Environmental Impact Assessment Report

Lairdmannoch Energy Park

Chapter 5: Landscape and Visual

Lairdmannoch Energy Park Limited

May 2025

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Glossary of Terms

Term	Definition
The Applicant	Lairdmannoch Energy Park Limited
The Agent	Atmos Consulting Limited
Environmental Advisors and Planning Consultants	Atmos Consulting Limited
Environmental Impact Assessment	Environmental Impact Assessment (EIA) is a means of carrying out, in a systematic way, an assessment of the likely significant environmental effects from a development.
Environmental Impact Assessment Regulations	Electricity Works (Environmental Impact Assessment)(Scotland) Regulations 2017 (the EIA Regulations)
Environmental Impact Assessment Report	A document reporting the findings of the EIA and produced in accordance with the EIA Regulations.
The Proposed Development	Lairdmannoch Energy Park
The Proposed Development Site	The full application boundary as per Figure 1-1
Detailed Study Area(s)	The area(s) within which significant landscape and visual effects may occur

List of Abbreviations

Abbreviation	Description
AESLQ	Assessment of Effects on Special Landscape Qualities
CAA	Civil Aviation Authority
CLVIA	Cumulative Landscape and Visual Impact Assessment
DGC	Dumfries and Galloway Council
DGWLSS	Dumfries and Galloway Wind Energy Landscape Sensitivity Study, 2024
ECU	Energy Consents Unit
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
GDL	Garden and Designed Landscape
GLVIA3	Guidelines for Landscape and Visual Impact Assessment 3rd Edition
LCT	Landscape Character Type
LVIA	Landscape and Visual Impact Assessment
NS LCT	NatureScot Landscape Character Type
NSA	National Scenic Area
NTS	Non-Technical Summary
OS	Ordnance Survey
RSA	Regional Scenic Area
RVAA	Residential Visual Amenity Assessment
SLQ	Special Landscape Qualities
VP	Representative Viewpoint
ZTV	Zone of Theoretical Visibility
CZTV	Cumulative Zone of Theoretical Visibility

5 Landscape and Visual

5.1 Introduction

This Chapter of the EIAR presents an assessment of the likely effects arising from the construction, operation (including maintenance) and decommissioning of the Proposed Development upon the landscape and visual resource.

The Proposed Development is described in outline below in Section 5-6 and in more detail in Chapter 3 of the EIAR. It should be noted that the three main elements of the Proposed Development with the potential for significant landscape and visual effects, namely, the wind farm, the solar farm and the site access track, are assessed together as one development. It is however acknowledged that the wind farm element would have more geographically wide-ranging effects than the other two elements and this is reflected in the assessment.

The Proposed Development Site lies approximately 7km northeast of Gatehouse of Fleet, in Dumfries and Galloway, in an elevated location above the small village of Laurieston which in turn lies approximately 3km to the northeast of this (see Figures 5-1 & 5-2). A detailed discussion of the baseline landscape and visual context can be found below in Section 5-5

To inform the landscape and visual impact assessment (LVIA) visits were made to various locations within the study area including, but not restricted to, representative viewpoints, by Stephenson Halliday (SH) on behalf of Atmos, from April 2024 - March 2025- The assessment team was headed by experienced Chartered Landscape Architects Kelly Anderson and James Truscott (the Author).

This assessment defines:

- the existing landscape and visual baseline environments;
- assesses their sensitivity to change; describes the key landscape and visual related aspects of the Proposed Development; and
- describes the nature of the anticipated changes and assesses the effects arising during construction and once completed.

5.2 Consultation

Detailed information regarding Scoping and consultation is included in EIAR Chapter 1: Introduction. A formal Scoping Report was submitted in August 2023 and a Scoping Opinion issued by ECU in January 2024. Following this, further consultation was undertaken with NatureScot (NS) and Dumfries and Galloway Council (DGC) in order to refine the scope of assessment. Table 5-1 provides a summary of the consultation undertaken to date to inform this assessment.

Table 5-1: Consultation undertaken

Consultee	Summary of Consultee Response	Where addressed within this Report
DGC Landscape Officer; Pre-App Response 8.12.20 (No scoping response received)	Scope of LVIA discussed, incl. NSA, LCTs, routeways, recreational and public interest locations. Night-time effects visualisations and assessment was also requested.	These suggestions were reviewed subsequently and included within the LVIA scope and represented by Viewpoints (VPs) where considered appropriate. Night-time visualisations and L&V effects assessment have been carried out as requested.
NatureScot (NS) Scoping Response 20.9.23	Expressed concern about the potential for significant adverse effects of the Proposed Development on Fleet Valley National Scenic Area (NSA) Scenic Landscape Qualities (SLQs) and overall integrity. Requested an Assessment of Effects on Special Landscape Qualities (AESLQ) to identify effects. Requested adequate scaled OS mapping of NSA with Zone of Theoretical Visibility (ZTV) (hub& tip, bare ground and screened) overlaid. Requested additional VPs within NSA to be considered.	ESLQ included in assessment; TA5-5 Figures supplied in TA5-5 Additional VPs reviewed in subsequent SH correspondence (21.02.24 and 7.3.24) and two additional VPs within the NSA were agreed with NS and included in assessment process as a result of this exercise.
NatureScot further information regarding Viewpoints 07.03.2024	With additional viewpoints as requested, NS agree the list of viewpoints	These have been renumbered and incorporated in the final set of viewpoints in Volume 4.
DGC further information regarding Viewpoints 22.05.2024	With additional viewpoints as requested, DGC agree the list of viewpoints	These have been renumbered and incorporated in the final set of viewpoints in Volume 4.
NS consultation 03.02.2025	It was agreed with that no assessment of the proposed Galloway National Park would be required.	This has not been included in the LVIA.

5.3 Planning Policy and Guidance

This section contains a brief review of national, strategic and local planning policies and guidance relevant to the landscape and visual assessment. The development plan policies are covered in detail in EIAR Chapter 2: Legislation and Planning Policy.

5.3.1 National Planning Policy

National planning policy particularly relevant to this assessment comprises:

NPF4 Policy 11 e) states that project design and mitigation will demonstrate how the following impacts are addressed:

> *'i) impacts on communities and individual dwellings, including residential amenity, visual impact, noise and shadow flicker;*
>
> *ii) significant landscape and visual impacts, recognising that such impacts are to be expected for some forms of renewable energy. Where impacts are localised and/or appropriate design mitigation has been applied, they would generally be considered to be acceptable;*
>
> *iii) public access, including impact on long distance walking and cycling routes and scenic routes;…*
>
> *xiii) cumulative impacts.'*

NPF4 Policy 4c) states Development proposals that would affect a National Park or National Scenic Area will only be supported where:

> *'i) the objective of the designation and the overall integrity of the areas would not be compromised; or*
>
> *ii) 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.'*

NPF4 Policy 4d) states Development proposals that affect a site designated as a landscape area in the LDP will only be supported where:

> *'i) development will not have a significant adverse effects on the integrity of the area or qualities for which it has been identified; or*
>
> *ii) any significant adverse effects on the qualities for which the area has been designated are clearly outweighed by social, environmental or economic benefits of at least local importance.'*

5.3.2 Local Planning Policy

Planning policy relevant to this assessment comprises:

Dumfries & Galloway Local Development Plan 2 (LDP2), (adopted October 2019).

- Policy OP1: Development Considerations – which requires that: Development proposals should respect, protect and/or enhance the region's rich landscape character, and scenic qualities, including features and sites identified for their landscape qualities or wild land character as identified on the 2014 Scottish National Heritage map (or any subsequent revised or amended map) of wild land areas. They should also reflect the scale and local distinctiveness of the landscape;
- Policy IN1: Renewable Energy – which states (inter alia) that: The Council would support development proposals for all renewable energy generation and/or storage which are located, sited and designed appropriately. The acceptability of any proposed development would be assessed against the following considerations;
  - landscape and visual impact;
  - cumulative impact; and
  - impact on local communities and individual dwellings, including visual impact, residential amenity, noise and shadow flicker;
- Policy IN2: Wind Energy – which sets out considerations for such developments, including the extent to which … significant detrimental landscape or visual impacts are avoided; and design considerations including scale, character and respecting site features. Visual dominance is also identified as a consideration in respect of effects on communities, dwellings and local amenity. The policy notes that further development management considerations are set out within supplementary guidance (SG) on Wind Energy Development;
- Policy NE1: National Scenic Areas – this policy states that '*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 – this policy indicates that: '*development … which affects Regional Scenic Areas, may be supported where the Council is satisfied that …the factors taken into account in designating the area would not be significantly adversely affected*'; and
- Policy NE3 Wild Land Areas - states that: 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.

5.3.3 National Guidance

The LVIA has been undertaken in accordance with the following sources of guidance:

- Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA 3). Landscape Institute (LI) and the Institute for Environmental Management and Assessment (IEMA) 2013;
- Notes and Clarifications on Aspects of Guidelines for Landscape and Visual Impact Assessment Third edition, Technical Guidance Note LITGN-2024-01, August 2024;
- Landscape Sensitivity Assessment Guidance, NatureScot, April 2022;
- Technical Guidance Note 2/19 Residential Visual Amenity Assessment. Landscape Institute 2019;
- Technical Guidance Note 02/21 Assessing landscape value outside national designations. Landscape Institute 2021;
- Pre-application and scoping advice for onshore wind farms, NatureScot February 2024;
- Visual Representation of Wind Farms (Version 2.2). Scottish Natural Heritage 2017; and
- Assessing the Cumulative Impact of Onshore Wind turbine developments. Scottish Natural Heritage March 2021.

5.3.4 Local Guidance

In addition, the following local guidance documents have been referred to during the preparation of this assessment:

- Dumfries and Galloway Council Appendix C: Wind Energy Landscape Sensitivity Study Assessment of Larger Wind Turbines (February 2025); and
- Dumfries and Galloway Council (January 2018) Regional Scenic Areas Technical Paper.

5.4 Methodology

5.4.1 Study Area

The initial Study Area to be used for reviewing the wider ZTV is 45km in line with NS guidance (see Figure 5-3). The focussed Study Area for LVIA (including photomontages) 25km.

Detailed study areas within the foregoing;

- Landscape Character Types; 15km;
- Landscape Designations; 15km;
- Visual Amenity; 15km;
- Night-Time LVIA; 20km;
- Cumulative L&V; 20km windfarm and 5km solar farm search and assessment areas;
- AESLQ; NSA area; and
- Residential Visual Amenity Assessment (RVAA); 2km.

5.4.2 Baseline Data Collection

Baseline data was collected using the following procedures;

- Field study during day-time and night-time from representative viewpoints, routeways including recreational routes, public vantage points and publicly accessible locations within groups and (in the case of RVAA) near individual residential receptor locations; and
- Desk study, reviewing Ordnance Survey 1:50,000 and 1:25,000 mapping; Google Earth aerial and street view photography; and local guidance as set out above.

5.4.3 Assessment Methodology

Introduction

The detail of the LVIA methodology is described in EIAR Technical Appendix 5-1. A summary of the primary judgements is provided in the following sections.

Sensitivity

Sensitivity is judged by taking into account the component judgments about the value and susceptibility of the receptor. A slightly greater weight is given to susceptibility in judging sensitivity of visual receptors as indicated by Table 5-2 – Landscape Sensitivity and Table 5-3- Visual Sensitivity. Where sensitivity is judged to lie between levels, an intermediate assessment would be adopted.

Table 5-2: Landscape Sensitivity

		Susceptibility		
		High	**Medium**	**Low**
Value	**National**	High	High/Medium	Medium
	Regional	High/Medium	Medium	Medium/Low
	Community	Medium	Medium/Low	Low

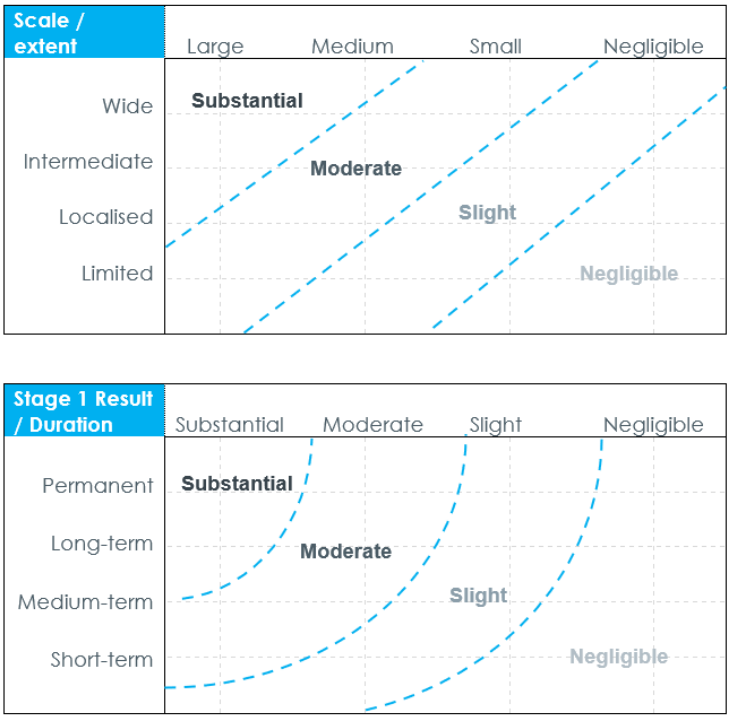
Table 5-3 – Visual Sensitivity

		Susceptibility		
		High	**Medium**	**Low**
Value	**National**	High	High/Medium	Medium
	Regional	High/Medium	High/Medium	Medium/Low
	Community	High/Medium	Medium	Low

Magnitude

Scale of effect is the first factor in determining magnitude, which may be higher if the effect is particularly widespread and/or long lasting, or lower if it is constrained in geographic extent and/or timescale. Table 5-4 illustrates how this judgement is considered as a two- step process. Firstly, scale and extent are considered, for which the outcomes are illustrated by the first part of the table. The second part of the table illustrates the influence of duration on this initial judgement. Where magnitude is judged to lie between levels, an intermediate assessment would be adopted.

Table 5-4 – Magnitude of Effect



Significance of Effects

The significance of any identified landscape or visual effect is assessed as Major, Moderate, Minor or Negligible or a combination of these. These categories are based on the consideration of sensitivity with the predicted magnitude of change as illustrated by Table 5-5. This is not used as a prescriptive tool and illustrates the typical outcomes, allowing for the exercise of professional judgement. In some instances, a particular parameter may be considered as having a determining effect on the analysis.

Where the effect has been classified as Major or Major/Moderate, this is considered to be equivalent to a likely significant effect. Where 'Moderate' effects are predicted, professional judgement is applied to determine whether the effect is significant or not ensuring that the potential for significant effects to arise has been thoroughly considered. Effects of Moderate/ Minor, Minor, Minor/ Negligible or Negligible significance are considered to be not significant.

Table 5-5 – Significance of Effects

		Magnitude of Effect			
		Substantial	**Moderate**	**Slight**	**Negligible**
	High	Major	Major/ Moderate	Moderate	Minor
	Medium	Major/ Moderate	Moderate	Moderate/ Minor	Minor/ Negligible
	Low	Moderate	Moderate/ Minor	Minor	Negligible

Nature of Effects

Given that the proposal is time limited it is not considered a Permanent development, but would be Long Term. Given that the majority of landscape and visual effects would be removed following decommissioning, the effects are considered to be fully reversible.

Landscape and visual effects can be beneficial or adverse and, in some instances, may be considered neutral. Taking a precautionary stance, changes to rural landscapes involving construction of man-made objects of a large scale are generally, considered to be adverse.

With regard to the visual effects of wind farms, it is important to recognise the differing views revealed by extensive available research and to take into account that for the same development, some may view the impact as adverse, some as beneficial and yet others as neutral. This depends to some extent on the viewer's predisposition towards landscape change but also their opinion regarding the principle of renewable energy developments, including windfarms, in the landscape.

Taking a precautionary approach in making an assessment of the worst-case scenario, this assessment considers that all effects on views which would result from the construction and operation of the Proposed Development to be adverse, unless specified otherwise in the text. It should be noted however that many people would not consider the effects to be adverse.

Cumulative Assessment

Cumulative assessment relates to the assessment of the effects of more than one development and describes the likely combined cumulative effects of the Proposed Development in association with operational, consented and other proposed developments.

