



Wind Power North Two Limited

Balblair Wind Farm

Environmental Impact Assessment Report (Volume 2)

Chapter 6 – Landscape and Visual Impact Assessment

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CONTENTS

6	LANDSCAPE AND VISUAL IMPACT ASSESSMENT	6-1
6.1	Introduction	6-1
6.2	Relevant legislation, policy and guidance	6-2
6.3	Consultation undertaken	6-4
6.4	Approach to Assessment	6-7
6.5	Existing environment	6-15
6.6	Embedded mitigation.....	6-31
6.7	Predicted effects.....	6-32
6.8	Cumulative effects.....	6-81
6.9	Summary of effects.....	6-99
6.10	References	6-108

TABLES

Table 6.1:	Summary of consultation responses relevant to this chapter	6-4
Table 6.2:	Receptor/matters scoped out of further assessment.....	6-9
Table 6.3:	Receptor/matters scoped into further assessment	6-11
Table 6.4:	Assessment Viewpoints	6-29
Table 6.5:	Summary of Landscape Character Sensitivity	6-38
Table 6.6:	Assessment of Effects on Landscape Character During Construction.....	6-41
Table 6.7:	Assessment of Effects on Landscape Character During Operation	6-49
Table 6.8:	Summary of Operational Effects on Representative Viewpoints	6-56
Table 6.9:	Summary of Operational Effects on Settlements.....	6-62
Table 6.10:	Summary of Operational Effects on Core Paths.....	6-67
Table 6.11:	Summary of Operational Effects on Roads, Railways, Promoted Tourist Routes and Cycle Routes.....	6-77
Table 6.12:	Other Wind Farms within 20 km of the proposed Development.....	6-81
Table 6.13:	Summary of In-Combination Visual Effects by Viewpoint Location of Operational and Consented Schemes.....	6-90
Table 6.14:	Summary of In-Combination Visual Effects by Viewpoint Location of In Planning and Scoping Schemes	6-91
Table 6.15:	Summary of Cumulative Effects on Representative Viewpoints.....	6-94
Table 6.16:	Summary of effects	6-103

6 LANDSCAPE AND VISUAL IMPACT ASSESSMENT

6.1 Introduction

6.1.1 This chapter presents a Landscape and Visual Impact Assessment (LVIA) of the proposed Development. The purpose of an LVIA when undertaken in the context of an Environmental Impact Assessment (EIA) is to identify any likely significant landscape and visual effects arising as a result of the proposed Development. An LVIA must consider both:

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

Therefore, this LVIA considers the potential effects of the proposed Development upon:

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

6.1.2 In this chapter, landscape and visual effects are assessed separately although the procedure for assessing each of these is closely linked and follows The Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3) (Landscape Institute and the Institute for Environmental Management and Assessment, 2013).

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

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

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

- to identify, evaluate and describe the baseline visual context of the Site and its surroundings with a focus on both specific views and the more general visual amenity experienced by people who have views of the Site;
- to determine the nature of the visual receptor (i.e. the sensitivity of the viewpoint or person whose visual amenity is affected) through a consideration of the susceptibility of the viewpoint/person to the type of development proposed and any values associated with either the viewpoint or visual amenity experienced;

- to identify and describe any impacts of the development in so far as they affect a viewpoint or views experienced;
 - to evaluate the nature of the visual effects (i.e. the magnitude, duration and reversibility of the effect);
 - to identify and describe mitigation measures that have been adopted to avoid, reduce and compensate for visual effects;
 - to evaluate the relative significance of residual visual effects; and
 - to determine which visual effects, if any, are significant.
- 6.1.5 The LVIA also considers any cumulative landscape and visual effects which may arise as a result of the proposed Development in conjunction with other wind farm developments.
- 6.1.6 The main LVIA presented in this chapter is supported by figures in EIA Report **Volume 3a**, visualisations in **Volume 3b** and **3c** and technical appendices in **Volume 4**.
- 6.1.7 The location of the proposed Development and the initial study area for the LVIA is illustrated on **Figure 6.1**. The Site location and detailed 20 km LVIA study area is illustrated on **Figure 6.2**.
- 6.1.8 For reference, other operational, consented and proposed wind farms within the initial 45 km LVIA study area which are referred to throughout this chapter are illustrated on **Figure 6.28** and **Figure 6.29** shows other wind farms within 20 km.
- 6.1.9 This chapter is structured as follows:
- Relevant legislation, planning policy and guidance;
 - Consultation undertaken;
 - Approach to Assessment;
 - Existing environment;
 - Embedded mitigation;
 - Predicted effects;
 - Additional mitigation;
 - Cumulative effects;
 - Summary of effects; and
 - References.

6.2 Relevant legislation, policy and guidance

European Landscape Convention, Adopted 2000

- 6.2.1 The European Landscape Convention (ELC) is the first international convention to focus specifically on the landscape as a resource in its own right. The convention promotes landscape protection, management and planning, as well as European co-operation on landscape issues. Signed by the UK Government in February 2006, the ELC became binding from March 2007. It applies to all landscapes, towns and villages, as well as open countryside; the coast and inland areas; and ordinary or even degraded landscapes, as well as those that are afforded protection.
- 6.2.2 The UK Government has stated that it considers the UK to be compliant with the ELC's requirements and in effect the principal requirements of the ELC are already enshrined

in the existing suite of national policies and guidance on the assessment of landscape and visual effects.

6.2.3 The ELC defines landscape as:

“An area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.” (Council of Europe 2000)”

6.2.4 It is important to recognise that the ELC does not require the preservation of all landscapes although landscape protection is one of the core themes of the convention. Equally important though is the requirement to manage and plan future landscape change.

6.2.5 The ELC highlights the importance of developing landscape policies dedicated to the protection, management and planning of landscapes. In this regard, NatureScot and the Highland Council (THC) have a suite of landscape character assessment and landscape sensitivity studies which enables decisions to be made with due regard to landscape character as promoted by the ELC.

Planning policy

6.2.6 The following currently adopted planning policy documents were reviewed as part of the desk study for the LVIA:

- National Planning Framework for Scotland 4 (NPF4) (2023);
- Planning Advice Note 60. Planning for Natural Heritage (2000);
- Highland-wide Local Development Plan (HwLDP) (2012); and
- Caithness and Sutherland Local Development Plan (CaSPlan) (2018).

6.2.7 A full and detailed consideration of national and local planning policy is contained in **Chapter 5: Planning Policy and Legislation** of this EIA Report and in the accompanying Planning Statement.

6.2.8 It is noted however that there are a number of policies of particular relevance to landscape and visual matters. In particular, these include Policy 11 of NPF4 and specifically section (e) ii, which states that *‘Where impacts are localised and/or appropriate design mitigation has been applied, they will generally be considered to be acceptable’*. Whilst there is no definition of ‘localised’ set out in NPF4, it is considered that localised relates to not just the distance to which significant effects would occur, but also the type of landscape, the scale of the proposed Development and the number of receptors who may be impacted by significant effects. In this context it is considered that the proposed Development only gives rise to localised landscape and visual effects, and this is demonstrated in the assessments set out in subsequent sections of this chapter. It is also considered that appropriate design mitigation has been applied, which is discussed in the wider application submission material.

Guidance

6.2.9 The following supplementary guidance and technical reports which provide the evidence base for current planning policy were also reviewed:

- Highland Council Onshore Wind Supplementary Guidance (2016) and Addendum (2017) (OWESG);

- Assessment of Highland Special Landscape Areas (2011).

6.3 Consultation undertaken

6.3.1 **Table 6.1** provides a summary of the consultation activities undertaken in support of the preparation of this assessment.

Table 6.1: Summary of consultation responses relevant to this chapter

Consultee	Issues Raised	Response/Action Take
Energy Consents Unit		
Viewpoints and Visualisations	The Scottish Ministers recommend that the final list of viewpoints and visualisations should be agreed following discussion between the Company, Historic Environment Scotland, NatureScot and the Highland Council.	<p>Additional LVIA viewpoint requests made in scoping responses from The Highland Council (THC) and NatureScot (NS) were reviewed. An additional LVIA viewpoint at Ord Hill has been added as requested by THC.</p> <p>An additional dark sky visualisation has been prepared from LVIA Viewpoint 10 – Struie Viewpoint as requested by THC and NS.</p> <p>A wireline has been provided from Ben More Assynt as requested by THC.</p> <p>LVIA Viewpoint 4 – Ardgay has been relocated as requested by NS.</p> <p>The final list of LVIA viewpoints was confirmed in emails to both THC and NS dated 15 October 2024.</p>
Highland Council		
Photomontages	...should follow the Council's Visualisation Standards	Visualisations to Highland Council Visualisation Standards are provided in Volume 3c of the EIA Report.
	All elements of the proposal are to be rendered into photomontages	The wind turbines will be the most conspicuous element of the proposed development and other elements such as tracks, BESS, substation etc. will be relatively diminutive in views from many of the proposed LVIA viewpoints. Therefore, other project elements have been modelled into photomontages from LVIA viewpoints situated within 5 km of the proposed development where such elements would be visible.

Consultee	Issues Raised	Response/Action Take
Methodology	The LVIA chapter of the EIA Report should clearly set out the methodology	The LVIA methodology is set out in Technical Appendix 6.1 in Volume 4 .
Singular and cumulative effects	The LVIA should contain an assessment of singular and cumulative effects for each of the viewpoints following this methodology. The logic of the Applicant's assessment must be clearly and readily understood.	An assessment of cumulative effects is provided in Section 6.8 .
Assessment of recreational routes	When assessing the impact on recreational routes please ensure that all core paths, rights of way, national cycle network, and long distance trails are assessed.	A preliminary assessment of all routes within the 20 km detailed LVIA study area has been included at Technical Appendix 6.4 in Volume 4 . Those routes where receptors have the potential to experience significant effects have been assessed in detail in Section 6.7 .
OWESG Criterion	Assessment of the proposal against the criterion set out in the Council's OWESG at pages 19 and 20 to be included within the LVIA chapter of the EIA Report.	An assessment of the proposal against the Criterion is included within the Planning Statement that accompanies the application.
Landscape Impact Assessment	The Landscape Impact Assessment's analysis should not only focus on potential impacts on individual Landscape Character Types and individual Units, but also on the local landscape character composition within which these elements come together to define a particular sense of Place.	The LVIA includes an assessment of effects on landscape character in accordance with The Guidelines for Landscape and Visual Impact Assessment Third Edition (GLVIA3).
Designated landscapes	An assessment of the impacts of the proposal on landscape should assess the impacts on any landscapes designated at a national and local scale.	An assessment has been made on both nationally and locally designated landscapes in Section 6.7 .
Effects of aviation lighting	Assessment of the likely effects of aviation lighting should include consideration of darkness hours during winter months – noting that these hours will include not only night-time but also some periods when receptors may still be	The assessment of the effects of aviation lighting has been carried out in accordance with Annex 1 NatureScot pre-application guidance for onshore wind farms and NatureScot Guidance on Aviation Lighting Impact Assessment.

Consultee	Issues Raised	Response/Action Take
	going about their daytime activities.	
Residential visual amenity assessment	The residential visual amenity impact should be assessed for all properties, settlements, housing groups within 2 km of the turbines within the LVIA.	A 2 km study area has been used for the Residential Visual Amenity Assessment (RVAA) as illustrated at Figure 6.6.1 that accompanies the RVAA at Technical Appendix 6.6 .
Additional viewpoint request	The Council requests an additional LVIA viewpoint from Ord Hill.	An additional LVIA viewpoint from Ord Hill has been included at LVIA Viewpoint 16 .
Special Landscape Areas	The scope of the assessment is generally acceptable, however, the Council do not at this stage agree that effects on Special Landscape Areas can be scoped out. Although it is noted that the nearest is 13 km, we do have experience of significant effects occurring at this distance. At this stage it is considered that further assessment is required to check whether there will be any significant effect in relation to the Special Qualities of the SLAs within the 20 km study area.	All Special Landscape Areas within the detailed 20 km LVIA study area have been assessed in Technical Appendix 6.3 . Those SLAs which have the potential to experience significant effects have been assessed in detail in Section 6.7 .
NatureScot		
Dornoch Firth National Scenic Area	Concern on significant adverse and cumulative effects on the special landscape qualities (SLQs) of the Dornoch Firth NSA.	An Assessment of Effects on the Special Landscape Qualities (AESLQ) of the Dornoch Firth NSA identified by NatureScot has been included at Technical Appendix 6.7 to the LVIA chapter. The methodology follows the Guidance for AESLQ – Consultative Draft published by NatureScot.
Cumulative effects	Cumulative day time and night-time interactions with Garvary wind farm (in-planning), approximately 2.2 km north of the Site would be a key consideration of the cumulative impact assessment (CLVIA). This should be presented within the AESLQ, should it be deemed that this is required.	An additional dark sky visualisation from LVIA Viewpoint 10 – Struie Viewpoint has been included in Volume 3b to allow consideration of this.

Consultee	Issues Raised	Response/Action Take
Aviation lighting	Outside of Ardgay and Bonar Bridge, landscapes within the study area have relatively low baseline lighting levels with coastal qualities and scattered settlement. We consider that lighting affects both landscape character and visual receptors. The lighting assessment should be carried out in accordance with Annex 1 NatureScot pre-application guidance for onshore wind farms.	The assessment of visible aviation lighting has been carried out in accordance with Annex 1 of NatureScot pre-application guidance for onshore wind farms.
Viewpoint 4 – Ardgay	Viewpoint 4 Ardgay is located within the northern edge of the Dornoch Firth NSA. We suggest an additional / alternative viewpoint from Ardgay / Dornoch Firth NSA - exploring visibility from the western settlement edge at grid reference NH597903.	LVIA Viewpoint 4 in Volume 3b and 3c has been relocated to this location.
Additional viewpoint request	We request an additional night-time visualisation from Viewpoint 10 - Struie Viewpoint on B9176 to gain a better understanding of potential cumulative night-time effects on the Dornoch Firth NSA with Garvary wind farm.	As noted above, an additional dark sky visualisation from LVIA Viewpoint 10 – Struie Viewpoint has been included in Volume 3b and Volume 3c to allow consideration of this.
Request for an AESLQ	We request an Assessment of Effects on the Special Landscape Qualities (AESLQ) of the Knapdale NSA.	As set out in email to NatureScot 15 October 2024, it is assumed this should refer to the Dornoch Firth NSA. An AESLQs of the Dornoch Firth NSA is included at Technical Appendix 6.7 in Volume 4 .

6.4 Approach to Assessment

- 6.4.1 The primary source of best practice for LVIA in the UK is *“The Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3) (Landscape Institute and the Institute for Environmental Management and Assessment, 2013).”*
- 6.4.2 The LVIA presented in this chapter has been undertaken in accordance with the principles established in this document. It must however be acknowledged that GLVIA3 establishes guidelines not a specific methodology. The preface to GLVIA3 recognises that:

“This edition concentrates on principles and processes. It does not provide a detailed or formulaic ‘recipe’ that can be followed in every situation – it remains the responsibility of

the professional to ensure that the approach and methodology adopted are appropriate to the task in hand.”

