4 Landscape & Visual

4.1 Introduction

4.1.1 This chapter considers the likely significant effects on the landscape and visual resource of the area arising from the construction, operation and decommissioning of the proposed development. The specific objectives of the chapter are to:

- Describe the assessment methodology and significance criteria used in completing the impact assessment;
- Describe the landscape and visual baseline and cumulative baseline context;
- Describe the potential effects, including direct, indirect and cumulative landscape and visual effects;
- Describe the mitigation measures proposed to address likely significant landscape and visual effects; and
- Assess the residual effects, including cumulative effects remaining following the implementation of mitigation.

4.1.2 The assessment has been carried out by Robert Bainsfair CMLI, of Ramboll Environment and Health UK Ltd. He is a Chartered Landscape Architect with over 21 years of experience working across a wide range of sectors including renewable energy and has extensive experience of managing and undertaking landscape and visual impact assessments (LVIA), cumulative assessments (CLVIA), and has provided expert witness evidence on a number of wind farm developments throughout Scotland. A copy of his CV is included in EIAR Volume 4: Technical Appendix 1.2.

4.1.3 This chapter is supported by the following technical appendices which are presented in EIAR Volume 4: Technical Appendices:

- Technical Appendix 4.1: Glossary;
- Technical Appendix 4.2: Landscape Character Type Descriptions;
- Technical Appendix 4.3: Designated Landscapes;
- Technical Appendix 4.4: Assessment of Effects on Landscape Character Types;
- Technical Appendix 4.5: Assessment of Effects on Designated Landscapes;
- Technical Appendix 4.6: Wild Land Impact Assessment;
- Technical Appendix 4.7: Viewpoint Assessment; and
- Technical Appendix 4.8: Evaluation Against Supplementary Guidance.

4.1.4 The chapter is also accompanied by the following figures which are presented in EIAR Volume 3: Figures:

- Figure 4.1: Topography;
- Figure 4.2: Landscape Character;
- Figure 4.3: Landscape Designations and Mapped Areas;
- Figure 4.4: Transportation Routes, Recreational Routes and Summits;
- Figure 4.5a: Blade Tip Zone of Theoretical Visibility (ZTV) drawing;
- Figure 4.5b: Blade Tip/Hub Height ZTV;
- Figure 4.6: Cumulative Context;
- Figure 4.6a: Cumulative ZTV -Glenshero, Beinneun and Extension & Stronelairg;

- Figure 4.6b: Cumulative ZTV -Glenshero, Millennium South;
- Figure 4.6c: Cumulative ZTV -Glenshero, Bhlaraidh and Corrimony;
- Figure 4.6d: Cumulative ZTV -Glenshero, Correigarth and Extension and Dell;
- Figure 4.6e: Cumulative ZTV -Glenshero, Aberarder and Dunmaglass;
- Figure 4.6f: Cumulative ZTV -Glenshero, Farr Wind Farm and Glen Kyllachy;
- Figure 4.7: Viewpoint Location Map;
- Figures 4.8a-o: Visualisations - Viewpoint 1: Meal Fuar Monaidh;
- Figures 4.9a-o: Visualisations - Viewpoint 2: Carn a'Chuilinn;
- Figures 4.10a-o: Visualisations - Viewpoint 3: Corrieyairack Hill;
- Figures 4.11a-i: Visualisations - Viewpoint 4: Glen Roy;
- Figures 4.12a-i: Visualisations - Viewpoint 5: Footpath (east of Loch Spey);
- Figures 4.13a-m: Visualisations - Viewpoint 6: Carn Dearg (west of Gleann Ballach);
- Figures 4.14a-m: Visualisations - Viewpoint 7: Geal Charn (Ardverikie Forest);
- Figures 4.15a-m: Visualisations - Viewpoint 8: Ben Alder;
- Figures 4.16a-i: Visualisations - Viewpoint 9: Meall Chruaich;
- Figures 4.17a-i: Visualisations - Viewpoint 10: Garva Bridge;
- Figures 4.18a-i: Visualisations - Viewpoint 11: Dun da Lamh;
- Figures 4.19a-o: Visualisations - Viewpoint 12: Geal Charn;
- Figures 4.20a-k: Visualisations - Viewpoint 13: Carn Dearg;
- Figures 4.21a-i: Visualisations - Viewpoint 14: Footpath (north of Aberarder Lodge);
- Figures 4.22a-o: Visualisations - Viewpoint 15: Carn Liath;
- Figures 4.23a-m: Visualisations - Viewpoint 16: Loch na Lairige;
- Figures 4.24a-i: Visualisations - Viewpoint 17: Doire Duibhe;
- Figures 4.25a-m: Visualisations - Viewpoint 18: Meall Cruaidh;
- Figures 4.26a-i: Visualisations - Viewpoint 19: A' Mharconaich;
- Figures 4.27a-i: Visualisations - Viewpoint 20: Carn na Gaim;
- Figures 4.28a-o: Visualisations - Viewpoint 21: Beinn Teallach; and
- Figures 4.29a-i: Visualisations - Viewpoint 22: Leathad an Taobhain.

4.1.5 Figures and technical appendices are referenced in the text where relevant.

4.2 Assessment Methodology and Significance Criteria

Study Area

4.2.1 The study area for the LVIA comprises a 40 km radius area extending from the outermost turbines of the proposed developments turbines. This study area is presented on Figures 4.1-4.7 (EIAR Volume 3). The extent of the study area was agreed following production of a preliminary ZTV based on an initial layout for the turbines and in consultations with the Energy Consents Unit (ECU), The Highland Council (THC), Scottish Natural Heritage (SNH) and the Cairngorms National Park Authority (CNPA) in 2017.

Scope of Assessment

4.2.2 This chapter assesses the landscape and visual effects of the proposed development as described in EIAR Volume 2: Chapter 2: Development Description of this EIAR. The assessment of landscape and visual effects considers effects on:

- Landscape fabric;
- Landscape character;
- Designated landscapes; and
- Visual amenity.

4.2.3 Effects on landscape fabric occur when there is physical change to components of the landscape such as the landform, land use or land cover. Effects on landscape character arise when there is change to the key characteristics of the landscape and its associated distinct and recognisable pattern of elements. Visual effects are a subset of landscape effects and comprise changes in views of the landscape and the overall effects on visual amenity.

4.2.4 Landscape and visual effects may have effects on cultural heritage facets of the landscape, specifically on the setting of Gardens and Designed Landscapes (GDLs) and on listed buildings and ancient monuments. The landscape and visual assessment (LVIA) considers potential effects on GDLs, whilst effects on other cultural heritage receptors are considered in EIAR Volume 2: Chapter 5: Archaeology and Cultural Heritage.

4.2.5 Landscape and visual considerations have influenced the design of the proposed development and these are explained in EIAR Volume 2: Chapter 3: Design Evolution and Alternatives.

4.2.6 The scope of the assessment has been informed by consultation responses summarised in Table 4.1 and the following guidelines/policies:

4.2.7 The landscape and visual assessment has been based on guidelines provided in:

- Guidelines for Landscape and Visual Impact Assessment (GLVIA)[1];
- Landscape Character Assessment[2];
- Techniques for Judging Capacity and Sensitivity[3];
- Siting and Designing Wind Farms in the Landscape[4];
- Assessing Effects on Wild Land[5];
- Scottish Planning Policy[6]; and
- Guidance: Cumulative Effects of Wind Farms[7].

[1] Landscape Institute and Institute of Environmental Management and Assessment (2013) Guidance for Landscape and Visual Impact Assessment – Third Edition

[2] The Countryside Agency and Scottish Natural Heritage (2002) Landscape Character Assessment

[3] Scottish Natural Heritage and the Countryside Agency (2002) Topic Paper 6: Techniques and Criteria for Judging Capacity and Sensitivity

[4] Scottish Natural Heritage (2017) Siting and Designing Wind Farms in the Landscape – Version 3a

[5] Scottish Natural Heritage (2017) consultation on draft guidance: Assessing impacts on Wild Land Areas – technical guidance consultation on draft guidance: Assessing impacts on Wild Land Areas – technical guidance

[6] The Scottish Government (February 2010): Scottish Planning Policy

[7] Scottish Natural Heritage (2012) Assessing the Cumulative Impact of Onshore Wind Energy Developments

Consultation

4.2.8 Table 4.1 summarises the consultation responses received that are of relevance to the preparation of the LVIA and provides information on where and/or how they have been addressed in this assessment.

4.2.9 Full details on the consultation responses can be reviewed in EIAR Volume 4: Technical Appendix 1.1: Consultation Register.

Table 4.1: Consultation Responses

Consultee and Date	Scoping / Other Consultation	Issue Raised	Response / Action Taken
Scottish Natural Heritage (SNH) 29.1.18	Scoping	Scope and Methodology: Some of the guidance documents quoted [in the scoping report] are now out of date and include SNH Wild Land Descriptions 2017. Comments provided regarding the proposed approach to sensitivity, magnitude and significance rating. Cumulatives: THC should be consulted to obtain the most up to date cumulative information. Cairngorms National Park (CNP): SNH recommended that the draft special quality assessment be used. Wild Land: The three WLAs which require further assessment are WLA 20 Monadhliaths, WLA 19 Braeroy - Glenshirra - Creag Meagaidh and WLA 14 Rannoch - Nevis - Mamores – Alder. A key issue is the relationship between the Stronelairg Wind Farm and the Glenshero proposal and how they are seen together, in terms of design, this will be an important factor in determining the additional effects on the landscape.	Agreed with SNH to utilise 2017 consultation draft Wild Land Impact Assessment (WLIA) methodology. Subsequent consultation with SNH was undertaken to agree methodology and scope of WLIAs. Cumulative context was derived from THCs own online database accessed in July 2018. An assessment of the special qualities of the CNP is included in EIAR Volume 4: Technical Appendix 4.5 of the LVIA. The three Wild Land Area identified have been assessed in in EIAR Volume 4: Technical Appendix 4.6. SNHs design advice was taken into account, along with their published guidance and the criteria in Section 4 of THCs Supplementary Guidance on wind energy developments[8].
Cairngorm National Park Authority (CNPA) 29.1.18	Scoping	CNPA expressed concerns regarding the potential impacts on the National Park and recommended that this should be fully considered as per their comments and any mitigation clearly set out. This includes: policy, special landscape qualities of CNP, impacts on wild land areas and wildness, impacts on landscape character, impacts on visual sensitivities, cumulative effects, sequential visual effects, viewpoints, all graphics should show the boundary of CNP, grid connection, access, lighting.	The siting and design of the proposed development (including ancillary elements such as infrastructure, substation and control room) took account of the potential effects on the Cairngorm National Park (CNP) and utilises the screening effect of topography to the east of the site to limit potential effects on the CNP.
Mountaineering Council of Scotland (MCoS) 29.11.17	Scoping	MCoS proposed a number of alternative viewpoints (VP): ▪ Meall na h-Aisre. ▪ Gairbeinn.	The suggested viewpoints were considered, along with those proposed by SNH and THC and a finalised list produced based on achieving a broad representation of different receptors at varying

[8] THC (2017) Onshore Wind Energy Supplementary Guidance, November 2016 (with addendum, December 2017)

Table 4.1: Consultation Responses			
Consultee and Date	**Scoping / Other Consultation**	**Issue Raised**	**Response / Action Taken**
		▪ Carn na Saobhaidhe, further north in the Monadhliath, is also a Corbett. While the impact may be attenuated by distance, there are otherwise no viewpoints at all in this direction. Consider that both of these corbetts are likely to experience substantial impacts. The following VPs could be dropped: ▪ Crag na Doire Duibhe is infrequently climbed and at a similar angle and intermediate in distance to Dun da Lamh fort (VP 11) and Carn na Caim (VP 20) or Meall Chuaich (VP 9). Depending on the final location of Viewpoint 18 (see below), either Viewpoint 19 or Viewpoint 20 would add little further information to the assessment. Viewpoint 18 (Meall Chruaidh) is climbed less frequently than the main summit of the ridge west of Loch Ericht on which it lies – The Fara. The ZTV suggests that both Meall Cruaidh and The Fara would have similar visibility of Glenshero so it would be logical to select the latter since it is the more frequented location. Wild Land: Monadhliath WLA the focus should be on elevated locations east and west of Glen Markie (e.g. Carn Odhar na Criche to Geal Charn). Beinn Bhreac Mhor referred to in the same section is the one north of Strath Dearn (NH6719).	distances and elevations. Having investigated suitable viewpoints to the north of the proposed development, within the Monadhliaths, it was decided to omit any further viewpoints in this direction as views from the north would be through the Stronelairg Wind Farm and the proposed development would be partially screened by intervening topography thereby mitigating potential effects on summits in this direction. The final viewpoints are presented on EIAR Volume 3: Figure 4.5a.
John Muir Trust (JMT) (17.1.18)	Scoping	The Trust agreed that the main Wild Land Areas (WLAs) to be considered are WLA19 Braeroy – Glenshirra-Creag Meagaidh; WLA20 the Monadhliaths; and WLA14 Rannoch-Nevis – Mamores-Alder. Cumulative LVIA: JMT considers the 10 km radius for including cumulative wind farms too small and that at least a 35 km radius should be used. Wild Land Methodology: The Report states that "*The methodology utilised for the WLIA in respect of the effect of the proposed development will follow SNH's currently (sic) Guidance, but with cognisance of the SNH consultation Draft Guidance. JMT agreed with the use of the SNH current Guidance in this way. The draft SNH 2017 Guidance has not been progressed following consultation and so the current Guidance (updated 2014) should be used.* *The WLIA should not artificially divide the WLAs into smaller units which the assessor regards as more or less wild*	The Wild Land Impact Assessment in EIAR Volume 4: Technical Appendix 4.6 covers the agreed WLAs. Cumulative developments within a 40 km radius of the proposed development were included, in accordance with SNH guidance [9]. The WLIA in EIAR Volume 4: Technical Appendix 4.6 follows agreed methodology based on the SNH 2017 consultation draft guidance.