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

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

The approach to the CLVIA follows NatureScot guidance (2021). As such, it focuses upon those wind turbine developments that have the potential to give rise to significant cumulative effects and those likely to influence decision making, rather than an assessment of every potential cumulative effect. In addition, Scoping and pre-planning windfarms which have little or no fixed proposals, are not considered within the detailed assessment, in line with NatureScot's cumulative guidance.

Following a review of the cumulative search area, it was considered that the potential for significant cumulative effects from other wind farm development would be largely contained within a 20km radius of the proposed development and from other solar farm development within a 5km radius.

There are no existing or proposed solar farm or similar developments within 5km of the Proposed Development, and therefore the CLVIA considers other wind farm

developments only. The list of wind energy sites within, or immediately outside, this detailed cumulative study area is presented below in Table 5-6. The cumulative data cut-off date is 31st January 2025. Only turbines higher than 50m to tip were considered, in accordance with current good practice.

Table 5-6 Windfarms within, or just over, 20km- 31st January 2025

Windfarm	Status/ Application Date	Number of Turbines	Tip Height(M)	Approximate Direction/ Distance (Km) from Site
Blackcraig	Operational 01/09/2017	23	110	19 N
Glenshimmeroch Resubmission	Consented 21/08/2023	10	200	23 N
Divot Hill	Consented 21/03/2022	9	200	23 N
Margree	Consented 21/03/2022	9	200	23 N
Fell	Consented, Variation submitted 30/03/2022	9	200	22 N
Knockman Hill	Approved but not constructed 05/11/2013; Scoped out	5	81	21 N
High Barcaple	Approved but not constructed 16/12/2013; Scoped out	1	62	3 S
Little Sypland	Approved but not constructed 24/05/2013; Scoped out	1	74	11 SE
Trostrie Farm	Approved but not constructed 21/02/2011; Scoped out	1	66.5	3 S

As can be seen in the table, there are four approved smaller windfarms or single turbines of 81m or less to tip, within, or immediately adjacent to, the detailed cumulative study area which were submitted in 2013 or earlier. From a review of aerial photography and as confirmed in the field, there is no evidence that they have been constructed and given the elapsed time, it can be realistically assumed that the applications have lapsed and been abandoned and thus they are not given further consideration in this assessment.

There is one operational wind farm, Blackcraig, which is located over 19km to the north. This has been included in the baseline of the LVIA (Scenario 1).

As noted in Table 5-6 and shown on Figure 5-13, there are no other consented or proposed wind farm developments within 20km of the Proposed Development, which was the detailed cumulative study area agree at Scoping. Taking into account the large separation distance, it is considered highly unlikely that significant cumulative effects would arise in conjunction with the Proposed Development and the operational or consented projects listed above. Therefore, a detailed CLVIA has been scoped out of this Chapter.

Night-time Assessment

The Proposed Development includes aviation lighting on four of the nine turbines for which an assessment of potential night-time landscape and visual effects is included below in Section 5.12 and EIAR Technical Appendix 5-3 Viewpoint Analysis. There is a distinction between light pollution or nuisance and the effect of lighting on the character and amenity of the landscape at night. This is not a technical lighting assessment but focusses on the night - time effects as a result of the introduction of new artificial lighting within the landscape, with consequent effects on the night character and visual amenity of the area.

In this context, effects on landscape character are almost exclusively concerned with perceptions of darkness and remoteness, as most of the key characteristic constituent elements of landscapes are generally obscured after dark.

For visual receptors, the value attached to night-time views is considered to be low unless there is a particular feature that can be best appreciated in the hours of darkness. The susceptibility of visual receptors also differs at night reflecting the different activities people undertake in the hours of darkness, such as stargazing. As a result, the receptors for night-time impacts may be different from those which experience day-time impacts.

Cumulative night-time landscape and visual effects are unlikely to be significant bearing in mind there are no approved/ consented wind farms exceeding 150m in height within 20km and no constructed wind farms exceeding 150m in tip height within 30km (see Figure 5-13) and this aspect of the assessment has therefore been scoped out as a consequence.

Figure 5-8 indicates night-time hub-height ZTV superimposed on VP locations.

Residential Visual Amenity

As set out within LI Technical Guidance Note 02/19 Residential Visual Amenity Assessment (RVAA) changes in views and visual amenity are considered in the planning process. In respect of private views and visual amenity, it is widely known that, no one has a right to a view. … *It is not uncommon for significant adverse effects on views and visual amenity to be experienced by people at their place of residence as a result of introducing a new development into the landscape. In itself this does not necessarily cause particular planning concern. However, there are situations where the effect on the outlook / visual amenity of a residential property is so great that it is not generally considered to be in the public interest to permit such conditions to occur where they did not exist before.*

The methodology and assessment of effects on residential visual amenity for the most affected properties within 2 km is included in EIAR Technical Appendix 5-6.

Distances

Where distances are given in the assessment, these are approximate distances from the nearest wind turbine or other stated part of the development (e.g., solar farm) to the nearest part of the receptor in question, unless explicitly stated otherwise.

Visual Aids

Photographs of the existing views and photomontages showing the Proposed Development are shown in EIAR Volume 4. The method of visualisation selected has been informed by Landscape Institute, NatureScot's Visual Representation of Wind Farms - Guidance (Version 2.2) and Technical Guidance Note 06/19 Visual Representation of Development Proposals. The methodology for production for the photomontage visualisations and figures is included in Technical Appendix 5-2.

5.5 Baseline Conditions

5.5.1 Introduction

An overview of the baseline study results is provided in this section with the full baseline description of the individual landscape and visual receptors in the assessment where it is relevant for ease of reference. This section identifies those landscape and visual receptors which merit detailed consideration in the assessment of effects, and those which are not taken forward for further assessment as effects have been judged unlikely to occur or so insignificant that it is not essential to consider them further (GLVIA3, para. 3.19).

Both this baseline section and the effects section describe landscape character and visual receptors before considering designated areas, as it is common for designations to encompass both character and visual considerations within their special qualities or purposes of designation.

5.5.2 Zone of Theoretical Visibility Study

A Zone of Theoretical Visibility (ZTV) study was generated based on the wind turbines and solar panel components of the Proposed Development. The analysis was carried out using a topographic model, shown on Figures 5-3 to 5-11 inclusive, illustrating a bare ground scenario, or in the case of Figure 5-7 and 5-10 a screened scenario, which incorporates the screening effects of forestry, woodland and buildings, to show potential visibility of the proposed turbines and solar panels. Other elements of the Proposed Development such as tracks, sub-stations and compounds are not included within the ZTV study. In addition, the model does not take into account any localised features such as small topographic features, clusters of trees, hedgerows or individual trees which may result in additional screening. The vegetation (woodlands and forestry) which has been included in the ZTV with screening is identified on the ZTV.

The ZTV study was used to aid the identification of those landscape and visual receptors that are likely to be most affected by the Proposed Development and those that do not require detailed consideration. It should be noted that in many areas woodlands included within the ZTV may comprise active forestry, resulting in the felling and replanting of some areas modelled in the ZTV study, including those found across the Site. Whilst the felling cycle would alter the heights of different areas of forestry over time, altering localised visual effects, the wider pattern would remain relatively constant.

As can be seen in the aforementioned figures, the bare ground ZTVs for the proposed wind turbines (i.e. the largest elements of the Proposed Development), show that the main area of theoretical visibility of 7 or more turbines extends out to 15km over

extensive areas of high ground to the east of the study area and more limited and discrete hilltops and ridges to the west also out to approximately 15km. Some more extensive theoretical visibility is available to the southwest across the lower land of Fleet Bay albeit of mostly 6 turbines or less.

Based on this coverage and as confirmed by field study, it was considered that the LVIA should concentrate on 15km from the outer turbines (the detailed LVIA study area) as outwith this area effects are considered unlikely to be significant due to distance from the Proposed Development, and very limited or intermittent potential visibility pattern shown on the ZTV.

It should be noted that effects on both landscape or visual receptors outside the areas of visibility shown on the ZTV study would not be affected and are not therefore assessed.

5.5.3 Baseline Landscape Context

Lying in the foothills of the Galloway Hills, which form part of the Southern Uplands of Scotland, the roughly triangular Proposed Development Site occupies the eastern slopes of Bankben and Millae, two low hills which reach up to 257m AOD. This is where the proposed 9 wind turbines would be located (see Figures 5-1 and 5-2). An extension limb from the main site then straddles the Anstool Burn above Loch Mannoch, and it is here, on an east-facing slope between the derelict Upper Lairdmannoch and Linn Hill (179m AOD) above the deeply incised Kirkconnell Linn, and along the lower pastures alongside the Tarff Water, that the north and south arrays of the proposed solar farm would be located. The main access track for the Proposed Development would however be to the southwest through Glengap Forest and Disdow Wood from the B727 above the town of Gatehouse of Fleet, which features a conservation area.

There are currently no wind farms, solar farms or similar developments in the local landscape although there are some small telecoms masts and isolated domestic scale turbines (sub-50m to tip), usually associated with farm buildings on lower ground.

The Proposed Development Site itself is largely open moorland, but it is bordered on three sides by commercial forestry; Laurieston Forest on low hills rising to the north and west to 263m at Kenick Hill; and Glengap Forest, on low hills rising to 307m AOD at Fore Hill of Glengap to the south.

The detailed study area is flanked by two major valleys; that of the Fleet Water to the southwest; and the River Dee, with the Loch Ken Reservoir, to the east.

The main communications route, the A75 trunk road between Dumfries and Stranraer, runs east-west to the south of the site, between the towns of Castle Douglas to the east of the study area and by-passing Gatehouse of Fleet to the west. The villages of Ringford and Twynholm lie mid-way, to the south of the Proposed Development Site, with the former at the junction of the A762 which runs northwards through the village of Laurieston, to the east of the Proposed Development Site, before reaching New Galloway just outside the detailed study area, and ultimately Ayr to the north. Although the valleys are well settled, the hills are generally devoid of settlement. At the south of the detailed study area lies the inland harbour town of Kirkcudbright, with its conservation area and rich sense of cultural heritage, literary and artistic associations.

5.5.4 Landscape Character

The current Landscape Character Assessment covering the Site and study area is the NatureScot Landscape Character Types dataset, 2019 (NSLCT).

In addition, the Dumfries and Galloway Wind Energy Landscape Sensitivity Study Assessment of Larger Wind Turbines (October 2024) (DGWLSS) which now supersedes the Dumfries and Galloway Windfarm Landscape Capacity Study, 2020 (DGWLCS), provides a landscape character and relative sensitivity assessment of the Council area's landscapes to larger scale wind turbine arrays such as featured in the Proposed Development.

The DGWLSS has been used for reporting effects on landscape character within the 15km detailed LVIA study area and is used with reference to the NSLCT landscape descriptions, since within the study area there is little difference between the LCT boundaries of the two assessments (referred to as Assessment Units, (AUs) within the DGWLSS). The DGWLSS landscape character types within the LVIA detailed study area are illustrated in Figure 5-5.

The Proposed Development Site largely falls within DGWLSS AU20, Foothills with Forest. The NSLCT has identified a broadly similar area, described as LCT 176 Foothills with Forest – Dumfries and Galloway.

Further analysis through desk study and site work was undertaken of the other LCTs within the study area which would be intervisible with the Proposed Development; some of which are not considered further due to the very limited potential for change due to potential intervisibility coinciding with enclosed and extensively wooded areas as well as distance from the Proposed Development, and very limited or intermittent potential visibility pattern shown on the ZTV (Figure 5-5). It is therefore likely that there would be very limited or no intervisibility within LCTs outwith the 15km detailed study area and due to this fact, combined with distance and hence decreased magnitude of change, it is considered that there would be no potential for significant effects on the character of these units.

Table 5-7 presents a preliminary appraisal of the LCTs within the detailed study area and indicates which of them are considered in detail within the assessment, and which of them do not require further detailed assessment as the impacts are considered unlikely to be significant.

Table 5-7 Preliminary Appraisal of LCTs/AUs Within Detailed 15km Study Area

Landscape Receptor	Comment	Approx. Distance at Closest Point(km) and Direction	Included for Further Assessment?
AU1(LCT156); Peninsula	Limited and relatively distant intervisibility	10 (SE)	No
AU2(LCT157); Peninsula with Gorsey Knolls	Limited and scattered Intervisibility in low, knolly landscape with wooded clumps	9 (SW)	No
AU4(LCT160);Narrow Valleys (Wooded River Valley)	Fleet Area only; other sub-areas limited or no intervisibility	4 (W)	Yes
AU8(LCT164); Flooded Valley	Potential visibility along east side of Loch Ken	4 (NE)	Yes

AU13(LCT169); Drumlin Pastures	Potentially widespread visibility to east and southeast of Proposed Development	2(E)	Yes
AU15(LCT179); Upland Fringe (Coastal Uplands)	Very Limited or no intervisibility; where intervisible, coincides with heavily forested slopes	9(W)	No
AU19 (LCT175); Foothills	Pontental intervisibility from Cairnharrow & Fleet Areas	1(W)	Yes
AU20 (LCT176); Foothills with Forest	Laurieston Areas; Proposed Development Host CT Limited intervisibility in Cullendoch Area; scope out	Site located in Laurieston Area; Cullendoch 2 (NW)	Yes
AU23 (LCT179); Coastal (Granite)Uplands	Cairnsmore Intervisibity limited to hilltops; wider changes to landscape integrity unlikely	5(SW)	No
AU25(LCT181); Rugged (Granite)Upland with Forest	Cairn Edward; Very localised, limited, or no intervisibility; where intervisible, coincides with heavily forested slopes and hilltops	9(N)	No

5.5.5 Visual Receptors

Visual receptors are the different groups of people who may experience views of the development (GLVIA3, paragraph 6.3). In order to identify those groups who may be significantly affected by the Proposed Development, ZTV studies, baseline desk study and site visits have been used.

The different types of groups considered within this assessment encompass:

- Local residents;
- People using key routes such as roads; cycle ways;
- People within accessible or recreational landscapes;
- People using rights of way, core paths; and
- People visiting specific viewpoints.

In dealing with areas of settlement, local recreational routes and local roads, receptors are grouped into areas where effects might be expected to be broadly similar, or areas which share particular factors in common.

Representative viewpoints (VPs) have also been selected to aid the assessment of effects on visual receptors.

5.5.6 Baseline Visual Environment

The Proposed Development Site is situated on a low ridge of hills above Loch Mannoch, adjoined by commercial forestry on three sides but open to the Tarff Water valley to the east.

Apart from the forestry, the landcover in the vicinity of the Proposed Development Site is predominantly open moorland, grading to improved pasture on valley sides and floors. The immediate area is not particularly remote or wild but is very rural in character. Road-user receptors can be found on several important transport routes running along the north-south main valleys such as the A713 Ayr road and east-west in the lowland areas bordering the coast; notably the A75 Stranraer-Dumfries trunk road. There are, in addition, a number of recreational routes and trails in the detailed study area although the screened ZTV, as confirmed by field studies, indicates that receptors on a majority of these routeways would have limited, or no, views of the Proposed Development (see Figure 5-7).

Receptors in settlements are focussed on the valleys and coastal lowlands. Apart from the more built-up areas around Castle Douglas, Gatehouse of Fleet and Kirkcudbright there are the smaller villages and settlements of Anwoth, Borgue, Crossmichael, Glengap, Laurieston, Ringford, Tongland and Twynholm. However, the screened ZTV in Figure 5-7, as confirmed by field studies, indicates limited or no theoretical intervisibility with the Proposed Development in all but Laurieston and Crossmichael to the northeast and Glengap to the south. This screening is largely due to local topography. However, in respect of coniferous forestry screening in close proximity to the site, the future baseline alternative felling scenario (see section 5-5-10 below) is adopted in the assessment, in addition to the current scenario with full tree cover.

Laurieston and Crossmichael, therefore, together with areas of the towns listed below in Section 5-5-7 and dispersed low density rural settlement across the Drumlin Pastures to the south and east, would be the subject of receptor group assessment as part of the Visual Impact Assessment (VIA).

At night, the local environment is very dark away from the more built-up areas around Castle Douglas, Gatehouse of Fleet and Kirkcudbright and the main transport corridors (see night-time aviation lighting ZTV, Figure 5-8)

There are no operational wind farms in the local area although some can be seen distantly from hilltops and peaks (see Figure 5-13).

Viewpoints Overview

The representative viewpoints have been selected based on Pre-Application responses, Scoping Opinion and from further consultation with NatureScot, DGC, ZTV analysis and field survey. They represent views from sensitive landscape and visual receptors within the study area and aid in the assessment of landscape and visual effects and are listed below in Table 5-8.