6.4.3 The methodology adopted for this LVIA follows GLVIA3 to ensure that it is appropriate and fit for purpose.

6.4.4 Consideration has also been given to the following documents:

- Landscape Sensitivity Assessment Guidance (Methodology), (2022), NatureScot;
- Assessing the Cumulative Impact of Onshore Wind Energy Developments (March 2021) NatureScot;
- Siting and Designing Wind Farms in the Landscape, Version 3a (August 2017) SNH;
- Visual Representation of Wind farms – Version 2.2 (February 2017), SNH;
- General pre-application and scoping advice for onshore wind farms. Guidance. (November 2024) NatureScot;
- Guidance on Aviation Lighting Impact Assessment. (November 2024), NatureScot;
- LI Technical Guidance Note 2/19. Residential Visual Amenity Assessment (RVAA) (March 2019) Landscape Institute;
- LI Advice Note 02/17 Visual representation of development proposals (March 2017) Landscape Institute;
- LI Technical Guidance Note 02/21 Assessing landscape value outside of national designations;
- Assessment of Highland Special Landscape Areas (THC, 2011); and
- Visualisation Standards for Wind Energy Developments (July 2016) The Highland Council.

Scope of Assessment

6.4.5 The LVIA assesses both the long-term effects (assessed as though they were permanent) relating to the operational lifetime of the proposed Development and the short-term temporary effects associated with the construction of the proposed Development.

6.4.6 Where appropriate, the LVIA also considers any residual effects once the proposed turbines have been decommissioned and removed (30 years from the commencement of operation).

6.4.7 The LVIA considers both direct and indirect landscape and visual effects. It not only assesses the impacts associated with the turbines but also any related impacts resulting from the associated infrastructure e.g. construction compound, borrow pits, underground cabling, site tracks, substation and access roads.

6.4.8 Consideration has been given to the movement of the turbine blades, along with seasonal variations when assessing the visibility of the proposed Development.

6.4.9 The LVIA also considers any cumulative effects arising in combination with other wind farm schemes in the study area, as defined in **Section 6.8** below. Best practice guidelines identify two principal types of cumulative visual impact:

- combined visibility – where the observer is able to see two or more developments from one viewpoint; and

- sequential visibility – where two or more sites are not visible at one location but would be seen as the observer moves along a linear route, for example, a road or public right of way.

6.4.10 The guidelines state that ‘combined visibility’ may either be ‘in combination’ (where two or more sites are visible from a fixed viewpoint in the same arc of view) or ‘in succession’ (where two or more sites are visible from a fixed viewpoint, but the observer is required to turn to see the different sites). Both types are discussed in this LVIA. The published GLVIA3 also indicates a difference in emphasis between sequential effects that are frequent and those which are occasional.

6.4.11 The primary purpose of the cumulative impact assessment is to consider the additional effects that might arise as a result of the proposed Development if the other consented and in planning (awaiting determination) schemes were also operational. In addition, the cumulative assessment also includes a further consideration of the overall totality of the effect, when the proposed Development is considered alongside the other operational or proposed schemes across the study area.

6.4.12 In relation to both the effects of the proposed Development alone and the cumulative effects with other wind farm schemes in the study area, both beneficial (positive) and adverse (negative) effects are considered. Wind farms give rise to a wide spectrum of opinions, ranging from strongly negative to strongly positive, with a wide range of opinions lying somewhere between these two positions. Some people view turbines as incongruous or industrial structures whilst others view them as aesthetically pleasing, elegant structures and a positive response to climate change. This spectrum of opinion has come to be referred to in relation to wind farms as the concept of valency. For the avoidance of doubt, in considering the effects of the proposed Development, a precautionary approach to the assessment has been adopted and it is assumed that, unless specifically stated otherwise, the effects of the proposed Development will be adverse in nature even though it is acknowledged that, for some people, the impacts could be considered to be beneficial.

Receptors/matters scoped out of further assessment

6.4.13 **Table 6.2** presents the receptors/matters that are scoped out of further assessment, together with appropriate justification. Where a change has occurred since EIA scoping, this is clearly stated and justified.

Table 6.2: Receptor/matters scoped out of further assessment

Receptor/matter	Phase	Justification	Change since EIA Scoping?
Effects on receptors located outside of the ZTV	All phases	The proposed Development would not result in any effects where there is no predicted visibility.	No change
All receptors	Decommissioning	The effects experienced during decommissioning would be slightly less than those experienced during construction as decommissioning	No change

Receptor/matter	Phase	Justification	Change since EIA Scoping?
		activities would use existing hardstandings and tracks.	
Effects on LCTs outside of the proposed detailed 20 km LVIA study area	All phases	There would be no potential for indirect significant effects due to the distance from the proposed Development.	No change
Effects on landscape character resulting from the proposed aviation lighting	Operation	It has been established in recent appeal decisions that the effects of visible aviation lighting is “ <i>wholly a visual concern</i> ” and that “ <i>It is noted that the Reporters conclude that proposed aviation lighting would be a visual impact alone and consider that without being able to see and fully appreciate the features of the landscape and the composition of views, it is not possible to carry out a meaningful landscape character assessment. The Scottish Ministers concur with this conclusion. The detail is set out at paragraph 4.141 to 4.154 of the PLI Report.</i> ” (The Scottish Government. Crystal Rig IV Decision Letter. Dated 24 March 2021)	No change
Effects on users of the A9	All phases	Due to the distance from the proposed Development and the very limited theoretical visibility at distances in excess of 15 km, there is no potential for users of this route to experience significant visual effects.	No change
Effects on settlements beyond 10 km	All phases	Due to the distance from the proposed Development and the very limited theoretical visibility, there is no potential for receptors in these settlements to experience significant visual effects.	No change
Effects on core paths beyond 10 km	All phases	Due to the distance from the proposed Development and the limited theoretical visibility, there is no potential for users of these core paths to experience significant visual effects.	No change
Effects on GDL	All phases	No theoretical visibility. Therefore, no potential for effects.	No change
Effects on Wild Land	All phases	Given the distance from the proposed Development to the nearest WLAs and with reference to Policy 4 (g) of NPF4	No change

Receptor/matter	Phase	Justification	Change since EIA Scoping?
		that states that “Buffer zones around wild land will not be applied and effects of development outwith wild land areas will not be a significant consideration.”	
Effects on Long Distance Walking Routes	All phases	No long distance walking routes within the detailed 20 km study area. Therefore, no potential for effects.	No change

Receptors/matters scoped into further assessment

6.4.14

6.4.15 **Table 6.3** presents the receptors/matters that are scoped into further assessment, together with appropriate justification. Where a change has occurred since EIA scoping, this is clearly stated and justified.

Table 6.3: Receptor/matters scoped into further assessment

Receptor/matter	Phase	Justification	Change since EIA Scoping?
Landscape features within the Site	Construction, operation and decommissioning	Due to the potential direct effects resulting from the proposed Development.	No change
Landscape character within the 20 km detailed LVIA study area	Construction, operation and decommissioning	It is anticipated that potential for significant effects upon landscape character would occur within 20 km.	No change
Visual amenity within the 20 km detailed study area	Construction, operation and decommissioning	It is anticipated that potential for significant effects upon visual amenity would occur within 20 km.	No change
Effects on the special qualities of the Dornoch Firth NSA	Construction, operation and decommissioning	Due to the proximity of the proposed Development to the NSA, there is potential for indirect effects on some of the theSpecial Landscape Qualities which may be significant. NatureScot advised in their Scoping Response dated 8 May 2024 that ‘The contrast between the enclosed west and the expansive east’, ‘Inhabited surrounds within a wilder backdrop of hills and moors’ and ‘The tranquillity of an undeveloped coastline’ SLQs may be affected.	No change

Receptor/matter	Phase	Justification	Change since EIA Scoping?
Effects on visual receptors resulting from the proposed aviation lighting	Operation	The assessment of turbine lighting will consider the additional visual effects introduced by the proposed aviation lights. The assessment has been informed by a ZTV of the lit turbines out to 20 km, a turbine lighting intensity ZTV to 20 km and night-time visualisations prepared from Viewpoints 1, 2, 4 and 10	An additional dark sky visualisation has been prepared from Viewpoint 10 – Struie Viewpoint as requested by THC and NatureScot.
Cumulative effects	Construction, operation and decommissioning	The assessment of cumulative effects has considered effects on landscape character and visual amenity with other operational, approved/under construction or in-planning wind farms within the detailed 20 km cumulative study area which it is considered are the schemes that have the potential to result in cumulative effects.	No change
Residential visual amenity	Operation	The visual amenity of those properties located within 2 km of the proposed Development has been assessed as part of a RVAA to determine whether any properties would experience a significant visual effect from their dwelling, curtilage or principal access.	No change

Study Area

- 6.4.16 The initial study area for the landscape and visual impact assessment is 45 km radius from the turbines in all directions, as set out in the Scoping Report. The extent of this study area is illustrated in **Figure 6.1**. Initial site work informed by analysis of preliminary ZTVs indicated that any significant landscape and visual effects are likely to occur within a much narrower radius from the Site; therefore, the level of assessment work in this LVIA incrementally decreases with distance from the Site, with the greatest focus of assessment being within broadly 20 km of the Site. The intention is that the detail of the LVIA remains proportional to the likely significance of effects, as advocated in GLVIA3.
- 6.4.17 In terms of cumulative effects, the intention has again been that assessment work is proportional to the likelihood of significant effects arising, noting that there is less likelihood that wind farms currently in planning will all be consented. The approach adopted in the cumulative LVIA has been to focus on other wind farms which are either operational, under construction, consented or the subject of a full planning application within 20 km radius from the turbines in all directions as agreed in the Scoping Opinion and which have the potential to give rise to significant cumulative effects when considered in combination with the proposed Development. The approach has been to focus the assessment on those wind farms which have the potential to give rise to significant

cumulative effects. Further details of this approach are set out in the cumulative impact assessment at **Section 6.8**.

Landscape Assessment Methodology

- 6.4.18 A baseline landscape assessment was carried out to determine the current features and character of the landscape within and surrounding the Site.
- 6.4.19 The baseline landscape assessment involved firstly a review of desk material including:
- Ordnance Survey maps at 1:250,000; 1:50,000; 1:25,000 and 1:10,000 scales;
 - Aerial photographs of the Site and surrounding area;
 - Topography;
 - Current and historical land use;
 - Geology and soil maps;
 - Historic Parks and Designated Landscapes;
 - Relevant planning policy;
 - Relevant landscape sensitivity/capacity studies;
 - Relevant landscape character assessments; and
 - Relevant Historic Landscape Character Assessments.
- 6.4.20 Field visits have been conducted in a variety of weather conditions and at different times of the year during the pre-application stage.
- 6.4.21 The baseline assessment identified the existing landscape features on the Site, and in the immediate vicinity, and how these elements combine to give the area a sense of landscape character. Plans and construction details of the proposed Development were used to determine the impacts of the scheme on landscape features and character.
- 6.4.22 The LVIA firstly assesses how the proposed Development would impact directly on any existing landscape features or elements (e.g. removal of trees etc.).
- 6.4.23 The LVIA then considers impacts on landscape character with reference to landscape character areas/types identified in published landscape character documents.

Visual Assessment Methodology

- 6.4.24 Potential visual receptors of the proposed Development were identified by interpretation of digitally generated ZTVs (see **Technical Appendix 6.2** for an explanation of how the ZTVs were produced).
- 6.4.25 A selection of viewpoints was identified and agreed with statutory consultees to represent a range of views and viewer types as discussed in Visual Representation of Wind farms – Version 2.2 (NatureScot) and in Paragraphs 6.16 - 6.20 of GLVIA3. The assessment viewpoints are listed in **Table 6.2**.
- 6.4.26 The viewpoints cover a variety of different character areas, are in different directions from the Site and are at varying elevations. Some of the viewpoints are intended to be representative of the visual experience in a general location whereas other viewpoints illustrate the view from a specific or important vantage point. The viewpoints are located at a range of distances from the proposed Development to illustrate the varying magnitude of visual impacts.

- 6.4.27 Visualisations were produced for each of the viewpoints; these are presented in **Volume 2c** of this EIA Report. An explanation of how they were produced and information to be read in conjunction with the visualisations is provided in **Technical Appendix 6.2**.
- 6.4.28 Each of the representative viewpoints were visited to gain an understanding of the sensitivity of the viewpoint receptors and to make professional judgements on the likely visual effects arising from the proposed Development.
- 6.4.29 The viewpoints were used as the starting point for considering the effects on visual receptors within the entire study area. The visual assessment does not rely solely on the viewpoint assessments to determine the significance of effects on different visual receptor groups throughout the study area. It should be recognised that the viewpoints illustrated in the LVIA simply represent a series of snapshots from a small selection of the locations within the study area from where the proposed Development will be visible. It should also be noted that the proposed Development is always centred within the viewpoint visualisation. This follows NatureScot visualisation guidance and does not imply that the proposed Development will be the focus of the view from any given viewpoint. Following the viewpoint assessment, the LVIA considers the effect on visual amenity throughout the study area with reference to different visual receptor groups at varying distances from the Site.

Assessment Criteria

- 6.4.30 The purpose of an LVIA when produced in the context of an EIA is to identify any significant landscape and visual effects within the study area to assist the determining authority in deciding the acceptability of the scheme under consideration.
- 6.4.31 In accordance with the GLVIA3, the level (relative significance) of an effect is ascertained by considering in tandem the nature (sensitivity) of the baseline landscape or visual receptor and the nature (magnitude) of change as a result of the proposed Development. These two judgements are described as very high, high, medium, low or very low.
- 6.4.32 The relative significance of landscape or visual effects is described as **major, moderate major, moderate, minor moderate, minor** or **negligible**. No effect may also be recorded where the effect is so negligible it is not even noteworthy. Professional judgement is then employed to determine whether the effect is significant or not. Those effects described as **major, moderate major** and in some cases, **moderate** may be regarded as significant.
- 6.4.33 The detailed assessment criteria used to determine landscape and visual sensitivity, magnitude of change and significance of effect are set out in **Technical Appendix 6.1**. The approach to the assessment of cumulative effects is set out in **Section 6.8** of this chapter. The approach to the residential visual amenity assessment is set out in **Technical Appendix 6.6**. The approach to the assessment of effects on Special Landscape Qualities of the NSA is set out in **Technical Appendix 6.7** and our approach to the assessment of visible aviation lighting is set out in **Technical Appendix 6.8**.

Assessment Limitations

- 6.4.34 The assessment of effects within this LVIA has been derived through the use of publicly available information only. Within such a large study area it is unfeasible to visit every single location from which the proposed Development might be visible as illustrated on

the ZTVs. The authors of the LVIA have, however, spent a considerable length of time ‘in the field’ and visited all important viewpoints and locations within the detailed 20 km LVIA study area.

- 6.4.35 Limitations to the use of ZTVs and in relation to photography, wireframes and photomontages are set out in **Technical Appendix 6.2**.

6.5 Existing environment

- 6.5.1 For the avoidance of doubt all distances are approximate and have been measured to the nearest proposed turbine unless otherwise stated.

Site Location

- 6.5.2 The Site of the proposed Development is located on the Balblair Estate, which lies approximately 2 km to the north-west of Bonar Bridge, within The Highland Council (THC) local authority area.

Landscape Designations

- 6.5.3 Landscape designations within the initial 45 km study area are illustrated on **Figure 6.10**. Landscape designations within the detailed 20 km study area are illustrated on **Figure 6.11** and overlaid with the blade tip ZTV at **Figure 6.12**.

