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8. Landscape and Visual

8.1. Introduction

8.1.1. This chapter of the EIA Report evaluates the effects of the Proposed Development on landscape and visual receptors.

8.1.2. 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).

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

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

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

8.1.5. 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 Development and any values associated with it;
- to identify and describe any impacts of the Proposed 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.

8.1.6. 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

Development and any values associated with either the viewpoint or visual amenity experienced;

- to identify and describe any impacts of the Proposed 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.

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

8.1.8. The main LVIA presented in this chapter is supported by:

- figures 8.1 to 8.36 in EIA Report Volume 2;
- visualisations in EIA Report Volume 3 (figures 8.37a to 8.64 and cumulative visuals including schemes in scoping associated with Appendix 8.5 (figures A8.5.1 – A8.5.13); and
- appendices 8.1 to 8.5 in EIA Report Volume 4.

8.1.9. The location of the Proposed Development and the study area for the LVIA is illustrated on **Figure 8.1 (see Volume 2)**. For reference, other operational, consented and proposed wind farms within 35 km which are referred to throughout this chapter are illustrated on **Figures 8.2 and 8.3 (see Volume 2)**.

8.1.10. 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.

8.2. Legislation, Policy and Guidance

8.2.1. 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.

8.2.2. 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

8.2.3. The following current planning policy documents were reviewed as part of the desk study for the LVIA:

- National Planning Framework for Scotland 3 (NPF3) (2014);
- Scottish Planning Policy (SPP) (2014); and
- Dumfries and Galloway Local Development Plan (2014).

8.2.4. The following supplementary guidance and technical reports which provide the evidence base for the current policy were reviewed:

- Dumfries and Galloway Landscape Assessment (1998);
- Dumfries and Galloway Wind Energy Interim Spatial Framework Maps (2014);
- Dumfries and Galloway Part 1 Wind Energy Development: Development Management Considerations (2017);
- Dumfries and Galloway Wind Farm Landscape Capacity Study Appendix Report (2017); and
- Dumfries and Galloway Regional Scenic Areas Technical Paper (2018).

8.2.5. A full and detailed consideration of national and local planning policy is contained in Chapter 5 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 2014

8.2.6. 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".

8.2.7. Policy NE2: Regional Scenic Areas states that "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 landscape character and scenic interest for which the area has been designated would not be significantly adversely affected; or*
- *there is a specific need for the development at that location which could not be located in a less sensitive area".*

8.2.8. Policy IN1 concerns Renewable Energy and it states that "The Council will support development proposals for all renewable energy provided they do not individually or in combination have an unacceptable* significant adverse impact on:

- *landscape;*

- *the cultural and natural heritage;*
- *areas and routes important for tourism or recreational use in the countryside;*
- *water and fishing interests;*
- *air quality; and*
- *the amenity of the surrounding area”.*

8.2.9. Policy IN2: Wind Energy sets out “The Council will assess the acceptability* of any proposed wind energy development against the following considerations (1) [inter alia]:

PART 1: Assessment of all windfarm proposals

Landscape and visual impact:

- *the extent to which the proposal addresses the guidance contained in the Dumfries and Galloway Windfarm Landscape Capacity Study (DGWLCS).*
- *the extent to which the landscape is capable of accommodating the development without significant detrimental impact on landscape character or visual amenity*
- *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 fully addresses the potential for mitigation.*

Cumulative Impact: The extent of any detrimental landscape or visual impact from two or more wind energy developments and the potential for mitigation.

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

PART 2: Spatial Framework

The considerations in Part 1 above will be applied in the context of the following Spatial Framework:*

- *Areas of Greatest Potential (1): areas free from significant constraint where proposals for large and medium turbine typologies will be supported subject to detailed assessment.*
- *Areas of Significant Protection (2): Areas where a presumption against development applies due to significant constraints. These include: 1. Sites designated for their national or international landscape or natural heritage value where Policies NE1, NE3, NE4 and NE5 also apply. 2. Areas where the cumulative impact of existing and consented windfarms limit further development.*
- *Cumulative Sensitivity Zones (3): Areas where cumulative impact is a potential constraint. In these areas proposals should: address potential future cumulative impact and avoid unacceptable coalescence between clusters of windfarms to retain an acceptable and coherent pattern of windfarm development.*
- *All other areas (4): Areas where potential constraints apply but with potential for mitigation. Wind energy proposals will be assessed against all the considerations set out above in Part 1. For Regional Scenic Areas the proposal should assess the potential impact on the objectives of the designation and demonstrate the extent to which these can be addressed”.*

Guidance

Dumfries and Galloway Part 1 Wind Energy Development: Development Management Considerations 2017

8.2.10. This supplementary guidance document supports Policy IN2 and includes the DGWLCS as an appendix.

8.2.11. Section A of the document sets out matters with regards to landscape and visual amenity, stating the following:

All proposals will be assessed for potential impacts on landscape and visual amenity. Particular attention will be given to proposals within or affecting areas designated for their landscape qualities and to how the proposals will impact on the special qualities and/or reasons for such designations.

8.2.12. Section B relates to cumulative impacts on landscape and visual amenity and refers to the content within the DGWLCS in relation to the capacity of the landscape to accommodate development.

8.2.13. Section C concerns the design of proposals and states "All proposals will be assessed for their impact on the landscape and visual amenity in relation to their design in terms of siting, layout, turbine form, colour, lighting and ancillary works".

8.2.14. The final relevant section to this assessment is Section D which concerns effects on local amenity and communities. It states that the visual dominance of turbines will be considered in conjunction with any mitigation measures proposed.

Dumfries and Galloway Windfarm Landscape Capacity Study (2017)

8.2.15. The DGWLCS forms Appendix C of the supplementary guidance Dumfries and Galloway Part 1 Wind Energy Development: Development Management Considerations. It was updated during 2016 to reflect the baseline environment in terms of operational and consented wind farms, both within the region, and within regions that border Dumfries and Galloway.

8.2.16. The Proposed Development is categorised as large typology, as it comprises turbines up to 149.9m to tip height. The site is largely located within the Ken unit of landscape character area (LCA) 19a: Southern Uplands with Forest, with a small area of the site located within the Ken unit of LCA 4: Narrow Wooded River Valley.

8.2.17. A detailed review of the of the study is provided within the baseline section of this report, but in summary the Ken unit of LCA 19a is considered within the DGWLCS to have very limited capacity for further large typology turbines. With respect to the Ken unit of LCA 4, it is stated that there is no scope for turbines >50m in height.

Wind Energy Interim Spatial Framework Maps (2014)

8.2.18. The Interim Spatial Framework Maps set out various turbine typologies considered, with large typology stated as being >80m to blade tip. Map 1 of

the document provides the spatial framework for large typology turbines. The Proposed Development is located mostly within an Area of Greatest Potential.

8.2.19. It is acknowledged however, that a very small proportion of the site is located within an Area Requiring Significant Protection. This area relates to the designated Galloway Hills Regional Scenic Area.

8.2.20. Landscape designations within 35 km of the Proposed Development with specific geographical limits are shown in **Figure 8.4 (see Volume 2)**.

International/National Landscape Designations

8.2.21. There are no international landscape designations covering the site or located within the 35 km study area.

8.2.22. There is one National Scenic Area (NSA) located within the 35 km study area, namely the Fleet Valley National Scenic Area. There is virtually no ZTV coverage with the NSA, which is located over 25 km from the Proposed Development and thus effects upon the NSA are not considered within this LVIA.

Local Landscape Designations

8.2.23. A review of all local landscape designations within the wider 35 km study area, and the detailed 10 km study area has been undertaken. The following designations are considered to be the most pertinent to the LVIA.

Regional Scenic Areas (RSA)

8.2.24. The closest regional scenic area is the Galloway Hills RSA, which partly falls within the western edge of the site boundary. Five of the proposed turbines are located within the RSA, two of which fall on the very cusp of the designated landscape.

8.2.25. The Thornhill Uplands RSA is located 10 km to the east of the Proposed Development, whilst the Terregles Ridge RSA is located 24 km to the south-east.

8.2.26. There is virtually no ZTV coverage within the Terregles Ridge RSA, so this RSA is not discussed further. There is also very limited ZTV coverage with the Thornhill Uplands RSA, restricted to the blade tips of a small number of the proposed turbines at distances over c. 8 km. Due to the very limited nature of theoretical visibility and taking in consideration the distances in which the Proposed Development would be seen, any combined effects upon the RSA are not considered to be significant.

Special Landscape Areas/Sensitive Landscape Areas (SLA)

8.2.27. There are a small number of Special Landscape Areas and Sensitive Landscape Areas located within the 35 km study area, all of which are outwith the Dumfries and Galloway administrative area.

8.2.28. It is acknowledged that the Leadhills and Lowther Hills SLA, South Lanarkshire, is located within 30 km to the north-east of the Proposed Development. However, ZTV coverage within the SLA is very sparse and limited to visibility

of 1-6 turbines only. Taking into consideration the distance and lack of ZTV coverage, effects upon the Leadhills and Lowther Hills SLA would not be significant in terms of the EIA Regulations and are not discussed further.

8.2.29. Within the East Ayrshire administrative district, there are two Sensitive Landscape Areas located within the wider study area. The first is located within 7 km to the north of the site, north of Carsphairn Forest. The second is located within 13 km of the site, in a north-westerly direction, in the vicinity of Dalmellington.

8.2.30. The ZTV at **Figure 8.7 (see Volume 2)** illustrates that there is very limited ZTV coverage within the landscape covered by the SLA to the north of the site. Therefore, no assessment of effects is necessary. With regards to the SLA to the north west, ZTV coverage is patchy and is limited to a relatively small number of proposed turbines. Taking this into consideration, alongside the relative distance between the Proposed Development and the SLA, likely effects are not considered to be significant in terms of the EIA Regulations, thus further assessment is not necessary.

8.3. Assessment Methodology and Significance Criteria

8.3.1. The primary source of best practice for LVIA in the UK is:

- The Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3) (Landscape Institute and the Institute for Environmental Management and Assessment, 2013).

8.3.2. 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.'

8.3.3. The methodology for this assessment has therefore been developed specifically for this LVIA to ensure that it is appropriate and fit for purpose.

8.3.4. Consideration has also been given to the following documents:

- An Approach to Landscape Character Assessment, (2014) Natural England;
- Guidelines for Landscape Character Assessment, (2002) Countryside Agency and Scottish Natural Heritage (SNH);
- Landscape Character Assessment Guidance for England and Scotland: Topic Paper 6: Techniques and Criteria for Judging Capacity and Sensitivity, (2002) The Countryside Agency and Scottish Natural Heritage (SNH);
- Assessing the Cumulative Impact of Onshore Wind Energy Developments (March 2012) SNH;
- 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; and

- LI Advice Note 02/17 Visual representation of development proposals (March 2017) Landscape Institute.

Scope of Assessment

- 8.3.5. The LVIA assesses both the long term effects relating to the operational lifetime of the Proposed Development and the short term temporary effects associated with the construction of the Proposed Development.
- 8.3.6. Where appropriate, the LVIA also considers any residual effects once the proposed wind turbines have been decommissioned and removed (assumed to be 25 years from the date of completed construction).
- 8.3.7. 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.
- 8.3.8. Consideration has been given to seasonal variations when assessing the visibility of the Proposed Development.
- 8.3.9. 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.
- 8.3.10. 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.
- 8.3.11. In relation to both the effects of the Proposed 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 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.

Study Area

- 8.3.12. The extent of the primary study area for the landscape and visual impact assessment is 35 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 15 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.
- 8.3.13. 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 Development. Rather than simply considering every other wind farm within a set distance of the Proposed Development, the approach has been to focus the assessment on those sites which have the potential to give rise to significant cumulative effects. Further details of this approach are set out in the cumulative impact assessment (Section 8.7) of the LVIA.
- 8.3.14. Due to the number of wind farms schemes at the scoping stage within close proximity to the Proposed Development, it has also been considered necessary to carry out an assessment of cumulative effects in combination with four other proposed wind farms at this stage. The assessment of potential effects is provided at **Appendix 8.5** and the cumulative visualisations associated with this assessment are included in the cumulative section of Volume 3 of this EIA Report.

Survey Methodology

- 8.3.15. A baseline landscape assessment was carried out to determine the current features and character of the landscape within and surrounding the Site.
- 8.3.16. 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.
- 8.3.17. Field visits have been conducted in a variety of weather conditions and at different times of the year during the pre-application stage. Surveys have been

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.

- 8.3.18. 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 Development were used to determine the impacts of the scheme on landscape features and character.

Assessment Methodology

- 8.3.19. The LVIA firstly assesses how the Proposed Development would impact directly on any existing landscape features or elements (e.g. removal of trees etc.).
- 8.3.20. The LVIA then considers impacts on landscape character with reference to landscape character areas/types identified in published landscape character documents.
- 8.3.21. 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 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 most material in the decision making process.

Visual Assessment Methodology

- 8.3.22. Potential visual receptors of the Proposed Development were identified by interpretation of digitally generated ZTVs (see Table 8.1 for an explanation of ZTVs and how they were produced).
- 8.3.23. A selection of viewpoints was chosen and 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.
- 8.3.24. 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 Development to illustrate the varying magnitude of visual impacts.
- 8.3.25. Visualisations 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**.
- 8.3.26. 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 Development. Furthermore, the entire extent of the study area was visited to appreciate visibility of the Proposed Development as receptors move throughout the landscape.

- 8.3.27. 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 Development will 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.
- 8.3.28. 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 8.1 - 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 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 Resoft WindFarm. 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 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 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.

Assessment Criteria

- 8.3.29. 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.
- 8.3.30. 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**.

Residual Effects

- 8.3.31. 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.
- 8.3.32. 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').
- 8.3.33. The approach taken in this study has been to build landscape and visual mitigation into the final layout (refer to Chapter 3). 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 Limitations

- 8.3.34. 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 unfeasible to visit every single location from which the Proposed 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.
- 8.3.35. Limitations to the use of ZTVs are set out in Table 8.1 above and the limitations in relation to photography, wireframes and photomontages are also set out in **Appendix 8.2**.

8.4. Scoping Responses and Consultation

- 8.4.1. Throughout the scoping exercises, and subsequently during the ongoing EIA process, relevant organisations were contacted with regards to the Proposed Development.
- 8.4.2.
- 8.4.3. Table 8.2 outlines the consultation responses received in relation to landscape and visual effects.

Table 8.2 Consultation

Consultee	Details	Response	Where Addressed in EIA Report
SNH	<p>With regards to the question raised in relation to the characteristics of the 'Ken' Narrow Wooded River Valley, SNH responded "<i>At this point we ask that the proposal to consider the 'Ken' landscape of the Narrow Wooded River Valley' character type as being part of the adjacent 'Southern Uplands with Forest' character type for the purposes of the character assessment is clearly justified in the LVIA section of the EIA Report</i>". In terms of the selection of viewpoints their response was "<i>Our advice on the 2013 scoping was that the list of viewpoints was adequate but requested a viewpoint from Corserine which we note has been included in the updated Scoping Report</i>".</p>	<p>An appropriate assessment of the relevant landscape character areas has been provided within the chapter, including a separate assessment of the 'Ken' character type. The LVIA viewpoints have been reviewed following the reduction in turbine numbers, but largely the key hill summits have been retained and assessed.</p>	<p>Assessment of landscape character at section 8.6. Viewpoint assessment (Appendix 8.3)</p>
Dumfries and Galloway Council Landscape Officer	<p>The scoping response was thorough in terms of content and included viewpoint and visual receptors suggestions, suggestions on the content of the cumulative assessment, as well as information regarding landscape</p>	<p>A 15 km detailed study area has been adopted. A full review of the LVIA viewpoints has been undertaken following the</p>	<p>Viewpoint assessment (Appendix 8.3). RVAS (Appendix 8.4). Assessment of cumulative effects at</p>

Consultee	Details	Response	Where Addressed in EIA Report
	<p>character and landscape designations. The detailed study area was suggested to be 15 km, particularly as it was noted that the pattern of the ZTV suggested significant effects were <i>"not expected beyond 15 km"</i>.</p>	<p>reduction of turbine numbers. A number of viewpoints have been amended in light of comments received. An assessment of all properties within 2km has been carried out (RVAS). The cumulative assessment includes an assessment of all relevant schemes within the vicinity, including those at scoping stage. It should be noted that the LVIA is proportionate to the Proposed Development and primarily considers receptors most likely to experience potential significant effects.</p>	<p>section 8.7 and Appendix 8.5 (with the associated cumulative visualisation included in Volume 3).</p>

8.5. Baseline Conditions

Site Location

- 8.5.1. The Proposed Development is located in Dumfries and Galloway, Scotland. The Site is centred at OS Grid Reference 262212, 594019. The closest settlement to the proposed turbines is the village of Carsphairn, located c. 4.5 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.

8.5.2. 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. The B7000 is also located c. 1 km to the south.

8.5.3. The location of the Proposed Development is illustrated in **Figures 1.1** and **8.1**.

Published Landscape Character Descriptions

8.5.4. A review was undertaken of the following published sources of information regarding regional landscape character, landscape value and landscape capacity:

- Dumfries and Galloway Landscape Assessment, SNH Review No 94, 1998, Land Use Consultants;
- Dumfries and Galloway Wind Farm Landscape Capacity Study (DGWLCS), 2017, Carol Anderson in association with Alison Grant;
- South Lanarkshire Landscape Character Assessment, 2010, South Lanarkshire Council/Ironside Farrar;
- South Lanarkshire Validating Local Landscape Designations, 2010, South Lanarkshire/Ironside Farrar;
- South Lanarkshire – Landscape Capacity Study for Wind Energy, 2016, South Lanarkshire/Ironside Farrar;
- South Ayrshire Landscape Wind Capacity Study, 2013, Carol Anderson Landscape Associates; and
- East Ayrshire Landscape Wind Energy Capacity Study, 2018, Carol Anderson Landscape Associates.

8.5.5. 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.

8.5.6. At a local level, the Proposed Development site falls within the landscape covered by the DGWLCS, (2017). The landscape character assessment establishes 21 LCTs for the Dumfries and Galloway area.

8.5.7. LCTs and LCAs as identified in the key landscape character assessments listed above are illustrated on **Figure 8.5** and **Figure 8.6** (out to 35 km and 15 km respectively). Additionally, **Figure 8.19** presents the LCTs and LCAs within 15 km overlaid on the Zone of Theoretical Visibility.

Character Type/Area Covering the Proposed Development Site

8.5.8. Three LCTs cover the Site, namely 19a: Southern Uplands with Forest, 4: Narrow Wooded River Valley and 9: Upper Dale (Valley).

- 8.5.9. The Proposed Development is largely located within the Southern Uplands with Forest LCT, with one of the turbines located within the Narrow Wooded River Valley. The site entrance and some of the ancillary development is located within Upper Dale (Valley). The key characteristics of these LCTs are discussed further below.

Landscape Character Type 18a: Southern Uplands with Forest

- 8.5.10. The character assessment records the key characteristics as follows:
- large, smooth dome-shaped hills with large scale dark green plantations on slopes and over lower summits;
 - sitka Spruce dominated, interspersed with Larch,
 - changing landscapes with large scale felling, ploughing and replanting.

- 8.5.11. Under the general description of the wider Southern Uplands with Forest LCT, the character assessment recognises:

'In topographic respects, the southern uplands with forests landscape type is the same as the Southern Uplands type. Its character is, however, considerably different due to the dominant forestry landcover. Indeed, the visual influence of these forests extends over considerably larger areas than those plotted on the above plan. The forestry is predominantly Sitka Spruce, the main variations being in mixes with Larch which provides colour contrasts between the dark green of Spruce and the light greens to browns of Larch. The forests generally extend over the summits or are concentrated on the side slopes leaving the domed peaks exposed. The rotational nature of forest management provides long term textural and colour changes related to the felling and replanting coups'.

- 8.5.12. In terms of Key Issues, wind farms are recognised within the document with the following guidelines stated:

'The large scale topography of this landscape type should be able to accommodate the scale of wind turbines. This would, however, require siting below ridge and summit lines in positions which provide backclothing from main viewpoints. Locations within open ground in forest dominated areas should seek to utilise as far as possible any forestry and local access roads. The scale of the landscape might be able to accommodate large wind farms (c. 20 no. turbines) but environmental assessment should seek to ensure these are not intervisible and do not dominate consecutive viewsheds'.

Landscape Character Type 4: Narrow Wooded River Valley

- 8.5.13. The character assessment records the key characteristics as follows:
- flat bottomed, shallow sided valley;
 - pastoral valley floor: improved pasture in lower reaches, with semi improved grassland higher up;
 - riparian trees and shrubs;
 - medium sized enclosures: walls higher up, fences in lower reaches with sheep and cattle grazed; and
 - wooded lower slopes, giving way to conifer plantation or rounded grassy slopes.

