



# Chapter 6

## Landscape and Visual

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# Chapter 6

## Landscape and Visual

### 6.1 Introduction

#### 6.1.1 Background

1. This landscape and visual impact assessment (LVIA) considers effects on the landscape resource - both direct effects and effects on how the landscape is perceived - and the effect on visual amenity (views) within the Study Area (See section 6.4.1 Study Area and **Figure 6.1a**). Cumulative effects arising from the addition of the proposed Development to other windfarms are also considered.
2. Technical appendices to this LVIA should be read in conjunction with the chapter as follows:
  - Technical Appendix 6.1: Landscape and Visual Assessment Methodology; and
  - Technical Appendix 6.2: Visual Assessment of Turbine Lighting.
3. This chapter is also supported by figures and visualisations provided in separate EIA Report Volumes as follows:
  - Volume 2: Plan Figures 6.1a to 6.14g;
  - Volume 3: Technical Appendix 6.2 Figures TA6.2-1 to TA6.2-9e; and
  - Volume 4: LVIA Visualisations – Viewpoints 1-17 – Figures 6.15a to 6.31b.

#### 6.1.2 The Proposed Development

4. The Site area and Site layout is also shown on **Figure 6.1b**, the Site area of the proposed Development is entirely located within Dumfries and Galloway. The LVIA is based on an indicative turbine with a 105 m hub height, 150 m rotor diameter and maximum height to blade tip of up to 180 m, as shown on **Figure 4.3** and described in **Chapter 4: Development Description**. Other elements of infrastructure (including the indicative solar arrays) of the proposed Development assessed in this chapter are also described in **Chapter 4**. The landscape and visual aspects of the site selection and design are described in full in **Chapter 3: Development Area, Selection & Design**.

### 6.2 Legislation, Policy and Guidelines

#### 6.2.1 Key Guidance Documents

5. The following legislation, policy and guidelines have been taken into consideration during the assessment of landscape and visual effects.
6. The LVIA follows Optimised Environments Limited's (OPEN) methodology devised specifically for the assessment of windfarm developments (see **Technical Appendix 6.1**) and generally accords with '*Guidelines for Landscape and Visual Impact Assessment: Third Edition*' (Landscape Institute and IEMA, 2013) ('GLVIA3'), the key source of guidance for LVIA.
7. Other sources of guidance used and referenced in the LVIA include the following:
  - Carys Swanwick Department of Landscape University of Sheffield and Land Use Consultants for The Countryside Agency and Scottish Natural Heritage (2002). Landscape Character Assessment Guidance for England and Scotland;
  - Scottish Natural Heritage (2012) Assessing the Cumulative Impact of Onshore Wind Energy Developments;

- Scottish Natural Heritage (2017) Assessing impacts on Wild Land Areas - Technical Guidance-Consultation Draft;
- Scottish Natural Heritage (2017) Siting and Designing Wind Farms in the Landscape Version 3a;
- Scottish Natural Heritage (2017) Visual Representation of Wind Farms, Version 2.2;
- Landscape Institute (2019) Technical Guidance Note 2/19 Residential Visual Amenity Assessment; and
- Landscape Institute (2019) Visual representation of Development Proposals: Landscape Institute Technical Guidance Note 06/19.

#### 6.2.2 Strategic Policy

##### 6.2.2.1 European Landscape Convention (ELC)

8. The ELC is devoted exclusively to the protection, management and planning of all landscapes in Europe. Landscape is described as "*an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors*" (ELC, 2000). The definition applies to all urban and peri-urban landscapes, towns, villages, rural areas, the coast and inland areas. In addition, it applies to ordinary or even degraded landscape as well as those areas that are of outstanding value or protected.
9. The ELC became binding in the UK from 1 March 2007. As a signatory, the UK government has therefore undertaken to adopt general policies and measures to protect, manage and plan landscapes as follows:
  - to recognise landscapes in law as an essential component of people's surroundings, an expression of the diversity of their shared cultural and natural heritage, and a foundation of their identity;
  - to establish and implement landscape policies aimed at landscape protection, management and planning through the adoption of the specific measures. These include awareness-raising, training and education, identification and assessment of landscapes, definition of landscape quality objectives and the implementation of landscape policies;
  - to establish procedures for the participation of the general public, local and regional authorities, and other parties with an interest in the definition and implementation of the landscape policies mentioned in the bullet above; and
  - to integrate landscape into regional and town planning policies and in cultural, environmental, agricultural, social and economic policies, as well as in any other policies with possible direct or indirect impact on landscape.
10. The ELC provides a framework for SNH's work for Scotland's landscapes based on the following five guiding principles:
  - Our landscape - people, from all cultures and communities, lie at the heart of efforts for landscape, as we all share an interest in, and responsibility for, its well-being;
  - All landscapes - the landscape is important everywhere, not just in special places and whether beautiful or degraded;
  - Changing landscapes - landscapes will continue to evolve in response to our needs, but this change needs to be managed;
  - Understanding landscapes - better awareness and understanding of our landscapes and the benefits they provide is required; and
  - Tomorrow's landscapes - an inclusive, integrated and forward-looking approach to managing the landscapes we have inherited, and in shaping new ones, is required.
11. Given the UK's adoption of the ELC and its aims, the ELC gives an appropriate basis for the importance placed on the Scottish landscape.
12. **6.2.2.2 National Planning Framework 3 (NPF3)**  
Scotland's third National Planning Framework (NPF3) was published by the Scottish Government in June 2014. NPF3 is a long-term strategy for Scotland and is the spatial expression of the Government's Economic Strategy and plans for development and investment in infrastructure.

### 6.2.2.3 Scottish Planning Policy (SPP)

13. The key national policy document in relation to land use planning is *Scottish Planning Policy* (SPP) (Scottish Government, 2014). As part of Scotland's commitment to sustainable economic growth it is recognised in Paragraph 2 that the planning system should "...take a positive approach to enabling high-quality development and making efficient use of land to deliver long-term benefits for the public while protecting and enhancing natural and cultural resources".
14. In Table 1: Spatial Frameworks, SPP sets out the basis for a spatial framework in relation to windfarm development in which a hierarchy of protection is defined. Group 1 areas are based on National Parks and National Scenic Areas and are defined as 'Areas where wind farms will not be acceptable'. Group 2 areas are based on the following criteria: a range of national designations, other nationally important environmental interests (such as wild land or carbon rich soils, deep peat and priority peatland habitat), and community separation (2 km from cities, towns and villages identified on the Local Development Plan). Group 2 areas are defined as 'Areas of Significant Protection'.
15. In relation to Spatial Frameworks outlined in SPP, the DGC LDP2 Supplementary Guidance - Wind Energy Development: Development Management Considerations (Draft January 2018) states that 'no area within the region is completely unconstrained (this includes 'Group 3' areas in the Spatial Framework)'.

#### National Scenic Areas

16. Paragraph 212 of SPP sets out the following policy in respect of National Scenic Areas:
17. 'Development that affects a National Park, National Scenic Area, Site of Special Scientific Interest or a National Nature Reserve should only be permitted where:
- the objectives of designation and the overall integrity of the area will not be compromised; or
  - any significant adverse effects on the qualities for which the area has been designated are clearly outweighed by social, environmental or economic benefits of national importance'.

#### Gardens and Designed Landscapes

18. In Paragraph 148 of SPP protection is given to Gardens and Designed Landscapes: 'Planning authorities should protect and, where appropriate, seek to enhance gardens and designed landscapes included in the Inventory of Gardens and Designed Landscapes and designed landscapes of regional and local importance'.

### 6.2.3 Local Development Plan Policy

#### 6.2.3.1 Dumfries & Galloway Local Development Plan 2 2019 (LDP2)

19. The Dumfries and Galloway LDP2 was adopted on October 3<sup>rd</sup> and replaces the previous 2014 LDP. The LDP2 'provides the planning framework and guides the future use and development of land in towns, villages and the rural area.'
20. The LDP2 vision for rural areas states that a 'viable rural economy and community' will be characterised by –
- 'more rural businesses
  - more houses in small groups
  - more recreational activity
  - more woodlands
  - high quality distinctive landscapes
  - high quality accessible viewpoints, paths and green networks
  - a range of renewable energy developments
  - a protected and enhanced natural and historic environment
  - access to sustainable transport
  - ready access to higher education and opportunities for knowledge transfer'
21. Key landscape and visual related policies are listed below.

#### Policy NE1: National Scenic Areas

22. 'Development within or that would have an effect on a National Scenic Area (NSA) should only be permitted where:

- it will not adversely affect the integrity of the area or the qualities for which it has been designated; or
- any such adverse effects are clearly outweighed by social, environmental or economic benefits of national importance.'

#### Policy NE2: Regional Scenic Areas

23. 'The siting and design of development within a Regional Scenic Area (RSA) should respect the special qualities of the area. Development within, or which affects 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.'

24. RSAs are described in Section 6.5 and the potential effect considered in Section 6.7 of the LVIA.

#### Policy NE3: Areas of Wild Land

25. 'Development which would affect the Merrick Wild Land Area in Galloway and the Talla Hart Fell Wild Land Area north of Moffat would not be supported unless the Council is satisfied that it is demonstrated that any significant effects on the qualities of these areas can be substantially overcome by siting, design or other mitigation.'

Wild Land Areas (WLAs) are described in Section 6.5 and the potential effect considered in Section 6.7 of the LVIA.

#### Policy ED10: Galloway and Southern Ayrshire Biosphere

26. The Galloway and Southern Ayrshire Biosphere is Scotland's First Biosphere, where the environment is designated by the United Nations to promote and demonstrate a balanced relationship between people and nature. The Biosphere is a non-statutory designation that in itself has no formal status within the planning system. DGC supports the Biosphere in LDP2 policy ED10 which states 'Development must be appropriate to the role of the different zones within the Biosphere.'

27. Policy ED10 is supported by Map 4; which identifies the three different zones within the Biosphere: Core Area, Buffer Zone, and Transition Area. A Core area lies at the heart of the Biosphere and includes the areas of mountain, moorland, freshwater lochs and rivers primarily within the Search Area for Wild Land around the Merrick Uplands/Galloway Hills. A Buffer zone covering the Galloway Forest Park is a working landscape managed to protect the natural heritage of the core areas. A transition zone is defined across the wider surrounding landscapes of South Ayrshire and Galloway, where people live and work to make the best use of local resources. The proposed Development is located within this transition zone, described in the Galloway and Southern Ayrshire Windfarm Position Statement that 'it is the view of the Partnership that wind farm developments within the Biosphere could be acceptable in the transition zone, where substantial community engagement has demonstrated that the majority of communities are supportive of the proposed development and it can be shown that the environmental impact of the development is minimal and effective mitigation can be achieved'.

#### Policy ED11: Dark Skies

28. 'a) Galloway Forest Dark Sky Park - The Council supports the designation of the Galloway Forest Dark Sky Park, and will assess proposals for development on their merits, securing levels of lighting that are appropriate to the nature of the development, contribute to sustainable development, and do not adversely affect the objectives of the Dark Sky Park designation.
29. b) Dark Skies - Supplementary guidance provides guidance on the adoption of good lighting principles and practice for Dumfries and Galloway, including those relating particularly to the Galloway Forest Dark Sky Park.'

30. A visual assessment of the visible lighting of the proposed Development is assessed in Technical Appendix 6.2. Of the 10 Dark Sky Viewpoints identified by DGC for the Dark Sky Park, Bruce's Stone in Glen Trool has distant views of the existing Kilgallioch Windfarm and also has potential views of the proposed Development including the proposed turbine lighting, a detailed visual assessment of the effects of lighting at this viewpoint is therefore included in TA 6.2.

#### Policy HE6 - Gardens and Designed Landscapes

31. 'a) The Council will support development that protects or enhances the significant elements, specific qualities, character, integrity and setting, including key views to and from, gardens and designed landscapes included in the Inventory of Gardens and Designed Landscapes or the Non-Inventory List. In considering development proposals the Council will need to be satisfied that:
- the development protects or enhances the significant elements of the garden or landscape in situ; and
  - due consideration has been given to the significance and value of the asset in relation to the long term benefit and specific need for the development in the location proposed.
32. b) Developers will be required to submit the results of an assessment of the impact of their proposals on the sites and their settings including details of any potential mitigation measures.
33. c) Proposals that would have a detrimental effect on the specific quality, character or integrity of a garden or designed landscape will not be approved unless it is demonstrated that the benefits of the proposal are of sufficient public interest to override that detriment.'
34. Gardens and Designed Landscapes (GDLs) are described in Section 6.5 and the potential effect considered in Section 6.7 of the LVIA.

#### 6.2.4 Supplementary Guidance (SG)

##### Wind Energy Development: Development Management Considerations (Draft January 2018)

35. The LDP2 SGs 'directly relate to a policy in LDP2' and 'once formally adopted they become part of LDP2 and have the same weight as the Plan in the decision making process.' The previous LDP SGs are no longer available on the DGC website. The Policy support in the adopted LDP2, namely Policy IN1: Renewable Energy and Policy IN2: Wind Energy is outlined in section 2 of this SG.
36. Section 3 of the SG Development Management Considerations, 'outlines the issues to be considered in assessing proposals for wind energy developments.' Key Landscape and Visual considerations are summarised as follows:
37. 'A. Landscape and Visual Considerations
- All proposals will be assessed against:
- The extent to which the proposal addresses and takes into account the guidance contained in the Dumfries and Galloway Windfarm Landscape Capacity Study.
  - The extent to which the landscape is capable of accommodating the development without significant detrimental landscape or visual impacts.
  - Whether 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
  - Whether the proposal fully addresses the potential for mitigation: where mitigation through design has been optimised, compensatory mitigation measures can be considered as a balancing factor for residual effects.'
38. 'B. Cumulative Landscape and Visual Considerations
- All proposals will be assessed against: The extent of any cumulative detrimental landscape or visual impacts or impacts on existing patterns of development and the potential for mitigation.'
39. 'C. Design of Proposals (in terms of turbine siting, design, layout, form and colour)
- 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'
40. 'D. Effects on Local Amenity and Communities

- All proposals will be assessed for their impact on communities and residential amenity in relation, but not restricted, to the effects of noise, shadow flicker and visual dominance relative to all affected properties, considered in conjunction with any mitigation measures proposed.'

41. Appendix A and B of the SG list and map the sensitivity of character areas within Dumfries and Galloway based on the Dumfries and Galloway Wind Farm Landscape Capacity Study (DGWLCS), Appendix C (2017). The proposed Development is located within the Plateau Moorlands with Forest (17a) LCT, Glentroul unit (**Figure 6.3a**). The DGWLCS assesses this LCT as having a high sensitivity to the Very Large turbine typology (>150m in height), the SG restates this in its summary table in Appendix A and on map 5 in Appendix B.

##### 6.2.4.1 Dumfries and Galloway Wind Farm Landscape Capacity Study, Appendix C (2017)

42. The Dumfries and Galloway *Wind Farm Landscape Capacity Study* (DGWLCS) was adopted in June 2017. The DGWLCS revises and updates the 2011 study of the same name, in response to changes in baseline conditions and to reflect current planning policy and guidance. The DGWLCS represents the most recent characterisation study in the area and has therefore been used as the basis for identifying Landscape Character Areas within Dumfries and Galloway.
43. The proposed Development is located within the Plateau Moorlands with Forest (17a) LCT, Glentroul unit (**Figure 6.3a**). The DGWLCS has assessed a High sensitivity to the very large typology development (>150 metres (m) high).
44. The executive summary of the DGWLCS states that '*The study identifies the greatest scope for additional development in parts of the Southern Uplands with Forest, with some more limited remaining opportunities likely in the Plateau Moorlands, Plateau Moorlands with Forest and Foothills with Forest landscape character types. Cumulative effects with operational and consented wind farms and likely increased effects on surrounding more sensitive landscapes are key constraints in the remaining undeveloped parts of these landscapes.*'
45. DGWLCS describes and maps the existing cumulative situation within an area known as the Wigtownshire Moorlands, which DGWLCS identifies as the area covered by Plateau Moorland LCT (17), Balcer Moor unit; Plateau Moorland with Forestry LCT (17a), Glentroul unit and Upland Fringe LCT (16), Camrie unit. DGWLCS *Figure 8* includes a map of the operational and consented schemes in the Wigtownshire area and states that '*These landscape character types/areas are strongly influenced by wind farm development. The Arecleoch and Kilgallioch wind farms comprise extensive wind farms which are largely located in the less settled core of these upland plateau landscapes, thus reducing landscape and visual effects.*'
46. In the section on 'Scope for additional larger typologies' DGWLCS states that '*There is some limited scope to consolidate the association of existing more successfully sited large wind farm development with extensive, sparsely settled landscapes with a predominantly simple landform and land cover by directing new wind farm developments to similar landscapes.* The proposed Development site shares these expansive, sparsely settled, simple landform and simple land cover landscape characteristics advocated as suitable for additional larger typologies by DGWLCS.
47. DGWLCS goes on to state '*It is recommended that this clear pattern of wind farm development should not be muddled by locating Very Large and Large development typologies in more complex, smaller scale and/or settled landscapes as this will increase landscape and visual impacts but also dilute a clear strategy and association of a particular wind farm type with a particular landscape character.*' The proposed Development site is located close to existing Operational Kilgallioch Windfarm turbines and has been designed to fit with the '*clear pattern of wind farm development*' described. The map of the Operational Kilgallioch Windfarm on *Figure 8* includes all of the proposed Development site area (this operational development is also reflected on map 5 (Very Large typology spatial framework map) of the LDP Wind Energy SG. In this way DGWLCS has acknowledged that the proposed Development site area lies within the '*successfully sited*' Operational Kilgallioch Windfarm area. It is considered therefore that the proposed Development site clearly fits with the DGWLCS advice to '*consolidate*' ... '*by directing new wind farm developments to similar landscapes*'.
48. Considered reference has also been made to this Landscape Capacity Study throughout the report.

### 6.2.5 South Ayrshire Local Landscape Areas (LLAs)

49. In accordance with 2017 draft SNH guidance on the harmonisation and selection of local landscape area designations across Scotland, South Ayrshire Council commissioned a consultant to review the extensive, existing sensitive landscape character area and scenic area designations in South Ayrshire, consider the need for new Local Landscape Areas (LLAs), with a view to defining candidate LLAs that (1) conform with Scottish Planning Policy, (2) recognise LLAs may not just be of scenic value, but may have other attributes like nature conservation, cultural heritage or recreational value, and (3) are sufficiently robust to protect and enhance South Ayrshire Council's local landscapes. The copy of the final report informed the preparation of the Proposed replacement South Ayrshire Local Development Plan (PLDP2), currently the subject of public consultation.
50. As PLDP2 has only recently been published for public consultation, the LLAs within it remain candidate sites, indicative of the Council's intention for protecting important landscapes in South Ayrshire, but carry less weight as a material consideration in planning application decision making than the Scenic Areas and related policies defined in the adopted South Ayrshire Local Development Plan (LDP1). The candidate LLAs have been mapped in **Figure 6.4** for reference, however the LVIA reports on the impacts of the proposed Development on the South Ayrshire Scenic Areas.
51. The blade tip ZTV on **Figure 6.9** (which also shows landscape character areas and designations) indicates that theoretical visibility of the proposed Development is restricted within these candidate LLAs, in particular there is very little theoretical visibility within the candidate LLA that covers the Duisk valley. Furthermore, existing windfarms experienced to the south of these cLLAs, both in the foreground (Kilgallioch) and in the background (Aries, Artfield Fell and Balmurrie Fell), moderate the potential additional influence that the proposed Development would have and it is considered that there is no potential for the candidate LLAs to be significantly affected.

## 6.3 Consultation

52. A request for a Scoping Opinion was submitted to the Scottish Government Energy Consents Unit (ECU) in April 2019. The ECU compiled the final consultation responses from key consultees including SNH and DGC. A summary of the Scoping Opinion is provided in **Technical Appendix 2.1: Scoping Opinion**. Key information provided by consultees relevant to this LVIA assessment is provided in **Table 6.3.1**. Full details of the consultation undertaken throughout the project are presented in the Gatecheck Report provided in **Technical Appendix 5.2**.

Consultee name	Consultees comments	Consultant comments / action
Dumfries and Galloway Council Scoping Response dated 30 <sup>th</sup> May 2019	The scoping response states - <i>'Due to ongoing pressures on landscape resources and workload, landscape advice is prioritised in the order in which work is submitted to the Council, however the full consultation response will be provided in due course.'</i> The scoping response then cites passages from the LDP and the DGC Wind Farm Landscape Capacity Study (2017) (DGWLCS).	Since the scoping consultation the DGC LDP2 has been adopted. DGWLCS has been referred to throughout the LVIA in particular for the host Landscape Character Area 17a - Plateau Moorland with Forest (Glentroot Unit), see section 6.8.3.
Dumfries and Galloway Council Landscape Architect email dated 11 <sup>th</sup> July 2019	<i>'I think the VP list is reasonably comprehensive but would suggest adding two: Eldrig Fell, which we have always used in the past and shows this area well; and a worst case scenario taken from the Bargrennan Cottage stretch of the A714.'</i>  <i>'Also I suggest keeping in A and E, even to demonstrate non effect, given the sensitivity of these receptors – plus effects on the Merrick Wild Land Area and Galloway Forest Dark Sky Park of any lighting – it is probably also worth keeping D in for the same reason as this scheme would be likely to introduce lighting to the Wigtownshire Moorlands.'</i>  <i>'Any requirement for lighting would introduce an important new visual issue, as would cumulative visual effects of the extension seen in combination with other wind farm development around about.'</i>  <i>'Otherwise this might be more largely a case about landscape character: the remaining open area of moorland, the relationship of turbines to Eldrig Fell and other features of the moorland such as the abandoned farmsteads (Eldrig used to be very fine), local topography and mosaic of semi-natural moorland vegetation.'</i>	Both of these viewpoints were added and considered in the LVIA.  These viewpoints A, E and D are included in the LVIA as viewpoints – LVIA VP## - The Merrick (Scoping Report VP-A); LVIA VP12 – A714 north of Newton Stewart (Scoping Report VP-E); and LVIA VP15 - A77 near Cairpat (Scoping Report VP-D).
		Technical Appendix 6.2 assesses the visual effects of turbine lights. Cumulative effects are assessed throughout the LVIA. The methodology for assessing cumulative effects within the LVIA is clearly set out in Technical Appendix 6.1.
		Landscape Character Effects are assessed in section 6.7.3 of the LVIA, Eldrig Fell is assessed in Section 6.8.2.
SNH	The scoping response states –	It is noted that SNH are in broad agreement with the

Scoping response dated 9 <sup>th</sup> May 2019	<i>'We are currently experiencing difficulties with providing landscape and visual advice due to staffing issues and therefore have to prioritise our advice on proposals likely to impact on areas such as Wild Land and National Scenic Areas. This does not of course mean we do not consider there to be impacts elsewhere in the wider countryside.'</i>  The scoping response goes on to say that - <i>'methodologies look to be in line with what we would expect in terms of LVIA, Cumulative LVIA and the approach to assessing landscape and visual effects also viewpoint assessment. For visualisation production the scoping report refers to the correct guidance. The preliminary viewpoints appear to be well spaced and limited to those viewpoints where all turbines will be visible to some degree but as a starting point for discussion at a later stage we are satisfied at this point.'</i>	methodology, approach and guidance set out in the scoping report for the proposed Development. The detailed methodology for the LVIA is clearly set out in Technical Appendix 6.1. Whilst the addition of viewpoints at Eldrig Fell and the A714 near Bargrennan were added to the scope of the LVIA through discussions with DGC, the preliminary viewpoints were broadly retained and it is noted that SNH are satisfied with this selection of locations.
	<i>'Given the likely height of the turbines we trust that full consideration will be given to turbine lighting bearing in mind the current situation with regard to radar activated lighting and the CAA's present position on the subject.'</i>	Technical Appendix 6.2 assesses the visual effects of turbine lights. Methodology and approach to night-time visual assessment of lighting is outlined in Section 6.3.3 of TA 6.2, including an outline of the CAA requirements.
Cree Valley Community Council Scoping Response dated 20 <sup>th</sup> May 2019	<i>'Table 3.1 is incorrect in that cumulative developments do not mean that the potential for significant affects has been reduced. All of the currently operational windfarms lie to the west of the site hence the wildness characteristics of the area remain intact from an eastern facing perspective. This cannot be ignored hence the Elements in Table A (section 6) cannot legitimately be scoped out.'</i>  <i>Paragraph 113 is nonsense. We do not accept that sufficient time has lapsed since windfarms began appearing on our natural landscape so that they have now become an integral part of it, and that any previous guidance which differs from this viewpoint is archaic and can easily be ignored would make a mockery of our entire planning system.'</i>  <i>Each application must still be considered on their own merits.'</i>	The methodology for assessing cumulative effects within the LVIA is clearly set out in Technical Appendix 6.1. Existing cumulative developments are considered to form part of the baseline in which the proposed Development is introduced. This approach accords with GLVIA3 (Landscape Institute and IEMA, 2013, p120) advises <i>'it is considered that existing schemes and those which are under construction should be included in the baseline for both landscape and visual effects assessments (the LVIA baseline).'</i> A summary is provided at paragraph 66.
	<i>'Paragraph 117 and 123 should be read in the full knowledge that the proposed Kilgallioch Extension turbines would be much taller than all of the existing local turbines and that they would all be erected on open moorland to the East of the previously consented windfarms in the area. The views within the Galloway Hills RSA would definitely be affected and the proposed 10 km radius is</i>	The LVIA is based on an indicative turbine with a 105 m hub height, 150 m rotor diameter and maximum height to blade tip of up to 180 m, as shown on Figure 4.3 and described in

	<p>therefore completely insufficient to define a boundary for the necessary study area.'</p>	<p>Chapter 4: Development Description. The LVIA considers the proposed Development in the context of the operational turbines in the area and also within the context of other consented and application windfarms. The LVIA has focussed the assessment within a 20km Study Area as described in section 6.4.1.</p>
	<p>'Paragraph 138 proposes that the effects on the Dark Sky Park can be scoped out. This seems unreasonable as the proposed turbines are over 150m tall and could interfere with an astronomer's view of a celestial object appearing low on the western horizon of the Dark Sky Park. This should be properly assessed and the local astronomical society (Galloway Forest Astronomical Society) must be consulted.'</p>	<p>Technical Appendix 6.2 assesses the visual effects of turbine lights at Bruce's Stone within the Dark Sky park.</p>
	<p>'There is a need to assess the effects further within all of the Dumfries and Galloway RSAs and the Merrick Wild Land Area.'</p>	<p>Regional Scenic Areas (RSAs) and the Merrick Wild Land Area (WLA) are considered within the preliminary assessment of the LVIA to not require a detailed assessment. See section 6.7.2.</p>
<p>New Luce Community Council Scoping Response dated 8<sup>th</sup> May 2019</p>	<p>'With respect to the Wigtownshire Moorlands, the DGWFLCS (3.4.1, p30) concludes that: "Significant cumulative landscape and visual effects are evident in the southern part of this area where the variety of wind farm designs, in terms of turbine sizes, elevations and layout pattern and densities, and the relative proximity of wind farm developments results in substantial visual confusion." "Operational and under-construction wind farm developments already occupy less sensitive core areas of the upland plateau landscapes, where Very Large (150m+) turbines could potentially have been located to minimise effects on smaller scale features such as settled valleys, small hills and lochs and on the Merrick Wildland Area (WLA) and the Galloway Hills. The assessment concludes that there is no scope for Very Large turbines." The DGWFLCS (3.8, pp 43-44) even refers to the "Cumulative Wigtownshire Moors". Clutter and visual confusion also feature strongly as themes in the SNH Guidelines (Assessing the Cumulative Impact of Onshore Wind Energy Developments, March 2012, Spatial Planning for Onshore Wind Turbines, June 2015, and Siting and Designing Wind Farms in the Landscape, August 2017). SNH have been tasked by the Scottish Government to provide this guidance. For us, the Proposed Development is manifestly 'infil', with yet another turbine size and design, and so does not respect guidelines on cumulative impacts.'</p>	<p>Cumulative effects are assessed throughout the LVIA. The methodology for assessing cumulative effects within the LVIA is clearly set out in Technical Appendix 6.1. Further to the cumulative assessments carried out in the LVIA for individual receptors the conclusion to the LVIA includes a summary of cumulative effects titled Relationship of the proposed Development to Cumulative Context in section 6.10.5 which also includes a statement on the combined effect of cumulative windfarms on the landscape of the Study Area.</p>

	<p>'Effects on Galloway Hills Wild Land Area Obviously, to be properly appreciated, designated Wild Land Areas need at least to be set in a neutral background landscape context, which might often be traditional farmed landscapes. If large numbers of large industrial structures occupy large areas of that landscape context, then the sense and purpose of that WLA is compromised.'</p>	<p>The Merrick Wild Land Area (WLA) are considered within the preliminary assessment of the LVIA to not require a detailed assessment. See section 6.7.2.</p>
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Table 6.3.1: Consultation Summary

## 6.4 Assessment Methodology and Significance Criteria

### 6.4.1 Study Area

53. The initial step in the LVIA is the establishment of the Study Area for the assessment. Guidance developed by SNH (*Visual Representation of Windfarms* Version 2.2, February 2017) indicates that an area with a radius of 45 km from the nearest turbine is appropriate for the turbines of the size proposed in the proposed Development. For the purposes of the assessment, this 45 km study area will be referred to as the 45km radius and is shown on **Figure 6.1a**.

54. The majority of landscape and visual receptors between 20 km and 45 km are outwith the coverage of the ZTV, where theoretical visibility is shown on the ZTV potentially significant effects are limited by distance and intervening woodland or forestry. From locations within these areas the proposed Development would be seen on the skyline in the immediate context of other operational windfarms visible at closer range. Due to the nature of the proposed Development as an extension of an operational windfarm and the wider context that includes other windfarms, significant effects are likely to be restricted to a more localised Study Area. Furthermore, some of the changes to the landscape that have occurred, primarily through windfarm development within the area, have altered the local landscape character context. Taking this into account and in order to focus the assessment on potential for significant effects, the LVIA has focussed its assessment within a 20 km Study Area as shown on **Figure 6.1a** and hereafter referred to as the 'Study Area'.

### 6.4.2 Desk Study

55. The assessment is initiated through a desk study of the Site and 45 km radius focussing on the detailed 20km Study Area as described above. Zone of Theoretical Visibility (ZTV) analysis of the proposed Development has been carried out for the Study Area (including cumulative ZTVs, CZTVs), as has mapping of landscape character, landscape related designations, wild land areas and principal visual receptors. The Study Area is not intended to provide a boundary beyond which the proposed Development would not be seen, but rather to define the area within which it may have a significant landscape or visual effect. A significant effect is, in reality, very unlikely to occur towards the edges of the Study Area.