International/National Landscape Designations

- 6.5.4 There are no national landscape designations covering the Site. The Dornoch Firth National Scenic Area (NSA) is located approximately 4.8 km to the south of the proposed Development and extends eastwards from Ardgay and Bonar Bridge across the firth and its mouth, as shown on **Figures 6.10** and **6.11** along with other landscape designations. The Special Landscape Qualities (SLQs) of the Dornoch Firth NSA are defined as:

- “The contrast between the enclosed west and the expansive east;
- Inhabited surrounds within a wilder backdrop of hills and moors;
- A wide diversity of woodland cover;
- A rich variety of alluvial lands, dunes and links;
- The ever-changing firth;
- The tranquillity of an undeveloped coastline; and
- Migdale, a microcosm of the wider Dornoch Firth.”

- 6.5.5 Effects on the Dornoch Firth NSA are considered within the preliminary assessment of Landscape Character Types (LCTs) and Designated Sites in **Technical Appendix 6.3** and subsequently in the Assessment of Effects on the Special Landscape Qualities (AESLQ) of the Dornoch Firth NSA in **Technical Appendix 6.7**.

- 6.5.6 NatureScot advised in their Scoping Response dated 8 May 2024 that ‘The contrast between the enclosed west and the expansive east’, ‘Inhabited surrounds within a wilder backdrop of hills and moors’ and ‘The tranquillity of an undeveloped coastline’ SLQs are likely to be affected.

- 6.5.7 The Assynt-Coigach NSA is located over 30 km to the north west of the proposed Development. Its SLQs are defined as:

- “Spectacular scenery of lone mountains;
 - Rocky topography of great variety;
 - Settlements nestled within a wider landscape of mountain peaks, wild moorlands, and rocky seascapes;
 - Extensive cnocan landscapes;
 - A coastline of endless drama;
 - An intricate multitude of lochs and lochans;
 - A landscape of vast open space and exposure;
 - Significant tracts of wild land;
 - Unexpected and extensive tracts of native woodland; and
 - A still, quiet landscape under a constantly changing sky.”
- 6.5.8 At over 30 km to the north-west of the proposed Development significant effects are considered unlikely given the intervening distance, as discussed further in the preliminary assessment of LCTs and Designated Sites in **Technical Appendix 6.3**.

Local Landscape Designations

Local Landscape Areas

- 6.5.9 THC has identified 27 Special Landscape Areas, which it notes are landscapes identified to protect and enhance landscape qualities and promote their enjoyment. For each of the LLAs THC has produced citations contained within the ‘Assessment of Highland Special Landscape Areas’ (2011) which set out the key landscape and visual characteristics, special qualities, sensitivity to change and potential for landscape enhancement and other interests.
- 6.5.10 Note, the term ‘Local Landscape Area’ (LLA) follows Scottish Government policy and is the name for local landscape designations in Scotland. Some local authority policy and guidance documents may still refer to previous names such as ‘Special Landscape Area’, which is the term used in existing Highland Council policy documents.
- 6.5.11 Seven LLAs overlap the initial 45 km study area as illustrated on **Figure 6.10**. These comprise:
- Ben Kilbreck and Loch Choire – approximately 25 km to the north of the proposed Development;
 - Bens Griam and Loch nan Clar – approximately 37.5 km to the north north east;
 - The Flow Country and Berriedale Coast – approximately 40.8 km to the north east;
 - Loch Fleet, Loch Brora and Glen Loth – approximately 13 km to the east;
 - Sutors of Cromarty, Rosemarkie and Fort George – approximately 32 km to the south east;
 - Ben Wyvis – approximately 25.7 km to the south south west; and
 - Fannichs, Beinn Dearg and Glencavie – approximately 14.8 km to the south west.
- 6.5.12 Of these, the Loch Fleet, Loch Brora and Glen Loth LLA and the Fannichs, Beinn Dearg and Glencavie LLA overlap the 20 km detailed LVIA study area as illustrated on **Figure 6.11**. Effects on these designations are considered further within the preliminary assessment of LCTs and Designated Sites in **Technical Appendix 6.3**. This concluded that none of the LLAs have the potential to experience significant effects and as such are not considered further within this chapter.

Wild Land

- 6.5.13 The proposed Development is not located within a Wild Land Area (WLA). The nearest WLA is Rhiddoroch – Beinn Dearg -Ben Wyvis WLA (WLA 29) located approximately 9.6 km to the south west of the proposed Development.
- 6.5.14 Although it is acknowledged that there is theoretical visibility from part of the WLA any effects would be very minimal given the distance from the proposed Development and the very limited theoretical visibility from within the WLA. Furthermore, with reference to Policy 4 (g) of National Planning Framework 4 that states that “Buffer zones around wild land will not be applied and effects of development outwith wild land areas will not be a significant consideration”, effects on the WLA are not considered further within the assessment.

Gardens and Designed Landscapes

- 6.5.15 One Garden and Designed Landscape (GDL), Skibo Castle, is situated within the detailed 20 km study area. However, referring to **Figure 6.12** illustrating landscape designations within 20 km overlaid with the blade tip ZTV there is no theoretical visibility predicted. Therefore, effects on GDL are not considered further within the assessment.

Published Landscape Character Descriptions

- 6.5.16 A review was undertaken of the following published sources of information regarding regional and local landscape character, landscape value and landscape sensitivity:
- Highland Council Onshore Wind Energy Supplementary Guidance (2016) and Addendum (2017) (OWESG);
 - NatureScot National Landscape Character Assessment (2019).
- 6.5.17 NatureScot guidance (2019) advises that any topic-specific landscape sensitivity studies would take precedence over the National Landscape Character Types. The study area is not covered by such a sensitivity study. Therefore, NatureScot’s 2019 national landscape character assessment (LCA) has been used as the basis for the assessment of effects on landscape character.
- 6.5.18 At this point, for clarity, it is necessary to distinguish between two terms that are frequently used in published guidance and this chapter. They originate from the ‘Guidelines for Landscape Character Assessment’ (Countryside Agency and NatureScot, 2002):-
- Landscape Character Types (LCTs) are defined as tracts of landscape, which have a generic unity of character due to the particular combinations of landform, land cover, pattern and elements. The same landscape character type can occur at several different locations throughout a study area; and
 - Landscape Character Areas (LCAs) are defined as discrete geographical areas of a particular landscape character type and can only occur at a single location.
- 6.5.19 NatureScot national LCTs covering the initial 45 km LVIA study area are illustrated on **Figure 6.13**. National LCTs within the detailed 20 km LVIA study area are illustrated on **Figure 6.14** and overlaid with the blade tip ZTV at **Figure 6.15**.

Landscape Character Types Covering the Site

- 6.5.20 With reference to **Figure 6.13**, the proposed turbines, the majority of the access tracks, the substation, temporary construction compound and Battery Energy Storage System (BESS) and other associated infrastructure are located within LCT 135 Rounded Hills – Caithness & Sutherland.
- 6.5.21 This LCT occurs in other parts of the detailed 20 km LVIA study area and as such has been subdivided into different units for the purposes of the assessment as follows:
- 6.5.22 LCT 135 Rounded Hills – Caithness & Sutherland – south of Strath Fleet unit (the host unit where the proposed Development would be located)
- 6.5.23 The key characteristics of LCT 135 are described as:
- Rolling hills forming broad, subtly rounded summits but with some more pronounced hills also occurring, these often featuring steeper slopes along the coast or where truncated by deep glens;
 - Hills cut by numerous narrow burns and small lochans lie within dips, corries and on plateau summits;
 - Predominantly dense heather ground cover and moorland grasses, but also some areas of bog;
 - Fragments of broadleaf woodland in inaccessible locations;
 - Scarcely settled with a largely uninhabited interior and widely scattered crofts and farms on lower slopes adjoining straths and farmed landscapes;
 - Narrow glens and lower hill slopes often rich in archaeology with features such as standing stones, brochs and medieval townships;
 - Wind farms located in more accessible and generally lower rolling hills, either close to extensive forestry or the high voltage transmission line aligned broadly parallel to the south-east Sutherland coast;
 - Convex character of hill slopes limiting distant visibility and views of the hill tops when travelling through the landscape;
 - Views into the interior of the hills very restricted; and
 - Strong sense of wild character can be experienced within the more remote and little modified parts of this landscape.
- 6.5.24 As noted in the above key characteristics, wind energy development is an established component of the baseline landscape character.
- 6.5.25 A very short section of the westerly end of the proposed access track and its bellmouth overlaps with LCT 142 Strath – Caithness and Sutherland.
- 6.5.26 The key characteristics of LCT 142 are described as:
- Straths range from fairly straight deeply incised troughs to more winding valleys with a number of minor side glens;
 - River terraces and hummocky lower side slopes a common feature;
 - Water is a key characteristic with straths accommodating a central river meandering across the floodplain, often traced by clumps of birch and alder;
 - Lochs in some straths, where a string of small lochs add to the scenic richness of the lower strath;
 - Areas of wetland often present on the strath floors;
 - Smooth and fairly large pastures the predominant land cover on the floodplains of the straths, commonly enclosed by wire fences;

- Semi-improved pastures, heather and grass moorland and coniferous plantations covering lower side slopes;
- Increasing extent of moorland and woodland generally further up the straths, where the floodplain narrows and settlement is sparser;
- Smaller strip-fields present on often hummocky, lower side slopes and associated with croft houses arranged in linear groups raised on terraces above the floodplain and sometimes backed by woodland;
- Some crofts within the Straths more randomly dispersed or staggered on lower hill slopes;
- Occasional small farms located in the broader and more fertile parts of the straths;
- Settlement generally denser within the lower reaches of many straths, especially at bridging points, on the coast and close to major roads;
- Many areas rich in archaeology with cairns, roundhouses, brochs and old field systems, usually found on side slopes;
- Abandoned crofts, particularly within the upper straths and in narrow side glens;
- Focus in views from roads provided by a number of estate shooting lodges, and clustered, predominantly 19th Century, often estate style buildings;
- Narrow roads, commonly aligned along the edge of the floodplain, from which views are strongly channelled by the side slopes;
- Rounded Hills often forming prominent edges to the straths with shapely well-defined hills, providing a distinctive skyline and scenic backdrop; and
- Highly scenic backdrop of mountains often revealed in some of the upper reaches of these straths.

6.5.27 The very small part of the south-eastern corner of the application boundary overlaps with LCT 145 – Farmed and Forested Slopes with Crofting but there would be no development located in this part of the Site. This LCT is considered along with the other LCTs in the study area in the below section.

Other Landscape Character Types to be assessed

6.5.28 In order to consider the indirect effects of the proposed Development on landscape character, landscape character types within 45 km of the proposed Development have been illustrated on **Figure 6.13**, and those located within the detailed 20 km LVIA study area are illustrated on **Figure 6.14**. The LCTs within 20 km have also been overlaid with the ZTV at **Figure 6.15**.

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

6.5.30 With reference to **Figure 6.13** and the blade tip ZTV at **Figure 6.3**, all LCTs located between 20 km and 45 km have been scoped out of further assessment, on account of the distance from the proposed Development, the influence of other closer wind farm development and the relatively limited theoretical visibility. It is acknowledged that there may be very limited potential for effects on the character of available views from these LCTs but there would be no potential for significant effects to arise.

- 6.5.31 All LCTs present within the detailed 20 km LVIA study area have been subject to an initial filtering exercise. The findings of this exercise are presented at **Table 6.3.1 of Technical Appendix 6.3**.
- 6.5.32 The LCTs assessed in detail in this chapter are:
- LCT 135 Rounded Hills – Caithness & Sutherland – the part of the LCT where the proposed Development is located and extending approximately 20 km to the north west and 13.3 km to the south east (South of Strath Fleet unit);
 - LCT 135 Rounded Hills – Caithness & Sutherland – the part of the LCT situated approximately 7.4 km to the south south west and to the south of Strath Carron (Strath Carron unit);
 - LCT 135 Rounded Hills – Caithness & Sutherland – the part of the LCT situated approximately 4.4 km to the south west lying between Strath Oykel to the north and Strath Carron to the south (Kyle of Sutherland unit);
 - LCT 142 Strath Caithness and Sutherland – the part of the LCT situated within approximately 4.5 km to the north west to approximately 6 km to the south covering the Kyle of Sutherland (Kyle of Sutherland unit);
 - LCT 139 Rugged Mountain Massif – the part of the LCT situated approximately 9.1 km to the south west (Carn Saláchaidh unit);
 - LCT 330 Rounded Hills and Moorland Slopes – Ross & Cromarty - situated approximately 8.2 km to the south at its closest point; and
 - LCT 145 Farmed and Forested Slopes – situated approximately 2.3 km to the south at its closest point (Migdale unit).

Local Landscape Description and Character Appraisal

- 6.5.33 A plan illustrating the landscape features/elements within the Site and its immediate context (5 km radius of the turbines) is provided in **Figure 6.17**. The following discussion provides an overview of the physical and perceptual characteristics of the Site and immediately surrounding landscape without particular reference to published landscape character types.

Topography

- 6.5.34 Topography within 20 km of the proposed Development is illustrated at **Figure 6.16**.
- 6.5.35 The topography of the Site and its immediate context is broadly characterised as rolling moorland rising to form rounded summits. Within the Site, a low ridge of higher ground extends through the main part of the Site. This extends from Sithean Mor at an elevation of approximately 250 m Above Ordnance Datum (AOD) and Cnoc a' Bhuidhe at approximately 298 m AOD in the southern part of the Site, in a north easterly direction through a saddle to Cnoc Blàr na Curaich at an elevation of approximately 293 m AOD before falling towards a shallow valley through which the watercourses of Allt Loch Leisgein and An Uidh flow.
- 6.5.36 From this low ridge in the main part of the Site, the landform falls in a north westerly direction towards the western boundary of the Site where elevations range from approximately 200 m AOD near Loch Leisgein to approximately 21 m AOD at the south western corner of the Site near Invershin Station.
- 6.5.37 To the east of the ridge, the terrain falls towards the south eastern boundary of the Site where elevations range from approximately 152 m AOD in the north eastern corner of the

Site, rising to approximately 225 m AOD near Lydsurach and falling to approximately 100 m AOD at the south eastern corner of the Site near Rhinàmain.

- 6.5.38 Raised ground extends along the south western boundary of the Site bordering Balblair Wood and Meikle Wood.
- 6.5.39 Towards the northern boundary of the Site, a shallow valley extends broadly north west to south east between high ground at Cnoc na Mòine Duibhe at 239 m AOD and Sròn Ach' a' Bhacaidh at 283 m AOD to the north and Cnoc Breac at 237 m AOD to the south.
- 6.5.40 Beyond the Site, topography to the north forms part of the wider chain of rolling, moorland rounded hills, while to the south the topography forms part of the slopes that border the northern edge of the Dornoch Firth and the Kyle of Sutherland.