8.5.14. The general description of the wider LCT defines the area as follows:

These valleys are clearly defined topographic features whose profiles change throughout their length. The upper reaches are typically V shaped with steep wooded slopes. The lower reaches usually have flat valley floors, sometimes discontinuous through which the river meanders. These flat sections have river meadows and riparian woodland; their side slopes are also steep and mostly wooded. Woodlands are an essential feature of this landscape type; they create intimate enclosure and restrict views. They typically comprise a mixture of semi-natural woodlands, shelterbelts, farm and policy woodlands with small to medium scale coniferous plantations extending from the higher slopes. The woodlands are separated by pastures of small scale that provide spatial interest and permit views across the valleys. The fields are divided by hedges and fences in the lower areas with stone dykes more prevalent in the upper reaches. These landscapes typically contain minor roads which follow the valley floor giving access to isolated houses some of which have large gardens or designed parkland.

8.5.15. With regards to Key Issues within the LCT, the primary issues are considered to be hedgerow loss, increase in coniferous forestry, quarrying and road engineering projects.

8.5.16. Having reviewed the key characteristics outlined for LCT 4 – Narrow Wooded River Valley, it is noted that the Proposed Development lies on the fringes of this character type in a transitional zone with the adjacent LCT 19a – Southern Uplands with Forest and shares some of the characteristics of this character type.

8.5.17. 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.

Landscape Character Type 9: Upper Dale (Valley) – Upper Glenkens

8.5.18. The key characteristics are recorded as follow:

- wide 'V' shaped valley, enclosed by high peaks and moorland;
- open with long views;
- 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 forestry plantations on the valley sides and extending over horizons from higher ground;
- mining settlements and remnants of industrial activity e.g. mine ruins and bings.

8.5.19. With regards to Key Issues within the LCT, the primary issues are considered to be decline in dykes and heather cover, expansion of coniferous plantation and interest in wind farm development.

- 8.5.20. It should be noted that the proposed turbines are not located within this LCT. The landscape of the part of the LCT in which the site is located is dominated by coniferous plantation and is the primary characteristic at this location.

Other Character Types and Areas considered in this LVIA

- 8.5.21. In order to consider the indirect effects of the Proposed Development on landscape character all other LCTs and LCAs within 35 km of the Proposed Development are illustrated at **Figure 8.5**, and those located within 15 km are illustrated at **Figure 8.6**. The LCTs and LCAs within 15 km have been overlaid on the ZTV at **Figure 8.19**.
- 8.5.22. As is evident from these figures, there are many discrete character types, sub-types and areas within 35 km of the site. An initial sieving exercise has therefore been necessary to determine which ones required detailed consideration in this LVIA. 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 so as to scope out various character types from further consideration.
- 8.5.23. The first observation with reference to the ZTV presented in **Figure 8.19** is that the extent of theoretical visibility is heavily influenced by topographical variation, coverage is broadly orientated along the Water of Ken Valley to the south. The primary extent of visibility extends up to 5 km to the north, 10 km to the east and west, and 15 km to the south and southwest.
- 8.5.24. Taking into consideration that the defining elements of landscape character as experienced at any given location in the assessment study area are most commonly derived from features of the landscape in relatively close proximity, aside from hill summits, it has been considered appropriate and proportionate to focus attention on character types and areas that are located within 15 km of the Proposed Development.
- 8.5.25. This is not to suggest that the turbines will not be visible beyond 15 km. However, it should be acknowledged that at any given location in a landscape, the physical and perceptual characteristics of the landscape in the immediate vicinity have a far greater impact on the sense of landscape character than distant features.
- 8.5.26. **Figure 8.19** illustrates the character types within 15 km overlaid on the ZTV, which reveals that even within this distance there are certain character types from which there would be no, or almost no, visibility of the Proposed Development. Notably there would be no discernible visibility of the Proposed Development from character types in the South Ayrshire and South Lanarkshire regions, and there is also very limited ZTV coverage within the East Ayrshire region. From within the Dumfries and Galloway region, there is limited ZTV coverage within 15 km of the Site from LCT 10 – Uplands Glens to the east, and tracts of LCT 21A – Rugged Granite Uplands with Forest, and therefore it has not been deemed necessary to discuss these in the LVIA.

- 8.5.27. The ZTV indicates extensive visibility across all character types located within 5 km of the proposed turbines, namely LCT 4 – Narrow Wooded Valley, 19A – Southern Uplands with Forest, LCT 19 – Southern Uplands, and LCT 9 – Upper Valley, and therefore, these LCTs are discussed further in the LVIA.
- 8.5.28. Three further character types considered relevant to the assessment are LCT 8 – Flooded Valley, LCT 18A – Foothills with Forest, and LCT 21 – Rugged Granite Uplands; all of which are located within 10 km of the Site.

Table 8.3 Landscape Character Types/Areas Considered in Detail

Landscape Character Type/Area	Approximate Distance to Proposed Development from LCT
19a – Southern Uplands with Forest – Ken Unit	Proposed Development located within LCT. Also located c. 900 m to the east.
4 – Narrow Wooded Valley – Ken Unit	Proposed Development located within LCT
9 – Upper Dale (Valley) – Upper Glenkens Unit	Proposed Development located within LCT
19 – Southern Uplands – Carsphairn Unit	Proposed Development located to the immediate east
18A – Foothills with Forest – Rhinns of Kells Unit	Proposed Development located 4.7 km to the northwest
8 – Flooded Valley – Ken Valley Unit	Proposed Development located c. 10.9 km to the north
21 – Rugged Granite Uplands – Rhinns of Kells Unit	Proposed Development located c. 6 km to the east

Local Landscape Description and Character Appraisal

- 8.5.29. A plan illustrating the landscape features/elements within the Site and its immediate context (2 km radius of the turbines) is provided in **Figure 8.20**. 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

- 8.5.30. Topography and relief within 35 km of the Proposed Development site is illustrated in **Figure 8.21**.
- 8.5.31. The Proposed 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.

- 8.5.32. 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. 200m AOD. To the north, west and south of the hill summit, the slopes are gentler in comparison and contribute to the general upland landscape.
- 8.5.33. 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.
- 8.5.34. 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.
- 8.5.35. 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.
- 8.5.36. 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 Dundeugh 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

- 8.5.37. 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.
- 8.5.38. 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.

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- 8.5.39. 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.
- 8.5.40. 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

- 8.5.41. 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 felled along the eastern periphery of the Site, on the lower hill slopes by the Water of Ken and Black Burn Bridge. The recent phase of felling works, and the subsequent removal of timber, was completed in Spring 2018.
- 8.5.42. 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.
- 8.5.43. 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

- 8.5.44. 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.
- 8.5.45. 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

- 8.5.46. 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.

- 8.5.47. 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.
- 8.5.48. 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.
- 8.5.49. 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.
- 8.5.50. 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 out with the valley landscapes.

Forces for Future Change in the Landscape

- 8.5.51. The landscape of the Site, 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.
- 8.5.52. 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.
- 8.5.53. Within the wider landscape, there are a number of commercial scale wind energy developments proposed or being considered at scoping which, if consented, would alter the existing nature of the landscape. In particular, the Longburn Scheme to the east of the Site, which is being considered by an appeal reporter, would alter the nature of the landscape, if consented. In

accordance with the approach advocated in GLVIA3, this proposed scheme, and those at scoping, are not considered in the baseline against which the Proposed Development is assessed. However, should a number of these schemes be consented in the coming years there would be an influence upon the landscape character of the study area.

Visual Receptors

- 8.5.54. Due to the height of the proposed turbines and the undulating landform in the surrounding study area, there is the potential for the Proposed 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 Development to result in any significant visual effects at distances over 35 km from the Site, and furthermore, that with distance from the Site, the likelihood of significant visual effects occurring incrementally decreases. Therefore, whilst the study area for this LVIA extends out to 35 km and the various figures which accompany this report illustrate a 35 km study area, sensitive visual receptors are identified with a decreasing level of detail with distance from the Site.
- 8.5.55. Interpretation of the ZTVs (**Figures 8.7 – 8.18**) assisted to identify potentially sensitive visual receptors of the Proposed Development. Principal visual receptors within the surrounding landscape are illustrated at **Figure 8.22** and are identified below.

Residential Receptors and Settlements

- 8.5.56. 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 Development. It is however recognised that there would be views from individual properties and clusters of properties throughout the study area.
- 8.5.57. There are 13 residential properties within 2 km of the proposed turbines. These are identified on **Figure 8.24** and discussed in detail within the Residential Visual Amenity Study (RVAS) presented at **Appendix 8.4**. In summary, the properties within 2 km 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):
- Craigengillan Cottage (770 m);
 - Craigengillan (873 m);
 - Moorbrock (1409 m);
 - Smittons (1358 m);
 - 1 Muirdrochwood (1286 m);
 - 2 Muirdrochwood (1297 m);
 - Strahanna Farm (1743m);
 - Marscalloch Cottage (1964 m);
 - Nether Loskie (1908m);
 - Furmiston (1336 m);
 - Stroanpatrick (2002 m);
 - Marbrack (1767 m); and
 - Marbrack Cottage (1708 m).

- 8.5.58. Beyond 2 km of the proposed turbines, there are numerous isolated farmsteads and dwellings, many located along tracks within the upland landscape. There are also properties strung along the various 'A' and 'B' roads in the local landscape. Those located within the ZTV for the Proposed Development are considered to have potential for views towards the scheme and will be discussed further within the assessment.
- 8.5.59. In terms of small settlements and villages, Carsphairn is located c. 4.5 km to the west of the Site. The village of St John's Town of Dalry (Dalry) is located c. 10 km to the south, and Moniaive is located c. 14 km to the east.
- 8.5.60. Within the 35 km study area there are a number of larger settlements and towns including:
- Sanquhar;
 - Cumnock;
 - Dalmellington;
 - Maybole; and
 - Castle Douglas.

Recreational and Long Distance Walking and Cycling Routes

- 8.5.61. There are a number of recreational and long distance walking and cycling routes within the 35 km study area of the Proposed Development.
- 8.5.62. Within 2 km of the Site lies the route of the Southern Upland Way. The long distance route passes to the east of the Site at a distance of c. 730 m 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 Manquill 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.
- 8.5.63. There is one other long distance walking route located within 35 km of the Site, namely the River Ayr Way. The route passes between Ayr and Glenbuck along the banks of the River. The route is located outwith ZTV coverage and is not considered further within this assessment.
- 8.5.64. In terms of long distance cycling routes, NCN 7 runs through the 35 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.
- 8.5.65. A local 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 and Other Routes

- 8.5.66. Within the 35 km study area, there are inevitably numerous core paths and other routes, and it would be impossible to describe them all in this chapter.
- 8.5.67. There is one local right of way that adjoins the Site boundary, namely DS21, on the summit of Marscalloch Hill. This route passes between Marscalloch Hill

and Muirdrochwood. Right of Way DS16 passes alongside the north-eastern Site boundary between the properties at Moorbrock and Craigengillan, and route DS15 passes partly alongside the north-western Site boundary.

8.5.68. The Core Paths and other routes within 4km of the Site are listed below and illustrated at **Figure 8.20 and Figure 8.22:**

- Path 182 (DS15 leading to DS16), west of the Site at Knockgray;
- Path 504 (DS18), east of the Site at Stroanpatrick (also route of Southern Upland Way);
- DS17, east of the Site at Stroanfreggan Cairn to Auchrae;
- DS19, south of the Site, south of Marscalloch Hill;
- Path 199, south of the Site at Kendoon;
- Path 23 (DS27-31), south of the Site at Dundeugh Hill, and
- Path 164 (DS33), Bardennoch Trail Pack Road, south-west of the Site.

8.5.69. All Core Paths falling within the ZTV, where the potential for significant visual effects are likely to occur, will be considered 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 Development.

8.5.70. 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 8.3.**

Road and Rail Network

8.5.71. An extensive network of major and minor roads traverse the landscape within the 35 km study area.

8.5.72. There are no motorways located within the 35 km of the Site, but other notable major routes include:

- A76;
- A78;
- A75;
- A762;
- A712; and
- A713.

8.5.73. The A713 runs to the south-west of the Site at distance of c. 3 km. As the route falls within the ZTV, further assessment is provided. Other routes to be considered further include the A712 and A762.

8.5.74. There are also a number of 'B' roads within the 35 km study area that provide access to villages and smaller settlements including:

- B729;
- B7000; and
- B732.

8.5.75. The B7000 and B729 are located in relatively close proximity to the Site with large areas of ZTV coverage and thus are considered further within the assessment.

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- 8.5.76. The LVIA also considers the effects upon appropriate 'C' roads, and other minor roads, where there is potential for significant visual effects.
- 8.5.77. The closest railway line to the Site runs between Dumfries and Cumnock. The route does not fall within ZTV coverage and is not considered further within this assessment.

Centres of Recreational and Tourism Activity

- 8.5.78. 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.
- 8.5.79. 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 is provided within Chapter 11 of this EIA report. Views from Woodhead Mines are however considered within the LVIA in relation to Viewpoint 20 at **Appendix 8.3**.
- 8.5.80. 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.
- 8.5.81. 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 ZTV to blade tip at **Figure 8.7**, the vast majority of the Galloway Forest Park, including Glentroll Forest, Carrick Forest and Kirroughtree Forest are located outwith theoretical visibility of the Proposed Development and are therefore not considered further.
- 8.5.82. The Raiders Road Forest Drive runs from Mossdale off the A762 in a north-westerly direction into the extensive forested landscape. The vast majority of the route is located outside of ZTV coverage. It is acknowledged that the Bennan Hill viewing point is located on the cusp of ZTV coverage, but at a distance of c. 21 km from the nearest proposed turbine and bearing in mind that the viewpoint looks east over Loch Ken rather than north towards the Site, any limited views of the Proposed Development would not give rise to significant visual effects.
- 8.5.83. The Parton Heritage Trail, as promoted as part of the Galloway Kite Trail, is located c. 23 km to the south of the nearest turbine. The route of the trail does not fall within ZTV coverage. Similarly, the Red Kite feeding station at

Lauriston, and the RSPB Ken – Dee Marshes are also located at distance from the Site and do not fall within the landscape covered by the ZTV to blade tip.

- 8.5.84. The LVIA will assess likely visual effects upon receptors at tourist and recreational locations where considered relevant. The assessment of effects on tourism and local recreation is also further assessed in Chapter 17 of this EIA Report.

Assessment Viewpoints

- 8.5.85. The following table 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 SNH and the landscape officer at Dumfries and Galloway Council.
- 8.5.86. The viewpoints are considered to be representative of the range of views towards the Proposed 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).
- 8.5.87. Table 8.4 identifies the 22 assessment viewpoints. The locations of these assessment viewpoints are illustrated on **Figure 8.23**.
- 8.5.88. **Appendix 8.3** 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 8.4 Assessment Viewpoints

VP no	Location	OS Grid Ref	Approx. distance to nearest turbine	Receptor Type
1	Stroanfreggan Bridge (B729)	264541, 591790	2288m (T17)	Cyclist, Motorist (Resident and Leisure), Heritage Asset
2	Stroanfreggan Craig	263717, 592077	1418m (T17)	Walkers, Heritage Asset
3	Guttery Glen (B729)	265777, 591723	3462m (T17)	Walkers, Motorist (Resident and Leisure)
4	Smittons Bridge (B729)	263406, 591851	1320m (T17)	Walkers, Cyclist, Motorist (Resident and Leisure), Heritage Asset

vp no	Location	OS Grid Ref	Approx. distance to nearest turbine	Receptor Type
5	Stroanfreggan Cairn	264016, 591415	2066m (T17)	Heritage Asset, Walkers
6	Head of Ken Valley	264541, 591790	4048m (T3)	Walkers, Motorist (Leisure)
7	Southern Upland Way at Culmark Hill	263717, 592077	3676m (T19)	Walkers
8	Minor road south of B729	265777, 591723	6397m (T17)	Cyclist, Walkers, Motorist (Resident and Leisure)
9	High Bridge of Ken	263406, 591851	2244m (T19)	Cyclist, Motorist (Resident and Leisure)
10	Southern Upland Way, Benbrack (Striding Arch)	264016, 591415	5425m (T3)	Walkers
11	B7000 at East Ardarroch	261851, 589283	3123m (T19)	Cyclist, Motorist (Resident and Leisure)
12	Dundeugh Hill	260971, 589741	2869m (T19)	Walkers
13	Beninner	260593, 597150	2045m (T1)	Walkers
14	Cairnsmore of Carsphairn	259459, 597979	3420m (T1)	Walkers
15	Craig of Knockgray	257054, 594385	4553m (T16)	Walkers
16	Alhang	264228, 601023	5847 (T1)	Walkers

vp no	Location	OS Grid Ref	Approx. distance to nearest turbine	Receptor Type
17	Southern Upland Way at Waterside Hill	260768, 582043	10437m (T19)	Walkers
18	A713 at Stroangassel	260313, 586825	5839m (T19)	Cyclist, Motorist (Resident and Leisure)
19	A713 south of Carsphairn	257702, 592193	3800m (T16)	Cyclist, Motorist (Resident and Leisure)
20	Woodhead Mines	252875, 593759	8542m (T16)	Walkers
21	Corserine (Hennessey's Shelter)	250447, 587287	12380m (T16)	Walkers
22	Carsphairn War Memorial	256859, 593089	4547m (T16)	Heritage Asset, Local population

8.6. Assessment of Potential Effects

8.6.1. Following a brief summary of the Proposed Development, this section of the LVIA considers the effects of the Proposed Development on landscape features, landscape character, and visual amenity. It considers the effects at three different stages in the lifetime of the Proposed Development:

- during construction of the Proposed Development;
- during the operational lifetime of the Proposed Development; and
- during decommissioning of the Proposed Development after 25 years of operation.

8.6.2. 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 Development are considered to be long term, reversible effects.

Project Description

8.6.3. A detailed description of the Proposed Development is set out in Chapter 4 of this EIA Report. The Proposed Development description below summarises those details of the Proposed Development that have particular relevance to the LVIA.

- 8.6.4. The Proposed Development will principally comprise the following visible features which may have an impact on landscape character or visual amenity:
- 19 wind turbines, 17 up to 149.9 m to blade tip and 2 up to 125m (the proposed turbines are three bladed horizontal axis machines, the finish and colour of the turbines will be semi matt and pale grey in colour);
 - crane hardstanding areas;
 - site access tracks (utilising existing forest tracks where possible);
 - a substation and battery energy storage compound and control room;
 - a construction compound;
 - two borrow working search areas; and
 - a permanent meteorological mast (met mast) (100 m steel lattice structure).

Effects on Existing Landscape Features

Effects during Construction of the Proposed Development on Existing Landscape Features

- 8.6.5. Access to the Proposed 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 will be required.
- 8.6.6. The primary access route to the turbines would partly follow existing forest roads within Site. There will be a requirement to construct further access tracks within the plantation to access each turbine which will result in the loss of coniferous trees. However, the trees are a commercial crop and the trees would be felled regardless of the Proposed Development.
- 8.6.7. The 19 proposed turbines and their associated foundations and crane pads, the main construction compound, met mast, and all new access tracks would be located within areas that were commercial plantation. The plantation would be felled to allow for construction of the Proposed Development, and replanted, where relevant, once the development is completed. Notch (keyhole) felling of the commercial crop, up to 90 m radius from the turbine tower, will be required in areas of existing and retained plantation in order to construct the various ground level components of the Proposed Development. It is highly unlikely that any vegetative cover of biodiversity value will be removed during the construction process.
- 8.6.8. 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 will be disturbed through the felling of plantation. Once the Proposed 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.

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- 8.6.9. 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

- 8.6.10. The first stage in assessing the effects of the Proposed 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.
- 8.6.11. A number of documents assist in this process. In considering landscape susceptibility and landscape values it is helpful to draw upon the analysis contained within the Dumfries and Galloway Wind Farm Landscape Capacity Study (DGWFLCS), which forms Appendix C of the Local Development Plan Supplementary Guidance, Part 1 Wind Energy Development: Development Management Considerations (2017). Dumfries and Galloway Council have also published draft supplementary guidance namely Wind Energy Development: Development Management Considerations (WEDDMC), January 2018. This document considers turbines up to 200 m to blade tip.
- 8.6.12. For each character type considered, a discussion is provided regarding any analysis of landscape sensitivity within the DGWFLCS. The DGWFLCS considers the physical and perceptual characteristics of each character type to wind energy development of various typologies (the Proposed Development falls into the large turbine typology 80 m-150 m), and forms a judgement concerning the sensitivity of each characteristic which is combined to provide an overall judgement about landscape sensitivity (broadly the same concept as landscape susceptibility as defined in GLVIA3).
- 8.6.13. It should be noted that the DGWFLCS study should be read with caution as it does not necessarily just consider landscape sensitivity (susceptibility and value). Firstly, the document combines judgements about landscape character sensitivity (which is broadly the same as the concept of landscape susceptibility as defined in GLVIA3) and landscape value with judgements about visual sensitivity to formulate opinions about capacity or scope for development (i.e. the quantity of development that a landscape can accommodate). It is important therefore to disaggregate the relevant judgements contained within the study such that perceived visual constraints do not factor in the judgements regarding landscape sensitivity, as required for the purposes of this LVIA.
- 8.6.14. It should also 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.
- 8.6.15. Furthermore, it should also be noted that these documents, although published relatively recently, are already 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.