56. The desk study also utilises Geographic Information System (GIS) and Resoft Windfarm software to explore the potential visibility of the proposed Development. The resultant ZTV diagrams and wirelines provide an indication of which landscape and visual receptors are likely to be key in the assessment.

### 6.4.3 Field Survey

57. To inform the LVIA and layout design process, field survey was undertaken between August 2018 and November 2019. Viewpoint photography was captured during field survey visits in periods of good visibility. Field surveys were carried out throughout the 45 km radius area, although surveys were concentrated within the areas shown on the ZTV to gain theoretical visibility of the proposed Development and the Study Area of 20 km. Field survey included a walkover of the Site, visits to viewpoints, walks along the Southern Upland Way as well as extensive travel around the Study Area to consider potential effects (including cumulative) on landscape character and on the experience of views seen from travel routes through the landscape. These visits have allowed the landscape character and the visual amenity of the Study Area to be experienced in a range of different conditions

and seasonal variation. The field survey allows the assessors to judge the likely scale, distance, extent and prominence of the proposed Development directly.

58. The landscape of the Site was assessed for any particular features that contribute to the landscape character of the Site or are important to the wider landscape setting. In particular, the form and pattern of the land was assessed from the Site and surrounding area to better understand its character and to take these qualities into account in the siting and design of the proposed Development. The landscape character types for the Study Area were reviewed and the key characteristics of the landscape were identified. The field surveys provided an experience of the character types of the Study Area and verification of how these areas might be affected by the proposed Development. Visual amenity was surveyed including both static and sequential views, from receptors representative of the range of views and viewer types likely to experience the proposed Development. Views from a variety of distances, aspects, elevations and extents were included. Receptor types include individual properties and settlements; main transport routes; main visitor locations; areas of cultural significance; the range of landscape character types within the Study Area; and the cumulative effects of the proposed Development in combination with other existing or proposed windfarms in the Study Area.
59. The field survey is also important in informing the sequential assessment, through the experience of each of the routes under consideration, to provide an understanding of the essential characteristics, and how these are likely to be affected by the proposed Development.

#### 6.4.4 Assessment Methods

60. The detailed methodology for the assessment is described in detail in **Technical Appendix 6.1: Landscape and Visual Assessment Methodology**. The broad principles used in the assessment of the significance of effects are also described here.
61. The objective of the assessment of the proposed Development is to predict the likely significant effects on the landscape and visual resource. In accordance with the EIA Regulations the landscape and visual effects are assessed to be either significant or not significant. The LVIA does not define intermediate levels of significance as the EIA Regulations do not provide for these.
62. The significance of effects is assessed through a combination of two considerations; the sensitivity of the landscape receptor or view and the magnitude of change that would result from the addition of the proposed Development.

##### 6.4.4.1 Sensitivity of Receptor

63. Sensitivity is an expression of the ability of a landscape receptor or view to accommodate the proposed Development. Sensitivity is determined through a combination of the value of the receptor and its susceptibility to the proposed Development. The factors that determine these criteria are described in **Technical Appendix 6.1**. Levels of sensitivity - high, medium-high, medium, medium-low and low - are applied in order that the judgement used in the process of assessment is transparent.

##### 6.4.4.2 Magnitude of Change

64. Magnitude of change is an expression of the extent of the effect on landscape receptors and views that would result from the introduction of the proposed Development. The magnitude of change is assessed in terms of a number of variables, including the size and scale of the impact and the extent of the affected area. The factors that determine these criteria are described in **Technical Appendix 6.1**. Levels of magnitude of change - high, medium-high, medium, medium-low, low and negligible - are applied in order that the judgement used in the process of assessment is transparent.

##### 6.4.4.3 Categories of Effects

65. The LVIA is intended to determine the effects that the proposed Development would have on the landscape and visual resource. For the purposes of assessment, the potential effects on the landscape and visual resource are grouped into four categories:
- **Physical effects** are restricted to the area within the Site boundary and are the direct effects on the existing fabric of the Site, such as alteration to ground cover. This category of effects is made up of landscape

elements, which are the components of the landscape such as rough grassland and moorland that may be directly and physically affected by the proposed Development.

- **Effects on landscape character:** landscape character is the distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape, and the way that this pattern is perceived. Effects on landscape character arise either through the introduction of new elements that physically alter this pattern of elements, or through visibility of the proposed Development, which may alter the way in which the pattern of elements is perceived. This category of effects is made up of landscape character receptors, which fall into two groups; landscape character types and landscape-related designated areas and Wild Land Areas.
  - **Effects on views:** the assessment of effects on views is an assessment of how the introduction of the proposed Development would affect views. The assessment of effects on views is carried out in two parts:
    - an assessment of the effects that the proposed Development would have on a series of viewpoints; and
    - an assessment of the effects that the proposed Development would have on views from principal visual receptors (relevant settlements and routes found throughout the Study Area).
  - **Cumulative effects** arise where the study areas for two or more windfarms (or in some cases other relevant development) overlap so that both of the windfarms/developments are experienced at a proximity where they may have a greater incremental effect, or where windfarms/other developments may combine to have a sequential effect.
66. It is important to remember that the objective of the cumulative assessment is different from the assessment of effects of the proposed Development itself. In the cumulative assessment the intention is to establish whether or not the addition of the proposed Development, in combination with other relevant existing and proposed windfarms, may lead to a landscape character or view that is characterised primarily by windfarms so that other patterns and components are no longer definitive. The assessment of the effects of the proposed Development itself focusses on the effect that the proposed Development would have on the viewpoints, principal visual receptors and landscape character receptors, taking baseline windfarms into consideration. Baseline (operational and under construction) cumulative windfarms are taken into consideration in both the assessment of the proposed Development itself and the cumulative assessment, while consented and application stage windfarms are considered only in the cumulative assessment.
67. In accordance with guidance (SNH, 2012), the LVIA for each receptor considered assesses the effect arising from the addition of the proposed Development to the cumulative situation, and not the overall effect of multiple windfarms. However, in considering the detailed cumulative effects described within the LVIA, a broad statement relating to the combined cumulative effect of multiple windfarms in the area has also been provided in the LVIA summary, section 6.9.

##### 6.4.4.4 Potential Effects

68. Potential effects are those which could result from the construction and operation of the proposed Development. **Table 6.4.1** describes the typical landscape and visual effects that can arise from the construction and operation of a windfarm; it should be noted that their inclusion in this table does not imply that they will occur, or be significant, in the case of the proposed Development.

Activity	Specific element	Potential effects	Potential sensitive receptors
Construction	Construction plant, borrow pit excavation, temporary construction facilities, temporary meteorological masts, construction cranes, construction of onsite substations	Temporary physical effects on landscape fabric Permanent physical effects on landscape fabric (i.e. permanent removal of vegetation / forestry / ground cover) Temporary effects on landscape character Temporary effects on views Temporary cumulative effects	Physical landscape features Landscape character receptors Visual receptors

Activity	Specific element	Potential effects	Potential sensitive receptors
Operation – day time	Turbines, solar photovoltaic arrays, access tracks, restored borrow pits, operations building, permanent meteorological masts	Long term effects on landscape character including cumulative effects Long term effects on views including cumulative effects	Landscape character receptors Visual receptors
Operation – night time	Turbine lighting on turbines	Long term effects on views	Visual receptors

Table 6.4.1: Potential effects

69. The effects of the construction and operation of the proposed Development on the landscape and visual resource would arise principally from the construction and operation of the turbines and access tracks. The temporary construction facilities, such as cranes, construction vehicles, borrow pits, construction compound and delivery vehicles required during the construction would also have effects on the landscape and visual resource during the 18 month construction period. There is no proposal to limit the lifetime of the proposed Development.
70. Operational and construction effects are assessed and reported together in this chapter. Due to the large scale of the windfarm proposed, it is considered that there would be no instances where construction effects trigger a significant effect for receptors where operational effects are found to be not significant.

#### 6.4.4.5 Turbine Lighting

71. The wind turbines would be fitted with visible aviation lighting in accordance with the *Air Navigation Order (2016)* and Civil Aviation Authority (CAA) requirements. As such, there is potential for the proposed Development to be visible at night.
72. Specific requirements for aviation and navigational lighting would be agreed with the relevant stakeholders post-consent and prior to construction. A description of the proposed turbine lighting is found within **Chapter 4: Development Description** and **Chapter 14: Other Issues**. Based on this, the following assumptions have been made with regards to lighting of the proposed Development for the LVIA:
- The CAA requires that all obstacles at or above 150 m above ground level are fitted with visible lighting and in the case of wind turbines these should be located on the nacelle;
  - The CAA requires that a secondary light is fitted for use only when the primary light fails and would not be lit concurrently;
  - There is an additional requirement for lights to be provided at an intermediate level of half the nacelle height. These would need to be fitted around the towers to allow for 360-degree horizontal visibility; and
  - It is proposed to explore the possibility of using 'smart' aviation lighting (aviation obstruction lighting detection system) whereby the lights would only be switched on when low altitude aircraft approach them. The CAA is in the process of consulting on a new policy statement on *En-Route Aviation Detection Systems for Wind Turbine Obstruction Lighting Operation*. SPR has had an opportunity to review the CAA's proposal as part of an industry working group considering this guidance. It is expected that this guidance will be finalised and released during 2020.
73. See also **Technical Appendix 6.2: Visual Assessment of Turbine Lighting**, which describes the lighting parameters and approach to assessing night time effects in more detail in relation to the proposed Development.

#### 6.4.4.6 Solar Photovoltaic Arrays

74. Areas of the Site will be used to locate ground mounted solar photovoltaic arrays (solar PV arrays). The developable areas for solar PV arrays have been identified following a process of site survey and desk based analysis to identify

the most suitable parts of the Site, within the confines of the Sites environmental constraints. Landscape and Visual analysis has been a key factor in the identification of the most suitable developable areas and their refinement.

75. The indicative layout consists of an array of solar photovoltaic modules orientated in a southerly direction. The modules will stand approximately 0.5 m Above Ground Level (AGL) at their minimum point and will be angled around 25° to the horizontal and arranged in rows. Depending on the finalised angle of elevation, and the number of rows of modules stacked, the maximum height of the modules will be around 3.0 m AGL.
76. The four areas identified for solar development, range from approximately 3.7 to 13.5 ha in area with the potential for an installed capacity of around 20 MW. These four solar search areas are labelled A<sub>1</sub> to G on **Figure 4.1a** and are considered in this LVIA, along with the other infrastructure proposed for the Site see also **Figure 6.1b**.
77. An indicative description of the proposed solar array is found within **Chapter 4: Development Description**. Based on this, assumptions have been made with regards to the landscape and visual effects of the solar array as follows:
- typical construction activities with the potential to affect the landscape and visual resource include: Erection of photovoltaic panels, power units and fencing; and Vehicular movement on and offsite.
  - once operational the potential effects to the landscape and visual resource include: Loss or fragmentation of open moorland landscape; Effects on the existing landform, landscape character and landscape scale of the Site area; Potential for the proposed Development to introduce activity which is out of keeping with existing land uses or with established cultural or historic landscapes; and Potential visual intrusion in sensitive views or in close proximity to sensitive receptors e.g. Southern Upland Way (SUW).
78. There is potential for reflection of sunlight from the surface of the solar panels in views, however, perceived reflected light from solar PV panels is limited by the suns position in the sky, the time of year and the time of day, generally occurring within minimal periods in the early morning or evening. Furthermore, the solar panels are designed to have extremely low reflection levels using the latest anti-reflective treatment to ensure that any glare is minimized. A glint and glare assessment was undertaken on possible effects on the users of the SUW and can be found in **Chapter 14: Other Issues**.

#### 6.4.4.7 Nature of Effects

79. The effects of a proposed windfarm may be assessed as 'beneficial' or 'adverse' under the term 'Nature of effect'. The landscape and visual effects of windfarms are difficult to categorise in either of these brackets as, unlike other disciplines, there are no definitive criteria by which the effects of windfarms can be measured as being categorically 'beneficial' or 'adverse'. Generally, in the development of 'new' windfarms, a precautionary approach is adopted by OPEN, which assumes that significant landscape and visual effects will be weighed on the adverse side of the planning balance. Beneficial effects may, however, arise where a proposed windfarm contributes to the enhancement of desirable characteristics such as the restoration of a degraded landscape (e.g. through peatland restoration) and neutral effects may occur where the proposed windfarm fits with the existing landscape character. Unless it is stated otherwise, the significant effects identified in this assessment are considered to be adverse. Judgements on the nature of effect are based on professional experience and reasoned opinion informed by best practice guidance.

#### 6.4.4.8 Duration and Reversibility of Effects

80. The effects of the proposed Development are of variable duration, and are assessed as short-term or long-term, and permanent or reversible. As there is no proposal to limit the lifetime of the proposed Development, the assessment considers the effects of the operational phase of the proposed Development, without time limitations. The turbines, solar arrays, Site access tracks and operations building would be apparent during this time, and these effects are considered to be long-term.
81. Other infrastructure and operations such as the construction processes and plant (including tall cranes for turbine erection) and the construction and storage compound would be apparent only during the initial construction period of the proposed Development and are considered to be short-term effects. Borrow pit excavation would also be short-term as borrow pits would be restored at the end of the construction process, although a permanently altered ground profile may remain evident. The effects of the tall cranes and heavy machinery used during the construction and decommissioning periods are also temporary and reversible.

82. In order to avoid repetition, the duration and reversibility of effects are not reiterated throughout the assessment.

**6.4.4.9 Residual Effects**

83. The LVIA focuses on the effects of the proposed Development in its operational phase which is also considered as the residual effects.

**6.4.5 Mitigation**

**6.4.5.1 Embedded Mitigation**

84. The layout of the proposed Development is a vital part of the EIA process and is the stage where the biggest contribution can be made to mitigate potential landscape and visual effects, creating a windfarm which is appropriate for the existing landscape character and visual features of an area. The design of the proposed Development has evolved as part of an iterative process which has aimed to provide an optimal design in environmental, as well as technical and economic terms and landscape and visual mitigation measures have been a central consideration in the design process.

85. As described in **Section 4.5.2 Turbine Lighting**, it is proposed that visibility sensors are installed on relevant turbines to measure prevailing atmospheric conditions and visibility range. Should atmospheric conditions (for example an absence of low cloud cover, rain, mist, haze or fog) mean that visibility around the Site is greater than 5 km from the proposed Development, CAA policy permits lights to operate in a lower intensity mode of 200 candela (being a minimum of 10% of their capable illumination). If visibility is restricted to 5 kms or less, the lights would operate at 2000 candela. It is also proposed to explore the possibility of using 'smart' aviation lighting (aviation obstruction lighting detection system) whereby the lights would only be switched on when low altitude aircraft approach them.

**6.4.5.2 Landscape and Visual Design Strategy**

86. The landscape and visual design strategy for the proposed Development is described in **Chapter 3: Development Area, Selection & Design**.

87. The proposed turbine layout has been designed to minimise the effect on the surrounding landscape and visual resource. Therefore, the turbine layout design has evolved with the intention of presenting a simple, well balanced image of the proposed Development in the majority of views.

88. Ground disturbance onsite would be restricted as far as practicable and any soil materials excavated would be retained on the Site for re-use on areas to be re-vegetated following the construction phase. The proposed borrow pits, construction compound and tracks have been considered throughout the design process to minimise landscape and visual impacts where possible. Reuse of existing tracks previously used during the construction of the Operational Kilgallioch Windfarm (including the access track from the A714) would minimise the amount of new and upgraded track required as part of the proposed Development, and so minimising further landscape and visual effects.

**6.4.6 Assessment of Significance**

89. The significance of effects is assessed through a combination of the sensitivity of the landscape receptor or view and the magnitude of change that would result from the addition of the proposed Development. While this methodology is not reliant on the use of a matrix to determine the conclusion of a significant or not significant effect, a matrix is included in **Table 6.4.2** to illustrate how combinations of sensitivity and magnitude of change ratings can give rise to significant effects. The matrix also gives an understanding of the threshold at which significant effects may arise.

Magnitude \ Sensitivity	High	Medium-High	Medium	Medium-Low	Low	Negligible
High	significant	significant	significant	significant / not significant	not significant	not significant

Medium-High	significant	significant	significant / not significant	significant / not significant	not significant	not significant
Medium	significant	significant / not significant	significant / not significant	not significant	not significant	not significant
Medium-Low	significant / not significant	significant / not significant	not significant	not significant	not significant	not significant
Low	not significant	not significant	not significant	not significant	not significant	not significant

Table 6.4.2: Illustrative significance matrix

90. Effects within the dark grey boxes of **Table 6.4.2** are considered to be significant in terms of the EIA Regulations. Effects within the light grey boxes may be significant or not significant depending on the specific relevant factors that arise at a particular landscape or visual receptor. In accordance with GLVIA3, experienced professional judgement is applied to the assessment of all effects and reasoned justification is presented in respect of the findings of each case.

91. A significant effect occurs where the proposed Development would provide a defining influence on a landscape element, landscape character receptor or view. A not significant effect would occur where the effect of the proposed Development is not material, and the baseline characteristics of the landscape element, landscape character receptor, view or visual receptor continue to provide the definitive influence. In this instance the proposed Development may have an influence, but this influence would not be definitive. Significant cumulative landscape and visual effects would arise where the addition of the proposed Development to other windfarms and/or other major developments would lead to windfarms becoming a prevailing landscape and visual characteristic.

**6.4.7 Assumptions, Limitations and Confidence**

**6.4.7.1 Zone of Theoretical Visibility Analysis**

92. There are limitations in the theoretical production of ZTVs, and these should be borne in mind in their consideration and use:

- The ZTVs illustrate the 'bare ground' situation, and do not take into account the screening effects of vegetation, buildings, or other local features that may prevent or reduce visibility;
- The ZTVs do not indicate the reduction in visibility that occurs with increased distance from the proposed Development. The nature of what would be visible from 3 km away would differ markedly from what would be visible from 20 km away, although both are indicated on the ZTVs as having the same level of visibility; and
- There is a wide range of variation within the visibility shown on the ZTV. For example, an area shown on the blade tip ZTV as potentially having visibility of all of the turbines may gain views of the smallest extremity of blade tips, or of full turbines. This can make a considerable difference in the effects of the proposed Development on that area.

93. These limitations mean that while the ZTVs are used as a starting point in the assessment, providing an indication of where the proposed Development theoretically would be visible, the information drawn from the ZTVs should not be completely relied upon to accurately represent visibility of the proposed Development.

**6.4.7.2 Visualisations**

94. Photographs and other graphic material such as wirelines and photomontages used in the assessment are for illustrative purposes only and, whilst useful tools in the assessment, are not considered to be completely representative of what would be apparent to the human eye. SNH provides the following information on the limitations of visualisations that are produced according to the SNH guidance 'Visual Representation of Windfarms' (February 2017):

“Visualisations of windfarms have a number of limitations which you should be aware of when using them to form a judgement on a windfarm proposal. These include:

- a visualisation can never show exactly what the windfarm will look like in reality due to factors such as: different lighting, weather and seasonal conditions which vary through time and the resolution of the image;
- the images provided give a reasonable impression of the scale of the turbines and the distance to the turbines, but can never be 100% accurate;
- a static image cannot convey turbine movement, or flicker or reflection from the sun on the turbine blades as they move;
- the viewpoints illustrated are representative of views in the area, but cannot represent visibility at all locations;
- to form the best impression of the impacts of the windfarm proposal these images are best viewed at the viewpoint location shown;
- the images must be printed at the right size to be viewed properly (260mm by 820mm); and
- you should hold the images flat at a comfortable arm's length. If viewing these images on a wall or board at an exhibition, you should stand at arm's length from the image presented to gain the best impression.”

## 6.5 Baseline Conditions

### 6.5.1 Introduction

95. The landscape and visual baseline identifies aspects of the landscape and visual resource that may be significantly affected by the proposed Development and provides a description of the existing landscape and visual conditions in the area that may be affected. Establishing the baseline will, when reviewed alongside the description of the proposed Development, form the basis for the identification and description of the landscape and visual effects of the proposed Development.
96. The baseline description of the landscape that may be affected is primarily determined by the physical footprint of the proposed Development components and their ZTV (**Figures 6.7a – 6.7d**). The baseline also describes current pressures that may cause change in the landscape in the future, in particular drawing on information for wind energy developments that are not yet present in the landscape but are at other stages in the planning process. Operational and under construction wind energy developments are regarded as part of the baseline landscape character of the area. Any changes resulting from the proposed Development are assessed within this context in the assessment of landscape and visual effects.
97. A preliminary assessment has identified those landscape and visual receptors that may have the potential to experience significant effects, which require to be assessed in full. This section provides a baseline overview and a detailed baseline description is provided separately within the assessment section for each receptor that may be significantly affected.

### 6.5.2 Landscape and Visual Baseline Overview

#### 6.5.2.1 Site Context

98. The Site is located to the east of the southern part of the Operational Kilgallioch Windfarm and to the north of the operational Balmurrie Fell, Artfield Fell, Glenchamber windfarms and west of Aries Windfarm. The Site is located approximately 15 km west of Newton Stewart, 9.5 km north west of Kirkowan and 7 km north east of New Luce. Land cover on the Site is composed of moorland with large areas of coniferous forestry plantation within the close surrounding site context (some of which has been recently felled or is in the process of being felled).
99. Topography varies subtly across the Site (**See Figure 6.2**) with a series of small craggy hills of similar elevation separated by watercourses and lower elevated moorland. Craigmaddie Fell (248 AOD) to the north of the Site and Eldrig Fell (226 AOD) within the Site to the south are the most notable hills within the context of the Site. Other smaller undulations include Ha Hill (196 AOD) and Belgaverie (182 AOD) in the western part of the Site and Airieglasson (217 AOD) which is just outside the Site area to the north east which connects to the rocky ridges of the Rig of the Garry and Monandie Rig that form the north eastern edges of the Site. The Site lies within the catchment of the Tarf Water and a large number of small watercourses flow within the Site boundary. Eldrig Loch

lies to the north of Eldrig Fell within a relatively flat area of moorland to the east of the southern part of the Site known as Eldrig Moss.

#### 6.5.2.2 Landscape Character

100. The landscape assessment considers the effect of the proposed Development on the Landscape Character Types / units (LCTs) within the Site and the surrounding area. The LCTs found in the Study Area are shown on **Figures 6.3a-b** (**Figure 6.9** shows LCTs with the blade tip ZTV of the proposed Development).
101. The Study Area is covered by the following SNH landscape character reviews: *Dumfries and Galloway Landscape Assessment*, SNH Review No 94, 1998 and *Ayrshire Landscape Assessment*, SNH Review No 111, 1998. These landscape character reviews described and categorised the landscape of the Study Area into distinct character types as defined in SNH's landscape character dataset. In early 2019, SNH published an update to the characterisation of Scotland's landscape as a digital resource. The information builds on the characterisation studies published in the 1990's. SNH describe the recent publication as now superseding the 1990s landscape character descriptions and mapping adding that *'Where there are topic-specific landscape capacity or sensitivity studies, they would take precedence for informing that development type, e.g. windfarms.'*<sup>1</sup>
102. The recent *'topic specific'* characterisation studies have been produced for each local authority in the Study Area as part of windfarm Landscape Capacity Studies: the Site and Study Area is covered by the *Dumfries & Galloway Wind Farm Landscape Capacity Study, 2017 (DGWLCS)* and *South Ayrshire Landscape Wind Capacity Study, 2018 (SALWCS)*. These capacity studies therefore form the most up to date characterisation studies in the area which update and refine the landscape characterisation and refine the boundaries of the SNH 2019 characterisation of Scotland. The landscape character boundaries used in the capacity studies therefore form the basis of character assessment in this LVIA and key characteristics have been summarised from these texts. For additional reference the 2019 SNH description of key characteristics has also been included.

103. The proposed Development would be located entirely within the western part of the Plateau Moorland with Forest (17a) as identified in the DGWLCS.

#### 6.5.2.3 Landscape Designations

104. A landscape designation is an area of landscape identified as being of importance at international, national or local level, either defined by statute or identified in development plans or other documents. The landscapes are designated in relation to their special qualities or features which warrant special consideration through the planning system. National and local designations occur in parts of the Study Area and are designated at a national level by SNH and at a local level by the local planning authority.
105. There are three ways in which such designations are relevant to the LVIA:
- The presence of a designation can give an indication of a recognised value that may increase the sensitivity of a landscape character receptor, viewpoint or visual receptor, and may therefore affect the significance of the effect on that receptor;
  - The presence of a relevant designation can lead to the selection of a representative viewpoint within the designated area, as the viewpoint will provide a representative outlook from that area; and
  - Designated areas may be included as landscape character receptors so that the effects of the proposed Development on these features of the landscape that have been accorded particular value can be specifically assessed.
106. In relation to the proposed Development, landscape designations within the Study Area include:
- Dumfries and Galloway Regional Scenic Areas (RSAs) – Galloway Hills, Rhins Coast and Mochrum Lochs;
  - South Ayrshire Scenic Area (SA) – the SAs are not named, the closest part of the SA lies to the north of the Site within the Duisk Valley; and
  - Gardens and Designed Landscapes (GDLs) – there are 3 GDLs within the Study Area - Castle Kennedy GDL; Lochryan GDL; and Glenapp GDL.

<sup>1</sup> <https://www.nature.scot/professional-advice/landscape/landscape-character-assessment/landscape-character-assessment-scotland>

- Dumfries and Galloway Non Inventory Garden and Designed Landscapes (NIGDL) – there are 15 within the Study Area – Glentool Lodge NIGDL; Castle Stewart NIGDL; Glencaird NIGDL; Torwood NIGDL; Craighlaw NIGDL; Shennanton Hall NIGDL; Mochrum Park NIGDL; Merton Hall NIGDL; Kirroughtree NIGDL; Old Place of Mochrum NIGDL; Dunragit House NIGDL; Balkail NIGDL; Culhorn NIGDL; Genoch NIGDL; and Corsewall House NIGDL.
107. Landscape designations found in the Study Area are shown on **Figures 6.4** and **6.9** (which shows landscape designations with the blade tip ZTV of the proposed Development overlaid). Whilst the access route crosses the SA, the area of the Site in which the proposed Development turbine layout is located is not subject to any form of landscape designation that is intended to protect it for its scenic qualities.
108. Whilst not specifically recognised as landscape designations the Galloway Forest Park and Dark Sky Park are valued recreational destinations as recognised within the DGC LDP. The Merrick SNH Wild Land Area (WLA) also lies to the east within the centre of Galloway Forest Park area. These areas have been included on **Figures 6.4** and **6.9** for reference to illustrate where the WLA, the park and its boundaries intersect with other landscape designations and landscape character types / units.

### 6.5.3 Visual Baseline Overview

#### 6.5.3.1 Zone of Theoretical Visibility (ZTV)

109. The blade tip ZTV is shown on **Figures 6.7a (45km)** and **6.7b (20km)** and the hub height ZTV is shown on **Figures 6.7c (45km)** and **6.7d (20km)**. The ZTVs indicate that potential theoretical visibility of the proposed Development is largely contained to the east by the large hill forms of the Merrick range (approximately 23 -25 km from the proposed Development turbines) with a break in theoretical visibility across the Glentool Village to Straiton minor road (NCN7) until the west facing slopes of the Merrick range. To the north, theoretical visibility is more patchy and is limited by the ridgeline of foothills south of Girvan (approximately 20 – 23 km from the proposed Development turbines). Whilst theoretical visibility to the north and west is limited within around 20-24 km of the proposed Development turbines, theoretical visibility becomes patchy at the outer edges of this coverage and in large parts of Glentool the forest restricts actual visibility. Theoretical visibility appears as a more consistent coverage across the plateau landscapes that surround the proposed Development (within around 10-15 km of the proposed Development turbines).
110. To the west theoretical visibility is found across much of the plateau moorland area, from the Site area to the western edges of the plateau where hills such as Braid Fell, Cairscarro and Glenwhan Moor (approximately 12 – 14 km) limit theoretical visibility on lower elevated coastal areas. To the south, theoretical visibility is found across the Plateau Moorland and Forest landscape from the Site area to the hills and ridgeline of rocky drumlins found to the north of the A75 road corridor (approximately 10 km). Further to the south, the ZTV shows theoretical visibility is also found across elevated parts of the Machars, some of which is wooded or within forestry. Distant theoretical visibility is also found on the east facing southern end of the Rhins peninsula and within Wigtown Bay.
111. The hub height ZTV is different than the blade tip ZTV in that the number of hubs visible within areas of theoretical visibility is far fewer than blades. A difference in theoretical visibility extent can also be seen when the hub and blade ZTVs are compared with much less extent for hub visibility than for blade. This typically happens at the edges of ZTV areas, which often less elevated are prone to blade only visibility on lower slopes or as found within the more distant landscapes to the south or north.
112. The solar ZTV is calculated for a detailed area of 5 km (**Figure 6.11**) and shows that theoretical visibility is restricted to within 1km to the east and limited beyond around 3km in other directions due to the successive layers of undulating topography that surrounds the Site. The areas of theoretical solar visibility beyond 3km is shown on the solar ZTV to largely occur as small patches on the tops of undulations within the Operational Killgallioch Windfarm to the north or to the south within the Aries area of Forest. Much of the solar theoretical visibility to the west and north occurs in areas of forestry which in reality would not have visibility of the solar array, further strips and wedges of forestry to the west and east largely contain the majority of solar theoretical visibility within the moorland in which it is located.

113. The Operational Kilgallioch Windfarm CZTV on **Figure 6.13a**, shows that theoretical visibility is very similar for Operational Kilgallioch Windfarm and the proposed Development with only small patches of 'Kilgallioch only' theoretical visibility shown in northern parts of the Study Area and small patches of 'proposed Development only' theoretical visibility shown in southern parts of the Study Area. The combined operational CZTVs on **Figures 6.13b to 6.13d** show that theoretical visibility of the proposed Development occurs almost entirely within the existing scenario for the Study Area.
114. Given that the proposed Development is an extension windfarm development to the Operational Kilgallioch Windfarm, the horizontal angle of view of the proposed Development and the amount of additional horizontal angle of view the proposed Development would result in when compared to the Operational Kilgallioch Windfarm has been calculated as part of the visual assessment at viewpoints. These horizontal angles are expressed in **Table 6.10** and highlighted in the viewpoint assessment text where required.
115. A Horizontal Zone of Theoretical Visibility (HZTV) (**Figure 6.8a**) has been produced for the proposed Development. A natural consequence of greater distance from the proposed Development results in a generally reduced horizontal angle of view and the visual effect would therefore likely diminish with distance. Generally, this will result in a higher magnitude of change from viewpoints at closer proximity, where the proposed Development might occupy a wider horizontal extent, and a lower magnitude of change from distant viewpoints. This can be seen on Figure 6.8a where for much of the area between 20 and 45 km, the extent of the horizon occupied by the proposed Development is very small.
116. A HZTV has also been produced to show the additional horizontal angle potentially occupied in direct relation to the operational Kilgallioch Windfarm (**Figure 6.8b**). These comparative horizontal angle of view calculations illustrate that the proposed Development would occupy a proportionally small amount of the view already occupied by the Operational Kilgallioch Windfarm that it is designed to extend. The proposed Development would often be seen to add only a small degree of additional development to the horizontal view already occupied by the operational Kilgallioch Windfarm and in many instances would not add any additional development to the horizontal view angle occupied by the operational Kilgallioch Windfarm.