Watercourses and Waterbodies

- 6.5.41 Several small watercourses flow from the low ridge of high ground in the central part of the Site. To the north west, Henman's Burn flows in a broadly westerly direction beyond the Site, towards the River Shin. Allt Port na Lice flows from Sithean Mòr near the south western corner of the Site in a south westerly direction towards the Kyle of Sutherland.
- 6.5.42 Allt an Rèidhe Dhorcha flows in a north westerly direction through the valley in the north western part of the Site, Allt Loch Leisgein flows towards Loch Leisgein adjacent to the north western boundary of the Site while Allt Loch Laro and An Uidh flow along the north eastern boundary of the Site.
- 6.5.43 To the east of the low ridge in the central part of the Site, Allt Asdale flows towards An Uidh to the east of the Site. Allt Rèidh nam Meann passes along the south eastern boundary of the Site, leading to Migdale Burn.
- 6.5.44 Beyond the Site there are several lochs and lochans comprising Loch Leisgein adjacent to the north western boundary of the Site, Loch Laro to the north of Sròn Ach' a' Bhacaidh, Loch an Lagain approximately 2.7 km to the east of the Site and Loch Dubh and Loch a' Ghobhair approximately 3.3 km and 4.1 km to the east respectively.
- 6.5.45 To the south east, Loch Migdale is a much larger waterbody situated approximately 2.5 km to the south east of the south eastern corner of the Site. The Kyle of Sutherland flows to the south west of the Site towards the Dornoch Firth to the south east.

Vegetation

- 6.5.46 The current land cover of the Site is classified as mainly raised and blanket bogs, seasonally wet and wet grassland, temperate shrub heathland, dry grasslands, and mesic grassland. Within the Site there are minor patches of mixed deciduous and coniferous woodland, arctic alpine, subalpine scrub, valley mires, poor fens and transition mires, woodland fringes and clearings and tall ford stands, temperate and mediterranean-montane scrub. Scots pine woodland, broad-leaved deciduous woodland, and commercial coniferous plantations are found at the western border of the Site with no woodland present within the application boundary where the proposed Development would be located. Further information on the habitats within the Site can be found in **Chapter 8: Ecology**.
- 6.5.47 Balblair Wood and Meikle Wood bordering the south western boundary of the Site are identified as Ancient Woodland on the Ancient Woodland Inventory.

Built Infrastructure

- 6.5.48 Built form is a minor existing component of the Site. The listed remains of Lydsurach Croft House are situated within the southern part of the Site to the south east of Cnoc a' Choire Buidhe, while a telecommunications mast is sited on the high ground of Cnoc a' Choire Buidhe itself with a rough track leading to it.
- 6.5.49 An existing 132 kV overhead pylon line mounted on steel lattice towers crosses through the northern part of the Site passing to the immediate south of Sròn Ach' a' Bhacaidh. This overhead line links the existing Shin Substation to the west of the Site to Loch Buidhe Substation located to the east of the Site. The existing 275 kV Fyrish to Loch Buidhe overhead line mounted on steel lattice towers passes approximately 1 km to the east of Site.
- 6.5.50 Within the wider landscape there are numerous scattered crofts and farmsteads predominantly situated in lower, more sheltered areas to the east linked by a network of minor roads. Areas to the north of the Site are more remote and uninhabited until Strath Fleet.
- 6.5.51 To the south of the Site is the settlement of Bonar Bridge, with Migdale to its east. The A836 provides access from the A9 to the north west of Tain along the southern fringes of the Dornoch Firth to Ardgay and Bonar Bridge before continuing north west to Lairg and northwards out of the detailed 20 km study area. To the north of Lairg, the A838 heads north west along the eastern shore of Loch Shin and out of the detailed 20 km study area.
- 6.5.52 From Bonar Bridge, the A949 heads along the northern edge of the Dornoch Firth, eventually leading to the A9.
- 6.5.53 In the eastern part of the study area, the A839 heads west from Loch Fleet through Strath Fleet to the north of the Site to Lairg. From Lairg it continues west to Rosehall where it meets the A837, that leads from the A836 at Invershin to the west of the Site and continues through Strath Oykel.
- 6.5.54 In addition to these main arterial routes, the B9176 links Alness to the south with the A836 and the Dornoch Firth, while the B864 links Lairg with the A837. The remote upland hills, means that there are relatively few other minor roads.
- 6.5.55 The Far North railway line linking, Inverness in the south with Thurso and Wick, passes along the southern edge of the Dornoch Firth to Ardgay. It continues north towards Lairg before continuing east through Strath Fleet towards Golspie.
- 6.5.56 Within the detailed 20 km LVIA study area there are a number of operational wind farms comprising Kilbruar and Kilbruar Extension, approximately 17.8 km to the north east, Lairg approximately 6.6 km to the north, Achany and Rosehall Wind Farms approximately 10.7 km to the north west, Beinn nan Oighrean and Beinn Tharsuinn approximately 14.3 km to the south and Coire na Cloiche approximately 16 km to the south.
- 6.5.57 In addition to these operational wind farms, there are several consented schemes comprising Lairg 2 approximately 4.9 km to the north, Achany Extension approximately 17.4 km to the north west and Meall Buidhe approximately 14.7 km to the west.
- 6.5.58 Furthermore, there are several schemes currently in planning, comprising Garvary, situated approximately 2.1 km to the north, Acheilidh approximately 3.5 km to the north north east and Strath Oykel approximately 15.7 km to the west.

6.5.59 Other wind farms within 20 km are illustrated at **Figure 6.29**.

Sensory and Perceptual Characteristics

6.5.60 The Site is perceived as part of a relatively remote upland moorland area that forms part of the backdrop of hills to the north of the Dornoch Firth. However, its remoteness is influenced by the existing presence of the tall telecommunications mast in the southern part of the Site at Cnoc a' Choire Buidhe and the existing overhead line that passes through the northern part of the Site and to the east of the Site. The perception of remoteness is also reduced due to its proximity to the settlements of Bonar Bridge and Ardgay.

6.5.61 Its upland location allows distant views to the south across to the hills to the south of Dornoch Firth, as well as some limited views to the Firth itself and towards Migdale and lower-lying areas to the east.

6.5.62 Views from Bonar Bridge are restricted due to the screening provided by the rising landform and the vegetative screening provided by Balblair and Meikle Wood. Longer range views are available from the south of the Firth where the greater separation distance from the rising landform allows views to the rolling moorland where the proposed Development would be located.

Forces for Future Change in the Landscape

6.5.63 The main foreseeable forces for change in the landscape surrounding the Site relate to changes to the forest plantations to the immediate west of the Site, with areas of felling and replanting in line with forest management plans. Further changes may also occur due to changes in agricultural land use and changes to traditional forms of moorland management, resulting from re-wetting or rewilding to encourage greater habitat diversity.

6.5.64 Within the wider landscape, there are several operational wind farms and several consented schemes which, if built, would also influence the existing nature of the wider landscape surrounding the proposed Development as set out in the Cumulative Assessment at **Section 6.8**.

6.5.65 In addition to the consented or proposed wind farm developments within the vicinity of the Site, the proposed Spittal - Loch Buidhe- Beaully 400 kV overhead line project will introduce further overhead lines into the immediate landscape surrounding the Site. Finally, it is widely recognised that climate change will have an impact on the future character of the Scottish landscape through changes to weather conditions that will in turn result in changes to vegetation that will affect the intrinsic character of the landscape.

Visual Receptors

6.5.66 With reference to the blade tip ZTV at **Figure 6.3** and **Figure 6.4**, theoretical visibility extends approximately 8 km to the north before the landform to the south of Strath Fleet restricts visibility. Theoretical visibility extends approximately 8 km to the east before being restricted by landform. Beyond these distances theoretical visibility becomes much more intermittent and largely restricted to localised areas of high ground and areas to the north of Loch Shin.

6.5.67 To the south, theoretical visibility extends to approximately 15 km, beyond which theoretical visibility is very limited. However, within this area of principal visibility to the

south there are some notable areas where there is no predicted visibility, most notably within Strath Carron and from the slopes to the south west of the ridge of high ground that extends through the south western part of the detailed 20 km LVIA study area between the summits of Cnoc nan' Sac, Carn Salachaidh, Carn Bhrain, Carn a' Chlaiginn, Carn an Liath-bhaid and Creagan a' Choin Ruaidh at a distance of approximately 13 km from the proposed Development.

- 6.5.68 To the west, theoretical visibility extends to approximately 7 km with some notable areas of predicted visibility beyond, situated to the north and south of Strath Oykel.
- 6.5.69 It was determined that there was no potential for the proposed Development to result in any significant visual effects at distances over 20 km from the Site as with increased distance from the Site, the likelihood of significant visual effects occurring incrementally decreases. Therefore, whilst the initial study area for this LVIA extends out to 45 km and the various figures which accompany this report illustrate an initial 45 km study area, the assessment has focused on visual receptors within the detailed 20 km LVIA study area as agreed with the statutory consultees at scoping.
- 6.5.70 Interpretation of the ZTVs (**Figures 6.3** through to **6.6** and the ZTV quadrants at **Figures 6.20** through to **6.27**) assisted in identifying potentially sensitive visual receptors. Principal visual receptors within the surrounding landscape are illustrated at **Figures 6.18** and **6.19** and are identified below.

Residential Receptors and Settlements

- 6.5.71 Residential visual receptors have been identified in bands of distance from the nearest turbine with a greater level of detail provided in relation to those properties nearest to the proposed Development, although it is recognised that there may be views from individual properties and clusters of properties throughout the wider study area.
- 6.5.72 With reference to the blade tip ZTVs at **Figures 6.3** and **6.4** and **Figures 6.20** through to **6.24** only those properties or settlements with theoretical visibility of the proposed Development have been identified below. Those settlements with no theoretical visibility have not been considered further within this chapter. Residential receptors are also shown on **Figures 6.17** and **6.19**.

Residential Properties within 2 km

- 6.5.73 There are seven residential properties within 2 km of the proposed Development as follows:
- Coirshellach – located within an area excluded from the wider application boundary, approximately 1.4 km to the south south east of the nearest turbine (financially involved);
 - Auchuan – located approximately 1.8 km to the south south east;
 - Ausdale – located approximately 1.4 km to the south south east;
 - Craigton – located approximately 1.0 km to the east south east (financially involved);
 - Reidbreac – located approximately 1.4 km to the east south east;
 - Badbog – located approximately 1.7 km to the east south east; and
 - Clasbhan – located approximately 1.8 km to the east south east.

- 6.5.74 The location of these properties is illustrated on **Figure 6.6.1** in **Technical Appendix 6.6**. Of these, Auchuan and Badbog are abandoned and are not considered to be immediately inhabitable.

Settlements within 5 km

- 6.5.75 Within 5 km of the proposed Development the nearest settlements, as identified in the Highland-wide Local Development Plan (HwLDP) and the Caithness and Sutherland Local Development Plan (CaSPlan) are:
- Invershin, situated approximately 3.3 km to the south west; and
 - Bonar Bridge, situated approximately 4.4 km to the south.

Settlements within 5 to 10 km

- 6.5.76 Within 5 to 10 km of the proposed Development the nearest settlements, as identified in the HwLDP and the CaSPlan are:
- Ardgay – located approximately 5.8 km to the south; and
 - Lairg – located approximately 9.1 km to the north north west.

Settlements within 10 to 15 km

- 6.5.77 Within 10 to 15 km of the proposed Development the nearest settlements, as identified in the HwLDP and the CaSPlan are:
- Edderton – located approximately 14.6 km to the south east; and
 - Rosehall – located approximately 14.8 km to the north west.

Settlements within 15 to 20 km

- 6.5.78 Within 15 to 20 km of the proposed Development the nearest settlements, as identified in the HwLDP and the CaSPlan are:
- Dornoch – located approximately 17.9 km to the south east;
 - Golspie – located approximately 19.3 km to the north east; and
 - Embo – located approximately 19.4 km to the south east.

- 6.5.79 An initial filtering exercise has been undertaken of settlements within the detailed 20 km LVIA study area to determine which have the potential to experience significant effects and would therefore require detailed consideration in this chapter. The intention has been to ensure that the level of attention given is proportionate to the likelihood of significant effects arising. The findings of the initial filtering exercise are presented at **Table 6.4.1** of **Technical Appendix 6.4**.

- 6.5.80 This filtering exercise identified that following settlements have the potential to experience significant effects:
- Bonar Bridge;
 - Ardgay; and
 - Lairg.

- 6.5.81 The effects on these settlements are considered further in **Section 6.7** and their location illustrated on **Figure 6.19**.

Core Paths

- 6.5.82 There are numerous core paths located within the detailed 20 km study area, illustrated at **Figure 6.19**. The effects on views from these paths are not assessed individually but are grouped together where appropriate and effects on views from these groups considered with reference to the viewpoint assessment at **Technical Appendix 6.5**.
- 6.5.83 An initial filtering exercise has been undertaken to determine which have the potential for significant effects to arise and would therefore require detailed consideration in this chapter. The intention has been to ensure that the level of attention given to each core path is proportionate to the likelihood of significant effects arising. The findings of the initial sieving exercise are presented at **Table 6.4.2** of **Technical Appendix 6.4**.
- 6.5.84 This filtering exercise identified that users of the following routes have the potential to be significantly affected by the proposed Development:
- SU08.03 Lochcoire, Lower Track & SU03.01 Cornhill – Culrain, via Invercharron Hill/Carbisdale;
 - SU03.10 Ardgayhill;
 - SU03.12 Oakwood Chalet – Oldtown, SU03.08 Oldtown – Badvoon, SU03.04 Badvoon Forest, Link Path, SU03.05 Badvoon Forest, Allt Eiteachan Path, SU03.03 Badvoon Forest, Forest Road; and
 - RC15.04 Struie Hill, Mast Track.

Long Distance Walking Routes

- 6.5.85 The John O’Groats Trail long distance walking route between John O’Groats and Inverness passes through the eastern part of the detailed 20 km LVIA study area. It passes around the coastline between Golspie and Tain, crossing the Dornoch Firth Bridge approximately 17 km to the south east of the proposed Development.
- 6.5.86 With reference to **Figure 6.19**, theoretical visibility from the route is very limited and limited to Dornoch where intervening buildings and vegetation would screen views. As such effects on this long distance walking route are not considered within the assessment.

Cycle Routes

- 6.5.87 With reference to **Figure 6.19**, there are no national cycle network routes within the detailed 20 km LVIA study area. However, the Inverness to John O’Groats cycle route passes through this study area, following the route of the A836 along the southern fringes of the Dornoch Firth to Ardgay.
- 6.5.88 From Ardgay, the route splits with one leg following a minor road along the western edge of the Kyle of Sutherland while the second leg continues to follow the A836 to Bonar Bridge. From Bonar Bridge, the route continues north to Invershin where the two route sections meet and the route continues north along the B864 towards Lairg, where the route continues north along the A836 to Rhian Bridge and beyond the detailed 20 km LVIA study area.
- 6.5.89 Effects on this route are considered further within the assessment.

Roads and Railways

Roads

- 6.5.90 As noted earlier at paragraph **6.5.52** to **6.5.54** there are relatively few roads located within the detailed 20 km LVIA study area. These are illustrated at **Figure 6.18** and **6.19**.
- 6.5.91 The following road pass through the detailed 20 km LVIA study area:
- A836 – located approximately 3.3 km to south west;
 - A837 – located approximately 3.3 km to the west;
 - A838 – located approximately 13.3 km to the north west;
 - A839 – located approximately 8.3 km to the north;
 - A949 – located approximately 5.1 km to the south;
 - A9 – located approximately 14.3 km to the east;
 - B864 – located approximately 3.4 km to the west;
 - B9176 – located approximately 10 km to the south south east; and
 - B9168 – located approximately 16.5 km to the south east.

Railways

- 6.5.92 As set out above at paragraph **6.5.55**, the Far North Railway line linking Inverness in the south with Thurso and Wick, passes through the detailed 20 km LVIA study area.