- 8.6.16. It should be noted that the sensitivity judgements provided in this section of the report 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.
- 8.6.17. Key sensitivities and capacity judgements from the DGWFLCS are also identified where relevant but updated where necessary with reference to recently constructed/consented wind farms if applicable.

Character Type 19a – Southern Uplands with Forest

- 8.6.18. The DGWFLCS considers the sensitivities of Character Type 19a – Southern Uplands with Forest, within which 18 of the 19 proposed turbines are located. The discussion focuses on four areas of the character type, two of which are geographically distant from the Ken unit of the character type in which the Site falls within. The Carsphairn unit of the character type is located within 5 km to north-west the Site.
- 8.6.19. The DGWFLCS recognises that wind farms are present in the landscape stating “*Wind farm development is a key feature within the West Langholm, Carsphairn and Ken units of this landscape character type*”. The study also acknowledges the potential cumulative effects within the Ken and Carsphairn units due to the presence of a number of existing wind farms alongside those that are consented/under construction.
- 8.6.20. The landscape appraisal in relation to the large turbine typology discusses a number of topics such as scale, landform, features, and views and sets out a sensitivity 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 8.5 Character Type 19A – Ken Unit - Landscape Sensitivity

Landscape Character Criteria	Sensitivity Level to Large Typology Turbines
Scale and Openness	Medium - Low
Landform	Medium - Low
Landcover and Landmark Features	Medium - Low
Settlement and Archaeology	Medium - Low
Landscape Context	Medium
Perceptual Qualities	Low
Views and Visibility	Medium
Landscape Values	Medium - Low

Landscape Character Criteria	Sensitivity Level to Large Typology Turbines
OVERALL RATING	Medium

8.6.21. In relation to landscape values, it should be noted that DGWFLCS states that the Ken unit has increased sensitivity with respect to recreational value than the medium – low sensitivity given for the character type as whole.

8.6.22. Despite the overall sensitivity of the character type given as medium, the guidance for development within Character Type 19A states that opportunities for the Large typology within the Ken unit is “*very limited*”. Scope is said to be limited to repowering and/or extensions to existing windfarms located away from recreational routes and sensitive glens.

Character Type 4 – Narrow Wooded River Valley

8.6.23. The Proposed Development is also located, in part, within the Ken unit of Character Type 4 – Narrow Wooded River Valley, including one of the proposed turbines, albeit in close proximity to the boundary with Character Type 19A.

8.6.24. The DGWFLSC provides no appraisal or table of landscape sensitivity/character criteria against turbines larger than 50 m to blade tip as it states that turbines greater than 50 m in height cannot be accommodated within these landscapes “*without significant adverse impacts occurring on key landscape and visual sensitivities*”. However, the DGWFLCS does state that overall sensitivity in relation to Large typology turbines is High.

8.6.25. It is noted that within the description of operational and consented wind energy development, it is stated that no wind farm development has occurred within the character type but does state that wind farms are visible from a number of the units within the type, excluding the Ken unit. However, there is an omission to recognise that existing wind turbines are visible from the Ken unit as Windy Standard is clearly seen from within the valley, beyond the landscape features of Beninner and Cairnsmore of Carsphairn.

Character Type 19 – Southern Uplands

8.6.26. The Carsphairn unit of the Southern Uplands character type is located to the immediate east of the Site. The Carsphairn unit is described as ‘rugged southern upland’, formed of high hills and dramatic sculptural landform.

8.6.27. It is recognised that Regional Scenic Areas cover much of the character type, and overall sensitivity to turbines >50m to blade tip is stated to be high, as set out in table 8.6 below.

8.6.28. In terms of existing wind farms, the DGWFLCS acknowledges the presence of Windy Standard wind farm, which extends into the Carsphairn Unit. Other wind farms within adjacent character types are also discussed, but these are located largely to the north and north-east of the character unit where existing wind farms are prevalent.

Table 8.6 Character Type 19 - Landscape Sensitivity

Landscape Character Criteria	Sensitivity Level to Large Typology Turbines
Scale and Openness	Medium
Landform	High
Landcover and Landmark Features	Medium
Settlement and Archaeology	Medium - low
Landscape Context	High
Perceptual Qualities	High
Views and Visibility	High
Landscape Values	High - medium
OVERALL RATING	High

Character Type 9 – Upper Dale (Valley)

- 8.6.29. The Upper Glenkens unit of the Upper Dale (Valley) character type is described as a broad valley contained by high hills. It is recognised that the valley floor is well settled and linked by major roads, whilst the valley slopes are sparsely settled.
- 8.6.30. The DGWFLCS states that there is overall high sensitivity to turbines 80-150 m. In terms of landscape values, due to the Upper Glenkens unit being covered by an RSA designation, the sensitivity is stated to be High-medium, as set out within Table 8.7 below.
- 8.6.31. In terms of cumulative matters, it is recognised within the DGWFLCS that existing wind farms located within the adjacent Southern Uplands and Southern Upland with Forest character types "*do not have a strong influence on this landscape*". This does not include the recently operational Blackcraig wind farm, although it is recognised within the document that visibility would be likely as a consented scheme.
- 8.6.32. In relation to wind farm development within adjacent character types/units, it is stated that the landscape would be sensitive to development within character types 18A, 19 and 19A, where "*turbines could form prominent features seen above steep containing slopes*".

Table 8.7 Character Type 9 - Landscape Sensitivity

Landscape Character Criteria	Sensitivity Level to Large Typology Turbines
Scale and Openness	High
Landform	High - medium
Landcover and Landmark Features	High
Settlement and Archaeology	High
Landscape Context	Medium
Perceptual Qualities	Medium - low
Views and Visibility	High
Landscape Values	High - low
OVERALL RATING	High

Character Type 18A – Forest with Foothills

- 8.6.33. There are two character units of the Forest with Foothills character type that concern this LVIA, namely Stroan and Rhinns of Kells. Each of the units 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 character units have undergone individual sensitivity appraisal as set out at Tables 8.8 and 8.9 below.
- 8.6.34. With regards to the Rhinns of Kells unit, the overall sensitivity of the landscape is considered to be High-medium, with a High-medium sensitivity in terms of landscape values due to the landscape being located within an RSA.
- 8.6.35. The presence of other turbines in the wider landscape is acknowledged, with Windy Standard and Wether Hill noted at a distance of 12 km. The potential visibility of Blackcraig wind farm is also discussed, and this operational scheme is now visible from the character unit at distance of over 8 km.
- 8.6.36. The guidance on development sets out the potential for significant adverse impacts on the landscape setting of the Rhinns of Kells for turbines greater than 50 m to blade tip located in proximity to the foothills of the hill formations.

Table 8.8 Character Type 18A Rhinns of Kells Unit - Landscape Sensitivity

Landscape Character Criteria	Sensitivity Level to Large Typology Turbines
Scale and Openness	Medium
Landform	Medium
Landcover and Landmark Features	Medium
Settlement and Archaeology	Medium - low
Landscape Context	High
Perceptual Qualities	High - medium
Views and Visibility	High
Landscape Values	High - medium
OVERALL RATING	High – medium

- 8.6.37. The Stroan unit of the Foothills with Forest is described as an area of upland plateau of rounded hills, punctuated by 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.
- 8.6.38. In terms of sensitivity, there is a High-medium sensitivity to large typology turbines, with low sensitivity landscape values due to the absence of landscape designations and other recognised assets.
- 8.6.39. Overall, it is a medium to large scale landscape with simple land cover and sparse population.

Table 8.9 Character Type 18A Stroan Unit - Landscape Sensitivity

Landscape Character Criteria	Sensitivity Level to Large Typology Turbines
Scale and Openness	Medium
Landform	Medium
Landcover and Landmark Features	Medium
Settlement and Archaeology	Medium
Landscape Context	High - medium
Perceptual Qualities	Medium - low
Views and Visibility	High - medium
Landscape Values	Low
OVERALL RATING	High - medium

Character Type 8 – Flooded Valley

- 8.6.40. 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.
- 8.6.41. The DGWFLCS does not provide a detailed sensitivity appraisal for the character type due to the low demand for wind energy development. However, a summary of landscape sensitivity is provided in which it states that for turbines >50m to blade tip, the overall sensitivity is High.
- 8.6.42. 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 >20m to blade tip.
- 8.6.43. In terms of the siting of turbines within adjacent upland character types, the DGWFLCS states that if poorly located, turbines could be perceived as being *"perched above and easily dominate the Flooded Valley"*.

Character Type 21 – Rugged Granite Uplands

- 8.6.44. The Rhinns of Kells unit of the Rugged Granite Uplands is a sparsely populated tract of upland landscape, commonly described as 'Highland' in character. Overall landscape sensitivity is considered to be High to large typology turbines. In terms of landscape values, sensitivity is also considered High due to the presence of the Galloway Forest Park.
- 8.6.45. The landscape is considered sensitive to wind farm development within nearby character types such as 17, 17a, 18a and 19a. Guidance is given for the siting of wind turbines that would impact upon key views to and from the uplands from the local road network, settlements and public rights of way. The guidance also states that wind farms within other character areas should be sited at such distance to avoid visual prominence and the perception of *"cumulative encirclement"*.

Table 8.10 Character Type 21 - Landscape Sensitivity

Landscape Character Criteria	Sensitivity Level to Large Typology Turbines
Scale and Openness	Medium - low
Landform	High
Landcover and Landmark Features	High - medium
Settlement and Archaeology	Medium - low
Landscape Context	High
Perceptual Qualities	High
Views and Visibility	High
Landscape Values	High
OVERALL RATING	High

Effects on Landscape Character during Construction

- 8.6.46. The Proposed Development is located within character types 19a – Southern Uplands with Forest (18 turbines, meteorological mast, and ancillary development), 9 – Upper Dale (Valley) (Site entrance, access and main construction compound), and 4 - Narrow Wooded River Valley (1 turbine and ancillary development). It is recognised that there would be some temporary effects during construction. 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 will also screen or interrupt the visual presence of the ground level elements of the Proposed Development.
- 8.6.47. The effects on landscape character would increase incrementally as construction progresses and as more turbines, foundations and hardstandings are constructed.
- 8.6.48. 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.
- 8.6.49. There would be earth movements associated with the construction of foundations, hardstandings, borrow working search areas, and other ancillary features of the Proposed Development. Such activities would all result in some soil disturbance, but this will 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.
- 8.6.50. The main construction compound is located within character type 9 - Upper Dale (Valley) 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.
- 8.6.51. It is noted that while the Site entrance and main access track is situated within character type 9, the route is an existing forest track that serves articulated lorries and other forestry vehicles; therefore, there will be no significant direct effects to this landscape character type.
- 8.6.52. 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.
- 8.6.53. Overall, it is considered that there would be a medium to low magnitude of change for the reasons set out above upon the small tract of character types 4 and 9 within which the Proposed Development is located. This would result in no greater than a moderate to moderate/minor temporary effect. With regards to character type 19a there would be a localised high to medium magnitude of change in landscape character as a result of the felling of plantation to allow for construction. Due to the absence of the trees in the landscape, the

construction activities will be perceptible to a relatively high degree at close proximity to the Site. That said, the plantation felling was due to occur between 2019 and 2023 in any event. The temporary and located effect upon the Ken character type would be major to moderate and significant.

- 8.6.54. In terms of indirect effects upon landscape character as a result of construction activities, there will be a localised high to medium magnitude of change upon the Carsphairn unit of character type 19, which lies immediately west of the Site. Due to the felling of plantation along the western site boundary, the construction activities will be highly visible from the eastern portion of the character unit giving rise to a major to 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.

Effects on Landscape Character during Operational Phase

- 8.6.55. The effects on landscape character are discussed below in relation to each landscape character type or unit as identified in Table 8.11. The magnitude of change on landscape character as a result of the Proposed 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;
- 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 Development.

- 8.6.56. 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 report 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 Windy Standard (and extension), Wether Hill, and Blackcraig wind farms are considered as part of the baseline, but all wind farms awaiting a planning decision, including Longburn, or are at the scoping stage (e.g. Troston Loch) are not considered; these are addressed in the cumulative impact assessment.

- 8.6.57. To aid the consideration of effects on landscape character, the ZTV has been overlaid on the character types within 15 km of the site. This is shown at **Figure 8.19**.

- 8.6.58. Beyond a relatively short distance from the site, the ground level components of the Proposed Development would not be highly perceptible features in the landscape in comparison to the visual presence of the turbines. The substation/control building is likely to be perceptible from the landscape to the west due to the absence of plantation at the outset of the development. However, as the plantation begins to establish, its presence will incrementally decrease. The access tracks and other ground level components will also be perceptible, particularly from higher ground, but again such presence will gradually decrease on establishment of the 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.

- 8.6.59. It is noted that in general, the magnitude of change in landscape character will incrementally decrease with distance from the turbines as they become gradually less prominent. Some of the character types considered in this assessment extend from relatively close proximity to the Proposed Development out to beyond 10 km from the Site. This includes the character type in which the majority of the proposed turbines are located, which extends to beyond 15 km from the Site itself. The same character type also occurs elsewhere in the 15 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 will 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 character types/units in bands of distance from the site.
- 8.6.60. The Proposed Development is largely located within character type 19A – Southern Uplands with Forest, with a smaller part of the Proposed Development located within character type 4 – Narrow Wooded River Valley, and the site entrance, access track and construction compound located within character type 9 – Upper Valley, and thus the Proposed Development will have a direct effect on the character of these character types. Effects on surrounding character types are considered to be indirect.
- 8.6.61. A summary of the effects on landscape character is presented in Table 8.11. Note that for all character types stated within Table 8.11, the duration of the Proposed Development is considered to be long term and the reversibility of this element is considered to be non-permanent.
- 19A – Southern Uplands with Forest – Ken Unit*
- 8.6.62. The Proposed Development comprises 19 turbines, 18 of which are located within the Ken Unit of character type 19A. The Ken unit 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 Unit also extends to the east of the Site at distances of 12-13 km. The Ken unit forms the valley slopes of the Water of Ken, which bisects the character unit immediately east and north-east of the Site as well as the upland landscape of the northern reaches of Dumfries and Galloway.
- 8.6.63. Analysis of **Figure 8.19**, which shows the 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 character unit, 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 character unit and the upper reaches of the valley north of the Water of Ken.

- 8.6.64. The ground level components of the Proposed Development within this character unit (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.
- 8.6.65. 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 character unit.
- 8.6.66. 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 of the Site will serve to screen views of the western side of the Site on establishment and maturation, particularly as the central and western areas of forest will be felled to allow for the construction of the Proposed Development. Overall, the presence of the hardstandings in the landscape would give rise to no more than a moderate/minor change in the landscape.
- 8.6.67. The substation/control building and 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 Development is located within, or beyond, the existing central forested area of the Site which will 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, this young forest will mature, and it will go on to provide filtering or screening to views of any ground level components of the Proposed 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.
- 8.6.68. 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 unit of 19A – Southern Upland with Forest arises principally in relation to the introduction of the proposed turbines (both those located within the character unit and those directly adjacent within character type 4).
- 8.6.69. 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.

- 8.6.70. 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 unit, and its intervisibility with other character types/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 will be highly prominent becoming a characterising influence within the character unit.
- 8.6.71. It should be noted that the Proposed Development would be located within the same character unit as the existing Wether Hill wind farm. The existing Windy Standard wind farm and its associated extension are also located within the same character type. Wind farms are therefore already a characteristic of the landscape and thus the Proposed 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.
- 8.6.72. The Proposed Development would be perceived as a separate wind farm to Wether Hill and Windy Standard, due to the separation distances between the schemes.
- 8.6.73. Taking into consideration the above appraisal of the character unit, the Proposed 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. From 1 km to c. 3 km, there would be a high magnitude of change perceived in the landscape particularly in an easterly direction, outwith forested areas of the character unit, as illustrated by the visualisation at **Figure 8.38c** at Stroanfreggan Craig. In distances 3 km to 5 km from the Proposed 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 8.39c**. The magnitude of change is considered to be medium.
- 8.6.74. 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 6-7 km distance to the east, theoretical visibility of the Proposed 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 character unit. There would be no greater than a medium to low magnitude of change within this tract of the landscape.

- 8.6.75. In a north-westerly direction from the Site, the magnitude of change upon the Ken character unit would be also decrease with distance. Further large areas of coniferous forest to the immediate north and beyond the Water of Ken valley to the north-east of the Site would limit the extent that the Proposed Development is seen in the landscape. 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. Overall, the magnitude of change within 3 - 4 km of the Proposed Development would be high in locations where coniferous forest is absent, reducing to medium up to 5 km.
- 8.6.76. At greater distance from the Site the magnitude of change would reduce further. The visualisation at **Figure 8.52c** at Alhang depicts the open nature of the landscape from the higher peaks within the character unit. Although the Proposed 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 Development are also seen alongside the existing wind turbines at Wether Hill and thus do not introduce new features into the landscape. There would be no greater than a medium to low magnitude of change upon landscape beyond 6-7 km from the Site in a northerly and north-easterly direction.
- 8.6.77. In summary, the greatest level of effects upon the Ken unit of the Southern Upland with Forest character type would occur within c. 5 km of the Proposed Development. There would be a major/moderate effect upon landscape character within very close proximity of the proposed turbines up to a distance 1 km, a moderate effect up to distances of 3 – 5 km, all of which would be significant, long term but non-permanent. Beyond 5 km distance, there would be a moderate to moderate/minor effect which is not significant.

4 – Narrow Wooded River Valley – Ken Unit

- 8.6.78. There is just one of the proposed turbines (T11) located within the Ken unit of the Narrow Wooded River Valley character type.
- 8.6.79. The Ken unit is a relatively slender tract of land that follows the Water of Ken valley floor. The character unit 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 character unit.
- 8.6.80. Analysis of the ZTV to blade tip at **Figure 8.19** indicates that there would be theoretical visibility of the proposed turbines from almost all of the character unit, with only the northernmost reaches of the character unit falling outside of ZTV coverage due to the presence of intervening landform.

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- 8.6.81. The ground level components associated with T11 are likely to be perceptible from the character unit, within close proximity of the Site, as it is likely that the notch (keyhole) felling of the plantation to allow for the construction of T11 will open up views to the base of the turbine.
- 8.6.82. 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. Overall there would be slight adverse effect on the underlying character of the unit.
- 8.6.83. The crane hardstanding area of T11 would be particularly visible from the immediate environs and from the elevated parts of this landscape unit within close proximity to the Site. However, 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 will 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 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.
- 8.6.84. The substation building and borrow pit would not be readily perceptible features in the landscape due their location on the western side of the Site, 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 will go on to provide filtering or screening to views of any ground level components of the Proposed Development located on the eastern fringes of the Site, thus becoming much less perceptible over time.
- 8.6.85. It has been established that there would be no significant effects on existing landscape features. Therefore, the effects on landscape character within the Ken unit of 4 – Narrow Wooded River Valley arises largely in relation to the introduction of the proposed turbines (both those located within the character unit and those directly adjacent within character type 19A).
- 8.6.86. Turbine T11 will largely lie at the same level as the existing ground level, with some very localised ground levelling to accommodate the hardstanding and crane pad. Overall, the proposed turbine would not largely affect the landform or topography of the underlying landscape to any significant degree.
- 8.6.87. The majority of the proposed turbines would be located outside of the character unit on higher ground than the river valley bottom, with T11 located within the unit on the higher slopes of the valley. As a consequence, the turbines will 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.
- 8.6.88. The area of the character unit in which the T11 is located forms the transition from the lower valley to the higher upland slopes. It is an area associated with coniferous forest rather than the grazed valley bottom. All of the proposed turbines would be perceived to be set back from the river valley floor.
- 8.6.89. The underlying landscape in which T11 is located 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 character unit and the valley slopes sweep up to form a bowl like valley bottom rather than the 'V' shaped valley further north within the unit. 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.
- 8.6.90. It is recognised that the introduction of the turbines and the movement of the blades when in operation will become a characterising influence within the southern portion of the character unit. However, the presence of the existing coniferous forest within the Site will assist in reducing the overall visibility of the turbine towers where turbines are located within or beyond the forest. The visualisation at Smittons Bridge (**Figure 8.40**) shows that although the turbines would be clearly tall structures, seen above the trees, their presence in the landscape is reduced by their location within the coniferous woodland. Only a small proportion of the overall Proposed Development is visible, largely limited to blade tips.
- 8.6.91. Moving north through the character unit, 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.
- 8.6.92. 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 Development would therefore not necessarily introduce new features to the landscape as seen from the valley.
- 8.6.93. The Proposed Development will 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 **Figure 8.42** 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.