[9] SNH (2017) Visual Representation of Wind Farms – Guidance – Version 2.2

Table 4.1: Consultation Responses			
Consultee and Date	**Scoping / Other Consultation**	**Issue Raised**	**Response / Action Taken**
		but consider the WLA as a whole. Of course, within the WLA the significance of an impact will vary according to the particular site."	

Potential Effects Scoped Out

4.2.10 Effects related to the decommissioning of the proposed development have been omitted from the LVIA as such effects are anticipated to be equivalent or possibly less than those attributable to its construction.

Desk Study

4.2.11 Initially, a desk study was undertaken to establish the baseline context of the proposed development, this considered physical components of the landscape (i.e. landscape fabric) as well as the distinctive recognisable patterns of elements that form the landscape character of the area and of designated and classified landscapes. Visual elements and receptors/receptor locations were also identified including settlements, transportation corridors and recreational trails and summits, as well as specific landscape character types and designated areas.

4.2.12 Landscape character types (LCTs) considered in the baseline and subsequent assessment are derived from the following SNH Landscape Character Assessments (LCAs) listed below:

- Cairngorms National Park Authority Landscape Character Assessment[10];
- Cairngorm Landscape Character Assessment[11];
- Inverness District Landscape Character Assessment[12];
- Lochaber Landscape Character Assessment[13];
- Tayside Landscape Character Assessment[14]; and
- Ben Alder, Ardverikie and Creag Meagaid character assessment[15].

4.2.13 The key characteristics of the LCTs are provided in EIAR Volume 4: Technical Appendix 4.2, and the assessment of effects on each LCT is provided in in EIAR Volume 4: Technical Appendix 4.4.

4.2.14 The description of landscape designations and classifications contained in the LVIA were derived from the following publications:

- Cairngorms Landscape Toolkit[16];
- Cairngorm Landscape Character Assessment[17];
- SNH (2010) The Special Qualities of the National Scenic Areas;

[10] Cairngorms National Park Authority & British Geological Survey (2009) Cairngorms National Park Landscape Character Assessment - Available at http://cairngorms.co.uk/authority/publication/235/

[11] SNH Review No.76 (2006) Cairngorms Landscape Assessment

[12] SNH Review No.114 (1999) Inverness Landscape Character Assessment

[13] SNH Review 97 (1998) Lochaber Landscape Character Assessment

[14] SNH Review 122 (1999) Tayside Landscape Character Assessment

[15] SNH Review 120 (1999) Ben Alder, Ardverikie and Creag Meagaid Landscape Character Assessment

[16] Available at http://cairngorms.co.uk/park-authority/planning/landscape-toolkit/

[17] Available at http://cairngorms.co.uk/authority/publication/235/

- THC (2011) Assessment of Highland Special Landscape Areas (THC, 2011); and
- SNH Wild Land Area descriptions[18].

4.2.15 EIAR Volume 4: Technical Appendix 4.3 summarises the special qualities of designated landscapes, and EIAR Volume 4: Technical Appendix 4.5 evaluates the likely effect of the proposed development on the integrity of these designated areas. Description of key wild land qualities and an assessment of the effect of the proposed development is provided in the Wild Land Impact Assessment in EIAR Volume 4: Technical Appendix 4.6.

4.2.16 Datasets utilised in the preparation of the LVIA included:

- Ordnance Survey 1:50,000 and 1:250,000 mapping;
- Ordnance Survey 50 – 5 m Digital Terrain Model;
- Scottish Landscape Character Assessment data – SNH data sets;
- Gardens and Designed Landscapes – Historic Environment Scotland datasets;
- Cairngorm National Park – Scottish Government data sets;
- National Scenic Areas – Scottish Government data sets;
- Special Landscape Areas – The Highland Councils data sets;
- Wild Land Areas - SNH data sets;
- Road network – Meridian 2 data; and
- Cumulative data – THC dataset.

4.2.17 A series of ZTV drawings and draft wireline images were generated during the desk study to enable the identification of potential landscape and visual receptors as well as providing support for the iterative development of the scheme's design.

Field Survey

4.2.18 Desktop findings were verified and augmented by targeted field reconnaissance during which all key sensitive receptor locations were visited. During the field reconnaissance draft wirelines, mapping, data collection systems and augmented reality tools were utilised to verify theoretical visibility (including cumulative visibility).

4.2.19 Extended, detailed field reconnaissance within Wild Land Areas was undertaken by two Landscape Architects as part of the Wild Land Impact Assessments in EIAR Volume 4: Technical Appendix 4.6.

Illustrative Materials

4.2.20 The LVIA is illustrated by a range of tools including Zone of Theoretical Visibility (ZTV) plans, photographs, wirelines, and photomontages. All outputs have been prepared in accordance with current best practice provided by SNH[19] and The Landscape Institute[20], and THC[21].

4.2.21 ZTVs have been prepared to assist in the identification of areas from where there is potential visibility of the proposed development, illustrated on EIAR Volume 3: Figures 4.5a and 4.5b. The ZTVs are based on Ordnance Survey (OS) digital terrain data supplied as gridded height data at 5 m interval resolution. This data does not reflect the screening effect of vegetation or

[18] Available at https://www.nature.scot/wild-land-area-descriptions

[19] SNH (2017) Visual Representation of Wind Farm – Guidance Version 2.2

[20] Landscape Institute (2018) Technical Guidance Note – Photography and Photomontage in Landscape and Visual Impact Assessment – Public Consultation Draft

[21] THC (2016) Visualisation Standards for Wind Energy Developments

built structures and so the visibility shown on the ZTVs is more extensive than actual visibility on the ground. Where the ZTV shows no visibility, it is predicted that no turbines can be seen.

4.2.22 The accompanying visibility analysis provides details of the number of visible turbines and which aspects of the turbines would be visible (i.e. tower, hub, blades).

4.2.23 In order to establish the cumulative theoretical visibility, ZTVs were prepared for all operational, under construction, consented and application stage wind farm projects within 40 km of the proposed development (EIAR Volume 3: Figure 4.6). The cumulative ZTVs are included in EIAR Volume 3: Figures 4.6a to 4.6f.

Assessment of Effects

4.2.24 The aim of the landscape and visual impact assessment is to identify, predict and evaluate potential significant effects arising from the proposed development. Wherever possible, identified effects are quantified, but the nature of landscape and visual assessment requires interpretation by professional judgement. In order to provide a level of consistency to the assessment, landscape sensitivity to change, the prediction of magnitude of impact and assessment of significance of the residual effects has been based on pre-defined criteria, the level of effects being determined by a comparison of the sensitivity of receptors and the magnitude of impact arising from the proposed development.

4.2.25 The LVIA considers landscape and visual effects on designated landscapes in the study area, including National Scenic Areas (NSAs), Regional Scenic Areas (RSAs), and Special Landscape Areas (SLAs). Additionally, whilst not landscape designations, a number of sensitive landscape classifications have been assessed, including Wild Land Areas (WLAs). Whilst there are Gardens and Designed Landscapes (GDLs) located within the study area, none would be subject to views of the proposed development and they have therefore been omitted from the LVIA.

4.2.26 In order to assist in evaluating the potential landscape and visual effects arising from the proposed wind farm, Zones of Theoretical Visibility (ZTVs) were generated to identify the potential extent of the proposed development's visibility over the study area (EIAR Volume 3: Figure 4.5a and 4.5b). An assessment of the predicted visibility of the proposed development from each of the landscape character types, designated and sensitive non-designated landscapes in the study area has been carried out by analysing the ZTVs and verifying the findings during field reconnaissance. The visibility assessment has concentrated on the publicly accessible areas including outdoor recreational areas, road and the public footpath network.

4.2.27 Mitigation measures which have been incorporated into the final design and layout of the proposed development are described, together with a summary of the design optimisation process carried out in parallel with the LVIA. Further details of the constraints which were identified, and the design process are described in EIAR Volume 2: Chapter 3: Design Evolution and Alternatives.

4.2.28 A selection of viewpoints was chosen in consultation with THC, SNH, CNPA and non-statutory consultees in respect of this application. These viewpoints are considered to be representative of the main sensitive receptors in the study area. The viewpoints have also been checked against the cumulative ZTVs for existing/consented and proposed wind farms within the study area in order to ensure that they provide representative coverage of potential cumulative visibility and related effects. Viewpoint locations are detailed in EIAR Volume 4: Technical Appendix 4.7 and are included in EIAR Volume 3: Figures 4.5a, 4.5b and 4.7.

4.2.29 Analysis of the potential effects on landscape and visual amenity arising from the proposed development at each of these viewpoints has been carried out. This analysis has involved the

production of computer generated wirelines and/or photomontages to predict the operational views of the proposed development from each of the agreed viewpoints. The existing and predicted views from each of these viewpoints have been analysed to identify the magnitude of impact and the residual effects on landscape character and visual amenity at each viewpoint location.

Criteria for Assessing the Sensitivity of Receptors

4.2.30 The sensitivity of the landscape to change is defined as high, medium or low based on professional interpretation of a combination of its susceptibility to change associated with the type of development proposed, and the value attributed to the landscape. The following parameters were therefore applied in determining the susceptibility of the landscapes within the study area:

- Landscape quality;
- Existing land-use;
- The pattern and scale of the landscape;
- Visual enclosure/openness of views and distribution of visual receptors;
- The scope for mitigation, which would be in character with the existing landscape; and
- The degree to which the particular element or characteristic contribution to the landscape character and can be replaced or substituted.

4.2.31 In determining value the LVIA uses, as its primary indicator, formal landscape designations. Where other clearly defined indicators were identified, these have also been referred to.

4.2.32 Visual receptor sensitivity is also defined as high, medium or low based on an interpretation of a combination of parameters, and also relates to the susceptibility and value ascribed to visual receptors or receptor locations. The following criteria were utilised in determining viewpoint sensitivity:

- The land use or main activity at the viewpoint/receptor location;
- The frequency and duration of use of receptor location; and
- The landscape character and quality of the intervening landscape.

4.2.33 In relation to land use at the viewpoint, visual sensitivity is defined in Table 4.2, below.

Table 4.2: Sensitivity in Relation to Receptor Type and Activity

Sensitivity	Receptor Type and Activity
High	Tourists and those engaged in outdoor recreational activities for which the landscape and views form a key part of their experience, including hill walkers and visitors to formal vantage points, strategic recreational footpaths, cycle routes or rights of way); Visitors to landscapes/sites that have a strong physical, cultural or historic connection with the landscape or a particular view; residential receptors.
Medium	Local road users/commuters whose are generally travelling alone and/or are focused on the road rather than the adjoining landscape.
Low	People engaged in outdoor sports or recreation (other than appreciation of the landscape), commercial buildings, and other locations where people's attention may be focused on their work or activity. People in commercial buildings, and other locations where people's attention may be focused on their work or activity.