Promoted Tourist Routes

- 6.5.93 In addition to the above roads and routes, the North Coast 500 (NC 500) promoted tourist route follows the A9 through the eastern part of the detailed 20 km LVIA study area. The Moray Firth Tourist Route also passes through the study area following the B9176, A836 and the A839.
- 6.5.94 An initial filtering exercise has been undertaken to determine which of these routes have the potential to experience significant effects and would therefore require detailed consideration in this chapter. The intention has been to ensure that the level of attention given to each route is proportionate to the likelihood of significant effects arising. The findings of the initial filtering exercise are presented at **Table 6.4.5** of **Technical Appendix 6.4**.
- 6.5.95 This filtering exercise identified that users of the following routes have the potential to experience significant visual effects:
- A836;
 - A837;
 - B9176;
 - Far North Railway Line; and
 - Moray Firth Tourist Route.

Assessment Viewpoints

- 6.5.96 The following table sets out the viewpoints considered as part of this assessment. These viewpoints have been derived through desk-based, site visits, interpretation of ZTVs and through consideration of the viewpoints used in the assessment of other nearby wind

farms. The assessment viewpoints have also been consulted on as part of scoping and amended following feedback received, as set out in **Table 6.1** above.

- 6.5.97 The viewpoints are representative of the range of views towards the proposed Development. They are not intended to cover every single view but are representative of a range of distances from the Site and receptor types (e.g. residents, walkers, road users) and have been used to inform the assessment of effects on landscape character, the visual assessment, the cumulative assessment and the assessment of visual receptor groups.
- 6.5.98 **Table 6.4** identifies the 16 assessment viewpoints. The locations of these viewpoints are illustrated on **Figures 6.3** and **6.4**.

Table 6.4: Assessment Viewpoints

Viewpoint	OS Grid Reference	Approximate Distance to Nearest Turbine	Receptor
Viewpoint 1 - Minor Road, Drochaid na h-Uidh (N)	264191, 895646	2,367 m (T3)	Walkers Road users
Viewpoint 2 - Bonar Bridge (N)	261244, 891724	4,945 m (T7)	Residents Road users
Viewpoint 3 - Core Path Cornhill – Culrain, via Invercharron Hill/Carbisdale	255790, 894244	5,822 m (T7)	Walkers
Viewpoint 4 – Ardgay * (N)	259707, 890297	6,518 m (T7)	Residents Road users
Viewpoint 5 - Creagan Glas	267089, 901684	6,559 m (T3)	Walkers
Viewpoint 6 - A839 Between Lairg and Rosehall	256178, 903664	8,287 m (T4)	Road users Walkers
Viewpoint 7 - A836 at Ardchronie	261042, 889162	8,465 m (T7)	Cyclists Road users
Viewpoint 8 - Auchintoul	251388, 899942	10,189 m (T4)	Residents Road users
Viewpoint 9 - Lairg Cemetery, overlooking Lairg	258059, 907217	10,513 m (T1)	Road users Visitors
Viewpoint 10 - Struie Viewpoint on B9176 (N)	265253, 885786	11,564 m (T6)	Visitors Road users
Viewpoint 11 - West Langwell	269667, 908949	13,887 m (T3)	Road users

Viewpoint	OS Grid Reference	Approximate Distance to Nearest Turbine	Receptor
			Residents
Viewpoint 12 - Achnairn, near Caravan Park	255813, 912799	16,524 m (T1)	Residents Visitors to caravan and camping site
Viewpoint 13 - A837 Strath Oykel	243020, 901079	18,579 m (T4)	Road users
Viewpoint 14 - Carn Chuinneag	248367, 883341	18,420 m (T7)	Walkers
Viewpoint 15 - A836 Rhian Bridge	256335, 916580	19,981 m (T1)	Road users Cyclists
Viewpoint 16 - Ord Hill **	257399, 905574	9,244 m (T1)	Walkers

* Relocated LVIA viewpoint following feedback received at scoping.

** Additional LVIA viewpoint added following feedback received at scoping.

(N) – Dark hours visualisation produced from this viewpoint in addition to daytime visualisation

6.5.99 **Technical Appendix 6.5** provides a baseline description of the view from each assessment viewpoint, followed by a detailed analysis and assessment of the effects.

6.6 Embedded mitigation

Design Considerations

6.6.1 Landscape and visual considerations have been a key contributing factor that has shaped the design of the proposed Development.

6.6.2 The key landscape and visual factors that have influenced the design were:

- maximising the separation distance between the proposed Development and the Dornoch Firth NSA;
- avoiding siting on the more visible and sensitive south west slopes within the Site around Cnoc a' Choire that would otherwise have increased the visibility of the proposed Development from the NSA;
- avoiding siting on higher ground within the south western part of the Site around Cnoc a' Choire Buidhe and Sithean Mòr; and
- maximising the separation distance from nearby residential properties.

6.6.3 These factors, balanced against other onsite technical constraints, have resulted in a layout that is concentrated in the north western corner of the Site.

6.6.4 Evolving layouts were tested from key landscape and visual design viewpoints comprising LVIA viewpoints 10, 2 and 4.

6.6.5 Particular focus was paid to creating a compact layout, contained by adjacent topography, that avoids outlying turbines and turbines crossing into adjacent landscapes when viewed from the LVIA design viewpoints.

6.6.6 In accordance with Civil Aviation Authority (CAA) CAP 764 turbines taller than 150 m require visible aviation lighting. A reduced visible aviation lighting scheme has been agreed with the CAA. In total six of the eight turbines (T1, T2, T3, T4, T6 and T7) are proposed to be fitted with visible red 2,000/200 candela (cd) lights on the nacelle of each turbine. These will operate in the reduced 200 cd intensity where meteorological visibility is greater than 5 km and where visibility is less than 5 km the lights will operate at 2,000 cd. The lights are required to be at maximum intensity at 3 degrees above and 1 degree below horizontal. Light intensity reduces beyond those parameters.

6.6.7 It has been agreed with the CAA (agreement of proposed obstacle lighting scheme for the proposed Development dated 20 November 2024) that there will be no requirement for intermediate lighting to be installed halfway between the nacelle and the ground-level on the turbine towers.

6.6.8 The above factors have been designed into the proposed Development as embedded mitigation.

Best Practice Measures

6.6.9 The design of the scheme has also been guided by "NatureScot Siting and Designing wind farms in the landscape" Version 3a. (2017).

6.7 Predicted effects

6.7.1 Following a brief summary of the proposed Development, this section of the LVIA considers the effects of the proposed Development on the physical features of the Site (landscape fabric), landscape character, and visual amenity. It considers the effects during the construction and operation of the proposed Development:

6.7.2 Effects during the construction phase are considered to be temporary and would have a short duration. Effects associated with the operational phase of the proposed Development are considered to be long-term and largely reversible as the wind turbines, BESS and associated infrastructure will be dismantled and removed, including above-ground electrical equipment. Underground cables will remain in place and foundations will be removed to a depth of 0.5 m. However, effects are assessed as though permanent.

Project Description

6.7.3 A detailed description of the proposed Development is set out in **Chapter 2: The Proposed Development**. The description below summarises those details of the proposed Development that have particular relevance to this LVIA.

6.7.4 The proposed Development would comprise the following visible features which may have an impact on landscape character or visual amenity:

- up to eight, Vestas V136 three-bladed horizontal axis wind turbine of up to 180 m tip height (T1, T4, T5, T6, T7 and T8) with a hub height of up to 112 m and up to 200 m to blade tip (T2 and T3) with a hub height of up to 132 m;
- Aviation obstruction lights fitted to turbines T1, T2, T3, T4, T6 and T7. The visible aviation lighting would comprise red steady state medium intensity (2000 candela (cd)/200 cd) lights. All turbines would be fitted with infra-red lights;
- a means of access from the public road to the Site;
- turbine foundations and crane hardstandings;
- transformer/switchgear housings located adjacent to turbines;
- new internal access tracks and upgrade of a segment of existing track with associated drainage, and new watercourse crossings;
- underground electrical cables connecting the turbines to the on-site substation;
- temporary wind farm construction compound areas, laydown areas and car parking;
- a substation compound with a control building with closed-circuit television mast(s) and communication mast(s);
- battery energy storage;
- up to three borrow pit search areas. The primary area will be at the entrance to Balblair wind farm at Borrow Pit Search Area 2 of Garvary wind farm. Additional borrow pit search areas have been identified at the locations of Turbines T2 and T3; and
- habitat enhancements as set out in the Outline Biodiversity Enhancement Management Plan (OBEMP) in **Technical Appendix 8.6**.

6.7.5 It is noted that a 50 m micro-siting allowance around the turbines has been included as part of the proposed Development, as set out in **Chapter 2**. The assessment judgements have been mindful at all times of this potential micro-siting.

Effects during Construction on Existing Landscape Features

- 6.7.6 As identified in the baseline section, the only existing landscape features present on the Site or that may be affected by the proposed Development are:
- Existing moorland vegetation within the Site; and
 - Watercourses crossing through the Site.

Existing moorland vegetation

- 6.7.7 The construction phase would result in the removal of moorland vegetation and other such ground-level vegetation, through the construction of temporary access works at the junction between the A836 and the Site access track, on-site access tracks, hardstanding areas, a substation compound, BESS compound, underground cabling, temporary borrow pit workings, construction compounds and turbine foundations. Underground electricity cables would generally follow access tracks.
- 6.7.8 The existing vegetation within the Site would be removed to allow construction of foundations for the various elements. Soils stripped as part of the establishment works would be stored in accordance with established soil handling best-practice for use during reinstatement works on completion of construction activities.
- 6.7.9 Referring to **Figure 2.2** of the EIA Report, up to three borrow pit working search areas would be required. The final location, number and estimate of material won from the search area would be determined once full ground investigation works and testing have been completed. The borrow pit search area would be located within LCT 135 Rounded Hills – Caithness and Sutherland. Its excavation would be short-term and would result in the removal of vegetation, soils and subsurface rock. Borrow pit workings would be restored following construction so as to encourage re-vegetation, although it is accepted that some regrading of the land profile would be expected.
- 6.7.10 The moorland vegetation is a common feature of the wider surrounding upland landscape. It does not form part of the fabric of a site designated for its scenic value although it is a characteristic feature of the upland moorland landscape and has evolved over time through land management practice. The ongoing change and modification resulting from moorland management practices, lowers its susceptibility. Combining its value and susceptibility results in the sensitivity of the moorland and grassland vegetation being low.
- 6.7.11 The moorland and forest vegetation would experience a medium magnitude of change resulting from the construction of new access tracks, laydown areas, crane pads and turbine foundations, substation compound and BESS compound affecting a small part of the overall moorland within the Site, with large areas remaining in the south western part of the Site. The overall level of effect on the moorland vegetation resulting from the proposed Development is considered to be minor moderate which is not considered to be significant.

Watercourses

- 6.7.12 The Site is incised by numerous channels created as water flows from the high ground. These features are considered to be of low value in landscape terms but highly susceptible to changes which affect their course or their quality. Combining their value

and susceptibility results in the watercourse and drainage features having a medium level of sensitivity.

- 6.7.13 The proposed turbines and associated infrastructure have been located away from any watercourses/channels on the Site. Therefore, it is only in the location of the proposed watercourse crossing where there is potential for construction effects to occur. Effects would be limited and controlled through best-practice construction and environmental practices, such that there would be no greater than a low magnitude change and a minor moderate level of effect which would not be significant.

Summary of effects on existing landscape features

- 6.7.14 The proposed Development would result in a moderate/minor effect to the moorland vegetation and a moderate/minor effect to watercourses and drainage channels. These effects are considered to be not significant.

Assessment of Effects on Landscape Character

- 6.7.15 The LCTs covering the initial 45 km LVIA study area are shown on **Figure 6.13** and within the detailed 20 km LVIA study Area at **Figure 6.14**. LCTs within 20 km of the proposed Development overlaid with the blade tip ZTV are illustrated at **Figure 6.15**.

- 6.7.16 As explained in the baseline section at paragraph **6.5.29**, an initial filtering process has been carried out on all LCTs within the detailed 20 km LVIA study area which identified that, in addition to LCT 135 Rounded Hills – Caithness and Sutherland in which the proposed Development is sited, a further four LCTs have the potential to be significantly affected by the proposed Development. The LCTs assessed in detail in this chapter are:

- LCT 135 Rounded Hills – Caithness & Sutherland – the part of the LCT where the proposed Development is located and extending approximately 20 km to the north west and 13.3 km to the south east (South of Strath Fleet unit);
- LCT 135 Rounded Hills – Caithness & Sutherland – the part of the LCT situated approximately 4.4 km to the south west lying between Strath Oykel to the north and Strath Carron to the south (Kyle of Sutherland unit);
- LCT 135 Rounded Hills – Caithness & Sutherland – the part of the LCT situated approximately 7.4 km to the south south west and to the south of Strath Carron (Strath Carron unit);
- LCT 142 Strath Caithness and Sutherland – the part of the LCT situated within approximately 4.5 km to the north west to approximately 6 km to the south covering the Kyle of Sutherland (Kyle of Sutherland unit);
- LCT 139 Rugged Mountain Massif – the part of the LCT situated approximately 9.1 km to the south west (Carn Saláchaidh unit);
- LCT 330 Rounded Hills and Moorland Slopes – Ross & Cromarty - situated approximately 8.2 km to the south at its closest point; and
- LCT 145 Farmed and Forested Slopes – situated approximately 2.3 km to the south at its closest point (Migdale unit).

Sensitivity of Landscape Character to Wind Energy Development

- 6.7.17 The first stage in assessing the effects of the proposed Development on landscape character is to evaluate the sensitivity of the LCTs brought forward into detailed assessment, to the type of change proposed. As indicated within GLVIA3, sensitivity of

landscape character should be determined through a consideration of both susceptibility to change and any values associated with the landscape.

LCT 135 Rounded Hills – Caithness & Sutherland (South of Strath Fleet unit)

- 6.7.18 This unit covers the Site of the proposed Development and extends to cover a broad area, bordered by Strath Fleet to the north, Migdale to its south and the Kyle of Sutherland to its west and north west. It is generally formed of rolling moorland with broad hills with rounded summits with some more pronounced hills and comprises moorland vegetation with some forestry and broadleaf woodland on lower slopes and in straths. It is very sparsely settled with occasional abandoned croft buildings and heritage features with evidence of early settlement. It provides a sense of remoteness with a wild character experienced in more remote parts of the LCT such as at Ben Armine Forest and within the higher hills of Strath Kildonan.
- 6.7.19 This perception of wild character is not evident in this unit which is influenced by existing wind farm development, with the existing Lairg Wind Farm and the consented Lairg 2 wind farm in the central northern part of the LCT to the south of Strath Fleet. In the north western part of the LCT the existing Achany and Rosehall wind farms further reinforce wind energy as a characteristic feature of this unit.
- 6.7.20 The unit is also crossed by a number of existing overhead electricity pylon lines, between Lairg, Shin and Loch Buidhe substation, which is also located within the central part of the LCT. In addition to the electricity infrastructure there are several telecommunications masts also present within this unit.
- 6.7.21 The South of Strath Fleet unit is assessed as having a medium value. It is not located within a landscape designated for its scenic qualities and it is not identified as a WLA. However, this unit's value is derived from it forming the backdrop to the more settled coastal areas to the east and the Dornoch Firth to the south as well as more intimate-scaled strath landscapes to the north.
- 6.7.22 The unit is assessed as having a medium susceptibility to the change proposed. It is a relatively large scale landscape where wind farm development, and electricity infrastructure, is an established baseline feature of the landscape. As such the proposed Development would not introduce a new feature into the landscape.
- 6.7.23 Combining the unit's value and susceptibility results in a **medium sensitivity** to the change proposed.