- 8.6.94. Taking into consideration the above appraisal of the character unit, the Proposed 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 Black Burn Bridge to Craigengillan, where the forest has been recently felled and thus T11 would be a highly apparent feature in the landscape.
- 8.6.95. In the vicinity of Smittons Bridge and the most southerly reaches of the character unit, the Proposed Development will be located beyond the existing coniferous forest. This plantation will be retained up until c.2024 – 2028. Once felled, the Proposed Development, and ground level ancillary development will be clearly visible in the view. Whilst the plantation is present in the baseline landscape, the kinetic nature of the blade tips will be seen at close proximity, beyond the coniferous trees, but overall the baseline landscape will remain the predominant feature. There would be a high magnitude of change within this part of the character unit as shown in the visualisations in relation to Viewpoints 2 and 4 at **Figures 8.38c and 8.40c** respectively.
- 8.6.96. Heading north of Craigengillan, where the river valley begins to narrow, the Proposed Development would become increasingly less prominent in the landscape, although clearly visible from within the valley. At distances up to 3 km there would be a high magnitude of change in the character of the valley reducing to medium to c. 4 – 4.5 km as illustrated at **Figure 8.42c** in relation to Viewpoint 6. In the vicinity of the head of the Water of Ken, there is a reduction in overall visibility, as shown at **Figure 8.19**, and as such, the magnitude of change reduces further to where effects would not be significant upon landscape character.
- 8.6.97. In summary, the greatest level of effects upon the Ken unit of the Narrow Wooded River Valley character type would occur within c. 4.5 km of the Proposed Development. There would be a major effect upon landscape character within 3 km which would give rise to a significant effect. Beyond 3 km to c. 4 - 4.5 km, effects would reduce to moderate and significant. Beyond 4.5 km the effect would become moderate to moderate/minor 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 would be long term but non-permanent.

9 – Upper Dale (Valley) – Upper Glenkens Unit

- 8.6.98. 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 character type, and there would be some very localised direct effects upon landscape character. However, overall the majority of the effects discussed below are indirect.
- 8.6.99. The direct effects upon the character type arise from the siting of the 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 will be minimal and not there will be no significant effects.

- 8.6.100. Analysis of **Figure 8.19**, which shows the ZTV to blade tip overlaid on top of the character type boundaries, indicates that there is variable coverage across the character unit, influenced by the valley landscape and the presence of higher hills that form the backdrop to the valley, including the notable Dundough Hill.
- 8.6.101. Within the central, lower lying portion of the character unit, 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 Dundough Hill which curtails intervisibility in a northerly direction.
- 8.6.102. The areas of the character unit in which the Proposed Development will be most perceptible in the wider landscape to the north will be in the vicinity of Carsphairn and Bardennoch Hill as well as the western flank of the Water of Ken valley in the vicinity of Waterside Hill and Hannaystoun Hill.
- 8.6.103. The visualisation at **Figure 8.55c** shows the likely view from the A713 south of Carsphairn, east of Bardennoch Hill, and **Figure 8.58c** shows the likely view from Carsphairn War Memorial, located on the southern edge of the village. The landscape in which the Proposed 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 character unit. Nevertheless, the Proposed Development will form a clearly perceptible feature in the landscape to the east.
- 8.6.104. In the southern portion of this unit of the Upper Dale (Valley) character type, the Proposed Development will be seen at greater distance, as depicted at **Figures 8.53c and 8.54c** in relation to the visualisations at Viewpoints 17 and 18 respectively.
- 8.6.105. From within the lower lying valley, as seen at **Figure 8.54**, the Proposed 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 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.
- 8.6.106. From locations higher on the valley slopes, such as that at Waterside Hill, shown at **Figure 8.53c**, the Proposed 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.
- 8.6.107. Taking into consideration the above appraisal, within the Glenkens unit of this character type, the Proposed 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. Within these parts of the character unit, there would be a major effect, which would be significant. Beyond 3 km, to c. 4.5 km distance, there would be a medium magnitude of change giving rise to a moderate effect which is also significant. At distances beyond 4.5 km, the Proposed 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.

19 – Southern Uplands – Carsphairn Unit

- 8.6.108. The Proposed Development is not located within this character unit, and there would be no direct effects upon this landscape character. Therefore, the effects discussed below are indirect.
- 8.6.109. The Carsphairn unit of the Southern Uplands is located to the immediate west of the Site. The character unit 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.
- 8.6.110. Analysis of the ZTV to blade tip overlaid onto the character types at **Figure 8.19**, shows that there would be visibility of the all of the proposed turbines from the eastern slopes of the hills located on the eastern side of the character unit. The hill summits within the character unit create large areas of no visibility immediately beyond them and thus the western and north-western portions of the character unit have virtually no visibility other than from the highest peaks.
- 8.6.111. Within the character unit, there are areas of coniferous plantation that will interrupt visibility of the Proposed Development. Such areas occur on the lower slopes of Mid Hill of Glenhead, Glenhead Rig, and Green Hill. It is acknowledged that such vegetation would not limit intervisibility of the Proposed Development from the higher slopes and hill summits.
- 8.6.112. Where the turbines are visible from within the character unit, they will be highly prominent from locations to the immediate west of the Site, such as Furmiston Craig and the lower slopes of Knockwhirn. The magnitude of change in the landscape would be very high. With distance from the Site, the prominence will decrease but the turbines would remain a prominent feature up to distances of c. 3 km. The visualisation at **Figure 8.49c** in relation to Beninner 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.
- 8.6.113. The visualisation at **Figure 8.50** at Cairnsmore of Carsphairn indicates the likely experience of the landscape from the primary hill summits within the character unit located at distance of over 3.5 km to the north-west of the Proposed 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, Blackcraig, and Windy Standard are visible from the summit, with Windy Standard forming a highly visible feature in the near landscape to the immediate north.

- 8.6.114. The visualisation at **Figure 8.51** in relation to Craig of Knockgray, located 4.5 km to the west of the Proposed Development shows the likely experience of the turbines from higher ground from part of the furthest extent of full theoretical visibility within the character unit. The introduction of the Proposed 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 character unit. 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 4.5 km.
- 8.6.115. Beyond 4.5 km of the Proposed 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.
- 8.6.116. In summary, the magnitude of change in landscape character within the Carsphairn unit of the Southern Uplands will vary relative to location from the Site. In close proximity to the turbines, the very high magnitude of change will result in a major effect. Similarly, the high magnitude of change in character experienced at distances up to 3 km from the Proposed Development would also result in a major effect.
- 8.6.117. Beyond distances of 3 - 3.5 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 will increase, and the experience of the landscape alters to take in a greater panorama. The Proposed Development will be located within a vast landscape, where wind energy is already present in the landscape to the east. There will be a medium magnitude of change in landscape character which is considered to be significant up to distances of 4 - 4.5 km. Beyond such distance, effects are not considered to be significant.

18A – Foothills with Forest –Stroan Unit

- 8.6.118. The Stroan unit of the Foothills with Forest character type is located c. 2.5 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 Development are located within the character type/unit, and hence, there would be no direct effects upon landscape character.
- 8.6.119. Analysis of **Figure 8.19**, ZTV to blade tip over laid onto character type boundaries, indicates that coverage across the character unit is limited to the higher slopes and hill summits, with no visibility within the lower lying areas. ZTV coverage within the character unit generally ceases at 13 - 14 km from the Proposed Development.
- 8.6.120. The visualisation at **Figure 8.43** shows the likely views available from the higher ground closest to the Site, such as Culmark Hill. The Proposed 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 turbines.

- 8.6.121. At such distance from the Site, c. 3 km, there would be a high magnitude of change in the landscape to the north-west. The Proposed Development will be much more notable in the landscape than the existing Windy Standard turbines. The effect upon landscape character would therefore be major to moderate and significant.
- 8.6.122. As one travels further south and south-east within the character unit, the presence of large areas of coniferous plantation will greatly reduce the level of intervisibility towards the Proposed Development and thus actual visibility will be less prevalent than that indicated on the ZTV at **Figure 8.19**.
- 8.6.123. Also, with distance from the Site, one moves closer to the existing Blackcraig Hill Wind Farm, which forms a notable feature located within the character unit. The Proposed Development will appear as a much smaller feature in the wider landscape in comparison to Blackcraig Hill at distances of c. 10 km and greater.
- 8.6.124. The Stroan Unit of the Forest with Foothills is very varied in terms of topography and beyond distances of c. 3.5 - 4 km, ZTV coverage is limited to hill summits, the majority of which are blanketed in coniferous plantation, such as Glenshimmeroch Hill and Kilnair Hill. The availability of intervisibility with the Proposed Development is greater reduced as a consequence, and effects on landscape character are unlikely to be significant.
- 8.6.125. Overall, within the Stroan Unit of the character type, the effects upon landscape character are limited to the closest open upland grasslands in the vicinity of Culmark Hill and Auchenshinnoch Hill, with significant effects upon landscape character experienced up to 3.5 - 4 km from the Proposed Development.

18A – Foothills with Forest – Rhinns of Kells Unit

- 8.6.126. The Rhinns of Kells unit of the Foothills with Forest character type 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 character unit to the Site is c. 4.5 km to the south-west, extending to over 22 km distance from the nearest proposed turbine.
- 8.6.127. The ZTV to blade tip over laid onto character type boundaries at **Figure 8.19** indicates that coverage across the character unit is most prevalent across the higher slopes and hill summits within the character unit. Bands of ZTV coverage can be found across large areas of the landscape that are characterised by coniferous plantation, so in reality overall visibility will be restricted by the presence of such plantation.
- 8.6.128. There are few locations within the character unit from which there would be an open aspect towards the Site with high levels of intervisibility. The character unit is so strongly forested that likely visibility is limited to the landscape around Loch Goosie, Green Dass and Stranfasket Hill. Such locations are situated at distances of 6.5 to 8.5 km from the nearest proposed turbine, and

as such, the Proposed Development is likely to form a less notable feature in the wider landscape.

8.6.129. At such distances from the Site, there would be a worst case medium magnitude of change in the landscape which would give rise to a moderate effect that is not considered to be significant. The underlying forested baseline landscape will not be notably altered by the presence of the Proposed Development, which would appear associated with the upland landscape beyond the Ken valley to the north east.

8.6.130. Overall, there would be a low magnitude of change in the landscape which would give rise to a moderate/minor effect that is not considered to be significant. The underlying forested baseline landscape will not be notably altered by the presence of the Proposed Development, which would appear associated with the upland landscape beyond the Ken valley to the north-east.

8 – Flooded Valley – Ken Valley Unit

8.6.131. The Ken Valley unit of the Flooded Valley character type 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 character unit 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.

8.6.132. ZTV coverage within the character unit is intermittent with theoretical visibility of all 19 of the proposed turbines restricted to the western flank of the valley in the vicinity of Loch Ken, and higher ground to the east and south-east of New Galloway. The closest area of ZTV coverage of all 19 of the proposed turbines occurs at distances of over 14 km. At such 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.

8.6.133. The Flooded Valley landscape is also well treed, the banks of Loch Ken are strongly planted, and the route of the A762 passes through numerous woodlands. Such vegetation will interrupt intervisibility of the Proposed Development from the most frequented locations within the valley.

8.6.134. Overall, there would be a low magnitude of change in the character of the Flooded Valley resulting in a moderate/minor effect that is not considered to be significant. The underlying valley landscape will not be notably altered by the presence of the Proposed Development in the distant landscape to the north.

21 – Rugged Granite Uplands – Rhinns of Kells Unit

- 8.6.135. The Rhinns of Kells unit of the Rugged Granite Uplands character type is a small area of land located c. 6 km to the west of the nearest proposed turbine, extending to c. 17.5 km to the south west. The character unit covers some of the highest land within the detailed study area and features the Rhinns of Kells summit of Corserine.
- 8.6.136. The ZTV at **Figure 8.19** shows that coverage within the character unit 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 character unit, ZTV coverage is patchier and related to the eastern facing hill slopes such as Craigrine, North Gairy Top, Meikle Millyea, and Corserine.
- 8.6.137. The visualisation at **Figure 8.56c** in relation to Viewpoint 20 at Woodhead Mines shows the relative distance between the Site and the character unit (over 8.5 km). The Proposed 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 Development would form a clearly separate and distinguishable wind farm in the wider landscape.
- 8.6.138. At greater distance, and elevation from the Site, the visualisation at **Viewpoint 8.57c** shows the likely view from the summit of Corserine. 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 Development is located on lower ground within the commercial forested landscape east of Cairnsmore of Carsphairn, at a distance of over 13 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 Regional Scenic Area.
- 8.6.139. Overall, the Proposed Development would not appear overly prominent from the closest parts of the character unit to the Site, and at greater distance they would appear as a smaller element in a much wider panorama. The Proposed 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 medium to low magnitude of change in the character of this unit of the Rugged Granite Uplands resulting in a moderate to moderate/minor effect that is not considered to be significant.

Table 8.11 Summary of Landscape Character Effects

Landscape Character Type/Sub-type	Sub Area/Location	Magnitude of Change	Level of Effect	Significance
19a Southern Uplands with Forest – Ken unit	Proposed Development located largely within the character unit. Effects up to 1 km from proposed turbines.	Very High	Major/ Moderate	Significant
	1 km to 3 km to east	High	Moderate	Significant
	3 km to 5 km to east	Medium	Moderate	Significant
	Beyond 5 km to east	Medium to Low	Moderate to Moderate/ Minor	Not Significant
	3 km to 4 km to north west	High	Moderate	Significant
	Up to 5 km to north west	Medium	Moderate	Significant
4 Narrow Wooded River Valley – Ken Unit	Proposed Development partially located within the Unit. Effects up to 1 km from proposed turbines.	Very High	Major	Significant
	Up to 3 km distance	High	Major	Significant
	Up to 4km to 4.5 km	Medium	Moderate	Significant
	Beyond 4.5km	Medium to Low	Moderate to Moderate/ Minor	Not significant
9 Upper Dale (Valley)- Upper Glenkens Unit	Proposed Development located within very small part of the Unit.	Low to Very Low	Moderate/ Minor to Minor	Not significant
	Up to 3 km	High	Major	Significant
	3 km to 4.5 km	Medium	Moderate	Significant
	Beyond 4.5 km	Medium to Low	Moderate to Moderate/ Minor	Not Significant

Landscape Character Type/Sub-type	Sub Area/Location	Magnitude of Change	Level of Effect	Significance
19 Southern Uplands – Carsphairn Unit	Up to 1 km	Very High	Major	Significant
	1 km to 3 km	High	Major	Significant
	3 km to 4.5 km	Medium	Moderate	Significant
	Beyond 4.5 km	Low	Moderate/Minor	Not Significant
18A Foothills with Forest – Stroan Unit	Up to 3 km	High	Major to Moderate	Significant
	3 km to 4 km	Medium	Moderate	Significant
18A Foothills with Forest – Rhinns of Kells unit	Over 4.5 km	Low	Moderate/Minor	Not Significant
8 Flooded Valley – Ken Unit	Over 11 km	Low	Moderate/Minor	Not Significant
21 Rugged Granite Uplands – Rhinns of Kells unit	Over 6 km	Medium to Low	Moderate to Moderate/Minor	Not Significant

Effects on Landscape Character during Decommissioning

- 8.6.140. It is recognised that there would be some additional temporary effects during decommissioning of the Proposed Development after 25 years over and above those assessed under the heading of Operational Effects above. The effects resulting from decommissioning activities will be localised and relatively incidental when viewed in the context of the wind farm being removed.
- 8.6.141. The effects on landscape character will therefore decrease incrementally as decommissioning progresses and as more turbines and associated foundations and hardstanding are removed.

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- 8.6.142. The effects would be similar to those during the construction phase but in reverse.
- 8.6.143. 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 and Narrow Wooded River Valley character types within which the Proposed Development is located. The decommissioning effects will be temporary in nature and are unlikely to all occur at the same time during this phase.
- 8.6.144. The decommissioning effects of the Proposed Development on landscape character are deemed to be not significant.

Assessment of Visual Effects at Representative Viewpoints

Construction Effects

- 8.6.145. The ground level activity associated with the turbine construction will 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, will arise in relation to views of the cranes erecting the turbines. The cranes will 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 will also be incidental and not significant, in relation to the overall effects identified as a result of the Proposed Development.

Operational Effects

- 8.6.146. A detailed viewpoint assessment of the operational phase effects is presented at **Appendix 8.3** and this considers the long term visual effects during the operational phase of the Proposed Development for each of the 22 assessment viewpoints agreed with DGC and SNH.
- 8.6.147. 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.
- 8.6.148. This is followed by a description of the features of the Proposed 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 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.

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- 8.6.149. 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.
- 8.6.150. A summary of the sensitivity of the view, magnitude of change in the view and level/significance of effect is given in Table 8.12. Where a viewpoint is representative of more than one type of visual receptor, the assessment carried forward to Table 8.12 is that which represents the most sensitive receptor group represented by the viewpoint.
- 8.6.151. It has been assessed that there would be a significant visual effects experienced at 15 of the 22 representative viewpoints. These are as follows:
- Viewpoints 1-7;
 - Viewpoints 10 - 12;
 - Viewpoints 14 - 16; and
 - Viewpoint 19 and 20.
- 8.6.152. It is recognised that there is high proportion of viewpoints from which there would be significant effects, 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 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.

Table 8.12 Summary of Visual Effects at Viewpoint Locations

Name/ Receptor	OS Grid Ref	Distance to nearest turbine	Sensitivity	Magnitude of Change	Level of Effect	Significance
1. Stroanfreggan Bridge (B729)	264539, 591797	2288m (T17)	High	High	Major	Significant
2. Stroanfreggan Craig	263712, 592093	1418m (T17)	High	High	Major	Significant
3. Guttery Glen (B729)	265776, 591732	3462m (T17)	High	High	Major	Significant
4. Smittons Bridge	263406, 591856	1320m (T17)	High	Medium to High	Moderate to Major	Significant
5. Stroanfreggan Cairn	264016, 591415	2066m (T17)	High	High	Major	Significant
6. Head of Ken Valley	265860, 598002	4048m (T3)	High	Medium to High	Moderate to Major	Significant
7. Southern Upland Way at Culmark Hill	264460, 589630	3676m (T19)	High	High	Major	Significant
8. Minor Road south of B729	268509, 590654	6397m (T17)	High	Low	Moderate/ Minor	Not Significant
9. High Bridge of Ken	261970, 590159	2244m (T19)	Medium	No Effect	No Effect	Not Significant
10. Southern Upland Way, Benbrack (Striding Arch)	268029, 597036	5425m (T3)	High	Medium to High	Moderate to Major	Significant
11. B7000 at East Arndarroch	261845, 589285	3123m (T19)	Medium	High	Moderate	Significant
12. Dundough Hill	260971, 589741	2869m (T19)	High	Medium to High	Moderate to Major	Significant
13. Beninner	260583, 597157	2045m (T1)	High	Low to Medium	Moderate/ Minor to Moderate	Not Significant
14. Cairnsmore of Carsphairn	259459, 597979	3420m (T1)	High	Medium	Moderate	Significant
15. Craig of Knockgray	257054, 594385	4553m (T16)	High	High	Major	Significant
16. Alhang	264228, 601023	5847 (T1)	High	Medium	Moderate	Significant
17. Southern Upland Way at Waterside Hill	260768, 582043	10437m (T19)	High	Low to Medium	Moderate/ Minor to Moderate	Not Significant
18. A713 at Stroangassel	260313, 586825	5839m (T19)	Medium	Medium	Moderate	Not Significant

Name/ Receptor	OS Grid Ref	Distance to nearest turbine	Sensitivity	Magnitude of Change	Level of Effect	Significance
19. A713 south of Carsphairn	257702, 592193	3800m (T16)	Medium	High to Medium	Moderate	Significant
20. Woodhead Mines	252893, 593756	8542m (T16)	High	Medium	Moderate	Significant
21. Corserine (Hennessey's Shelter)	250447, 587287	12380m (T16)	High	Low to Medium	Moderate/ Minor to Moderate	Not Significant
22. Carsphairn War Memorial	256859, 593089	4547m (T16)	High	Medium	Moderate	Significant

Assessment of Effects on Visual Receptor Groups

- 8.6.153. 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 Development.
- 8.6.154. In this section, the effects of the Proposed Development on various different visual receptor groups are considered.

Construction Effects on Visual Receptor Groups

- 8.6.155. It is recognised that there would be some additional temporary visual effects during the construction of the Proposed Development over and above those assessed under the operational phase.
- 8.6.156. The vast majority of effects, of note, when considering the construction phase will 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.
- 8.6.157. The construction works will 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 will 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.
- 8.6.158. A small number of public rights of way pass through or within close proximity to the Site, namely DS17, DS21, DS15, DS16, and DS19, as illustrated at **Figure 8.20**. The Southern Upland Way passes within c. 730 m to the east of the Site boundary, although the nearest turbine is located c. 2.1 km from this long distance route. The route of the Southern Upland Way is also Core Path 504.
- 8.6.159. Receptors using these routes would experience views of the Proposed 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 will allow the ground level works to be seen where forestry is absent. From other routes, the presence of the plantations in the landscape will interrupt and curtail visibility of much of the ground level works.
- 8.6.160. 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 will be visible to varying degrees, with views across the entirety of the Site unlikely to be available.
- 8.6.161. Overall, it is assessed that 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, and these effects need to be considered in conjunction with the operational effects identified below.