#### 6.5.3.2 Overview of Principal Visual Receptors

117. Principal visual receptors are shown on **Figure 6.5** (**Figure 6.10** also shows principal visual receptors with the blade tip ZTV of the proposed Development). Principal visual receptors within the Study Area include settlements, residential properties, roads, rail, long distance walking routes and cycling routes. The key principal visual receptors in relation to the proposed Development are described below and the preliminary assessment provides an initial assessment of principal visual receptors within 20 km of the proposed Development.

#### 6.5.3.3 Settlements

118. The key settlements in relation to the proposed Development include New Luce, Barrhill and Bargrennan and Kirkcowan all of which lie close to the 10 km boundary. Larger settlements that fringe the Study Area include Stranraer and the market town of Newton Stewart.

#### 6.5.3.4 Residential Properties

The upland landscape of the Site and immediately surrounding landscape context is sparsely populated, with extensive areas of either remote moorland or commercial coniferous woodland with few individual properties. The Landscape Institute has published a technical guidance note relating to Residential Visual Amenity Assessment (RVAA).<sup>2</sup> The Technical Guidance Note explains that the 'exceptionally large' study areas of up to 3 km are disproportionate further stating that *'The logic for these (exceptionally) large study areas was based on certain findings of LVIA's which identified significant visual effects from 'settlements' or from clusters of residential properties within this range. This fails to recognise that RVAA is a stage beyond LVIA. Consequently, many RVAAs, including those of wind farms with large turbines (150 m and taller), have included disproportionately extensive study areas incorporating too many properties. This appears to be based on the misconception that if a significant effect has been identified in the LVIA adjacent to a property at 2.5 km it will also potentially lead to reaching the RVA Threshold.'* The Guidance then advocates a RVAA study area of between 1.5km and 2km *'when assessing relatively conspicuous structures such as wind turbines'*, recommending smaller study areas for less conspicuous

<sup>2</sup> Landscape Institute (2019). Technical Guidance Note 2/19 Residential Visual Amenity Assessment (RVAA).

development types. There are no properties within 2 km of the proposed turbine locations and therefore a residential amenity assessment is not required.

#### 6.5.3.5 Roads

119. There are a number of A and B class roads within the Study Area. Key routes for the proposed Development include the A714, A75, A77 and B7027.

#### 6.5.3.6 Rail

120. The Stranraer to Ayr railway line passes through the western half of the Study Area following the Luce River valley.

#### 6.5.3.7 Ferry Routes

121. Passengers on the Cairnryan to Larne and Cairnryan to Belfast ferry routes are within 20 km of the proposed Development within Loch Ryan.

#### 6.5.3.8 Recreational Routes

122. Long distance recreational walking routes in the Study Area include the SUW and Ayrshire Coastal Path. The Burns Heritage Trail, Robert Bruce Trail, Solway Heritage Trail and Mull of Galloway Trail are also within the Study Area. The national cycle route NCR7 is within Glentroot Forest to the east of the proposed Development and NCR73 lies to south on the Machars.

#### 6.5.3.9 Core Paths

123. There are no core paths within the Site area of the proposed Development, where the majority of the infrastructure would be located. DGC core path 504 is the route of the SUW which the access route from the north would cross near Laggangarn. The routes of core paths will not be altered in any way as a result of the proposed Development. DGC core path 334 'Glenkitten Fell' is a forested track, part of which lies within the Operational Kilgallioch Windfarm that connects the minor road that follows the Cross Water of Luce at Miltonise to the SUW at Brockloch Hill. DGC core path 432 is found to the south of the proposed Development and Aries windfarm around the Three Lochs. The SUW (and therefore core path 504) has been considered in a detailed sequential assessment and by a number of LVIA viewpoints located along its route (see **Figure 6.6**).

#### 6.5.3.10 Recreational destinations and visitor attractions

124. Tourism and recreation in the area are addressed in Chapter 13: Socio-economics, Tourism, Recreation of this EIAR. The areas of moorland and forestry within and immediately surrounding the proposed Development are not considered a specific tourist attraction, but despite this, the Study Area is visited and there are a number of discrete facilities for visitors.
125. Newton Stewart has a number of hotels and tends to be one of the main bases for exploring the region. In the wider Study Area, coastal areas such as Portpatrick and Girvan are popular. Wigtown is Scotland's National Book Town and is home to over 20 book-related businesses and an annual book festival. The SUW long distance route extends from Portpatrick on the west coast of the Rhins Peninsula to Cockburnspath on the east coast of the Scottish Borders, crossing the Study Area on its journey. The Official Guide to the Southern Upland Way (Smith, 2005), describes local accommodation suitable for people walking the route. Merrick and Cairnsmore of Fleet provide the focus for hill walkers. Glentroot is a popular area for visitors, with cycling, walking and visitor facilities focusing around the hub visitor centre at Glentroot. The region has become increasingly popular for mountain biking and the 7 Stanes facilities at Glentroot and Kirroughtree provide some of the highest quality downhill mountain bike trails available in the UK. Large parts of the Study Area have been designated as forest parks, for example Galloway Forest Park, with visitor facilities, parking, access tracks and picnic sites. The Rivers Cree, Stinchar, Duisk and Bladnoch are renowned for their salmon stocks. A large number of tourists pass along the A75 corridor through the southern part of the Study Area en route to and from Ireland via the ferries at Stranraer and Cairnryan.

#### Galloway Forest Park

126. The Galloway Forest Park (GFP), managed by Forestry and Land Scotland (FLS) lies approximately 9.8 km to the north east of the nearest proposed Development turbine. GFP covers the Galloway Hills including The Merrick, Mulwharcher and the Rhins of Kells hill ranges and the recreational trails found across and leading up to these hills.

The GFP is not a designation and has no formal status within the planning system, however it is considered as a recreational area within which people could experience views of the proposed Development while exploring the forest trails, three visitor centres and cycling/mountain biking trails. The Galloway Forest Park also includes The Merrick, Mulwharcher and the Rhins of Kells hill ranges with recreational trails found across and leading up to these hills. The GFP's three visitor centres, which are the hubs for activities that extend from these centres, Kirroughtree, Glentroot and Clatteringshaws.

#### Galloway Forest Dark Sky Park

127. The GFP was awarded status as a Dark Sky Park (DSP) in 2009 and was subsequently extended to land to the north and east in 2012 to include an area outside the GFP. The DSP is composed of two zones, namely a Core and Buffer Zone. The conditions for DSP status require stringent lighting guidance for the Core Zone. The Buffer Zone is required around the Core Zone to protect the status of the Core but does not in itself need to reach to the same dark sky class in order for the DSP to keep its status. DGC supports the DSP in LDP2 policy ED11. The Galloway Forest Dark Sky Park is located approximately 16.4 km to the east of the nearest proposed Development turbine with the Dark Sky Park Buffer Zone boundary lying approximately 11.7 km to the east of the nearest proposed Development turbine.
128. The park attracts people wishing to appreciate the night time sky with an absence of night time light pollution. FLS promotes 10 viewing locations in the DSP buffer zone<sup>3</sup> which offer stopping points to view the night sky. The sensitivity of the 10 viewing locations to the potential effects of the turbine lights is higher than other areas of the DSP, as visitors will come to these sites with the express intention of viewing the night sky and this experience could be affected by other sources of light. Of the 10 Viewpoints promoted by FLS for the DSP, Bruce's Stone in Glen Trool, has distant views of the existing Operational Kilgallioch Windfarm and also has potential views of the proposed Development. Bruce's Stone is included as an assessment viewpoint and a night time assessment location. Whilst the Hub ZTV (highest point on turbines proposed to be lit) shows theoretical visibility at Glentroot Visitor Centre - DSP viewpoint 3 and Caldons woodlands - DSP viewpoint 5, substantial intervening forestry prevents unobstructed views to the west that would allow a view of the proposed Development turbine lights.
129. While these 10 viewing locations are identified as being suitable viewing sites, people could feasibly be viewing the night sky from any part of the Dark Skies Park. Parts of the Core Zone of the DSP around the Merrick uplands, which offer visibility of the proposed Development are remote upland areas and they are not generally somewhere that people are likely to go at night to view the night sky (in general, people would tend to use the viewing locations). Further to these specifically identified Dark Sky Park viewpoints, areas of potential visibility within the Dark Sky Park (and buffer area) that lie with Glentroot Forest have been closely scrutinised during field work and it is considered that all of the other areas of potential visibility that occur within reach of a public highway do not have any actual visibility of proposed Development turbines due to the large amount of forestry within Glentroot Forest that intervenes.

#### 6.5.3.11 Overview of Viewpoints

130. The viewpoints used in the assessment have been selected to cover points of specific importance such as recognised viewpoints, landscape character, settlement, routes and hilltops, and to inform the definition of the likely extent of significant visual effects arising from the proposed Development. A variety of landscape types and points from different directions and distances have also been represented in the selected views.
131. 17 viewpoint locations have been selected in consultation with DGC and SNH. **Table 6.5.1** below lists the viewpoints and provides information on their location, the receptors which may experience views at these locations, viewpoint elevation and distance and direction from the proposed Development. Viewpoint locations are shown in conjunction with the blade tip ZTV on **Figures 6.7a-b** and their locations are mapped at detailed scale in the visualisations in **Figures 6.15a – 6.31b**.

<sup>3</sup> FLS DSP leaflet online at - [https://forestryandland.gov.scot/images/pdf/rec\\_pdfs/DarkSkiesLeaflet.pdf](https://forestryandland.gov.scot/images/pdf/rec_pdfs/DarkSkiesLeaflet.pdf)

Ref	Viewpoint name	Receptor	Landscape Character Type (LCT) / Landscape designation	Grid ref	Elevation (AOD m) / nearest proposed turbine (m) / direction
1	Eldrig Fell	Recreational (Walkers)	Plateau Moorland with Forest (17a), Glentroot unit	225248 568752	224.0 906 NW
2	SUW (Knockniehourie)	Recreational (Walkers)	Plateau Moorland (17), Balker Moor	221291 568297	195.0 2254 E
3	SUW (Craig Airie Fell)	Recreational (Walkers)	Plateau Moorland with Forest (17a), Glentroot unit	223610 573665	314.4 2792 S
4	SUW (West of Derry)	Recreational (Walkers)	Plateau Moorland with Forest (17a), Glentroot unit	225871 573419	169.3 2877 SW
5	B7027 Loch Maberry	Road users Recreational (Fishing)	Plateau Moorland with Forestry and Windfarms (18c) / South Ayrshire Scenic Area	228803 575606	120.9 6364 SW
6	Minor Road near Bennylow (Culvennan Fell)	Road users	Drumlin Pasture in Moss and Moor Lowland (12)	229982 564194	129.9 7471 NW
7	Mains of Larg (New Luce)	Settlement Road users Rail passengers	Plateau Moorland (17), Balker Moor	216928 564162	68.8 8265 NE
8	SUW (Hill of Ochitree)	Recreational (Walkers)	Plateau Moorland with Forest (17a), Glentroot unit	232706 574102	180.0 8717 W
9	A75 Dergoals	Road users	Moss and Forest Lowland (11)	224492 559028	92.7 10263 N
10	SUW (Glenwhan Moor)	Recreational (Walkers)	Plateau Moorland (17), Balker Moor	214352 561680	127.6 11869 NE
11	A714, Bargrennan Cottage	Road users	Plateau Moorland with Forest (17a), Glentroot unit	234254 578260	100.1 12191 SW
12	A714 north of Newton Stewart.	Road users	Drumlin Pasture in Moss and Moor Lowland (12) / Edge of Galloway Hills RSA	240112 566813	35.2 15486 W
13	Mochrum Loch	Road users	Plateau Moorland with Lochs (17b) / Mochrum Lochs RSA	230614 554686	75.9 15825 N
14	Bruce's Stone, Glen Trool / Dark Sky Park	Visitor attraction	Rugged Granite Upland (21), Merrick unit / Galloway Hills RSA	241587 580344	138.7 19484 WSW
15	A77 by Cairnpat	Road users	Penninsula (1), Rhins	205295 555795	73.0 22544 NE

Ref	Viewpoint name	Receptor	Landscape Character Type (LCT) / Landscape designation	Grid ref	Elevation (AOD m) / nearest proposed turbine (m) / direction
16	The Merrick	Hill Walker	Rugged Granite Upland (21), Merrick unit / Galloway Hills RSA	242750 585555	833.9 23380 SW
17	A75, Point Nets	Road users	Coastal Flats (2), Wigtown & Cree, Fleet Fringe / Galloway Hills RSA	247197 557682	5.2 25377 NW

Table 6.5.1: LVIA viewpoints

### 6.5.4 Wind Energy Development Baseline

#### 6.5.4.1 Introduction

132. The difficulty with combined effects is acknowledged by the Landscape Institute in the *Guidelines for Landscape and Visual Impact Assessment (GLVIA)* at Paragraph 7.18:

*"Agreement should also be reached about whether the cumulative effects assessment is to focus primarily on the additional effects of the main project under consideration, or upon the combined effects of all of the past, present and future proposals together with the new project. Some of those involved may tend to favour a limited view focused on the additional effects of the project being assessed, on top of the cumulative baseline. Some stakeholders may however be more interested in the combined effects of all the past, current and future proposals, including the proposed scheme. Again, discussion will be needed at the scoping stage with the competent authority and the consultation bodies about what can reasonably be expected, especially as assessing combined effects involving a range of different proposals at different stages in the planning process can be very complex. Furthermore, the assessor will not have assessed the other schemes and cannot therefore make a fully informed judgement. A more comprehensive overview of the cumulative effects must rest with the competent authority."*

133. The cumulative assessment set out in the LVIA assesses only the additional landscape and visual effects of the proposed Development, in the context of different baseline scenarios that make assumptions about existing and proposed windfarms. It does not present an assessment of the combined effects of all of the relevant windfarms on the landscape. However, in considering the detailed cumulative effects described within the LVIA, a broad statement relating to the combined cumulative effect of multiple windfarms in the area has also been provided in the LVIA summary. While the combined effects are of relevance to the decision maker, the Applicant does not have detailed information about each of the other projects that would allow a combined effects assessment to be presented.

#### 6.5.4.2 Scope of Cumulative Assessment

##### Existing wind energy developments

134. Operational wind energy developments are a long-established feature of the immediate and upland landscape context within the Study Area. Operational and under-construction windfarms are assumed to be part of the baseline conditions.

135. The Operational Kilgallioch Windfarm lies immediately to the west and north of the proposed Development at 580 m from the nearest proposed Development turbine. Other operational windfarms within the immediate area include – Aries Farm (2.06 km to the south east); Artfield Fell (2.23 km to the south); Balmurie Fell (2.58 km to the south); and Glenchamber (4.51 km to the south). Arecleoch Windfarm lies 7.65 km to the north, Carscreugh lies 7.97 km to the south, Mark Hill lies 13.24 km to the north and Glen App lies 13.94 km to the west of the proposed Development.

##### Consented wind energy scenario

136. In addition to the existing wind energy developments, there is potential for further change to the landscape and visual baseline as a result of consented wind energy developments being built. The 'consented scenario' assumes

that all consented stage wind energy developments have become operational and are part of a theoretical baseline situation that also includes the existing and under construction stage windfarms. There are a number of consented windfarms in the Study Area, the closest of these include Chirmorie 6.10 km to the north and Stranoch 1 6.80 km to the north west of the proposed Development.

**Application wind energy scenario**

137. Similar to the consented scenario, the 'application scenario' assumes that all application stage wind energy developments have become operational and are part of a theoretical baseline situation that also includes existing, under construction and consented stage windfarms. There is greater uncertainty in the prediction of potential changes resulting from windfarm planning applications, as they may or may not ultimately become built features in the landscape.
138. The Study Area includes the undetermined applications of Stranoch 2, Arecleoch Extension and Clauchrie. Stranoch 2 is an application on the same site as the consented Stranoch 1 for a windfarm development with a similar footprint with larger turbines than consented. The LVIA assesses the Stranoch 2 application as a replacement to the consented scheme within this scenario as these developments would not both be built.
139. There are also a large number of scoping stage proposals in the area. Scoping sites closest to the proposed Development include Arnsheen and Bargrennan which would extend the influence of the existing windfarms in the immediate area. Scoping stage sites are mapped on **Figures 6.12a-b** for reference but are not considered further in the assessment, due to layout and design uncertainties at the pre-application stages.

**Preliminary assessment of cumulative windfarms**

140. An initial map of cumulative sites was produced to provide a broad understanding of the pattern of wind energy development in the surrounding landscape within a 45 km radius search area (**Figure 6.12a**). This cumulative map includes operational, consented and application stage wind energy developments as of the 24<sup>th</sup> September 2019 cumulative cut-off date for this LVIA.
141. Based on surrounding topography and the locations of groups of windfarm developments within this 45 km search area, it is considered that there is no likelihood of significant cumulative effects between the proposed Development and any of the cumulative sites that lie beyond 20 km of the proposed Development (**Figure 6.12b**). Sites beyond 20 km are found to not have any substantive influence on the cumulative situation and there is limited visibility of these sites from the proposed Development LVIA viewpoints or key sequential routes (See Figures 6.13a-j)
142. For this reason, the detailed assessment within the LVIA has focussed on the cumulative sites within 20 km of the proposed Development (the Study Area) and these are listed below in **Table 6.5.2**. Cumulative windfarms are shown on **Figure 6.12b** and diagrams showing Cumulative Zone of Theoretical Visibility (CZTV) for those developments within 20 km of the proposed Development are shown on **Figures 6.13a-j**.

Wind energy development	No. of turbines	Blade Tip Height (m)	Distance from the proposed Development turbines (km)	Local Authority	Status
Airies Farm	14	136.5	2.06	Dumfries & Galloway	Operational
Arecleoch	60	118	7.65	South Ayrshire	Operational
Artfield Fell	15	74	2.23	Dumfries & Galloway	Operational
Balmurrie Fell	7	74	2.58	Dumfries & Galloway	Operational
Barlockhart Moor	4	115	12.36	Dumfries & Galloway	Operational
Carscreugh	18	70	7.97	Dumfries & Galloway	Operational
Glen App	11	126.5	13.94	South Ayrshire	Operational

Wind energy development	No. of turbines	Blade Tip Height (m)	Distance from the proposed Development turbines (km)	Local Authority	Status
Glenchamber	11	126.5	4.51	Dumfries & Galloway	Operational
Kilgallioch	96	2 x 125 94 x 146.5	0.58	Dumfries & Galloway	Operational
Mark Hill	28	110	13.24	South Ayrshire	Operational
Bartlockhart Moor Extension	4	115	12.18	Dumfries & Galloway	Consented
Chirmorie	21	146.5	6.10	South Ayrshire	Consented
Stranoch 1	24	16 x 110 8 x 135	6.80	Dumfries & Galloway	Consented
Arecleoch Extension	14	200	8.80	South Ayrshire	Application
Clauchrie	16	200	16.90	Dumfries & Galloway	Application
Stranoch 2	20	2 x 140 8 x 149.9 10 x 175	6.43	Dumfries & Galloway	Application
Airriequhillart	18	136.5	18.75	Dumfries & Galloway	Scoping
Arnsheen	12	Unknown	3.69	Dumfries & Galloway	Scoping
Bargrennan	15	137	7.71	Dumfries & Galloway	Scoping
Barskeoch	1	130	11.31	Dumfries & Galloway	Scoping
Garvilland	6	150	5.78	Dumfries & Galloway	Scoping
Mindork	21	Unknown	11.86	Dumfries & Galloway	Scoping

Table 6.5.2: Cumulative windfarms within 0-20 km of the proposed Development

143. Whilst not assessed in detail in the LVIA, cumulative developments beyond the Study Area (between 20 km and 45 km) are included in wireframe diagrams to support the approach to cumulative assessment. For reference these cumulative windfarms are also listed in **Table 6.5.3** below.

Wind energy development	No. of turbines	Blade Tip Height (m)	Distance from the proposed Development turbines (km)	Local Authority	Status
Assel Valley	10	110	23.76	South Ayrshire	Operational
Dersalloch	23	1 x 110 5 x 115 17 x 125	36.29	South Ayrshire	Operational
Dowhill Farm	1	77	32.05	South Ayrshire	Operational
Hadyard Hill	52	110	23.56	South Ayrshire	Operational
Knocknain Farm	1	53.7	26.55	Dumfries & Galloway	Operational
Meikle Float Farm	1	54	27.42	Dumfries & Galloway	Operational

Wind energy development	No. of turbines	Blade Tip Height (m)	Distance from the proposed Development turbines (km)	Local Authority	Status
North Rhins	11	0	23.57	Dumfries & Galloway	Operational
Penwhapple	1	67	26.15	South Ayrshire	Operational
North Threave	1	53.71	33.13	South Ayrshire	Operational
Tralorg	8	100	25.94	South Ayrshire	Under Construction
Benbrack	18	130	41.34	Dumfries & Galloway	Consented
Chapleton Farm	3	67	33.97	South Ayrshire	Consented
Glenshimmeroch	10	149.9	44.41	Dumfries and Galloway	Consented
High Barcaple	1	62	43.45	Dumfries and Galloway	Consented
Kirk Hill	8	110	33.64	South Ayrshire	Consented
Knockman Hill	5	81	44.05	Dumfries and Galloway	Consented
Larbrax	8	100	26.84	Dumfries & Galloway	Consented
South Kyle	50	149.5	43.11	Dumfries & Galloway	Consented
Trostle	1	53.71	41.78	Dumfries and Galloway	Consented
Torrs Hill	2	100	33.31	Dumfries & Galloway	Under Construction
Benbrack Variation	18	1 x 132 1 x 135 16 x 149.9	41.34	Dumfries & Galloway	Application
Millenderdale	5	110	20.55	South Ayrshire	Appeal
Shepherds Rig	19	2 x 125 17 x 149.9	43.00	Dumfries & Galloway	Application
South Port o Spittal	3	66.6	27.40	Dumfries & Galloway	Application
Windy Standard III	20	8 x 125 12 x 177.5	43.39	Dumfries & Galloway	Appeal
Blackmyre Moor	10	80	28.38	Dumfries & Galloway	Scoping
Cailiness Farm	5	74	34.68	Dumfries & Galloway	Scoping
Mark Farm	11	110	27.62	Dumfries & Galloway	Scoping
Irelandton	4	99.5	40.65	Dumfries & Galloway	Scoping
Benshinnie	24	125	44.38	Dumfries & Galloway	Scoping
Barlay Hill	10	126	44.18	Dumfries & Galloway	Scoping
Knocknalling	14	150	35.46	Dumfries & Galloway	Scoping
Knockower	16	145	34.80	Dumfries & Galloway	Scoping
Torrs Hill B	12	250	32.86	Dumfries & Galloway	Scoping

Table 6.5.3: Cumulative windfarms within 20-45 km of the proposed Development

## 6.6 Assessment of Physical Landscape Effects

### 6.6.1 Introduction

144. The first category of effects covered in the assessment is physical effects, which are direct effects on the fabric of the Site, such as changes to ground cover. Physical effects are found only on the Site, where existing landscape elements may be removed or altered by the proposed Development. The methodology for the assessment of physical effects is described in full in **Technical Appendix 6.1**. It should be noted that landscape elements are assessed with reference to their contribution to the landscape rather than in ecological terms.
145. The areas of the Site in which the turbines and the majority of infrastructure would be located are almost entirely within moorland ground cover. The moorland of the Site also contains patches of improved grassland associated with historic grazing use and the derelict farm at High Eldrig has a series of broken drystone walls. As described in the site context section there are also a number of archaeological features scattered across the site and immediate area. These features are largely found on top of the undulations within the site but also associated with High Eldrig (refer to **Chapter 11: Archaeology and Cultural Heritage** for more detail on these features).
146. The access route includes areas of commercial forestry and whilst much of this is already used to access the Operational Kilgallioch Windfarm a new section of track would be required to connect to the proposed Development and minor alterations may be required to the existing tracks to allow larger rotors access to the site.
147. The physical landscape effect of the proposed Development on the moorland and coniferous forestry landscape elements is assessed in detail below.

### 6.6.2 Moorland

#### 6.6.2.1 Sensitivity

148. The moorland on the Site comprises grasses and heathers typical of the Scottish uplands and upland areas within Dumfries and Galloway. Within the immediate context of the Site (Plateau Moorland and Forestry LCT 17 and Plateau Moorland LCT 17), moorland ground cover is an abundant landscape element and whilst its ecological sensitivity is recognised in the nearby moorlands of Kirkowan Flow, River Bladnoch and Blood Moss it is not rare and is not specifically recognised for its value within the Site area. As a result, moorland ground cover is considered to have a medium landscape value. The susceptibility to change of this landscape element is medium-low due to the potential for reinstatement and restoration of the ground cover following construction. The combination of the medium-low susceptibility to change with medium value results in a medium sensitivity for moorland ground cover.

#### 6.6.2.2 Magnitude of Change

149. All of the proposed Development turbines and solar panels would be located on moorland. The proposed turbines would have concrete foundations that would remove the moorland ground cover at the base of each turbine. The solar panels are proposed to be mounted on steel frames that sit above the ground and so avoid the need for further areas of moorland, beneath the solar panels, to be removed. It is understood from **Chapter 4: Development Description** that the moorland ground cover would continue to grow around the solar panels and can be grazed by sheep.
150. Much of the infrastructure required would also be located on moorland, including access tracks (except access route to site), crane hardstandings, meteorological mast, construction compound, operations building, borrow pits and cable routes are all proposed to be located within this land cover. The proposed Development would result in an alteration to the moorland ground cover from the removal of small areas of this landscape element during the construction phase. Following construction, moorland would be reinstated over the areas not permanently occupied by infrastructure that have been disturbed by landform change including the restored construction compound, cable

routes and borrow pits. The remaining moorland within the Site would be retained over the lifetime of the proposed Development.

151. The area of moorland to be removed in the construction and operation of the proposed Development is very limited in relation to the total area of moorland on the site and elsewhere within the Plateau Moorland with Forest LCA (17a), Glentroot unit. The extent of moorland removal is not considered to constitute a redefinition of this landscape element as a component of the site area or the wider landscape. The magnitude of change of this removal is therefore considered to be low.

#### 6.6.2.3 Significance of the Effect

152. The effect of the proposed Development on moorland is considered to be not significant. This is due to the low magnitude of change and medium sensitivity when considered together.

### 6.6.3 Coniferous Forestry

#### 6.6.3.1 Sensitivity

153. The value of this landscape element is medium-low; it is a widespread and commercially-grown landscape element that is not rare or specifically recognised for its value. Whilst not a characteristic within the site area, commercial forestry is a key characteristic of the Plateau Moorland with Forest LCA (17a) Glentroot unit. The 'with forest' characteristic is also common to neighbouring LCTs e.g. Plateau Moorlands with Forestry & Windfarms (18c) LCT in South Ayrshire. Commercial 'sitka spruce' forestry is a common feature between these and the mosaic of forestry and areas of clear fell are constantly changing as areas of forestry are felled and replanted. Whilst the forestry contributes to the overall character of the upland landscape in its contrast to areas of plateau moorland, it is planted with the intention that it will eventually be felled. Once felled, coniferous forestry can relatively easily be replaced and over time will mature to the scale and age of trees removed. Susceptibility of the forestry to the further changes that the proposed Development would bring is therefore considered to be medium-low. The combination of the medium-low susceptibility to change with medium-low value results in a medium-low sensitivity for coniferous forestry.

#### 6.6.3.2 Magnitude of Change

154. Up to 9.2 ha of coniferous forestry would be removed as a direct result of the proposed Development, requiring felling on the routes of access track to the north. The magnitude of change for this landscape element is considered to be negligible.

#### 6.6.4 Significance of the Effect

155. The removal and replanting of areas of coniferous woodland will contribute to very little change in the landscape character of the area and the essential function of this landscape element as a commercial forest would not be altered or redefined in any way. The effect of the proposed Development on coniferous forestry would not be significant due to the factors that contribute to the medium-low sensitivity of the forestry and the negligible magnitude of change upon it.

#### 6.6.5 Cumulative Physical Effects

156. The windfarm developments in both the consented and application scenarios are not within the immediate landscape context of the proposed Development. No cumulative interaction between these physical effects is therefore predicted resulting in no cumulative effect.

## 6.7 Landscape Character Assessment

### 6.7.1 Introduction

157. Landscape character is the distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape, and the way that this pattern is perceived. Effects on landscape character occur both on the Site, where the pattern of elements that characterises the landscape would be directly altered by the addition of the proposed Development to the landscape; and offsite, around the Study Area, where visibility of the proposed Development may alter the way in which this pattern of elements is perceived.

158. It should be noted that levels of magnitude of change on landscape character receptors are generally found to be lower than the magnitude of change on viewpoints that lie within these receptors. This means, for example, that if a viewpoint is assessed to undergo a medium-high magnitude of change it does not necessarily follow that the landscape character types within which it lies would also undergo a medium-high magnitude of change but may undergo a medium magnitude of change instead. This is because the effects on viewpoints are assessed within the context of a specific outlook of the proposed Development and are usually specifically selected to gain a direct view over the Site. The landscape character of a receptor is not necessarily determined so specifically by the outlook over the proposed Development, and there are many other considerations, both visual and perceptual, that may combine to give an area its landscape character. This means that the proposed Development may have a lesser degree of influence on landscape character than on a specific view. This is particularly true of areas that lie slightly further away from the proposed Development. In the immediate vicinity of the Site, up to around 2 km away - the magnitude of change on viewpoints and landscape character is likely to be similar, but beyond this, the magnitude of change on landscape character is found to often diminish more rapidly as the influence of the turbines is subsumed in the many other influences on landscape character. Viewpoints are referred to in this assessment as they do give a useful indication of the appearance of the proposed Development from specific locations within the various landscape receptors, but the level of magnitude of change may vary between the viewpoint assessment and the landscape character assessment. As described in the baseline overview, in order to focus the assessment on assessing potential significant effects, the LVIA has focussed its assessment of Landscape Character receptors within 20km (the Study Area).