Criteria for Assessing the Magnitude of Impact

4.2.34 The magnitude of impact arising from the proposed development may be described as substantial, moderate, slight, negligible or none based on the interpretation of a combination of largely quantifiable parameters, as follows:

- The distance of receptors from the proposed development;
- The duration of the predicted change and whether it is reversible;
- The size and scale of the change anticipated;
- The geographical extent of the study area, landscape character unit, designation or route that would be affected;
- The angle of view in relation to main receptor activity;
- The degree of contrast;
- The background context to the proposed development; and
- The extent and nature of other built development visible, including vertical elements.

4.2.35 The assessment of effects at viewpoints in EIAR Volume 4: Technical Appendix 4.7 quantifies the horizontal angle occupied by the proposed development in each view.

4.2.36 Table 4.3, below, provides a brief definition for different magnitudes of impact.

Table 4.3: Magnitude of Impact

Magnitude	Definition
Substantial	Total loss or considerable alteration/interruption of key elements, features or characteristics of the landscape character and/or composition of views resulting in a substantial change to baseline conditions.
Moderate	Partial loss or alteration to one or more key features or characteristics of the baseline, resulting in a prominent, but localised change within a broader unaltered context.
Slight	Discernible loss or alteration to one or more key elements, features or characteristics of the baseline conditions. Change arising from the loss/alteration would be discernible but underlying landscape character or view composition would be broadly consistent with baseline.
Negligible	Very limited or imperceptible loss or alteration to one or more key elements/characteristics of the baseline. Change may be barely discernible.
None	No aspect of the proposed development would be discernible. The proposed development would result in no appreciable change to the landscape resource or view.

Criteria for Assessing Cumulative Magnitude of Impact

4.2.37 Table 4.3, below, provides a brief definition for different magnitudes of cumulative impact.

Table 4.4: Magnitude of Cumulative Impact

Magnitude	Definition
Substantial	The proposed development would represent a considerable increase in the influence of wind energy development on the character of the landscape and/or the composition of views.
Moderate	The proposed development would represent a notable increase in the influence of wind energy development on the character of the landscape and/or the composition of views. Moderate cumulative change equates to a localised change within an otherwise unaltered context.
Slight	The proposed development would represent a minor addition to the influence of wind energy development on the character of the landscape and/or the

Table 4.4: Magnitude of Cumulative Impact	
Magnitude	**Definition**
	composition of views. The change would be discernible, but the original baseline conditions would be largely unaltered.
Negligible	The proposed development would represent a barely discernible addition to influence of wind energy development on the character of the landscape and/or the composition of views. The baseline condition of the landscape or view would, for all intents and purposes, be unaffected.
None	No other cumulative development would be apparent.

4.2.38 In assessing potential cumulative landscape and visual effects, consideration has been given to cumulative effects arising from combined and/ or consecutive (concurrent) visibility (where the observer is able to see two or more developments from one viewpoint location), and sequential effects (where a number of similar developments would be visible individually or simultaneously over a sequence of connected viewpoints, such as would be found along a road or footpath). This is in accordance with current SNH guidance[22].

4.2.39 Consideration has also been given to the additional effects attributable specifically to the proposed development, as well as its 'in combination' effect, where the combined effect of the proposed development and other cumulative schemes are taken into account.

4.2.40 In accordance with current SNH and Scottish Government policy, projects which are at scoping stage have not been included in the detailed assessment as they may undergo substantial change before a formal planning application is submitted and may not progress to an application at all. The final list of cumulative developments for consideration was derived from THCs online data base (EIAR Volume 3: Figure 4.6), and is summarised in Table 4.6, below.

Criteria for Assessing Significance

4.2.41 Table 4.5 below, illustrates how residual effects are determined by comparison of the sensitivity of receptors with the magnitude of predicted change. For the purposes of this assessment significant landscape or visual effects are **major** or **major/moderate.**

Table 4.5 Residual Effects					
	Magnitude of Change				
Landscape and Visual Sensitivity	**Substantial**	**Moderate**	**Slight**	**Negligible**	**None**
High	Major	Major/moderate	Moderate	Moderate/ minor	None
Medium	Major/moderate	Moderate	Moderate/minor	Minor	None
Low	Moderate	Moderate/minor	Minor	Minor/none	None

4.2.42 In line with the recommendations in the GLVIA the matrix is not used as a prescriptive tool or arithmetically, and the methodology and analysis of potential effects at any particular location must allow for the exercise of professional judgement. Descriptions of residual effects, especially those considered significant, are described in narrative text.

4.2.43 Landscape and visual effects can be adverse (i.e. having a detrimental effect on the physical elements, character and visual amenity of the area), beneficial (i.e. having a positive effect on the landscape and visual amenity of the area through strengthening or augmentation of

[22] Scottish Natural Heritage (2012) Assessing the Cumulative Impact of Onshore Wind Energy Developments

baseline conditions and/or improvement of the existing landscape or views), or neutral (representing no adverse or beneficial effects on balance). For the purposes of this assessment residual effects are assumed to be adverse, unless stated otherwise.

Limitations and Assumptions

4.2.44 The assessment considers receptors in publicly accessible locations. Where assessment of individual residential properties has been undertaken this was completed from publicly accessible locations. No assessment has been undertaken for individual residential or private properties.

4.2.45 The data utilised in completion of the LVIA has a number of inherent limitations related to data tolerances and levels of accuracy. However, these have been taken into account in the assessment.

Measurement

4.2.46 Unless stated otherwise, all measurements pertaining to the distance of receptors from the proposed development are based upon the nearest turbine rather than the nearest visible turbine or any other ancillary element of the proposed development. Where measurements pertain to Landscape Character Types (LCTs), designations and classifications, the measurement given relates to the nearest section of the LCT or designated/classified area boundary to the proposed development turbines, which may not be subject to potential views of the proposed development. This is important because effects experienced within such areas may occur at a considerably greater distance, with corresponding consequences for the level of residual effect.

4.3 Baseline Conditions

Current Baseline

Landform and Hydrology

4.3.1 EIAR Volume 3: Figure 4.1 depicts the topographical elevations of the landscape in the study area. In essence, the study area may be divided into two broad areas of mountains and plateaux bisected by the Great Glen which is oriented in a southwest to northeast direction. To the north of the Great Glen the landscape comprises a series of rugged uplands divided into a series of mountain ranges by deep, steep sided glens. In contrast, the landscape to the south of the Great Glen is simpler, consisting of high level plateaux of largely featureless smooth rounded hills. This difference is due, in part, to the nature of each area's geology.

4.3.2 To the north of the Great Glen the underlying rocks consist of hard sedimentary materials which have been eroded to form ranges of rugged irregular mountains covered in numerous rocky outcrops.

4.3.3 The landscape to the south of the Great Glen, including the Monadhliath Hill range is largely derived from glacial erosion of underlying mica schists to form large scale, undulating plateaux and smooth rounded hills which are devoid of corries.

4.3.4 Both landscapes are considered to provide remote environments which have limited amounts of built development or obvious human artefacts. This is reflected by the extent of each area subject to wild land categorisation as WLAs. However, it is apparent from the WLIA in EIAR Volume 4: Technical Appendix 4.6 that there are a number of prominent wind farm and infrastructure developments and large scale coniferous forests which have resulted in reductions of the 'wildness' of these landscapes in places.

4.3.5 Within the essentially mountainous structure of the landscape of the study area a series of distinct smaller scale landscapes are also present including sheltered straths and glens which are often associated with increased settlement and infrastructure. The largest of these is the Great Glen which comprises a deep, steep sided 'u' shaped valley typified by a series of lochs linked to the main waterbody of Loch Ness by the Caledonian Canal. The floor of the Great Glen plays host to the main settlements and road infrastructure in the area along with farmland, whilst the steep sides of the glen contain extensive forest and woodland cover.

4.3.6 A number of prominent glens extend into the landscape of the adjoining uplands from the Great Glen, including Glen Urquhart, Glen Morriston, Glen Garry, Glen Spean and Glen Tarff.

4.3.7 Other notable incised landscapes in the study area include Loch Ericht, Loch Laggan, Spey valley, Glen Strathfarrar, Strathglass, Strathnairn, and Glen Affric.

4.3.8 The proposed development site (the site) is situated on the southwest of the Monadhliaths and would be situated on elevated ground between 613 m Above Ordnance Datum (AOD) and 752 m AOD. The proposed developments turbine would occupy an area of elevated undulating terrain between the summits of Carn Dearg and Sidheah Dubh na Cloiche Baine, Geal Charn. To the south of the proposed development's turbines the terrain falls away towards the Corrieyairack Pass and the River Spey. The site is enclosed to the north, east and west by a series of elevated summits and ridges.

Landcover, Land-Use and Landscape Elements

4.3.9 The study area contains substantial variation in landcover: uplands and mountain ranges are characterised by a mosaic of moorland grassland, heaths, gorse scrub, rock exposures and areas of bare ground and erosion channels. In places, these channels are accompanied by riparian vegetation. The uplands have generally low incidents of man-made features with the exception of hill tracks, occasional power lines, and in places, forest blocks.

4.3.10 Scarp slopes and glen sides, due to their reduced accessibility, have a predominance of coniferous plantation and pockets of grassland, heathland, gorse scrub, with increased deciduous woodland cover as the slope descends to the floor of valleys.

4.3.11 The main strath and glens in the study area often contain a combination of deciduous woodlands/tree belts, scrub and pastureland. The glens also contain the main concentrations of settlement and road and power infrastructure, as well as areas of open water in the form of lochs and rivers. Glen Tarff and Glen Buck are situated on the eastern and western sides of the site and are typified by steeply incised treed topography and watercourses.

4.3.12 The site itself is fairly typical of the Monadhliaths and comprises extensive areas of moorland, with localised areas of bare ground and peat bog, much of it hagged.

Settlement

4.3.13 There are few settlements within the study area. The main concentrations occur around the sides of Loch Ness and in the adjoining straths and glens. It is apparent from the ZTV in EIAR Volume 3: Figure 4.5a that none of these settlements would be afforded views of the proposed development. Consequently, no further assessment has been made of these receptor locations.

4.3.14 A number of scattered farmsteads and dwellings are also present but are generally located within straths and glens and so generally provide no opportunities for views of the proposed development. The closest properties are at Melgarve and Garvabeg and are located over 3.5 km from the proposed developments turbines.

Transport Routes

4.3.15 There are relatively few public roads within the study area and those that do exist are generally located within enclosed straths and glens with the consequence that only a small number of highways would be affected by the proposed development. These include:

- The A9;
- The A833, north of Glen Urquhart;
- A889; and
- B862, which initially extends south-eastwards around the end of Loch Ness before turning northeastwards along Stratherrick, past Loch Tarff and Loch Mhor to Achnabat. This route comprises a section of General Wade's Road.

4.3.16 There are also a number of unclassified roads that would be subject to potential views of the proposed development. These would include a minor single-track road between Glen Urquhart and Bunloit, on the western side of the Great Glen, and which forms part of the Great Glen Way. To avoid duplication, this road is assessed as part of the Great Glen Way.

4.3.17 Whilst the Caledonian Canal is located within the study area, it would be subject to no potential views of the proposed development and has therefore not be considered further in this assessment.

Recreational Routes and Summits

4.3.18 In addition to the routes described above, there are a small number of long range recreational routes including the Great Glen Way and National Cycle Route 78 (EIAR Volume 3: Figure 4.4).

4.3.19 The Great Glen Way extends 73 miles (117 km) between Fort William on the Atlantic west coast to Inverness to the north and follows the alignment of the Great Glen. From Loch Linnhe on the Atlantic coast the route follows canal towpaths, loch shore paths and forestry tracks to reach Inverness. This route provides extensive visibility of the lochs of the Great Glen and fine panoramas of the surrounding Highlands. This route is well marked and relatively straight forward, utilising canal towpaths and forest tracks. High route options are included between Fort Augustus and Invermoriston and between Invermoriston and Drumnadrochit which provide elevated vantage points overlooking the Great Glen.

4.3.20 The critical part of National Cycleway 78 within the study area is located between Fort William and Inverness which follows the alignment of the B862 carriageway. In order to avoid duplication, this route has been dealt with under the assessment of the B862.

4.3.21 The proposed development would also be seen from sections of General Wade's Military Road, between Laggan and the Ardachy Road. This route is valued, not only for its cultural heritage, but also for its amenity for walkers and mountain bikers. During the annual Corrieyairack Challenge charity race runners and mountain bikers also represent key receptors on this route.