Operational Effects on Visual Receptor Groups

- 8.6.162. Views of the ground level components of the Proposed Development will 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 Development.

Residential Properties within 2 km of the Proposed Turbines

- 8.6.163. There are 13 residential properties within 2 km of the proposed turbines. All of the properties are identified and assessed in detail within the Residential Visual Amenity Study (RVAS) presented at **Appendix 8.4**.
- 8.6.164. The RVAS concludes that of the 13 properties assessed, there will be significant visual effects experienced at two of the dwellings and/or their associated garden curtilage; namely Craigengillan and Strahanna Farm.
- 8.6.165. The property at Craigengillan is used as a holiday home and thus is not permanently resided within. The effects assessed for this property are a worst case assessment as no access was gained to the dwelling.
- 8.6.166. The significant effects assessed in relation to Strahanna Farm will occur from the property and its curtilage. However, there will be no overwhelming or overbearing effects upon the property and it will remain an attractive place to live.
- 8.6.167. It is noted that Smittons Plantation is due to be felled during the lifetime of the Proposed Development. The felling of the trees will allow for open views towards the Site from the property at Smittons. The RVAS concludes that there will be no greater than moderate and not significant effects upon receptors at the dwelling as they use the access track to the property. The effects would increase to become significant post felling of the plantation, limited to the access track only.

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

- 8.6.168. Between 2 km and 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.
- 8.6.169. 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.
- 8.6.170. The ZTV to blade tip at **Figure 8.7** 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 Dundough, due to the presence of landforms of Marscalloch Hill and Dundough Hill curtailing visibility towards the Site. There is also an

area of no ZTV coverage within the valley associated with Fingland Burn, c. 3.9 km to the south-east of the Site where there are a number of scattered farmsteads.

- 8.6.171. The landscape to the north and north-west of the Site, between 2 km and 5 km, is not settled, and there are very few properties located to the north-east and 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 will be views towards the Proposed Development from the farmsteads located along Lorg Road, including Auchrae, the cluster of properties at Corlae, and Craigythorn. The views would be similar to that shown on **Figure 8.42** in relation to the visualisation at Viewpoint 6, which was taken just north of Craigythorn.
- 8.6.172. The Proposed Development would be seen as an additional feature 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 will be seen from the property curtilages, and as receptors are travelling to and from their dwellings. 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 effects respectively, which are significant.
- 8.6.173. The landscape to the south-east and 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; up to 8 turbines to blade tip. The visualisation at **Figure 8.37** 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 six southernmost turbines will be seen to the west, sitting below the landform of Stroanfreggan Craig.
- 8.6.174. It is considered that the magnitude of change in the view 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 effects respectively. The effects will be significant.
- 8.6.175. The property at Bridgemark is also located just over 2 km to the south of the nearest proposed turbine. The farmhouse occupies a slightly elevated position in the landscape over the Water of Ken with views directly towards the Site from part of the property. The southernmost turbines would be seen above the coniferous plantation in the immediate view, with the remaining turbines screened from view. The Proposed Development would also be seen from the wider curtilage of the farmstead.
- 8.6.176. Due to the distance of the property from the Site, and the location of the dwelling in the landscape, the magnitude of change in the view from the western side of the property and the wider curtilage is assessed to be high giving rise to a major and significant effect. It is recognised that the plantation

between the property and the Site will be felled during the lifetime of the Proposed Development, and as such, a greater proportion of the turbines will become visible as a result. However, the turbines would not appear overwhelming or overbearing in the view.

- 8.6.177. Other properties to the south and south-east of the Site, where views of the Proposed Development will be available, include Blackmark, Culmark, the farmsteads at Arndarroch off the B7000, and those at Glenhoul. Blackmark is located at Guttery Glen, nestled within coniferous plantation where views from the Site are curtailed by the presence of the thick forest.
- 8.6.178. 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. 3 km from the nearest proposed turbine, and views would be similar to that shown in relation to Viewpoint 7 at **Figure 8.43c**, the dwelling can be seen in the middle ground of the photograph, beyond the mature deciduous trees that form the southern curtilage boundary. There would be a high magnitude of change in the view to the north-west giving rise to a major effect that is significant.
- 8.6.179. The B7000 has a number of farmsteads and dwellings located along its route within 5 km of the Proposed 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 will be visible. The visualisation at **Figure 8.47c** 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 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.
- 8.6.180. Overall, 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 Development resulting in a moderate to major effect that is significant.
- 8.6.181. 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 19 of the proposed turbines at Knockgray Park is patchy, and there is large amount of coniferous woodland in the landscape surrounding the dwellings.
- 8.6.182. 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, Polwhirn and those at Kensglen, Burnfoot and Marbrack. 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 giving rise to a major and significant effect.

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- 8.6.183. 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.
- 8.6.184. 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.

Primary Settlements beyond 5 km

- 8.6.185. Beyond 5 km of the proposed turbines, opportunities for clear views of the turbines from within the primary settlements within the 15 km detailed study area would be increasingly limited. It should be noted that there is no ZTV coverage across New Galloway, Balmaclellan, and Moniaivie.
- 8.6.186. The ZTVs imply a degree of visibility across Carsphairn and St John's Town of Dalry at distances of c. 5.8 km and 11 km respectively. In relation to theoretical visibility within St John's Town of Dalry, it is limited to up to four turbines only, and in reality, the blade tips of the four turbines would not be distinguishable features 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 Development would barely be visible.
- 8.6.187. The eastern side of Carsphairn is located within ZTV coverage of up to 19 turbines with the western side of the village located within coverage of up to 14 turbines. In reality, the Proposed Development would not form a highly noticeable feature from within the central and western parts of the village as the settlement itself will form the primary focus of views, with open views available to the south across the Water of Deugh.
- 8.6.188. From the eastern edge of the village, the Proposed 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 will be the most visible, set down in the landscape adjacent to Marscalloch Hill.
- 8.6.189. At distances of almost 6 km from the nearest turbine, there will be a worst case medium magnitude of change in the view resulting in a moderate visual effect which is not considered to be significant due to the context in which the turbines will be seen.

Core Paths and Other Routes including Long Distance and Recreational Trails

- 8.6.190. Throughout the 15 km detailed study area as a whole, there are numerous Core Paths and other recreational routes. The purpose of this assessment is to consider those where significant visual effects are likely to be experienced.
- 8.6.191. 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 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.

- 8.6.192. It should be noted that receptors using public rights of way are of high sensitivity to change in the view.

Rights of Way DS15, DS16 and DS21

- 8.6.193. The nature of views from rights of way DS15, DS16 and DS21 will vary over the lifetime of the Proposed 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.
- 8.6.194. In views from DS16, which passes around the northern site boundary, there will be views into the Site and thus towards the northernmost turbines at least, where trees have already been felled. The Proposed Development would be seen at close proximity to the route as one travels in the vicinity of Moorbrock. The Proposed Development will be visible when travelling from the Lorg Road to Moorbrock in the oblique view to the west and south west. The turbines will be prominent features in the landscape as they will be seen above the plantation within the Site. There will be a high magnitude of change in the view from route DS16, giving rise to a major effect which is significant.
- 8.6.195. Turning to route DS15 (Core Path 182), which runs around the north western and western site boundary, views into the Site will be largely screened by the presence of plantation as one passes immediately past the Site. The magnitude of change in the view would be low and the visual effect would be moderate/minor.
- 8.6.196. On the felling of the plantation within the northern portion of the Site, there will be a locally very high magnitude of change in the view as the turbines will form a prominent feature in the near landscape, giving rise to a major effect that is significant. This effect will gradually reduce as the restocked plantation begins to establish and mature, with views of the ground level components of the Proposed Development filtered or screened from view.
- 8.6.197. Views from the remainder of DS15 would become increasingly open with distance from the Site, as one moves away from the plantation that currently covers the Site. There would be a high magnitude of change in the view to the east as receptors travel towards the Site from Knockgray Park, which would result in a major effect that is significant. Post felling of the plantation, views of the lower portions of the turbines would also become available but the magnitude of change would remain high, and therefore the effects would remain major and significant.
- 8.6.198. In relation to the visual effects experienced from DS16, post felling of the plantation, there will also be close proximity views available into the Site where felling has occurred in the vicinity of Moorbrock. The Proposed Development would be seen on higher ground above the route, but the turbines would be set back from the footpath at a distance c. 1.3 km and thus would not appear overwhelming in the view.

- 8.6.199. There would be inevitably be a very high tending to 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.
- 8.6.200. Route DS21 is located within the southern portion of the Site, south of Marscalloch Hill where the existing plantation is currently establishing. The route also passes through an area of reduced ZTV coverage. Views of the southernmost turbines are likely to comprise the moving blade tips above the forest, if visible at all. There will be a worst case medium to low magnitude of change giving rise to a moderate to moderate/minor effect which is not significant.

Core Paths and Other Routes

- 8.6.201. An assessment of visual effects upon the following Core Paths and rights of way is considered due to their proximity to the Proposed Development and location within ZTV coverage:
- Path 182 (DS15), west of the Site at Knockgray;
 - DS17, east of the Site at Stroanfreggan Cairn to Auchrae;
 - Path 199, south of the Site at Kendoon;
 - Path 23 (DS27-31), south of the Site at Dundough Hill; and
 - Path 164 (DS33), Bardennoch Trail Pack Road, south west of the Site.
- 8.6.202. Core Path 504 (DS18), east of the Site at Stroanpatrick, forms part of the Southern Upland Way and is assessed as part of the long distance route.
- 8.6.203. It has already been established that there will be localised major visual effects upon route DS15/Core Path 182 as it passes in close proximity to the Site. The route also runs at distance from the Site to Knockgray Park where it meets the B729. The ZTV at **Figure 8.22** suggests that coverage varies but overall a larger proportion of the route falls within an area of visibility of all 19 turbines.
- 8.6.204. Receptors travelling in a south-westerly direction will have the Proposed Development located behind them. Views will therefore be gained when travelling from the B729 at Knockgray Farm to Moorbrock, north of the Site. Where the route passes over the open upland grassland landscape between Knockgray Park and within 500 – 750 m of the Site boundary, direct views of the Proposed Development will be above with the southernmost turbines appearing most prominent in the view. There will be a worst case high magnitude of change in the view giving rise to a major visual effect which is significant.
- 8.6.205. Route DS17 crosses the landscape to the east of the Site between Stroanfreggan Craig and Lorg Road. The nature of views from the southern part of the route are similar to that shown in relation to Viewpoint 2 at **Figure 8.38c**. The Proposed Development will form a prominent feature in the view to the west, seen within the same part of the view occupied by the more distant Windy Standard turbines.
- 8.6.206. As the route travels further north, it enters dense coniferous forest where the turbines will not be seen, before joining Lorg Road south of Auchrae, by which point the Proposed Development will be behind the receptor.

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- 8.6.207. Overall, there will be a worst case high magnitude of change in the view to the west where the open aspect allows views across the Ken Valley towards the Site. There will be a major visual effect which is significant.
- 8.6.208. There is a cluster of rights of way that form Core Path 23 located to the south of the Site at Dundough Hill. The route largely passes through dense coniferous forest which curtails views out over the surrounding landscape. It should be noted that at the time of visit, some of the routes on the hillside were impassable due to the nature of the forest. At the summit of the Hill there is a telecommunications mast and further dense forest, but there is an area of scrub from which a partially open aspect is experienced which allows views in a northerly direction beyond the immediate forest. The visualisation at **Figure 8.48c** in relation Viewpoint 12 shows the likely view available from this small open area on Dundough Hill, but it should be noted that this location is not likely to be frequently visited due to the overgrown nature of the vegetation. Nevertheless, there would be a worst case high to medium magnitude of change in the view from the summit resulting in a major to moderate effect which is significant. From elsewhere on Dundough Hill, the Proposed Development is unlikely to be visible as the route passes through the plantation and therefore the magnitude of change will be low to very low giving rise to a worst case moderate/minor effect which is not significant.
- 8.6.209. Core Path 199 leaves the B7000 north of Glenhoul to join the Southern Upland Way at Butterbole Bridge. It is located c. 4.5 km from the nearest proposed turbine. The ZTVs show that theoretical visibility along the route varies, but where the route passes over open upland grassland in the vicinity of Mackilston Hill, there will be direct views available towards the Proposed Development, similar to those experienced from Culmark Hill albeit at greater distance.
- 8.6.210. There will be a worst case medium magnitude of change in the view to the north of the route from higher hill slopes where the aspect is open. The Proposed Development would occupy a relatively small part of the much wider view available and would be seen in the context of existing commercial wind turbines in the view. It is considered that there would be a moderate visual effect which is significant limited to a c. 1.5 km length of the route. From other locations along the route, views of the Proposed Development would be interrupted by vegetation and the variation in landform. The magnitude of change in the view would be no greater than medium to low and therefore the visual effect would be no greater than moderate/minor which is not considered to be significant.
- 8.6.211. The Bardennoch Pack Trail is a Core Path that passes between Carsphairn and Dundough via Bardennoch Hill. As the area is an archaeology sensitive area, the Cultural Heritage chapter of the EIA report as Chapter 11 provides a number of visualisations from points along, or just off the route.
- 8.6.212. The ZTVs imply that there is theoretical visibility of all 19 turbines from much of the route; however, the southern portion of the Trail passes through coniferous woodland where the Proposed Development would not be visible from within. Where the Proposed Development will be visible, largely where the route passes along the ridge of Bardennoch Hill and on towards Carsphairn, the Proposed Development would form a noticeable feature in the view to the north-east to east at a distance of c. 4.8 km. The turbines would be seen

beyond the line of pylons that occupy the foreground view. There would be a worst case medium magnitude of change in the view from the Bardenoch Trail giving rise to a moderate effect that is considered significant.

Southern Upland Way

- 8.6.213. The Southern Upland Way passes through the 15 km detailed study area from the north-east though to the south-west. The landscape in which the route passes falls in and out of ZTV coverage as shown on **Figure 8.22**.
- 8.6.214. It has already been established that the long distance route lies within close proximity to the east of the Site. There would be clear views of the Proposed Development for at c. 2.5 km length of the route as it passes over Culmark Hill to Stroanfreggan Cairn and the B729. The likely views are shown in relation to Viewpoint 6 at **Figure 8.42c** and Viewpoint 5 at **Figure 8.41c**, which is located just east the SUW, north of Culmark.
- 8.6.215. Further 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, will be visible in the landscape to the west where there is an open aspect.
- 8.6.216. On from Dunnans Craig, the route enters coniferous forest and also begins to fall on the cusp of ZTV coverage. There are clearings on the hill summits such as Manquil Hill and Benbrack from which the turbines will be visible, as shown in **Figure 8.46c** in relation to Viewpoint 10, but in large, the turbines would not be highly visible. The visualisation in relation to Benbrack shows that the turbines would be seen at distance 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 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.
- 8.6.217. Beyond Benbrack, the route follows the ridge between Mid Hill, Cairn Hill, and Black Hill before heading onto lower ground and thus out of ZTV coverage. The proposed turbines would be seen at distances of c.5.5 to 6.5 km, and they would appear set down in the landscape.
- 8.6.218. In considering likely visual effects within the southern portion of the detailed study area, south of Culmark Hill the Southern Upland Way passes over undulating landform and so ZTV coverage is intermittent. The Proposed Development will be visible from the upper hill slopes and summits along the route such as Old Hill of Mackilston and, to a limited extent, from the plateau grassland at Corsebridge. The turbines will be seen at distances of c. 5 to 7 km and would form a feature within a much wider view.
- 8.6.219. Further south, the route follows the lower slopes towards and through St John's Town of Dalry, where there is either no ZTV coverage or where in reality views towards the turbines will not occur due to the presence of built form and layers of vegetation in the local landscape. The route then heads west and passes

through the valley associated with Garroch Burn where there is also no ZTV coverage other than from the summit of Waterside Hill. The visualisation at **Figure 8.53c** in relation to Viewpoint 17 at Waterside Hill 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.

- 8.6.220. Overall, the greatest visual effects will occur within 4 to 5 km from the proposed turbines where there will be major to moderate effects which are significant. Beyond distances of 5 km, ZTV coverage becomes intermittent, coniferous forest curtails views towards the Site, and the Proposed Development becomes an increasingly smaller element in the wider views available from the route.

Local Cycle Network

- 8.6.221. There is one local cycle route of note which 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. The assessment of this route is also applicable to the minor road itself. Receptors using the route are considered to be of high sensitivity.
- 8.6.222. The ZTV at **Figure 8.22** shows that a large proportion of the route falls outside of coverage. There are also areas along the route, such as at Auchenshinnoch Bridge, where the ZTV implies that a small number of the proposed turbines will be seen but in reality, the landform and the vegetation upon it will interrupt views towards the Site.
- 8.6.223. The primary areas of visibility of the Proposed Development will occur on a short stretch of the route between Fingland Moss and Bonfire Hill, and further afield between Butterbole Bridge and Old Hill of Mackilston. The latter section of the route has previously been described as part of the assessment of the Southern Upland Way.
- 8.6.224. The visualisation in relation to Viewpoint 8 at **Figure 8.44c** shows the limited nature of visibility of the Proposed Development due to the nature of the landform. The proposed turbines would be seen in 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.
- 8.6.225. Overall there would be a medium to low magnitude of change in the view from the route giving rise to a moderate to moderate/minor effect that is not considered to be significant.

Roads

- 8.6.226. The A713 is the closest primary road to the Site, located to the south-west at distance of c. 3 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.
- 8.6.227. The ZTV at **Figure 8.12** 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.

- 8.6.228. The primary views of the Proposed Development that concern this assessment are those experienced from St John's Town of Dalry to Carsphairn. The ZTV shows that there is variable coverage along the route and also implies that there are long sections of the route in which the Proposed Development will be fully visible. In reality, the layers of vegetation within the landscape in which the route travels will greatly influence views towards the Site.
- 8.6.229. Indeed, the section of the route from Dundegh to Carsphairn will not experience the extent of views suggested by the ZTV as there are large areas of coniferous plantation within the landscape that curtail views to the road itself. The presence of Dundegh Hill and the forest upon it also prevent views towards the Site.
- 8.6.230. The visualisation at **Figure 8.55c** in relation to Viewpoint 19 shows the likely views experienced in the oblique view from the A713 as one passes Bardennoch Hill to the south of Carsphairn. The plantation at Culmark Knowes has been felled which allows views across the lower lying valley towards the Site. The Proposed Development would form a noticeable feature above the near horizon at a distance of c. 3.8 km to the nearest turbine. The turbines would be seen in the context of the newly upgraded pylons that cross the landscape alongside the road at Carsphairn.
- 8.6.231. There would be a high magnitude of change in the oblique view to the north-east resulting in a moderate effect which is significant. However, such effects are limited to a relatively short section of the road south of Carsphairn to Bardennoch, unless further plantation felling occurs.
- 8.6.232. At greater distance from the Proposed Development, the section of the A713 between St John's Town of Dalry and Dundegh passes through variable ZTV coverage. The visualisation in relation to Viewpoint 18 (**Figure 8.54c**) at Stroangassel shows the typical nature of views from the route.
- 8.6.233. The layers of vegetation in the landscape, particularly roadside vegetation, coupled with the interlocking hills limits the availability of clear views towards the proposed turbines. Nevertheless, there are locations along the route from which the Proposed Development will be visible beyond the valley, such as from Stroangassel, where there is an absence of roadside vegetation. The southernmost turbines will be seen in the context of Kendoon Power station and lines of associated pylons, with the northerly turbines unlikely to be noticeable. At such locations, there will be a medium magnitude of change in the view which is not considered significant due to the nature of the existing baseline landscape. However, from much of the route views will be limited and the visual effect would be no greater than moderate/minor which is not significant.
- 8.6.234. The A762 passes alongside the western shores of Loch Ken heading north onto New Galloway and St John's Town of Dalry where it meets the A713. The closest point of the route to the Proposed Development is over 10 km distance at Alangibbon Bridge.
- 8.6.235. As one travels northwards along the A762 the visual experience from the road is very variable, and this is reflected in ZTV coverage. For instance, a long stretch of the route falls outside of ZTV coverage, from Burnfoot, south of New

- Galloway, to Kells Parish Church, north of the town. There is also a low lying section of the route where only a small number of the proposed turbines are theoretically visible, as the road passes adjacent to the Water of Ken at Holm of Dalry. From this location, the valley landscape, which is well treed, would restrict the turbines from being visible.
- 8.6.236. The greatest opportunity for views of the Proposed Development would occur at two primary sections of the route; firstly, at greater distance from the Site at Loch Ken between Bennan Hill and Dykefoot Bridge, and secondly from Kil Hill to Coom Bridge, as the road passes over higher ground north of New Galloway heading towards St John's Town of Dalry.
- 8.6.237. The section of the road that passes Loch Ken is located over 17 km from the nearest turbine and so falls outside of the detailed study area for this assessment. The Proposed Development, if visible, would form a minor additional feature in a view that comprises the Loch and its associated valley, with layers of vegetation and landform present within the intervening landscape. There would not be any greater than a very low magnitude of change in the view and thus the effect would be minor and not significant.
- 8.6.238. At closer distance, north of New Galloway, it is recognised that as the route passes over higher ground there are open views available across the Water of Ken valley and on towards the landscape in which the Site is located. However, the nearest proposed turbine would be located at least 12 km from the road, and the Proposed Development would be seen beyond a well wooded foreground landscape. The turbines would form a minor element in a much wider view, and they would appear set down in the landscape beyond a series of interlocking hill formations. There would be no greater than a low magnitude of change resulting in a moderate/minor effect that is not significant.
- 8.6.239. The A712 is located some 13.5 km to the south of the Site at its nearest point in Balmaclellen. It passes between the town and Newton Stewart via the Galloway Forest Park. It also passes to the east of New Galloway to the A75 at Crocketford. The ZTV at **Figure 8.12** 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 19 proposed turbines at The Queens Way, Westrisk Park. The road passes alongside thick woodland at this location and even in winter views are curtailed to the immediate environs only. Should the proposed turbines be visible, they would form an incidental feature in the distant landscape. There would be no significant visual effects upon receptors using the A712.
- 8.6.240. There are two 'B' roads within the 15 km detailed study area that are of interest to the assessment, namely the B729 and the B7000. Both of these routes are located within close proximity to the Site. The sensitivity of receptors using the routes is considered to be high due to their use for tourism purposes, particularly as they provide access to the Southern Upland Way.
- 8.6.241. The ZTV at **Figure 8.23** implies that there is theoretical visibility for much of the B729 but in reality, the visual experience from the road is vary variable due to the presence of coniferous plantation that flanks the road in numerous locations. This is particularly applicable to the section of the route that passes to the immediate south of the Site, around Marscalloch Hill and on to Smittons.