### 6.7.2 Preliminary Assessment

#### 6.7.2.1 Landscape Character Preliminary Assessment

159. Landscape Character Types / units (LCTs) in the Study Area are assessed using ZTV analysis (Figure 6.9), to identify which of the LCTs are likely to be influenced by the proposed Development. Using this analysis, Table 6.7-1 identifies the LCTs that have the potential to undergo significant effects and require to be assessed in detail.

Status – Potential for significant effects and included in detailed assessment.	
Landscape Character Type (LCT)	Comment
Dumfries and Galloway – 17a - Plateau Moorland with Forest (Glentroot unit)	All of the turbines and proposed Site infrastructure would be located within this LCT.
Dumfries and Galloway - 17 - Plateau Moorland (Balker Moor unit) 12 - Drumlin Pasture in Moss and Moor Lowland (Machars unit) South Ayrshire – 18c - Plateau Moorlands with Forestry & Wind Farms	Neighbouring LCTs that fringe the LCT within which the proposed Development is located. Potential for significant effects due to close relationship with upland setting of host LCTs.
Status – Considered further in preliminary assessment but found to have no potential for significant effects and not included in detailed assessment.	
Landscape Character Type (LCT)	Comment
South Ayrshire – 13 - Intimate Pastoral Valley	Limited levels of visibility extent across the LCT. Existing windfarms experienced to the south of this LCT, both in the foreground (Kilgallioch) and in the background (Aries, Artfield Fell and Balmurrie Fell), moderate the potential additional influence that the proposed Development would have on the characteristics of this LCT. It is considered that there is no potential for the character of this LCT to be significantly affected.
Dumfries and Galloway - 11 - Moss and Forest Lowland (Machars and Mochrum units) 17b - Plateau Moorland with Lochs (Machars unit) 13 - Drumlin Pastures (Machars unit)	The ZTV shows theoretical visibility across much of the elevated parts of these LCTs, on the Machars to the south of the site. However, the intervening ridgeline landform to the north of the A75 limits the view of the wider plateau beyond and where visible the proposed Development would be experienced from these LCTs within a context of existing

	wind turbines on the plateau, moderating the potential additional influence that the proposed Development would have on the characteristics of these LCTs. It is considered that there is no potential for the character of these LCTs to be significantly affected.
Dumfries and Galloway 3 - Shallow Flat Bottomed Valley (Water of Luce unit) 4 - Narrow Wooded River Valleys (Cree unit)	The Shallow Flat Bottomed Valley of the Water of Luce has very little theoretical visibility and potential views are further screened by intervening woods and forestry blocks found on the fringes of the valley and plateau landscapes. The Narrow Wooded River Valley of the Cree has potential visibility from elevated eastern slopes although the majority of these slopes are forest or woodland. It is considered that there is no potential for the character of this LCT to be significantly affected.
Dumfries and Galloway: 21 - Rugged Granite Upland (Merrick unit)	Within these LCTs, the ZTV shows that theoretical visibility is found on elevated west facing slopes of the Merrick and its surrounding foothills to the north and west of the summit. The strong baseline of existing windfarms which are seen to the west from hill summits and west facing slopes within this LCT, include Barlockhart Moor, Carscreugh, Airies Farm, Glenchamber, Meikle Float, Artfield Fell, Balmurrie Fell, Kilgallioch, North Rhinns, Knocknain, Glen App, Arecleoch and Mark Hill, totalling 276 turbines with further windfarm development in other view directions. This substantially moderates the potential additional influence that the proposed Development would have on the characteristics of this LCT. It is considered therefore that there is no potential for the character of this LCT to be significantly affected. See also viewpoint 20 Merrick.
21a - Rugged Granite Upland with Forest (Merrick unit)	The majority of theoretical visibility within this LCT is found within large areas of forest which intervenes in views of the proposed Development. It is considered therefore that there is no potential for the character of this LCT to be significantly affected.
<b>Status – Limited level of influence to the defining characteristics, due to limited / restricted or distant visibility of the proposed Development, such that there is no potential for significant effects.</b>	
Dumfries and Galloway 1 – Peninsula (Machars; and Rhins units) 2 - Coastal Flats (Stranraer Basin; and Wigtown & Cree / Fleet Fringe units) 16 - Upland Fringe (Camrie Fringe; Balker Moor Fringe; Glentrool Fringe; and Cairharrow Fringe units) 18a - Foothills with Forest (Cairnsmore unit) 19 - Southern Uplands (Beneraird unit)	South Ayrshire 14 - Upland Glens, Glen App unit 17e - Coastal Foothills 20b - South Ayrshire Southern Uplands 21 - Rugged Uplands with Loch & Forest
<b>Status – No theoretical visibility of the proposed Development. No potential for significant effects and not included in detailed assessment.</b>	
South Ayrshire 1c - Raised Beach Coast with Flat Fields & Headlands 1d - Raised Beach Coast with Rocky Shore	7d - South Ayrshire Lowlands 14 - Upland Glens, Glen Tig unit 22 - Glenapp Coastal Farmland & the Policies

Table 6.7-1: Preliminary assessment LCTs

### 6.7.2.2 Landscape Designations Preliminary Assessment

160. Landscape Designations in the Study Area are assessed using ZTV analysis (Figure 6.9), to identify which are likely to be influenced by the proposed Development. Using this analysis, Table 6.7-2 identifies the landscape designations that have the potential to undergo significant effects and require to be assessed in detail.

<b>Status – Potential for significant effects and included in detailed assessment.</b>	
<b>Landscape designation</b>	<b>Comment</b>
South Ayrshire SA (Duisk Valley)	Included in detailed assessment due to the proximity of the southernmost area of SA (Duisk Valley) to the proposed Development. All other parts of the SA are not assessed in detail due to distance and the fact that the proposed Development would be seen on the skyline in the immediate context of other operational windfarms visible at closer range.
<b>Status – Limited level of influence to the defining characteristics, due to limited / restricted or distant visibility of the proposed Development, such that there is no potential for significant effects.</b>	
<b>Landscape Designation</b>	<b>Comment</b>
<ul style="list-style-type: none"> <li>Castle Kennedy GDL</li> </ul>	Not included in detailed assessment due to distance and limited extent of ZTV.
<ul style="list-style-type: none"> <li>Galloway Hills RSA</li> <li>Kirroughtree NIGDL</li> <li>Old Place of Mochrum NIGDL</li> </ul>	Not included in detailed assessment due to distance and fact that the proposed Development would be seen on the skyline in the immediate context of other operational windfarms visible, both in the foreground and background context of the proposed Development.
<ul style="list-style-type: none"> <li>Mochrum Lochs RSA</li> </ul>	Not included in detailed assessment due to distance and fact that the proposed Development would be seen on the skyline in the immediate context of other operational windfarms visible at closer range. Character of RSA relates primarily to Lochside/coastal context.
<ul style="list-style-type: none"> <li>Rhinns Coast RSA</li> </ul>	Not included in detailed assessment due to distance and fact that the proposed Development would be seen on the skyline in the immediate context of other operational windfarms visible at closer range. Character of RSA relates primarily to coastal/seaward context including the Machars rather than the uplands to the north.
<ul style="list-style-type: none"> <li>Glentrool Lodge NIGDL</li> <li>Castle Stewart NIGDL</li> <li>Glencaird NIGDL</li> <li>Torwood NIGDL</li> </ul>	Not included in detailed assessment as potentially visible areas shown on the ZTV would in reality be obscured by intervening forestry or estate woodlands
<ul style="list-style-type: none"> <li>Craighlaw NIGDL</li> <li>Shennanton Hall NIGDL</li> <li>Mochrum Park NIGDL</li> <li>Merton Hall NIGDL</li> </ul>	Not included in detailed assessment due to the very limited extent of ZTV
<b>Status – No theoretical visibility of the proposed Development. No potential for significant effects and not included in detailed assessment.</b>	
<ul style="list-style-type: none"> <li>Lochryan GDL; and</li> <li>Glenapp GDL.</li> <li>Dunragit House NIGDL</li> <li>Balkail NIGDL</li> </ul>	<ul style="list-style-type: none"> <li>Culhorn NIGDL</li> <li>Genoch NIGDL</li> <li>Corsewall House NIGDL</li> </ul>

Table 6.7-2: Preliminary assessment landscape designations

### 6.7.2.3 Wild Land Area Preliminary Assessment

161. In 'Descriptions of Wild Land Areas' (SNH 2017) the key attributes of the Merrick WLA are listed as follows:

- “A relatively small wild land area but with a strong perception of naturalness, few human artefacts and little contemporary land use;
- A wild land area that contrasts with the adjacent Forest Park, especially in terms of human activity;
- Human elements are widely visible from the tops and outermost slopes but lower-lying areas have a much stronger sense of remoteness; and
- A rugged landscape that provides a surprisingly high degree of physical challenge”

162. The WLA is located approximately 20.7 km from the nearest turbine of the proposed Development and theoretical visibility is limited to the west facing slopes and summit of the Merrick. The influence of the proposed Development on this WLA would be limited due to distance and as a result of the strong baseline of existing windfarms that are already a characteristic of views from the WLA to the west. Existing windfarms are located closer to the WLA than the proposed Development with Mark Hill approximately 12.8 km from WLA and Kilgallioch approximately 15.9 km from WLA. The position of the proposed Development within this context of the existing windfarm developments in view also ensures that it would not contribute to a significant cumulative effect on the WLA.

163. Taking all of this into account, it is concluded that the wildness qualities of the WLA could not be significantly affected by the proposed Development and no further assessment is required in the LVIA.

#### 6.7.2.4 Summary of Preliminary Landscape Character Assessment

164. The preliminary assessment has identified the following principal landscape receptors that require to be assessed in full as a result of the potential effects of the proposed Development.

#### Landscape Character

Dumfries and Galloway

- 17a - Plateau Moorland with Forest (Glentrool unit)
- 17 - Plateau Moorland (Balker Moor unit)
- 12 - Drumlin Pasture in Moss and Moor Lowland (Machars unit)

South Ayrshire

- 18c - Plateau Moorlands with Forestry & Wind Farms

#### Landscape Designations

- South Ayrshire SA (Duis Valley)

### 6.7.3 Detailed Assessment of Landscape Character Effects

#### 6.7.3.1 17a - Plateau Moorland with Forest (Glentrool Unit)

Baseline conditions
<p><b>Baseline description</b></p> <p>The proposed Development is located within this LCT. Much of this LCT is highly modified by large and expansive areas of commercial forestry. Whilst only two areas of moorland remain within the LCT other larger areas of moorland (framed by the same commercial forestry in this LCT) are abundant in neighbouring LCTs. The two areas of moorland in this LCT are therefore not exceptional to the underlying character make up found in the wider landscape for which forestry and moorland (and more recently windfarms) are the key defining and characteristic landscape elements. The SNH 2019 character assessment describes the key characteristics for this LCT as follows –</p> <ul style="list-style-type: none"> <li>• ‘Elevated flat or gently undulating landscape of large scale.</li> <li>• Dominance of forestry, with a consistent blanket of dark green, superimposed on plateau moorland, currently being restructured as part of felling rotations, and to accommodate wind farm development.</li> <li>• Some large-scale open plateau moorland components within the area, and smaller pockets of open ground.</li> <li>• Rough grass, farmland and heathland in un-forested areas.</li> <li>• Dark horizons formed by forest margins.</li> <li>• Evidence of historic and pre-historic land use in un-forested areas.</li> <li>• Sparsely populated, but with some pockets of settled farmland.</li> </ul>

- Occasional loch basins, which are a focus for some recreational and tourist facilities.
- Wind farm development of forested or recently clear-felled areas northwestern, western and southwestern areas.
- Remote and exposed character.’

The DGWLCS describes this LCT as follows: ‘Key characteristics of the Plateau with Forest (17a) comprise a gently undulating landform and extensive scale, a generally simple land-cover of large scale coniferous forestry interspersed with areas of open moorland and farmland and sparse settlement. While these key characteristics present opportunities for potential development, areas of open moorland, small pronounced hills, loch basins and pockets of settled farmland, pre-improvement and prehistoric sites and landscapes are important in contributing diversity to this landscape and are of increased sensitivity. The proximity of the Merrick WLA is also a key constraint. Wind farms are a key characteristic of this landscape and the variety of operational and under-construction wind farm developments (in terms of the height, number and layout of turbines) and their differing relationship to landform features (whether sited in shallow basins, extensive plateaux or on small hills) further constrains opportunities for additional wind turbines to be accommodated.’

In the DGWLCS and also in DGWED SG (in reference to DGWLCS), sensitivity to a ‘very large turbine typology’ (>150 m tip height) for this LCT is summarised as ‘High’, ‘principally due to cumulative effects that would be likely to occur with some operational wind farms which comprise substantially smaller turbines and on the Galloway Hills, Merrick WLA and smaller scale diverse landscape features’

Sensitivity for each of the landscape criteria considered in DGWLCS is also summarised as:

- Scale and openness – Medium (‘Turbines towards the 200m high onshore turbines currently available could dominate the smaller scale settled outer fringes of this plateau and the small hills which are an occasional feature in this landscape. This typology would have a better scale relationship with the more expansive plateau areas’.)
- Landform – Medium-Low (‘Turbines sited on or close to occasional distinctive craggy knolls and small hills would overwhelm their size and detract from their more intricate form. Turbines could however relate to the gentle hill slopes and low-lying basins of the plateau’.)
- Land cover and landmark features – High-Medium (‘While larger turbines could fit with the simple pattern of forestry, if sited within or nearby open moorland and farmland, they would diminish the visual contrast it provides with forestry and therefore the diversity of the landscape type as a whole. Turbines of this size sited close to lochs would overwhelm their scale and adversely affect their landmark status’.)
- Settlement and archaeology – Medium (‘There is some scope to site this typology to avoid overwhelming settlement and archaeological features by being located within more extensively forested areas and set back from more populated areas. Open areas of moorland and farmland which feature settlement and archaeology would be of higher sensitivity to this typology’.)
- Landscape context – High-Medium (‘Turbines towards 200m high sited close to the western edges of this character type would dominate the settled and small scale Water of Luce Valley’)
- Perceptual qualities – Medium (‘Turbines sited within and close to the more extensive areas of open and undeveloped moorland would affect the sense of naturalness associated with these areas’.)
- Views and visibility – High (‘The sparsely settled nature of this character type, the presence of large wind farm developments and the screening provided by extensive forestry reduces visual sensitivity. Turbines of this size could increase the extent of development visible on key skylines on the Upper Water of Luce, tributary valleys and Duis Valley and seen from key roads. Views to and from the Galloway Hills, from minor roads and from the SUW could also be affected and the focus provided by small lochs, which provide visual interest within the predominant forest cover of this character type, could also be diminished’.)
- Landscape values – High-Medium (‘The absence of designations in the majority of the character type reduces sensitivity. However, development located within and close to the RSA would affect the sweeping and dramatic views of the hills and the setting provided by forested hill slopes to the dramatic summits of the Galloway Hills. Effects on the Merrick Wild Land Area may occur with turbines of this size likely to have significant effects particularly if located in the eastern part of this character type’.)

The DGWLCS ‘Guidance for Development’ section of this LCT is summarised as ‘All development typologies should avoid impacting on the setting and views to small lochs, on areas of more complex landform, including small but pronounced hills such as Glenvernoch Fell, and on archaeological features as these enrich the landscape of this character type and often provide a focus in views. Intrusion on key views to the Galloway Hills, for example from the A714 and the Cree valley, should be avoided. Potential cumulative landscape and visual effects with other operational and consented wind farms would need to be carefully considered as this landscape is considered to be close to reaching capacity for additional development. Key cumulative sensitivities are likely to include effects on smaller scale settled landscapes on the outer

*fringes of this landscape, on the Merrick Wildland Area and on views from the southeastern coast of the Rhins, parts of the Machars, the Galloway Hills and the A75 and A714.'*

A large proportion (63 of 96 turbines) of the operational Kilgallioch windfarm are located in the north western regions of this LCT. The operational Aries windfarm is located in the south west of the LCT. In addition, the operational windfarms of Carscreugh, Glenchamber, Artfield Fell and Balmurrie Fell are also visible from within elevated and open areas of this LCT. Viewpoints within this LCT include - Viewpoint 01 – Eldrig Fell, Viewpoint 03 – SUW Craig Airie Fell, Viewpoint 04 – SUW west of Derry, Viewpoint 08 – Hill of Ochiltree and Viewpoint 11 – A714, Bargrennan Croft.

Value	Susceptibility	Sensitivity
This LCT is not subject to any national designations. The Galloway Hills RSA covers the eastern edges of this LCT across the southern Glentroll forest that lies within this LCT. The Dark Skies Park buffer also covers this eastern area of the LCT. However, the heightened value of the LCT does not extend to the western edges of the LCT where the proposed Development site is located. On balance, the value of this LCT is considered to be Medium.	This LCT is a large-scale landscape dominated by simple land cover such as large areas of undulating coarse grassland and forestry plantations. The overall character is typified by these characterising elements and it is considered that this LCT is an appropriate receiving landscape for wind energy development. The presence of historic land-use within this LCT increases its susceptibility. The baseline windfarm influence in this LCT reduces susceptibility to change and the 'sense of naturalness' described by the DGWLCS. Wind turbines are not an uncharacteristic feature in the landscape however, the potential for cumulative effects potentially increases susceptibility. On balance, the susceptibility of this LCT to the proposed Development is Medium.	The combination of the value of the landscape and its susceptibility to the proposed Development leads to an overall sensitivity of Medium.

**Assessment (including operational and under construction cumulative sites)**

**Magnitude of change**

The ZTV shows that theoretical visibility is extensive across this LCT. The actual visibility of the proposed Development is however moderated by the substantial forestry within the LCT which restricts the potential for landscape effects to areas of moorland which are far smaller in extent than the areas of forestry and not always with an unrestricted view towards the proposed Development.

- Factors that increase the magnitude of change are:
- Change to the experience of the landscape character of the LCT resulting from the addition of large scale wind turbines, associated infrastructure and solar array within it;
  - The proposed Development would increase the influence of wind energy development across the LCT;
  - The degree to which the proposed Development would contrast in turbine size and scale in comparison to the Operational Kilgallioch Windfarm;
  - The potential influence of large scale wind energy development on the historic land-use characteristic found within the site and surrounding area;
  - The potential reduction in open moorland character within the character type; and
  - The level of proposed Development construction activity experienced within this LCT.

- Factors that decrease the magnitude of change are:
- the change to key characteristics would be restricted from large areas of the LCT which are forested, this is particularly the case for northern areas;
  - when visible, the proposed Development would be experienced within a context of existing wind turbine development, particularly those Kilgallioch and Aries windfarms that are within this LCT and have a more immediate relationship with the proposed Development;
  - The proposed turbines would therefore introduce elements that are not uncharacteristic, albeit as an intensification of wind turbines in this LCT;

- The proposed Development would be located away from the craggy knolls and small hills, highlighted by DGWLCS as having 'more intricate form' and would be located in an area of gently sloping moorland that has a low-lying plateau character; and
  - As a result of the location of the proposed Development within the core of the southern part of the wider plateau, the small hills that edge the plateau limit the ZTV extent within the LCT and in the wider landscape.
- Taking these factors into account the magnitude of change for this LCT is considered to be High locally reducing to Medium in the wider area.

**Significance of effect**

The effect of the proposed Development on the landscape character of the western part of this LCT, centred around where the Site is located, would be significant. The introduction of large scale wind turbines, associated infrastructure and solar array to an area of moorland landscape that already contains large scale windfarm development moderates the magnitude of change, however, the historic land-use characteristic within the localised area would be partly diminished by the presence of the proposed Development resulting in the localised High magnitude of change. Significant effects are highly localised within this LCT (approximately 2-3 km from the Site boundary although more limited where areas of forestry remain). Significant effects are considered to occur both as a result of the introduction of the proposed Development into this LCT and cumulatively with the operational baseline.

The effect of the proposed Development on the landscape character of all other parts of this LCT are assessed as not significant. The addition of the proposed Development would increase the extent of a 'landscape with windfarms' characteristic for the immediately surrounding landscape context.

**Cumulative assessment (See CZTVs on Figures 6.13a-j)**

**Cumulative assessment (consented sites)**

Chirmorie and Stranoch 1 will be located to the north of this LCT separated by a neighbouring part of a similarly characterised plateau moorland landscape (Plateau Moorlands with Forestry & Wind Farms 18c) and the other operational turbines of Kilgallioch. Barlockhart Moor Extension lies to the south of this LCT and intervisibility between this scheme and the LCT is limited. The cumulative interaction of these consented schemes, as experienced from the LCT is minimal as a result of this separation. The cumulative magnitude of change is therefore considered to be Negligible resulting in a Not Significant cumulative effect.

**Cumulative assessment (application sites)**

The Stranoch 2 application is a replacement to the consented Stranoch 1 Windfarm and if consented would have a similar influence to Stranoch 1 on the LCT. Arecleoch Extension is proposed to the north of Chirmorie with Clauchrie proposed to the east of Mark Hill. As with the consented scenario, these application schemes would be located to the north of this LCT separated by a neighbouring part of a similarly characterised plateau moorland landscape (South Ayrshire 18c) and the other operational turbines of Kilgallioch. The cumulative interaction of these application schemes, as experienced from the LCT, would be minimal as a result of this separation. The cumulative magnitude of change is therefore considered to be Negligible resulting in a Not Significant cumulative effect.

Table 6.7-3: Detailed assessment of 17a - Plateau Moorland with Forest (Glentroll unit)

**6.7.3.2 17 - Plateau Moorland (Balker Moor Unit)**

**Baseline conditions**

**Baseline description**

The proposed Development is located to the north of this LCT. The LCT is a large area of drumlin influenced landscape with varied topography, land cover and land use. The SNH 2019 character assessment describes the key characteristics for this LCT as follows –

- 'Flat or very gently undulating land of open scale and extensive nature;
- Numerous streams, some lochs, and waterlogged areas;
- Simple landcover of grass moorland and occasional improved pastures relating to upland valleys;

- Rough vegetation, grazed by sheep and cattle, with pockets of mixed woodland;
- Forested margins/peripheral areas, with isolated areas of forestry and shelter plantations within the Landscape Character Type;
- Mostly unenclosed with occasional large walled or fenced enclosures;
- Very few settlements, with isolated farms and properties, marked sometimes by pockets of mixed woodland;
- Wind farm development in forested or recently clear felled margins, and in some central moorland areas east of Cross Water of Luce;
- Numerous archaeological sites from historic and prehistoric times, with relict land use areas adding distinctiveness to the landscape; and
- Feels remote and exposed.'

The DGWLCS describes this LCT as follows: 'Key characteristics of the Plateau Moorland character type comprise a gently undulating landform, a simple land cover of grass moorland and occasional improved pastures with some areas of coniferous forestry. This landscape is sparsely populated although some built infrastructure is associated with Penwhirn Reservoir. The large scale and simplicity of this landscape present potential opportunities to accommodate wind farm development. However, the sense of seclusion and openness and the richness of archaeology found in some areas of moorland not occupied by operational and consented wind farms are key constraints. The sparsely settled nature and relative extensiveness of this character type are likely to limit visual intrusion although distant views are possible from the south and west where this landscape forms a backdrop to settled landscapes'.

The operational windfarms of Glenchamber, Artfield Fell, Balmurrie Fell and 18 of the 96 Kilgallioch windfarm turbines lie within this LCT. In addition, the operational windfarms of Aries Farm, Carscreugh, Glen App, Arecleoch and the other 78 turbines of the Kilgallioch windfarm are found at the edges of this LCT.

Value	Susceptibility	Sensitivity
This LCA is not subject to any national, regional or local landscape designations. The presence of substantial windfarm development and extensive forestry denote an established level of human intervention. The value of this LCT is considered to be Low.	This LCT is a large-scale landscape dominated by simple moorland land cover. The overall character is typified by the large scale, open and exposed character and is considered to be an appropriate receiving landscape for wind energy development. The baseline windfarm influence in this LCT reduces susceptibility to change and the 'sense of seclusion' described by the DGWLCS. Wind turbines are not an uncharacteristic feature in the landscape, however, the potential for cumulative effects potentially increases susceptibility. On balance, the susceptibility of this LCT to the proposed Development is Medium.	The combination of the value of the landscape and its susceptibility to the proposed Development leads to an overall sensitivity of Medium-Low.

**Assessment (including operational and under construction cumulative sites)**

**Magnitude of change**

The ZTV shows that theoretical visibility is found as a series of wide swathes across elevated undulations on the upland plateau found to the east and west of the Water of Luce valley. Lower elevated or west facing slopes within the plateau are shown to have no or reduced visibility. The closest area of this LCT with theoretical visibility is the upland landscape between New Luce and the forestry that edges the proposed Development Site on the eastern slopes of Artfield Fell.

Factors that increase the magnitude of change are:

- Change to the experience of the landscape character of the LCT resulting from addition of large scale wind turbines, associated turbine infrastructure and solar arrays to the east;
- The proposed Development would appear to increase the influence of wind energy development in views east; and
- Potential cumulative effects with existing windfarm developments including potential contrasts in turbine scale.

Factors that decrease the magnitude of change are:

- The change to key characteristics would be restricted from large areas of the LCT that have no or limited theoretical visibility;

- Successive layers of forest covered hills within the neighbouring Plateau Morland and Forest LCT, intervene in views east, would contribute to screening the proposed Development from within this LCT;
- The intervening forestry also provides a sense of separation between this and the neighbouring Plateau Morland and Forest LCT, further limiting the change to key characteristics;
- The proposed Development would be experienced within an immediate context of existing wind turbine development, including Kilgallioch, Aries, Artfield Fell and Balmurrie Fell;
- The Operational Kilgallioch turbines already have a strong presence along the eastern edges of this LCT with 18 of the 96 Kilgallioch turbines located within it; and
- The proposed turbines would therefore introduce elements that are not uncharacteristic, albeit as an intensification of wind turbines to the east of this LCT.

Taking these factors into account the magnitude of change for this LCT is considered to be Medium.

**Significance of effect**

The effect of the proposed Development for this LCT is considered to be Not Significant. Whilst the experience of key characteristics would be affected to an extent, the extensive open upland characteristics of the moorland plateau is maintained and not diminished by the introduction of the proposed Development. The experience of the large scale and forested plateau character within the receiving landscape to the east is also not diminished by introducing the proposed Development. The existing windfarms within this plateau landscape are intensified by the presence of further larger turbines although the underlying larger scale of the landscape is not dominated by them.

**Cumulative assessment (See CZTVs on Figures 6.13a-j)**

**Cumulative assessment (consented sites)**

Stranoch 1 will be located within this LCT, which in itself will further intensify the existing experience of wind energy development created by those windfarms within or closely neighbouring this LCT. Chirmorie will be located to the north of this LCT separated by a neighbouring part of a similarly characterised plateau moorland landscape and the other operational turbines of Kilgallioch and Arecleoch. Barlockhart Moor Extension lies to the south of this LCT and intervisibility between this scheme and the LCT is limited. When considering the proposed development within this scenario the key factors of magnitude considered against the operational baseline are still considered to broadly apply and as a result the cumulative magnitude is considered to be Medium, resulting in a Not Significant effect.

**Cumulative assessment (application sites)**

The Stranoch 2 application is a replacement to the consented Stranoch 1 Windfarm and if consented would have a similar influence to Stranoch 1 on the LCT. Arecleoch Extension is proposed to the north of Chirmorie with Clauchrie proposed to the east of Mark Hill. As with the consented scenario, these application schemes would be located to the north of this LCT separated by a neighbouring part of a similarly characterised plateau moorland landscape (South Ayrshire 18c) and the other operational turbines of Kilgallioch and Arecleoch. The cumulative interaction of these application schemes, as experienced from the LCT, would be minimal as a result of this separation and cumulative backdrop. The cumulative magnitude of change is therefore considered to be Medium resulting in a Not Significant cumulative effect.

Table 6.7-4: Detailed assessment of 17 - Plateau Moorland (Balker Moor unit)

**6.7.3.3 12 - Drumlin Pasture in Moss and Moor Lowland (Machars Unit)**

**Baseline conditions**

**Baseline description**

The proposed Development is located to the north of this LCT. The LCT is a large area of drumlin influenced landscape with varied topography, land cover and land use. The SNH 2019 character assessment describes the key characteristics for this LCT as follows –

- 'Prominent pasture drumlins, set in flatter moss and moor, bounded by hedges and drystone walls to form medium sized fields;
- Colour contrast between green drumlins and brown moss and moor;

- Scattered antiquities including standing stones and cairns;
- Relatively poor road network connecting isolated houses/farmsteads;
- A few small forests and policy landscapes; and
- Intimate scale and complexity of drumlin landscape.

The DGWLCS describes this LCT as follows: 'The Drumlin Pasture in Moss and moor Lowland is characterised by the extensive and repeated pattern of small, rounded, elongated mounds and higher, more irregular shaped hills rising out of low-lying areas of flat wetland, moss and flood plain which in places has been afforested. Relatively easy to access, this type is both well-settled within the drumlin dominated areas, and less settled within areas associated with more extensive wetlands and higher hills. Smooth textured grazed fields extend up and over the drumlins, well defined by hedges and patterned with occasional small woods and clumps of trees. The higher hills offer a more upland character of open rough grazing fragmented by whin and scrub, while wetland is frequently fragmented by rushy pasture and scrubby willow. The low profile, intimate scale and complexity of the drumlins, as well as the diverse mosaic of the vegetation pattern, and in places relative semi-natural qualities, severely limits scope for larger wind farm typologies. This landscape is visible from the A75 although landform and vegetation result in views being intermittent.'

The operational Barlockhart Moor lies within this LCT. In addition, the operational windfarms of Aries Farm, Carscreugh, Glenchamber, Artfield Fell, Balmurrie Fell and Kilgallioch are also visible from within elevated and open areas of this LCT. Viewpoint 06 – Minor road near Bennylyow (Culvennan Fell) and Viewpoint 12 – A714 north of Newton Stewart are within this LCT.