4.3.22 The footpath from Glen Spean to the Corrieyairack Pass bisects the Braeroy, Glenshirra and Creag Meagaidh WLA (No.19) and is an important route for the interpretation of Glen Roy and the 'Parallel Roads' which stand out as horizontal ridges on both sides of the Glen. The character of the route changes along its length, being wooded with a surfaced road at its southwestern end, thereafter being dominated by the steep sides of the glen before broadening at Glen Turret and by the Falls of Roy from where the route connects to the Corrieyairack Pass west of Loch Spey.

4.3.23 In addition to the above routes, the study area contains substantial opportunities for access to the countryside of the Highlands under the terms of the Land Reform (Scotland) Act 2003. A

key part of this access is mountain walking and the study area contains numerous notable summits, including Munros (i.e. selected summits with an elevation exceeding 3,000 feet or 914 m AOD) and Corbetts (which have summits between 760 m AOD – 914 m AOD), and Grahams (which have elevations of between 609 m AOD and 760 m AOD). For the purposes of the LVIA, a number of summits have been included in EIAR Volume 4: Technical Appendix 4.7: Viewpoint Assessment. Whilst not comprehensive, these summits are considered to provide a reasonable and proportionate coverage with which to assess effects on the amenity of hill walkers and the character of the hills.

Cumulative Context in the Study Area

4.3.24 Table 4.6, below, lists the existing/operational, consented and proposed wind farms located within the study area at the time of design freeze and preparation of the assessment, and which have therefore been included in the cumulative assessment.

Table 4.6: Cumulative Context

Wind Farm	Status	Approximate Distance and direction from the Proposed Development (km)	Number of Turbines	Maximum Blade Tip Height (m)
Aberarder	Consented/Under Construction	21 km NNE	12	130
Beinneun & Extension	Existing/Operational	24.3 km NNW	32	132
Bhlaraidh	Existing/Operational	22 km NNW	32	135
Corriegarth & Extension	Existing/Operational	11.4 km N	23	120
Corrimony	Existing/Operational	27.8 km NNW	5	100
Dell	Proposed/Appeal	4.7 km NNW	14	130.5
Dunmaglass	Existing/Operational	18.3 km NNE	33	117.5
Farr	Existing/Operational	32 km NNE	40	100
Glen Kyllachy	Consented	31 km NNE	20	110
Millennium	Existing/Operational	19.7 km WNW	26	Up to 125
Millennium South	Consented	21 km WNW	10	132
Stronelairg	Under Construction	0.4 km NW	66	Up to 135

4.3.25 The cumulative plan in EIAR Volume 3: Figure 4.6 shows the emerging pattern of wind farms in the study area and indicates a predominance of large scale developments situated on open elevated moorlands. Developments northwest of the Great Glen comprise the closely spaced paired schemes of Millennium and Beinneun, and the Bhlaraidh and Corrimony schemes. Both Millennium and Beinneun have been subject to recent extension and are located in close proximity to each other, whilst Corrimony is located around 3 km away from Bhlaraidh. To the southeast of the Great Glen the development pattern comprises a series of large scale individual wind farms that have been extended or are now abutted by new developments that appear largely as extensions. This is the case at Farr Wind Farm, which is adjoined by the consented Glen Kyllachy development, Dunmaglass, which is adjoined by Aberarder turbines, and Corriegarth, which was previously extended. The currently under construction Stronelairg Wind Farm is subject to proposals for adjacent developments at Dell Wind Farm (immediately to the northwest), and the proposed development (to the south).

Landscape Designations

4.3.26 As indicated in EIAR Volume 3: Figure 4.3, the development site is not subject to any landscape designation. However, there are national and local designations present within the wider study area.

4.3.27 Nationally important landscape designations present include:

- Cairngorms National Park: situated around 1.1 km to the east-southeast of the proposed development;
- Cairngorm Mountain NSA: around 26 km east-southeast of the proposed development; and
- Glen Affric NSA: around 32 km to the northwest of the proposed development.

4.3.28 The study area also contains a number of locally important Special Landscape Areas (SLAs) that are predicted to provide views of the proposed development, including:

- Ben Alder, Laggan, and Glen Banchor SLA: around 4 km to the northwest of the proposed development;
- Strathconon, Monar and Mullardoch SLA: situated approximately 33 km to the northwest of the proposed development;
- Loch Ness and Duntelchaig SLA: approximately 9.5 km northwest of the proposed development;
- Loch Lochy and Loch Oich SLA: approximately 14 km southwest of the proposed development;
- Moidart, Morar and Glen Sheil SLA: approximately 32 km to the west northwest of the proposed development; and
- Gaik SLA: approximately 23 km to the southeast of the proposed development.

4.3.29 SNH's publication regarding The Special Qualities of the National Scenic Areas, 2010, outlines the key characteristics of the NSA, whilst THC's Assessment of Highland Special Landscape Areas (THC, 2011) describes the key qualities of the SLAs. EIAR Volume 4: Technical Appendix 4.3 summarises these characteristics and EIAR Volume 4: Technical Appendix 4.5 evaluates the likely effect of the proposed development on the integrity of these designated areas.

Landscape Classifications

4.3.30 Whilst the study area contains a number of Gardens and Designed Landscapes (both inventory and non-inventory sites), EIAR Volume 3: Figure 4.5a indicates that there would be no theoretical visibility of the proposed development from these locations and therefore these GDLs have not be considered in the LVIA.

4.3.31 The study area also contains a number of Wild Land Areas (EIAR Volume 3: Figure 4.3). Those with potential visibility of the proposed development include:

- The Cairngorms WLA (No.15), which is situated around 16.8 km to the southeast of the proposed development;
- The Monadhliaths WLA (No.20), which, at its closest, is situated over 1 km to the east of the proposed development;
- Rannoch-Nevis – Mamores-Alder (No.14), which is situated, at its closest, around 10 km to the south-southeast of the proposed development; and
- The Braeroy, Glenshirra and Creag Meagaidh WLA (No.19), situated approximately 4 km to the south of the proposed development.

4.3.32 EIAR Volume 4: Technical Appendix 4.6 sets out the methodology utilised and the key wild land attributes and qualities of each WLA as well as the assessment of likely effects on each area.

Landscape Character Types

4.3.33 The location and extents of landscape character types (LCTs) within the study area are indicated in EIAR Volume 3: Figure 4.2. These LCTs are based on SNH's character assessments identified in Section 4.2, and those predicted to have theoretical visibility of the development are listed below and briefly described in EIAR Volume 4: Technical Appendix 4.2:

- Mountain Massif (LCT LBR2), around 30 km to the southwest of the proposed development;
- Smooth Moorland Ridges (LCT LBR5), which, at its closest, is situated around 7.5 km to the west-southwest of the proposed development;
- Rocky Moorland (LCT LBR6), which, at its closest, is situated 15 km to the west of the proposed development;
- Rugged Massif (LCT LBR7), situated 8.5 km to the southwest of the proposed development;
- Interlocking Sweeping Peaks (LCT LBR8), around 20 km to the west of the proposed development;
- Rugged Massif (LCT INV1), situated over 15 km to the northwest of the proposed development;
- Rolling Uplands (LCT INV2), which immediately abuts the northern side of the proposed development and which contains the proposed access track which would utilise the existing Stronelairg Wind Farm track;
- Rocky Moorland Plateau (LCT INV3) which is situated around 18 km to the northwest of the proposed development;
- Rocky Moorland Plateau with Woodland (LCT INV4), which is situated approximately 32 km to the north of the proposed development;
- Farmed and Wooded Foothills (LCT INV6), located around 11 km to the northwest of the proposed development;
- Broad Steep Sided Glen (LCT INV7) situated around 11 km to the northwest of the proposed development;
- Isolated Mountain Plateau (LCT LGN1), which is located around 7 km to the south of the proposed development;
- Smooth Rounded Hills (LCT LGN2), located around 10 km south of the proposed development;
- Small Craggy Knolls and Hills (LCT LGN3), situated around 9 km to the south of the proposed development;
- Upper Highland Glens with Lochs (LCT TAY2), around 25 km to the south of the proposed development;
- Highland Summits and Plateaux (LCT TAY3), around 21 km to the south of the proposed development;
- Cairngorm Plateau (LCT CGN1), situated over 29 km to the east-southeast of the proposed development;
- Uplands and Glens (LCT CGN2), which contains the proposed development; and

- Cairngorm Straths (LCT CGN3), situated around 2 km to the south-southeast of the proposed development.

Future Baseline

4.3.34 With the exception of distant historical events, the landscape within the study area exhibits a relatively limited trend of change. This, in part, reflects the difficulties in development of the mountainous landscape and the constraints to its productive use for agriculture. The greatest changes apparent in the study area relate to the ebb and flow of settlement, improvements to road infrastructure, and expansion of power transmission infrastructure within straths and glens where access and terrain are more accommodating. Commercial forestry and associated clear felling and forest infrastructure constitute a cause of considerable change in the landscape historically but are largely confined to the elevated drier sides of straths and glens, leaving the more elevated open tops of hills and plateaus that contain the greatest peat resource as open moorland. This elevated environment has increasingly been utilised for wind farm developments and associated infrastructure, with access tracks and grid connections extending downslope into straths and glens. In the absence of the proposed development and without dramatic changes to policy or economic drivers in the area, the established trends in respect of land use/landcover and the baseline landscape and visual context will remain largely consistent with the scenario described.

Summary of Sensitive Receptors

4.3.35 Table 4.7 below, contains a summary of sensitive receptors that have been considered in the assessment of residual effects presented in Section 4.6 of this chapter.

Table 4.7: Summary of Sensitive Receptors

Receptor Type	Name of Sensitive Receptor	Justification
Landscape Receptors		
Landscape Character Types	▪ Mountain Massif (LCT LBR2); ▪ Smooth Moorland Ridges (LCT LBR5); ▪ Rocky Moorland (LCT LBR6); ▪ Rugged Massif (LCT LBR7); ▪ Interlocking Sweeping Peaks (LCT LBR8); ▪ Rugged Massif (LCT INV1); ▪ Rolling Uplands (LCT INV2); ▪ Rocky Moorland Plateau (LCT INV3); ▪ Rocky Moorland Plateau with Woodland (LCT INV4); ▪ Farmed and Wooded Foothills (LCT INV6); ▪ Broad Steep Sided Glen (LCT INV7); ▪ Isolated Mountain Plateau (LCT LGN1); ▪ Smooth Rounded Hills (LCT LGN2); ▪ Small Craggy Knolls and Hills (LCT LGN3); ▪ Highland Glens with Lochs (LCT TAY2); ▪ Highland Summits and Plateaux (LCT TAY3); ▪ Cairngorm Plateau (LCT CGN1); ▪ Uplands and Glens (LCT CGN2); and ▪ Cairngorm Straths (LCT CGN3).	EIAR Volume 4: Technical Appendix 4.2 provides an explanation of each LCTs sensitivity, they range from low to high.
Landscape Designations	▪ Cairngorms National Park; ▪ Cairngorm Mountain NSA; ▪ Glen Affric NSA; ▪ Ben Alder, Laggan, and Glen Banchor SLA;	These designations are recognised in planning policy to have a high value and are considered susceptible to the type of development proposed.

Table 4.7: Summary of Sensitive Receptors		
Receptor Type	**Name of Sensitive Receptor**	**Justification**
	▪ Strathconon, Monar and Mullardoch SLA; ▪ Loch Ness and Duntelchaig SLA; ▪ Loch Lochy and Loch Oich SLA; ▪ Moidart, Morar and Glen Sheil SLA; and ▪ Gaik SLA.	For the purposes of the LVIA these designations are considered to all have a high susceptibility to the type of development proposed. (EIAR Volume 4: Technical Appendix 4.3 provides further information).
Wild Land	▪ The Cairngorms WLA (No.15); ▪ The Monadhliaths WLA (No.20); ▪ Rannoch-Nevis – Mamores-Alder (No.14); and ▪ The Braeroy, Glenshirra and Creag Meagaidh WLA (No.19).	These WLAs are recognised in planning policy as of high value and are generally considered susceptible to the type of development proposed. EIAR Volume 4: Technical Appendix 4.7 contains a baseline description and evaluation in respect of each ones' susceptibility to the type of development proposed.
Visual Receptors		
Road users	Key roads, especially those utilised by tourists,	Road users, such as tourists, have a high sensitivity due to their expectations in respect of scenic views and the sensitivity of the mountain landscapes in the study area.
Recreational Receptors	Hill walkers, walkers, cyclists	As indicated in LVIA methodology, hill walkers and cyclists are considered to have a high sensitivity on the basis of their expectations in respect of scenic views and the sensitivity of the mountain landscapes in the study area.