The current visual experience is very limited, and the Proposed Development would not be visible to the immediate north. It is recognised that the plantation at Smittons will be felled during the lifetime of the Proposed Development. However, due to the angle of view towards the Site from the road and the location of the proposed turbines set back from the route c. 1.8 km within forestry that will not be felled, the overall visual experience is likely to be limited to the south-easternmost turbines and associated ancillary development. Nevertheless, the magnitude of change in the view would be medium, limited to the route as it passes in close proximity to the Site, resulting in a moderate and significant effect due to the proximity of the route to the proposed turbines.

- 8.6.242. In considering likely views from the B729 as it leaves the A713 at Carsphairn, travelling south-east alongside the Water of Deugh towards Furmiston, the narrow route passes in and out of coniferous plantation which curtails views towards the Site. There are lengths of the route from where Marscalloch Hill is visible, particularly from Old Burnfoot Cottage eastwards to Furmiston Bridge. The Proposed Development would form a prominent feature in the view from the road as it passes between Burnfoot and Furmiston, with the southernmost turbines particularly visible above the horizon. There would be a worst case, locally high magnitude of change in the view resulting in a major effect that is significant.
- 8.6.243. There will also be open and direct views from the B729 as one travels westwards from Guttery Glen to Smittons Bridge. Further east of Guttery Glen, the Proposed Development would be barely visible as there is little ZTV coverage on towards Moniaive.
- 8.6.244. The visualisations in relation to Viewpoints 1, 3 and 4 show the likely visual experience from the route. In the view from the road at Guttery Glen (Viewpoint 3, **Figure 8.39c**), the northernmost turbines are directly visible, but the southernmost turbines are located beyond plantation. Conversely, as one approaches Stroanfreggan Bridge (Viewpoint 1, **Figure 8.37c**), the southernmost turbines are a prominent feature in the view whereas the northernmost turbines are located beyond the landform in the near view. The road then winds itself in a westerly direction from Stroanfreggan Bridge towards Smittons Bridge, in close proximity to the Site. The view from Smittons Bridge (Viewpoint 4, **Figure 8.40c**), features a relatively small number of the proposed turbines, due to the presence of coniferous plantation, but those that are seen are prominent above the tree line.
- 8.6.245. Overall, the visual experience of the Proposed Development from the B729 when travelling westwards towards the Site will vary relative to location. However, the proposed turbines will form prominent features in the view, from Stroanfreggan Bridge to Smittons Bridge. There will be a worst case high magnitude of change in this localised view from the B729 resulting in a major effect which is significant. Elsewhere on the route as it passes to the east of the Site, beyond Guttery Glen, there would be no greater than a moderate/minor effect which is not significant.
- 8.6.246. The B7000 is located c. 2.8 km to the south of the nearest turbine. The route meets the B729 at College Brow, east of Kendoon Loch. The junction of the two

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- roads is located within dense coniferous forest, and as such the Proposed Development will not be visible from this closest location.
- 8.6.247. A c. 1.7 km length of the B7000 is located within ZTV coverage of up to all 19 of the proposed turbines, namely the section between High Bridge of Ken and White Hill. The visualisation in relation to Viewpoint 9 at the High Bridge of Ken (**Figure 8.45c**) demonstrates that the proposed turbines would not be visible due to the presence of plantation in the immediate view.
- 8.6.248. In views from further south along the route, the Proposed Development would be seen in the direct view to the north, beyond the lower lying Water of Ken and Kendoon Loch in the immediate view, and beyond and adjacent to Marscalloch Hill, which forms the near horizon. The southernmost turbines would be most visible beyond the hill formation, with the northernmost turbines partially, or almost fully screened by Marscalloch Hill itself, as shown at **Figure 8.47c** in relation to Viewpoint 11. As the proposed turbines would appear as highly apparent features in the view from the road as it passes over higher ground between White Hill and Arndarroch, there will be a high magnitude of change in the direct localised view to the north giving rise to a major effect that is significant.
- 8.6.249. Further south along the route, ZTV coverage is intermittent and limited to four of the proposed turbines only; those located within the southern portion of the Site immediately beyond Marscalloch Hill. There are a number of woodlands and plantation located within the landscape along the route as one travels north from St John's Town of Dalry which will serve to screen or interrupt views of the turbines. The view to the west and north-west over the Water of Ken Valley will remain the primary point of interest for receptors using the road. There will be a worst case low magnitude of change resulting in moderate/minor effect which is not significant.
- 8.6.250. In summary, there will be a worst case major and significant localised visual effect upon receptors on the B7000 as they travel a relatively short distance in a northerly direction between White Hill and Arndarroch. Elsewhere from the B7000 the Proposed Development would not form a highly notable feature in the landscape there would be no greater than a moderate/minor visual effect which is not significant.
- 8.6.251. There is one other minor road within close proximity to the Site that warrants further consideration. Lorg Road passes to the immediate east of the Site, leaving the B729 heading generally north to the Head of Ken Valley where there is a small car park and picnic site.
- 8.6.252. The ZTV at **Figure 8.23** shows that there is theoretical visibility of the Proposed Development for the majority of the route other than from the Head of Ken Valley itself, where coverage is limited.
- 8.6.253. It is acknowledged that the Proposed Development will be visible from Lorg Road as one travels north and south immediately past, and up to 4 km from, the Site. The turbines will be prominent features in the view to the west. With increasing distance from the Site to the north, the Proposed Development will reduce in prominence and would be seen when travelling southbound only.

However, the turbines would remain highly perceptible in the view along the valley.

- 8.6.254. 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. There would be a very high magnitude of change as one passes the Site to the immediate east up to 750 - 1 km distance from the proposed turbines, and a high magnitude of change beyond such distance resulting in a major effect which is significant.

Visual Effects during Decommissioning

- 8.6.255. It is recognised that there would be some additional temporary effects during decommissioning of the turbines after 25 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.
- 8.6.256. 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, will 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 Development.
- 8.6.257. The effects would be similar to those during the construction phase but in reverse.
- 8.6.258. 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.
- 8.6.259. The decommissioning effects of the Proposed Development on visual amenity are not considered to be significant.

Effects upon Regional Scenic Areas

- 8.6.260. Within the detailed 15 km study area there are two RSA's; namely the Galloway Hills and the Thornhill Uplands.
- 8.6.261. The LVIA has already established that there would be no significant effects upon the Thornhill Uplands as the designated landscape falls largely outside of ZTV coverage to blade tip, with very limited coverage of the proposed turbines.
- 8.6.262. The Proposed Development is partially located within the Galloway Hills RSA, with five of the proposed turbines located on the eastern periphery of the designated landscape, two of which are located on the very cusp of the RSA. The ZTV at **Figure 8.23** shows that there is theoretical visibility of the Proposed Development from north-eastern and eastern areas of the RSA with

limited ZTV coverage from a small number of higher hill locations within central parts of the designated landscape at distances over 15 km from the Proposed Development.

8.6.263. It is considered for the purposes of this assessment that the potential for significant effects will not occur within the Galloway Hills RSA beyond 15 km from the proposed turbines.

8.6.264. In order to consider the likely effects of the Proposed Development upon the RSA, an understanding of adopted policy context in relation to the designated landscape is necessary.

8.6.265. Policy NE2: Regional Scenic Areas, is the current policy that protects RSAs as set out within the adopted Dumfries and Galloway Local Development Plan. It states the following:

"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 landscape character and scenic interest for which the area has been designated would not be significantly adversely affected; or*
- *there is a specific need for the development at that location which could not be located in a less sensitive area".*

8.6.266. The emerging Draft Local Development Plan 2, January 2018 provides a slightly revised Policy NE2 as follows:

"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.*

8.6.267. The matter of RSAs is considered within the adopted Local Development Plan Technical Paper: Regional Scenic Areas, September 2014. Within this document each of the RSAs within Dumfries and Galloway are discussed separately.

8.6.268. It is noted that there is a revised Technical Paper, January 2018, produced as part of the emerging Draft Local Development Plan 2. However, on review of this document, the only difference that can be noted is a slight revision to the RSA boundaries to incorporate the errata's stated within the 2014 paper.

8.6.269. Both the adopted Policy NE2 and the emerging policy of the same name set out that development should respect the special qualities of the RSA, with the emerging policy citing "*factors taken into account in designating the area*" as being an additional consideration.

8.6.270. The RSA Technical Papers do not set out a definitive list of special qualities in relation to any of the RSAs within Dumfries and Galloway, and further research

has also proven unsuccessful in determining both the reasoning behind the original designation of the Galloway Hills, and the special qualities that the landscape affords.

- 8.6.271. It has therefore been necessary to look to the description of the Galloway Hills as set out within the Regional Scenic Area Technical Paper and derive the special qualities and reason of designation from the prose stated on page 20. It is noted that the description on page 20 was used as the basis to describe the reasons for the areas designation within the Officer's Report to Committee in relation to the proposed Longburn Wind Farm, located to the east of the Proposed Development.
- 8.6.272. It is understood that the following factors form the relevant considerations for the purposes of this LVIA in relation to the Proposed Development and its location:
- *"Sweeping and dramatic views of hills";*
 - *"Dramatic and sculptural peaks";*
 - *"Narrow wooded valleys" and their "scenic juxtaposition with the uplands".*
- 8.6.273. 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

- 8.6.274. The LVIA has considered the potential for significant effects upon the relevant character units of a number of landscape character areas, including:
- Southern Uplands with Forest;
 - Southern Uplands;
 - Foothills with Forest;
 - Upper Dale (Valley);
 - Flooded Valley; and
 - Rugged Granite Uplands.
- 8.6.275. The assessment has concluded that there will be direct and significant effects upon the character of the Ken unit of the Southern Uplands with Forest area where the Proposed Development is located. As five of the proposed turbines are also located on the periphery of the RSA, there will also be direct effects upon this confined part of the overall landscape, which is an inevitable consequence of type of development proposed.
- 8.6.276. There will also be indirect significant effects upon landscape character up to a distance of 5 km from the proposed turbines experienced from within the wider landscape of the Southern Uplands with Forest. There will also be indirect significant landscape effects experienced from the Upper Glenkens unit of the Upper Dale (Valley) character area and the Carsphairn unit of the Southern Uplands character area up to a distance of 4.5 km. Both of these character units fall within the RSA.
- 8.6.277. Beyond 4.5 km to 5 km distance from the proposed turbines, within the Galloway Hills RSA, effects upon landscape character will have dissipated to below the significant threshold due to a combination of landform, vegetation, and distance

Visual Amenity

- 8.6.278. The LVIA has considered the potential for significant visual effects upon nine 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.
- 8.6.279. Overall the assessment of visual effects concludes that there will be some inevitable significant effects experienced within the RSA, largely within 8 to 9 km of the proposed turbines. Such effects will occur where there are relatively open views towards the Site, and a large proportion of the Proposed Development is visible.
- 8.6.280. It should be noted that although localised significant visual effects will occur, the Proposed Development will 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 Craigenjillan Hill, sited within the working coniferous plantation landscape. The Proposed Development will 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.
- 8.6.281. There will also be some localised significant visual effects experienced from locations outside of the RSA boundary looking towards the RSA. Such effects will 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 Development.
- 8.6.282. In considering the above summary of effects upon character and visual amenity, analysis against the three special qualities identified above can conclude that although the Proposed Development will be seen from, and in views towards the Galloway Hills RSA, the proposed turbines will not affect an appreciation of the dramatic and sculptural peaks within the designated landscape. In particular, the notable landform of Cairnsmore of Carsphairn will 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 8.57** in relation to Viewpoint 21, Corserine and **Figure 8.39** in relation to Viewpoint 3, Guttery Glen.
- 8.6.283. There will also remain sweeping and dramatic views of hills both from within and towards the RSA. The presence of the Proposed Development will 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 Alhang and Benbrack (**Figure 8.52** and **Figure 8.46** 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 8.47** in relation to Viewpoint 11.
- 8.6.284. The scenic juxtaposition between the narrow wooded valley of the Water of Ken and the surrounding upland landscape will also remain to be appreciated. As can be seen in **Figure 8.42** in relation to Viewpoint 6 located within the narrow wooded valley, the valley landform and its surrounding hill slopes are clearly appreciable, with the Proposed 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 Development, will not be greatly altered when seen from the narrow valley north of the Site.

- 8.6.285. In summary, whilst it is acknowledged there will 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 will not be significant effects upon the special qualities of the Galloway Hills nor its reason for designation.

8.7. Assessment of Cumulative Effects

- 8.7.1. All other wind energy developments that are operational, under construction, consented or subject to a valid full planning application within 35 km of the Proposed Development were identified and reviewed as part of the cumulative assessment.
- 8.7.2. At the request of the Local Authority, a review of scoping sites within the vicinity of the Proposed development has also been undertaken and a separate cumulative assessment including relevant scoping sites is provided at **Appendix 8.5** and the cumulative visualisations associated with this assessment are included in the cumulative section of Volume 3. Cumulative ZTVs have been produced for the schemes considered relevant to the assessment at **Figures 8.33 – 8.36**. This is against the approach advocated in GLVIA3 largely due to the uncertainty that these schemes will come forward as a full application and the lack of adequate information about project details. All relevant sites identified are shown in **Figures 8.2 and 8.3**.
- 8.7.3. It is acknowledged that this cumulative situation is constantly changing and therefore the 1st July 2018 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.
- 8.7.4. In order that the cumulative assessment remains focussed on other schemes that have the greatest potential to give rise to significant cumulative effects it has been necessary, from the outset, to decide which schemes realistically need to be considered in detail. On review of the ZTV to blade tip at **Figure 8.7**, it became quickly apparent that the assessment did not need to include all schemes within 35 km of the Proposed Development; to do so would simply detract attention from the key issues relating to the application.
- 8.7.5. As there are several wind farms (either operational, consented or in planning) in the vicinity of the Proposed 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 Development). It was also deemed appropriate to scope out small scale turbines as there are very few present within the local landscape.

- 8.7.6. The cumulative impact assessment therefore focuses primarily on those schemes within c. 15 km of the Proposed 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 Development.
- 8.7.7. It should be noted that not all other wind farms within 15 km are considered within the CLVIA. The ZTV to blade tip at **Figure 8.12** shows that there is very little coverage in the landscape to the north and north-east beyond 10 km and thus there would be no intervisibility between the Proposed Development and wind farms located in this wider area. As such, a number of wind farms were discounted from the assessment including those in and around Sanqhuar and those at Enoch Hill and Pencloe.
- 8.7.8. The wind farms identified within Table 8.13 are the schemes on which the discussion of the cumulative landscape and visual impact effects are focused.
- 8.7.9. For the purposes of clarification, it should be noted that other wind farms within 35 km of the Proposed Development are shown on the visualisations where relevant.

Table 8.13: Other Wind Farms Considered in Detail in the Cumulative LVIA

Site	Blade tip height of turbines	Number of turbines
Operational		
Windy Standard I	92.5m	36
Windy Standard II	100 - 120m	30
Wether Hill	91m	14
Blackcraig Hill	110m	23
Consented		
Afton	120m	27
Lorg	130m - 150m	9
South Kyle	149.5m	50
Knockman Hill	81m	5
Benbrack	130m	18
Torrs Hill	100m	2
Windy Rig	125m	12
In Planning		
Longburn	134m	10
Wether Hill Extension	100m	11
Windy Standard III	120m - 177.5m	20
Margree	120m	17

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- 8.7.10. For the avoidance of doubt and to reiterate the methodology adopted in the main LVIA, the baseline against which the effects of the addition of the Proposed Development to the landscape has been assessed to include all operational/built wind farms but not any consented or 'in planning' schemes. An assessment of the effects of developing the Proposed Development in combination with other operational wind farms has already therefore been presented in the main section of this LVIA. However, where necessary, an assessment of the totality of effects is provided, taking into consideration all schemes.
- 8.7.11. The purpose of the cumulative impact assessment is to consider the additional effects that might arise as a result of the Proposed Development if other consented and in planning (awaiting determination) schemes were also operational.
- 8.7.12. 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.
- 8.7.13. Three scenarios need to be 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 with the exception to Longburn; and
 - Scenario 3 - assumes all schemes in planning are operational, including Longburn.
- 8.7.14. By necessity, this presents a rather simplistic analysis of future development scenarios. In reality, based on current trends, it is highly unlikely that all other schemes that are in planning will be approved and constructed, but the latter scenario assumes all planning schemes are operational as this presents a 'worst case' scenario.

Cumulative ZTVs, Wireframes and Photomontages

- 8.7.15. Cumulative ZTVs (CZTVs) have been produced to illustrate the theoretical visibility of various other wind farms and combinations of wind farms with the Proposed Development.
- 8.7.16. 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.
- 8.7.17. Cumulative ZTVs have been produced for the following combinations of existing and consented wind farm sites and other sites in planning. The list below includes all those sites considered to have the potential to give rise to potential significant cumulative effects. These sites have then been carried forward into Table 8.14. The cumulative wireframes, **Figures 8.37b to 8.58b**, include all sites within the study area for completeness.

CZTVs with Operational Windfarms:

- Cumulative ZTV with Wether Hill and Windy Standard I and II (**Figure 8.25**); and
- Cumulative ZTV with Blackcraig Hill and Knockman Hill (**Figure 8.26**).

CZTVs with Consented Windfarms:

- Cumulative ZTV with Afton, Lorg, Windy Rig, South Kyle and Benbrack (**Figure 8.27**); and
- Cumulative ZTV with Torrs Hill (**Figure 8.28**);

CZTVs with Other Wind Farm Schemes in Planning

- Cumulative ZTV with Longburn (**Figure 8.29**);
- Cumulative ZTV with Wether Hill Extension (**Figure 8.30**);
- Cumulative ZTV with Windy Standard III (**Figure 8.31**); and
- Cumulative with Margree (**Figure 8.32**).

8.7.18. 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 six of the hill summit locations from which 360 degree views are available and where the most likely cumulative effects will be experienced from. These are presented in **Figures 8.59 – 8.64**.