Table 5-8 Representative Viewpoints

LVIA VPs	Title	Approx. Distance and Direction	Consultation Comments/ Notes/Receptor Type
1	A762, Lairdmannoch Bridge	0.4km NE from solar farm	Road-Users
2	A762, Kirkconnell	0.3km SE from solar farm	Road-Users
3	Neilsons Monument	1km E from solar	Walkers to viewpoint/ Core path users
4	Loch Mannoch, core path	1.9km SE	Core path users
5	Glengap	1.7km S from wind	Night-time Montage & Assessment Core path users
6	West of Loch Whinyeon @ 261880 560883	1.5 km W	D&G requested at Scoping Core path users; nearby road-users
7	Minor road between Gatehouse and Laurieston, near Darngarroch Bridge	1.7km NW	Road-users
8	Laurieston, A762	3.4km NE	Night-time Montage & Assessment Residents, Road-Users
9	A75 SW of Castle Douglas @ 270145 558373	8.1km SE	D&G requested this viewpoint on the A75 Road-users
10	Underwood	7km SE	Road-users, rural residents
11	A75 west of Twynholm @ 265102 554162	7.5km S	D&G requested at Scoping Road-Users
12	Millenium (Rutherfords) Monument	8.0 SW	NSA Location; Requested by NatureScot Walkers to monument
13	B796 near Upper Rusko	7.2 km W	NSA Location; Night-time Montage & Assessment Road-users, incl. cyclists; nearby rural residents
14	Airie Hill 262279 568632	10.8 km N	D&G suggested Airie Hill and this was similar to Cairn Edward Hill, so this was replaced. Walkers
15	Parton viewing point	8.5km NE	Bird-Watchers, Core Path Users
16	Crossmichael	8.8km NE	Residents, Road-users, Visitors on Red Kite Trail, Robert the Bruce Trail, Tourist Route Night-time assessment
17	Threave Castle	8.5km E	Core path users, visitors to castle, bird-watchers
18	Castle Douglas	10.7km E	Night-time assessment Residents
19	Screel Hill	14km SE	Walkers

20	Kirkcudbright	10.5km S	Night-time assessment Residents, Visitors
21	Mossyard Bay	13.5km SW	NSA Location; Night-time assessment Residents, Visitors
22	Mill Knock	11km SW	NSA Location; Requested by NatureScot Walkers
23	Cairnharrow	12km SW	Walkers
24	Cairnsmore of Fleet	14.2km NW	Walkers; Core Path Users
25	Blackloch, north of Gatehouse of Fleet	7km SE	To assess new access route; NSA Location; cycle route Road users; cyclists; residents; visitors

In addition to the foregoing and the receptor group assessments of towns and villages referred to above, effects upon receptors in individual properties within 2 km of proposed turbines are considered in Technical Appendix 5-6: Residential Visual Amenity Assessment (RVAA).

5.5.7 Visual Receptor Groups

The following visual receptor groups located within the study area, fall within the ZTV and are therefore likely to have visibility of one or more elements of the Proposed Development, and are considered further in Section 5.12:

- Gatehouse of Fleet - Upper– (see VPs 12,25);
- Gatehouse of Fleet – Central;
- Gatehouse of Fleet – Fleuchlarg;
- Laurieston - Upper - (see VP8);
- Laurieston - Church Road;
- Kirkcudbright – Upper;
- Castle Douglas - Upper (see VP18);
- Castle Douglas – Lower;
- Crossmichael (see VP16);
- Glengap; and
- Dispersed rural settlement across Drumlin Pastures to east and south of Proposed Development Site.

The following potential receptor groups were scoped out of the visual assessment from an early stage, using professional judgement and knowledge of the area, on the basis that visual effects were likely to be Minor or less for the reasons indicated below. These initial assumptions were later confirmed on the site assessment visit.

- Twynholm – Potential visibility of the Proposed Development partially or fully screened by topography; a majority of the village lies in the Kirk Burn Valley;
- Tongland - fully screened by topography; the village lies in an incised section of the Dee Valley;
- Ringford – Potential visibility of the Proposed Development partially or fully screened by the local topography of the Tarff Valley and mid-ground tree groups;

- Cally Palace and Gardens – Potential visibility of the Proposed Development largely screened by topography and foreground policy woodland;
- Threave Gardens - Potential visibility of the Proposed Development largely screened by foreground policy woodland;
- Kirkcudbright Lower (see VP20) – Potential visibility of the Proposed Development largely screened by midground topography, tree groups and foreground buildings; and
- Castle Douglas-Central - Potential visibility of the Proposed Development largely screened by topography and buildings.

5.5.8 Key routeways &Vantage Points

Recreational Routes

The following visual receptors on recreational routes located within the study area, would fall within the ZTV and are therefore likely to have visibility of the Proposed Development, as shown on the ZTV study on Figure 5-7 and these are considered further in Section 5.12:

- National Cycle Route 7; The section of this cycle route which is intervisible with the Proposed Development coincides with the sections of the B796 to be assessed (see above) and is assessed in parallel with this;
- Red Kite Trail; The section of this road route intervisible with the Proposed Development coincides with the sections of the B795 and A713 to be assessed (see above) and is assessed in parallel with this;
- Robert the Bruce Trail; The section of this road route intervisible with the proposed development coincides with the section of the A713 to be assessed (see above)and is assessed in parallel with this;
- Galloway Tourist Route; The section of this road route intervisible with the Proposed Development coincides with the section of the A713 to be assessed (see above) and is assessed in parallel with this ;
- Core Path Loch Mannoch-Kirkconnell illustrated by VP4;
- Core Path, Barstobrick Hill illustrated by VP3;
- Core Path, Loch Whinyeon illustrated by VP6;
- Core Path to Red Kite Viewing Point, Parton, illustrated by VP15; and
- Core Path Disdow Wood to Glengap illustrated by VP5 and VP25 and northerly branch through Laurieston Forest.

Other core paths in the detailed study area falling within the ZTV within the assessed visual receptor groups listed in 5-5-7 above are more likely to be used for local journeys and are considered in the receptor group areas they lie within.

Using the same principles described above, all other recreational routes or sections of routes in the detailed study area were scoped out of the detailed assessment at an early stage, on the basis that visual effects were likely to be Minor or less, due to screening by local topography, tree groups or building groups or a combination of these.

Roads and Railways

There are no active railway routes within the detailed study area.

The following visual receptors on roads located within the detailed study area, would fall within the ZTV and are therefore likely to have visibility of the Proposed Development, as shown on the ZTV study on Figures 5-6 & 5-7 and these are considered further in Section 5.12:

- A75 between Twynholm and Castle Douglas illustrated by VPs 9&11;
- A762 between A75 and Tongland illustrated by VP10;
- A762 between Kirkconnell and Laurieston illustrated by VPs 1,2&8;
- A713 between Castle Douglas and Airds House Bridge illustrated by VPs 15&16;
- B796 between Upper Rusko Cottage and Nether Rusko illustrated by VP10;
- B796 between Gatehouse of Fleet and Pulcree illustrated by VP 25;
- B795 between Laurieston and Drumlane; and
- Minor Road, Gatehouse of Fleet to Darngarroch Bridge illustrated by VP7.

Using the same principles described above all other road routes or sections of road routes in the detailed study area were scoped out of the detailed assessment at an early stage, on the basis that visual effects were likely to be Minor or less, due to screening by topography, tree groups or building groups or a combination of these.

Vantage Points

The following visual receptors on public vantage points located within the study area, would fall within the ZTV and are therefore likely to have visibility of the Proposed Development, as shown on the ZTV study on Figure 5-7 and these are considered further below in Section 5.12:

- Red Kite Viewing Point, Parton illustrated by VP15;
- Neilson's Monument, Bostobrick Hill illustrated by VP3; and
- Millennium Monument/ Rutherford's Monument illustrated by VP12.

5.5.9 Landscape Designations

ZTV analysis has helped to focus the scope of the assessment based on the landscape designations within the study area.

National Scenic Areas

The Proposed Development Site is not subject to any national landscape designations. As illustrated by Figures 5-3 and 5-4, the nearest national designations to the Site are the following National Scenic Areas (NSAs); Fleet Valley (c.4 km west); East Stewartry Coast (c.14 km southwest); and Nith Estuary (c.24km east).

The ZTV indicates that the Fleet Valley NSA would have some intervisibility with the Proposed Development and potential effects on the Special Qualities are considered further in the AESLQ in EIAR Technical Appendix 5-5.

The ZTVs indicate that East Stewartry Coast and Nith Valley NSAs (13km and 25km distant respectively) would not have any notable intervisibility with the Proposed Development. Given the distance and lack of visibility, effects are likely to be less than Minor, and they are therefore not considered further.

Solway Coast National Landscape

The Solway Coast National Landscape (formerly Area of Outstanding Natural Beauty) on the Cumbrian coastline is located just outwith the southeastern extent of the overall

study area at about 46km at the closest point. This National Landscape is characterised by the flat expanses of coastal terrain and mosaic patterns of the internationally important estuary habitats. The ZTV in Figure 5-3 illustrates theoretical intervisibility albeit very distant and beyond the outer fringes of the study area; effects are likely to be Negligible and they are not considered further.

Wild Land Areas

Wild Land Areas (WLAs) are not landscape designations but are nevertheless considered to be of national value. Merrick (WLA 01) is located c.24 km northeast of the Site and shown on Figure 5-3. The ZTV illustrates there would be minimal, distant coverage on a few isolated peaks and hilltops. Effects on the Special Qualities of WLA 01 are considered to be Negligible and are therefore not considered further.

Galloway Dark Sky Park

Dark Sky Parks (DSPs) are not landscape designations but are nevertheless considered to be of national value. Galloway Dark Sky Park is located within Galloway Forest Park. Forest parks are areas of usually commercial forestry but managed by Forestry and Land Scotland (FLS) for wider benefits, with an emphasis on recreation facilities for visitors.

Galloway Forest Park is the UKs largest forest park at 78,000 hectares, within which the Dark Sky Park occupies approximately 20 percent of the total area and has been set aside as a central core for preservation of dark skies and wildlife, with a policy of no permanent illumination. The park is one of the best places to observe the night sky in the UK, and its management recognises the dark skies as a valuable resource and is committed to protecting and preserving them.

The Core Area, as can be seen in Figure 5-3, is c.18km distant from the Proposed Development at its closest point and encompasses the Merrick WLA (see above). The buffer area however comes to within c.3km of the Proposed Development to the northwest. The potential impact would be from the four cardinal point red aviation warning lights and the effect this may have on the dark sky area. However as with the WLA, the night-time ZTV in Figure 5-9 illustrates there would be minimal, distant coverage on a few isolated peaks and hilltops in the buffer area c.8-15km to the northwest; and even fewer in the core area, which is a considerable distance away.

Visit Scotland and Glorious Galloway both recommend that Clatteringshaws Loch and Kirroughtree Visitor Centre are two of the best locations from which to view the night sky. These are both at lower levels near the A712 and A75 respectively. Go stargazing in addition to the above, recommends in Dumfries & Galloway that Loch Trool Visitor Centre, Bruces Stone Loch Trool, Caldons Woods Loch Trool, and the Wild Goat Park, Talnotry (off A712) are all good stargazing locations. Although not far from the hilltops indicated on the ZTV, all these viewing locations are at relatively low levels and outwith the aviation lighting ZTV (see Figure 5-8).

Since there is an extremely low likelihood of receptors involved in stargazing climbing up to the peaks and hilltops in the dark when they can achieve good views of the night sky at ground level at the aforementioned locations, it is considered that potential effects on the dark sky experience of receptors would be Minor or less, and these are therefore not considered further.

Regional Scenic Areas

Locally designated landscapes within the study area are illustrated in Figure 5-4. The Site is located near, but fully outwith, Regional Scenic Area (RSA) 4 Galloway Hills, which occupies most of the western half of the detailed study area. Whilst not identified for individual assessment during the consultation process, the special qualities of this RSA are nevertheless considered and assessed below (see Section 5.13).

The Solway Coast RSA is situated along the southern coastal periphery of the detailed study area, with the exception of an inroad around Kirkcudbright. Potential intervisibility with the Proposed Development is limited and fragmented, and since residual landscape effects are likely to be Minor or less, this RSA is not considered further in the assessment.

Other Designations

There are three Garden and Designed Landscapes (GDLs) within the detailed study area; the closest is Cally, c.7km southwest of the Site, with limited theoretical visibility. The effects upon these assets are considered within EIAR Chapter 10: Cultural Heritage. However, their contribution to local landscape value and visual amenity is considered in the LVIA where relevant.

5.5.10 Future Baseline

For the purposes of this assessment, it is acknowledged that felling of commercial forestry would be likely upon full maturity and would be part of a future baseline. When this felling would actually take place and where, is currently unknown.

However, where forestry is providing important foreground screening to some receptors (for example in the RVAA study), and its removal would be likely to radically change the assessment, notably at receptor locations close to the Proposed Development, an alternative future baseline scenario is assessed whereby it is assumed that the trees have been removed, allowing visibility.

5.6 The Proposed Development

The Proposed Development is described in detail in EIAR Chapter 3 and illustrated on Figure 3-1 and comprises nine wind turbines of up to 180m height to blade-tip; an 890-panel solar farm; and all associated infrastructure including access tracks, control buildings, borrow pit and construction components. The Proposed Development would re-use and share existing infrastructure from the existing onsite forestry operations and access tracks wherever possible.

The components of the Proposed Development with the potential for landscape and visual effects include:

- Two solar panel arrays (north and south) with associated foundations, earthworks, sub-stations, transformers, switching and breaking stations, access tracks and fencing;
- Nine wind turbines, with a maximum height of 180m to blade tip, including foundations and mitigated aviation lighting as described within **Technical Appendix 14-2**. However, the final turbine selection would be made following planning consent and the geometry below the blade tip height would be variable;
- Hardstanding areas at the base of each turbine;

- A substation and control buildings with parking and welfare facilities with a 3m security fence within the compound;
- Underground cabling linking the turbines with the substation;
- A Met Mast (power performance assessment anemometry mast) and associated hardstanding area;
- A widened access at the new wind farm entrance from the B727, with sections of upgraded and slightly realigned forestry access track through Disdow Wood and Glengap Forest, with associated watercourse crossings;
- Temporary construction compound areas;
- Extraction of material from one proposed borrow pit to provide suitable rock for access tracks, turbine bases and hardstandings.
- Additional development components to improve the overall ecological, environmental and social benefits accruing from the Proposed Development, as follows:
- Ecological and environmental: peatland restoration/habitat improvement and native woodland and riparian planting as described in EIAR Chapter 6.

For the construction phase duration, refer to EIAR Chapter 3 for details. The activities and temporary features with the potential to cause an effect on landscape and visual amenity include HGV & abnormal load deliveries to the Proposed Development Site, the internal movement of vehicles and construction of all elements of the Proposed Development including the use of cranes for the erection of wind turbines.

The operation phase would follow and would be limited to 40 years.

5.7 Embedded Mitigation

5.7.1 Design Process

The description of the Proposed Development Site selection rationale and the iterative design process is described within EIAR Chapter 3. The design of the Proposed Development has been a staged process with the aim of arriving at an optimal design configuration in respect of landscape and visual effects, and a range of other environmental, energy yield, and technical factors. Mitigation measures (including embedded mitigation) as proposed by the Applicant to reduce the level of potential effects and to inform the assessment of residual effects are described in the following sections.

Siting and Designing Windfarms in the Landscape Version 3 (NatureScot, 2017) provides a framework for the consideration of general design issues relating to onshore wind energy development to receiving landscape character and visual receptors. The design of the wind array has used these principles to guide the design.