4.4 Assessment of Likely Effects

4.4.1 This section describes the potential significant effects which could occur as a result of the proposed development.

Potential Construction Effects

4.4.2 The construction phase would be approximately 24 months in duration. The methods that would be utilised during the construction stage are described in EIAR Volume 2: Chapter 2: Development Description.

4.4.3 The following elements and activities associated with the construction phase of the proposed development have the potential to result in effects on the landscape and visual amenity of the study area:

- Construction of new on-site access tracks, including any 'floating' tracks;
- Extension of the existing Stronelairg Wind Farm access track to provide a linkage to the proposed development's infrastructure;
- Possible off-site highway improvements;
- Erection of turbines;
- Construction of substation and compound, incorporating control room;

- Construction of laydown areas;
- Construction of three temporary site compounds incorporating site offices;
- Excavation and construction of turbine foundations and crane pads;
- Excavation of up to seven temporary mineral extraction areas;
- Creation of a temporary batching plant;
- Excavations for underground cables;
- HGV and abnormal load deliveries to site and movement of vehicles on site; and
- Reinstatement work, including removal of temporary accommodation works.

4.4.4 The majority of effects occurring during this phase would concern disturbance of existing landcover at the site and potential for long term change or loss of characteristic vegetation with consequent effects on the character and amenity of the site and the adjoining area. However, a large proportion of the construction effects would be managed through adoption of good practice and careful construction management and monitoring regimes (such as those presented in outline Construction and Environmental Management Plan (CEMP) EIAR Volume 4: Technical Appendix 2.1). Given the relatively localised, short duration and partially reversible nature of such effects, they are considered unlikely to result in significant effects on landscape fabric.

Potential Operational Effects

4.4.5 The operational life of the proposed development would be 30 years. The operational elements with the potential to affect the landscape and visual amenity of the study area are:

- Wind turbine generators;
- On-site access tracks;
- Restored temporary mineral extraction areas;
- Any retained off-site highway improvements and any new roads for HGV deliveries established during the construction phase of the proposed development;
- Sub-station/ site control building.

Potential Decommissioning Effects

4.4.6 Decommissioning of the proposed development could have effects similar to that of the construction period with temporary disturbance of landscape fabric and effects on landscape character and visual amenity, both within the site and in the wider study area. Detailed decommissioning proposals would be devised in conjunction with THC, SNH and other statutory consultees prior to the commencement of this phase, the emphasis being upon minimising landscape and visual effects.

4.5 Mitigation

Siting and Design

4.5.1 The siting and design of the proposed development has been influenced by a number of national and regional sources of guidance, including:

- SNH's currently guidance on the siting and design of wind farms[23]; and
- THC's 2016 Adopted Onshore Wind Energy Supplementary Guidance (SG).

[23] SNH (2017) Siting and Design of Wind Farms in the Landscape – Version 3a

SNH Guidance

4.5.2 Paragraph 1.15 of the SNH guidance (guidance) states that *"Wind farms should be sited and designed so that adverse effects on landscape and visual amenity are minimised and so that landscapes which are highly valued are given due protection."*

4.5.3 Paragraph 2.15 states that *"Choice of turbine size is an integral part of the design process. Identification of the key landscape characteristics, their sensitivity and capacity to accommodate change will inform this. Generally speaking, large wind turbines will appear out of scale and visually dominant in lowland, settled, or smaller-scale landscapes, which are often characterised by the relatively 'human scale' of buildings and features. They are best suited to more extensive, upland areas, and set back from more sensitive upland fringes. This can reduce effects on settled and smaller-scale valleys and lowland landscapes."*

4.5.4 Paragraph 2.16 states that *"turbine size is also a key issue in upland landscapes, where they are viewed against, or from, landscapes of a more intricate scale and pattern; or where it is otherwise difficult to discern the landscape scale and distance. By illustrating the scale of an upland landscape, wind turbines may seem to conflict with the expansive nature of these areas."*

4.5.5 Paragraph 2.20 goes on to propose that *"ancillary elements for a wind farm development should be designed so they relate to the key characteristics of a landscape. It is important that these elements do not confuse the simplicity of the wind farm design, or act as a scale indicator for the turbines themselves. Undergrounding power lines within the wind farm, using transformers contained within tower bases (where possible), and careful siting of substations, transmission lines, access tracks, control buildings and anemometer masts will all help to achieve a coherent wind farm design. Simplicity of appearance and use of local, high quality materials will further enhance this."*

4.5.6 Paragraph 2.21 addresses the layout of turbines and suggests that *"turbines can be arranged in many different layouts. The layout should relate to the specific characteristics of the landscape - this means that the most suitable layout for every development will be different."*

4.5.7 Paragraph 3.23 discusses design responses to terrain, stating that *"landform is a key landscape characteristic, whether it is rugged, flat, undulating or rolling, upland or lowland. In flat landscapes, any undulations tend to become accentuated so that even low hills appear substantial."*

4.5.8 Paragraph 3.24 goes on to state that *"it is generally preferable for wind turbines to be grouped on the most level part of a site, so the development appears more cohesive, rather than as a poorly related group of turbines."*

4.5.9 The guidance identifies skylines to be of critical importance and possets that the design should avoid detracting from, or overwhelming the character of distinctive skylines, as well as avoiding variable heights or overlapping turbines.

4.5.10 A further design objective discussed in the guidance is the appropriate scale for the wind farm that is in keeping with that of the landscape. SNH suggests that the proposed development should form an element of:

- Minor vertical scale in relation to the other key features of the landscape;
- Minor horizontal scale in relation to the key features of the landscape (where the wind farm is surrounded by a much larger proportion of open space than occupied by the development); and

- Minor size compared to other key features and foci within the landscape; or separated from these by a sufficiently large area of open space (either horizontally or vertically) so that direct scale comparison does not occur.

4.5.11 The guidance also discusses the relationship between wind farms. A key factor determining the cumulative impact of wind farms is the distinct identity of each development. This relates to their degree of separation and similarity of design between wind farms. This applies whether they are part of a single development, a wind farm extension, or a separate wind farm in a wider group. A wind farm, if located close to another of similar design, may appear as an extension. However, if it appears at least slightly separate and of different design, it may conflict with the other development.

THC Guidance

4.5.12 According to THC's SG and spatial framework (EIAR Volume 3: Figure 3.2) the proposed development would predominantly be located in a Group 3 area which is defined by SPP as locations where wind farms are likely to be acceptable, subject to detailed consideration against identified policy criteria.

4.5.13 Section 4 of THC's Adopted Onshore Wind Energy Supplementary Guidance (2016) contains a series of criteria relating to potential landscape and visual effects of developments. It should be noted that these criteria are not policy tests but are intended as a framework and focus against which the THC can assess proposals. Table 4.8.1 in EIAR Volume 4: Technical Appendix 4.8: Evaluation Against Supplementary Guidance Criteria, summarises these criteria along with an evaluation of the proposed development's performance against them. This should be read in conjunction with the findings in Section 4.6: Residual Effects.

Design Priorities

4.5.14 Based on the preceding analysis of the existing landscape and visual baseline context of the proposed development a number of key priorities for the location and design of the development site are proposed as follows. These are based on the landscape and visual context previously described, and concerns raised by SNH and THC during consultations (presented in Table 4.1, above), these include:

- Location of proposed development outwith areas subject to landscape designations or classifications;
- Use of topography to the east of the site to minimise visibility from within the CNP, avoiding potential for significant effects on the majority of CNP and its principle sensitive core area (i.e. the Cairngorm Mountain NSA);
- Use of elevated topography to the west of the site to screen the proposed development from the interior of the Great Glen, as well as the majority of the Loch Ness and Duntelchaig, Loch Lochy and Loch Oich SLAs, and summits on the western side of Loch Ness;
- Adoption of suitable stand-offs to prominent slopes and skylines to minimise effects on some of the most sensitive parts of the Ben Alder, Laggan and Glen Banchor SLA as well as the Great Glen and Corrieyairack Pass;
- Adoption of set-back from prominent upland edges to screen the proposed development from the main concentrations of receptors, including settlements, transportation and tourist/scenic routes;
- Avoidance of skylining turbines in the majority of cases, wherever possible, in accordance with THC criteria in their Supplementary Guidance;

- Positioning of the proposed development in larger scale upland moorland locations adjacent to Stronelairg Wind Farm, thereby avoiding smaller scale landscapes and distinctive topographical and landscape features;
- The adoption of a layout that reflects the underlying northwest – southeast pattern of ridges and watercourses, but that, when viewed from neighbouring elevated receptor locations, is consistent with the form of the Stronelairg Wind Farm and which reflects the geometry of the Stronelairg Wind Farm turbines;
- Positioning of the proposed development so that it appears in close association and consistent with the adjacent Stronelairg Wind Farm in views from key locations within the CNP, adjacent WLAs and key summits, appearing in front of or behind the Stronelairg Wind Farm, or as a lateral extension to this permitted development;
- Avoidance of prominent elevated summits that could cause turbines to notably exceed the level of Stronelairg Wind Farm's turbines;
- Minimisation of extent to which the proposed development would be seen without the context of the Stronelairg Wind Farm;
- Use of existing Stronelairg Wind Farm site access to avoid necessity of a new access track on exposed slopes overlooking the Corrieyairack Pass;
- Minimisation of the amount of site infrastructure and ancillary elements required, and careful positioning and design to ensure that such elements are screened from the majority of external receptor locations; and
- Careful siting and design of proposed substation and control room to minimise visibility from external receptor locations.

4.5.15 EIAR Volume 2: Chapter 3: Design Evolution and Alternatives provides a summary of the key iterations undertaken during the course of the design of the proposed development.

4.5.16 The efficacy of the siting and design measures is evident in the ZTV in EIAR Volume 3: Figure 4.5a, the visualisations for viewpoints and assessment in EIAR Volume 4: Technical Appendix 4.7: Viewpoint Analysis.

Mitigation during Construction

Control Building/Substation

4.5.17 The control building and substation would be located within the undulating elevated large-scale landscape within the site, away from exposed slopes and the interior of the Corrieyairack Pass. The buildings would be positioned on a slight break slope in the western half of the site, in the lee of the Meall na h-Aisre summit in order to avoid the necessity for extensive ground modelling or excavations that could form scarring on the hillside. This position would also provide for the screening of the buildings and compound from the CNP and adjoining hill summits. This position also has the benefit of being screened from the majority of neighbouring WLAs and the Corrieyairack Pass.

4.5.18 For the purposes of the LVIA, it has been assumed that the substation would be housed inside a steel portal building that it would be coloured a dark recessive colour so that its prominence is reduced when backclothed in views from neighbouring elevated viewpoints.

Grid Connection

4.5.19 The proposed development would utilise a grid connection into the Melgarve substation, to the south of the site, in the Corrieyairack Pass. This would necessitate cabling down the side of the pass. In order to avoid visual intrusion and potential cumulative effects in respect of

turbines and the Beauly Denny overhead power line, the grid connection would be undergrounded.

General Construction Mitigation Measures

4.5.20 The location and management of construction elements has been carefully considered to minimise environmental effects including potential landscape and visual effects during the construction stage. Additionally, the following general precautionary measures would be adopted in order to minimise landscape and visual effects:

4.5.21 All working areas would be restricted as far as practicable to the specified areas and demarcated to prevent incursion of site plant into non-construction locations:

- Designated haul routes would be utilised that correspond with the longer-term site access tracks;
- Material storage/temporary stockpiles would be retained for the shortest duration practicable and would be sited to avoid visual intrusion to neighbouring receptor locations;
- Peat materials would be placed directly wherever practicable to avoid double handling, reduce vehicle movements, and to reduce potential drying and oxidisation of the peat. Where this is not possible the peat shall be stored in accordance with the EIAR Volume 4: Technical Appendix 2.5: Peat Management Plan and EIAR Volume 4: Technical Appendix 2.1: CEMP;
- Lay down areas, temporary site compounds and temporary mineral extraction areas would be reinstated prior to the commencement of the operational phase of the site to avoid the necessity of retaining restoration materials on site over the operational period and to avoid sustained effects on landscape fabric character and visual amenity; and
- Excavations for turbines foundations, laydown areas and underground cables, including the undergrounded grid connection would be reinstated prior to commencement of the operational phase of the proposed development and all track sides, including floating tacks, would be reinstated with translocated turves to ensure they would blend in with the adjoining (undisturbed) ground in the site.

4.5.22 These measures have been incorporated into a Construction and Environmental Management Plan (EIAR Volume 4: Technical Appendix 2.1).