8.7.19. Table 8.14 provides a summary of cumulative effects at each of the 22 assessment viewpoints.

Table 8.14 Summary of Cumulative Visual Effects

Viewpoint		Visibility of Wind Farms at Each Viewpoint Location											
		Key: X = In Combination, O = In Succession, [] = theoretically visible only (i.e. not actually visible)											
		Wether Hill and Extension	Blackcraig Hill	Knockman Hill	Margree	Afton	Lorg	South Kyle	Benbrack	Torrs Hill	Longburn	Windy Rig	Windy Standard I, II and III
1	Stroanfreggan Bridge (B729)	O								X	O		
2	Stroanfreggan Craig	O				X					O	X	X
3	Guttery Glen (B729)	O				X	O				X	X	X
4	Smittons Bridge					X					O	X	X
5	Stroanfreggan Cairn	O								[O]	O		
6	Head of Ken Valley						O				X		O

		Visibility of Wind Farms at Each Viewpoint Location Key: X = In Combination, O = In Succession, [] = theoretically visible only (i.e. not actually visible)											
Viewpoint		Wether Hill and Extension	Blackcraig Hill	Knockman Hill	Margree	Afton	Lorg	South Kyle	Benbrack	Torr's Hill	Longburn	Windy Rig	Windy Standard I, II and III
7	Southern Upland Way at Culmark Hill	O	O	[O]	O	X				O	X	X	X
8	Minor Road south of B729	X O			O		[X]				X		
9	High Bridge of Ken						[X]			[O]	X	[X]	
10	Southern Upland Way, Benbrack (Striding Arch)	O	O	O	O	O	O			X	X	X	
11	B7000 at East Arndarroch	O	[O]	[O]	O	[X]	X		X		X		
12	Dundeugh Hill	X	O		O		X		O		X	X	[X]
13	Beninner	X O	X	X	X	[O]	O			O	X	O	[O]
14	Cairnsmore of Carsphairn	X	X	X	X	O	O			O	X	O	O
15	Craig of Knockgray	X	X	X	X			[O]		O	X		O
16	Alhang	O	X	X	X			O			X	XO	O
17	Southern Upland Way at Waterside Hill	X	O	O	O	X	X	[X]	X	O	X	X	X
18	A713 at Stroangassel	X					X	[X]			X	[X]	
19	A713 south of Carsphairn	[X]	[O]		[O]		X			[X]	X		
20	Woodhead Mines	X	X	X	X						X		
21	Corserine (Hennessey's shelter)	X	X	X	X	X	X	O	O	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)											
Viewpoint		Wether Hill and Extension	Blackcraig Hill	Knockman Hill	Margree	Afton	Lorg	South Kyle	Benbrack	Torr's Hill	Longburn	Windy Rig	Windy Standard I, II and III
22	Carsphairn War Memorial	[X]	[X]		[X]					[O]	[X]		

Cumulative Effects on Landscape Features and Character

Cumulative Scenario 1

- 8.7.20. It is noted that there are several consented, but as yet unbuilt wind farms, within 15 km of the Proposed Development, particularly to the north-west through to the north east of the Site. Such wind farms include Afton, Lorg, Windy Rig, Benbrack and South Kyle. It is noted that the Benbrack scheme is proposed to be revised to include taller turbines, but as this is not yet subject to a valid planning application, the existing consented Benbrack scheme is considered within this LVIA.
- 8.7.21. Whilst GLVIA3 requires the main LVIA to exclude such schemes within the baseline against which the Proposed Development is considered, the first cumulative scenario includes consented schemes in the baseline. In the case of this application, the consented (but as yet unbuilt) wind farms in the surrounding landscape are likely to be an important material consideration in determining the acceptability of the Proposed Development.
- 8.7.22. As demonstrated in the main LVIA section of this report, the Proposed Development would not give rise to any notable effects on existing landscape features. It follows therefore that whatever cumulative effects other operational and consented wind farms have on existing landscape features, the Proposed Development would not contribute any further to this effect; therefore, there would be no cumulative effect as a result of the Proposed Development on any landscape features.
- 8.7.23. In the first cumulative scenario (in which Lorg, Afton, Windy Rig, South Kyle, Benbrack, and Knockman Hill form part of the baseline) the character of the wider landscape within which the Proposed Development is located would be different, particularly to the north-west through to the north-east. With reference to the DGWFLCS, the scope for further development within the character type and unit within which the Proposed Development is located is limited in terms of large typology turbines. This is also the case for the neighbouring Carsphairn unit of character type 19 - Southern Uplands and the Carsphairn unit of 19A - Southern Uplands with Forest.

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- 8.7.24. With the introduction of the Lorg Wind Farm, the Ken unit of character type 19A – Southern Uplands would not become defined by wind energy development. The scheme is located at such distance from the existing Wether Hill wind farm, separated by large scale commercial forests to not significantly affect existing landscape character. In this context, the introduction of the Proposed Development would not greatly alter the defining characteristics of this LCT but would instead reinforce the existing characteristics of the baseline landscape.
- 8.7.25. In the case of the small area of the Ken unit of the Narrow Wooded River Valley in which one of the proposed turbines is located and the Upper Dale (Valley) character type in which the Site entrance and access is located, the presence and influence 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 Development and the other schemes.
- 8.7.26. The valley landform of the Ken Valley (Narrow Wooded River Valley) greatly restricts intervisibility with wind farms in the wider landscape. It is acknowledged that Lorg Wind Farm would be located beyond the head of the valley, but its location set back from the valley slopes beyond coniferous forest would contribute in reducing overall actual visibility. In this context the introduction of the Proposed Development would give rise to effects upon landscape character in its own right, rather than a result of cumulative effects with other schemes and thus cumulative effects upon landscape character would not be significant.
- 8.7.27. It is acknowledged that wherever more than one wind farm is present in the landscape there will be a greater overall or combined effect on landscape character than if just one wind farm was visible in the landscape. Likewise, it is acknowledged that the more wind turbines that are constructed in any given landscape, the greater will be the magnitude of overall (or combined) change to the landscape character that prevailed prior to the introduction of the first turbines.
- 8.7.28. 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 will be more heavily characterised by turbines in the baseline situation.
- 8.7.29. Taking this into account it is considered that in the first cumulative scenario, the effect of introducing the Proposed Development on the character of the Ken unit of character type 19A, in which the Lorg Wind Farm is already present, alongside the existing Wether Hill wind farm, would be less significant than previously assessed in the main LVIA. The combined effect would also not be significant due to the location of the wind farms within a very varied topographical region of dense coniferous plantation where the wind farms are not readily perceived from all but the highest peaks within the Southern Uplands.

- 8.7.30. In relation to the Carsphairn unit of character type 19, Windy Rig wind farm is already located within this character type. The addition of the Proposed Development to the landscape to the south-east of the character type would extend the presence of turbines in a southerly direction, away from the main cluster of wind farms to the north west through to the north east. However, the Proposed Development would be located in a part of the landscape where the existing Wether Hill scheme is also present, albeit at slightly greater distance, and combined visibility of the wind farms would be generally limited to the highest hill summits. The Proposed Development would not introduce turbines into part of the landscape where they do not already exist; therefore, the overall magnitude of change would be medium to low giving rise to a moderate to moderate/minor effect that is not significant.
- 8.7.31. The Carsphairn unit of character type 19A is one of the primary locations for existing and consented wind farms within the detailed study area. The existing Windy Standard I and II wind farms and the consented South Kyle and Benbrack schemes are located within this unit. The addition of the Proposed Development to the wider landscape away from this concentration of wind farms will not give rise to any significant cumulative effects as there is an overall lack of intervisibility between this character type and the Proposed 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.
- 8.7.32. For all other landscape character units/types considered within the LVIA, the Proposed 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 character types 21, 21A and 18A 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 will not be significant.
- 8.7.33. In considering the totality of effects upon landscape character in Scenario 1, there will inevitably be a concentration of wind energy development within character types 19A of both the Ken and Carsphairn units, and there will be no doubt some localised significant effects. However, such effects will occur in the absence of the Proposed Development.

Cumulative Scenario 2

- 8.7.34. In this scenario there are four other wind farms currently undetermined located within 15km of the Proposed Development, namely Windy Standard III, Wether Hill Extension, and Margree. Wether Hill Extension and Windy Standard III are extensions to existing wind farms and are located immediately adjacent to existing commercial wind energy development. Both of these schemes will add to the clustering of turbines within character type 19A.
- 8.7.35. Margree is located in proximity to the existing Blackcraig Hill wind farm and the consented Knockman Hill wind farm and will add to the concentration of turbines with character type 18A. The intervisibility of these schemes with the Proposed Development is relatively low from the local landscape but all four

schemes would be seen in combination from the hill summits at relative distance in the wider landscape; the Proposed Development would be perceived as a completely separately wind farm. The combined effect is unlikely to be significant.

- 8.7.36. Overall, the addition of the above three wind farms alongside the Proposed Development would increase the presence of turbines across the southern fringes of the Southern Uplands. The prevalence of wind energy development within the landscape would be mostly perceived from higher ground and hill summits within the Rhinns of Kells and Southern Uplands. The wind farms are also likely to be seen in combination with each other at distance, and thus, the overall sense of scale of the landscape will also be perceived, the wind farms will not dominate the landscape and the underlying character of the uplands bisected by its numerous valleys will still remain to appreciate.
- 8.7.37. From within the low lying valley landscapes, the wind farms are likely to be seen on a solus basis, if visible, due to the general location of wind farms within the varied uplands where coniferous plantation is extensive.
- 8.7.38. In summary, it is considered that in Scenario 2 there would be a combined medium magnitude of change upon character type 19 and the Ken unit of character type 19A, but such effects would not be significant due to the location of the schemes within the varied Upland landscape, where plantation is extensive to serve to screen the presence of turbines. The Southern Uplands is also a landscape where wind energy development has become characteristic of the area over and above other landscapes within Dumfries and Galloway, and this will be continued to be reinforced.
- 8.7.39. When the totality of landscape effect is considered, there would be localised significant effects within character type 19A, with some localised significant indirect effects upon character type 19, but this would occur in any event in the absence of the Proposed Development.

Cumulative Scenario 3

- 8.7.40. The addition of Longburn to Scenario 3 as above would extend the horizontal array of turbines in the landscape to a certain degree, but they would appear in the same part of the landscape as Wether Hill and its extension, Lorg, and Windy Rig. The presence of Longburn would reinforce the characteristics of the local landscape and the overall cumulative magnitude of change would be medium to low with respect to the character types located within the 15 km detailed study area.
- 8.7.41. The addition of the Proposed Development to the landscape immediately west of Longburn would again reinforce the existing characteristics of the area, and it is likely to be perceived as almost an extension to Longburn in longer distance views. Overall the additional cumulative effect upon landscape character would be no greater than moderate to moderate/minor and not significant.
- 8.7.42. In relation to the totality of effect, again there would be localised significant effects as per Scenario 2, but such effects would arise in the absence of the Proposed Development.

Cumulative Effects on the Galloway Hills RSA

- 8.7.43. For the Landscape Character Types/Units within the Galloway Hills RSA, considering Cumulative Scenario 1, and considering the above cumulative assessment in relation to landscape character, there would be no significant effects upon character types 19A and 19 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 Development to the landscape would arise because of the scheme in its own right rather than due to cumulative effects.
- 8.7.44. It is acknowledged that the Windy Rig wind farm is located within 5 km to the north of the Proposed Development, and this scheme alongside the proposed turbines would extend the array of turbines south from the existing cluster at Windy Standard and Afton. There would be some moderate cumulative effects upon the Galloway Hills RSA, but such effects are not considered to be significant, as wind energy development is already a characteristic of the landscape immediately beyond the RSA boundary to the north and north-east.
- 8.7.45. In relation to Cumulative Scenario 2, it is noted that two of the undetermined schemes in planning are extensions to existing wind farms, with Margree located at relative distance to the south-east. The introduction of these schemes to the wider landscape would not result in any additional significant cumulative effects upon the RSA.
- 8.7.46. Given the number of operational and consented schemes considered in Cumulative Scenario 1, the change to the baseline brought about by the other schemes in planning would be relatively minimal. The general location and array of turbines in the wider landscape would remain largely the same. Therefore, it is not considered that the cumulative effects on the landscape character would be any greater in Cumulative Scenario 2 than in Scenario 1, and no additional significant cumulative effects on the Galloway Hills RSA are predicted.
- 8.7.47. This is also the case in Scenario 3, where Longburn is also present in the landscape. The Proposed Development would appear in close proximity to, but as a clearly separate development to Longburn, extending the horizontal array of turbines to the north-east, particularly when seen from the north-eastern fringes of the RSA. There would be no additional significant cumulative effects on the Galloway Hills RSA. Any significant effects upon the RSA will arise as a result of the Proposed Development in its own right.

Combined Cumulative Effects on Visual Amenity

- 8.7.48. Table 8.14 above summarises the occurrence of in-combination and in-succession effects at each of the 22 assessment viewpoints.

Cumulative Scenario 1

- 8.7.49. Through analysis of Table 8.14 and the cumulative visualisations, a few observations can be made.

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- 8.7.50. Firstly, in Cumulative Scenario 1, it is noted that the Proposed Development would, from the vast majority of locations, be visible either in combination with or in succession with the consented Afton and Windy Rig wind farms, and to a limited extent, also the Lorg wind farm. This is in addition to the existing operational windfarms of Wether Hill and Windy Standard I and II, which together will form a clustering of wind farms within the Southern Uplands, albeit at relative distance from each other.
- 8.7.51. It is noted that the Proposed Development would introduce turbines into some views from which currently there are limited views of other turbines. However, these are restricted to the landscape within close proximity to the Site, particularly lower lying ground from which the existing turbines at Wether Hill and Windy Standard are not widely noticeable. From elevated parts of the local landscape, there is already a perceived presence of turbines, and the introduction of the Proposed Development reinforces this perception.
- 8.7.52. It is acknowledged that where more than one wind farm is present in the view there will 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.
- 8.7.53. 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.
- 8.7.54. Measured against this baseline, the additional effects arising as a result of introducing the Proposed Development would typically be less significant than reported earlier in the main assessment.
- 8.7.55. Except where stated below the significance of effects reported in the main LVIA would still apply in Cumulative Scenario 1; however, the following observations are noted.
- 8.7.56. In relation to the properties within 2 km of the Proposed Development (as discussed in the RVAS in **Appendix 8.4**), it is noted that these properties would have no notable views of the consented Wether Hill Extension and Windy Standard III wind farms. The addition of the Proposed Development would not greatly increase the magnitude of change at the properties within the valley, and the effects are not considered to be significant.
- 8.7.57. Throughout the local landscape, within 5 km of the Proposed 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 that includes Lorg, Windy Rig, and Afton alongside the existing Windy Standard I and II. It is noted that the Proposed

Development will not extend the presence of turbines any further south in the Southern Uplands landscape than the existing wind farms at Wether Hill.

- 8.7.58. Although there will be significant visual effects experienced by residential receptors within the local landscape to the Site, such effects would largely arise from the introduction of the Proposed Development in its own right. The effects of the introduction of the Proposed Development within a landscape that features the consented schemes alongside existing wind farms would not be notable different to the effects already reported within the main part of the LVIA.
- 8.7.59. However, in relation to the properties within 2 km of the Proposed Development, it is noted that there are likely to be views of Windy Rig from within the Ken Valley, albeit glimpsed views beyond the upland hill formations and coniferous forest that flank the valley to the west and north-west. The addition of the Proposed Development would increase the magnitude of change at the properties within the valley, but the effects are not considered to be significant. In combination, the two schemes would result in a moderate/minor effect.
- 8.7.60. 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 Development would not be significant.
- 8.7.61. In terms of the Core Paths and other paths in the immediate vicinity of the site, the consented schemes would be seen at greater distance than the Proposed Development, and thus, any significant effects arise as a consequence of the proposed turbines being seen in the own right, as discussed in the main part of the LVIA. Similarly, for those footpaths located immediately adjacent to the Proposed Development itself, the significance of effect identified in the main section of the LVIA would still apply as the very close proximity of the turbines to these paths would have a locally prominent effect and a significant effect even in the presence of other consented turbines in the wider landscape. The overall cumulative effect would be minimal when considered in the context of the consented schemes of Afton, Lorg, South Kyle, Benbrack, Knockman Hill, and Torrs Hill.
- 8.7.62. It is acknowledged that the Proposed Development would be seen in combination or succession with Windy Rig from Core Paths and other routes in the landscape to the west and south-west of the Site. However, the Proposed Development will be the most notable in views, with Windy Rig seen in the context of the existing, and more distant, Windy Standard I and II wind farms. There would be no greater than a moderate/minor additional effect over and above those already reported in the main LVIA.

Cumulative Scenario 2

- 8.7.63. In Cumulative Scenario 2, the pattern of wind farm development established and reported above in relation to cumulative scenario 1 would be not be greatly altered by the introduction of Wether Hill Extension, Windy Standard III, and Margree, 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. There would be no greater than a moderate/minor additional effect.

Cumulative Scenario 3

- 8.7.64. In Cumulative Scenario 3, it is noted that the Proposed Development would, from the vast majority of locations, be visible in combination with the proposed Longburn Wind Farm. The schemes would appear as two clearly separate wind farms in close and medium range views, with the two schemes appearing as one larger wind farm in longer distance views. Such views will be in addition to the existing operational wind farms of Wether Hill and Windy Standard I and II, and their associated extensions, which will also be visible from numerous hill top locations within the local landscape of the Proposed Development, particularly within 5 km distance.
- 8.7.65. Furthermore, there will be other locations within the immediate landscape to the Site from where the proposed turbines would be visible in succession with the proposed Longburn Wind Farm, alongside the existing Wether Hill Wind Farm. To the north of the Site, the Proposed Development, will also be seen either in combination with or in succession with the numerous existing and consented wind farms located within the Southern Uplands.
- 8.7.66. In general, where visible, the Proposed Development, would reinforce the presence of turbines in views rather than introduce turbines into any views which are currently unaffected by turbines.
- 8.7.67. In considering specific visual receptors, the properties located within 2 km to the east of the Proposed Development will experience views of Longburn alongside successional views of the proposed turbines. The proposed turbines would give rise to some localised significant effects on properties located within the Ken Valley and off the B729 in close proximity to the Site, and the Longburn turbines are also likely to be prominent from these properties giving rise to a significant effect on these properties in its their own right. The addition of the proposed turbines would increase the magnitude of change at these properties, and in the context of Longburn, the effects would be significant. In combination, the two schemes would result in a major effect on these properties, but the overall effect would not be so overbearing as to render the properties unattractive places to live.
- 8.7.68. Throughout parts of local landscape up to 5 km from the Site, the proposed turbines would be seen in combination with the Longburn turbines and would extend the horizontal array occupied by turbines on the southern fringes of the Southern Uplands. The properties located to the west and south-west of the Site would have a greater degree of views towards the Proposed Development than Longburn, and any significant effects arise as a result of the Proposed Development in its own right. It is acknowledged that there would be views of both the Proposed Development and Longburn from properties located to the south-east of the Site, such as Culmark. The two wind farms would be seen in combination rather than in succession and the overall cumulative effect would be minor.
- 8.7.69. Other wind farms in the landscape would be seen at distance, in glimpsed views beyond intervening hill formations and coniferous woodland. It is therefore

unlikely that the additional effect of introducing the Proposed Development in conjunction with other consented and operational windfarms would be significant.

- 8.7.70. From other residential areas in the wider landscape, the proposed turbines would generally be seen in conjunction with Longburn only, if visible at all. In this context, the additional effects resulting from the introduction of the Proposed Development would not be significant.
- 8.7.71. In terms of the Core Paths and other paths in the immediate vicinity of the site, the Longburn turbines would be prominent before the introduction of the Proposed Development. For those footpaths which pass immediately to the west, north-west, and south of the Site, the Proposed Development will give rise to significant effects in its own right, as identified in the main section of the LVIA, as the very close proximity of the turbines to these paths would have a locally prominent effect and a significant effect even in the presence of other consented turbines nearby. From all of the routes, except route DS17, the two wind farms would be seen in combination with each other and as such additional cumulative effects are likely to be low over and above those already reported.
- 8.7.72. The nature of effect on views experienced from path DS17, located directly between the Proposed Development and Longburn, will be locally significant as both schemes will be equally prominent in succession. In views from the Southern Upland Way, as it passes to the immediate east of Longburn, the Longburn turbines would be locally dominant to the immediate west, with the Proposed Development seen beyond, reinforcing the presence of turbines at a greater distance than Longburn itself.
- 8.7.73. In views from the long distance route at increasing distance from the Site, the introduction of the Proposed Development to the landscape after the construction of the Longburn turbines would extend the horizontal array of turbines on the southern fringes of the Southern Upland, but the proposed turbines would reinforce the presence of commercial scale turbines in a landscape that features numerous other wind farms.
- 8.7.74. In considering the totality of effects upon visual amenity, there will no doubt be some localised significant effects experienced by receptors located in areas within the Southern Uplands where wind farms would be seen in numerous directions of view. However, such effects would occur in the absence of the Proposed Development, should all schemes come forward alongside those already existing in the landscape.

Sequential Cumulative Effects on Visual Amenity

- 8.7.75. The four routes that form the primary receptors to the sequential cumulative assessment are the B729, the B7000, the A713, and the Southern Upland Way.

Cumulative Scenario 1

- 8.7.76. As the B729 runs between Carsphairn and Moniaive, there are current intermittent and glimpsed views of the existing Wether Hill turbines. There are also distant and intermittent glimpsed views of the existing Windy Standard turbines. The introduction of the Proposed Development to the landscape in

which the route passes, where Afton, Lorg, Windy Rig, South Kyle and Benbrack would also be present, would not result in significant cumulative effects. The majority of the other consented schemes are located at distance from the road, beyond the varied landform that forms the southern fringes of the Southern Uplands and beyond large areas of coniferous forest. At worst, the consented schemes would be seen intermittently, similarly to the existing schemes in the landscape. The Proposed Development will give rise to significant visual effects in its own right from the route as it passes between Guttery Glen and Carsphairn, but it would not contribute to a perception of windfarm clustering in the landscape.