5.7.2 Design Approach and Mitigation

The following approaches were taken during the design evolution in order to minimise environmental impacts;

- Adjustments and reduction in turbine numbers to improve visual composition and minimise inconsistent turbine spacing, such as, relatively large gaps, outliers or

excessive overlapping turbines and ensure a balanced/compact array especially from key views;

- Placing turbines and solar panels on gentler gradients, where possible, to minimise the groundworks necessary to accommodate the foundations and access requirements;
- Location of temporary construction compound and laydown areas in visually discreet parts of the Site to minimise effects on landscape fabric;
- Utilising existing forestry access tracks in order to minimise requirement for new access tracks;
- Visible aviation warning lighting embedded mitigation includes a reduced lighting scheme and automatic dimming of the lights, all as detailed in **Technical Appendix 14-2**;
- Consideration of the particular landscape sensitivities of wind energy identified for the Laurieston area of the Foothills with Forest AU20 within the Dumfries and Galloway Wind Energy Landscape Sensitivity Study Assessment of Larger Wind Turbines (October 2024) (DGWLSS) including minimising adverse effects on prominent skylines seen from the highly sensitive Loch Ken area;
- Minimising prominence of the Proposed Development in views from the Galloway Hills Regional Scenic Area (RSA) and the Fleet Valley National Scenic Area (NSA) by reducing the number of turbines;
- Reducing the prominence of the Proposed Development in views from nearest residents in the village of Laurieston, by setting the development back from the village, as well as recreational users in the area;
- Reducing the prominence of the Proposed Development in views from key transport routes including the A75 and A762;
- Avoiding significant effects on Tourist Routes and Dark Skies Core Area; and
- Avoiding significant effects upon the most valued landscape features on Site.

5.8 Mitigation During Construction

Construction of the Proposed Development would follow an agreed construction method statement that would include arrangements for implementation of various aspects of the works to mitigate local adverse effects during construction. Specific mitigation measures during construction will include:

- Minimise or Avoid construction impacts on local communities at Laurieston by using access track from Gatehouse of Fleet for wind farm construction;
- Retention of the existing trees in Disdow Wood on the western downhill side of the upgraded access track to retain existing screening of the existing forestry track for those located in Gatehouse of Fleet to minimise impacts as far as possible;
- Protection of tree groups that are to be retained within the Proposed Development Site;
- Restoration of borrow pit;
- Maintaining the Site and temporary construction compound in a tidy and contained condition;
- Removing all temporary construction materials once work is completed; and

- Controlling temporary construction lighting so that it does not impinge into sensitive views (e.g. from residential dwellings).

5.9 Potential Landscape & Visual Effects

5.9.1 Introduction

This section sets out the residual effects that the Proposed Development would have on landscape and visual receptors subsequent to the implementation of the mitigation measures reviewed above.

Effects during construction and for the operation of the Proposed Development are considered for each landscape and visual receptor included within the assessment. The effect of decommissioning on landscape character and visual receptors would be equal to, or lesser than, the effects during construction. Therefore, they have been considered together in this assessment.

5.9.2 Effects on Site Fabric

Changes to landscape fabric occur where there would be physical changes to the landscape. In this instance, changes to landscape fabric would predominantly occur within the Proposed Development Site, during construction.

Within the Landscape Character AreaAU20 Foothills with Forest (Laurieston Area) there would be Long-Term direct effects arising from the localised loss of landscape elements during construction For the wind turbine element, it would result in the loss of mainly moorland vegetation, as a result of the introduction of the turbines, borrow pit and substation compound; and loss of mainly commercial forestry as a result of the widened existing access track/new sections of track.

For the solar arrays, there would be the localised loss of the drumlin pasture within AU20 for the construction of the solar farm north array. These Large/Medium scale, but Localised, Long-Term direct effects would lead to a Moderate magnitude of change on this Medium sensitivity landscape and resultant **Moderate** effects overall, but **Not Significant**.

5.9.3 Construction and Decommissioning Effects; General

The erection of the proposed wind turbines involving the use of large cranes would be another component of the construction stage. Compared to the ground level construction activities noted above, the influence of this activity on landscape character would be available to a wider range of receptors, more similar to the operational phase. These construction effects would occur for the landscape and visual receptors as reported in the operational phase below and therefore have not been repeated here.

5.9.4 Construction and Decommissioning Effects; Landscape

In addition to the Long-Term changes to the landscape fabric assessed above in Section 5-10.2, the construction and decommissioning stages of the Proposed Development would also result in some Short-Term direct and indirect effects within the host landscape, AU20 Foothills with Forest (Laurieston Area). These Short-Term effects

would result primarily from the use of the newly constructed access track by construction vehicles and plant.

Direct and indirect Short-Term effects would also arise from the erection of the wind turbines and solar arrays, and the ground level construction activities such as borrow pit excavation, construction compounds, and control building/substation compound, as well as the activity and movement of large construction vehicles/plant/cranes within the Proposed Development Site.

These activities would disturb the more tranquil qualities of landscape character locally. However, given that most of these activities would occur within or near areas of extensive commercial forest activity, some aspects of this ground-level activity may be similar in some cases to the baseline.

The landscape character of the Foothills with Forest LCT is considered to be of Medium landscape sensitivity to construction activity. The surrounding forestry and topography would limit the influence of construction operations, particularly ground-level operations from areas within, and most vantage points outside, of the Proposed Development Site within AU20 Foothills with Forest.

In terms of the local landscape character, the scale of construction activity is considered to be Large but only over a Localised area and Short-Term in duration. Taking all this into account, the magnitude of effect is considered to be Moderate, which gives rise to **Moderate** construction/ decommissioning effects which would be **Not Significant** for the Forest with Foothills AU.

The landscape character of AU13 Drumlin Pastures (Deeside Area) is considered to be of High/Medium landscape sensitivity to construction activity. There would be some influence from elevated locations in western part of this AU due to the perception of construction activity going on below in the adjacent Foothills with Forest including movements on the access track.

The relative tranquillity of the landscape adjacent would be disturbed by construction work, construction vehicles on the slopes to the west of the Tarff Valley floor to the southwest side of AU13 (due to solar farm construction) and the skyline to the west of this (due to windfarm construction). There would be Short-Term change to the existing landscape character as a result. However, on lower areas in the remainder of the AU there would be limited perception of change due to screening by topography and woodland.

The indirect effects of construction activity are considered to be Medium in scale over a Limited extent of this landscape type in the Short Term. Accordingly, the magnitude of change is considered to be Slight, which gives rise to **Moderate/Minor** and **Not Significant** construction/ decommissioning effects.

The landscape character of AU19 Foothills (Fleet Area) is considered to be of Medium landscape sensitivity to construction activity, lying immediately to the west of the host landscape. The access point and access route through the forest would result in more construction activity being perceptible in this vicinity.

There would be no awareness of any other ground level construction activities but there would be widespread intervisibility with the emerging turbines where large cranes would be perceptible on the setting. The effects of construction activity are considered to be Medium scale over a Localised extent of this section of the Foothills AU in the Short Term.

The magnitude of effect was considered to be Moderate/Slight resulting in **Moderate/Minor** and **Not Significant** construction/ decommissioning effects on AU19 Foothills (Fleet Area).

There would be limited influence arising from construction/decommissioning on the other neighbouring LCTs; considered **Not Significant.**

5.9.5 Construction and Decommissioning Effects; Visual Amenity

Residents in Laurieston (VP8) would not experience views of ground operations from the settlement due to foreground screening by topography and woodland. There would be little awareness of the construction work until the tops of cranes appear above the horizon lifting tower and blade sections into place and hence in this immediate locality, little resultant change to landscape characteristics.

The construction effects are therefore considered to be Small in scale and Localised for this receptor group in the Short-Term resulting in a Slight magnitude of change. The magnitude of change combined with the High/Medium sensitivity would give rise to **Moderate/Minor** and **Not Significant** effects.

Residents at Kirkconnell (VP2) and visitors to VP3 would have no visibility of the wind farm or access track construction; however, solar farm construction vehicles and plant would be seen on the A762 and through the trees in the mid-distance coming and going to the site. Viewed through gaps in the foreground trees, the solar farm south array site construction activities would be carried out.

Part-screened by foreground trees, the construction effects are considered to be Medium in scale, Localised and Short-Term and reversible for this receptor group resulting in a Moderate magnitude of change. This, combined with the High/Medium sensitivity, would give rise to **Major/Moderate** and **Significant** effects.

Residents in Gatehouse of Fleet and users of the B796/ Cycle Route 7 (VP25) would have limited, or no, visual awareness of the construction of the wind farm or solar farm on the Site. However, the wind farm access track is proposed as an upgrade to an existing substantial forest track across the hillside near the western edge of Disdow Wood. Embedded mitigation to minimise effects of this has included the retention of downhill side trees to screen or filter views of this element of the Proposed Development. The potential effectiveness of this mitigation is demonstrated in the difference between the theoretical visibility of the access track shown in Figure 5.9 without tree screening and Figure 5.10 with tree screening, noting that the tree cover illustrated in Figure 5.10 over represents what is currently on site.

Currently there is a mix of dense forestry and deciduous woodland between the track and Gatehouse of Fleet, with some gaps, as illustrated in Viewpoint 25. The dense forestry would screen views of the track from much of the town itself. However, between this dense forestry and as the track turns the corner in Disdow Wood, near Fleuchlang, there are some gaps in the tree cover to the west of the track. This would allow in views to the new cut / fill slopes of the upgraded track, as well as construction traffic. Garden vegetation within the properties at Fleuchlang, would reduce visual effects from most but not all properties. There will be some limited

visibility ofthe construction of the track improvements, new cut and fill slopes above the existing track, and construction vehicles on the track. However, it is noted that this track already carries large forestry vehicles, so this is already part of the baseline.

There would be a Medium degree of visual change for a Limited part of Gatehouse of Fleet (Fleuchlang area). The effect would occur over a Short-Term resulting in a Moderate/Slight magnitude of change. The magnitude of change combined with the High/Medium sensitivity would give rise to a **Moderate** and **Not Significant** construction effect.

Residents at Glengap (RVAA Property Group P1) have west-facing primary views overlooking the road to trees opposite and would be oblique/ side-on to the Proposed Development construction works. No ground works would be visible, and the erection of the few potentially visible turbines, although close at hand, would be substantially screened by a combination of foreground topography, (due to the properties reducing in elevation away from the top of the hill); deciduous trees and a large outbuilding near the top of the hill, behind The Water House.

The construction effects are therefore considered to be Small in scale and Localised for this receptor group location in the Short-Term resulting in a Slight magnitude of change. The magnitude of change combined with the High/Medium sensitivity would give rise to **Moderate** and **Not Significant** construction/ decommissioning effects.

For recreational users of the Core Path which shares the wind farm access route, it is anticipated that access to the Core Path may be limited at times, but details are not known at this time. Therefore, during the construction period it is assumed that there would potentially either be close range views of construction work, or no access. In either case this is likely to result in a Large degree of adverse visual change across a Wide extent of the route, for recreational users of the core path in the Short-Term resulting in a Moderate magnitude of change. The magnitude of change combined with the High/ Medium sensitivity would give rise to **Major/Moderate** and **Significant** construction/ decommissioning effects.

Recreational visitors at the Neilson's Monument vantage point (VP3) would obtain open views down into the site and will be able to see nearly all of the construction activity associated with both solar arrays and the wind turbines, including the working the borrow pits at a distance of over 3km. However, the main wind farm would be accessed from the other side of the hill and any work, just beyond the skyline would not be visible.

The construction effects are considered to be Large in scale across an Intermediate part of the view for this receptor group in the Short-Term resulting in a Moderate magnitude of change. The magnitude of change combined with the High/Medium sensitivity would give rise to **Major/Moderate** and **Significant** construction/ decommissioning effects.

On the A762 between Laurieston and Waterside, (VP1 and VP2) construction vehicles and plant would be seen on the A762 as well as coming and going up the track to the solar farm sites. Construction activities would then take place at the two solar farm array locations. At the same time wind turbine towers and blades would rise above the

skyline, lifted into place by cranes. However, the wind farm would be accessed from the other side of the hill and work below the skyline would not be visible.

The construction effects are therefore considered to be Large in scale across a Localised extent of the route in the Short-Term resulting in a Moderate magnitude of change. The magnitude of change combined with Medium sensitivity would give rise to **Moderate** and **Not Significant** effects.

All other construction/ decommissioning effects on visual amenity in the study area are likely to be Minor or less and therefore not considered further.

5.9.6 Construction and Decommissioning Effects; Designations

The construction and decommissioning stages of the Proposed Development would result in some short-term effects on Galloway Hills RSA. There would be no change to the physical fabric of this RSA. There would however be some influence from elevated locations and summits in the western and northern parts of the RSA due to the perception of construction activity going on below in the adjacent landscape to the south and east; in some cases, relatively close at hand.

The indirect effects of construction activity are considered to be Medium in scale over a Limited extent of the Regional Scenic Area in the Short Term. Accordingly, the magnitude of change is considered to be Slight, which in consideration of the High sensitivity, gives rise to locally **Moderate** but **Not Significant** effects on the Galloway Hills RSA. Potential construction/decommissioning effects on the Fleet Valley NSA were considered during the AESLQ process in EIAR Technical Appendix 5-5.

5.9.7 Viewpoint Analysis

Viewpoint analysis has been undertaken from a total of 25 representative viewpoints. The viewpoint locations are illustrated on all ZTVs. The visualisations (comprising existing view, wireframes and photomontages) are illustrated in EIAR Volume 4.

The full viewpoint analysis is contained within **Technical Appendix 5-3 Viewpoint Analysis** and the findings summarised below in Table 5-9. Visual analysis considers the nature and the scale of changes to character and views at each viewpoint location. The sensitivity of receptors and wider extent of the effect (beyond the individual viewpoint location) and its duration are considered in the main body of the assessment text below as part of the consideration of the magnitude and significance of effects.

Future Baseline: It should be noted that if all intervening forestry were to be felled, the degree of change at VPs 1,4,6,7 &8 would generally increase, as shown.

Table 5-9 Viewpoint Analysis Summary (Operation)

LVIA VPs	Title	Distance/ Direction	Scale of Visual Change	Scale of Landscape Change
1	A762, Lairdmannoch Bridge	0.5km NE from solar farm 2.69 from turbines	Large/Medium NB If forestry felled, change would be: Large	Large/Medium NB If forestry felled, change would be: Large
2	A762, Kirkconnell	0.12km SE from solar farm 2.74 from turbines	Medium	Large/Medium
3	Neilson's	1.11km E from solar	Large	Large

	Monument	farm 3.71 from turbines		
4	Loch Mannoch, core path	1.51 S from solar farm 2.08km SE from turbines	Large/Medium NB If forestry felled, change would be: Large	Large NB If forestry felled, change would be: Large
5	Glengap	1.66km S from turbines	Large	Large
6	West of Loch Whinyeon @ 261880 560883	2.41 km W from turbines	Large/Medium NB If forestry felled, change would be: Large	Large/Medium NB If forestry felled, change would be: Large
7	Minor road between Gatehouse and Laurieston, near Darngarroch Bridge	1.61km NW from turbines	Small NB If forestry felled, change would be: Small/Moderate	Small NB If forestry felled, change would be: Small/Moderate
8	Laurieston, A762	3,28 from solar farm 3.65km NE from turbines	Medium NB If forestry felled, change would be: Large/Medium	Medium NB If forestry felled, change would be: Large/Medium
9	A75 SW of Castle Douglas	5.9km SE	Medium/Small	Medium/Small
10	Underwood	7.23km SE	Small/Negligible	Negligible
11	A75 west of Twynholm	7.19km S	Small	Small
12	Millennium Monument (near Rutherford's Monument)	8.03 SW	Small	Small
13	B796 near Upper Rusko	7.38 km W	Small	Small
14	Airie Hill	6.19 km N	Medium	Medium
15	Parton viewing point	9.09km NE	Small	Small
16	Crossmichael	8.89km NE	Small	Small
17	Threave Castle	8.85km E	Small	Small
18	Castle Douglas	10.86km E	Small	Small
19	Screel Hill	14.20km SE	Small	Negligible
20	Kirkcudbright	10.75km S	Negligible	Negligible
21	Mossyard Bay	13.45km SW	Negligible	Negligible
22	Mill Knock	11.01km SW	Small	Small
23	Cairnharrow	12.08km SW	Small	Small
24	Cairnsmore of Fleet	14.00km NW	Negligible	Negligible
25	Blackloch, north of Gatehouse of Fleet	c.7km SE	Negligible	Negligible

Summary of Viewpoint Analysis; Visual Amenity

Large scale visual change arising from the Proposed Development would be contained to within approximately 2.5km, noting that views to the west and north would be much more restricted by landform and further by forestry; this would increase to 4km if all intervening forestry were to be felled;

- Medium-Scale visual change would be contained within approximately 4-6km from nearest turbines;
- Small-Scale visual change between approximately 6-13km; and
- Negligible visual change generally in excess of 13km.

Summary of Viewpoint Analysis; Landscape Character

- Large-Scale change to landscape character arising from the Proposed Development would be confined to the local area within approximately 2.5 km; this would increase to 4km if all intervening forestry were to be felled;
- Medium-Scale landscape change would be confined within approximately 4-6km;
- Small-Scale landscape change to character be between approximately 6-13km; and
- Generally, beyond 13 km, change to landscape character would reduce to Negligible.