Temporary Construction Compounds

4.5.23 A total of three temporary construction compounds are proposed:

- One east of Dub Lochan, southeast of Turbine 10;
- One adjacent to the proposed substation compound, southeast of Turbine 13; and
- One west of Turbine 25.

4.5.24 The use of three compounds is intended to limit the necessary size of the compound and reduce length and frequency of on-site vehicle movements. It is also intended that these compounds would be returned to a condition matching that of the adjoining moorland during final construction works at the site.

Concrete for Turbine Bases

4.5.25 Concrete required for the construction of turbine foundations would be produced at a batching plant to be established in a low flat spot between two summits east of Meall na h-Aisre and would be screened from the majority of external receptor locations. In any event, this is a

temporary element and would be removed and restored during final construction works at the site.

Mineral Extraction Areas

4.5.26 It is proposed that aggregate for new tracks would be won from mineral extraction areas at the site. Currently seven temporary mineral extraction areas are proposed (EIAR Volume 3: Figure 2.1a and b). However, the precise location and extent of mineral extraction areas is currently unknown. Of the mineral extraction areas, three are positioned on a relatively flat area between Turbine 5 and Turbine 12, at the western end of the site, and a further three are proposed in the eastern half of the site, two to the north of Creag Mhor, and the third by Turbine 30. The seventh extraction area would be located adjacent to the existing Stronelairg Wind Farm's substation, north of Carn na Gourach. These locations were selected to avoid prominent exposed slopes or ridgelines or highly distinctive topographical forms that might make sympathetic restoration difficult. The distribution of the mineral extraction areas is intended to reduce the length of site haulage of stone and its consequent effects on the character and amenity of the adjoining landscape.

4.5.27 It is intended that the size of any excavation would be limited to avoid formation of large scale unsightly excavations that might prove onerous to restore. Detailed designs and restoration proposals for the mineral extraction areas would be provided to THC and SNH prior to commencement of construction works at the site but are anticipated to comprise a partially backfilled void topped with a maximum of 2 m of selected peat materials and translocated turf (as set out in EIAR Volume 4: Technical Appendix 2.5). Additionally, in order to avoid the establishment of anomalous cut faces on the upper part of the excavation the chamfering of edges of the mineral extraction areas are proposed, the resultant slopes to be covered in restoration substrate and turf to ensure that the pit blends in with the adjoining landscape.

Crane Pads and Laydown Areas

4.5.28 These elements of the proposed development would be kept to a minimum size and would be surfaced to match the track construction. Laydown areas would be removed at the end of the construction phase of the proposed development and the ground reinstated to match adjoining undisturbed ground.

Mitigation during Operation

4.5.29 Mitigation measures relating to the operational phase of the proposed development have been incorporated into the design of the scheme, as described above.

Mitigation during Decommissioning

4.5.30 The decommissioning phase of the proposed development would be of a shorter duration to that of the construction phase, with the dismantling of all above ground structures and reinstatement of disturbed ground, subject to a hydrological assessment. Below ground structures would be left in place to avoid further disturbance. There would therefore be a temporary impact from the activities on site to remove structures, but this would be of relatively short duration. Accordingly, the decommissioning phase is considered to be likely to have a minimal effect on the landscape and visual amenity of the locality. Mitigation measures associated with decommissioning would be agreed during the preparation of the final decommissioning plan, that would require approval of statutory consultees and ECU.

4.6 Assessment of Residual Effects

Residual Construction Effects

Residual Effects on Landscape Fabric during Construction

4.6.1 EIAR Volume 2: Chapter 2: Development Description details the landtake associated with the construction of the proposed development. This indicates that, including temporary disturbance, the proposed development would cause disturbance of, or change to around 24.63 hectares (ha) of the site. However, of that, 4.24 ha would comprise temporary disturbance associated with the establishment of temporary compounds and laydown areas. The remaining 20.39 ha of the proposed development site would be subject to long term alteration associated with turbine bases, crane pads, communications mast, the control room and compound, the substation and compound and site access tracks.

4.6.2 The key change to the fabric of the landscape within the site would relate to some minor localised changes to site topography and losses to characteristic landcover. This is considered to represent a non-significant effect, and one which would be largely reversible upon decommissioning of the proposed development.

Residual Effects on Landscape Character Types during Construction

4.6.3 The effect of construction operations at the development site would be localised to construction locations and would be of relatively short duration and much of the disturbance associated with construction would be ameliorated or removed during subsequent reinstatement activities. Consequently, they are not considered to represent significant residual effects on landscape character either within or in the adjacent landscape.

Residual Effects on Designated Landscapes during Construction

4.6.4 As with predicted effects on landscape character types, effects on designated landscapes within the study area are also not anticipated to be significant. The proposed development would occur outwith designated areas and would therefore have no direct effect on designated landscapes. Whilst indirect effects are likely, primarily as a result of the operation of cranes and erection of turbines, such effects would be localised and would be of a short duration. Consequently, such effects are not considered to represent significant residual effects on adjacent designated landscapes.

Residual Effects on Visual Amenity during Construction

4.6.5 Construction operations at the site would be confined to locations within the site that are screened from the majority of external receptor locations, including settlements, transportation routes and the majority of recreational routes, the exception to this being the operation of site cranes and erection of turbines. However, even these aspects of the construction operations would be of relatively short duration. In this context, residual construction effects on visual amenity are considered unlikely to be significant.

Residual Operational Effects

Residual Operational Effects on Landscape Fabric

4.6.6 No additional effects on landscape fabric would occur during the operational life of the proposed development.

Residual Operational Effects on Landscape Character

4.6.7 With the exception of the Uplands and Glens LCT (CGN2) and Rolling Uplands LCT (INV2), no other landscapes would be subject to direct effects. EIAR Volume 4: Technical Appendix 4.4 outlines the residual effects of the proposed wind farm on landscape character types within the study area. It is apparent from this assessment that significant effects would be restricted to locations within the following LCTs within the Study Area:

- Rugged Massif LCT (LBR7): Much of the LCT would provide no views of the proposed development. However, parts of the Braeroy Forest, including the Carn Dearg, Creag Tharsuin, and Meall a Mheanbh-chruidh which are situated between 12 and 17 km to the southwest of the proposed development and from where up to 38 of the turbines (including around 28 hubs and rotors) would be visible to the northeast. The turbines would partially overlap the Stronelairg Wind Farm array when viewed from these summits. Despite the distance and context of existing development, the proposed development would constitute impacts ranging from slight to moderate, the greatest impact occurring at Meall a Mheanbh-chruidh. Consequently, significant effects would be confined to a small number of summits including Meall a Mheanbh-chruidh and Carn Dearg from where the proposed development would represent a notable localised effect on the remote and wild character at this summit.
- Rolling Uplands LCT (INV2): The majority of this LCT would be subject to no effect. However, localised moderate effects would occur at a small number of summits north of the Stronelairg Wind Farm, significant effects would be experienced at Carn Donnachaidh. The effect of the proposed development would therefore be highly constrained and localised. The proposed development would be a characteristic element of this LCT and generally seen behind and merged with the Stronelairg array.
- Isolated Mountain Plateau LCT (LGN1): Effects on this LCT would be highly variable. Much of this LCT would be unaffected by the proposed development, but significant effects are predicted at the northernmost locations in the LCT (e.g. Carn Liath – Viewpoint 15), where the proposed development would occupy a prominent elevated position in views to the north of this LCT. Whilst not representing a wholly new feature in the backdrop to this landscape, it would introduce notably greater complexity and movement to the landscape.
- Smooth Rounded Hills LCT (LGN2): Despite the relatively widespread theoretical visibility of the proposed development within this LCT, the majority of the LCT would not be significantly affected. Significant effects would be confined to a small number of elevated locations at the northern extents of the Ardverikie Forest, including Beinn Eilde from where the proposed development turbines would increase the influence of wind energy developments and would have a notable impact on the skyline and mountain tops that form an important backdrop to the landscape to the north of the LCT.
- Uplands and Glens (Monadhliaths & Ardverikie) LCT (CGN2): Effects on this would be highly varied. The majority of this extensive LCT would be subject to no effect. However, highly localised significant effects would occur at Geal Charn, adjoining the eastern boundary of the site, at the summit of Dun na Lamh, at a number of summits north-west of Dalwhinnie, and in lower lying positions east of Loch Spey. Such localised effects would generally relate to the interruption of the form and scale of the enclosure and horizon of adjoining straths and the transition between the Monadhliaths and the interior of the adjoining Corrieyairack Pass and the Spey Headwaters.
- Cairngorm Straths (Spey Headwaters) LCT (CGN3): The proposed development would be screened from the majority of this LCT, but localised significant effects are anticipated at

the western end of the LCT, between Loch Spey and Drummin and in the vicinity of Garva Bridge where the proposed developments turbines would introduce movement and large-scale structures to a currently undeveloped moorland skyline that forms a backdrop to the strath.

Residual Operational Effects on Designated Landscapes

4.6.8 None of the designated landscapes within the study area would be subject to direct effects. EIAR Technical Appendix 4.5: Effects on Designated Landscapes, outlines the indirect effects on the special qualities of each designation, and the findings are summarised below.

CAIRNGORM NP

4.6.9 Of the areas that would afford views of the proposed development, the majority of the CNP, including the core Cairngorm massif would be subject to non-significant effects due to a combination of the screening effects of intervening topography, distance and the presence of the existing Stronelairg Wind Farm which forms a developed context in views from elevated positions. Significant localised effects are predicted, however, north of Aberarder Lodge, in the vicinity of Garvamore, and at Dun da Lamh hill fort[24]. The effect on the special qualities at these locations would vary, reflecting the special qualities and sensitivity of each of the locations

4.6.10 Aberarder Lodge is located in the Glen Shirra landscape area of the CNP which is dominated by the sense of seclusion, tranquillity and remoteness and is essentially simple. The proposed development would introduce greater complexity and movement to this still landscape and reduce the sense of seclusion and remoteness.

4.6.11 Garvamore is located in the Upper Glen of the Spey area, on the edge of the CNP and is dominated by the confluence of several glens and side valleys that radiate north and west from Garva Bridge, and these reinforce the sense of a 'pass'. This is further emphasised by the historic Wade Road which extends through the Corrieyairack Pass, linking Fort Augustus with Ruthven Barracks and Dalwhinnie. The proposed development would form a prominent new feature on the skyline to the north of the Pass, with consequent effects on the perceived scale of the pass and would impact upon the character of this part of the historic General Wades route.

4.6.12 Dun da Lamh hill fort is located within the Coul Farmland landscape, which is a transitional landscape that is noted for its sense of 'threshold' between the flat strath floor to the east, and the more upland character of the Spey Headwaters to the west, and which is pronounced and reinforced by the 'gateway' of dramatic topography created by the resistant rock forms and woodland and forest cover. The proposed development would affect the perceived scale of Spey Headwaters and the background context provided by the edge of the Monadhliath Mountains but would represent a highly localised effect.

4.6.13 The proposed development would result in highly localised effects on the character and visual amenity of the CNP subject. Such effects would be experienced in locations on the outer extents of the CNP, away from the most sensitive areas of the CNP). Such effects would not compromise the scale, form and contrast between the different constituent landscapes of the CNP or the prominence and distinctiveness of the mountains and plateaux of the NP. Similarly,

[24] Although it is a Scheduled Monument, the Dun da Lamh Iron Age fort (SM4361) is 7.1 km from the nearest turbine and is not included in the cultural heritage assessment because the long-distance views from and towards the monument are not considered to be of any particular sensitivity or relevance to the fort's cultural significance. Therefore, and in accordance with the methodology employed in EIAR Volume 2: Chapter 5 (Section 5.2.19), SM4361 was excluded from the cultural heritage baseline.

the proposed development would not significantly affect the settled straths and glens within the CNP, its wilder or remote and secluded areas, or its the visual or sensory qualities. On this basis, the effect on the CNP would not be significant overall, and the integrity of the CNP would not be undermined.

GLEN AFFRIC AND CAIRNGORMS NSAS

4.6.14 No significant effects on these designated areas were identified due to a combination of the screening effects of intervening topography, distance and the presence of the existing Stronelairg Wind Farm that forms an existing developed context.

SPECIAL LANDSCAPE AREAS

4.6.15 Of the five SLAs assessed, significant effects were only identified within parts of the Ben Alder, Laggan, and Glen Banchor SLA.