- 8.7.77. Similarly, 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 landscape would not greatly alter the visual outlook from the road due to their location further north within the Southern Uplands. The Proposed Development would give rise to localised significant visual effects in its own right when seen from the route as already discussed within the main part of the LVIA, but the cumulative magnitude of change would be low and thus any additional effects would not be significant.
- 8.7.78. The A713 passes through The Glenkens, where there are distant and glimpsed views of existing wind farms, and the introduction of the consented schemes of Afton, Lorg and South Kyle would not greatly alter views from the road due to their location in the landscape relative to the road. The two Torrs Hill turbines would be intermittently visible in views towards the Rhinns of Kells, in the opposing direction of the large proportion of wind energy development in the area. The consented Knockman Hill scheme would be seen in the same part of views towards the existing Blackcraig Hill, which is visible more so from the road as it passes south of St Johns Town of Dalry. The Benbrack Wind Farm is likely to be seen from the A713 as one travels north of Carsphairn towards Dalmellington, but views are again likely to be intermittent as the route travels through the valley.
- 8.7.79. The introduction of the Proposed Development to views from the route as a whole is unlikely to result in any greater than a medium to low magnitude of change. It is recognised that the Proposed Development would be clearly seen from the road in the vicinity of Carsphairn, but it would be seen on its own in the landscape, and there would be several kilometres distance between it and other wind farms visible. The Torrs Hill turbines may be seen in succession with the Proposed Development, but they would also be located at distance from the road and would form a relatively minor element in the overall view available. The additional cumulative effect would be no greater than moderate to moderate/minor and not significant.
- 8.7.80. The Southern Upland Way passes through the Southern Uplands where there are numerous existing wind farms already present in the landscape. The addition of the consented Lorg, Windy Rig and Afton wind farms would further contribute to the existing clustering of wind farms in the landscape, with South Kyle and Benbrack located further afield. The consented Knockman Hill wind farm will also be visible from the open higher peaks along the route, particularly from Benbrack and the Striding Arch heading south past the Site to Culmark Hill.

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- 8.7.81. The addition of the Proposed Development to views experienced from the Southern Upland Way would introduce a further wind farm within a localised part of the landscape that does not currently feature turbines, but the existing smaller scale Wether Hill and Windy Standard turbines would be seen at relative close proximity, both in succession and in combination with the Proposed Development, thus reinforcing the existing character of the landscape within the southern fringes of the Southern Uplands.
- 8.7.82. The Proposed Development would introduce localised significant visual effects upon the route in its own right due to the proximity of the Site to the footpath, but the cumulative effects would not be significant. The Proposed 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 and would be seen intermittently along the route between Benbrack and Waterside Hill.

Cumulative Scenario 2

- 8.7.83. In cumulative scenario 2, the Wether Hill Extension and Windy Standard III wind farms would further reinforce the visual presence of turbines within the Southern Upland landscape. The Proposed Development would be seen in the context of this concentration of turbines, particularly from the Southern Upland Way as it passes over open higher ground. 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 Development. The significance of introducing the Proposed Development into this baseline scenario would not be notably greater than that assessed above, and no additional significant effects are predicted.
- 8.7.84. Along the A713, in this cumulative scenario, the proposed Margree turbines would be visible south of St Johns Town of Dalry in association with the consented Knockman Hill turbines and the existing Blackcraig scheme. However, this would simply reinforce the presence of turbines within this outlying forested landscape beyond the Water of Ken Valley. Within this context the addition of the Proposed Development would not appear out of character. The turbines of the Proposed Development would appear as a distinctly separate wind farm located at distance to this cluster. The overall effect on the A713 is unlikely to be significant.
- 8.7.85. The sequential experience from the B729 and B7000 in this scenario would be limited as there is limited intervisibility between and the proposed schemes and the two roads. The proposed Wether Hill Extension would be intermittently visible from the B729 between the Site and Guttery Glen, would it would be seen in the context of the existing Wether Hill turbines, albeit they would be larger in scale. The addition of the Proposed Development, in views from these routes would not give rise to significant cumulative effects.

Cumulative Scenario 3

- 8.7.86. In Cumulative Scenario 3, the proposed Longburn Wind Farm would be highly visible from the B729 and the B7000. It would also be seen from the A713 south of Carsphairn and from the Southern Upland Way, particularly as it passes immediately alongside the route.

- 8.7.87. The Proposed Development would appear in combination with Longburn, particularly in longer distance views from all of the routes, and thus, it would not give rise to any significant cumulative effects over and above any localised effects that may already be brought about by Longburn's presence in the landscape alongside all other consented and proposed wind farms considered within this assessment.
- 8.7.88. In close proximity to the Proposed Development, it is acknowledged that the proposed turbines would be seen sequentially with Longburn, at close succession, when travelling along the B729 in either direction between Knockgray Park and Guttery Glen. There would be a very localised high magnitude of change upon a very short section of the route as one passes directly between the two wind farms, as the two schemes would be perceived as two separate developments. There would be a significant cumulative effect upon the B729 but for a very short section only.
- 8.7.89. In summary, in relation to sequential cumulative effects upon the B729, B7000, A713 and the Southern Upland Way, there would be localised significant effects brought about by the introduction of the Proposed Development into a landscape where the proposed Longburn is also present alongside all other consented and proposed schemes considered as part of the assessment. Such effects would be limited to a short section of the B729 only. In all other scenarios, the Proposed Development would simply reinforce the existing visual experience from the routes as it would be seen in parts of the view that already feature turbines.

8.8. Mitigation Measures

Mitigation Measures and Design Evolution

- 8.8.1. 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).
- 8.8.2. The primary mitigation adopted in relation to the Proposed Development is embedded within the design of the Proposed Development and relates to the consideration that was given to avoiding and minimising landscape and visual effects during the evolution of the Proposed Development 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 Development.
- 8.8.3. Based on general good practice design principles (as set out in SNH guidelines), a review of the DGWFLCS technical report and an analysis of site-specific opportunities and constraints, the wind farm layout has been evolved to take into consideration a number of landscape and visual constraints whilst maintaining an optimal development.

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- 8.8.4. 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 turbines have also been located away from the highest parts of both Marscalloch and Craigengillan Hills to ensure that the Proposed Development is perceived as being set down in the landscape as far as possible.
- 8.8.5. Appropriate offsets from all properties and settlements, have been maintained to ensure that no property would experience an overbearing visual impact such that it became an unattractive place to live.
- 8.8.6. 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.
- 8.8.7. In considering the layout of other structures and ancillary features of the Proposed Development, the design has sought to utilise some of the existing infrastructure such as forest tracks and access to the Site.
- 8.8.8. The position of the substation, construction compound and borrow pits are located within the existing plantation so will benefit from good screening from the trees ensuring that the visual impact of these structures will be minimised.
- 8.8.9. The turbines themselves will be painted an off white colour with a low reflectivity semi-matt finish (or similar as agreed with the Local Planning Authority (LPA)). 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.
- 8.8.10. In the long term, when the Proposed Development is decommissioned, the turbines would be removed from site, and the hard-standings would be restored in accordance with a restoration plan to be approved by the local planning authority.

8.9. Residual Effects

- 8.9.1. 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.
- 8.9.2. 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').
- 8.9.3. The residual landscape and visual effects have been assessed as a result of the primary mitigation embedded within the design of the Proposed Development, relating to avoiding and minimising landscape and visual effects during the evolution of the Proposed Development layout. Therefore, the residual

landscape and visual effects are largely the same as those assessed in the main part of the LVIA.

8.10. Summary

- 8.10.1. The Proposed 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.
- 8.10.2. The site does not fall within a National Scenic Area or National Park but does partly fall within the Galloway Hills Regional Scenic Area. Five of the westernmost turbines just fall within the locally designated landscape.
- 8.10.3. The Proposed Development straddles three Landscape Character Types as described in the Dumfries and Galloway Wind Farm Landscape Capacity Study (2017), namely: character type 19a – Southern Uplands with Forest, character type 4 – Narrow Wooded River Valley, and character type 9 – Upper Valley (Dale). The majority of the proposed turbines are located within character type 19A, with one of the turbines located within character type 4. The site access and construction compound are located within character type 9.
- 8.10.4. The structures of the Proposed 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 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.
- 8.10.5. As with almost any onshore wind farm development it is recognised that the Proposed 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 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 Development would give rise to any significant effects in their own right on landscape character or visual amenity.
- 8.10.6. 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

- 8.10.7. The Proposed Development would result in a direct significant effect on landscape character across two of the character types within which the Site is located: the Ken unit of character type 19A – Southern Uplands with Forest and the Ken unit of character type 4 – Narrow Wooded River Valley. Such significant effects would occur up to 4.5 km to 5 km from the Proposed 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 will be highly prominent becoming a characterising influence on the two character types during the lifetime of the Proposed Development.

- 8.10.8. In addition, it is recognised that the Proposed Development would have a significant indirect effect in some adjoining character types. Within character type 9 – Upper Dale (Valley), it is assessed that significant effects on landscape character would extend up to 4.5 km from the proposed turbines. There would also be indirect significant effects within character type 19 up to 4.5 km and indirect significant effects within character type 18A up to 4 km from the proposed turbines.

Effects on Visual Amenity

- 8.10.9. In relation to visual effects, it is accepted that the Proposed 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 7 to 8 km of the proposed turbines.
- 8.10.10. There would be a significant visual effect experienced at 15 of the 22 representative viewpoints as follows:
- Viewpoints 1-7;
 - Viewpoints 10 - 12;
 - Viewpoints 14 - 16; and
 - Viewpoint 19 and 20.
- 8.10.11. 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 10 km of the Proposed 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.
- 8.10.12. There are 13 properties within 2 km of the proposed turbines, all of which have been assessed within the RVAS. The RVAS, presented at **Appendix 8.4**, concludes that of the 13 properties assessed, there will be significant visual effects experienced at two of the dwellings and/or their associated garden curtilages, namely Craigengillan and Strahana Farm.
- 8.10.13. It is recognised that certain other residential properties scattered within the local landscape, situated between c. 2 km and 5 km of the proposed turbines,

largely located to the east, south-east and west, would experience some significant visual effects as a result of the Proposed Development. However, again such views would not result in the properties becoming an unattractive place to live.

- 8.10.14. The nearest settlements to the Proposed Development are located at distance from the Site, and as such, visual effects experienced from within Carsphairn and St John's Town of Dalry will not be significant. The Proposed Development will not be visible from Moniaive.
- 8.10.15. When considering the Core Paths and other footpaths located within the detailed study area, there will be significant effects experienced from Core Path 182/Path DS15 as the route passes between Knockgray Park and the Site. There will also be close proximity views of the Proposed Development from the path on the felling of the plantation at the western Site boundary. Significant visual effects will also be experienced from route DS16 in the vicinity of Moorbrock, north of the Site, and route DS17 as it passes through the Ken Valley to the east of the Site. There will also be some limited significant effects experienced from Core Path 23 at Dundeugh Hill, Core Path 199, as it passes over open grassland near to Butterbole Bridge, and the Bardennoch Pack Trail as it passes between Bardennoch Hill and Carsphairn.
- 8.10.16. In relation to the Southern Upland Way, the greatest visual effects will occur within 4 to 5 km of the proposed turbines where there will be major to moderate localised effects which are significant. Beyond distances of 5 km, ZTV coverage becomes intermittent, coniferous forest curtails views towards the Site, and the Proposed Development becomes an increasingly smaller element in the wider views available from the route.
- 8.10.17. In terms of effects upon the local road network, there will be significant visual effect upon receptors on the B7000 as they travel a relatively short distance in a northerly direction between White Hill and Arndarroch. There will also be significant visual effects upon users of the B729 between Knockgray Park and Guttery Glen, and Lorg Road up to a distance of 4 km to the north of the Site. Further significant effects would also occur for a relatively short distance as receptors travel along the A713 between Carsphairn and Bardennoch. However, such effects are inevitable due to the close proximity of the roads to the Site.

Effects on the Galloway Hills RSA

- 8.10.18. Turning to the effects upon the Galloway Hills Regional Scenic Area, in which a small part of the Site is located, it is acknowledged there will be some localised significant effects, both direct and indirect, upon landscape character experienced from a relatively small part of the RSA, in the vicinity of Cairnsmore of Carsphairn. There will also be some significant visual effects experienced from the RSA looking east and north-east towards the Proposed Development up to a distance of c. 8 km. The assessment has also considered views towards the RSA from the landscape beyond its boundary, where there will also be some significant visual effects limited to a small part of the landscape to the east and south-east of the Site. However, despite the identified significant effects upon views and landscape character, there will not

be any significant effects upon the special qualities of the Galloway Hills nor its reason for designation.

Cumulative Effects

- 8.10.19. The cumulative assessment has considered the effects of the Proposed Development in relation to three scenarios;
- 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 with the exception to Longburn; and
 - Scenario 3 - assumes all schemes in planning are operational, including Longburn.
- 8.10.20. A brief assessment has also been made with regards to the cumulative effect of the Proposed Development with four schemes that are currently at the scoping stage.
- 8.10.21. In relation to effects upon landscape character in Scenario 1, overall it is considered that the combined effect of the wind farms considered will not be significant. With regards to the Carsphairn unit of character type 19, the addition of the Proposed Development to the landscape to the south-east would extend the presence of turbines in a southerly direction, away from the main cluster of wind farms to the north-west through to the north-east. However, the Proposed Development would be located in a part of the landscape where the existing Wether Hill scheme is also present, albeit at slightly greater distance, and combined visibility of the wind farms would be generally limited to the highest hill summits. The Proposed Development would not introduce turbines into part of the landscape where they do not already exist; therefore, the overall magnitude of change would be medium to low giving rise to a moderate to moderate/minor effect that is not significant.
- 8.10.22. With regards to the Carsphairn unit of character type 19A, it is one of the primary locations for existing and consented wind farms within the detailed study area. The existing Windy Standard I and II wind farms and the consented South Kyle and Benbrack schemes are located within this unit. The addition of the Proposed Development to the wider landscape away from this concentration of wind farms will not give rise to any significant cumulative effects as there is an overall lack of intervisibility between this character type and the Proposed 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.
- 8.10.23. For all other landscape character units/types considered within the LVIA, the Proposed 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 character types 21, 21A and 18A and intervisibility of the wind farms will vary relative to topography and presence of dense vegetation.
- 8.10.24. In relation to cumulative landscape character effects in Scenario 2, it is considered that there would be a combined medium magnitude of change upon

character type 19 and the Ken unit of character type 19A, but such effects would not be significant due to the location of the schemes within the varied Upland landscape, where plantation is extensive to serve to screen the presence of turbines. The Southern Uplands is also a landscape where wind energy development has become characteristic of the area over and above other landscapes within Dumfries and Galloway, and this will be continued to be reinforced.

- 8.10.25. For Scenario 3, the addition of the Proposed Development to the landscape immediately west of Longburn would reinforce the existing characteristics of the area, and it is likely to be perceived as almost an extension to Longburn in longer distance views. Overall the additional cumulative effect upon landscape character would be no greater than moderate to moderate/minor and not significant.
- 8.10.26. Turning to cumulative visual effects in Scenario 1, although there will be significant visual effects experienced by residential receptors and users of rights of way and local road network within the local landscape to the Site, such effects arise from the introduction of the Proposed Development in its own right. The effects of the introduction of the Proposed Development within a landscape that features the consented schemes alongside existing wind farms would not be notable different to the effects already reported within the main part of the LVIA.
- 8.10.27. In Scenario 2, it is considered that there would be a combined medium magnitude of change upon character type 19 and the Ken unit of character type 19A, but such effects would not be significant due to the location of the schemes within the varied Upland landscape, where plantation is extensive to serve to screen the presence of turbines. The Southern Uplands is also a landscape where wind energy development has become characteristic of the area over and above other landscapes within Dumfries and Galloway, and this will be continued to be reinforced.
- 8.10.28. In considering Scenario 3 where the Proposed Development would be located in close proximity to the proposed Longburn development, in general, where visible, the Proposed Development would reinforce the presence of turbines in views rather than introduce turbines into any views which are currently unaffected by turbines.
- 8.10.29. In considering specific visual receptors, the properties located within 2 km to the east of the Proposed Development will experience views of Longburn alongside successional views of the proposed turbines. The proposed turbines would give rise to some localised significant effects on properties located within the Ken Valley and off the B729 in close proximity to the Site, and the Longburn turbines are also likely to be prominent from these properties giving rise to a significant effect on these properties in its their own right. The addition of the proposed turbines would increase the magnitude of change at these properties, and in the context of Longburn, the effects would be significant. In combination, the two schemes would result in a major effect on these properties, but the overall effect would not be so overbearing as to render the properties an unattractive place to live.

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- 8.10.30. Turning to sequential effects upon the Southern Upland Way, B729, B7000, and A713, in Scenario 1, the addition of the Proposed Development to views experienced from the Southern Upland Way would introduce a further wind farm within a localised part of the landscape that does not currently feature turbines, but the existing smaller scale Wether Hill and Windy Standard turbines would be seen at relative close proximity, both in succession and in combination with the Proposed Development, thus reinforcing the existing character of the landscape within the southern fringes of the Southern Uplands.
- 8.10.31. The Proposed Development would introduce significant visual effects upon the route in its own right due to the proximity of the Site to the footpath, but the cumulative effects would not be significant.
- 8.10.32. In relation to sequential effects upon the local road network, the existing wind farms in the landscape are seen intermittently and at relative distance from the B729, B7000, and A713. The introduction of the consented developments to the landscape would not greatly alter the visual outlook from the road due to their location further north within the Southern Uplands. The Proposed Development would give rise to significant visual effects in its own right when seen from the route as already discussed within the main part of the LVIA, but the cumulative magnitude of change would be low and thus any additional effects would not be significant.
- 8.10.33. In Scenario 2, the proposed Wether Hill Extension and Windy Standard III wind farms would further reinforce the visual presence of turbines within the Southern Upland landscape. The Proposed Development would be seen in the context of this concentration of turbines, particularly from the Southern Upland Way as it passes over open higher ground.
- 8.10.34. Along the A713, the proposed Margree turbines would be visible south of St Johns Town of Dalry in association with the consented Knockman Hill turbines and the existing Blackcraig scheme. However, this would simply reinforce the presence of turbines within this outlying forested landscape beyond the Water of Ken Valley. Within this context the addition of the Proposed Development, at distance from this cluster of turbines would not appear out of character.
- 8.10.35. The sequential experience from the B729 and B7000 in this scenario would be limited as there is limited intervisibility between and the proposed schemes and the two roads. The proposed Wether Hill Extension scheme would be intermittently visible from the B729 between the Site and Guttery Glen, where it would be seen at distance in the context of the existing Wether Hill turbines. The addition of the Proposed Development to the view from the routes would not give rise to significant cumulative effects.
- 8.10.36. In relation to Scenario 3, there would be localised significant sequential effects brought about by the introduction of the Proposed Development into a landscape where the proposed Longburn wind farm is also present alongside all other consented and proposed schemes considered as part of the assessment. Such effects would be limited to a short section of the B729 only. In all other scenarios, the Proposed Development would simply reinforce the existing visual experience from the routes, as it would be seen in parts of the view that already feature turbines.

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- 8.10.37. Finally, in relation to cumulative effects upon the Galloway Hills Regional Scenic Area, considering Cumulative Scenario 1, there would be no significant effects upon character types 19A and 19 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 Development to the landscape would arise because of the scheme in its own right rather than due to cumulative effects.
- 8.10.38. In relation to Cumulative Scenario 2 it is acknowledged that the proposed Windy Rig wind farm is located within 5 km to the north of the Proposed Development, and this scheme alongside the proposed turbines would extend the array of turbines south from the existing cluster at Windy Standard and Afton. There would be some moderate cumulative effects upon the Galloway Hills RSA, but such effects are not considered to be significant as wind energy development is already a characteristic of the landscape immediately beyond the RSA boundary to the north and north east.
- 8.10.39. Given the number of operational and consented schemes considered in Cumulative Scenario 1, the change to the baseline brought about by the other schemes in planning would be relatively minimal. The general location and array of turbines in the wider landscape would remain largely the same. Therefore, it is not considered that the cumulative effects on the landscape character would be any greater in Cumulative Scenario 2 than in Scenario 1, and no additional significant cumulative effects on the Galloway Hills RSA are predicted.
- 8.10.40. This is also the case in Scenario 3, where Longburn is also present in the landscape. The Proposed Development would appear in close proximity to, but as a clearly separate development to Longburn, extending the horizontal array of turbines to the north-east, particularly when seen from the north-eastern fringes of the RSA. There would be no additional significant cumulative effects on the Galloway Hills RSA. Any significant effects upon the RSA will arise as a result of the Proposed Development in its own right.
- 8.10.41. It is noted that whilst the reported effects are considered to be long term, they are not ultimately permanent, and upon decommissioning the Proposed 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.
- 8.10.42. It is noted that localised significant effects on landscape character and visual amenity are inevitable as a result of commercial wind energy development anywhere in the UK. 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 are considered in the baseline.
- 8.10.43. 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.

8.10.44. However, in considering the effects of the Proposed Development, a precautionary approach has been adopted, and it is therefore assumed that the effects identified will be adverse in nature even though it is recognised that for some people the impacts could be perceived to be beneficial.