Value	Susceptibility	Sensitivity
This LCA is not subject to any national, regional or local landscape designations. The drumlin landscapes in the northern Machars have local value and are well settled. On balance the value of this LCT is considered to be Medium-Low.	This LCT is a varied landscape which is susceptible to change from the proposed Development from elevated areas that has unrestricted visibility to the north. The large scale, open and exposed character of the upland plateau is not always immediately evident from this LCT although the ridgeline of higher drumlins to the north of the A75 form an upland transition and the large scale forestry and moorland is evident from these elevated parts. Wind turbines are not an uncharacteristic feature in the landscape, however, the potential for cumulative effects potentially increases susceptibility. On balance, the susceptibility of this LCT to the proposed Development is Medium.	The combination of the value of the landscape and its susceptibility to the proposed Development leads to an overall sensitivity of Medium.

**Assessment (including operational and under construction cumulative sites)**

**Magnitude of change**

The ZTV shows that theoretical visibility is found on elevated landform between Glenluce and Culvennan Fell. The A75 corridor has intermittent theoretical visibility and roadside vegetation would further restrict visibility of the proposed Development. The ridgeline of hills around Culvennan Fell limits theoretical visibility in southern parts of this LCT such that swathes of theoretical visibility are found near Kirkowan, Barear Fell, Meg's Craig and Barr Moor in the northern area of the Machars.

Factors that increase the magnitude of change are:

- Change to the experience of the landscape character of the LCT resulting from addition of large scale wind turbines to the north of this LCT;
- Potential cumulative effects with existing windfarm developments due to contrasts in turbine scale; and
- Potential cumulative effects due to intensification of windfarm development experienced to the north of this LCT.

Factors that decrease the magnitude of change are:

- The change to key characteristics would be restricted from large areas of the LCT that have no or limited theoretical visibility;
- Forestry and woodlands within and surrounding this LCT limit the number and extent of areas that are potentially affected;

- The intervening ridgeline of hills to the north of the A75 corridor limits potential for significant effects and also provides a sense of separation between this and the neighbouring Plateau Moorland and Forest LCT, further limiting the change to key characteristics within the part of this LCT that lies in the northern Machars;
- The proposed Development would be experienced within an immediate context of existing wind turbine development, including Kilgallioch, Aries, Artfield Fell, Carscreugh, Glenchamber, Barlockhart Moor and Balmurrie Fell; and
- The proposed turbines would therefore introduce elements that are not uncharacteristic, albeit as an intensification of wind turbines to the north of this LCT.

Taking these factors into account the magnitude of change for this LCT is considered to be Low.

**Significance of effect**

The effect of the proposed Development for this LCT is considered to be Not Significant. The experience of key characteristics would only be affected to an extent and the proposed Development would be experienced as a slight increase in wind turbines. The proposed Development would fit the existing pattern of large scale turbine development in the background landscape to the north and also closer to the northern edges of the LCT, as seen within the foreground of the proposed Development.

**Cumulative assessment (See CZTVs on Figures 6.13a-j)**

**Cumulative assessment (consented sites)**

Whilst Chirmorie and Stranoch 1 could potentially be experienced from within this LCT, intervening forestry and topography substantially restrict any cumulative interaction. The cumulative magnitude of change is therefore considered to be Negligible resulting in a Not Significant cumulative effect.

**Cumulative assessment (application sites)**

Whilst Stranoch 2 could potentially be experienced from within this LCT, intervening forestry and topography substantially restrict any cumulative interaction. The cumulative magnitude of change is therefore considered to be Negligible resulting in a Not Significant cumulative effect.

Table 6.7-5: Detailed assessment of 12 - Drumlin Pasture in Moss and Moor Lowland (Machars unit)

**6.7.3.4 18c - Plateau Moorlands with Forestry & Wind Farms (South Ayrshire)**

**Baseline conditions**

**Baseline description**

The proposed Development is located to the south of this LCT. The LCT is a large area of moorland and forestry part intersected by the Duisk valley. The SNH 2019 character assessment identifies this area as largely within 'Plateau Moorland' except for a small area of 'Southern Upland with Forest'. The Southern Upland with Forest description of key characteristics are not specific to the unit within the Study Area and more akin to the larger area of this type near Dalmellington, it is not therefore cited here as it is not key to this assessment. Key characteristics of 'Plateau Moorland' are described as follows –

- 'Topography is comparatively level with extensive plateaux rising to soft contoured ridges.
- Underlain by basalts to the east and greywackes to the south west.
- Covered by blanket bog, heather and grass moorland, with extensive mosses and peatland forming an important component of this landscape type.
- Frequent extensive areas of coniferous forest of uniform age which, in places, have significantly modified the original character of these areas in terms of colour, texture and views.
- Largely undeveloped with a sparse network of roads.
- Windfarm development on the north eastern margins.
- Open, exposed and rather remote landscape, wild in character, although this is lessened in places by the presence of wind turbines and associated infrastructure.
- Views are open and medium to longer distance depending on undulations in the local topography'.

The key characteristics within the 2018 SALWCS are summarised as follows –

- *'This landscape has an expansive scale due to its simple gently undulating plateau landform and absence of settlement;*
- *Extensive areas of forestry and windfarm development reduce openness and there are few remaining areas of open moorland within this character type;*
- *A simple, gently undulating upland plateau within generally rounded and subtle topography. Larger hills rise to around 300m. The extensive forest cover of this area tends to 'flatten' and mask underlying topography;*
- *A simple landscape pattern dominated by dense and fairly uniform coniferous forest. Areas of open moorland, small pockets of farmland and occasional lochs in the Drumlamford and Corwar area provide diversity and contrast within the character type;*
- *This character type is very sparsely settled and accommodates only a few narrow minor public roads;*
- *While windfarm development and forestry are key characteristics of this landscape, the eastern part of this landscape is remote and has some degree of wildness;*
- *The relatively subdued landform of this upland plateau, together with the very sparse settlement and restricted access, limits visibility of the interior of this landscape; and*
- *This landscape is visible from the A714, B7027 and from the relatively little-used minor public road between New Luce and Barrhill.'*

The operational Arecleoch, Mark Hill, Glen App and northern part of Kilgallioch lie within this LCT. In addition, the operational windfarms of Hadyard Hill, Assel Valley, Penwhapple, Airies Farm, Artfield Fell, Balmurrie Fell, Glenchamber and Carscreugh are also visible from within elevated and open areas of this LCT as a backdrop to the closer windfarms located within it. Viewpoint 05 – B7027 is within this LCT.

Value	Susceptibility	Sensitivity
This LCT is not subject to any national landscape designations. The Galloway Forest Park and Dark Sky park buffer area sit across the eastern part of the LCT. The northern edges of the LCT are designated locally as SA Scenic Area, where the LCT borders the Stinchar and Duisk valleys, with a small section of the South Ayrshire Scenic Area extending southwards to the DGC border. The presence of windfarm development and extensive forestry denote an established level of human intervention. The value of this LCT is considered to be Medium.	Windfarm development is an existing and acknowledged characteristic experienced within this LCT and also within neighbouring LCTs to the north and south. The underlying expansive landscape scale, simple pattern of forestry and gently undulating landform moderate susceptibility. Outward facing views from the interior of this LCT is limited. Susceptibility is considered to be Low.	The combination of the value of the landscape and its susceptibility to the proposed Development leads to an overall sensitivity of Medium-Low.

**Assessment (including operational and under construction cumulative sites)**

**Magnitude of change**

The ZTV shows that theoretical visibility is found across large parts of the LCT currently occupied by the Operational Kilgallioch Windfarm and across higher ground to the north east. The actual visibility of the proposed Development is however moderated by the substantial amount of forestry within the LCT which restricts the potential for landscape effects to areas of moorland which are far smaller in extent than the areas of forestry and not always with an unrestricted view towards the proposed Development.

Factors that increase the magnitude of change are:

- change to the experience of the landscape character of the LCT resulting from the addition of large scale wind turbines to the south of the LCT;
- the proposed Development would increase the influence of wind energy development across the underlying plateau moorlands and forestry LCT, common to this LCT and the Plateau Moorlands and Forestry LCT in which the Site is located; and
- the degree to which the proposed Development would contrast in turbine size and scale in comparison to the Operational Kilgallioch Windfarm which would be experienced in the foreground of the proposed Development.

Factors that decrease the magnitude of change are:

- the change to key characteristics would be restricted from large areas of the LCT which are forested, this is particularly the case for more remote eastern areas;
- when visible, the proposed Development would be experienced within a context of existing wind turbine development, particularly with the Operational Kilgallioch Windfarm which is straddles the border between this LCT and the host Plateau Moorland and Forestry LCT to the south; and
- the proposed turbines would therefore introduce elements that are not uncharacteristic, albeit as an intensification of wind turbines within the wider plateau landscape.

Taking these factors into account the magnitude of effect on the character of this LCT is considered to be Low.

**Significance of effect**

The effect of the proposed Development on the landscape character of this LCT is predicted to be Not Significant. This is as a result of the Medium – Low sensitivity combined with a Low magnitude of change. Due to localised screening from landform and forestry the potential for an effect on key characteristics is quite limited from this LCT. Furthermore, the potentially affected key characteristics of the LCT are currently experienced within the context of the Operational Kilgallioch Windfarm and the proposed Development would only result in a relatively minor addition to this existing awareness and influence of windfarm development in the area resulting in slight intensifying the effect experienced.

**Cumulative assessment (See CZTVs on Figures 6.13a-j)**

**Cumulative assessment (consented sites)**

Key cumulative schemes in the consented scenario for this LCT are the consented Chirmorie and Stranoch 1 Windfarms. Chirmorie will be located within the LCT and Stranoch 1 will be located on a neighbouring part of a similarly characterised plateau moorland landscape within Dumfries and Galloway. These two schemes will bridge the gap between Arecleoch and Kilgallioch. When considering the addition of the proposed Development to this situation, the scale of change predicted for the proposed Development against the existing baseline is slightly increased due to further intensification of wind energy development within the broad plateau landscape, which the proposed Development would be a part of, albeit to the south of this LCT. Whilst the scale of change predicted for the proposed Development against the existing baseline is considered to increase slightly, this slight increase would not be enough to alter the magnitude of change category predicted. The cumulative magnitude of change is therefore considered to be Low resulting in a Not Significant cumulative effect.

**Cumulative assessment (application sites)**

The Stranoch 2 application is a replacement to the consented Stranoch 1 Windfarm and if consented would have a similar influence as Stranoch 1 on the LCT. Arecleoch Extension is proposed within this LCT and Clauchrie would be experienced to the east of this LCT. These schemes would further intensify and extend the influence of windfarm development on the key characteristics of this LCT, increasing the man modified aspects of its character already acknowledged by the 'with windfarms' characteristic of the LCT.

The proposed Development would contribute to this intensification, albeit to the south of this LCT, and when considering the addition of the proposed Development to this situation, the scale of change predicted for the proposed Development against the existing and consented baseline is further increased. Taking this into account, the cumulative magnitude of change is considered to be Low-Medium resulting in a Not Significant cumulative effect.

Table 6.7-6: Detailed assessment of 18c - Plateau Moorlands with Forestry & Wind Farms

**6.7.3.5 South Ayrshire SA (Duisk Valley)**

**Baseline conditions**

**Baseline description**

The South Ayrshire Scenic Area (SA) covers extensive areas of the South Ayrshire countryside with around 59% of South Ayrshire covered by the scenic area, much of which is in the south of the region. Within the Study Area these extensive areas include the mainly upland area of South Carrick, the coastal strip along the River Stinchar to the south of Girvan and the valley of the River Duisk.

The South Ayrshire LDP recognises the importance of providing protection through the SA designation in 'LDP policy: protecting the landscape' which states -

*'We will consider proposals within or next to Scenic Areas (as defined on the LDP environment map) against the following conditions.*

- The significance of impacts and cumulative impacts on the environment, particularly landscape and visual effects as informed by the Ayrshire Landscape Character Assessment (SNH 1998)''.*
- How far they would benefit the economy.*
- Whether they can be justified in a rural location.'*

It is considered that the 1998 character assessment is not relevant in this instance as the 'LDP policy: wind energy' advocates the use of the SALWCS to 'decide the effect of proposals on the landscape'. Whilst the scenic area designation is not specifically referred to in SALWCS, scenic attributes are recognised within the Intimate Pastoral Valley (13) LCT.

The preliminary assessment has identified that the Duisk Valley area of SA is the only susceptible part of the SA to the proposed Development and the assessment is focussed as a result. The Duisk Valley area of SA encompasses a variety of landscape character, ranging from smaller scale, settled valleys to larger scale, open or forested uplands.

The southernmost area of the Duisk Valley SA also extends out of the Intimate Pastoral Valley (13) LCT to the south east across parts of the Plateau Moorlands with Forestry and Windfarms (18c) LCT. The baseline description for LCT 18c is described in the previous detailed assessment. LCT 13 has been found in the preliminary assessment to not have the potential for significant effects, however, the transitional nature of the southern Duisk Valley (from valley to upland plateau), means that the key characteristics of LCT 13 are relevant to the assessment of the SA. The key characteristics of LCT 13 within the 2018 SALWCS are summarised as follows –

- *‘These valleys are relatively narrow and strongly contained by adjacent upland character types. The Plateau Moorland with Forest and Windfarms (18c) generally forms more simple even skylines seen from these valleys;*
- *A small to medium scale landscape. Scale increases on more open and less settled upper valley sides, particularly at the transition with the very gently sloping Plateau Moorland with Forest and Windfarms (18c);*
- *Broader terraces and gentler, smoother slopes occur on upper valley sides either side of the Duisk Valley and on the southeastern edge of the Stinchar valley at the transition with the Plateau Moorland with Forest and Windfarms (18c);*
- *The rolling landform and presence of woodlands, hedgerows and trees restricts long views from roads and settlement in some areas although open views are possible where roads are more elevated or the floodplain more open; and*
- *Popularly accessed hills such as Knockdolian and Craigengower Hill also offer elevated views over these valleys.’*

For reference, the SNH 2019 character assessment identifies this area (albeit with subtly different borders) as ‘Pastoral Valley’ and describes key characteristics as follows –

- *‘Narrow, intimate medium to small scale valleys with steep slopes and relatively flat bottoms cut into the foothills and moorlands of the Ayrshire uplands;*
- *Strongly contained by adjacent uplands with occasional higher and more pronounced summits;*
- *Diverse land cover dominated by broadleaf woodland including shelterbelts, riparian woodland and policy woodlands separating the valley into small parcels of pasture;*
- *Network of tree-lined winding roads;*
- *Number of hill forts, hilltop cairns, castles and strongholds, and mansion houses, resulting in a rich heritage and a strong sense of timelessness;*
- *Settlement comprises a dispersed scatter of houses and farms;*
- *Well settled, intricately patterned landscape which has a rural, picturesque quality;*
- *Views tend to be short to medium distance, focused along the valley in the direction of travel with the surrounding upland landscape forming the enclosing, often dramatic, ridgeline in views. More pronounced ‘landmark’ hills form key foci. Open views are available from elevated roads and where floodplain is more open; and*
- *Popular walks and hill views provide elevated views over this landscape.’*

Whilst the majority of key characteristics, described above, are experienced throughout the Duisk and Stinchar valleys they are experienced to a varying degree depending on the specific valley or valley section. For instance, SALWCS highlights that the *‘scale increases on more open and less settled upper valley sides, particularly at the transition with the very gently sloping Plateau Moorland with Forest and Windfarms (18c)’*.

Viewpoints within the SA include viewpoint 05 – B7027, Loch Maberry. The operational windfarms of Assel Valley, Hadyard Hill and Dersaloch lie entirely within the SA and the operational Mark Hill is partly within the SA. The operational Arecleoch and Glen App Windfarms are located close to the southern edges of the SA and Kilgallioch is seen from the southernmost area of the Duisk area of SA.

Value	Susceptibility	Sensitivity
There is no citation for the SA and no description of the reasons for designation and special qualities of this designated landscape. It is considered that the value of the SA to be Medium-High which principally relates to the Medium-High value associated with the Intimate Pastoral Valley and Upland Glens LCT around which the SA area is focussed.	Although the proposed Development is not located within the SA, the SA is susceptible to the proposed Development. The intimate, small to medium scale nature of the valley landscapes increases susceptibility to windfarm development within the SA although it should be noted that the scenic aspects of the larger scale upland areas of the SA are less susceptible to changes potentially resulting from the proposed Development. Susceptibility is moderated by the visual presence of existing windfarm development from parts of this SA, by the sense of enclosure provided by forestry or woodland that occurs in parts of the SA and for valley landscapes the steep and wooded valley sides, that create a separation from the neighbouring plateau landscapes. On balance, susceptibility is considered to be Medium-High.	The combination of the value of the landscape and its susceptibility to the proposed Development leads to an overall sensitivity of Medium – High.

### Assessment (including operational and under construction cumulative sites)

#### Magnitude of change

The ZTVs show that theoretical visibility is found across the LCT 13 and LCT 18c. Whilst there are patches of theoretical visibility further north on other areas of the SA (north of the Stinchar for example) these areas are too distant to have any potential for significant effects. As previously described, LCT 13 has been found to not have the potential for significant effects. The remaining area of theoretical visibility covers the southernmost part of the SA, which lies within LCT 18c.

Factors that increase the magnitude of change are:

- change to the experience of the landscape character of the SA resulting from addition of large scale wind turbines to the south;
- change to more open and elevated parts of this area of SA (near Corwar Mains); and
- the proposed Development would appear to increase the influence of wind energy development already experienced from several parts of this SA, potentially increasing the cumulative effect of multiple windfarms already experienced from the Duisk Valley part of the SA.

Factors that decrease the magnitude of change are:

- the change to key characteristics would be minimal from large areas of the Duisk Valley part of the SA that have little or no visibility. Potential visibility is further restricted by intervening vegetation on the valley floor and woods on the valley sides;
- where visibility occurs within the SA and is not obscured, the proposed Development would largely be experienced within the large scale upland context of the Plateau Moorland and Forestry with Windfarms (18c) LCT;
- the proposed Development would appear within the context of the Operational Kilgallioch turbines within the vast majority of locations. Also, the proposed Development is sometimes seen within a context of existing wind turbine development that occurs in the distance to the south of the SA including Aries, Artfield Fell and Balmurrie Fell. The proposed turbines would therefore introduce elements that are not uncharacteristic;
- In addition, the proposed Development would be experienced within a wider context of existing wind turbine development including Mark Hill, Hadyard Hill, Arecleoch, Penwhapple, Glen App and Kilgallioch are strong features in the landscape at the edges of the SA and Duisk Valley. Assel Valley, Penwhapple and Hadyard Hill are located within the SA further to the north.

Taking these factors into account the magnitude of change on the character of this SA is considered to be Low.

#### Significance of effect

The effect of the proposed Development on the character of this SA is predicted to be Not Significant. The SA has a Medium-High sensitivity although the magnitude of change is predicted to be Low. In summary, the combination of localised screening from intervening landform and forestry and existing windfarm influence has substantially moderated the degree of potential change that would be experienced from the Duisk Valley area of SA.

Whilst the candidate South Ayrshire Local Landscape Areas (cLLAs) have not yet been adopted, it is notable that the Stinchar Valley cLLA, which will cover the Duisk Valley area of the current Scenic Area designation, is set much further back from the proposed Development than the Scenic Area. None of the Duisk Valley to the south of Barrhill is included in this candidate LLA and it is focussed more on the valley floor than valley sides in comparison to the current designation. This retraction of designated area from the landscape to the north of the site would result in the LLA designation being far less affected than the current SA area.

#### Cumulative assessment (See CZTVs on Figures 6.13a-j)

##### Cumulative assessment (consented sites)

Key cumulative schemes in the consented scenario for the SA are the consented Chirmorie and Stranoch 1 Windfarms. Both of which will be located to the west of the Duisk Valley and will bridge the gap between Arecleoch and Kilgallioch. When considering the addition of the proposed Development to this situation, the scale of change predicted for the proposed Development against the existing baseline is slightly increased due to further intensification of wind energy development within the broad plateau landscape, which the proposed Development would be a part of to the south. This slight increase however, would not be enough to alter the magnitude of change predicted against the existing baseline. The cumulative magnitude of change is therefore considered to be Low resulting in a Not Significant cumulative effect.

##### Cumulative assessment (application sites)

The Stranoch 2 application is a replacement to the consented Stranoch 1 Windfarm and if consented would have a similar influence to Stranoch 1 on the SA. Arecleoch Extension is also proposed to the west of the SA and Clauchrie would be

experienced to the east of the SA. These schemes would further intensify and extend the influence of windfarm development on the key characteristics of this SA, increasing the man modified aspects of its character already acknowledged by the 'with windfarms' characteristic of the underlying LCT 18c in which the majority of windfarm development is located. However, the combination of localised screening from intervening landform and forestry and existing windfarm influence has substantially moderated the degree of potential change that would be experienced from the Duisk Valley area of SA. Taking this into account, the cumulative magnitude of change is considered to be Low resulting in a Not Significant cumulative effect.

Table 6.7-7: Detailed assessment of South Ayrshire SA (Duisk Valley)

## 6.8 Assessment of Effects on Views

### 6.8.1 Introduction

112. Effects on views are the changes to views experienced by people that result from the introduction of the proposed Development. As described in the baseline overview, the assessment of effects on views includes effects on people at representative viewpoints and on principal visual receptors (i.e. groups of people in settlements, motorists on roads or users of recreational routes). The following preliminary assessment identifies which of these views and visual receptors may experience significant effects and therefore which require to be assessed in full. A detailed baseline description is provided separately within the assessment section for each viewpoint and visual receptor identified as requiring more detailed assessment. As described in the baseline overview, in order to focus the assessment on assessing potential significant effects, the LVIA has focussed its assessment of effects on views and principal receptors within 20 km (the Study Area).

### 6.8.2 Preliminary assessment of effect on views

#### 6.8.2.1 Viewpoints

113. Viewpoint locations are shown in conjunction with the blade tip ZTV on **Figures 6.7a-b** and at a detailed scale in the visualisations in **Figures 6.15a – 6.31b**.
114. Visualisations have been prepared to meet the requirements of SNH (*Visual Representation of Windfarms* Version 2.2, December 2017). Photomontages are provided for those viewpoints requiring a detailed assessment (see preliminary assessment of viewpoints in **Table 6.8-2**). It should be noted that the 53.5 degree photomontage view does not always include a view of key existing windfarms in the view and it is important therefore that the 90 degree baseline panoramas provided are reviewed alongside the 53.5 degree photomontages when reviewing the visualisations so that these existing windfarms are properly taken into account.
115. **Table 6.8-1** provides a summary of the theoretical visibility analysis carried out for each viewpoint. This table helps in understanding the degree of extended horizontal angle theoretically visible in comparison to the existing Kilgallioch Windfarm.

Ref	Viewpoint Name	Nearest proposed turbine (m)	Theoretically visible turbines (No's)		Horizontal angle of theoretically visible turbines (°)			
			Hubs	Blades	A	B	C	D
1	Eldrig Fell	906	11	11	102.40	49.91	102.40	0
2	SUW (Knockniehourie)	2254	11	11	84.41	37.82	108.82	24.41
3	SUW (Craig Airie Fell)	2792	11	11	261.80	33.29	297.78	35.98
4	SUW (West of Derry)	2877	11	11	198.08	31.64	223.52	25.44
5	B7027 Loch Maberry	6364	11	11	51.86	15.58	63.21	11.34

Ref	Viewpoint Name	Nearest proposed turbine (m)	Theoretically visible turbines (No's)		Horizontal angle of theoretically visible turbines (°)			
			Hubs	Blades	A	B	C	D
6	Minor Road near Bennylow (Culvennan Fell)	7471	11	11	42.73	12.07	42.73	0
7	Mains of Larg (New Luce)	8265	9	11	30.16	12.96	39.20	9.04
8	SUW (Hill of Ochitree)	8717	11	11	38.24	11.29	43.51	5.27
9	A75 Dergoals	10263	8	11	28.60	10.61	28.60	0
10	SUW (Glenwhan Moor)	11869	11	11	21.54	9.26	28.05	6.51
11	A714, Bargrennan Cottage	12191	11	11	16.21	8.50	21.60	5.39
12	A714 north of Newton Stewart.	15486	10	11	24.55	5.48	24.55	0
13	Mochrum Loch	15825	11	11	22.19	6.66	22.19	0
14	Bruce's Stone, Glen Trool / Dark Sky Park	19484	11	11	8.49	5.42	11.47	2.98
15	A77 by Cairnpat	22544	11	11	12.70	4.86	15.86	3.16
16	The Merrick	23380	11	11	14.16	4.61	17.14	2.98
17	A75, Point Nets	25377	11	11	15.88	3.49	15.88	0

Table 6.8-1: Viewpoint Theoretical Visibility summary

116. **Table 6.11** identifies which viewpoints require more detailed assessment in the LVIA because they have the potential to undergo significant effects (including cumulative effects), and which viewpoints do not require further detailed assessment (highlighted grey).

Ref	Viewpoint name	Status / comment	Visualisation provided
1	Eldrig Fell	Viewpoint location requested by DGC. Included in the detailed assessment due to proximity and level of visibility of the proposed Development.	Photomontage
2	SUW (Knockniehourie)	Included in the detailed assessment due to proximity and level of visibility of the proposed Development. SUW sequential views.	Photomontage
3	SUW (Craig Airie Fell)		Photomontage
4	SUW (West of Derry)	Included in the detailed assessment due to proximity and level of visibility of the proposed Development. SUW sequential views.	Photomontage
4 (Night)	SUW (West of Derry)	Assessment of lighting at night included in agreement with DGC.	Night time photomontage
5	B7027 Loch Maberry	The intervening forestry on the southern and western side of the loch substantially restricts the view of the proposed Development. Not included in the detailed assessment.	Photomontage

Ref	Viewpoint name	Status / comment	Visualisation provided
6	Minor Road near Bennylow (Culvennan Fell)	Included in the detailed assessment due to the level of visibility of the cumulative context of the proposed Development.	Photomontage
6 (Night)	Minor Road near Bennylow (Culvennan Fell)	Assessment of lighting at night included in agreement with DGC.	Night time photomontage
7	Mains of Larg (New Luce)	Very limited visibility. 2 proposed Development turbines (top of tower and hubs close to the horizon) would appear beside 4 Operational Kilgallioch turbines (much of tower appearing above the horizon). The other proposed Development turbines are restricted by the forestry and woodland found on the skyline to the east such that only 4 blades would be seen above the treeline. Given the restricted level of visibility which would occur within close context to Operational Kilgallioch turbines, no potential for significant effects is predicted for this viewpoint. Not included in the detailed assessment.	Photomontage
8	SUW (Hill of Ochitree)	Included in the detailed assessment due to the level of visibility of the cumulative context of the proposed Development. SUW sequential view.	Photomontage
9	A75 Dergoals	The view from this part of the A75 towards the proposed Development Site is limited to eastbound road users. For these receptors, the potential view of the proposed Development would be a glimpse of extremely short duration, the proposed Development turbines would be partially screened by the intervening hill landform and would otherwise be screened by roadside vegetation on the A75, to the east and west of the viewpoint location. Not included in the detailed assessment.	Photomontage
10	SUW (Glenwhan Moor)	Included in the detailed assessment due to the level of visibility of the cumulative context of the proposed Development. SUW sequential view.	Photomontage
11	A714, Bargrennan Cottage	Viewpoint location requested by DGC. Glimpsed view from a short section of oblique visibility from an undulated section of the A714. Included in the detailed assessment due to the level of visibility of the existing cumulative context of the proposed Development.	Photomontage
12	A714 north of Newton Stewart.	Cumulative baseline and distance limits potential for significant effects. Not included in the detailed assessment. Photomontage included on request by DGC.	Photomontage

Ref	Viewpoint name	Status / comment	Visualisation provided
13	Mochrum Loch	Cumulative baseline and distance limits potential for significant effects. Not included in the detailed assessment.	Wireline
14	Bruce's Stone, Glen Trool / Dark Sky Park	The level of visibility of the proposed Development from this viewpoint is limited by distance and an existing cumulative baseline is seen within the same part of the distant view west. Not included in the detailed assessment.	Baseline photo and wireline
14 (Night)	Bruce's Stone, Glen Trool / Dark Sky Park	Assessment of lighting at night included in agreement with DGC.	Night time photomontage
15	A77 by Cairnpat	The proposed Development appears within a strong existing windfarm context from this viewpoint and the level of visibility is also limited by distance. Not included in detailed assessment.	Wireline
15 (Night)	A77 by Cairnpat	Assessment of lighting at night included in agreement with DGC.	Night time photomontage
16	The Merrick	The level of visibility of the proposed Development from this viewpoint is limited by distance. However, the Merrick is a key visitor location and representative of views from within the WLA. Included in detailed assessment.	Baseline photo and wireline
17	A75, Point Nets	Cumulative baseline and distance limits potential for significant effects. Excluded from the detailed assessment during viewpoint agreement.	Wireline

Table 6.8-2: Preliminary assessment of viewpoints

### 6.8.2.2 Principal visual receptors

117. The principal visual receptors in the Study Area are shown on **Figure 6.5** and with the proposed Development blade tip ZTV on **Figure 6.10**. **Tables 6.8-3 to 6.8-5** identify which of the identified principal visual receptors have the potential to undergo significant effects (including cumulative effects), and which of them do not require further detailed assessment.

Status – Considered further in preliminary assessment but found to have no potential for significant effects and not included in detailed assessment.	
Receptor	Comment
New Luce	The core area of this settlement (Main Street and Station Road) has no or very limited theoretical visibility shown on the ZTV. The settlement boundary covers a rural area beyond this settled core which although is shown to have some theoretical visibility to the north of Main Street, would be screened by the forestry or woods to the east of the settlement.
Kirkowan	Views of the proposed Development from this settlement are limited by the intervening topography of Culvennan Fell. They are further restricted by intervening trees and woods associated with the embankments of the dismantled railway line to the north of the settlement.