4.6.16 The majority of this designated area would be subject to no effects or non-significant effects. However, significant effects would be experienced at a number of elevated summits and south of the Spey Dam and at Carn Liath. Seen from elevated slopes and summits south of the Spey Dam the proposed development would form a prominent new feature to the north of the Corrieyairack Pass and would affect the form and simplicity of the existing horizon to the north, which is a constituent of the special qualities of the SLA.

4.6.17 However, seen from summits south of Loch Laggan, the proposed development would be seen distantly and in the context of the Stronelairg Wind Farm array. The proposed development's turbines would appear to draw wind farm development closer to receptors but would remain separated from the edge of the Monadhliaths and the Corrieyairack Pass representing a moderate residual effect. Consequently, there would be no significant effects on key characteristics and special qualities of the SLA in this area, such as the remoteness and distinctive topographical features. Whilst it would be inconsistent with the reported contrast between glens and uplands, the presence of the Stronelairg Wind Farm has already altered this context.

4.6.18 Given the relatively limited geographical extent of predicted significant effects within this SLA the proposed development is not considered to undermine the integrity of this designation.

Residual Operational Effects on Wild Land Areas

4.6.19 A total of three WLAs were assessed, comprising:

- Monadhliaths Wild Land Area (WLA No.20);
- Rannoch-Nevis – Mamores-Alder (No.14); and
- Braeroy, Glenshirra and Creag Meagaidh WLA (No.19).

4.6.20 The proposed development is located outwith these WLAs and would therefore have no direct effects on these mapped areas. EIAR Volume 4: Technical Appendix 4.6 contains the detailed assessment of the indirect residual effects on these WLAs which was undertaken in accordance with SNH's (2017) consultation on draft guidance: Assessing impacts on Wild Land Areas – technical guidance. From these assessments it is apparent that no significant effects on the wild land qualities or attributes is anticipated.

Residual Operational Effects on Visual Amenity

Settlements

4.6.21 The proposed development would be screened from all local settlements and so there would be no effect on the amenity of such settlements.

Transportation Routes

4.6.22 A9 from Calvine to Auchnahallin: Of the 105 kms of this route within the study area, the proposed development would be theoretically visible from north-bound vehicles for approximately 0.04 km of the route, south of Dalwhinnie. Whilst the blade tips of up to 8 turbines would be theoretically visible, field reconnaissance suggests that the turbines would not be visible due to the screening effect of intervening topography, woodland and forestry at the head of Loch Ericht.

4.6.23 A833, north of Glen Urquhart: Views of the very end of two blade tips of the proposed development's turbines would be provided from southbound vehicles on elevated sections of this route as it descends into Glen Urquhart. The turbines would be seen at a distance of 30 km and so would not be discernible in actuality.

4.6.24 A889 Dalwhinnie to Drumgask Farm: Of this 13.76 km route, the proposed development would theoretically be visible from 0.01 km of the route by Wede Bridge. However, the turbines would not be visible due to the screening effect of intervening topography, woodland and forestry at the head of Loch Ericht.

4.6.25 A862 from Scaniport to Fort Augustus: The proposed development would be glimpsed from southbound vehicles on a 180 m section of this 47 km route by Loch Ceo Glais. The turbines would appear as a small number of blade tips (ends) and would be seen at a distance of over 27 km and would therefore not be discernible.

4.6.26 On the basis of this analysis, the proposed development would not result in appreciable effects on the amenity of transportation routes within the study area.

Recreational Routes

4.6.27 Great Glen Way: The proposed development would visible intermittently from a total of 4.98 km of the route. This includes a short section of the high route option northeast of Invermoriston, on the eastern flank of Creag Dhearg (around 20 km to the northwest of the proposed development), and between Corryfoyness and Urquhart Bay (over 29 km to the north of the proposed development, and between Creag na h-Iolaire and Bunloit (around 25 km to the north of the proposed development). The ZTV in EIAR Volume 3: Figure 4.5a indicates that theoretical views of a small number of blade tips would be provided from these locations. However, only the very ends of blade tips would be visible, and at the stated distances would not be readily discernible, and so would not affect the visual amenity of this route.

4.6.28 National Cycleway 78: See findings in respect of the B862, above.

4.6.29 In addition to the preceding routes, there are a small number of other important recreational rights of way including Corrieyairack Pass between Laggan and Ardachy Road, and the footpath between Glen Spean and the Corrieyairack Pass, through Glen Roy.

4.6.30 Corrieyairack Pass between Laggan and Ardachy Road: Views of the proposed development from this route would be confined to locations in the vicinity of Garvamore and Garva Bridge (Ref. Viewpoint 10), and immediately west of Melgarve. EIAR Volume 3: Figure 4.17d depicts the operational view of the proposed development from Garva Bridge, from where 16 of the

proposed developments turbines (8 blade tips and 8 hubs/rotors) would be visible on the skyline around 3.8 km to the north, their prominence constituting a **major** residual effect. Similarly, viewed from west of Melgarve, the proposed development would also be seen on the skyline around 3.6 km to the north, and appear as 6 turbines (4 hubs/rotors and 2 blade tips. In both locations, the proposed development would be seen through the wirescape of the Beauly Denny overhead line.

4.6.31 Glen Spean and the Corrieyairack Pass through Glen Roy: The majority of this route would be shielded from views of the proposed development by intervening topography thereby preventing adverse effects in the visual amenity of most of this route, but as it approaches the Corrieyairack Pass (east of the Falls of Roy) restricted views of up to 14 turbines (9 blade tips and 5 hubs/rotors) would be visible at a distance of 11.8 km from this location. The proposed development would be seen to the right of Creag Mhor and would introduce movement and a wholly new element to the skyline above the Corrieyairack Pass and would represent a moderate residual effect. As the route progresses eastwards into the Corrieyairack Pass, east of Loch Spey, and exits the WLA, the closer proximity and consequent increased prominence of the proposed development would in increase the residual effect to a localised **Major** effect, which would be significant, but localised, the majority of the route being entirely unaffected by the proposed development.

Summits

4.6.32 The LVIA assesses effects on landscape and visual effects on a number of summits, including:

- Meal Fuar-Monaidh (Graham) – represented by Viewpoint 1;
- Carn a'Chuillin (Corbet) – represented by Viewpoint 2;
- Corrieyairack Hill (Corbett) – represented by Viewpoint 3;
- Carn Dearg – west of Gleann Balloch (Munro) – (Munro) – represented by Viewpoint 6;
- Geal Charn[25] – Ardevrikie Forest (Munro) – represented by Viewpoint 7;
- Ben Alder (Munro) – represented by Viewpoint 8;
- Meall Chuaich – Gaik Forest (Munro) – represented by Viewpoint 9;
- Geal Charn[25] (Munro) – represented by Viewpoint 12;
- Carn Dearg (Corbett) -represented by Viewpoint 13;
- Carn Liath (Munro) – represented by Viewpoint 15;
- Meall Cruaidh (Corbetts) – represented by Viewpoint 18;
- A'Mharconaich (Munro) represented by Viewpoint 19;
- Carn na Gaim (Munro) – represented by Viewpoint 20;
- Beinn Teallach (Corbett) – represented by Viewpoint 21; and
- Leathad an Taobhain (Corbett) -represented by Viewpoint 22.

4.6.33 Of these summits, significant effects are predicted at Geal Charn (1.6 km from the proposed development) and Carn Liath (approximately 8.7 km from the proposed development).

4.6.34 EIAR Volume 3: Figures 4.19f and 4.19g depict the operational view of the proposed development from Geal Charn, from where 39 turbines (5 blade tips and 34 hubs/rotors) would

[25] Note that there are two separate summits with the same name of Geal Charn. Refer to EIAR Volume 3: Figure 4.5a to distinguish between the two summits.

be visible from this summit and would constitute a substantial impact and **major** effect on visual amenity.

4.6.35 EIAR Volume 3: Figure 4.22f and 4.22g illustrate the operational view of the proposed development view from Carn Liath. All 39 of the proposed turbines would be visible from this location (hubs/rotors). The proposed development would extend across a large proportion of the view. The proposed development would, however, be seen in the context of the existing Stronelairg Wind Farm. The proposed development would extend the horizontal extent of turbines to the north east of the view and would bring turbines closer to the viewpoint, thereby resulting in a **major** effect on visual amenity at this summit.

Residual Cumulative Effects

Residual Cumulative Effects on Landscape Fabric

4.6.36 Cumulative effects on landscape fabric would be negligible. Whilst some ongoing construction at the Stronelairg Wind Farm site was evident during the preparation of the LVIA, it is anticipated that these works would be completed by the time that the proposed development is constructed. Whilst other construction works could be underway within the study area, their distance and visual separation means that significant cumulative effects on landscape fabric are considered to be highly improbable.

Residual Cumulative Operational Effects on Landscape Character

4.6.37 EIAR Volume 4: Technical Appendix 4.4 outlines the residual cumulative effects of the proposed development on landscape character types within the study area. It is apparent from this assessment that significant cumulative effects would be restricted to locations within the following LCTs within the Study Area:

- Rugged Massif LCT (LBR7): Much of the LCT would not be subject to cumulative views. However, a small number of summits would be subject to significant cumulative effects. These would include Meall a Mheanbh-chruidh from where the proposed development would represent a notable, but localised increase in the prominence and influence of wind farm developments that are visible to the north, within the Monadhliaths. This would affect the remote and wild character at these summits.
- Rolling Uplands LCT (INV2): The majority of this LCT would be subject to no cumulative effects. However, significant cumulative effects would be experienced at Carn Donnachaidh from where the proposed development would be seen to the south of the Stronelairg Wind Farm array and would result in a notable lateral extension of this development, to the south-southwest of this summit. However, this represents a highly constrained and geographically localised cumulative effect on the character of this LCT.
- Isolated Mountain Plateau LCT (LGN1): Cumulative effects would be highly variable in this LCT. Much of this LCT would be subject to no cumulative effects as a result of the proposed development, but localised significant effects would occur at the northernmost sections of the LCT. Whilst not representing a wholly new feature in the backdrop to this landscape, the proposed development would introduce a notably more prominent wind farm to the landscape. Elsewhere, non-significant cumulate effects would be experienced at more distant summits such as Puist Coire Ardair and Ben Alder.
- Smooth Rounded Hills LCT (LGN2): Despite the relatively widespread theoretical cumulative visibility of the proposed development within this LCT, the majority of the LCT would not be significantly affected. Significant cumulative effects would be confined to a small number of elevated locations at the northern extents of the Ardverikie Forest, including Beinn Eilde. The proposed development would significantly increase the

prominence and influence of wind farms, thereby reducing the perceived wildness of this part of the LCT. However, the majority of the LCT would not be significantly affected.

- Uplands and Glens (Monadhliaths & Ardverikie) LCT (CGN2): Effects on this would be highly varied. The majority of this extensive LCT would be subject to no effect. However, highly localised **major** (significant) effects would occur at Geal Charn (adjoining the eastern boundary of the site) and **major/moderate** (significant) effects would also be experienced east of Loch Spey, at Dun na Lamh, and at a number of summits northwest of Dalwhinnie. In contrast, locations east of Glen Truim effects would generally be subject to moderate effects which are not considered to be significant. The localised significant effects would relate to effects on the form and scale of the enclosure and horizon of adjoining straths and the transition between the Monadhliaths and the interior of the adjoining Corrieyairack Pass and the Spey Headwaters. Such localised effects would generally relate to the relative prominence and proximity of the proposed development and Stronelairg Wind Farm, the proposed development often appearing to the south and in front of the Stronelairg Wind Farm, as demonstrated in Viewpoint 12 (EIAR Volume 3: Figures 4.19a to 4.19i).

Residual Cumulative Operational Effects on Designated Landscapes

4.6.38 EIAR Volume 4: Technical Appendix 4.5 describes the predicted cumulative effects on designated landscapes.

Cairngorm NP

4.6.39 The majority of the CNP would be subject to no cumulative effects as a result of the proposed development. Of the relatively small number of areas that would afford views of the proposed development, including the core Cairngorm massif, cumulative effects attributable to the proposed development would be moderate to moderate/minor due to its distance relative to other wind farms, and proximity to the existing Stronelairg array. Significant localised effects would be experienced at a small number of summits adjoining the western boundary of the CNP (e.g. at Geal Charn and Carn Dearg). Such effects would affect the amenity of recreational receptors and perceptions of the wildness and natural forms. Whilst the proposed development would often be seen in the context of the existing Stronelairg Wind Farm array, it would often be more prominent or form a notable lateral extension to this existing array. In locations within the Adverikie and Spey Headwaters areas of the CNP, the proposed development would introduce turbines to aspects currently without such features. However, given the geographically limited extent of the CNP subject to potentially significant cumulative effects, their location on the outer extents of the CNP where there is already the influence from existing wind farm developments, the effects on the CNP overall is not considered to be significant, and its integrity would not be undermined.