LCT 135 Rounded Hills – Caithness & Sutherland (Strath Carron unit)

- 6.7.24 This unit is located to the south of the proposed Development and extends westwards providing a backdrop of rounded hills to areas to the south of Strath Carron. In contrast to the South of Strath Fleet unit, this unit features some large areas of forestry at Blar Garvary to the south west of Ardgay and at Amat Forest towards the western end of the unit.
- 6.7.25 Although there are no wind farms located within this LCT, the existing wind farms of Coire na Cloiche, Beinn nan Oighrean and Beinn Tharsuinn are located close to the south eastern edge of the unit.

- 6.7.26 This unit is assessed as having medium value. The majority of the unit is not located within a landscape designated for its scenic qualities, although it is acknowledged that the Fannichs, Beinn Dearg and Glencalvie LLA overlaps the western edge of the LCT at a distance of approximately 15 to 20 km from the proposed Development and the Dornoch Firth NSA boundary overlaps its north eastern edge at Church Hill. The Rhiddoroch - Beinn Dearg - Ben Wyvis WLA also overlaps the southern fringes of this unit. Its value is mostly in the backdrop that it provides to the smaller-scale, intimate Strath Carron that borders the northern edge of the unit.
- 6.7.27 The unit is assessed as having a medium susceptibility to the change proposed. It is a relatively large scale landscape whose character is influenced by nearby windfarms establishing wind farm development as a baseline feature of the landscape. As such the proposed Development would not introduce a new feature into the landscape.
- 6.7.28 Combining the unit's value and susceptibility results in a **medium sensitivity** to the change proposed.

LCT 135 Rounded Hills – Caithness & Sutherland (Kyle of Sutherland unit)

- 6.7.29 This unit is located between the Strath Oykel and the Kyle of Sutherland to the north and Strath Carron to the south. It covers a broad-scale upland area of rounded hills, sandwiched between these two straths. In contrast to some of the other units of LCT 135, forestry is a more prevalent feature of this unit with several large expanse of forest plantation.
- 6.7.30 Although there are no wind farms currently located within this LCT, the existing Achany and Rosehall Wind Farms are located in the Strath Fleet unit to the north of the Kyle of Sutherland. The consented Meall a Buidhe wind farm will be located within this unit once constructed, further reinforcing wind energy development as a baseline feature of the unit.
- 6.7.31 This unit is assessed as having medium value. It is not located within a landscape designated for its scenic qualities and it is not identified as a WLA. However, this unit's value is derived from it forming the backdrop to the more intimate-scaled strath landscapes to its north and south.
- 6.7.32 The unit is assessed as having a medium susceptibility to the change proposed. It is a relatively large scale landscape whose character is influenced by nearby windfarms establishing wind farm development as a baseline feature of the landscape. As such the proposed Development would not introduce a new feature into the landscape.
- 6.7.33 Combining the unit's value and susceptibility results in a **medium sensitivity** to the change proposed.

LCT 142 Strath Caithness and Sutherland (Kyle of Sutherland unit)

- 6.7.34 This part of LCT 142 extends from Strath Oykel and Strath Cassley in the north west Shin Falls in the north, covering the valley sides of the Kyle of Sutherland, south to Ardgay. At its north and north western ends it is more enclosed, having a small, intimate that broadens further south towards Bonar Bridge. It has an important relationship with the South of Strath Fleet, Kyle of Sutherland and Strath Carron units of LCT 135 with its often wooded valley sides forming the transition to the larger scale rounded hills above.

- 6.7.35 There are no wind farms located within the LCT. However, the unit is crossed by several overhead power lines and Shin hydroelectric power station and Shin Substation are located within the northern part of the LCT. The A836 road and the Far North Railway line also pass through the LCT.
- 6.7.36 The unit is assessed as having medium high value. It is not located within a landscape designated for its scenic qualities and it is not identified as a WLA. However, the Dornoch Firth NSA borders its southern edge. The unit's value is derived from a combination of its more intimate scale and the transition it provides to the rounded hills above. The Moray Firth Tourist Route, the Inverness to John O'Groats cycle route and Shin Falls also contribute to its value through the recreational opportunities they provide.
- 6.7.37 The unit is assessed as having a medium high susceptibility to the change proposed. It is a smaller scale landscape with a more diverse landscape pattern of tree cover, transport routes, settlement and fields.
- 6.7.38 Combining the unit's value and susceptibility results in a **medium high sensitivity** to the change proposed.

LCT 139 Rugged Mountain Massif (Carn Saláchaidh unit)

- 6.7.39 The LCT occurs approximately 9.1 km to the south west of the proposed Development. It comprises the higher peaks of Cnoc na Tuppat (438 m AOD), Carn Saláchaidh (647 m AOD, Carn Bhrain (635 m AOD), Carn a' Chlaiginn (524 m AOD). It has a more complex landscape pattern with pronounced, rugged hills with areas of bare rock and rocky scree slopes flanking some of the summits that contrasts with the lower, more rounded hills of the Strath Carron unit of LCT 135 that surrounds it.
- 6.7.40 The unit is assessed as having a high value. It overlaps the Fannichs, Beinn Dearg and Glencalvie LLA at its western edge and is mostly contained within the Rhiddoroch - Beinn Dearg - Ben Wyvis WLA (WLA 29). It is very remote with no core paths and offers large-scale, panoramic views to those who venture to it.
- 6.7.41 The unit is assessed as having a high susceptibility to the change proposed. It is a remote upland landscape with a rugged nature that provides a strong sense of wildness and remoteness.
- 6.7.42 Combining the unit's value and susceptibility results in a **high sensitivity** to the change proposed.

LCT 330 Rounded Hills and Moorland Slopes – Ross & Cromarty

- 6.7.43 The LCT is situated approximately 8.2 km to the south at its closest point. The LCT consists of smooth rounded hills, sweeping moorland slopes and broad, high level unfarmed straths. Landcover is varied with areas of moorland, large forestry plantations in the larger scale interior that contrast with the smaller scale hillslopes at its northern edge near the Dornoch Firth.
- 6.7.44 Several operational wind farms are located within the central part of the LCT comprising Coire na Cloiche, Beinn nan Oighrean and Beinn Tharsuinn. The under construction Strathrory wind farm is also located in the southern part of the LCT. The LCT is also crossed by a number of overhead power lines that pass through it. The B9176 road that forms part of the Moray Firth Tourist route also pass through the LCT.

- 6.7.45 The LCT is assessed as having medium value. The majority of it is not located within a landscape designated for its scenic qualities and it is not identified as a WLA. However, the Dornoch Firth NSA overlaps the northern edge of the LCT.
- 6.7.46 The unit is assessed as having a medium susceptibility to the change proposed. It is a relatively large scale landscape whose character is influenced by nearby windfarms establishing wind farm development as a baseline feature of the landscape.
- 6.7.47 Combining the unit's value and susceptibility results in a **medium sensitivity** to the change proposed.

LCT 145 Farmed and Forested Slopes (Migdale unit)

- 6.7.48 This unit is situated around the northern edge of the Dornoch Firth and extends from Bonar Bridge, east through Migdale, and wraps around the foot of the round hills LCT and extends towards the coast to the east. It comprises a diverse mix of coniferous plantation, woodlands, moorland and managed farmland. It has a more intimate scale and is enclosed by woodlands on higher ridges, many of which are identified as Ancient Woodland on the Ancient Woodland Inventory. These woodlands restrict views in many areas with occasional views out revealed towards the Dornoch Firth. Loch Migdale is situated within the western part of the LCT.
- 6.7.49 The settlements of Bonar Bridge and Migdale are situated within the north western part of the LCT. Elsewhere, there is a dispersed pattern of settlement comprising crofts and small farms, served by a network of minor roads that follow the landscape grain of ridges and valleys that also allow views towards the rounded hills to the north.
- 6.7.50 The unit is assessed as having medium high value. It is partly located within the Dornoch Firth NSA towards its western end in Migdale. The unit's value is derived from a combination of its more intimate scale and the transition it provides to the rounded hills above.
- 6.7.51 The unit is assessed as having a medium high susceptibility to the change proposed. It is a smaller scale landscape with a more diverse landscape pattern of tree cover, minor roads, settlement and enclosed agricultural fields.
- 6.7.52 Combining the unit's value and susceptibility results in a **medium high sensitivity** to the change proposed.

Table 6.5: Summary of Landscape Character Sensitivity

Landscape Character Type	Value	Susceptibility	Sensitivity
LCT 135 Rounded Hills – Caithness & Sutherland <i>(South of Strath Fleet unit)</i>	Medium	Medium	Medium
LCT 135 Rounded Hills – Caithness & Sutherland <i>(Strath Carron unit)</i>	Medium	Medium	Medium

Landscape Character Type	Value	Susceptibility	Sensitivity
LCT 135 Rounded Hills – Caithness & Sutherland <i>(Kyle of Sutherland unit)</i>	Medium	Medium	Medium
LCT 142 Strath Caithness and Sutherland <i>(Kyle of Sutherland unit)</i>	Medium high	Medium high	Medium high
LCT 139 Rugged Mountain Massif <i>(Carn Saláchair unit)</i>	High	High	High
LCT 330 Rounded Hills and Moorland Slopes – Ross & Cromarty	Medium	Medium	Medium
LCT 145 Farmed and Forested Slopes <i>(Migdale unit)</i>	Medium high	Medium high	Medium high

Effects on Landscape Character During Construction

- 6.7.53 The eight proposed turbines, hardstandings, substation, BESS, temporary construction compound and the majority of the access tracks would be located within LCT 135 Rounded Hills – Caithness and Sutherland (South of Strath Fleet unit). A small proportion of the western end of the access track and the access off the A836 overlaps with LCT 142 Strath – Caithness and Sutherland (Kyle of Sutherland unit). This would result in direct effects during construction on these two LCTs.
- 6.7.54 During the construction phase, there will be the temporary presence of cranes on the Site and the movement of delivery vehicles and other construction traffic, consistent with the formation of access tracks, hardstandings, turbine foundations, installation of the turbines, construction of the substation and BESS and other associated infrastructure along with the installation of the turbines.
- 6.7.55 Effects during construction on landscape character will increase incrementally through the construction phase as more turbines, foundations, hardstandings and ancillary elements are constructed. Construction activities would move from turbine location to turbine location and, as activities increased in one location, they would be decreasing at locations where construction had finished.
- 6.7.56 Cranes would be involved in the erection of the turbines, but these would be onsite for a relatively short period during the overall construction phase. The cranes would form noticeable vertical features in the landscape for a short period of time but would be a

relatively diminutive visual component given their slender form compared with the turbines being erected.

- 6.7.57 Construction of the turbines, substation and BESS would take place in a central part of LCT 135 on the north-facing slopes of Cnoc Blàr na Curiach and Cnoc a' Choire Buidhe. Construction of the access from the A836 and the wind farm access track would take place within a shallow valley contained by high ground to the north at Cnoc na Mòine Duibhe and Sròn Ach' a' Bhacaidh and Cnoc Breac to the south. These landscape features would serve to limit the influence of construction activities on the character of this unit.
- 6.7.58 As set out above, there would be no significant effects on any existing landscape features. There would be localised areas of high magnitude of change directly within the Site, resulting in a **moderate major significant effect** to approximately 1 km, the effects on the wider unit would be lower.
- 6.7.59 Between approximately 1 km and 2 km, there would be a medium magnitude of change upon the LCT 135 Rounded Hills – Caithness and Sutherland (South of Strath Fleet unit) during the construction phase. This would result in a temporary additional **moderate effect**, which would be **not significant**.
- 6.7.60 Overall, there would be a low magnitude of change and a temporary additional **minor moderate effect** on the landscape character beyond approximately 2 km, and on the LCT as a whole, which would be **not significant**.
- 6.7.61 In terms of indirect effects on the other landscape character types brought forward into detailed assessment, the Rounded Hills – Caithness and Sutherland (LCT 135) Kyle of Sutherland unit and Strath Carron unit would experience some limited additional effects as construction takes place on the adjacent uplands to the north east of the Kyle of Sutherland. However, views of construction activity would be largely restricted by the landform, limiting views to cranes, with other construction activities screened from view. This would result in no greater than a very low magnitude of change and a temporary additional **minor effect** that would be **not significant**.
- 6.7.62 In terms of direct effects on the landscape character of LCT 142 Strath – Caithness and Sutherland (Kyle of Sutherland unit) during construction, activity would be limited to a very small section of the LCT where the Site entrance and a small section of the access track from the A836 would be located would be required in the immediate vicinity of the Site entrance. To the immediate north of the proposed access is the existing access to the Lairg to Loch Buidhe overhead line. This would introduce a medium magnitude of change and result in a temporary additional **moderate major significant effect** on a very small, highly localised part of the LCT extending to approximately 400 m to the south of the proposed access track.
- 6.7.63 There would also be indirect effects on views eastwards from the LCT resulting from the erection of turbines in the adjacent LCT to the east of this LCT. This would result in a low magnitude of change and a temporary additional **minor moderate effect** which would be **not significant**.
- 6.7.64 LCT 139 Rugged Mountain Massif (Carn Saláchaidh unit) would experience a very low magnitude of change with views of construction activity limited to views of cranes experienced at distances in excess of 9 km. This would result in no greater than a temporary additional **minor effect** that would be **not significant**.

- 6.7.65 LCT 330 Rounded Hills and Moorland Slopes – Ross & Cromarty would experience a very low magnitude of change. Views would be restricted by intervening forestry within the LCT, which coupled with the distance would result in no greater than a temporary additional **minor effect** that would be **not significant**.
- 6.7.66 From the Migdale unit of LCT 145 Farmed and Forested Slopes, the lower elevations would mean that construction activity would be largely restricted by the landform, limiting views to cranes, with other construction activities screened from view. This would result in no greater than a very low magnitude of change and a temporary additional **minor effect** that would be **not significant**.
- 6.7.67 **Table 6.6** below summarises the effects on landscape character during construction.

Table 6.6: Assessment of Effects on Landscape Character During Construction

Landscape Character Type	Sensitivity	Magnitude of Change	Level of Effect	Significant
LCT 135 Rounded Hills – Caithness & Sutherland <i>(South of Strath Fleet unit)</i> <i>Within approximately 1 km</i>	Medium	High	Moderate major	Significant
LCT 135 Rounded Hills – Caithness & Sutherland <i>(South of Strath Fleet unit)</i> <i>Between approximately 1 km and 2 km</i>	Medium	Medium	Moderate	Not significant
LCT 135 Rounded Hills – Caithness & Sutherland <i>(South of Strath Fleet unit)</i> <i>Beyond approximately 2 km</i>	Medium	Low	Minor moderate	Not significant
LCT 135 Rounded Hills – Caithness & Sutherland <i>(Kyle of Sutherland unit)</i>	Medium	Very low	Minor	Not significant

Landscape Character Type	Sensitivity	Magnitude of Change	Level of Effect	Significant
LCT 135 Rounded Hills – Caithness & Sutherland <i>(Strath Carron unit)</i>	Medium	Very low	Minor	Not significant
LCT 142 Strath Caithness and Sutherland <i>(Kyle of Sutherland unit) Extending approximately 400 m to the south of the access</i>	Medium high	Medium	Moderate major	Significant
LCT 142 Strath Caithness and Sutherland <i>(Kyle of Sutherland unit) Indirect views east</i>	Medium high	Low	Minor moderate	Not significant
LCT 139 Rugged Mountain Massif <i>(Carn Saláchaidh unit)</i>	High	Very low	Minor	Not significant
LCT 330 Rounded Hills and Moorland Slopes – Ross & Cromarty	Medium	Very low	Minor	Not significant
LCT 145 Farmed and Forested Slopes <i>(Migdale unit)</i>	Medium high	Very low	Minor	Not significant

Bold text indicates a significant effect

Effects on Landscape Character During Operation

6.7.68 The effects on landscape character are discussed below in relation to each landscape character type brought forward into detailed assessment (see **Technical Appendix 6.3**). The magnitude of change on landscape character as a result of the proposed Development has been determined using professional judgement based on the following factors:

- The percentage of the character type from where the Site would theoretically and actually be visible;
- The distance between the character type and the Site;
- The likely prominence of the wind turbines, substation and BESS from the character type taking account of existing locally dominant characteristics in the character type; and
- The degree to which the physical and perceptual characteristics of the landscape would change as a result of the proposed Development.