Bargrennan Glentool Village	Whilst these settlements are shown to have theoretical visibility, in reality potential views towards the proposed Development would be restricted by the forestry that surrounds these settlements and the level of forestry in the intervening landscape to the west.
<b>Status – No potential for significant effects and not included in detailed assessment due to limited and/or distant visibility of the proposed Development.</b>	
Newton Stewart; Barrhill	
<b>Status – Not included in detailed assessment: no theoretical visibility of the proposed Development.</b>	
Glenluce; Stranraer; Colmonell, Cairnryan; Castle Kennedy; and Ballantrae	

Table 6.8-3: Preliminary assessment of settlements

<b>Status – Potential for significant effects and included in detailed assessment</b>	
Receptor	Comment
A714	Visibility is limited by intervening landform and forestry from the vast majority of the A714. Where potential visibility is possible, distance and the strong existing cumulative baseline limits the potential for significant effects. Route not included in the detailed sequential assessment, however, the A714 at Bargrennan Cottage included in the detailed viewpoint assessment due to the level of visibility of existing cumulative context.
<b>Status – Considered further in preliminary assessment but found to have no potential for significant effects and not included in detailed assessment.</b>	
Receptor	Comment
A75	The view from the A75 towards the proposed Development Site is limited by intervening landform located to the south of the proposed Development Site. Where potential visibility is shown on the ZTV, the potential view of the proposed Development would be glimpsed for periods of extremely short duration through intervening landforms, such as at viewpoint 09. Not included in the detailed assessment.
B7027	Theoretical visibility is limited on this road. Where potential visibility is shown on the ZTV, the intervening forestry substantially restricts the view of the proposed Development either fully screening it from view or substantially restricting potential views. Not included in the detailed assessment.
A77	No theoretical visibility within the Study Area.
Stranraer to Ayr Railway	Theoretical visibility limited in extent along the length of this route. Where potential visibility is shown on ZTV, the potential view of the proposed Development is restricted by forestry and woodlands on the eastern skyline and visible proposed Development turbines would be seen in close context with the existing spread of turbines of the Operational Kilgallioch Windfarm.
<b>Status – No potential for significant effects and not included in detailed assessment due to limited and/or distant visibility of the proposed Development.</b>	
A747; A746; B733; B735; B7084; B7052; B7005; and B7077	
<b>Status – Not included in detailed assessment: no theoretical visibility of the proposed Development within 20km.</b>	
Cairnryan to Larne ferry route; Cairnryan to Belfast ferry route; A77; A712; A751; A717; A718; B737; B7079; B7044; and B734	

Table 6.8-4: Preliminary assessment of transportation routes

<b>Status – Potential for significant effects and included in detailed assessment due to level of influence and visibility of the proposed Development.</b>	
Receptor	Comment
SUW	Included in the detailed assessment due to the level of visibility and cumulative context of the proposed Development.
<b>Status – Considered further in preliminary assessment but found to have no potential for significant effects and not included in detailed assessment.</b>	
Receptor	Comment
Burns Heritage Trail Robert Bruce Trail Solway Heritage Trail Mull of Galloway Trail	Theoretical visibility is limited from these routes due to intervening topography, forestry or woods in which the routes are located or more distant forestry that intervenes. Where unobstructed visibility does occur the proposed Development would be seen in the distant view within the context of other large scale wind turbine development.
NCR7	The ZTV shows very little theoretical visibility along this route. Theoretical visibility to the north of Glentool Village is screened by surrounding forestry and theoretical visibility in the Cree valley is limited to elevated sections of the minor road that pass through the Cree Woods, restricting views to the west.
NCR73	Where potential visibility is shown on ZTV, the potential view of the proposed Development is either restricted by forestry and woodlands that intervene or would be seen in the distance within the close context of the existing Operational Kilgallioch windfarm and behind the Airies Windfarm.
<b>Status – Not included in detailed assessment: no theoretical visibility of the proposed Development within 20km.</b>	
Ayrshire Coastal Path	

Table 6.8-5: Preliminary assessment of recreational routes

### 6.8.3 Summary of Preliminary Assessment on Views

118. The preliminary assessment has identified the viewpoints and principal visual receptors that require to be assessed in full as a result of the potential effects of the proposed Development, these are listed as follows:

- Viewpoint 01 - Eldrig Fell;
- Viewpoint 02 – SUW (Knockniehourie);
- Viewpoint 03 – SUW (Craig Airie Fell);
- Viewpoint 04 – SUW (West of Derry);
- Viewpoint 06 - Minor Road near Bennylow (Culvennan Fell);
- Viewpoint 08 - SUW (Hill of Ochitree);
- Viewpoint 10 - SUW (Glenwhan Moor);
- Viewpoint 11 – A714, Bargrennan Cottage;
- Viewpoint 16 – The Merrick;
- Visual assessment at night of viewpoints 04, 06, 14 and 15 (see **Technical Appendix 6.2: Lighting Assessment**);
- A714 assessed at viewpoint 11; and
- SUW assessed at viewpoints 02, 03, 04, 08 and 11 and within the SUW sequential route assessment.

### 6.8.4 Detailed Assessment of Effects on Views

#### 6.8.4.1 Viewpoint 01 Eldrig Fell (See visualisations on Figures 6.15a-g)

<b>Viewpoint description</b>
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<p>This viewpoint is located on the summit of Eldrig Fell. The viewpoint can be accessed via a short walk across moorland from the track that leads to High Eldrig, a derelict property that lies at the southern edges of the proposed Development Site. The existing view is a 360 degree panorama across a wide extent of plateau moorland, forestry and windfarm development in multiple view directions. Beyond the moorland, forestry and windfarms, distant views include a long view to the east towards the Merrick range and southern Galloway Hills.</p> <p>The foreground of the view is gently undulating moorland which is framed by long swathes of commercial forestry. The groundcover of moorland and patches of historic grazing land (which appears greener) can be seen from this location, a notable difference to the surrounding simple ground cover of forestry and moorland. Loch Eldrig also features in this foreground view.</p> <p>Aries Windfarm is in close proximity to this location to the south and the route to High Eldrig and to access the viewpoint passes through the Aries Windfarm. The Operational Kilgallioch Windfarm occupies much of the northern horizon. Balmurrie Fell and Artfield Fell landforms and windfarms are notable features in reasonably close proximity to the west.</p>			
Receptor type	Value	Susceptibility	Sensitivity
Walkers	This viewpoint is not located within any national, regional or local scenic designations and has limited local value as a destination or viewpoint. Value is considered to be Medium-Low.	Walkers at this viewpoint have views towards the Site whose attention is likely to be focussed on the surrounding landscape. The viewpoint is located at close proximity to the proposed Development although the close proximity of Aries Windfarm to the south moderates the susceptibility to the proposed Development. On balance susceptibility is considered to be Medium-Low	Medium-Low
Assessment (including operational and under construction cumulative sites)			
<p>Description of change</p> <ul style="list-style-type: none"> <li>The proposed Development turbines would be visible at approximately 0.91 km to the nearest turbine north of the viewpoint;</li> <li>The proposed Development turbines would occupy 49.9 degrees of the view. However, the proposed Development would not increase the extent of the Operational Kilgallioch Windfarm which already occupies 102.4 degrees;</li> <li>All 11 of the proposed Development turbines would be visible with the majority of towers visible to base;</li> <li>Turbine infrastructure and access tracks would be visible from this location; and</li> <li>Solar panel arrays would be visible appearing as thin strips within the context of proposed turbine bases, tracks, turbine crane pads.</li> </ul>			
Magnitude of change			
<p>Factors that increase the magnitude of change are:</p> <ul style="list-style-type: none"> <li>The close proximity of the proposed Development as viewed from an elevated position with unobstructed views towards the proposed Development Site;</li> <li>The proposed Development would extend the Operational Kilgallioch Windfarm towards the viewpoint with larger turbines that would contrast in scale with existing turbines. The degree to which the larger scale of the proposed Development turbines contrasts with the smaller scale existing turbines in the view would make an immediately apparent contribution to the existing cumulative situation;</li> <li>The turbines would appear to sit in front of the distinctive landform of Craig Airie Fell 3 of the turbines that sit in front of Craig Airie Fell appearing stacked from this view;</li> <li>The derelict High Eldrig property sits in the foreground of the closest turbines in the view and its proximity to turbines emphasises the large scale of the proposed Development turbines;</li> <li>The level of visibility of proposed turbine infrastructure increases the magnitude of change; and</li> <li>The solar panels proposed for the site would be visible from this location appearing as thin strips within the gently rolling groundcover context of moorland and patches of historic grazing land. The addition of the solar panel arrays in themselves would contribute a moderate degree of visual change to the view, when considered alongside the existing wind energy developments and other visible infrastructure in this view.</li> </ul> <p>Factors that decrease the magnitude of change are:</p> <ul style="list-style-type: none"> <li>Whilst the proposed Development would be viewed at close proximity it would appear within a part of the view to the north where turbines already occupy the horizon;</li> </ul>			

<ul style="list-style-type: none"> <li>Other windfarms visible from this location are also seen in views to the west (Artfield Fell, Balmurrie Fell and Glenchamber) and to the south (Aries);</li> <li>Whilst the contrast in scale between turbines in this view is noticeable and varied, a natural perspective between these windfarms would be easily understood as more distant turbines appearing smaller and closer turbines appearing larger in the view, and so avoiding any scale distortions;</li> <li>The large scale of the underlying upland plateau moorland and forestry landscape in views towards the proposed Development and within the surrounding landscape provides a large scale surrounding landscape context to the proposed Development with a subtly undulating upland landscape accentuating its expansive scale from this elevated viewpoint; and</li> <li>The interlinking swathes of forestry is an underlying large scale landscape element that visually connects these windfarm sites and provides a unity of landcover familiar to the existing windfarm developments in this area.</li> </ul> <p>The magnitude of change for the proposed Development is considered to be High.</p>
Significance of effect
<p>The effect of the proposed Development on walkers at this viewpoint is considered to be Significant. The proposed Development would introduce further windfarm development increasing the cumulative effect experienced at this location. Turbine infrastructure and solar panel arrays would also be seen from this location further contributing to the High magnitude of change predicted. Significant effects are considered to occur both as a result of the introduction of the proposed Development in close proximity views and cumulatively with the operational baseline.</p>
Cumulative assessment
Cumulative assessment (consented sites)
<p>From this viewpoint the consented Chirmorie and Stranoch Windfarms will appear to the north, behind the existing spread of Kilgallioch turbines. The cumulative interaction of these consented schemes is minimal as a result of the intervening larger extent and closer proximity of existing windfarm development. The cumulative magnitude of change is therefore considered to be Negligible resulting in a Not Significant cumulative effect.</p>
Cumulative assessment (application sites)
<p>The Stranoch 2 application is a replacement to the consented Stranoch 1 Windfarm. Arecleoch Extension would further add to the distant backdrop of windfarm development behind Kilgallioch. Clauchrie would appear on the distant horizon to the north east partly behind the eastern edge of Kilgallioch and partly extending the developed horizon to the east. These applications in themselves would further intensify the distant backdrop although given the widespread development in the foreground of these distant application schemes the cumulative magnitude of change is still considered to be Negligible resulting in a Not Significant cumulative effect.</p>

Table 6.8-6: Viewpoint 01 - Eldrig Fell

6.8.4.2 Viewpoint 02 SUW (Knockniehourie) (See visualisations on Figures 6.16a-g)

Baseline conditions
Viewpoint description
<p>This viewpoint is located on the section of the SUW that runs between New Luce and Bargrennan. Knockniehourie is a local landform with gentle slopes but offers panoramic views across the surrounding moorland.</p> <p>The existing view is a 360 degree panorama notable for the wide extent of plateau moorland, forestry and windfarm development in multiple view directions. Beyond the moorland, forestry and windfarms, distant views include a variety of landscapes views including - the Merrick range and southern Galloway Hills to the east; the distinctive drumlin ridgeline at the southern edges of the plateau (including Carscreugh Fell); and distant views through gaps in this drumlin ridgeline to Luce Bay and the Rhinns.</p> <p>The foreground of the view is gently undulating moorland which is framed by long swathes of commercial forestry. Substantial forestry felling has recently taken place and as a result the areas of forestry in the view are not as uniform in appearance as found in other areas or on this section of SUW before the felling took place. Large areas of brash can be seen to the north and east of this view where trees have been recently felled, the remaining forestry stands within these areas of brash or separating it from the wider moorland. The tracks and turbine foundations / crane pads are also visible within these areas of felled forestry.</p>

The view east towards the proposed Development Site is partly through the southern turbines of Kilgallioch and across narrow bands of moorland and forestry that undulate with the gently rolling topography of the surrounding landscape. The topography of the site itself is not distinct from this gently rolling context although the southern edges of the site can be easily found in the view due to the more distinct hill of Eldrig Fell, behind which lie the turbines of Aries Windfarm. The groundcover of moorland and patches of historic grazing land (which appears greener) can be seen from this location, a notable difference to the surrounding simple ground cover of forestry, forest brash and moorland. Balmurrie Fell and Artfield Fell landforms and windfarms are notable features in reasonably close proximity to the south east. Other operational windfarms in the area include Glenchamber, Carscreuch, Barlockhart Moor to the south and North Rhinns to the south west.

Receptor type	Value	Susceptibility	Sensitivity
Walkers	This viewpoint is not located within any national, regional or local scenic designations, however, the viewpoint represents views from the Southern Upland Way. Value is considered to be Medium.	Walkers at this viewpoint have views towards the site whose attention is likely to be focussed on the surrounding landscape. Knockniehourie is a vantage point on this section of the SUW that offers good views of the wider landscapes that surround the plateau moorland and forestry. The close proximity view of commercial forestry (including recently felled) and existing wind turbines (including the tracks and crane pads of Kilgallioch) is evidently man-modified which moderate susceptibility to windfarm development. On balance susceptibility is considered to be Medium-Low	Medium

**Assessment (including operational and under construction cumulative sites)**

**Description of change**

- The proposed Development turbines would be visible at approximately 2.25 km to the nearest turbine north of the viewpoint;
- The proposed Development turbines would occupy 37.8 degrees of the view. When considered together, the Operational Kilgallioch Windfarm and the proposed Development would occupy 108.8 degrees, an increase of only 24.4 degrees from the 84.4 degrees currently occupied by just the Operational Kilgallioch Windfarm;
- All 11 of the proposed Development turbines would be visible. 5 of the proposed Development turbines would be seen to turbine base. The other 6 of the proposed Development turbines would be seen with turbine bases screened by intervening undulated landform and remaining forestry;
- The 5 northernmost proposed Development turbines in this view would appear within the same context of the Operational Kilgallioch turbines. The other 6 proposed Development turbines would appear to extend Kilgallioch to the south;
- Turbine infrastructure and access tracks in the north east of the Site area would be visible from this location; and
- Solar panel arrays would be visible appearing as thin strips within the context of proposed turbine bases, tracks, turbine crane pads.

**Magnitude of change**

Factors that increase the magnitude of change are:

- The close proximity of the proposed Development as viewed from a relatively elevated position on the moorland expanse;
- The proposed Development would increase the extent of the skyline to the east occupied by turbine development which would partly sit behind Operational Kilgallioch turbines and partly across the gap between Kilgallioch and Aries Windfarms and so reduce the extent of undeveloped view east. As a result the proposed Development would make an immediately apparent contribution to the existing cumulative situation;
- The degree to which the larger scale of the proposed Development turbines contrasts with the smaller scale existing turbines in the view;
- Whilst experienced at 2.2km from this location, which is at greater distances compared to the existing level of turbine infrastructure currently visible at much closer proximity immediately to the south of the proposed turbines at Eldrig Fell, the level of visibility of proposed turbine infrastructure increases the magnitude of change; and
- The solar panels proposed for the Site would be visible from this location appearing as thin strips within the gently rolling groundcover context of moorland and patches of historic grazing land. The addition of the solar panel arrays in themselves would contribute a relatively modest degree of visual change to the view, when considered alongside the existing wind energy developments and other visible infrastructure in this view. However, the contrast with the groundcover elements in this view is considered to intensify the overall magnitude of change.

Factors that decrease the magnitude of change are:

- Whilst the proposed Development would reduce the gap between Kilgallioch and Aries, it would result in an increase of 24.4 degrees to the existing schemes in views east. Adding a proportionally small amount of additional development to the existing 174 degrees of wind turbine development in the immediate context of the view (84.4 degree spread of Kilgallioch to the north east and 90 degree spread of Aries Farm, Artfield Fell, Balmurrie Fell, Glenchamber and Carscreugh to the south east);
- A gap of approximately 14 degrees would be maintained between Kilgallioch, the proposed Development and the other existing developments to the south east;
- From this location, the Operational Kilgallioch turbines in the foreground view appear larger than the proposed Development and whilst the Aries turbines appear smaller than the proposed Development a natural perspective between these windfarms would be easily understood as more distant turbines appearing smaller and closer turbines appearing larger in the view, and so avoiding any scale distortions;
- The large scale of the underlying upland plateau moorland and forestry landscape in views towards the proposed Development and within the surrounding landscape provides a large scale surrounding landscape context to the proposed Development with a subtly undulating upland landscape accentuating its expansive scale from this elevated viewpoint;
- The proposed Development turbines appear as an evenly spaced arrangement from this location that appears to sit neatly against the Operational Kilgallioch turbines;
- The interlinking swathes of forestry is an underlying large scale landscape element that visually connects these windfarm sites and provides a unity of landcover familiar to the existing windfarm developments in this area and whilst the current view contains large areas of felled forestry, these forests have or are planned to be replanted and so re-establishing this consistent underlying feature;

The magnitude of change for the proposed Development is considered to be High-Medium.

**Significance of effect**

The effect of the proposed Development on walkers at this viewpoint is considered to be Significant. The proposed Development would introduce further windfarm development increasing the cumulative effect experienced at this location. This increase in windfarm development is proportionally small when considered against the large amount of existing development, however, the proposed Development would reduce the extent of undeveloped part of the view east at relatively close proximity. Turbine infrastructure and solar panel arrays would also be seen from this location further contributing to the Medium – High magnitude of change predicted. Significant effects are considered to occur both as a result of the introduction of the proposed Development in close proximity views and cumulatively with the operational baseline.

**Cumulative assessment**

**Cumulative assessment (consented sites)**

From this viewpoint the consented Chirmorie Windfarm will appear to the north, behind the existing spread of Kilgallioch turbines. The consented Stranoch 1 will appear to the west of this larger grouping in the same view context as the Glen App turbines. Stranoch 1 will extend the amount of horizon to the north occupied by turbine development but will be viewed in a different part of the panorama than the proposed Development. When considering the introduction of the proposed Development to this scenario, the minimal level of cumulative interaction between these application schemes and the proposed Development moderates the level of cumulative change. The cumulative magnitude of change is considered to be Negligible resulting in a Not Significant cumulative effect.

**Cumulative assessment (application sites)**

The Stranoch 2 application is a replacement to the consented Stranoch 1 Windfarm. Arecleoch Extension and Clauchrie would add very slightly to the distant backdrop of windfarm development behind Kilgallioch. The cumulative magnitude of change is still considered to be Negligible resulting in a Not Significant cumulative effect.

Table 6.8-7: Viewpoint 02 - SUW (Knockniehourie)

**6.8.4.3 Viewpoint 03 SUW (Craig Airie Fell) (See visualisations on Figures 6.17a-g)**

**Baseline conditions**

**Viewpoint description**

This viewpoint is located on the section of the SUW that runs between New Luce and Bargrennan. Craig Airie Fell is a distinctive landform on this section of the SUW and offers panoramic views across the surrounding moorland. The existing view is a 360 degree panorama notable for the wide extent of plateau moorland, forestry and windfarm development in multiple view directions. The foreground view, on the slopes below the summit, is forest covered. Operational Kilgallioch turbines dominate the views to the north and west both from the summit and on approach.

Beyond the moorland, forestry and windfarms, distant views include a variety of landscapes views including - the Merrick range and Galloway Hills to the east; the distinctive drumlin ridgeline at the southern edges of the plateau (including the distinctive Culvennan Fell and Carscreugh Fell to the south); and distant views through gaps in this drumlin ridgeline to the Rhinns. Substantial forestry felling has recently taken place and large areas of brash can be seen to the west of this view, with much of the remaining forestry stands at the edges of the moorland and forest compartments. As well as the existing close proximity view of Kilgallioch turbines, the tracks and turbine foundations / crane pads are also visible to the north and west.

The view of the proposed Development site is to the south west across a strip of forestry on the south facing slopes of Craig Airie Fell and then across a large area of open moorland. The groundcover of moorland and patches of historic grazing land (which appears greener) can be seen from this location, a notable difference to the surrounding simple ground cover of forestry, forest brash and moorland. The moorland is gently undulated although occasional rocky outcrops such as Craigmaddie Fell around 1 km south (and foreground of the moorland from this location) and Eldrig Fell further south (background of the moorland from this location) stand out in an otherwise indistinct series of low relief hills, ridges and undulations which combine to give the impression of an expansive area of moorland. From this elevated position the moorland area stretches from the east (near Derry) to the south west (near Ha Hill) spanning approximately 120 degrees. The edges of the moorland are framed by forestry and the dark colour contrast of this forestry edge can be clearly seen to the east, south and west from this location, however, due to the undulated nature of the topography, other moorland areas to the east, south and west are visually interlinked across thin swathes of forestry.

Other operational windfarms in the area include Aries to the south; Balmurrie Fell, Artfield Fell, Glenchamber, Carscreugh and Barlockhart Moor to the south west. More distant operational windfarms (largely seen through the closer Operational Kilgallioch turbines) include North Rhins, Glen App, Arecleoch and Mark Hill.

Receptor type	Value	Susceptibility	Sensitivity
Walkers	This viewpoint is not located within any national, regional or local scenic designations, however, the viewpoint represents views from the Southern Upland Way. Value is considered to be Medium.	Walkers at this viewpoint have views towards the site whose attention is likely to be focussed on the surrounding landscape. Craig Airie Fell is a notable high point on this section of the SUW that offers good views of the wider landscapes that surround the plateau moorland and forestry landscape. The close proximity view of commercial forestry (including recently felled) and existing wind turbines (including the tracks and crane pads of Kilgallioch) is evidently man-modified which moderate susceptibility to windfarm development. On balance susceptibility is considered to be Medium-Low	Medium

**Assessment (including operational and under construction cumulative sites)**

**Description of change**

- The proposed Development turbines would be visible at approximately 2.79 km to the nearest turbine south of the viewpoint;
- The proposed Development turbines would occupy 33.29 degrees of the view. When considered together, the Operational Kilgallioch Windfarm and the proposed Development would occupy 297.78 degrees, an increase of only 35.98 degrees from the 261.80 degrees currently occupied by just the Operational Kilgallioch Windfarm;
- All 11 of the proposed Development turbines would be visible with the majority of towers visible to base;
- The 5 northernmost proposed Development turbines in this view would appear within the same context of the existing Artfield Fell and Balmurrie Fell turbines immediately to the south of the southernmost Kilgallioch turbines in the view. The other 6 proposed Development turbines would appear in the gap between Artfield Fell to the south west and Aries to the south;
- Turbine infrastructure and access tracks would be visible from this location; and
- Solar panel arrays would be visible appearing as thin strips within the context of proposed turbine bases, tracks, turbine crane pads.

**Magnitude of change**

Factors that increase the magnitude of change are:

- The close proximity of the proposed Development as viewed from an elevated position with unobstructed views towards the proposed Development Site;
- The proposed Development would increase the extent of the skyline to the south west occupied by turbine development (extending Kilgallioch to the south in this view) which would partly sit in front of the existing Artfield Fell and Balmurrie Fell Windfarms to the south west and would appear to fill the gap between the Artfield Fell and Aries Windfarms. As a result the proposed Development would make an immediately apparent contribution to the existing cumulative situation;
- The degree to which the larger scale of the proposed Development turbines contrasts with the smaller scale existing turbines in the view;
- The turbines would appear to sit in front of the distinctive landform of Eldrig Fell;
- Whilst the existing level of turbine infrastructure currently visible is considered extensive, and at much closer proximity to the north, the level of visibility of proposed turbine infrastructure increases the magnitude of change; and
- The solar panels proposed for the Site would be visible from this location appearing as thin strips within the gently rolling groundcover context of moorland and patches of historic grazing land. The addition of the solar panel arrays in themselves would contribute a relatively modest degree of visual change to the view, when considered alongside the existing wind energy developments and other visible infrastructure in this view. However, the contrast with the groundcover elements in this view is considered to intensify the overall magnitude of change.

Factors that decrease the magnitude of change are:

- Whilst the proposed Development would fill the gap between Kilgallioch and Aries, it would result in an increase of approximately 21 degrees to the existing schemes in views south between Aries and Artfield Fell. The proposed Development would add a proportionally smaller amount of additional development than currently viewed of the existing and widespread 321 degrees of wind turbine development in the immediate context of the view (11 degrees Aries and 310 degrees of Kilgallioch, Artfield Fell and Balmurrie Fell);
- From this location, the Operational Kilgallioch turbines in the foreground view to the north and west appear larger than the proposed Development, however, the Kilgallioch turbines that extends further to the west than the proposed Development Site would appear smaller in comparison to the proposed Development. The Artfield Fell and Balmurrie Fell turbines appear much smaller than the proposed Development and on a distant horizon. The Aries turbines also appear smaller than the proposed Development;
- Whilst the contrast in scale between turbines in this view is noticeable and varied, a natural perspective between these windfarms would be easily understood as more distant turbines appearing smaller and closer turbines appearing larger in the view, and so avoiding any scale distortions;
- The large scale of the underlying upland plateau moorland and forestry landscape in views towards the proposed Development and within the surrounding landscape provides a large scale surrounding landscape context to the proposed Development with a subtly undulating upland landscape accentuating its expansive scale from this elevated viewpoint;
- The proposed Development turbines appear as a relatively evenly spaced arrangement from this location, albeit with 2 of the turbines that sit in front of Eldrig Fell appearing stacked from this view;
- The interlinking swathes of forestry is an underlying large scale landscape element that visually connects these windfarm sites and provides a unity of landcover familiar to the existing windfarm developments in this area; and
- The proposed Development is located in front of the forest edge and due to the successive layers of shallow relief of moorland undulations seen from this view the proposed Development turbines would appear to occupy a relatively narrow strip of moorland close to the edges of the forest edge, albeit with 3 of the turbines sitting in the foreground of Eldrig Fell.

The magnitude of change for the proposed Development is considered to be High.

**Significance of effect**

The effect of the proposed Development on walkers at this viewpoint is considered to be Significant. The proposed Development would introduce further windfarm development increasing the cumulative effect experienced at this location. This increase in windfarm development is proportionally smaller than the large amount of existing development, however, the proposed Development would reduce the extent of undeveloped part of the view south at relatively close proximity. Turbine infrastructure and solar panel arrays would also be seen from this location further contributing to the High magnitude of change predicted. Significant effects are considered to occur both as a result of the introduction of the proposed Development in close proximity views and cumulatively with the operational baseline.

**Cumulative assessment**

**Cumulative assessment (consented sites)**

From this viewpoint the consented Stranoch 1 and Chirmorie Windfarms will appear to the north, behind the existing spread of Kilgallioch turbines. The consented Barlockhart Moor will appear behind Artfield Fell, Carscreugh and Glenchamber to the west. When considering the introduction of the proposed Development to this scenario, the minimal level of cumulative interaction between these consented schemes and the proposed Development moderates the level of cumulative change. The cumulative magnitude of change is considered to be Negligible resulting in a Not Significant cumulative effect.
<b>Cumulative assessment (application sites)</b>
The Stranoch 2 application is a replacement to the consented Stranoch 1 Windfarm. Arecleoch Extension and Clauchrie would add to the distant backdrop of windfarm development in the successive view to the north behind Kilgallioch, although the cumulative interaction of these additional schemes with the proposed Development is still considered minimal. The cumulative magnitude of change is still considered to be Negligible resulting in a Not Significant cumulative effect.

Table 6.8-8: Viewpoint 03 - SUW (Craig Airie Fell)

6.8.4.4 Viewpoint 04 SUW (West of Derry) (See visualisations on Figures 6.18a-g)

Baseline conditions			
Viewpoint description			
<p>This viewpoint is located on the section of the SUW that runs between New Luce and Bargrennan. The viewpoint is not located near any landmarks or obvious points of interest on the SUW and has been selected as it represents the first point at which unobstructed views towards the Site area are found when walking westwards towards Craig Airie Fell and New Luce. This part of the SUW is on an old tarmac track that connects to Polbae further to the east. The track is rough and potholed and long sections are within forestry or (as with the viewpoint location) are edged by forest to the north of the track.</p> <p>The view to the south west and towards the Site area is across an area of open moorland which is surrounded by commercial forestry that frames the moorland and limits more distant views. Craigmoddie Fell creates a rocky and distinctive profile on the horizon to the west, otherwise the horizon is made up of several layers of gentle undulation that combine to create a gradually sloping horizon. The groundcover of moorland and patches of historic grazing land (which appears greener) can be seen from this location, a notable difference to the surrounding simple ground cover of forestry and moorland.</p> <p>Whilst the Operational Kilgallioch Windfarm is in close proximity to the north of this viewpoint, the intervening forest obscures all but one of the closer proximity turbines which can be seen in direct alignment with the track to the east and a number of blade tips breaking the horizon to the west. Other than Kilgallioch, operational windfarms in this view include Artfield Fell and Balmurrie Fell to the west (although the landforms on which these windfarms are located are not seen in this view) and Aries which appears to sit behind the forestry to the south.</p>			
Receptor type	Value	Susceptibility	Sensitivity
Walkers	This viewpoint is not located within any national, regional or local scenic designations, however, the viewpoint represents views from the Southern Upland Way. Value is considered to be Medium.	Walkers at this viewpoint have views towards the Site whose attention is likely to be focussed on the surrounding landscape. The viewpoint is not a notable stopping point, particularly recognised or distinctive part of the walk. The close proximity view of commercial forestry and existing wind turbines is evidently man-modified which moderate susceptibility to windfarm development. On balance susceptibility is considered to be Medium - Low.	Medium
Assessment (including operational and under construction cumulative sites)			
<p>Description of change</p> <ul style="list-style-type: none"> <li>The proposed Development turbines would be visible at approximately 2.88 km to the nearest turbine south of the viewpoint;</li> <li>The proposed Development turbines would occupy 31.6 degrees of the view. When considered together, the Operational Kilgallioch Windfarm and the proposed Development would occupy 223.5 degrees an increase of 25.5 degrees from the 198 degrees currently occupied by just the Operational Kilgallioch Windfarm;</li> </ul>			

<ul style="list-style-type: none"> <li>All 11 of the proposed Development turbines would be visible above the horizon. The amount of tower visible above the horizon would vary from this location, with 3 turbines with almost all of tower (closest turbines to viewpoint) and 8 as only half of tower visible above the horizon (farthest turbines from viewpoint); and</li> <li>Visibility of other infrastructure including solar panels would be obscured by intervening landform.</li> </ul>
<b>Magnitude of change</b>
<p>Factors that increase the magnitude of change are:</p> <ul style="list-style-type: none"> <li>Change in the view resulting from addition of large scale wind turbines to the south west;</li> <li>The proposed Development would be located at close proximity compared to the majority of other visible turbines in the view (except for the close view of one of the Kilgallioch turbines); and</li> <li>The proposed Development turbines appear much larger on the horizon to the south west due to a combination of larger size and closer proximity.</li> </ul> <p>Factors that decrease the magnitude of change are:</p> <ul style="list-style-type: none"> <li>The viewpoint, surrounding landscape in the immediate view south and west and location of the proposed Development is clearly situated within an upland landscape character context that is large in scale and largely composed of large areas of forestry, existing windfarm development and gentle moorland slopes and plateau;</li> <li>Whilst a contrast in scale with the existing turbines would occur, the differences in scale between them are minimised by the distance between the existing turbines and the proposed Development which is understood through perspective; and</li> <li>The lower towers/bases, other infrastructure, substations and access tracks would be screened behind the skyline / forestry.</li> </ul> <p>The magnitude of change for the proposed Development is considered to be Medium - High.</p>
<b>Significance of effect</b>
The effect of the proposed Development at this viewpoint is considered to be Significant. The proposed Development would add substantially larger turbines to the view south west than currently experienced and whilst scale distortions would be minimal due to greater distance of existing smaller turbines the larger scale of the proposed Development is emphasised by the scale contrast. Whilst the contrast in scale with existing windfarms is a factor of the cumulative magnitude of change, significant effects are considered to occur largely as a result of the introduction of the proposed Development in close proximity views.
Cumulative assessment
<b>Cumulative assessment</b>
There are no consented or application schemes visible from this location resulting in no cumulative change and no cumulative effect.