5.9.8 Operational Effects on Landscape Character

This section addresses the operational phase landscape effects arising from the Proposed Development, with embedded mitigation measures described above in Sections 5-7 to 5-9.

Landscape character results from the different combinations and spatial distribution of physical, natural and cultural features. The effects of the Proposed Development on the landscape character of the study area have been assessed through review of all of the ZTVs, including that overlaid on to the LCTs shown on Figure 5-6, field survey work and informed by the viewpoint assessment (**Technical Appendix 5-3**) and the landscape sensitivity evaluation (**Technical Appendix 5-4**).

Descriptions for each of the Assessment Units (AUs)/Landscape Character Types (LCTs) are briefly summarised below, along with further observations from site-based work.

It should be noted that effects upon designated landscapes are included in a separate section after the visual effects, as it is common for designations to encompass both character and visual considerations within their special qualities or purposes of designation.

AU20 Foothills with Forest (Laurieston) (NS LCT 176 - Foothills with Forest - Dumfries & Galloway); "Host" Landscape

As shown on Figure 5-5, this AU includes the Proposed Development Site centrally; and extends both north and south of this. It should be noted that the fields in which the northern solar array are located, although technically falling within AU20, are actually more typical of the drumlin pastures of the AU13 landscape type. There would be direct effects on this landscape character type.

The Laurieston Foothills with Forest (AU20) is a large landscape unit stretching in a long band of low, rounded, afforested foothills from Slogarie Hill in the north to the craggier Dow Craig Hill and Meikle Culcaigrie Hill in the south. Viewpoints 4 and 5 are located within the southern part of this AU, (refer to **Technical Appendix 5-3**).

EIAR Technical Appendix 5-4 sets out a site and project-specific evaluation of landscape sensitivity which draws on the DGWLSS and NatureScot baseline landscape character assessments. The value of the landscape within the Forest with Foothills AU is judged to be Regional.

Peripheral areas to the north and south fall within Galloway Hills Regional Scenic Area. However, the scale and extent of commercial forestry, forestry operations and also farming operations on the eastern slopes, generally limit the perceptual sense of tranquillity or isolation; with the exception of the south Loch Mannoch area.

The susceptibility of this AU overall is judged to be Medium to wind energy development. Although the Proposed Development site is mostly open moorland (the wind farm site) with some improved pasture (the northern solar array site), the large-scale upland plateau is dominated by commercial forestry plantation.

There is little settlement in this AU with little intervisibility, but it does form an important backdrop to the Tarff Valley to the east and the Grobdale Lane valley to the west. Considering susceptibility and value together the sensitivity is judged to be Medium.

Table 5-10 outlines the effect the Proposed Development would have on the key characteristics of the Foothills with Forestry LCT, as stated in the NatureScot LCA 2019.

Table 5-10: AU20 Foothills with Forestry (NS LCT 176 - Foothills with Forest - Dumfries & Galloway) Key Characteristics

Key Characteristic	Effect of the Proposed Development
An extensive gently undulating plateau with simple landform and uniform forest land cover	This key characteristic would remain intact with only limited forestry removal.
Dark green blanket of forest covering undulating foothills.	As above, only limited forestry removal of limited perception beyond the immediate extent.

Changing landscape with areas with large and medium scale forestry operations and wind farm development.	Although some wind farm developments are distantly visible on the horizon from open, higher locations, there is currently only one operational wind farm on the periphery of the 20km cumulative study area. No significant cumulative effects are therefore likely. Forestry operations are already in place and trees generally mature/ semi-mature in this area.
Forested areas dominated by Sitka Spruce, interspersed with mixed conifers and broadleaf planting, undergoing felling and replanting in large coupes.	The Proposed Development would not change the species composition but there would be some habitat enhancement and restoration proposed and mitigation tree planting around the proposed solar farm.
Tall mature conifers at roadside.	No change to this characteristic is anticipated.
Areas of more complex, locally distinctive and smaller-scale landscapes, with semi improved pasture with walled enclosures on open ground, occasional lochs and estate policies, distinctive ridges and landmark summits.	The Proposed Development would be located in large scale moorland surrounded by forestry on three sides, across less distinctive landforms. There would be no significant change to locally complex, smaller scale and distinctive landscapes to the south; with the exception of the south Loch Mannoch area which may lose some of its sense of remoteness and tranquillity.
Areas of relict landscape with remains of pre-improvement settlement and agriculture clustered in burn valleys.	No change to this characteristic is anticipated.
Windfarms, locally defining the character in some areas of central Dumfries and Galloway.	As above; although some wind farm developments are distantly visible on the horizon from open, higher locations, there is only one operational wind farm on the periphery of the 20km cumulative study area. No significant cumulative effects likely.

In the absence of any other large wind turbine developments within just under 20km, the Proposed Development would establish a new landscape feature in the centre of the Laurieston Area of the Foothills with Forest LCT (AU20). However, the effects on the key characteristics would otherwise be relatively limited as demonstrated above in Table 5-10.

Within the AU the upgraded access track would be contained locally within existing areas of forestry (rather than using the local road network in the Tarff Valley). The proposed turbines would be located on moorland surrounded on three sides by areas of commercial forestry and the north solar array on improved pasture above the Tarff Valley.

AU20 Foothills with Forest is characterised by undulating upland plateau and forestry, which limits intervisibility within this LCT. Figure 5-5 illustrates the extent of bare ground theoretical visibility of the wind turbines, and the ZTV in Figure 5-7 includes the screening effect of forestry and native woodland which would further reduce visibility within the local landscape.

At up to 180m to tip, the proposed turbines would read as new large-scale features in the interior of this large-scale undulating plateau landscape. The vertical height and movement of the turbines would contrast with the more static landscape features of

this existing landscape. The movement of the blades would also draw attention to the wind turbines, especially as there are few turbines visible locally. However the large scale and simplicity of the wind turbines would accord with the large scale and simple characteristics of the receiving landscape.

However, there would be a contrast between the medium scale and increased relative complexity of the northern array of solar panels, located on what is currently a series of descending drumlin pastures, as appreciated from VP3 (Neilson's Monument) in neighbouring AU 13: Drumlin Pastures.

The bare earth ZTVs illustrate there would be a distinct area of influence contained within approximately 4-6km of the proposed turbines, but this would drop away quickly due to landform. When the extent of screening by forestry is considered, this is reduced to c. 2.5km radius of influence.

Within this area, there would be a Large scale of change, but due to topography and extent of screening by forestry this would only occur over a limited extent of the AU. The area around Loch Mannoch has a greater degree of enclosure and tranquillity than elsewhere in the AU but intervisibility between the turbines and the southern, most sensitive section, is reduced by local topography and woodland groups.

Overall, these Large/Medium scale but relatively localised changes are considered to be Long Term and would lead to a Moderate magnitude of effect for the Laurieston area of AU20 Foothills with Forest. For this landscape of Medium sensitivity, this would generally lead to a **Moderate** effect which would be **Not Significant**.

Beyond 4-6km, the screening effects of landform and forestry would increasingly limit the intervisibility, with **Minor/Negligible** local effects on landscape character within the northern and southern extremities of AU20, which would be **Not Significant**.

At night up to four lights, varying in distance and mainly in the central area of the AU (see Figure 5.9) would be noticeable where visible against the predominantly dark sky introducing an impression of man-made influence where there are very few such influences on character other than occasional traffic on the A762 and the localised streetlights and illuminated houses in smaller settlements along the A762.

A small localised degree of change, leading to a Moderate/Slight magnitude of change. With landscape sensitivity of Medium, local night-time landscape effects of **Moderate/Minor** (**Not Significant**) would be anticipated. Outwith 4-6km, magnitude of change would reduce progressively to Slight or Negligible, with effects of **Minor or less (Not Significant)**

AU 13 (LCT 169) – Drumlin Pastures (Deeside Area); Nearby Landscape

As shown on Figure 5-6, this AU receives some direct effects as it includes the solar farm south array element of the Proposed Development in the floor of the Tarff Valley on the western periphery of the assessment unit.

The Drumlin Pastures (AU13) is a very large landscape area of generally low, undulating hills and knolls (drumlins), mostly under medium-scale improved pasture, interspersed with clumps and copses of coniferous, mixed and deciduous trees and scattered rural settlement.

Geographically, it stretches from Mossdale and above the eastern shore of Loch Ken in the north; to just above Kirkcudbright in the south; and to the Castle Douglas area to the east. Viewpoints 1,2,3 and 8 are on the western periphery of AU13 close to the Proposed Development Site and adjacent AU20, with VPs 9,10,11 and 20 located within the south of this AU, and 17 and 19 to the east (refer to Figure 5-6 and **Technical Appendix 5-3**).

Technical Appendix 5-4 sets out a site evaluation of landscape sensitivity to wind turbines which draws on the DGWLSS and NatureScot baseline landscape character assessments. The value of the landscape within the Drumlin Pastures AU is judged to be Regional.

Galloway Hills Regional Scenic Area occurs around the extreme northern periphery and Solway Coast Regional Scenic Area the extreme southern periphery. However, the scale and extent of farming operations generally limit any perceptual sense of wildness or isolation in these areas.

The susceptibility of this AU is judged to be High-Medium. There is extensive dispersed rural settlement, especially to the east and northeast. Considering susceptibility and value together the sensitivity is judged to be High-Medium.

Table 5-11 outlines the effect the Proposed Development would have on the key characteristics of the Foothills with Forestry LCT, as stated in the NatureScot LCA 2019.

Table 5-11: AU 13 (LCT 169) – Drumlin Pastures (Deeside Area); Key Characteristics

Key Characteristic	Effect of the Proposed Development
Distinctive elongated mounds with smoothly convex outlines, creating an undulating landform	Where the turbines appear prominently in the local landscape above the hills and knolls within c.4-5km of the Proposed Development, there would be the potential for the vertical emphasis and large scale of the turbine towers and rotating blades in the neighbouring AU to appear out of place behind the foreground of more medium-scale, horizontally- orientated enclosed undulating pastureland, knolls and dispersed settlement although this change would be softened by the mid-ground tree groups.
Smooth convex slopes of improved pasture, grazed by sheep and cattle.	
Localised rugged knolls with gorse.	
Medium scale fields with prominent wall and hedgerow patterns accentuating topography.	
Small settlements and scattered farmsteads served by extensive network of minor roads.	No change to this characteristic is anticipated.

As can be seen in Table 5-11, AU 13 (LCT 169) – Drumlin Pastures (Deeside Area) is characterised by undulating low hills and knolls with clumps of woodland, which effectively limit and fragment more widespread potential intervisibility across this lower ground.

This fragmented pattern is clearly illustrated in the screening ZTV. In the absence of any other large wind turbine developments within this AU, the Proposed Development in adjacent AU20 would establish a noticeable new vertical feature in the undulating but more horizontally-orientated local landscape.

Figure 5-6 illustrates the extent of bare ground theoretical visibility of the Proposed Development and Figure 5-7 illustrates the screening effect of forestry and native woodland which would further reduce visibility within the local landscape. At up to 180m to tip, the proposed turbines would read as new large-scale features in the neighbouring AU20.

The vertical height and movement of the turbines would contrast with the more static landscape features of this existing landscape. The movement of the blades would draw attention to the wind turbines, especially from areas where turbines are not currently visible. Instead, the large scale of the wind farm is generally experienced above the lower, medium-scale, foreground pastureland.

This effect does however decrease with distance, especially outwith c.4-6km. Within this area, there would generally be a Small scale of change, due to topography and screening by woodland clumps, over an Intermediate extent of the AU. These changes are considered to be Long Term which would lead to a Moderate/Slight magnitude of effect for the Deeside area of AU13 Drumlin Pastures. For this landscape of High-Medium sensitivity, this would lead to a **Moderate** effect which would be **Not Significant**.

Beyond 4-6km, the screening effects of landform and local woodland clumps would increasingly limit the intervisibility, with local effects of **Moderate/Minor** or less on landscape character within the north, south and eastern extremities of AU13, which would be **Not Significant**.

At night up to four lights, varying in distance and fragmented in coverage (see Figure 5-9) would be noticeable where visible against the predominantly dark sky across the pasturelands, introducing an impression of man-made influence where there are very

few such influences on character other than the A75 transport corridor and the localised urban glare from Castle Douglas and smaller settlements along the A75 and A713.

A Small Intermediate degree of change, leading to a Moderate/Slight magnitude. With landscape sensitivity of High/Medium local night-time landscape effects of **Moderate** (**Not Significant**) would be anticipated. Outwith 4-6km, magnitude of change would reduce progressively to Slight or Negligible, with effects of **Minor or less (Not Significant)**

AU 8 (LCT 164) – Flooded Valley; Nearby Landscape

The Flooded Valley (AU8) is a compact, linear landscape area focussed around Loch Ken, a flooded upper section of the River Dee which functions both as a reservoir and a local outdoor leisure resource. Geographically, within the detailed study area, it stretches from Townhead of Greenlaw at the south end to Kenmure in the north. Viewpoints 15 (Parton Red Kite Viewing Point) and 16 (Crossmichael) are located on the eastern edge of AU8 (refer to Figure 5-6 and **Technical Appendix 5-3**).

EIAR Technical Appendix 5-4 sets out a site and project-specific evaluation of landscape sensitivity which draws on the DGWLSS and NatureScot baseline landscape character assessments. The value of the landscape within the Flooded Valley AU is judged to be National/ Regional and it falls entirely within Galloway Hills Regional Scenic Area. However, there is little sense of wildness or tranquillity due to the busy main road and frequent settlement.

The susceptibility of this AU is judged to be High. Most of the settlement and the main Ayr road is on the eastern shore of Loch Ken and this combines with the greatest degree of theoretical visibility; although in practice this is frequently filtered and screened by foreground and midground groups of trees and buildings. Considering susceptibility and value together the sensitivity is judged to be High-Medium.

Table 5-12 outlines the effect the Proposed Development would have on the key characteristics of the Flooded Valley LCT, as stated in the NatureScot LCA 2019.

Table 5-12: AU 8 (LCT 164) – Flooded Valley; Key Characteristics

Key Characteristic	Effect of the Proposed Development
Generally shallow V-shaped valley with narrow valley floor.	No change to this characteristic is anticipated
Extensive water body with bays and wetlands.	No change to this characteristic is anticipated.
Glacially shaped terrain: drumlins, roche moutonees, rocky ridges and eroded slopes.	No change to this characteristic is anticipated.
Improved pastures of medium scale with dry stone dyke enclosures.	No change to this characteristic is anticipated.
Rough grassland with heather and gorse on rocky ridges	No change to this characteristic is anticipated.
Small broadleaf woodlands and shelterbelts	The Proposed Development turbines would be seen above the woodlands and conifer plantations on the opposite bank where not subject to foreground screening. This would constitute a limited and localised indirect change to the background character of this area. At night up to four lights, relatively distant but noticeable against the predominantly dark sky across the
Small but numerous coniferous plantations (except at Cairn Edward, where forestry is extensive).	

	loch, would introduce an impression of man-made influence where there are very few such influences on character, other than the transport corridor.
Major road corridor.	No change to this characteristic is anticipated.

As can be seen in Table 5-12, AU 8 (LCT 164) – Flooded Valley is characterised by a narrow wooded valley around a linear man-made loch with a major road and linear settlement on the east bank and groups of woodland, forestry and improved pasture but little in the way of settlement on the west bank.

Figure 5-6 illustrates the extent of bare ground theoretical visibility of the Proposed Development in this AU and Figure 5-7 illustrates the screening effect of mid-ground forestry and native woodland on the west bank and foreground loch-side trees and buildings on the east bank which would reduce and fragment intervisibility within the local landscape.

As mentioned in Table 5-12, views of the turbine hubs and tips above the trees, where perceptible, would constitute a Small and Localised indirect change to the background character of this area. These changes are considered to be Long Term which would lead to a Slight magnitude of effect for AU8, Flooded Valley. For this landscape of High-Medium sensitivity, this would lead to a **Moderate/Minor** effect which would be **Not Significant**.

At night up to four lights, relatively distant but noticeable against the predominantly dark sky across the loch, where intervisible, would introduce an impression of man-made influence; but this would be in the context of the transport corridor locally. A Small, Localised degree of change, would thus lead to a Moderate/Slight magnitude of change, and with landscape sensitivity of High/Moderate, local night-time landscape effects of **Moderate/Minor** (**Not Significant**) would be anticipated.