6.7.69 To aid the consideration of the operational effects on landscape character, the landscape character types within the detailed 20 km LVIA study area have been overlaid with the blade tip ZTV at **Figure 6.15**.

6.7.70 Beyond the immediate environs of the Site, the ground-level components of the proposed Development would not be discernible from lower-lying areas due to the elevation of the rounded hills where the proposed Development would be located. Therefore, effects on landscape character, as experienced in the wider landscape, for most locations arise largely in relation to the introduction of the eight proposed turbines into the landscape and the resultant changes to the experience of landscape character.

6.7.71 It is acknowledged that there may be some elevated areas where the substation, BESS or wind farm access tracks may be visible and these are considered within the assessment where relevant.

6.7.72 It is noted that in general, the magnitude of change in landscape character will incrementally decrease with distance from the turbines as they become gradually less prominent.

6.7.73 A summary of the effects on landscape character during operation is presented in **Table 6.7**. Note that for all character types stated within this table, the duration of the proposed Development is considered to be long-term and reversible.

LCT 135 Rounded Hills – Caithness and Sutherland (South of Strath Fleet unit)

6.7.74 The eight proposed turbines, the substation and BESS as well as the majority of the access tracks would be located within this LCT. Views from this LCT are represented by **viewpoints 1, 5 and 6** (see **Volume 3b** and **3c**).

6.7.75 The proposed Development would be located towards the central southern edge of this unit. Referring to **Figure 6.15**, theoretical visibility reflects the varied topography of the LCT. The high ground at Meall Eachainn screens views from lower-lying areas to the north at Loch Cracail Mòr and Loch Cracail Beag. Further north, a ridge of high ground extending from Cnoc an Achaidh Mhòir in the west to Creagan Glas (**Viewpoint 5**) and Creag Dail na Mèine provides a natural break in theoretical visibility screening views from the north facing slopes on the southern south side of Strath Fleet. High ground to the immediate north of the application boundary at Sròn Ach' a' Bhacaidh also provides some localised screening on its north-facing slopes.

6.7.76 Within the southern part of the Site, the high ground at Cnoc a' Choire Buidhe screens views from the south west facing slopes. To the east of the Site, high ground at Creag a' Bhealaich and Meall Moraig to the south east of the sit and Beinn Domhnail to the east form a topographical break in the extent of theoretical visibility. However, theoretical

visibility is more extensive eastwards out to approximately 5 km although existing forestry to the south of Loch Buidhe Substation would restrict the extent of actual visibility.

- 6.7.77 The proposed turbines would introduce direct effects on the LCT in the immediate vicinity of the Site and indirect effects on the remaining parts of the LCT. The turbines, substation and BESS would be introduced into a landscape of rounded hills that has a simple landcover. This would mean that views of the substation and BESS would be limited to areas within the immediate vicinity of their locations.
- 6.7.78 The eight turbines would introduce tall vertical structures that would extend up to 180 m to blade tip (T2 and T3 would extend up to 200 m to blade tip). However, the existing Lairg Wind Farm and the consented Lairg II wind farm are also located within the northern part of this LCT, which, together with the existing electricity infrastructure present would mean that the proposed Development would not introduce entirely new features into the landscape.
- 6.7.79 Although the proposed turbines would represent a notable change to the immediate vicinity of the application site, their location within the rounded hills limits the landscape character effects, as the turbines would be contained within the landform away from the more sensitive southerly edge of the LCT. Referring to the representative viewpoints (**viewpoints 1, 5 and 6**), despite the physical size of the turbines they do not dominate the scale of the landscape, with open views still available allowing the scale and openness of the receiving landscape to still be perceived. The proposed Development would add to the existing characteristic feature of wind turbines within the LCT, but the effect would not be so great that the turbines would become the single-most dominant characteristic feature.
- 6.7.80 The proposed Development would introduce a medium high magnitude of change that would extend to approximately 5 km to the north east, 2.3 km to the east and 5 km to the south east. This magnitude of change would also extend to approximately 4 km to the north, 3.5 km to the north west and west and to approximately 1 km to the south. Combined with the sensitivity of the LCT, this would result in a **moderate significant effect**.
- 6.7.81 At greater distances beyond approximately 5 km to the north, east and south east visibility is much more intermittent and generally limited to areas of higher ground. To the north, the existing Lairg Wind Farm is situated within this part of the LCT which has a greater influence on the perception of the character of this part of the LCT. To the north east, visibility is very intermittent and is generally limited to high ground and south west facing slopes e.g. At Creagan Glas (**Viewpoint 5**), Meall Meadhonach, Blar Buidhe, Meall Mòr and Creag na Mèine, with the proposed turbines backgrounded against distant landform. To the east, actual visibility would be less than predicted due to the extensive area of forestry to the south of Loch Buidhe that would restrict available views. To the south east visibility would also be very intermittent.
- 6.7.82 Taking these factors into consideration, together with the increased distance, between approximately 5 and 10 km to the north, north east, east and south east, the proposed Development would introduce a low to very low magnitude of change and **minor effect** that would be **not significant**. However, these effects would only be experienced at very limited points and the majority of the LCT within this distance band would experience no effects.

LCT 135 Rounded Hills – Caithness & Sutherland (Kyle of Sutherland unit)

- 6.7.83 This unit is located to the north west of the River Shin and commences at a distance of approximately 5 km to the north west of the proposed Development, extending to over 20 km to the north west. Effects on this unit would be indirect as none the proposed infrastructure would be located within it and any effects would arise from the visibility of the proposed Development. Views from this unit are represented by **Viewpoint 6** (see **Volume 3b** and **3c**).
- 6.7.84 With reference to **Figure 6.15**, theoretical visibility extends between 5 km and 10 km from the proposed Development, although there is a notable area within this distance band where no visibility is predicted between Cnoc Ceann nam Bad, Cnoc Eadar-mi and at Braemore Wood. Actual visibility would be further reduced by existing forestry a Shin Forest on the slopes to the west of the River Shin, part of which is also identified as Ancient Woodland.
- 6.7.85 Where views are available, the proposed Development would be seen on the smooth, rolling hills that form the skyline in views to the north east, with the proposed turbines contained below the height of adjacent landform on the skyline, ensuring they do not appear out of scale with landscape features on the skyline.
- 6.7.86 The existing Achany and Rosehall turbines are also located within this unit to the north west of the A839. This means that the proposed Development would not introduce elements that are uncharacteristic in views currently experienced in views experienced from this unit.
- 6.7.87 The proposed Development would introduce a low to very low magnitude of change, which combined with the sensitivity of the LCT would introduce a **minor effect** that would be **not significant**.
- 6.7.88 Beyond approximately 10 km, theoretical visibility before much more limited. The existing operational schemes at Achany and Rosehall are also located within this unit at this distance and would have a much greater influence on the character of available views experienced from the LCT. Together with the increasing distance, this would result in the magnitude of change reducing to very low with effects becoming **negligible** which would be **not significant**.

LCT 135 Rounded Hills – Caithness & Sutherland (Strath Carron unit)

- 6.7.89 This unit is located to the south of Strath Carron and commences at a distance of approximately 7.4 km to the south south west. Effects on this unit would be indirect as none the proposed infrastructure would be located within it and any effects would arise from the visibility of the proposed Development.
- 6.7.90 Referring to **Figure 6.15**, theoretical visibility is relatively continuous up to approximately 10 km from the proposed Development, with some areas within this distance band where no visibility is predicted at Church Hill, Clais a’ Bhaid Choille and Conachreag nan Clach to the west of Creag a Choineachan, Allt Domhain and Féith Tharsuinn. Actual visibility would also be partly reduced by existing forestry within this part of the unit. This part of the unit is more closely related to the Strath Carron to its north, with its north facing slopes providing the southern valley sides to the strath.

- 6.7.91 Where views are available, the proposed Development would be seen on the smooth, rolling hills that form the skyline in views to the north east. The proposed turbines would introduce a notable, new element to the skyline. The compact layout of the turbines serves to limit the effect on the character of north easterly views and the array would be partly screened by the landform in south western part of the Site. The turbines would be introduced into a part of the landscape where views are available of the existing telecommunications masts in the south western part of the Site as well as longer range views of more distant turbines. As such they would not introduce an entirely new feature into views.
- 6.7.92 At distances between approximately 7.4 km and 10 km, this would introduce a low magnitude of change and result in a **minor moderate effect** that would be **not significant**.
- 6.7.93 Between approximately 10 km and 15 km theoretical visibility of the proposed Development is more intermittent. The increasing distance, together with the closer proximity of the existing Coire na Cloiche, Beinn nan Oighrean and Beinn Tharsuinn in the southern part of the unit would mean that the magnitude of change to the character of available views would reduce to low to very low, introducing a **minor effect** that would **not significant**.
- 6.7.94 At greater distances between 15 km and 20 km to the west, theoretical visibility is more limited. This increasing distance would mean that the magnitude of change would reduce to very with effects considered to be negligible and not significant.

LCT 142 Strath Caithness and Sutherland (Kyle of Sutherland unit)

- 6.7.95 This unit is situated within approximately 4.5 km to the north west to approximately 6 km to the south covering the Kyle of Sutherland. It commences to the south of Shin Falls and extends to encompass the western and eastern flanks of the Kyle of Sutherland, continuing southwards to Ardgay. Effects on this unit would be indirect as none the proposed infrastructure would be located within it and any effects would arise from the visibility of the proposed Development in the adjacent Rounded Hills – Caithness & Sutherland LCT (LCT 135 South of Strath Fleet unit) situated to its north east.
- 6.7.96 With reference to **Figure 6.15**, theoretical visibility from the eastern part of the unit to the east of the Kyle of Sutherland between Shin and Drumliah is mostly screened by the landform of the rising eastern valley side as it climbs towards the Rounded Hills LCT. Furthermore, these slopes are wooded and so views would be further screened by vegetation along these slopes.
- 6.7.97 In contrast, theoretical visibility is more extensive from the western part of the unit to the west of the Kyle of Sutherland where the increased distance reduces the screening provided by the eastern valley side. However, Shin Forest and extensive areas of Ancient Woodland around Creag Choineachan and Carbisdale Castle would provide some additional screening from the north western part of the unit, while views would be available at points along its western flank and towards its southern extent near Ardgay.
- 6.7.98 Where views are available, the proposed Development would be seen on the smooth, rolling hills that form the skyline in views to the north east. The proposed turbines would introduce a notable, new element to the skyline. The compact layout of the turbines serves to limit the effect on the character of north easterly views and the array would be

partly screened by the landform of the rising slopes and by intervening forestry at Balblair Wood and Meikle Wood.

- 6.7.99 From the eastern part of this unit, the very limited theoretical visibility would mean that the magnitude of change would be very with effects judged to be **negligible** which would be **not significant**.
- 6.7.100 From the western part of the unit, the magnitude of change would be medium, with effects assessed as **moderate** and **not significant**.

LCT 139 Rugged Mountain Massif (Carn Saláchaird unit)

- 6.7.101 This unit is situated approximately 9.1 km to the south west and is a discrete, elevated upland area allow large, panoramic views across lower-lying areas. Effects on this unit would be indirect and any effects would arise from changes to the long range views available.
- 6.7.102 Referring to **Figure 6.15**, there is extensive theoretical visibility from high peaks and the north-facing slopes within the LCT. At lower elevations towards the northern edge of the LCT, the proposed Development would appear on the skyline. However, the compact layout would mean that the change would only affect a small proportion of the view. At higher elevations, the turbines would be backclothed against the terrain to the north of the proposed Development.
- 6.7.103 Wind farms are a component of existing views from the high peaks, with the operational schemes at Gordonbush and Kilbraur to the north east, Achany and Rosehall to the north west and Coire na Cloiche, Beinn nan Oighrean and Beinn Tharsuinn to the south already present within views. As such the proposed Development would not introduce new entirely new features into the landscape.
- 6.7.104 At distances of over 9.1 km to the south west extending to over 15 km, the distance from the proposed Development would mean that the magnitude of change would be low. Combined with the sensitivity of the LCT this would result in a **minor moderate** effect that would be considered **not significant**.

LCT 330 Rounded Hills and Moorland Slopes – Ross & Cromarty

- 6.7.105 This LCT is situated approximately 8.2 km to the south at its closest point, extending to over 20 km to the south. Effects on this unit would be indirect as none the proposed infrastructure would be located within it and any effects would arise from the visibility of the proposed Development.
- 6.7.106 With reference to **Figure 6.15**, theoretical visibility from the LCT is mostly contained between 8.2 km and approximately 10 km on the north-facing slopes of Beinn Oighrean that slope down towards the northern edge of the LCT. The character of the LCT is influenced by the existing operational schemes of Coire na Cloiche, Beinn Oighrean and Beinn Tharsuinn that are located within the LCT on the high ground at Beinn Oighrean and Beinn Tharsuinn that largely screen visibility from approximately 15 km and beyond. Towards the northern edge of the LCT, Struie Wood, part of which is identified as Ancient Woodland, would provide some additional screening of available views.

- 6.7.107 The LCT is also crossed by several existing overhead lines that pass to the east of the Coire na Cloiche, Beinn Oighrean and Beinn Tharsuinn Wind Farms and descend down the north-facing slopes and continue along the south slopes to the Dornoch Firth.
- 6.7.108 The presence of this electrical infrastructure, together with the existing wind farms would reduce the influence of the proposed Development on the LCT. At distances between approximately 8.2 km and approximately 13 km the proposed Development would introduce a medium magnitude of change. This results from the primary focus of views from the north-facing slopes being in a northerly direction across the firth. This would introduce a medium magnitude of change and lead to a **moderate effect** that would be **not significant**.
- 6.7.109 With increasing distance to the south, the character of the LCT is influenced to a greater degree by the proximity to the existing operational schemes at Coire na Cloiche, Beinn Oighrean and Beinn Tharsuinn. At distances of between approximately 13 km and 15 km to the south and south west the magnitude of change would reduce to low, leading to effects reducing to **minor moderate** which would be **not significant**. At distances over 15 km to the south and south west the magnitude of change would reduce to very low with effects reducing to **minor** which would be **not significant**.

