 8 – Smittons, 9 – Stroanpatrick, 10 – Craigengillan and 14 – Strahanna Farm	Adverse	Properties 4, 8, 9, and 12 increased from moderate not significant, Property 13 increased from moderate/minor not significant

Description of Effect	Significance of Potential Effect		Mitigation and/or Enhancement Measure	Significance of Residual Effect		Change to Consented Development Conclusion
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse	
	and 14 – Strahanna Farm and River Ken Cottage)			and River Ken Cottage)		
Visual effects on residential properties within 2 km of the proposed turbines during hours of darkness	No significant effects	Adverse	No additional mitigation – mitigation of effects of visible aviation lighting embedded into the design of to include dimming (2000cd/200cd) when atmospheric visibility is greater than 5 km and vertical directional intensity which reduces the perceived intensity of lighting at angles below the level of the visible aviation lights.	No significant effects	Adverse	N/A
Visual effects on residential properties between 2 – 5 km during daylight hours	Worst-case major (properties to north-east accessed from	Adverse	No additional mitigation – consideration of landscape and visual	Worst-case major (as listed), major/moderate from properties to south	Adverse	No change from properties to the north-east, south-east or west.

Description of Effect	Significance of Potential Effect		Mitigation and/or Enhancement Measure	Significance of Residual Effect		Change to Consented Development Conclusion
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse	
	Lorg Road, properties to south-east accessed from the B729 near Blackmark Hill and properties to west accessed from the B729 near Water of Deugh). Major/moderate from properties to south accessed from the B7000.		matters was inherent at the design process.	(accessed from the B7000).		The effect on Bridgemark (to the south the site, accessed from the B7000) was assessed in this part of the LVIA in relation to the Consented Development as major. The property now falls within 2 km, so the assessment of its effects is included separately in the RVAA as major.
Visual effects on residential properties between 2 – 5 km during hours of darkness	Worst-case moderate significant from properties to west (accessed from the B729 near Water of	Adverse	No additional mitigation – mitigation of effects of visible aviation lighting embedded into the design of to include dimming (2000 cd / 200 cd) when	Worst-case moderate significant from properties to west (accessed from the B729 near Water of Deugh), moderate not significant from	Adverse	N/A

Description of Effect	Significance of Potential Effect		Mitigation and/or Enhancement Measure	Significance of Residual Effect		Change to Consented Development Conclusion
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse	
	Deugh), moderate not significant from properties to north-east accessed from Lorg Road, properties to south-east accessed from the B729 near Blackmark Hill, properties to south accessed from the B7000.		atmospheric visibility is greater than 5 km and vertical directional intensity which reduces the perceived intensity of lighting at angles below the level of the visible aviation lights.	properties to north-east accessed from Lorg Road, properties to south-east accessed from the B729 near Blackmark Hill, properties to south accessed from the B7000.		
Visual effects on primary settlements between 5 - 20 km during daylight hours	Worst-case moderate not significant (Carsphairn).	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent at the design process.	Worst-case moderate not significant (Carsphairn).	Adverse	No change
Visual effects on primary settlements between 5 -	Worst-case moderate/minor	Adverse	No additional mitigation – mitigation of effects of visible aviation lighting	Worst-case moderate/minor not	Adverse	N/A

Description of Effect	Significance of Potential Effect		Mitigation and/or Enhancement Measure	Significance of Residual Effect		Change to Consented Development Conclusion
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse	
20 km during hours of darkness	not significant (Carsphairn).		embedded into the design of to include dimming (2000 cd / 200 cd) when atmospheric visibility is greater than 5 km and vertical directional intensity which reduces the perceived intensity of lighting at angles below the level of the visible aviation lights.	significant (Carsphairn).		
Visual effects on recreational and long-distance walking and cycling routes during daylight hours	Worst-case major (Southern Upland Way within 5 km).	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent at the design process.	Worst-case major (Southern Upland Way within 5 km).	Adverse	No change
Visual effects on recreational and long-distance walking and cycling routes during hours of darkness	Worst-case moderate significant (Southern Upland Way).	Adverse	No additional mitigation – mitigation of effects of visible aviation lighting embedded into the design of to include dimming (2000 cd /	Worst-case moderate significant (Southern Upland Way).	Adverse	N/A