AU 19 (LCT 175) – Foothills (Fleet Area); Nearby Landscape

The Foothills (Fleet Area) (AU19) is a linear landscape area focussed on the Grobdale Lane valley to the north and the low hills above and to the east of the Fleet valley to the south. Viewpoints 6 (Loch Whinyeon) and 7 (Near Dumgarroch Bridge) are located on the eastern edge of AU19 not far from the Proposed Development Site (refer to Figure 5-6 and **Technical Appendix 5-3**).

Technical Appendix 5-4 sets out a site and project-specific evaluation of landscape sensitivity which draws on the DGWLSS and NatureScot baseline landscape character assessments. The value of the landscape within the Foothills (Fleet Area) AU19 is judged to be Regional.

It falls entirely within Galloway Hills Regional Scenic Area and is abutting/ slightly overlapping Fleet Valley NSA to the west "... *the western edge of this AU falls within the Fleet Valley NSA. The enclosure given by the ridge of small hills to the east of the Fleet valley which culminates in Barr Hill south of Gatehouse of Fleet is noted as a special quality of the NSA…(In addition)., a distinct sense of naturalness can be experienced within this upland valley, heightened by the context of more modified densely forested foothills (and) …it can feel secluded due to its strong containment by hills*."(DGWLSS)

The susceptibility of this AU is judged to be Medium. Considering susceptibility and value together the sensitivity is also judged to be Medium.

Table 5-13: AU 19 (LCT 175) – Foothills; Key Characteristics

Key Characteristic	Effect of the Proposed Development
Generally undulating land between 170 and 250 metres, with rounded peaks. Higher in the west, up to nearly 550 metres with craggier peaks.	Turbines would appear close at hand above this undulating landform from some elevated locations close to the site but intervisibility elsewhere would be contained by topography and to a lesser extent by forestry. The scale of the receiving landscape is large and the turbines where visible appear commensurate with this.
Foothills dissected by incised valleys.	Intervisibility with Grobdale Lane valley but comments as above,
Semi-improved pasture enclosed in medium-large fields by stone walls. Grazed by sheep and cattle. Some rough pastures and heath on higher ground.	No change to this characteristic is anticipated due to very limited no, intervisibility.
Trees in sheltered pockets with some copses on top of hills.	The proposed access track follows an existing forestry track through Disdow Wood and Glengap Forest. Some minor tree removal works largely restricted to the western side of the track are likely to result.
Many scattered farmsteads and small settlements.	No change to this characteristic is anticipated due to very limited or no, intervisibility.
Network of minor roads.	No change to these characteristics is anticipated due to very limited or no, intervisibility
Numerous archaeological sites particularly Bronze Age funerary and ritual sites and Iron Age settlements and forts.	

Figure 5-6 illustrates the extent of bare ground theoretical visibility of the Proposed Development in this AU and Figure 5-7 illustrates the screening effect of Laurieston Forest and it can be seen that the limited intervisibility is largely due to topography rather than the forestry.

As mentioned in Table 5-13, views of the turbine hubs and tips above the trees, where perceptible, although introducing a noticeable new feature into the local characteristics, would constitute a limited indirect change to the background character of this area ranging from Large/Medium to Small. These changes are considered to be Long Term, and Limited which would lead to a Moderate magnitude of effect for AU 19 (LCT 175) – Foothills (Fleet Area). For this landscape of Medium sensitivity, this would lead to a **Moderate** effect which would be **Not Significant**.

At night up to four lights, varying in distance and limited in coverage to higher ground on the west side of Grobdale Lane valley and around Loch Whinyeon, (see Figure 5.9) would be noticeable where visible against the predominantly dark sky, introducing an impression of man-made influence where there are very few such influences on character at present. A Small, Localised degree of change, although long-term, would lead to a Slight magnitude. With landscape sensitivity of Medium, local night-time landscape effects of **Moderate/Minor** (**Not Significant**) would be anticipated.

5.10 Operational Visual Effects

5.10.1 Introduction

This assessment focuses on the operational visual effects of the Proposed Development on groups of visual receptors. It considers effects subsequent to the application of embedded mitigation, as outlined above in Sections 5-7- 5-9.

The assessment of effects considers the visual amenity from public spaces and from groups of dwellings which share a similar outlook. Viewpoints (VPs) where relevant are referred to in the text and further details can be found in **Technical Appendix 5-3: Viewpoint Analysis**; and supporting visualisations and wirelines can be found in **Volume 4**.

The visual receptor groups focus on areas where there would be visibility of the Proposed Development likely to result in significant residual effects. However, there are some more distant or topographically screened visual receptors where effects are unlikely to be greater than Minor and therefore not considered further; as discussed above in Section 5-5-7.

These visual receptor groups are generally assessed as being of High susceptibility to the Proposed Development and of Community value, resulting in a **High/Medium sensitivity** to the Proposed Development, unless stated otherwise. Effects on individual private residential visual amenity are a separate matter and are assessed within **Technical Appendix 5-6: RVAA**.

Future Baseline

If close front views of the Proposed Development are currently constrained by commercial forestry, a future baseline scenario where the commercial forestry has been clear-felled has also been assessed; i.e., worst-case. (see above, Section 5-5-10).

Night-Time Visual Effects

Night-time visual amenity is evaluated in **Technical Appendix 5-3** and assessed within this section from a selection of receptor groups around VPs where night-time views are likely (primarily, settlements). For methodology refer to Section 5-4-3 above, and **Technical Appendix 5-1**.

Night-time visualisations at VPs 5 (Glengap),8 (Laurieston) and 13 (Upper Rusko) can be found in **Volume 4**. Unless otherwise stated, in this assessment, residential receptor sensitivity is assumed to be the same as daytime, as many receptors value night-time views from their houses and gardens as much as day-time views and may also enjoy star-gazing.

Core paths in receptor groups are less likely to be frequented by receptors at night and road-users at night tend to concentrate on the road ahead in their headlights, so both these receptor types are scoped-out of night-time assessment for these reasons.

5.10.2 Residential Visual Amenity Assessment (RVAA)

A RVAA was carried out and can be reviewed in **Technical Appendix 5-6**. The aim of the RVAA seeks to identify where effects on residential visual amenity are of such a nature or magnitude that the effect on the outlook / visual amenity of a residential property is so great that it is not generally considered to be in the public interest to permit such conditions to occur where they did not exist before.

In total there are 20 properties located within the 2km RVAA study area that are shown by ZTV studies to have potential visibility of the Proposed Development. However, two of these properties were scoped out of the assessment leaving 18 to be assessed. Of these remaining properties, some have been grouped together due to being adjacent, with similar views.

Receptors at five properties within 2km of the proposed turbines and/or 0.5km of the solar farm, were identified as experiencing **significant** effects of **Major/Moderate or Major** as a result of the Proposed Development as a whole**.** This could potentially increase to a total of six properties if foreground commercial forestry were to be felled.

However, the assessment concluded that in no case would these effects arising from the Proposed Development be of such nature and / or magnitude, that it potentially affects living conditions at any property to the point it becomes an unattractive place to live, when judged objectively in the public interest.

5.10.3 Visual Receptor Groups

Glengap (c.1km south of the proposed turbines); refer to RVAA, **Technical Appendix 5-6**. NB it should be noted that VP5 is located on a Core Path north of the settlement, nearer to the Proposed Development Site, and is *not* representative of the settlement itself.

Glengap is a small settlement with six, two-storey semi-detached houses arranged in a staggered row, stepping downhill away from the direction of the Proposed Development. All the properties would be oblique/ side-on to the Proposed Development and would have High/Medium Sensitivity. Receptors would primarily be residents, visitors, and users of the core path.

Two hubs and three tips would theoretically be visible through the gap between Dow Craig and Fore Hill of Glengap. However, in the oblique/side-on views from properties, the few visible turbines would be substantially screened by foreground topography, trees and a large outbuilding. The scale of the change would be Medium across a Localised extent of this group. These Long-Term effects on the receptor group would have a Moderate magnitude, resulting in a '**Moderate**' effect which would be **'Not Significant**'.

Night-time effects; no aviation lights would be visible; so effects would be **Negligible** and **'Not Significant**'.

Laurieston (c.3.0 km northeast of the proposed turbines). This village is split into three receptor groups which comprise residents and/or local road users /users of nearby core paths accessing or passing through the village. Receptors would have High/Medium Sensitivity. The village is located at the head of the Camelon Lane Valley before it runs into the Woodhall Loch to the north and is visually constrained by Laurieston Forest on foothills to the west but has improved, undulating pastureland enclosed by hedgerows

and drystone dykes to the east. The village can be divided into three discrete receptor groups, as follows.

Laurieston Lower: on the A762, located north of the crossroads with the B795- This is the heart of the village and lies in a shallow valley formed by the Camelon Lane burn and consequently has no intervisibility with the proposed turbines; and so is not considered further in this assessment.

Laurieston Church Road: this is a slightly elevated single-track residential road running between the A762 and the B795, on the northeast side of the village. Properties are 1-2 storey detached houses facing southwest, but only receptors in the top eight properties have potentially slightly elevated front views to the proposed turbines.

These views would be partially screened by the forest on the low ridge to the southwest but at night-time one or two aviation warning lights may be visible against a dark sky. Overall, the scale of change would be Large across a Localised extent of this group. These Long-Term effects on the receptor group would have a Substantial/Moderate magnitude, resulting in a **Major/Moderate** effect which would be **Significant**. If all the intervening commercial forestry were felled, this effect would increase to **Major**.

Laurieston Upper: (VP8) This is a group of 1-2 storey houses and cottages located in a slightly elevated location, southwest of the B795/A762 crossroads. They all have rear/ side-on views towards the proposed turbines. A nearby group of four cottages to the southeast of the crossroads are located in a hollow and are screened by the housing group to the west and so, not intervisible with the proposed turbines.

VP8 is located nearby on the southern edge of the village, in a gap in the hedgerow, and illustrates the maximum visibility from this receptor group. This VP illustrates that in theory eight hubs and one tip of the Proposed Development would be visible from here; however, in practice, a number of the hubs and up to three lights would be likely to be screened by the foreground woodland combined with the topography to some extent, with landform and forestry screening much of the lower parts of the turbines and all ground level infrastructure.

The turbines would however be a prominent addition on the skyline and the rotation of the turbines would draw the eye. The scale of the change would be Large/Medium across a Localised extent for this group. These Long-Term effects on the receptor group would have a Moderate magnitude, resulting in a **Moderate** effect which would be **Significant**. If all the intervening forestry trees were felled, the degree of change would increase to Large and the effect would also increase to **Major/Moderate** and **Significant**.

Night-time Effects: The village streetlights would not lie in the direction of the proposed turbines and as a result, from this VP, red aviation warning lights, where visible, would potentially be seen against a dark sky and may appear to blink in easterly winds due to blade rotation. However, with the current state of forestry and mid-ground tree groups this would result in just a single light on turbine one being visible from this location.

The scale of change would be Medium-Small across a Localised extent of this receptor group. These Long-Term night-time effects would have a Slight magnitude, resulting in a **Moderate/Minor** effect which would be **Not Significant**. If all the intervening forestry trees were felled, the degree of change would increase to Large and the effect would also increase to **Moderate** and **Significant**.

Gatehouse of Fleet (c.5.0 km southwest of the proposed turbines at its closest point; c.0.3km from proposed access track at its closest point). These receptor groups comprise residents and/or local road users/core path users visitors accessing or passing through or visiting the town. Receptors would have High/Medium Sensitivity unless otherwise stated. The town is located in the Fleet Valley and can be divided into four discrete receptor groups for assessment purposes, as follows.

There would be no night-time effects assessed at these locations (as no turbine hubs would be visible).

Gatehouse of Fleet-Upper– (see VPs 1225). Ramsay Wood/ Bracken Wood and Plane Tree Park are two groups of mainly two-storey, large, detached houses in elevated, east-facing locations on the west side of the Fleet Valley, above and largely separate from the main town.

Foreground mature trees would screen and filter front views of, potentially, three blade tips of the proposed turbines, in addition to seemingly distant cross-valley filtered views of the proposed access track at c.1.5km, along the edge of Disdow Wood on the hill opposite. The scale of the change would be Small across a Localised/Limited extent of this group. The Long-Term change to views from this receptor group would therefore be of a Slight magnitude, resulting in a **Moderate/Minor** effect which would be **Not Significant**.

Gatehouse of Fleet-Lower – Riverbank, Fleetside, Penny Well; relatively modern low-level riverside development of one-and two-storey terraced housing with side-on/ rear/oblique filtered views of the proposed access track at c.1km distance, but during operation there would be little change from the baseline, given that this is already a substantial forestry track. There would be no views to the proposed turbines from this part of the village. The Long-Term change to these oblique/rear/side-on views of the access track would therefore be of a Slight magnitude, resulting in a **Moderate/Minor** effect which would be **Not Significant**.

Gatehouse of Fleet-Central- the High Street with its iconic clock tower and Ann Street, both within the conservation area are lined by traditional, mainly two-storey terraced houses with residential receptors having side-on/rear filtered views of the proposed access track at c.0.5km distance at the focal point of the main axis to the northeast.

Unlike the primarily residential parts of the village, this central area is frequented by tourists visiting the NSA and therefore receptors would be considered of High sensitivity. Pedestrians and road-users heading in this direction up the High Street would have framed views towards the access track. There would be no views of the proposed turbines from this part of the village.

All trees on the western (downhill) side of the existing access track would be retained, as part of the embedded mitigation and from the centre of town, the dense forestry would screen views of the access track. During operation, there would be few movements on this track and there would be little or no change from the baseline. .

The scale of the change would be Small/Negligible across a Limited extent of this group. Resultant Long-Term effects would result in a Slight/Negligible magnitude of change. Considering the High sensitivity receptors, the resultant effects would be **Minor** and **Not Significant**.

Gatehouse of Fleet-Fleuchlarg- Golf course and clubhouse with adjacent single-storey detached housing development; with elevated northwest-facing views. There would be

no views of the proposed turbines, but there would be rear views from residences to the proposed/existing access track, c. 0.3km distant. Although the changes would be close, they would be partially screened/filtered by retained foreground trees. During operation, the movements visible on the track would be similar to the baseline which is currently used for forestry operations. The scale of change would be Small, across a Localised extent of this group , mainly affecting the secondary, rear views towards the forest rather than the primary front views across the Fleet Valley. This would result in a Slight magnitude. combined with a High/Medium sensitivity, would result in a **Moderate/Minor** effect which would be **Not Significant**.

Kirkcudbright (c.11km south of the proposed turbines). These receptor groups comprise residents and/or visitors or local road users/core path users accessing or passing through the town. The town, an attractive inland fishing port with many literary and artistic associations popular with visitors, is located inland of Kirkcudbright Bay, at the mouth of the River Dee. The ZTV indicates two areas of potential visibility of the Proposed Development, as confirmed on site.

Potential views from one of the two discrete receptor groups, **Kirkcudbright -Lower** as represented by VP20 and described in **Technical Appendix 5-3**, are constrained by background topography.

The receptor group locations comprise; Castledykes Road picnic area, adjacent riverside walk and marina; rear, part-screened views from two-and three-storey houses in the High Street; and the raised park at the harbour-front near to the tourist information office. However, as both day-time and night-time effects are likely to be **Negligible**, this receptor group has been scoped out of further assessment.

Kirkcudbright–Upper receptor group includes residents in two-storey houses in St. Cuthberts Road and nearby Silvercraigs Caravan park, and one-storey and two-storey detached houses in Woodlands Avenue with elevated, but distant, west and north-facing views across the town roofscape, of six hubs and three blade-tips.

The direction of their views towards the turbines would vary between oblique and side-on. The scale of change in the view at this distance would be Small and Localised, leading to a Slight, Long-Term magnitude of change and a **Moderate/ Minor** effect which would be **Not Significant**.

Night-time Effects: The lights of the town below Kirkudbright-Upper cast a foreground glare although there are no artificial lights in the direction of potentially visible turbine aviation warning lights against a dark sky, albeit at considerable distance. As illustrated in the bare earth Aviation ZTV in Figure 5-8, there would be no proposed lights visible west of the A711, with up to three lights visible from the highest slopes of the town.

The foreground lights of the town would mitigate the effects. The scale of change in the night-time view at this distance would be Small/Negligible and Limited, leading to a Negligible, Long-Term magnitude of change and a **Minor** effect which would be **Not Significant**.