Glen Affric and Cairngorms NSAs

4.6.40 No significant cumulative effects are predicted on these designated areas due to a combination of the screening effects of intervening topography, the relative distance to cumulative schemes. Where cumulative effects occur, they would primarily arise from the proposed development's intervisibility with Stronelairg Wind Farm turbines and would not be significant.

Special Landscape Areas

4.6.41 Of the five SLAs assessed, significant cumulative effects were only identified within parts of the Ben Alder, Laggan, and Glen Banchor SLA.

4.6.42 Much of this SLA would be subject to no cumulative effects. However, significant cumulative effects are predicted at the summit of Carn Liath where the proposed development would represent a notable increase in the prominence of existing/consented developments and a significant cumulative effect in respect of existing, consented and proposed wind farm developments.

4.6.43 Given the relatively limited geographical extent of predicted significant effects within this SLA the proposed development is not considered to undermine the integrity of this designation. Consequently, there would be no significant effects on key characteristics and special qualities of the SLA in this area, such as the remoteness and distinctive topographical features.

Residual Cumulative Operational Effects on Visual Amenity

Settlements

4.6.44 The proposed development would be screened from all local settlements and so there would be no cumulative effects on the amenity of such settlements.

Transportation Routes

4.6.45 The proposed development would not be discernible from the A9, A833, A889. Consequently, no cumulative effects on the visual amenity of these routes would be attributable to the proposed development. Therefore, it is concluded that there would be no significant effects on the amenity of transportation routes within the study area.

Recreational Routes

4.6.46 Great Glen Way and National Cycle Route 78: No discernible views of the proposed development would be provided from either the Great Glen Way or National Cycleway 78, and so no cumulative effects are predicted on these routes.

4.6.47 Corrieyairack Pass between Laggan and Ardachy Road: No simultaneous cumulative visibility would occur along this route, but sequential cumulative visibility would be experienced by north-west bound walkers and cyclists who would initially see the proposed development at Garva Bridge and then again west of Melgarve, the proposed developments turbines outcropping on the skyline between 3.8 km and 3.6 km to the north of receptors. As receptors progress northwards along the route the proposed development would be screened from view, but views of the existing Beinneun, Millennium and Millennium South, and Bhlaraidh turbines revealed as the route descends towards the Ardachy Road, these developments appearing on the opposite side of the Great Glen at distances of between 12 km and 15 km. Given the relative proximity and prominence of the proposed development in views from a section of this route currently without such features, the magnitude of cumulative impact would be moderate, and the sequential effect would be **major/moderate** and significant.

4.6.48 Glen Spean and the Corrieyairack Pass through Glen Roy: No cumulative visibility would be provided due to the screening effect of intervening topography, and so no cumulative effects would be experienced on this route.

Summits

4.6.49 Given the elevated nature of these receptor locations, cumulative visibility is considered an established element in receptors views. The majority of development is located in the Monadhliaths and to the west of the Great Glen. A key cumulative context for the proposed development is that of the Stronelairg turbines. The proposed development has been designed to be consistent with the typology and layout of this existing development and to avoid

anomalous elevated slopes or summits that would be incongruous in views from elevated summits.

4.6.50 Of the 15 summits assessed, significant cumulative effects are predicted at Geal Charn and Carn Liath.

4.6.51 Viewed from Geal Charn, the proposed development would be viewed in combination with turbines at Blharaidh, Stronelairg and Dunmaglass, the principal cumulative context being the Stronelairg array. The proposed development will notably increase the spread of wind farm development across the middle ground of the view, extending turbines across a large proportion of the view. The addition of Dell Wind Farm would further increase the developed context. The proposed development would constitute a substantial change and **major** cumulative effect.

4.6.52 Viewed from Carn Liath the proposed development would increase the prominence of wind energy development, extending effects associated with Stronelairg southwards towards this summit and resulting in moderate impacts and **major/moderate** residual cumulative effects at this summit.

4.7 Summary

4.7.1 The preceding LVIA was undertaken by an experienced and competent Landscape Architect and in accordance with an agreed scope and methodology. It considered the current landscape and visual baseline context of the proposed development, including cumulative context, and identified key sensitive receptors to be addressed in the assessment.

4.7.2 The LVIA identifies key impact generators associated with the construction and operation of the proposed development and prioritises them for mitigation in order to ameliorate potential for significant effects on the landscape and visual resource of a 40 km radius study area.

4.7.3 The design of the proposed development was informed by a number of technical, commercial and environmental drivers. Section 4.5 of the LVIA sets out the key priorities adopted in order to mitigate potential landscape and visual effects and reflects on the performance of the proposed development relative to the Criteria in Section 4 of THC's SG.

4.7.4 Section 4.6 of the LVIA contains a summary of the assessment findings in:

- TA4.4: Effects on Landscape Character Types;
- TA4.5: Effects on Designated Landscapes;
- TA4.6: Wild Land Impact Assessment; and
- TA4.7: Viewpoint Assessment.

4.7.5 Table 4.8 summarises the significant landscape and visual effects identified by the LVIA for construction and operational phases of the proposed development and Table 4.9 summarises the cumulative effects. It is apparent from this analysis that significant effects would be geographically limited in extent and would not affect nationally important landscape or visual resource.

4.7.6 The decommissioning phase of the proposed development would be of a shorter duration to that of the construction phase, with the dismantling of all above ground structures and reinstatement of disturbed ground, subject to a hydrological assessment. Below ground structures would be left in place to avoid further disturbance. There would therefore be a temporary impact from the activities on site to remove structures, but this would be of relatively short duration. Accordingly, the decommissioning phase is considered to be likely to

have a minimal effect on the landscape and visual amenity of the locality. Mitigation measures associated with decommissioning would be agreed during the preparation of the final decommissioning plan, that would require approval of statutory consultees and ECU.

Table 4.8: Summary of Potential Significant Effects of the Proposed Development

Likely Significant Effect	Mitigation Proposed	Means of Implementation	Outcome / Residual Effect
Construction			
Effects on landscape fabric	See construction mitigation in Section 4.5	Construction mitigation measures would be implemented as part of the CEMP which would be required to be agreed as a condition of consent.	No significant effect
Effects on landscape character	Mitigation embedded as part of the siting and design, as described in Section 4.5 and in EIAR Volume 2: Chapter 3: Design Evolution and Alternatives	Embedded in the siting and design of the proposed development	No significant effect
Effects on designated landscapes	Mitigation embedded as part of the siting and design, as described in Section 4.5 and in EIAR Volume 2: Chapter 3: Design Evolution and Alternatives	Embedded in the siting and design of the proposed development	No significant effect
Effects on visual receptors including walkers and hill walkers	Mitigation embedded as part of the siting and design, as described in Section 4.5 and in EIAR Volume 2: Chapter 3: Design Evolution and Alternatives	Embedded in the siting and design of the proposed development	No significant effect
Operation			
Effects on landscape character areas including: ▪ Rugged Massif LCT (LBR7): ▪ Rolling Uplands LCT (INV2); ▪ Isolated Mountain Plateau LCT (LGN1); ▪ Smooth Rounded Hills LCT (LGN2); ▪ Uplands and Glens (Monadhliaths & Ardverikie) LCT (CGN2); and ▪ Cairngorm Straths (Spey Headwaters) LCT (CGN3).	Mitigation embedded as part of the siting and design, as described in Section 4.5 and in EIAR Volume 2: Chapter 3: Design Evolution and Alternatives	Embedded in the siting and design of the proposed development	Significant effects highly localised and not considered to undermine the integrity of LCTs.
Effects on designated landscapes: ▪ Cairngorm NP	Mitigation embedded as part of the siting and design, as described in Section 4.5 and in EIAR Volume 2: Chapter 3:	Embedded in the siting and design of the proposed development	Significant effects highly localised and not considered to significantly affect or undermine the integrity of designations.

Table 4.8: Summary of Potential Significant Effects of the Proposed Development			
Likely Significant Effect	**Mitigation Proposed**	**Means of Implementation**	**Outcome / Residual Effect**
▪ Ben Alder, Laggan, and Glen Banchor SLA.	Design Evolution and Alternatives		
Effects on Wild Land	Mitigation embedded as part of the siting and design, as described in Section 4.5 and in EIAR Volume 2: Chapter 3: Design Evolution and Alternatives	Embedded in the siting and design of the proposed development	No significant effects on the wild land qualities of WLAs.
Transportation routes	Mitigation embedded as part of the siting and design, as described in Section 4,5 and in EIAR Volume 2: Chapter 3: Design Evolution and Alternatives	Embedded in the siting and design of the proposed development	No significant effects
Effects on hill walkers and walkers	Mitigation embedded as part of the siting and design, as described in Section 4.5 and in EIAR Volume 2: Chapter 3: Design Evolution and Alternatives	Embedded in the siting and design of the proposed development	Significant effects would be confined to the summits of Geal Charn and Carn Liath and within the Corrieyairack Pass at Garva Bridge, by Melgarve and east of Loch Spey

Table 4.9: Summary of Potential Significant Cumulative Effects			
Likely Significant Cumulative Effect	**Mitigation Proposed**	**Means of Implementation**	**Outcome / Residual Effect**
Construction			
Cumulative effects on landscape fabric	Mitigation embedded as part of the siting and design, as described in Section 4.5	Construction mitigation measures would be implemented as part of the CEMP which would be required to be agreed as a condition of consent.	No significant cumulative effect
Cumulative effects on landscape character	Mitigation embedded as part of the siting and design, as described in Section 4.5 and in EIAR Volume 2: Chapter 3: Design Evolution and Alternatives	Embedded in the siting and design of the proposed development	No significant cumulative effect
Cumulative effects on designated landscapes	Mitigation embedded as part of the siting and design, as described in Section 4.5 and in EIAR Volume 2: Chapter 3: Design Evolution and Alternatives	Embedded in the siting and design of the proposed development	No significant cumulative effect
Cumulative effects on visual receptors including walkers and hill walkers	Mitigation embedded as part of the siting and design, as described in Section 4.5 and in EIAR Volume 2: Chapter 3:	Embedded in the siting and design of the proposed development	No significant cumulative effect

Table 4.9: Summary of Potential Significant Cumulative Effects			
Likely Significant Cumulative Effect	**Mitigation Proposed**	**Means of Implementation**	**Outcome / Residual Effect**
	Design Evolution and Alternatives		
Operation			
Cumulative effects on landscape character areas including: ▪ Rugged Massif LCT (LBR7): ▪ Rolling Uplands LCT (INV2); ▪ Isolated Mountain Plateau LCT (LGN1); and ▪ Smooth Rounded Hills LCT (LGN2).	Mitigation embedded as part of the siting and design, as described in Section 4.5 and in EIAR Volume 2: Chapter 3: Design Evolution and Alternatives	Embedded in the siting and design of the proposed development	Significant cumulative effects highly localised and not considered to undermine the integrity of LCTs.
Cumulative effects on designated landscapes: ▪ Cairngorm NP ▪ Ben Alder, Laggan, and Glen Banchor SLA.	Mitigation embedded as part of the siting and design, as described in Section 4.5 and in EIAR Volume 2: Chapter 3: Design Evolution and Alternatives	Embedded in the siting and design of the proposed development	Significant cumulative effects highly localised and not considered to significantly affect or undermine the integrity of designations.
Cumulative effects on Wild Land Areas	Mitigation embedded as part of the siting and design, as described in Section 4.5 and in EIAR Volume 2: Chapter 3: Design Evolution and Alternatives	Embedded in the siting and design of the proposed development	No significant cumulative effects on the wild land qualities of WLAs.
Cumulative effects on transportation routes	Mitigation embedded as part of the siting and design, as described in Section 4,5 and in EIAR Volume 2: Chapter 3: Design Evolution and Alternatives	Embedded in the siting and design of the proposed development	No significant cumulative effects
Cumulative effects on hill walkers and walkers	Mitigation embedded as part of the siting and design, as described in Section 4.5 and in EIAR Volume 2: Chapter 3: Design Evolution and Alternatives	Embedded in the siting and design of the proposed development	Significant cumulative effects would be confined to the summits of Geal Charn and Carn Liath and significant sequential cumulative effects are predicted along the Corrieyairack Pass.