Description of Effect	Significance of Potential Effect		Mitigation and/or Enhancement Measure	Significance of Residual Effect		Change to Consented Development Conclusion
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse	
			200 cd) when atmospheric visibility is greater than 5 km and vertical directional intensity which reduces the perceived intensity of lighting at angles below the level of the visible aviation lights.			
Visual effects on core paths within 10 km during daylight hours	Worst-case major/moderate (Core Paths 23, 188 and 199), moderate significant (Core Paths 16, 164 and 182).	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent at the design process.	Worst-case major/moderate(Core Paths 23, 188 and 199), moderate significant (Core Paths 164 and 182).	Adverse	No change to Core Paths 23 or 164. Core Path 199 increased from moderate significant. Core Path 182 not previously assessed separately, Core Paths 16 and 188 not previously assessed.
Visual effects on core paths within 10 km during hours of darkness	Worst-case moderate significant (Core	Adverse	No additional mitigation – mitigation of effects of visible aviation lighting embedded into the design of to include	Worst-case moderate significant (Core Paths 23 and 164).	Adverse	N/A

Description of Effect	Significance of Potential Effect		Mitigation and/or Enhancement Measure	Significance of Residual Effect		Change to Consented Development Conclusion
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse	
	Paths 23 and 164).		dimming (2000 cd / 200 cd) when atmospheric visibility is greater than 5 km and vertical directional intensity which reduces the perceived intensity of lighting at angles below the level of the visible aviation lights.			
Visual effects on other rights of way within 5 km during daylight hours	Worst-case major (DS15, DS16 and DS17).	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent at the design process.	Worst-case major (DS15, DS16 and DS17).	Adverse	No change
Visual effects on other rights of way within 5 km during hours of darkness	Worst-case moderate significant (DS15, DS16 and DS17).	Adverse	No additional mitigation – mitigation of effects of visible aviation lighting embedded into the design of to include dimming (2000 cd / 200 cd) when atmospheric visibility is	Worst-case moderate significant (DS15, DS16 and DS17).	Adverse	N/A

Description of Effect	Significance of Potential Effect		Mitigation and/or Enhancement Measure	Significance of Residual Effect		Change to Consented Development Conclusion
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse	
			greater than 5 km and vertical directional intensity which reduces the perceived intensity of lighting at angles below the level of the visible aviation lights.			
Visual effects on roads during daylight hours	Worst-case major (B729, B7000 and Lorg Road), moderate significant (A713).	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent at the design process.	Worst-case major (B729, B7000 and Lorg Road), moderate significant (A713).	Adverse	No change
Visual effects on roads during hours of darkness	Worst-case moderate significant (Lorg Road).	Adverse	No additional mitigation – mitigation of effects of visible aviation lighting embedded into the design of to include dimming (2000 cd / 200 cd) when atmospheric visibility is greater than 5 km and	Worst-case moderate significant (Lorg Road).	Adverse	N/A

Description of Effect	Significance of Potential Effect		Mitigation and/or Enhancement Measure	Significance of Residual Effect		Change to Consented Development Conclusion
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse	
			vertical directional intensity which reduces the perceived intensity of lighting at angles below the level of the visible aviation lights.			
Direct effects on Galloway Hills RSA	Worst-case major significant effects on AU 22: Southern Uplands with Forest – Ken area within site boundary on periphery of RSA.	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent at the design process.	Worst-case major significant effects on AU 22: Southern Uplands with Forest – Ken area within site boundary on periphery of RSA.	Adverse	No change
Indirect effects on Galloway Hills RSA	Worst-case major within 3 km within AU 22: Southern Uplands with Forest - Ken, moderate	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent at the design process.	Worst-case major within 3 km within AU 22: Southern Uplands with Forest - Ken, moderate significant 3 - 5 km within AU 9: Upper	Adverse	Slight extension to the landscape effect in relation to the Consented Development by approximately 0.5 km.