Table 6.8-9: Viewpoint 04 SUW (West of Derry)

6.8.4.5 Viewpoint 06 Minor Road near Bennylow (Culvennan Fell) (See visualisations on Figures 6.20a-e)

Baseline conditions
Viewpoint description
<p>This viewpoint is located on the minor road that extends north from, and perpendicular to, the A75 near Kirkowan. The road connects the A75 to the minor road that runs between the Glassoch Bridge on the B7027 to the east and Glenluce in the west. The road rises steeply up to the ridge created by Culvennan Fell, Fell End and Barskeoch Fell the top of this ridge has a narrow plateau and panoramic views to the north and south are found at the northern and southern edges of the elevated plateau. The isolated properties at West Culvennan, Dirnow and Drumabrennan can be seen at the edges of the forest in views north. The viewpoint is representative of the view experienced by road users on this stretch of minor road, generally including residents of the isolated properties that it connects and visitors accessing the Three Lochs campsite at Balmnooch.</p> <p>In views to the north, the foreground view is characterised by the transition from the Drumlin Pasture in Moss and Moor Lowland (12) to the Plateau Moorland with Forest (17a) landscape character type. The more transitional nature of this landscape is evident from its more rugged, small hill ranges (such as Culvennan Fell and this viewpoint location), with rough grassland and heather moorland vegetation which contrasts with the lower elevated glacial drumlins with improved green pasture to the south. The view of the northern horizon is dominated by forestry and the existing windfarm</p>

developments of Kilgallioch, Aries, Artfield Fell, Balmurrie Fell and Glenchamber. The existing windfarms of Arecleoch, Assel Valley, Mark Hill and Hadyard Hill whilst theoretically visible are screened from view by the forestry on the horizon.			
Receptor type	Value	Susceptibility	Sensitivity
Road user	This viewpoint is not located within or close to any national, regional or local scenic designations or recognised scenic views and the value is considered to be Medium-Low.	This viewpoint is located on a minor road with elevated views towards the proposed Development turbines. The landscape in the view has a simple land use pattern and the evidently man modified commercial forestry and existing turbines reduce susceptibility. However, road users at this location would have a short but potentially repeated duration of the elevated view north towards the proposed Development and whilst receptors are limited in number, the majority of users will be residents of nearby isolated properties. On balance, susceptibility is considered to be Medium-High.	Medium
Assessment (including operational and under construction cumulative sites)			
Description of change			
<ul style="list-style-type: none"> <li>The proposed Development turbines would be visible at approximately 7.47 km to the nearest turbine north of the viewpoint;</li> <li>The proposed Development turbines would occupy 12.07 degrees of the view. However, the proposed Development would not increase the extent of the Operational Kilgallioch Windfarm which already occupies 42.73 degrees;</li> <li>All 11 of the proposed Development turbines would be visible above the horizon immediately behind the existing Aries Windfarm. Eldrig Fell sits in front of the locations of 6 turbines such that the lower half of 6 turbine towers are obscured; and</li> <li>Visibility of other infrastructure including solar panels would be restricted by intervening landform and forestry.</li> </ul>			
Magnitude of change			
Factors that increase the magnitude of change are:			
<ul style="list-style-type: none"> <li>Change in the view resulting from addition of large scale wind turbines, intensifying the existing view of wind energy developments to the north; and</li> <li>Contrasts in scale with existing smaller turbines in the view.</li> </ul>			
Factors that decrease the magnitude of change are:			
<ul style="list-style-type: none"> <li>The viewpoint, surrounding landscape in the immediate view north and location of the proposed Development is clearly situated within an upland landscape character context that is large in scale and largely composed of large areas of forestry, existing windfarm development and gentle moorland slopes and plateau;</li> <li>Whilst a contrast in scale with the Operational Kilgallioch turbines would occur, the degree of contrasting scale is minimal due to the greater distance of the Kilgallioch turbines in relation to the proposed Development turbines;</li> <li>The proposed Development would appear behind the Aries turbines from this viewpoint and differences in scale between them are minimised by this distance through perspective. Furthermore, the gentle topography of the undulated plateau and simple pattern of underlying forest cover makes it difficult to discern the difference in distance between the Site locations and therefore any potential scale distortions are avoided;</li> <li>The lower towers/bases, other infrastructure, substations and access tracks would be screened behind the skyline / forestry.</li> </ul>			
The magnitude of change for the proposed Development is considered to be Low.			
Significance of effect			
The effect of the proposed Development at this viewpoint is considered to be Not Significant. The proposed Development would appear to intensify the influence of windfarm development through the introduction of further windfarm turbines behind the existing Aries Windfarm, however, wind energy development is so familiar to the view north that the addition is considered to result in a Low magnitude of change. From this viewpoint, the design and location of the proposed Development appears consistent with the design and pattern of existing windfarm development on the northern horizon.			
Cumulative assessment			
Cumulative assessment (consented sites)			

Whilst Chirmorie and Stranoch 1 are theoretically visible from this location, intervening woods on the skyline obscures them from view resulting in no cumulative change and no cumulative effect.
Cumulative assessment (application sites)
Whilst Stranoch 2 is theoretically visible from this location, intervening woods on the skyline obscures it from view. The blades of the Arecleoch Extension would add to the distant backdrop of windfarm development in the view to the north of Kilgallioch and the Clauchrie Windfarm would add turbine development to the distant view north but would have little cumulative influence on the widespread cumulative context of the proposed Development that includes the existing Kilgallioch to the north west. The scale of change predicted for the proposed Development against the operational baseline scenario would therefore still broadly apply and the cumulative magnitude of change is therefore considered to be Low resulting in a Not Significant cumulative effect in the application scenario.

Table 6.8-10: Viewpoint 06 Minor Road near Bennylow (Culvennan Fell)

#### 6.8.4.6 Viewpoint 08 SUW (Hill of Ochitree) (See visualisations on Figures 6.22a-e)

Baseline Conditions			
Viewpoint description			
<p>This viewpoint is located on the section of the SUW that runs between New Luce and Bargrennan. This viewpoint is located on the summit of Hill of Ochitree on the SUW. The summit is a short walk from the minor road that passes Ochitree to the west, the SUW continues south to Glenruther Lodge along this minor road. The panoramic view largely consists of gently undulating and substantially forested moorland plateau which stretches over substantial areas of the foreground, middle ground and distant parts of the view. The large scale, uniformity of landcover and expansive perceptual qualities of these plateau landscapes are readily apparent from this location. The Merrick range of hills along with wider connecting summits of the Galloway Hills provides a backdrop to the view east, dominates the eastern skyline and the rugged profile of these hills creates a focus for views, particularly for walkers on the SUW travelling eastwards. The coast of Wigtown Bay can be seen to the south along with glimpses of the machars landscape which creates a simple and distant southern horizon between the slopes of the southern Galloway Hills such as Cairnsmore of Fleet and the distinctive Culvennan Fell.</p> <p>To the west and towards the proposed Development, Artfield Fell, Craig Airie Fell and Benbrake Hill form more distinctive hills on the plateau. The existing windfarms of Aries, Artfield Fell, Balmurrie Fell, Glenchamber and Kilgallioch populate the horizon that these hills create. Also seen within this broad plateau of moorland and forestry, the northern part of the Operational Kilgallioch Windfarm along with the existing Arecleoch Windfarm in the distance to the north west of this location and the Mark Hill Windfarm is visible to the north. Together these windfarms add a clearly man made influence to this landscape which has resulted in parts of the plateau to incorporate windfarms as a key characterising element within the South Ayrshire Plateau Moorlands with Forestry &amp; Wind Farms LCT (18c) and the Dumfries and Galloway Plateau Moorlands LCT (17). Other man made elements in the view include scattered farmsteads and property clusters and signs of the local road network, although these elements are inconsiderable within the broader landscape context of underlying moorland and the man-modified commercial forest which now dominates land use in the area.</p>			
Receptor Type	Value	Susceptibility	Sensitivity
Walkers	This viewpoint is not located within any national, regional or local scenic designations, however, the viewpoint represents views from the Southern Upland Way. Value is considered to be Medium.	Walkers at this viewpoint have elevated views towards the Site whose attention is likely to be focussed on the surrounding landscape. Existing wind turbine developments visible from this location moderate susceptibility as windfarm development is not an unfamiliar characteristic of the view. On balance susceptibility is considered to be Medium.	Medium
Assessment (including operational and under construction cumulative sites)			

<p>Description of change</p> <ul style="list-style-type: none"> <li>The proposed Development turbines would be visible at approximately 8.72 km to the nearest turbine west of the viewpoint;</li> <li>The proposed Development turbines would occupy 11.2 degrees of the view. When considered together, the Operational Kilgallioch Windfarm and the proposed Development would occupy 43.5 degrees, an increase of only 5.2 degrees from the 38.2 degrees currently occupied by just the Operational Kilgallioch Windfarm;</li> <li>All 11 of the proposed Development turbines would be visible above the horizon. 8 turbines would appear in front of the Operational Kilgallioch turbines and the other 3 would appear in the gap between the southernmost Kilgallioch turbine and the northernmost Balmurrie Fell turbine; and</li> <li>Whilst much of the towers of the proposed Development turbines would be visible from this location, visibility of other infrastructure including solar panels would be restricted by intervening landform and forestry.</li> </ul>
<p><b>Magnitude of Change</b></p>
<p>Factors that increase the magnitude of change are:</p> <ul style="list-style-type: none"> <li>The proposed Development would appear to intensify the influence of wind energy development in the view west, introducing further windfarm development into the Plateau Moorlands (LCT 17) landscape;</li> <li>The degree to which proposed Development turbines appear larger in scale than the Operational Kilgallioch turbines;</li> <li>The degree to which proposed Development turbines appear larger in scale than other existing turbines in the area in particular Aries, Artfield Fell and Balmurrie which would be seen in the same part of the view as the proposed Development;</li> <li>Some of the proposed Development turbines would appear in the gap between the neighbouring Kilgallioch turbines and the more distant Balmurrie Fell turbines which are smaller in scale;</li> <li>The proposed Development turbines would extend the horizontal spread of the Operational Kilgallioch Windfarm to the south.</li> </ul> <p>Factors that decrease the magnitude of change are:</p> <ul style="list-style-type: none"> <li>From this location, the Operational Kilgallioch turbines in the immediate context of the proposed Development turbines are situated behind the proposed Development further to the west. The Balmurrie Windfarm turbines are located further still to the west and as such appear much smaller. The larger scale of the proposed Development turbines are clearly understood from this location in comparison to these existing turbines, however, the existing turbines are also more distant and the natural perspective of the viewer would not be distorted as closer objects are naturally understood to appear larger in scale than more distant objects;</li> <li>The scale of the easternmost Kilgallioch turbines to the north west and the Aries turbines to the south west appear closer in scale to the proposed Development, further emphasising the smaller scale of more distant turbines within the immediate context, behind the proposed Development. The proposed Development turbines appear as an evenly spaced arrangement from this location that appears to sit neatly against the existing Kilgallioch turbines. The horizontal extent of the proposed Development is similar to Aries and the easternmost part of Kilgallioch in which the proposed Development is closest in scale to, reinforcing the existing pattern of development;</li> <li>The large scale of the underlying upland plateau moorland and forestry landscape in views towards the proposed Development and within the surrounding landscape provides a large scale surrounding landscape context to the proposed Development with a subtly undulating upland landscape accentuating its expansive scale from this elevated viewpoint;</li> <li>The interlinking swathes of forestry is an underlying large scale landscape element that visually connects these windfarm sites and provides a unity of landcover familiar to the existing windfarm developments in this area;</li> <li>The simple moorland and forestry landcover is extensive to the west with forestry and existing windfarm development dominating the area in which the proposed Development turbines would appear in this view. The proposed Development would appear on the western skyline, in a similar way to the existing windfarm development and would therefore relate to the same pattern of development and characteristic of the plateau landscape, creating a consistent image that limits visual confusion and reinforces the appropriateness of the location for windfarm development.</li> </ul> <p>The magnitude of change for the proposed Development is considered to be Medium.</p>
<p><b>Significance of Effect</b></p>
<p>The effect of the proposed Development at this viewpoint is considered to be Not Significant. The proposed Development would appear to increase the influence of windfarm development through the introduction of further turbines in front and to the south of the Operational Kilgallioch Windfarm, extending the spread of development. However, wind energy development is familiar within the panoramic views from this location and the proposed Development would be viewed in</p>

<p>the backdrop of widespread pattern of windfarm development with which the proposed Development would reinforce and be consistent with in its design.</p>
<p><b>Cumulative Assessment</b></p>
<p><b>Cumulative Assessment (Consented sites)</b></p>
<p>From this viewpoint the Chirmorie Windfarm will appear within the context of Kilgallioch and Arecleoch Windfarms, at a turbine scale between these two existing developments and in doing so will coalesce the existing developments into a more consistent spread which reduces in scale with distance. Only small blade tips of Stranoch 1 will be visible in the backdrop to the Kilgallioch Windfarm. When considering the addition of the proposed Development to the consented situation, the cumulative interaction with the proposed Development is minimal and the cumulative magnitude of change is therefore Negligible resulting in a Not Significant cumulative effect.</p>
<p><b>Cumulative Assessment (Application sites)</b></p>
<p>The Stranoch 2 application is a replacement to the consented Stranoch 1 windfarm and if consented would only be slightly more visible than Stranoch 1 with one of its turbines appearing between Craig Airie Fell and Benbrake Hill. Arecleoch Extension would add to the distant backdrop of windfarm development in the successive view to the north of Kilgallioch and the consented Chirmorie, Clauchrie Windfarm would in itself add turbine development to the distant view north but would have little cumulative influence on the widespread cumulative context of the proposed Development to the west.</p> <p>The scale of change predicted for the proposed Development against the consented scenario would therefore still broadly apply and the cumulative magnitude of change is therefore considered to be Negligible resulting in a Not Significant cumulative effect in the application scenario.</p>

Table 6.8-11: Viewpoint 08 SUW (Hill of Ochitree)

6.8.4.7 Viewpoint 10 SUW (Glenwhan Moor) (See visualisations on Figures 6.24a-d)

<p><b>Baseline conditions</b></p>			
<p><b>Viewpoint description</b></p>			
<p>This viewpoint is located on the SUW approximately 4km to the east of Castle Kennedy. The viewpoint is easily accessed at approximately 300m from the minor road that runs between Castle Kennedy and New Luce. This section of the SUW follows the Craig Burn, skirting along the northern edge of the Glenwhan Moor forestry, crossing the Water of Luce and bypassing New Luce by crossing the rocky moorland area of Kilhern Moss before turning north / north east to Barnshangan Waterfall.</p> <p>The viewpoint is located on the edge of upland plateau and the views are dominated by views of the plateau moorland that immediately surrounds the viewpoint. To the west, views of the upland fringe landscapes within the context of the coast and northern part of the Rhins Peninsula are almost entirely obscured by the plateau moorland in the foreground. To the south the nearby forestry limits the view. To the north and east, areas of more distant moorland and forestry can be seen beyond and between foreground moorland slopes and occasional small hills break the wide view of gently undulating plateau, the most notable of these from this location are Artfield Fell and Craig Airie Fell.</p> <p>The Merrick range of hills form a dramatic rugged profile in the distance to the east appearing between Artfield Fell and Craig Airie Fell, this provides focus to the distant view (albeit as seen through the existing windfarms of Kilgallioch, Balmurrie Fell, Aries, Artfield Fell and Glenchamber) and a sense of what lies ahead for walkers travelling east along the SUW. Other operational windfarms visible from this location include Carscreugh to the south east and North Rhinns to the west. Arecleoch is barely visible as small tips above the moorland skyline to the north and Barlockhart Moor is screened by intervening forestry. The gap between the southernmost Kilgallioch turbines and northernmost Balmurrie Fell turbines appears small from this location and whilst Carscreugh remains separated from Glenchamber the overall pattern of developed skyline to the east gives the impression of coalescence between Kilgallioch and the other existing schemes to the south.</p>			
<p><b>Receptor type</b></p>	<p><b>Value</b></p>	<p><b>Susceptibility</b></p>	<p><b>Sensitivity</b></p>
<p>Walkers</p>	<p>This viewpoint is not located within any national, regional or local scenic designations, however, the viewpoint represents views</p>	<p>Walkers at this viewpoint have views towards the Site whose attention is likely to be focussed on the surrounding landscape. Glenwhan Moor is a high point on this section of the SUW. The simplicity of the landscape pattern in the view of commercial forestry, moorland and existing wind turbines</p>	<p>Medium</p>

	from the Southern Upland Way. Value is considered to be Medium.	is evidently man-modified which moderate susceptibility to windfarm development. On balance susceptibility is considered to be Medium.	
<b>Assessment (including operational and under construction cumulative sites)</b>			
Description of change			
<ul style="list-style-type: none"> <li>The proposed Development turbines would be visible at approximately 11.87 km to the nearest turbine north east of the viewpoint;</li> <li>The proposed Development turbines would occupy 9.2 degrees of the view. When considered together, the Operational Kilgallioch Windfarm and the proposed Development would occupy 28 degrees, an increase of only 6.5 degrees from the 21.5 degrees currently occupied by just the Operational Kilgallioch Windfarm;</li> <li>All 11 of the proposed Development turbines would be visible;</li> <li>The view to the proposed Development turbines is restricted by intervening moorland such that the lower half of tower for 9 turbines would be screened (5 of these turbines would appear behind the Operational Kilgallioch turbines) and the other 2 turbines would appear as hubs close to the intervening moorland horizon (behind Balmurrie Fell turbines); and</li> <li>Visibility of other infrastructure including solar panels would be restricted by intervening landform.</li> </ul>			
<b>Magnitude of change</b>			
Factors that increase the magnitude of change are:			
<ul style="list-style-type: none"> <li>The proposed Development would increase the extent of the skyline to the east occupied by existing turbine development sitting across the gap between Kilgallioch and Balmurrie Fell;</li> <li>The degree to which proposed Development turbines appear larger in scale than the Operational Kilgallioch turbines;</li> <li>The degree to which proposed Development turbines appear larger in scale than other existing turbines in the area in particular Balmurrie Fell and Artfield Fell which would be seen in the same part of the view as the proposed Development. The Balmurrie Fell turbines whilst only overlapping with the 2 proposed Development turbines that are partly screened by landform, particularly appear to be of a clearly different scale; and</li> <li>Some of the proposed Development turbines would appear in the gap between the Killgallioch and Balmurrie Fell turbines which are smaller in scale.</li> </ul>			
Factors that decrease the magnitude of change are:			
<ul style="list-style-type: none"> <li>Whilst the proposed Development would fill the gap between Kilgallioch and Balmurrie Fell the current impression in the view east is already one of coalescence. Furthermore, it would only result in an increase of 6.5 degrees to the existing schemes in views east - Kilgallioch 21.5 degrees / Balmurrie Fell, Artfield Fell, Aries Farm and Glenchamber 24.5 degrees, (6.5 degrees occurring within a total spread of 51 degrees);</li> <li>From this location, the Operational Kilgallioch turbines in the immediate context of the proposed Development turbines are situated in front of some of the proposed Development turbines. Whilst scale differences remain, with the proposed Development appearing larger in this view, the difference in scale is reduced by perspective;</li> <li>The large scale of the underlying upland plateau moorland and forestry landscape in views towards the proposed Development and within the surrounding landscape provides a large scale surrounding landscape context to the proposed Development with a subtly undulating upland landscape accentuating its expansive scale from this elevated viewpoint;</li> <li>The proposed Development turbines appear as an evenly spaced arrangement from this location that appears to sit neatly against the Operational Kilgallioch turbines;</li> <li>The interlinking swathes of forestry is an underlying large scale landscape element that visually connects these windfarm sites and provides a unity of landcover familiar to the existing windfarm developments in this area;</li> <li>The simple moorland and forestry landcover is extensive to the north and east with forestry and existing windfarm development dominating the area in which the proposed Development turbines would appear in this view. The proposed Development would appear on the eastern skyline, in a similar way to the existing windfarm development and would therefore relate to the same pattern of development and characteristic of the plateau landscape, creating a consistent image that limits visual confusion and reinforces the appropriateness of the location for windfarm development.</li> </ul>			
The magnitude of change for the proposed Development is considered to be Low.			
<b>Significance of effect</b>			
The effect of the proposed Development at this viewpoint is considered to be Not Significant. The proposed Development would appear to increase the spread of windfarm development on the eastern skyline, however, the existing wind turbine			

development in this view is extensive when viewed from this elevated position (46 degrees of the eastern view including the Kilgallioch, Balmurrie Fell, Artfield Fell, Aries Farm and Glenchamber schemes) and the increase of proposed Development is proportionally much smaller at only 5 degrees. Some scale differences exist between the proposed Development and the surrounding windfarms, however, these differences are partly moderated by distance such that Kilgallioch existing turbines appear closer in scale than they actually are. The proposed Development would be viewed in the backdrop of widespread pattern of windfarm development with which the proposed Development would reinforce and be consistent with in its design.
<b>Cumulative assessment</b>
<b>Cumulative assessment (consented sites)</b>
From this viewpoint the Chirmorie and Stranoch 1 Windfarms will appear to the north, further extending the view of windfarm development by an additional 17 degrees to the north. Allowing for the moorland landforms and forestry that frame the view north east, much of the available skyline is developed in this scenario. When considering the addition of the proposed Development to this consented situation, the 5 degrees of additional development is proportionally smaller to the potentially 68 degrees occupied. Whilst the proposed Development would fill the gap between Kilgallioch and Balmurrie Fell the current impression in the view east is already one of coalescence (5 degrees occurring within a total spread of 68 degrees). On balance, the magnitude of change in this scenario is increased due to the contribution of the proposed Development to the wider cumulative view (albeit as a small contribution). The cumulative magnitude of change is considered to be Low-Medium resulting in a Not Significant cumulative effect.
<b>Cumulative assessment (application sites)</b>
The Stranoch 2 application is a replacement to the consented Stranoch 1 Windfarm. The scale of change predicted for the proposed Development against the consented scenario would therefore still broadly apply and the cumulative magnitude of change is therefore considered to be Low-Medium resulting in a Not Significant cumulative effect in the application scenario.

Table 6.8-12: Viewpoint 10 SUW (Glenwhan Moor)

6.8.4.8 Viewpoint 11 A714, Bargrennan Cottage (See visualisations on Figures 6.25a-d)

<b>Baseline conditions</b>			
<b>Viewpoint description</b>			
This viewpoint is located to the north of Bargrennan on a winding section of the A714. It lies within a swathe of theoretical visibility that cuts across this short section of A714. Localised topography and forestry potentially intervene in views west from this part of the A714 although a short section of the road has views west to the distant forestry and existing wind turbines of Kilgallioch Windfarm. The potential view to the proposed Development is limited by surrounding undulations close to the road corridor, resulting in the briefest glimpse in the direction of the Site that is only available from a short section of carriageway near the viewpoint location.  The properties at Bargrennan Cottage and Whitecairn are close to the viewpoint but would have different views to the viewpoint due to the intervening landform of Bargrennan Hill, which although of shallow relief would restrict views from the lower elevated Whitecairn property and Bargrennan Cottage which is located on the southern slopes of this landform. As a result, the viewpoint does not represent the view of residential receptors within these nearby properties.  Operational windfarms theoretically visible from this location include Kilgallioch, Aries, Glenchamber, Artfield Fell and Balmurrie Fell. In reality, Balmurrie Fell and Glenchamber are screened by intervening forestry on the distant horizon. The same intervening forestry limits the degree to which the other existing windfarms are visible resulting in many of the potentially visible towers and hubs of these operational turbines being obscured from view.			
<b>Receptor type</b>	<b>Value</b>	<b>Susceptibility</b>	<b>Sensitivity</b>

Road user	This viewpoint is not located within any national landscape designations and views do not include any locally designated scenic areas or landscapes. The value of this receptor is considered to be Medium-Low.	This viewpoint is located on an undulated and winding section of the A714 and whilst the national speed limit applies, road speeds are likely to be between 40-50 mph. Although the road winds, none of the sections of road are facing the proposed Development Site and potential views of the proposed Development would be glimpsed and at a perpendicular angle to the direction of travel. Existing windfarm development to the west reduces susceptibility to change. Susceptibility for road users at this viewpoint is Low.	Medium-Low
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**Assessment (including operational and under construction cumulative sites)**

<p>Description of change</p> <ul style="list-style-type: none"> <li>The proposed Development turbines would be visible at approximately 12.19 km to the nearest turbine west of the viewpoint;</li> <li>The proposed Development turbines would occupy 8.5 degrees of the view. When considered together, the Operational Kilgallioch Windfarm and the proposed Development would occupy 21.6 degrees, an increase of only 5.4 degrees from the 16.2 degrees currently occupied by just the Operational Kilgallioch Windfarm;</li> <li>Visibility of all 11 of the proposed Development turbines as top of tower and hub visible above the horizon for 4 turbines and due to forestry screening, the other 7 turbines appearing as blades above the treeline; and</li> <li>Visibility of other infrastructure including solar panels would be restricted by intervening landform.</li> </ul>
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**Magnitude of change**

<p>Factors that increase the magnitude of change are:</p> <ul style="list-style-type: none"> <li>The proposed Development would appear to intensify the influence of wind energy development in the view west, introducing further windfarm development into the plateau moorland and forestry landscape;</li> <li>The degree to which the proposed Development turbines appear more conspicuous on the distant forested skyline to the west;</li> <li>The degree to which proposed Development turbines appear larger in scale than the existing turbines in the view; and</li> <li>The proposed Development turbines would extend the horizontal spread of the Operational Kilgallioch Windfarm to the south.</li> </ul> <p>Factors that decrease the magnitude of change are:</p> <ul style="list-style-type: none"> <li>The simple moorland and forestry land cover is extensive to the west with forest cover dominating the area in which the proposed Development turbines would appear in this view. This underlying plateau moorland upland landscape provides a large scale surrounding landscape context to the proposed Development with a subtly undulating upland landscape accentuating its expansive scale from this viewpoint;</li> <li>The proposed Development would appear in a part of the view which has a clear association with the windfarm influenced landscape of the plateau uplands seen from this part of the A714;</li> <li>The change experienced would occur in a fleeting glimpse whilst the attention of road users is largely focussed on the road and immediate landscape context;</li> <li>Whilst the proposed Development turbines would appear larger on the horizon than the existing turbines (most notably in contrast to Artfield Fell), there are no scale indicators or landscape features that would introduce a sense of visual disruption and the natural perspective of more distant objects (Artfield Fell) appearing smaller than closer objects (the proposed Development) is easily understood and not diminished in any way.</li> <li>The arrangement of the proposed Development turbines appears as an evenly spaced layout from this location that fits the pattern of existing development, particularly Aries and the easternmost turbines of Kilgallioch.</li> </ul> <p>The magnitude of change for the proposed Development is considered to be Medium-Low.</p>
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**Significance of effect**

<p>The effect of the proposed Development at this viewpoint is considered to be Not Significant. The proposed Development would appear to increase the influence of windfarm development through the introduction of further windfarm turbines in front and to the south of the Operational Kilgallioch Windfarm, extending the spread of development. However, the change is experienced as a glimpsed view from a winding section of road where the focus of road users is considered to be largely on the road itself or its immediate context. For those road users who glimpse the view for the short duration available, wind</p>
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<p>energy development is a familiar feature of the horizon to the west and the proposed Development would be viewed in this context with which the proposed Development would reinforce and be consistent with in its design.</p>
<p><b>Cumulative assessment</b></p>
<p><b>Cumulative assessment</b></p>
<p>There are no consented or application schemes visible from this location resulting in no cumulative change and no cumulative effect.</p>

Table 6.8-13: Viewpoint 11 A714, Bargrennan Cottage

**6.8.4.9 Viewpoint 16 The Merrick (See visualisations on Figures 6.30a-d)**

<p><b>Baseline Conditions</b></p>			
<p><b>Viewpoint description</b></p> <p>At 843m, the summit of Merrick is the highest hill in the Southern Uplands and is a popular destination for hillwalkers which lies central to the Galloway Forest Park and is a key focal point in the area. With access via the Glentool car park the Merrick is reached via well established paths.</p> <p>The existing view is panoramic, long distance and takes in a 360 degree panorama over the diverse landscapes of southern and central Galloway, including the immediate mountainous core of the Merrick range and extensive forested plateau moorlands and Ayrshire coastline. The skyline to the west, in the direction of the proposed Development Site area has a broadly plateau appearance with the undulations combining in this distant view to result in few identifiable topographical features in the view. The view to the east is limited by the mountainous core of the Merrick range. Overall, the view is notable for the variety and diversity of landscapes visible within the panorama, comprising a complex mosaic of moorlands, forest, pastoral valleys, lochs and the sea. To the north west Beneraird, Ailsa Craig and Knockdolian form notable features in this otherwise gently undulated and expansive forested moorland plateau.</p> <p>The summit is remote and exposed and sits at the heart of the Merrick WLA area. The uniformity and simplicity of the land-use pattern of the moorlands to the west, comprising predominantly commercial forestry, moorland and wind turbines is evidently man-modified. Whilst these distant elements are recognisable components in the view, their influence on the sense of remoteness experienced at this location is limited by distance and the clearly apparent separation created by the intervening western slopes and foothills of the Merrick range which share the remoteness quality experienced at the summit.</p> <p>Surrounding windfarm development in the area is a key feature of the distant surrounding landscape. The key cumulative developments within this context are extensive and includes: Aries, Artfield Fell, Balmurrie Fell, Glenchamber, Kilgallioch, Knocknain Farm, Glen App, Arecleoch and Mark Hill are visible across the forested moorland to the west; Assel Valley and Hadyard Hill to the north west; and Dersalloch and Windy Standard to the north and north west.</p>			
<p><b>Receptor Type</b></p>	<p><b>Value</b></p>	<p><b>Susceptibility</b></p>	<p><b>Sensitivity</b></p>
<p>Walkers</p>	<p>The Merrick viewpoint is a regionally important position for viewing the landscape, being the highest point within the Southern Uplands of Scotland. It is located within the Galloway Hills RSA and is also central to the Merrick WLA. Value is considered to be High.</p>	<p>Views from the Merrick will be experienced by hill walkers whose attention is likely to be focused on the landscape as an integral part of their experience. Whilst the existing wind turbines are a recognisable feature in the view, the influence of this existing cumulative baseline on susceptibility is limited due to its distance from the summit. However, a key factor is that the proposed Development is within the same context as the existing development and so not an unfamiliar feature in the distant view. Susceptibility is considered to be High-Medium.</p>	<p>High</p>
<p><b>Assessment (including operational and under construction cumulative sites)</b></p>			