Castle Douglas (c.11km east of the proposed turbines) is located next to Carlingwark Loch, in the Dee Valley. Using the ZTV initially, three potential receptor groups were identified, comprising residents or local road users accessing or passing through the town. However, during field assessment, it was ascertained that potential views from one of the three discrete receptor groups, **Castle Douglas-Central** would be largely obscured by local topography, mature trees and buildings and since both day-time

and night-time effects are likely to be **Minor** or less, this receptor group has been scoped out of further assessment.

Castle Douglas–Upper receptor group includes residents in two-storey houses in an elevated location in Meadow View on the western edge of the town and is represented by VP18; see **Technical Appendix 5-3** and visualisations in **Volume 4**. Skylined in open front views, all nine hubs and blades would be visible but would appear relatively distant from this location and occupy a small part of the wider background panorama to the west.

The scale of change in the view at this distance would be Small and Localised, leading to a Slight, Long-Term magnitude of change and a **Moderate** effect which would be **Not Significant**.

Night-time Effects: In the direction of the Proposed Development four red lights would be seen relatively distantly against an otherwise dark sky; and the lights may appear to blink in easterly winds. However, the mid-ground A75/B736 roundabout lighting and foreground town edge lighting would mitigate this to a considerable extent.

The scale of change in the night-time view at this distance would therefore be Small/Negligible across a Limited extent, leading to a Negligible, Long-Term magnitude of change and a **Minor** night-time effect which would be **Not Significant**.

Castle Douglas-Lower receptor group comprises residents in two-and three-storey detached houses with slightly elevated, southwest-facing views; road-users/ pedestrians in Abercromby Road (A713); and members or visitors at Castle Douglas Golf Club on the course or in the clubhouse.

Skylined in oblique rear views from the houses, and varying views on the golf course and between gaps in the houses for road-users and pedestrians, potentially all nine hubs and blades would be visible but would appear relatively distant from this location and occupy a small part of the wider background panorama to the west and partly screened by mid-ground woodland clumps.

The scale of change in the view at this distance would be Small and Localised, leading to a Slight, Long-Term magnitude of change and a **Moderate/ Minor** effect which would be **Not Significant**.

Crossmichael (c.9km northeast of the proposed turbines); see VP16, EIAR Technical Appendix 5-3 and visualisations, EIAR Volume 4. A linear village of primarily one-storey terraced houses backing onto the east shore of Loch Ken reservoir. VP16 lies above the now converted old station and abandoned Dumfries-Stranraer railway line (now used as a lochside Core Path).

Receptors include residents; visitors; road-users (including those following the Robert the Bruce Trail, the Red Kite Trail and the Galloway Tourist Route); and pedestrians (on village footpaths and Core Path).

The views to the south-west are of Loch Ken in the in the foreground with low hills in the background; featuring improved pasture fields and clumps of mainly deciduous woodland. During operation, although the hubs and tips of all nine turbines would be seen skylined above low hills in the relative distance, they would occupy a small part of the wider background panoramic views towards the southeast and southwest.

The scale of change in the view at this distance would be Small and Localised, leading to a Slight, Long-Term magnitude of change and a **Moderate/ Minor** effect which would be **Not Significant**.

Night-time Effects: in predominantly rear views, theoretically up to four lights of the turbines would be relatively distant but with the current state of forestry only one or two would be noticeable on the horizon against a dark sky. The lights may blink in easterly winds. The streetlights of the village, housing lights and the headlights of passing cars combined with foreground screening would however reduce potential degree of change to residents in houses on the opposite side of the road.

The scale of night-time visual change would be Small and Localised, leading to a Slight, Long-Term magnitude of change and a **Moderate/Minor** night-time effect which would be **Not Significant**. If and when the midground forestry is felled, then this would increase to **Moderate** and **Not Significant**.

Dispersed Rural Settlement across Drumlin Pastures to east and south of Proposed Development Site

Stretching from Barstobrick Hill east of the Proposed Development Site to the River Dee, the screened ZTV in Figure 5-7 indicates widespread but fragmented theoretical visibility across the drumlin pastures landscape to the southeast of the study area; the fragmentation being partly due to the generally low but hummocky, undulating landform and partly due to the small-medium conifer plantations and clumps of deciduous trees which also characterise this area.

Amongst the drumlins is a pattern of dispersed rural settlement; mainly farms, cottages and outbuildings, but also individual rural properties, accessed by a network of minor roads. Of mixed orientation, these are mostly traditional in style with heights ranging from one-to one-and-a-half or two storeys; often accompanied by clumps of trees and occasionally a domestic scale (sub-50m high) individual wind turbine.

Sensitivity is High/Medium. Potential views to the Proposed Development are often partly or fully screened by the drumlin topography, low hills and knolls, foreground tree clumps and small conifer plantations referred to above. The scale of the change would be Medium/Small due to distance, but across a Wide extent for this group. These Long-Term effects on the receptor group would have a Moderate magnitude, resulting in a **Moderate** effect which would be **Not Significant**.

Night-time Effects; up to four lights, varying in distance and fragmented in coverage (see Figure 5.9) would be noticeable where visible against the predominantly dark sky across the dispersed rural settlement. There is little artificial lighting here apart from that emitted by individual properties, other than vehicle lights on the A75 transport corridor and the localised urban glare from Castle Douglas and smaller settlements along the A75 and A713.

A Small intermediate degree of change, leading to a Moderate/Slight magnitude would result. With visual sensitivity of High/Medium local night-time effects of **Moderate** (**Not Significant**) would be anticipated. Outwith 4-6km, magnitude would reduce progressively to Slight or Negligible, with effects of **Minor or less (Not Significant)**

5.10.4 Recreational Routes

Robert the Bruce Trail (c.7.5 km east of the proposed turbines) is a regionally promoted motorist, cyclist and pedestrian route. The Central trail extends southwest from Dumfries and includes sections of the A75 towards Castle Douglas, before heading northwards on the **A713** towards St.Johns Town of Dalry and then out of the study area.

The Galloway Tourist Route also follows the A713 through the detailed study area, as does part of the **Red Kite Trail**, a circular route around Loch Ken discussed in more detail below. Value is judged to be Regional on account of the historical associations and the views of the landscape which contribute to the visitor experience. Susceptibility is judged to be Medium, as the route is road based, with the A713 particularly busy. Users on this route are considered to be of High/Medium sensitivity to the Proposed Development.

The screened ZTV in Figure 5-10 illustrates patchy visibility along the **A713** section of the routes primarily due to foreground road-side and loch-side tree screening but also due to the local topography of the low hills which run alongside the loch above the west bank.

Overall, the scale of change for these routes and the A713 north of Castle Douglas would be Medium, across a Limited extent. This Long-Term change would lead to a Moderate/Slight magnitude resulting in a **Moderate** effect and **Not Significant**.

The Galloway Kite Trail (c.4km east of the proposed turbines at the closest point). As mentioned above, this is a circular route around Loch Ken regionally promoted for both motorists and cyclists. The three sections which theoretically fall within the bare ground ZTV as shown in Figure 5-9 are the A713, along the eastern shore of Loch Ken (reviewed and assessed above); a short section of the A762 between Laurieston and Woodhall Loch (which, as reflected in the screened ZTV in Figure 5-10 and as confirmed by field survey, is largely filtered or screened by roadside trees and can be discounted).

The **B795** between Laurieston and Drumlane (which includes the Red Kite Feeding Centre at Bellymack). This latter section has more open and slightly elevated views towards the proposed turbines in south-westerly aspects. Susceptibility is judged to be Medium, as the route is road based. Nevertheless, users on this route, some of whom are visitors on the trail, are considered to be of High/Medium sensitivity to the Proposed Development.

The scale of change for would be Medium, across a Limited extent. This Long-Term change would lead to a Moderate/Slight magnitude resulting in a **Moderate** effect and **Not Significant**.

B796 and National Cycle Route 7 (VPs 13,25): (c.5km west of the proposed turbines at its closest point) is a section of the national route falling within the ZTV in the detailed study area that follows the Old Military Road along the B796 north of Gatehouse of Fleet.

Value is judged to be National and includes views within and across the Fleet Valley NSA. Given that the appreciation of the landscape, particularly across the valley, is an important component on this route, users would be of High susceptibility. Road users on this route are therefore considered to be of High Sensitivity.

The bare earth and screened ZTVs illustrate visibility of turbines would be patchy along the Old Military Road with limited influence on the visual amenity on the lower part of the route due a combination of topographical and tree screening, until the higher,

more open section near Upper Rusko is attained, and even here, intervisibility is very limited.

However, at night, one aviation warning light would be visible against a dark sky where no other artificial lights would currently be present. The scale of change would be Small, over a Limited part of the route. This Long-Term change would lead to a Slight/Negligible magnitude of change and a **Moderate/Minor** effect which in this case bearing in mind the heightened sensitivity is considered to be **Not Significant**.

Core Path Loch Mannoch-Kirkconnell (illustrated by VP 4 and c.1.5km south of the proposed turbines at its closest point). Users of this core path would be of High/Medium sensitive to change as they would be there to appreciate the sense of remoteness and tranquillity which can be currently experienced, especially on the section between Lairdmannoch Lodge and the Martyrs Monument, with its northerly views over Loch Mannoch which is of Regional value and High susceptibility.

During operation, the turbines would be clearly visible from the path, where there is no other development at present; although on the lower section they would be partially screened by the conifers and landcover which run along the mid-ground ridge.

Nevertheless, the scale of change would be Large/Medium, albeit Localised, leading to a Long-Term, Substantial/Moderate magnitude of change and a **Major/Moderate** effect which would be **Significant**.

Core Path, Barstobrick Hill (c.4km east of the proposed turbines at its closest point) Users of this core path which runs up the eastern side of the ridge leading up to the hill, would also be of High/medium sensitivity to the Proposed Development. Visibility in a westerly direction however would be largely constrained by foreground topography and mostly coniferous trees between the stables at the foot of the hill and the attainment of Neilson's Monument at the summit of the hill (which is assessed separately below).

Views are generally eastwards until this point, over a small tributary valley of the Tarff Water. The magnitude of change for users of this path (except at the summit) is therefore negligible, which, taking account of the users high/medium sensitivity, would lead to a **Minor** effect and **Not Significant**

Core Path, Loch Whinyeon (illustrated by VP6 and c.2km west of the proposed turbines at its closest point). This path follows the slope up from the Fleet Valley by Lagg Farm, up to Laghead, where it crosses the minor road between Gatehouse and Laurieston, before continuing on to Loch Whinyeon, where it terminates. Users of the path would be of high/medium sensitivity to change, but Intervisibility with the turbines would be very Limited, to the top section by the loch where VP6 is located.

From here all nine hubs and tips of the Proposed Development would be visible at relatively close quarters; although there would be some screening by midground forestry on the far side of the loch.

Despite the main focus of the views on the path tending to be in the opposite direction south-westwards towards Gatehouse of Fleet and Fleet Bay, the scale of change, although Limited, would be Large-Medium, resulting in a Long-Term, Moderate magnitude of change and a **Major/Moderate** effect which would be **Significant.** If the mid-ground forestry was felled, this effect would increase to **Major**.

Core Path to Red Kite Viewing Point, Parton (illustrated by VP15 and c.9km east of the proposed turbines at its closest point). Users of this path are likely to be of high/medium

sensitivity. The lowest sections of this path as it runs alongside the main road and Lochside Wood are screened by the foreground trees, and it is not until the path starts to climb up the slope towards the vantage point (reviewed and assessed below) that wider views become available to the west; similar to those illustrated by VP15.

Although skylined, the turbines would be relatively distant from this location and occupy a small part of the wider background panoramic view towards the southeast and southwest. A Small, Localised degree of change would lead to a Long-Term but Slight magnitude of change leading to a **Moderate** effect which would be **Not Significant**.

Core Path Disdow Wood to Glengap; and north through Laurieston Forest (illustrated by VP5; c.1km southwest of the proposed turbines at its closest point; and following the same route as the proposed windfarm access track). Users of the core path would thus be walking on an upgraded track surface with evidence of some peripheral tree removal and cut and fill earthworks to accommodate this.

Views of the turbines would not be obtained until the path emerges from Glengap Forest and heads towards Glengap; as represented by VP5, users of the path would have a High/Medium sensitivity to change, which although Localised in extent, would be Large scale; leading to a Substantial/Moderate magnitude of change and a **Major/Moderate** effect, increasing to **Major** if the intervening forestry was felled. These effects are both considered to be **Significant.**

Another branch of the core path heads north though Laurieston Forest, intersecting the minor road to Laurieston ultimately at Lochenbreck. This would be unaffected by the Proposed Development, with views of the turbines screened by foreground forestry, with likely effects of **Negligible** and **Not Significant**.

Should the forestry be felled in coupes there would be areas where open, close views of the turbines would be revealed along the pathway; but there may also be other areas of retained trees or younger trees at different stages of growth. The magnitude of change would therefore lie between Slight to Substantial depending on location; with effects ranging from Minor (Not Significant) to **Major** (**Significant.**)

5.10.5 Road Routes

A713 between Castle Douglas and Airds House Bridge (illustrated by VPs 15&16). This is reviewed and assessed above under recreational routes; Robert the Bruce Trail; Galloway Tourist Route.

A75 between Twynholm and Castle Douglas (5.5km southwest of the Proposed Development at its closest point near VP9). As indicated by the bare ground and screened ZTVs in Figures 5-9 and 5-10 and confirmed in the field, visibility is patchy along this route, varying from locations to the east where all, or most, of the turbines would be visible where not screened by roadside trees, hedgerows and cuttings (see VP 9); to locations west of Ringford, where a maximum of six turbines would be theoretically visible; but more commonly less than three, or none (see VP11, near Twynholm).

There would be little or no visibility on the A75 to the west of this point. Sensitivity of receptors on the road would be Medium. The scale of change would range from Small-Medium to the east, to Small to the west; with views, where obtained, being Limited, this would result in a Long-Term, Slight magnitude of change and a **Moderate/Minor** level of effect (**Not Significant**).

A762 between A75 and Tongland (6km southwest of the Proposed Development at its closest point near VP10) As indicated by the bare ground and screened ZTVs in Figures 5-9 and 5-10 and confirmed in the field, visibility is very constrained along this route. There are individual locations where in theory 4-9 turbines can be seen. However, at one of these locations, VP10, only six turbine tips would be just visible over the ridge to the northwest where not screened by clumps of trees.

The movement of the tips over the skyline would be very limited but noticeable. However, they would occupy a relatively small part of the wider view in the northerly direction. There would be little or no visibility elsewhere on this route. Sensitivity of receptors on the road would be Medium. The scale of change would be Small-Negligible; with views, where obtained, being Limited, this would result in a Long-Term, Slight/Negligible magnitude of change and a **Minor/Negligible** level of effect (**Not Significant**).

A762 between Kirkconnell and Laurieston (illustrated by VPs 1,2&8 and c.2km east of the proposed turbines at its closest point). Visibility of the proposed turbines varies from virtually no view near Kirkconnell in the south (VP2) and limited views near Laurieston to the north, to much more close and open views through the central section near VP1, although part-screened by mid-ground tree clumps.

It should be noted that in the Kirkconnell area, although there would be little or no turbine visibility, close views of the southern solar array would be obtained, albeit with views filtered by foreground roadside and riverside trees and scrub. Some views of the northern array would also be obtained to the north of Lairdmannoch Bridge, rising up the slope above the Tarff valley to the southwest.

There would be very limited visibility on the A762 to the south of Laurieston, due to foreground topographic and tree screening. Sensitivity of receptors on the road would be Medium. The scale of change would thus range from Large/Medium near VP1, to Medium to the south near VP2; with views, where obtained, being Localised, this would result in a Long-Term, Substantial/Moderate magnitude of change and a **Major/Moderate** level of effect (**Significant**).

B796 between Gatehouse of Fleet and Upper Rusko (illustrated by VPs 10 & 25).

This is reviewed and assessed above, under recreational routes; National Cycle Route 7.

B795 between Laurieston and Drumlane

This is reviewed and assessed above under recreational routes; Galloway Kite Trail.

B727 Gatehouse of Fleet; this road linking Gatehouse of Fleet with the A75 would have no views of the proposed turbines. However, the proposed wind farm access track with its newly widened bell-mouth would be visible in a limited area near Girthon Old Manse. Sensitivity of receptors on the road would be Medium.