Description of Effect	Significance of Potential Effect		Mitigation and/or Enhancement Measure	Significance of Residual Effect		Change to Consented Development Conclusion
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse	
	significant 3 - 5km within AU 9: Upper Dale – Upper Glenkens area and AU 21: Southern Uplands – Carsphairn.			Dale – Upper Glenkens area and AU 21: Southern Uplands – Carsphairn.		
Decommissioning						
Effects on landscape character within AU 22: Southern Uplands with Forest – Ken	Worst-case moderate/minor not significant.	Adverse	Standard best-practice construction methods. No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Worst-case moderate/minor not significant	Adverse	No change
Effects on landscape character within AU 4: Narrow Valleys – Ken	No effect	No effect	N/A	No effect	No effect	Change from moderate/minor effect in relation to Consented Development as no

Description of Effect	Significance of Potential Effect		Mitigation and/or Enhancement Measure	Significance of Residual Effect		Change to Consented Development Conclusion
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse	
						turbines located in AU 4 in Proposed Varied Development.
Effects on landscape character within AU 9: Upper Dale – Upper Glenkens	No effect	No effect	N/A	No effect	No effect	No change
Visual effects	Worst-case moderate significant from section of Southern Upland Way and local footpaths DS15, DS16 and DS17.	Adverse	Standard best-practice construction methods. No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Worst-case moderate significant from section of Southern Upland Way and local footpaths DS15, DS16 and DS17.	Adverse	No change

Table 8.23 – Summary of Cumulative Effects

Receptor	Effect	Cumulative Developments	Significance of Cumulative Effect	
			Significance	Beneficial/Adverse
Cumulative landscape character effects	The Proposed Varied Development would fit in with the established pattern of wind energy development and would consolidate the existing effects on landscape character that have already been brought about by these other schemes and would not extend significant effects beyond the extent already introduced by the other schemes.	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	No change	Adverse
Totality of cumulative landscape character effects	The Proposed Varied Development would fit in with the established pattern of wind energy development and would consolidate the existing effects on landscape character that have already been brought about by these other schemes and would not extend significant effects beyond the extent already introduced by the other schemes.	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	No change	Adverse
Cumulative visual effects	The Proposed Varied Development would give rise to significant cumulative visual effects from some residential properties within 5 km, but significant visual effects are predicted in both the	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	No change	Adverse

Receptor	Effect	Cumulative Developments	Significance of Cumulative Effect	
			Significance	Beneficial/Adverse
	solus assessment and in the absence of the Proposed Varied Development.			
Cumulative sequential visual effects	The Proposed Varied Development would give rise to significant cumulative visual effects for a limited section of the B729 at Guttery Glen in Scenario 1, from the B729 between Carsphairn and the B7000, the B7000 north of Mackilston Hill, and from Core Paths 23 and 199 in Scenario 2 where significant solus effects are already identified.	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	Worst-case moderate significant	Adverse
Totality of cumulative visual effects	The addition of the Proposed Varied Development to both Scenarios 1 and 2 would result in some major significant effects experienced at various points within the local area, but not such as to result in the overall cumulative visual effect of wind turbines being dominant or oppressive in views.	No additional mitigation – consideration of landscape and visual matters was inherent in the design process.	No change	Adverse

N.B. Night-time effects resulting from the Consented Development have not been assessed due to the lower turbine height which do not require turbine lighting.

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Abbreviations

Abbreviations	Definition
AOD	Above Ordnance Datum
AEI	Additional Environmental Information
ASA	Archaeological Sensitive Area
AU	Assessment Unit
BESS	Battery Energy Storage System
CAA	Civil Aviation Authority
CROW	Catalogue of Rights of Way
DGC	Dumfries and Galloway Council
DGWLCS	Dumfries and Galloway Wind Farm Landscape Capacity Study
DGWLSS	Dumfries and Galloway Wind Energy Landscape Sensitivity Study
EIA	Environmental Impact Assessment
ELC	European Landscape Convention
GIS	Geographic Information System
GLVIA3	Guidelines for Landscape and Visual Impact Assessment, 3rd Edition
ICAO	International Civil Aviation Organization
LCA	Landscape Character Area
LCT	Landscape Character Type
LI	Landscape Institute
LLA	Local Landscape Area
LVIA	Landscape and Visual Impact Assessment
MW	Megawatts
NCN	National Cycle Network
NPF4	National Planning Framework 4
NNR	National Nature Reserve
NSA	National Scenic Area
OS	Ordnance Survey
RVAA	Residential Visual Amenity Assessment
RSA	Regional Scenic Area
SAC	Special Area of Conservation

SNH	Scottish Natural Heritage (<i>now NatureScot</i>)
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
SUW	Southern Upland Way
U.K.	United Kingdom
VIA	Visual Impact Assessment
VP	Viewpoint
ZTV	Zone of Theoretical Visibility