<p>Description of change</p> <ul style="list-style-type: none"> <li>The proposed Development turbines would be visible at approximately 23.38 km to the nearest turbine west of the viewpoint.</li> <li>The proposed Development turbines would only occupy 4.6 degrees of the view. When considered together, the Operational Kilgallioch Windfarm and the proposed Development would occupy 17.1 degrees an increase of only 2.9 degrees from the 14.1 degrees currently occupied by just the Operational Kilgallioch Windfarm;</li> <li>Visibility of all 11 of the proposed Development turbines to the south of the Operational Kilgallioch turbines within an area of moorland; and</li> <li>Visibility of other infrastructure including solar panels would not be restricted by forestry but would be limited by distance and barely visible.</li> </ul>
<p><b>Magnitude of Change</b></p> <p>Factors that increase the magnitude of change are:</p> <ul style="list-style-type: none"> <li>The proposed Development would appear to intensify the influence of wind energy development in the view west, introducing further windfarm development into the plateau moorland and forestry with windfarm landscape;</li> <li>The degree to which proposed Development turbines appear larger in scale than the Operational Kilgallioch turbines;</li> <li>The degree to which proposed Development turbines appear larger in scale than other existing turbines in the area in particular Aries, Artfield Fell and Balmurrie which would be seen in the same part of the view as the proposed Development;</li> <li>Some of the proposed Development turbines would appear in the gap between the neighbouring Killgallioch turbines and the more distant Balmurrie Fell turbines which are smaller in scale; and</li> <li>The proposed Development turbines would extend the horizontal spread of the Operational Kilgallioch Windfarm to the south.</li> </ul> <p>Factors that decrease the magnitude of change are:</p> <ul style="list-style-type: none"> <li>The large scale of the underlying upland plateau moorland and forestry landscape in views towards the proposed Development and within the surrounding landscape provides a large scale surrounding landscape context to the proposed Development;</li> <li>At this distance the scale difference between the proposed Development turbines and the existing turbines within its immediate context is barely perceptible;</li> <li>The simple moorland and forestry land cover is extensive to the west appearing draped across a subtly undulating upland landscape accentuating its expansive scale from this elevated viewpoint. The proposed Development would appear on the broad plateau landscape to the west, in a similar way to the existing windfarm development and would therefore relate to the same pattern of development and characteristic of the plateau landscape, creating a consistent image that limits visual confusion and reinforces the appropriateness of the location for windfarm development.</li> <li>The remoteness experienced within the immediate context of the viewpoint and within the Merrick range (which this location represents a worst case view) would be relatively unaffected by the proposed Development, given that it would be located within the immediate context of other windfarm development that forms an existing collection of man made features at similar distance to the west; and</li> </ul> <p>The magnitude of change for the proposed Development is considered to be Low-Negligible.</p>
<p><b>Significance of Effect</b></p> <p>The effect of the proposed Development at this viewpoint is considered to be Not Significant. Wind energy development is not unfamiliar within the panoramic views from this location, the proposed Development would appear to slightly increase the influence of windfarm development through the introduction of further windfarm turbines to the south of the Operational Kilgallioch Windfarm, however this additional influence is contained to one part of this panorama, and the effect is reduced by distance resulting in the low-negligible magnitude of change that the proposed Development would cause.</p>
<p><b>Cumulative Assessment</b></p>
<p><b>Cumulative Assessment (Consented sites)</b></p> <p>Key cumulative schemes in the consented scenario are the consented Chirmorie and Stranoch 1 Windfarms. From this viewpoint these windfarms will bridge the gap between Arecleoch and Kilgallioch creating a more coalesced spread of turbine development across the plateau moorland and forestry with windfarms landscape. When considering the proposed Development within this scenario, however, the scale of change predicted for the proposed Development against the</p>

<p>existing baseline would still broadly apply and the cumulative magnitude of change is therefore considered to be Low - Negligible resulting in a Not Significant cumulative effect.</p>
<p><b>Cumulative Assessment (Application sites)</b></p> <p>The Stranoch 2 application is a replacement to the consented Stranoch 1 Windfarm and if consented would have a similar influence as Stranoch 1 on the view. Arecleoch Extension and Clauchrie would be visible to the north west from this viewpoint further increasing the level of windfarm development in view, however, given these schemes would appear in a different part of the panorama from the proposed Development, the cumulative interaction is minimal. The overall intensification of wind energy development resulting from this scenario would be visible from this high vantage point, however, the proposed Development would contribute a relatively small proportion of the wider spread of turbines visible on the broad plateau in the distance and in a different part of the panorama to the other application schemes. Taking this into account, the cumulative magnitude of change is considered to be Low-Negligible resulting in a Not Significant cumulative effect.</p>

Table 6.8-14: Viewpoint 16 The Merrick

### 6.8.5 SUW sequential route assessment

#### 6.8.5.1 Baseline

119. The SUW is a long distance recreational route that runs between Portpatrick on the Rhins peninsula on the south west coast of Scotland to Cockburnspath on the east coast of Scotland. The track is well known for walking and cycling and is approximately 344 km in length.

Given the overall length of this route, the preliminary assessment of the SUW has considered the section of SUW within 45 km of the proposed development. This section lies approximately between Portpatrick on the Rhins peninsula and Culmark Hill to the east (See **Figure 6.7a**). The ZTV on **Figure 6.7a** show patches of theoretical visibility along the section of this route between Glen Trool and New Luce and again on the Rhins Peninsula. It is considered that on the Rhins Peninsula there is no potential for significant effects due to distance, limited visibility and cumulative baseline context and the sequential assessment of this route is therefore focussed on the section between Glen Trool and New Luce.

120. The view from the SUW varies due to differing landscape context and surrounding characteristics. The part of the SUW considered in this assessment can be split into clearly defined sections as follows:

- Glen Trool to Bargrennan – this section of the route is well wooded and the vast majority of views are inward looking and intimate in nature with a focus on Glen Trool and the Water of Trool including the wooded banks of the scenic Loch Trool;
- Bargrennan to Knowe on the B7027 – this section of the route has an open character which at times is elevated where it crosses the Hill of Ochiltree offering views across the broad plateau of moorland and forestry, to the Galloway Hills and Merrick range to the east and towards the existing windfarms in the area;
- Knowe to Craig Airie Fell – this section of the SUW is predominantly forest covered with breaks in the forestry cover or felled areas offering a view out across the extensive plateau of moorland and forestry in which this section of SUW is located within;
- Craig Airie Fell to Purgatory Burn – the section between Craig Airie Fell and the crossing with Purgatory Burn are a continuation of the same forest dominated character as the previous sections, varying in terms of the availability of views, dependant on the level of forest cover; and
- Purgatory Burn to New Luce – this section crosses undulating moorland terrain and is generally open in character.

121. Whilst these sections are described as travelling east to west along the route, it is acknowledged that walkers would experience views in multiple directions and would not be limited to their direction of travel.

122. **Figure 6.14g**, cumulative sequential analysis of this route, shows the theoretical visibility of cumulative windfarms considered in this assessment along the SUW. The graph illustrates the section of route considered (vertical axis) and the cumulative windfarms considered in the assessment (horizontal axis). Theoretical visibility is indicated as a series of vertical bands that correspond to parts of the route for each cumulative site (coloured according to status). The Figure shows that the operational Airies Farm, Arecleoch, Artfield Fell, Assel Valley, Balmurrie Fell,

Carscreugh, Glen App, Glenchamber, Hadyard Hill, Kilgallioch and Mark Hill Windfarms are all theoretically visible to varying degree. The operational windfarms in the northern group (Arecleoch, Glen App and Mark Hill) are shown to have less consistent theoretical visibility which is quite broken and interrupted by intervening topography along the central part of the route assessed (between Knocknahourie and west of Derry). The Operational Kilgallioch and the windfarms in the southern group (Aries, Artfield Fell, Balmurrie Fell, Glenchamber and Carscreuch) are the key visible windfarms in the observer's view towards the proposed Development Site.

#### 6.8.5.2 Sensitivity

123. The SUW is not located within any national scenic designations. Within 45 km, the eastern part of this route crosses the Galloway Hills RSA and the western end of the route is within the Rhins peninsula RSA. The SUW is also considered to be valued due to its local importance as a key connecting recreational route across the Galloway Hills more generally and its connection with other upland landscapes across southern Scotland. The SUW is considered to have a Medium-High value within the Galoway Hills RSA area and a Medium value in other areas.
124. Recreational walkers are likely to be focussed on their surroundings thereby increasing susceptibility, however, existing wind turbine developments visible from this route (particularly Kilgallioch, Airies, Balmurrie Fell, Glenchamber and Artfield Fell Windfarms) moderate susceptibility as windfarm development is not an unfamiliar characteristic of the view. The susceptibility of this route is considered to be Medium overall although when within close proximity to the extensive existing windfarm development in the area susceptibility is considered to be lower. The combination of susceptibility to change and value results in a range of sensitivity which varies from Medium - High sensitivity in eastern parts of the route assessed (Glen Trool to Bargrennan) and Medium sensitivity for other areas assessed (Bargrennan to New Luce).

#### 6.8.5.3 Magnitude of Change

125. For the section of the route between Glen Trool and Bargrennan visibility of the proposed Development is limited and where visible is restricted by intervening forestry in the local area.
126. From the section of route between Bargrennan and Knowe, viewpoint 08 is located on the Hill of Ochiltree which due to its elevation is considered to be a worst case view for this section of SUW. The visual assessment of viewpoint 08 predicts a Not Significant effect on walkers. From this location, the proposed Development would appear to increase the influence of windfarm development through the introduction of further turbines in front and to the south of the Operational Kilgallioch Windfarm, extending the spread of development. However, wind energy development is familiar within the panoramic views from this location and the proposed Development would be viewed in the backdrop of widespread pattern of windfarm development with which the proposed Development would reinforce and be consistent with in its design. Sequentially, a similar effect would be experienced on lower slopes to the west of this hill as the SUW drops into the shallow valley of the River Bladnoch and Knowe.
127. Between Knowe and Craig Airie Fell – the forestry and woodland between Knowe and Derry (to the west of Polbae) is substantial and would obscure views of the proposed Development. Viewpoint 04 is located on a less obstructed part of the SUW to the west of Derry. The visual assessment of viewpoint 04 predicts a Significant effect on walkers. From this stretch of SUW, the proposed Development would add substantially larger turbines to the view south west than currently experienced and whilst scale distortions would be minimal due to greater distance of existing smaller turbines the larger scale of the proposed Development is emphasised by the scale contrast. To the west of Derry Loch, visibility on the SUW is restricted by the intervening landform of Craigmaddie Fell and the Significant effect experienced at viewpoint 04 would be limited to approximately 1 km to the west of the viewpoint.
128. Viewpoint 03 is located on Craig Airie Fell and the visual assessment predicts a Significant effect on walkers. This is a key location on this section of the SUW and from this elevated view, the proposed Development would introduce further windfarm development increasing the cumulative effect experienced at this location. This increase in windfarm development is proportionally smaller than the large amount of existing development, however, the proposed Development would reduce the extent of undeveloped part of the view south at relatively close proximity. Turbine infrastructure and solar panel arrays would also be seen from this location further contributing to the High magnitude of change predicted. Sequentially the significant visual effect would be limited to unobstructed views between viewpoint 04 and the western slopes of Craig Airie Fell.

129. From the lower slopes of Craig Airie Fell to Purgatory Burn the SUW has restricted views although the existing turbines of Kilgallioch are occasionally seen through gaps between stands of forestry. From the Purgatory Burn to New Luce the SUW crosses open moorland. Viewpoint 02 is located on an elevated part of this section of route (Knockniehourie) and the visual assessment predicted a Significant effect on walkers at this location. From this location, the increase in windfarm development, resulting from the proposed Development, is proportionally small when considered against the large amount of existing development, however, the proposed Development would reduce the extent of undeveloped part of the view east at relatively close proximity. Turbine infrastructure and solar panel arrays would also be seen from this location further contributing to the Medium – High magnitude of change predicted. The Significant visual effect would extend to the south across the plateau top of Knockniehourie but further to the south, and as the visibility becomes more obscured by intervening landforms of Balmurrie Fell and Artfield Fell, the magnitude of change reduces resulting in a Not Significant Effect. Further to the south from Knockniehourie, as the SUW drops into the valley of the Cross Water of Luce, visibility continues to reduce with potentially visible turbines only visible as blades or blade tips and to the south of Carn na Gath the proposed Development would be barely visible.
130. To the south of the Barnshangan waterfall, the SUW rises up again, out of the Cross Water of Luce valley and onto the moorland plateau and rocky outcrops within the context of Drumfleugh and Killhearn. From this section of the route the proposed Development would sit amongst the Operational Kilgallioch and Balmurrie Fell turbines. The SUW then crosses the Water of Luce valley before skirting around the forest edge of Glenwhan Moor. Viewpoint 10 is located on an elevated part of the Glenwhan Moor and the visual assessment predicted a Not Significant effect on walkers at this location. At viewpoint 10, the proposed Development would appear to increase the spread of windfarm development on the eastern skyline, however, the existing wind turbine development in this view is extensive when viewed from this elevated position and the increase of proposed Development is proportionally much smaller. Some scale differences exist between the proposed Development and the surrounding windfarms, however, these differences are partly moderated by distance such that Kilgallioch existing turbines appear closer in scale than they actually are. The proposed Development would be viewed in the backdrop of widespread pattern of windfarm development with which the proposed Development would reinforce and be consistent with in its design. Potential visibility to the west of viewpoint drops off suddenly on the descent towards Castle Kennedy and Stranraer Basin.
131. On the overall section of SUW assessed, the magnitude of change would vary on the level of screening provided by the intervening landforms or forestry that would limit the potential for effects to occur. A higher magnitude of change is predicted on the closest parts of the route to the proposed Development where screening is minimal (between Derry and Craig Airie Fell and on the Knockniehourie landform), this is considered to be of a High to High – Medium magnitude of change. Sequential magnitude of change on the section of route between Glen Trool and Bargrennan is considered to be Negligible. Sequential magnitude of change on other sections of the route is affected by the degree of existing development in the view and the amount of landform / forestry screening and ranges between Medium to Negligible.

#### 6.8.5.4 Significance of Effect

132. The proposed Development is considered to have a localised Significant sequential effect on the section of SUW between Knockniehourie and Derry (approximately 8 km). This 8 km section of route amounts to approximately 2% of the whole route (344 km). The significant visual effects are predicted to be relatively isolated in extent (in the locale of viewpoints 02, 03 & 04) due to screening from intervening forestry and landform, however, the re-occurrence of these close proximity views along this 8 km section of route would result in significant sequential effects. Sequential effects are considered to be Not Significant for all other parts of the SUW. Significant effects on the SUW are considered to occur both as a result of the introduction of the proposed Development in close proximity views and cumulatively with the operational baseline.

#### 6.8.5.5 Cumulative Assessment

133. Cumulative schemes in the consented scenario that will add to the backdrop of windfarms from this section of SUW are the consented Chirmorie and Stranoch 1. The greater intensity of windfarm development from the SUW will increase the intensity of the effect experienced in forestry gaps or open areas where views of the surrounding windfarm context is available. When considering the proposed Development in this scenario, the increased level of windfarm development creates a slightly more complex scene with further multiple turbine heights and scales, an effect which the proposed Development intensifies. On balance however, when considering the addition of the

proposed Development to the consented situation, the degree of change predicted for the proposed Development against the existing baseline would still broadly apply to this scenario.

134. The consented cumulative schemes will appear within the context of the Operational Kilgallioch and Arecleoch Windfarms. When considering the addition of the proposed Development to the consented situation, the cumulative interaction with the proposed Development is minimal and the cumulative magnitude of change is therefore Negligible resulting in a Not Significant cumulative effect.
135. The Stranoch 2 application is a replacement to the consented Stranoch 1 Windfarm and if consented would have a similar influence as Stranoch 1 on the view. Arecleoch Extension and Clauchrie Windfarms would add to the distant view of windfarms in the north. The scale of change predicted for the proposed Development against the consented scenario would therefore still broadly apply and the cumulative sequential magnitude of change is therefore considered to be Negligible resulting in a Not Significant cumulative effect.

## 6.9 Summary and Statement of Significance

### 6.9.1 Summary of Effects

136. The LVIA has assessed the potential for significant landscape and visual effects across an area of 45 km, focussing the detailed assessment within 20 km (the Study Area). See also summary assessment **Tables 6.9-1 and 6.9-2**.
137. The proposed Development is located on an upland landscape and the scale and characteristics of the upland landscape are considered suitable for windfarm development. The areas of forestry required to be removed in the construction of the proposed Development would be extremely limited and restricted to the proposed access tracks to the north of the proposed Development Site area. The area of moorland to be removed in the construction and operation of the proposed Development is very limited in relation to the total area of moorland on the site and elsewhere within the Plateau Moorland with Forest LCA (17a), Glentool unit. This very limited extent of moorland removal is not considered to constitute a redefinition of this landscape element as a component of the site area or the wider landscape. The physical landscape effects of the proposed Development on these landscape elements are considered to be not significant.

### 6.9.2 Landscape Character Effects

138. The LVIA has identified significant effects for localised parts of the landscape character areas that cover the Site and its immediate surroundings. The addition of the proposed Development would increase the extent of a 'landscape with windfarms' characteristic for the immediately surrounding landscape context and the historic land-use characteristic within the localised Site area would be partly diminished. Significant effects within the Plateau Moorland with Forest LCT (17a), Glentool unit would extend to around 2-3 km from around the site boundary. The significant effects are highly localised in this way because the introduction of large scale wind turbines, associated infrastructure and solar array to an area of moorland landscape that already contains such an extensive amount of other large scale windfarm development substantially moderates the magnitude of change in the wider area of the host LCT and also at the neighbouring edges of other nearby LCTs.
139. At greater distances, the effect on landscape character would not be significant due to the level of screening from intervening landform such as upland ridgelines and interconnecting hills that contain views of the Site from the surrounding landscape, such as the large scale Galloway Hills and Merrick range to the east and screening by other landscape elements such as the large degree of commercial forest in the immediate and wider surrounding landscape context.
140. None of the landscape designations within the Study Area were found to have significant effects as a result of the proposed Development. It is also considered that the Galloway Forest Park, Merrick Wild Land Area or Dark Sky Park do not have potential for significant effects.

### 6.9.3 Visual Effects

141. The assessment of effects on views is informed by a series of 17 viewpoints that were selected, in agreement with DGC in line with comments received at scoping from SNH, to represent visibility from a range of receptors and distances throughout the Study Area. The visual assessment has found significant effects at the following locations: Viewpoint 01 - Eldrig Fell; Viewpoint 02 - SUW (Knockniehourie); Viewpoint 03 - SUW (Craig Airie Fell); and Viewpoint 04 - SUW (West of Derry).
142. In addition to the viewpoints, potential effects for a large number of settlements and routes through the area were assessed. Of the settlements considered, none were assessed as having significant visual effects. Of the routes considered, walkers on the SUW would experience significant effects at three viewpoints on a localised section of the route which would cause a significant sequential effect on that localised section (between Knockniehourie and Derry). There are no properties within 2 km of the proposed Development and viewpoint 07 Mains of Larg (to the west of New Luce, the closest settlement at approximately 7 km from the nearest proposed Development turbine) was assessed as having no potential for significant effects due to the very limited amount of visibility.
143. Significant visual effects (including viewpoints and visual receptors) as a result of the proposed Development, but also including cumulative scenarios for consented and application schemes, are largely found to occur in the immediate area surrounding the Site (approximately 3-4 km from the nearest proposed Development turbine). This is mostly due to the level of topographical and forestry screening in the wider landscape which limits available views but is also as a result of the widespread backcloth of existing turbine development seen from key views in the surrounding landscape (the agreed viewpoints) which moderates the magnitude of change, particularly when the proposed Development is seen at distance, as a modest extension to this existing widespread development.

### 6.9.4 Lighting Effects

144. The visual effects of turbine lighting were considered from four agreed viewpoints. At night the turbines would not in themselves be visible during times of darkness. Significant effects found at viewpoint 4 are largely as a result of the close proximity to the proposed Development (both 2000cd and 200cd lighting intensity).
145. The visual assessment of turbine lighting has also predicted significant effects where effects were assessed as not significant during the day for viewpoint 14 at Bruce's Stone (2000cd lighting intensity only). This is largely due to the appearance of lighting on an upland horizon which is currently far less affected by the effects of any other existing lighting and the particular view towards the proposed Development is a narrow focussed view along Glen Trool which draws the eye towards the location of the proposed Development. The visual effect of lighting at viewpoint 14 is not found to be significant when visibility is greater than 5km from the proposed Development and the turbine lights are operating at 200cd. Whilst the 2000cd light is predicted to result in a significant effect, it should be noted that this outcome would only occur during periods of poor visibility (<5km visibility at the proposed Development turbines) at a distance of nearly 20km. Taking these factors into account the 2000cd light is highly unlikely to ever be experienced at the maximum intensity that results in this significant effect. This finding exemplifies the unrealistic worst-case position and precautionary approach taken in this assessment (as described in section 6.3.4. of TA6.2). See Technical Appendix 6.2 for further details.

### 6.9.5 Relationship of the proposed Development to Cumulative Context

146. As described in **Section 6.7 of Technical Appendix 6.1** the cumulative assessment set out in the LVIA assesses only the additional landscape and visual effects of the proposed Development in the context of different baseline scenarios that make assumptions about existing and proposed windfarms. It does not present an assessment of the combined effects of all of the relevant windfarms on the landscape and/ or visual receptors.
147. A large proportion (63 of 96 turbines) of the Operational Kilgallioch Windfarm are located in the north western regions of the Plateau Moorland and Forest LCT (17a). The operational Aries Windfarm is located in the south west of the LCT. In addition, the operational windfarms of Carscreugh, Glenchamber, Artfield Fell and Balmurrie Fell are also key windfarms within close context of the proposed Development. Arecleoch, the northern part of Kilgallioch and Mark Hill are of a key influence in the wider plateau landscape to the north but have a less immediate cumulative relationship with the proposed Development Site than the existing windfarm context of the plateau landscape to the south. The significant effects identified in the LVIA are considered to occur both as a result of the proposed Development on its own (introduced to the host LCT or in close proximity views) and also cumulatively with the

operational baseline. For the consented and application cumulative scenarios, no further significant landscape and visual cumulative effects have been assessed.

148. Differences in scale between the proposed Development and the existing Operational Kilgallioch, Aries, Artfield Fell, Balmurrie Fell turbines would often be apparent in views from the surrounding landscape. The contrast in scale would be most notable when experienced at close proximity although the visual assessment at these closer locations found that natural perspective would aid the viewers perception of turbine scale difference, with closer turbines appearing larger in size and so avoiding distortions of scale in the view. This same natural perspective of larger turbines in the foreground also occurs (to a greater extent) within the existing windfarms in the area due to their large layout footprints and distances between foreground / background turbines (Kilgallioch and Arecleoch in particular) and the contrast in turbine scale in views of windfarms in the area is therefore a familiar feature of the windfarm characteristic of this Plateau landscape.
149. There is currently separation between these windfarms and whilst windfarms are considered to be a key feature of the landscape it is considered that the landscape is currently a 'landscape with windfarms'. DGWLCS states '*Wind farms are a key characteristic of this landscape*' for the host Plateau Moorland and Forest LCT (17a) and SALWCS defines the plateau LCT to the north of the Site as 'Plateau Moorlands with Forestry and Windfarms' (18c). The separation between the windfarms on the large scale upland plateau will be reduced following the introduction of the consented Chirmorie and Stranoch Windfarms. It is considered that the level of coalescing between these consented and existing windfarm developments will create a landscape where windfarms become a prevailing characteristic of the landscape. This will result in the redefining of the central area of the upland plateau (within the overall footprint of Kilgallioch, Stranoch, Chirmorie and existing Arecleoch) as a 'windfarm landscape character type'.
150. The addition of the proposed Development is considered to increase the extent of a 'landscape with windfarms' characteristic for the immediately surrounding landscape context, reducing the area of open moorland within the host LCT. Notwithstanding this consideration and the outcome of the consented scenario, it is OPEN's professional opinion that the proposed Development in itself would not alter the current perception of a 'landscape with windfarms' characteristic within the immediate landscape and visual context of the Site in the southern part of the plateau.

#### 6.9.6 Statement of Significance

151. The assessment has identified that the significant landscape and visual effects of the proposed Development would be contained within a very localised area around the Site when compared with other windfarm developments of this scale. Significant landscape character effects are assessed to occur within approximately 2-3 km from the nearest turbine with significant visual effects assessed to occur within approximately 3-4 km.
152. In landscape and visual terms, it is considered that there is scope for windfarm development within the large scale upland landscape of the Plateau Moorland with Forest LCT (17a). The proposed Development would appear set back into the core area of this broad upland plateau and would appear to sit within the large scale commercial forestry that often creates a forested skyline from many views in the surrounding area. The simple moorland and forestry land cover, along with existing wind turbine development, is extensive in the Study Area. From the surrounding landscape, the proposed Development would appear on the skyline, in a similar way to the existing windfarm development and would therefore relate to the same pattern of development and characteristic of the plateau landscape, creating a consistent image that limits visual confusion and reinforces the appropriateness of the location for windfarm development. It is considered that the landscape is capable of accommodating the proposed Development, and that significant effects on the existing landscape character or visual amenity are limited in number and extent.

Receptor	Receptor sensitivity	Operational / under construction scenario		Consented scenario		Application scenario	
		Magnitude of change	Significance of effect	Cumulative magnitude of change	Significance of cumulative effect	Cumulative magnitude of change	Significance of cumulative effect
<b>Physical landscape effects</b>							
Moorland	Medium	Low	Not Significant	No Change	No Effect	No Change	No Effect
Coniferous Forestry	Medium -Low	Negligible	Not Significant	No Change	No Effect	No Change	No Effect
<b>Landscape character effects</b>							
LCT 17a - Plateau Moorland with Forest (Glentrool unit)	Medium	<b>High (localised 2-3km)</b>	<b>Significant</b>	Negligible	Not Significant	Negligible	Not Significant
		Medium (wider area)	Not Significant	Negligible	Not Significant	Negligible	Not Significant
LCT 17 - Plateau Moorland (Balker Moor unit)	Medium - Low	Medium	Not Significant	Medium	Not Significant	Medium	Not Significant
LCT 12 - Drumlin Pasture in Moss and Moor Lowland (Machars unit)	Medium	Low	Not Significant	Negligible	Not Significant	Negligible	Not Significant
LCT 18c - Plateau Moorlands with Forestry & Wind Farms	Medium - Low	Low	Not Significant	Low	Not Significant	Low-Medium	Not Significant
<b>Landscape designations</b>							
South Ayrshire SA (Duisk Valley)	Medium - High	Low	Not Significant	Low	Not Significant	Low	Not Significant
<b>Visual effects</b>							
Viewpoint 01 - Eldrig Fell	Medium – Low	<b>High</b>	<b>Significant</b>	Negligible	Not Significant	Negligible	Not Significant
Viewpoint 02 – SUW (Knockniehourie)	Medium	<b>High - Medium</b>	<b>Significant</b>	Negligible	Not Significant	Negligible	Not Significant
Viewpoint 03 – SUW (Craig Airie Fell)	Medium	<b>High</b>	<b>Significant</b>	Negligible	Not Significant	Negligible	Not Significant
Viewpoint 04 – SUW (West of Derry)	Medium	<b>High - Medium</b>	<b>Significant</b>	No Change	No Effect	No Change	No Effect
Viewpoint 06 - Minor Road near Bennylow (Culvennan Fell)	Medium	Low	Not Significant	No Change	No Effect	Low	Not Significant
Viewpoint 08 - SUW (Hill of Ochitree)	Medium	Medium	Not Significant	Negligible	Not Significant	Negligible	Not Significant
Viewpoint 10 - SUW (Glenwhan Moor)	Medium	Low	Not Significant	Low - Medium	Not Significant	Low - Medium	Not Significant
Viewpoint 11 – A714, Bargrennan Cottage	Medium - Low	Medium - Low	Not Significant	No Change	No Effect	No Change	No Effect
Viewpoint 16 – The Merrick	High	Low - Negligible	Not Significant	Low - Negligible	Not Significant	Low - Negligible	Not Significant
<b>Sequential assessment</b>							
SUW sequential route assessment	Medium – High (Glen Trool to Bargrennan)	Negligible	Not Significant	Negligible	Not Significant	Negligible	Not Significant
	Medium (Bargrennan to New Luce)	<b>High to High-Medium (Knockniehourie to Derry)</b>	<b>Significant</b>	Negligible	Not Significant	Negligible	Not Significant
		Medium to Negligible (other sections)	Not Significant	Negligible	Not Significant	Negligible	Not Significant

Table 6.9-1 Summary Table LVIA

Visual effects of turbine lighting	Sensitivity of receptor at night	2000 Candela Turbine Lights		200 Candela Turbine Lights	
		Magnitude of change	Significance of effect	Magnitude of change	Significance of effect
Viewpoint 04 – SUW (West of Derry)	Medium	High	Significant	High	Significant
Viewpoint 06 - Minor Road near Bennylow (Culvennan Fell)	Medium	Medium	Not Significant	Medium - Low	Not Significant
Viewpoint 14 - Bruce's Stone, Glen Trool / Dark Sky Park	High	Medium - Low	Significant	Low	Not Significant
Viewpoint 15 – A77 by Cairnpat	Medium	Medium - Low	Not Significant	Low	Not Significant

Table 6.9-2 Summary Table Visual Effects of Lighting

## 6.10 References

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