The scale of change would be Small; with views, where obtained, being Limited, this would result in a Long-Term, Slight/Negligible magnitude of change and a **Minor** level of effect (**Not Significant**).

Minor Road between Gatehouse of Fleet and Darngarroch Bridge (illustrated by VP 7 and c.2km west of the proposed turbines at its closest point). As indicated by the bare ground and screened ZTVs in Figures 5-9 and 5-10 and confirmed in the field, visibility is very constrained along this route; limited to a short stretch of road before it enters Laurieston Forest near Darngarroch Bridge (VP7).

In theory four tips and one hub (unlit) would be seen from this location but in reality, the conifers are likely to screen all but one hub (unlit) and two tips. Sensitivity of receptors on the road would be Medium. The scale of change would be Negligible; with views, where obtained, being Limited, this would result in a Long-Term, Negligible magnitude of change and a **Minor/Negligible** level of effect increasing to **Minor** if the forestry was felled. These findings are **Not Significant**.

5.10.6 Vantage Points

Red Kite Viewing Point, (illustrated by VP15 and c.9km east of the proposed turbines at its closest point). Although skylined, the turbines would be relatively distant from this location and occupy a small part of the wider background panoramic view towards the southeast and southwest.

A Small, Localised degree of change would lead to a Long-Term but slight magnitude of change but bearing in mind the receptors high sensitivity, a **Moderate** effect is anticipated, which would be **Not Significant**.

Neilson's Monument, Barstobrick Hill (illustrated by VP3; just under 4km east of the proposed turbines at its closest point) From this elevated vantage point views to the west would include the Proposed Development, which would be very prominent in the mid- ground, skylined with all nine turbines visible. The form of the turbines would be clearly visible within the upland landscape (Foothills with Forestry). The solar farm would also be fully visible below the turbines from this location within the Drumlin Pastures. The southern solar array would appear alongside the road, low in the view. The northern solar array would appear within the transition zone of the Drumlin Pastures in between smaller blocks of forestry.

Visitors to the monument and vantage point would have a High/Medium sensitivity to change, which would be Large in scale and cover a Wide extent of the view leading to a Substantial magnitude of change and a **Major** effect, which would be **Significant**.

Millennium Monument/ near Rutherford's Monument (illustrated by VP12; c.8km distant, to southwest) five turbine tips would be just visible over the ridge to the northeast. Where visible, the movement of the tips over the skyline would be very limited but noticeable.

However, they would occupy a relatively small part of the wider view in this direction. The new access track would become progressively screened by retained trees in Disdow Wood and traffic limited to occasional maintenance vehicles.

A Small, Localised degree of change would lead to a Long-Term but Slight magnitude of change and for receptors of High sensitivity, this would lead to a **Moderate** effect is but would be considered **Not Significant**.

5.11 Operational Effects on Landscape Designations

The Special Qualities of the Fleet Valley NSA are assessed in the AESLQ in **Technical Appendix 5-5**. It concluded that due to the embedded design mitigation measures, there would be **no significant effects upon a majority of the SLQs of the Fleet Valley NSA** as a result of the Proposed Development.

However, there would be one limited and localised **Moderate** but **Not Significant** effect upon a key SLQ in the Upper Fleet Valley; *Views out of the Fleet Valley to the Merrick and gradation from coastal islands to upland hills.*

Galloway Hills Regional Scenic Area (RSA 4)

RSA 4 Galloway Hills is the largest of the ten Dumfries and Galloway Council RSAs (see Figures 5-3 and 5-4 for extent within the study area). Although not falling within the RSA, the Proposed Development Site lies just under 1km to the east at its closest point. RSA 4 encompasses the hills to the north of Laurieston through New Galloway and all the way to the South Ayrshire boundary near Dalmellington; to the west as far as Newton Stewart, encompassing some of the Gatehouse of Fleet NSA; and to the east, the upper Dee Valley, including Loch Ken.

This RSA includes varied and contrasting upland, valley and coastal scenery ranging from the exposed, remote summits of the Merrick, Cairnharrow and Cairnsmore of Fleet, through the wooded valleys of the Fleet and the Dee.

This RSA is described in Dumfries and Galloway Council, Local Development Plan 2, Regional Scenic Areas, Technical Paper (January 2018) as follows:

> *'This area centres on the Rugged Granite Uplands and Coastal Granite Uplands of central Galloway, extending from the Ayrshire boundary south to where the hills meet the sea.' … 'The outer boundaries were redrawn to include the immediate visual envelopes of the three major valleys which encircle the hills; the Cree, Fleet and Glenkens'… 'The overall scale of the designated area results in some parts, particularly those areas included because of their contribution to the wider view, being of less internal scenic interest than others. Examples include certain of the forested foothills of the Merrick and the Rhinns of Kells. However, these areas form the setting to the dramatic summits of the Galloway Uplands, and so warrant designation as an integral part of the scenically valued landscape of the Galloway hills, to protect them from unsuitable development, and encourage sensitive management.'… 'The area sees continued interest in forestry such that land-use balance is a potential issue, and is subject to interest from windfarm developers.'*

Landscape value is Regional on account of the local level designation. Landscape susceptibility is High/Medium. More susceptible attributes of the RSA relate to the elevated and distinctive parts of this landscape or where there are more smaller scale landscape elements.

However, less susceptible attributes are the large-scale landscapes with consistent landcover and few scaling features. Considering value and susceptibility, overall sensitivity is assessed as High/Medium.

Given the Proposed Development would be outwith the RSA, there would be no change to the physical attributes of the RSA. The main change would result from the perceptual changes to the RSA resulting from visibility of the Proposed Development.

The bare earth ZTVs indicate widespread visibility. However, given the extent of deciduous tree cover and policy woodland within the detailed study area and screening by forestry, the screening ZTVs predict a much-reduced extent of visibility across the RSA. Views from the RSA are illustrated with VPs 6,7; 12-16 inclusive; and 21-25 inclusive. The elevated parts of the RSA have the potential for more notable effects.

From the upland parts of the RSA, there would be open views to much of the Proposed Development albeit from varying distances. However, the ZTV, confirmed on site, indicates that lower lying hills and valleys within the RSA would not be intervisible with the Proposed Development.

With regard to views of the RSA, Cairnsmore of Fleet and The Merrick form prominent features in the landscape to the north and west, visible from many lower lying areas. However, as mentioned in the **Technical Appendix 5-5: AESLQ**, the Proposed Development would not appear in front of the Merrick in particular, which features in important background views from the Fleet Valley.

The scale of change is judged to be Medium within a Localised extent of the upland area on the south-eastern edge of this RSA. This Long-Term change would result in Moderate magnitude of effect as a result of the Proposed Development. The sensitivity of the landscape is High/Medium, leading to a **Major/Moderate** effect which would be **Significant**. So whilst there would be some significant adverse effects within this RSA as a result of invisibility, these would be contained within the upland area within approximately 5km of the Proposed Development and the key factors in designating this areas would not be significantly affected.

The extent of potential night-time effects arising from potential intervisibility with four aviation warning lights on the turbines would be limited, as indicated on the ZTV in Figure 5.9 to elevated locations. Potential night-time visual effects at such locations are likely to be **Negligible** due to limited or no receptors**.**

However, there would be an indirect effect upon landscape effects; as this is predominantly an area of dark skies, the perception of the lights at varying distances but primarily appearing in areas with little or no artificial lighting would seem out of keeping with the prevailing night-time characteristics. This Long-Term but Small scale of change, Localised to hilltops, would result in Slight magnitude of effect. As the sensitivity of the landscape is High/Medium, this would lead to a **Moderate** effect which in this case would be **Not Significant**.

5.12 Additional Mitigation Measures

In addition to aforementioned embedded and construction phase mitigation measures, an outline visual mitigation design has been proposed for the north and south arrays of the solar farm element of the Proposed Development, with the aim of locally reducing identified visual effects upon receptors using the adjacent A762 and also upon the residential amenity experienced by receptors at properties within 500m of the proposed solar farm as identified in the RVAA.

The planting proposals have been designed to complement the Habitat Management Plan (HMP) described in **Chapter 6** and as illustrated in Figure 5-12, aim to mitigate potential visual effects.

Solar panel areas would be topsoil-stripped prior to construction taking place, with this topsoil spread on the proposed planting areas (notional depth 350mm) whilst sowing native wildflower seeds (of local/regional provenance) on the areas in and around the panels, on the exposed subsoil finished surfaces. The native tree planting groups at the north and south ends of the southern array (waterside mix) as detailed below, would assist in screening in the Medium-Long Term.

In the northern array area, the solar panels would be partially screened and their extent compartmentalised by north-south bands of tree planting across the east-facing slope. The species would be a majority of Scots Pine, for year-round screening and to tie-in with the other nearby groups of conifers.

The proposed species mixes are as follows:

- Native Tree Planting for screening (Waterside Mix); and
- Alnus glutinosa (Alder)10%; Betula alba (Birch)20%; Crataegus monogyna (Hawthorn) 10%; Salix alba (White Willow) 20%; Salix caprea (Goat Willow) 20%; Salix cinerea (Common Sallow) 20%.

Native Tree Planting for screening (Upland Mix):

- Betula alba (Birch) 20%; Pinus sylvestris (Scots Pine) 60%;Quercus petraea (Sessile Oak) 10%;Sorbus aucuparia (Rowan) 10%.

Upland Mix Woodland planting is also proposed for the cut and fill slopes immediately above residences in the Fleuchlarg area of Gatehouse of Fleet, with the intention of mitigating potential visual effects upon receptors at these locations

5.13 Assessment of Residual Landscape & Visual Effects

As mentioned above in 5.10, the additional mitigation measures described are intended to mitigate localised visual effects upon receptors using the A762 between Kirkconnell and Laurieston and also the visual amenity of properties lying within 500m of the solar farm element of the Proposed Development with the potential to exceed the Residential Amenity Threshold (see EIAR Technical Appendix 5.6 RVAA).

The effects upon all other potential landscape and visual receptors identified above would remain unchanged by the additional mitigation measures.

Residual Visual Effects on Receptors on A762 between Kirkconnell and Laurieston (illustrated by VPs 1,2&8 and c.0.12km east of the proposed solar farm at its closest point). Visibility of the proposed turbines would remain unaltered by the proposed measures. However, in the Kirkconnell area, close views of the southern solar array

would be obtained, albeit filtered by foreground roadside and riverside trees and scrub; and the tree planting proposals would aim to assist further in this screening function in the Medium Term.

Further to the north between Lairdmannoch Bridge to north of the entrance to Edgarton Farm, views would also be obtained towards the northern solar farm array on the slope above the valley, and the proposed planting in the Medium Term would help to screen these views also. There would however, be very limited visibility of the solar farm on the A762 to the south of Laurieston, due to foreground topographic and tree screening.

Sensitivity of receptors on the road would be Medium. The scale of residual change would thus range from Large/Medium near VP1, to Medium to the south near VP2; with views, where obtained, being Localised, this would result in a Long-Term, Moderate magnitude of change and residual effects of **Moderate**. This would remain **Significant** however, in consideration of the remaining effects arising from the turbines above the valley to the west.

Residual Effects on Visual Amenity at RVAA Property Group P3; Kirkconnell Farm and Cottages; there would be mid-ground views, albeit partially screened by hedgerow trees, of the solar farm southern array, in the pasture fields to the north. Even though there are some trees to the northern end of the properties which would help screen/filter views of the solar farm from this location, further mitigation tree planting (see Figure 5-12) has been included as part of the Proposed Development.

The growth of the trees in the Medium-Long term would provide additional screening. After mitigation, magnitude would be slight and residual effects **Moderate** and **Not Significant**.

Receptors at RVAA Property Group P6, Edgarton Farm and Cottage would have elevated oblique views of the solar farm north array on a sloping hill to the south at a distance of just over 1km. Views of this would be progressively softened and screened by the maturing screen planting in the Short-Medium term, but this would not affect the level of effect anticipated due to the more noticeable effects arising from the turbines to the north.

The residual visual effect would remain unchanged and would not be sufficient to breach the Residential Visual Amenity Threshold.

Although benefiting from potential screening and filtering of the proposed solar farm southern array by existing roadside/riverside trees, hedgerows and scrub, effects upon receptors at RVAA Properties P4 (Backfell) and P5 (Beoch Farm and Cottage) would also be unaltered by the proposed mitigation measures owing to the angle and elevation of the views obtained in relation to the southern solar array/proposed planting groups and the unchanged views of the turbines on the ridge behind.

5.14 Conclusion

The LVIA has assessed the potential for significant landscape and visual effects from the Proposed Development during construction and operation; including night-time effects. The assessment takes into account embedded mitigation measures. Those effects remaining are referred to as residual.

This section provides an overview of the residual landscape and effects arising and focusses primarily on those predicted to be Significant. The development is considered to be Long Term in nature but fully reversible following decommissioning.

Construction and Decommissioning; Landscape and Visual Effects

The effect of decommissioning on landscape character and visual receptors would be equal to, or lesser than, the effects during construction. Therefore, in this assessment, they have been considered together.

Within the Proposed Development Site there would be Long-Term direct effects on the landscape fabric including moorland vegetation. However, they would be very localised and considered **Not Significant**. The construction and decommissioning stages of the Proposed Development would also result in Moderate effects within the host landscape, AU20 Foothills with Forest (Laurieston Area) which are considered **Not Significant**.

In terms of visual amenity, local residents in Laurieston, Kirkconnell, Glengap and Gatehouse of Fleet and motorists on the A762 would have views or partial views of the construction work but effects here would be **Not Significant**. There would however be **Significant** Short-Term effects predicted for recreational users of the **Core Path which is used for the access track**. In addition, **Significant** effects are predicted during construction to visitors to **Neilson's Monument** due to relatively close, elevated views of the construction works.

There would be no significant construction/ decommissioning effects on the Special Qualities of the NSA or the Galloway Hills RSA.

Operation; Significant Residual Landscape & Visual Effects

In the host landscape, AU20, there would be a distinct area of influence contained within approximately 4-6km of the proposed turbines, but this would drop away quickly due to landform. When the extent of screening by forestry is considered, this is reduced to c. 2.5km radius of influence.

Within this area, there would be a Large scale of change, but due to topography and extent of screening by forestry this would only occur over a Limited extent of the AU. This would result in a Moderate level of effect, considered **Not Significant**.

None of the neighbouring, or nearby, assessment units/landscape character types would experience any Significant direct or indirect residual landscape effects.

The **RVAA** identified receptors at five properties within 2km of the proposed turbines and/or 0.5km of the solar farm, as experiencing **Significant** effects of **Major/Moderate or Major** as a result of the Proposed Development as a whole. This could potentially increase to a total of six properties if foreground forestry were to be felled.

However, the **RVAA** concluded that the residual effects arising from the Proposed Development would not exceed the Residential Visual Amenity Threshold.

Some other **Significant** visual effects were also identified in the detailed study area, as follows.

At **Laurieston Church Road**, **Major/Moderate** effects were identified, which would increase to **Major** if mid-ground forestry was felled. At **Laurieston-Upper**, effects were currently assessed as **Moderate** and **Significant**; but if the mid-ground forestry was removed, **Major/Moderate** and Significant effects were considered likely. Night-time effects at this receptor group were also considered **Moderate** but **Significant** should intervening forestry be removed.

No significant residual effects or night-time effects were identified for receptor groups in Gatehouse of Fleet, Kirkcudbright, Castle Douglas, Crossmichael, Glengap, or dispersed rural settlement in the Drumlin Pastures area.

Recreational routes and road routes, where these fell within the ZTV, were also assessed across the detailed study area and **Significant** effects were identified at the **Core Path Loch Mannoch-Kirkconnell; Core Path, Loch Whinyeon; Core Path, Disdow Wood to Glengap and north through Laurieston Forest** (if forestry was not standing) **and A762 between Kirkconnell and Laurieston**.

A number of public vantage points were also assessed, and a **Significant** effect was identified at **Neilson's Monument, Barstobrick Hill.**

There would be a localised **Significant** effect upon the **Galloway Hills RSA** contained within the upland area within approximately 5km of the Proposed Development but the key factors in designating this areas would not be significantly affected.

There would be one limited and localised **Moderate** but **Not Significant** effect upon a key SLQ in the Upper Fleet Valley, and the overall conclusion is that there would **no significant residual effects** upon the SLQs of the **Fleet Valley NSA** as a result of the Proposed Development. Based on these conclusions reached, the objectives of the designation and the overall integrity of the NSA would not be compromised.

5.15 References

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