LCT 145 Farmed and Forested Slopes (Migdale unit)

- 6.7.110 This unit is situated approximately 2.3 km to the south at its closest point and extends around the northern flank of the Dornoch Firth to over 17 km to the east of the proposed Development. A small part of the LCT also extends across part of the southern edge of the Dornoch Firth at Kincardine. Effects on this unit would be indirect as none the proposed infrastructure would be located within it and any effects would arise from the visibility of the proposed Development. Views from this unit are represented by **Viewpoints 2** and also broadly by **Viewpoint 7** (see **Volume 3b** and **3c**).
- 6.7.111 Referring to **Figure 6.15**, theoretical visibility is mostly concentrated within the western end of the LCT between Bonar Bridge, Migdale and Spinningdale on the northern edge of the firth and at Kincardine to its south. High ground at Migdale Rock and Spinningdale to the north of the firth form a natural break in the extent of visibility, restricting views from areas further east.
- 6.7.112 Within this area, actual visibility would be further restricted by extensive forestry around Loch Migdale and at Creich Wood. Towards the north western end of the LCT the landscape exhibits a more farmed character. In addition, to the north of Bonar Bridge and Migdale theoretical visibility is also relatively intermittent. However, trees and hedgerows around field boundaries would also reduce actual visibility.
- 6.7.113 Referring to the hub height ZTV at **Figure 6.6**, only a limited number of turbine hubs would be visible in theory while a greater proportion of the wind farm would be experienced in views from higher ground to the south of Loch Migdale.
- 6.7.114 From the northern end of the LCT to a distance of approximately 5.2 km the relatively limited extent of visibility would mean that the proposed Development would introduce a low magnitude of change and a **minor moderate effect** that would be **not significant**.
- 6.7.115 Between approximately 5.2 km and 9 km at Spinningdale, theoretical visibility would gradually increase with the rising topography to the north and south of Loch Migdale. This would lead to the magnitude of change increasing to medium, with effects considered to

be **moderate** and **not significant**. At distances of over approximately 9 km to the east the magnitude of change would reduce to very low, with effects becoming **negligible** due to there being only very limited, distant theoretical visibility.

6.7.116 Referring to **Viewpoint 7**, at Kincardine to the south of the Dornoch Firth, the magnitude of change experienced would also be medium, with effects judged to be **moderate** and **not significant**.

Table 6.7: Assessment of Effects on Landscape Character During Operation

Landscape Character Type	Sensitivity	Magnitude of Change	Level of Effect	Significant
LCT 135 Rounded Hills – Caithness & Sutherland <i>(South of Strath Fleet unit)</i> <i>Within approximately 4 km to the north, 5 km to the north east, 2.3 km to the east and 5 km to the south east, 3.5 km to the north west and west and 1.8 km to the south</i>	Medium	Medium high	Moderate	Significant
LCT 135 Rounded Hills – Caithness & Sutherland <i>(South of Strath Fleet unit)</i> <i>Between approximately 5 km and 10 km to the north, north east, east and south east.</i>	Medium	Low to very low	Minor	Not significant
LCT 135 Rounded Hills – Caithness & Sutherland <i>(Kyle of Sutherland unit)</i> <i>Between 5 km and 10 km to the north west</i>	Medium	Low to very low	Minor	Not significant
LCT 135 Rounded Hills – Caithness & Sutherland <i>(Kyle of Sutherland unit)</i> <i>Beyond 10 km to the north west</i>	Medium	Very low	Negligible	Not significant
LCT 135 Rounded Hills – Caithness & Sutherland <i>(Strath Carron unit)</i> <i>Between 7.4 km and 10 km to the south west</i>	Medium	Low	Minor moderate	Not significant
LCT 135 Rounded Hills – Caithness & Sutherland <i>(Strath Carron unit)</i>	Medium	Low to very low	Minor	Not significant

Landscape Character Type	Sensitivity	Magnitude of Change	Level of Effect	Significant
<i>Between 10 km and 15 km to the south and west</i>				
LCT 135 Rounded Hills – Caithness & Sutherland (Strath Carron unit) <i>Between 15 km and 20 km to the west</i>	Medium	Very low	Negligible	Not significant
LCT 142 Strath Caithness and Sutherland (Kyle of Sutherland unit) <i>Eastern part of the unit</i>	Medium high	Very low	Negligible	Not significant
LCT 142 Strath Caithness and Sutherland (Kyle of Sutherland unit) <i>Western part of the unit</i>	Medium high	Medium	Moderate	Not significant
LCT 139 Rugged Mountain Massif (Carn Saláchaidh unit)	High	Low	Minor moderate	Not significant
LCT 330 Rounded Hills and Moorland Slopes – Ross & Cromarty <i>Between 8.2 km and 13 km</i>	Medium	Medium	Moderate	Not significant
LCT 330 Rounded Hills and Moorland Slopes – Ross & Cromarty <i>Between 13 km and 15 km</i>	Medium	Low	Minor moderate	Not significant
LCT 330 Rounded Hills and Moorland Slopes – Ross & Cromarty <i>Over 15 km</i>	Medium	Very low	Minor	Not significant
LCT 145 Farmed and Forested Slopes (Migdale unit) <i>Between 2.3 km and 5.2 km</i>	Medium high	Low	Minor moderate	Not significant
LCT 145 Farmed and Forested Slopes (Migdale unit) <i>Between 5.2 km and 9 km to the north of the Dornoch Firth</i>	Medium high	Medium	Moderate	Not significant

Landscape Character Type	Sensitivity	Magnitude of Change	Level of Effect	Significant
LCT 145 Farmed and Forested Slopes <i>(Migdale unit)</i> <i>Beyond 9 km to the north of the Dornoch Firth</i>	Medium high	Very low	Negligible	Not significant
LCT 145 Farmed and Forested Slopes <i>(Migdale unit)</i> <i>At Kincardine to the south of the Firth</i>	Medium high	Medium	Moderate	Not significant

Bold text indicates a significant effect.

Effects on Landscape Character during Decommissioning

- 6.7.117 It is acknowledged that there would be some additional temporary effects during decommissioning of the proposed Development after 30 years, over and above those assessed under the heading of operational effects above. The effects resulting from decommissioning activities would be localised and relatively incidental when viewed in the context of the wind farm being removed.
- 6.7.118 The effects on landscape character will therefore decrease incrementally as decommissioning progresses and as more turbines and associated foundations and hardstanding are removed.
- 6.7.119 The effects would be similar to those during the construction phase but in reverse.
- 6.7.120 Overall, it is considered that there would be a high magnitude of change to the Rounded Hills – Caithness & Sutherland (LCT135 South of Strath Fleet unit) and a **moderate major effect** that would be **significant** within approximately 1 km.
- 6.7.121 In terms of indirect effects, there would be a medium magnitude of change and no greater than a **moderate effect** that would be **not significant** on the Rounded Hills – Caithness & Sutherland (LCT135 South of Strath Fleet unit) between approximately 1 km and 2 km.
- 6.7.122 Regarding effects to LCT 142 Strath Caithness and Sutherland (Kyle of Sutherland unit), it assumed that the access track leading to the proposed Development would remain following decommissioning and the LCT would experience no additional effects during the decommissioning phase.
- 6.7.123 All other LCTs would experience no greater than a low magnitude of change and a **minor moderate effect** with these effects considered to be **not significant**.
- 6.7.124 The decommissioning effects of the proposed Development on landscape character are temporary. Once decommissioning is complete, there would be no further effects upon landscape character.

Assessment of Visual Effects

- 6.7.125 Effects on visual amenity arise from changes to views resulting from the introduction of the proposed Development. It comprises:
- An assessment of visual effects from the representative viewpoints; and
 - An assessment of visual effects on receptor groups such as settlements, roads and core paths brought forward into detailed assessment.
- 6.7.126 The assessment has been carried out through a combination of site visits and desk study using the ZTVs, wirelines and photomontages.
- 6.7.127 In accordance with Civil Aviation Authority (CAA) CAP 764 turbines taller than 150 m require visible aviation lighting. As set out in **Section 6.6**, a reduced visible aviation lighting scheme has been agreed with the CAA that incorporates vertical directional intensity lighting. The lights are required to be at maximum intensity at 3 degrees above and 1 degree below horizontal. Light intensity reduces beyond those parameters. It is important to highlight that when not obscured by cloud, the visibility in the area of the turbines can be expected to exceed 5 km for the majority of the time and as such, the lights would be dimmed to 200 cd. Furthermore, it is important to note that intensity of the lights would reduce with increased distance from the aviation lights and the intensity at which a viewer perceives them at would also be dependent on how adapted their eye was to the dark.
- 6.7.128 It has been agreed with the CAA that infra-red lights (that are not visible to the human eye) would be installed on all turbines except T8 for operators carry night vision capability. It has also been agreed with the CAA that there will be no requirement for intermediate lighting to be installed halfway between the nacelle and the ground-level.
- 6.7.129 Should the relevant regulatory actions concerning the mandatory carriage of a compatible Electronic Conspicuity system on aircraft be completed and signed into law the project could consider the installation an Electronic Conspicuity (i.e. transponder) based Aircraft Detection Lighting System. The installation of such a suitable Aircraft Detection Lighting System would significantly reduce the occasions when the lighting would be visible. A planning condition can be attached to the grant of consent which requires investigation and agreement to such a scheme, if regulatory approval for such systems becomes available. For the purposes of assessment it has been assumed that turbines will require visible aviation lighting as set out above.
- 6.7.130 In order to carry out an assessment of the effects of visible aviation lighting the following assumptions have been made and applied in the figures and visualisations that have informed the assessment:
- Lighting is only shown on the hubs of the six turbines proposed to be fitted with visible aviation lights;
 - No intermediate lighting is illustrated halfway between the nacelle and the ground-level;
 - As the photography was taken in clear weather conditions when visibility was greater than 5 km the visualisations illustrate the reduced 200 cd intensity to reflect the lighting that would arise in those conditions as a result of the mitigation proposed (i.e. that the lighting will operate in the reduced 200 cd intensity where meteorological visibility is greater than 5 km and where visibility is less than 5 km the lights will operate at 2,000 cd). Nonetheless, these images represent the worst-case as should visibility be less than 5 km such that the 2,000 cd lighting was

active, then these poor conditions would of themselves be such as to restrict the visibility of the lighting to no more than that of the 200 candela lighting seen in clear conditions (Professor Phillip Best, 2020);

- The reduction in the intensity of lights above and below the horizon has been illustrated on **Figure 6.8** Turbine Lighting Intensity to 20 km with Viewpoints. This ZTV shows the theoretical reduction in the candela intensity of the lights at vertical angles above and below the horizon to illustrate the reduction in the intensity of the lights at elevations below the level of the turbine lights;
- Whilst the lighting would reduce in intensity above and below the horizontal this reduction has not been illustrated in the night-time visualisations. As such the visualisations are a worst-case. This matter has however been considered within the assessment judgements;
- The visualisations illustrate the period after the commencement of Evening Civil Twilight, when sufficient ambient light remains for the landform of the landscape on which the wind farm is proposed, to remain partially visible;
- Whilst the implementation of a suitable Aircraft Detection Lighting System would significantly reduce the occasions when the lighting would be visible, this has not been factored into the judgements of lighting effects which focus on the 'worst-case' scenario of the period when the lighting would be visible. The benefits of a reduction in the lighting associated with the Aircraft Detection Lighting System are nonetheless a matter for the wider planning balance exercise, addressed separately in the application submission;
- It is noted that the matter of darkness adaption is also a relevant consideration, with some receptors, in particular car drivers, not perceiving the lighting in the same manner as if they were in a fully dark environment, due to their vision being influenced by lighting sources in their proximity (i.e. car headlights). The same would apply to residents of residential properties who were viewing the aviation lighting from a location with existing lighting present (i.e. it is unlikely that residents would themselves be fully in a dark environment and their eyes therefore adapted to take in the full extent of the light from the turbines). This serves to further reduce the effects compared to how they are set out in the assessment, which again can be considered to represent a 'worst-case' position compared to what would be experienced by receptors in practice;
- The frequency in which a viewpoint is likely to be visited during the hours of darkness is not a factor which is considered within the assessment of magnitude or sensitivity. However, it should be noted that viewpoints at hills summits and on long distance footpaths would be unlikely to be visited after daylight hours. Any assessment of these receptors should therefore be considered a 'worst-case' scenario as in many cases the actual numbers of individuals who would be likely to experience the view would be very limited, although it is recognised that there will be a few individuals such as landscape photographers who may visit hilltops to take photographs at sunset or sunrise; and
- It is understood that the value and susceptibility of visual receptors during the night-time period, may differ from during the day time period. For example, the value of views during the night-time period may be reduced due to the transient nature of views as people travel through the landscape, or that they may have some form of personal light for their safety, which would create an element of baseline light. It also reflects the limited time period during which the lights would be on when the features of the landscape could be perceived and appreciated before full darkness occurs. In this regard, the findings of the Reporters concerning this matter in the Crystal Rig IV Wind Farm Report to the Scottish Ministers are noted. Here it was concluded by the Reporters in paragraph 4.146 that *'we agree with the applicant that the value that can attributed to a view at night is low'*. In turn, the susceptibility of people experiencing night-time outdoors would depend in part on the degree to

which their perception is affected by existing baseline lighting. In brightly lit areas, or when travelling on roads from where sequential views of lighting may already be experienced, the susceptibility of receptors is likely to be lower than from areas where the baseline contains no or limited existing lighting. It is noted that the matter of value and susceptibility of night-time views is not specifically addressed in the Guidelines for Landscape and Visual Impact Assessment due to the relatively new nature of this issue and that a bespoke approach to considering the value of night-time views is therefore required.

- 6.7.131 Further details about the approach and the methodology to the assessment of visible aviation lighting are set out in **Technical Appendix 6.8**.

Construction Effects

- 6.7.132 Construction activities associated with the proposed Development would be screened from most parts of the study area due to the topography of the rounded hills LCT (LCT 135 Strath Fleet unit) where the proposed Development would be located. Construction activities would be visible from more elevated locations that allows views across the uplands where the proposed Development is located and from locations near to the Site access from the A836 to the west of the Site.
- 6.7.133 From lower-lying locations to the south west of the Site around the Dornoch Firth and the Kyle of Sutherland, the rising valley slopes would largely screen views of construction activity such as from **Viewpoint 2** at Bonar Bridge, **Viewpoint 3**, **Viewpoint 4** at Ardgay and **Viewpoint 7** A836. From such areas ground-level activities would be screened by landform. In these locations the additional visual effects, over and above those addressed under the heading of Operational Effects, would arise in relation to views of the cranes erecting the turbines.
- 6.7.134 The cranes would be visible for a relatively short period and would be incidental when considered in the context of the turbines being erected. It is assessed that any views of these works would result in a low magnitude of additional change and no greater than temporary **minor effect** which would be **not significant**.
- 6.7.135 From more elevated locations in relative proximity to the proposed Development, such as from **Viewpoint 5**, views extend across part of the Site allowing views of construction activities and vehicular movements, in addition to the views of the cranes used to install the turbines. In such locations, there would be a medium to high magnitude of additional change which would result in a temporary, additional **moderate major** effect during the construction phase that would be **significant**.
- 6.7.136 From all other remaining viewpoints, ground-level activities would be screened through a combination of landform and vegetation. In these locations the additional visual effects, over and above those addressed under the heading of Operational Effects, would arise in relation to views of the cranes erecting the turbines.
- 6.7.137 The cranes would be visible for a relatively short period and would be incidental when considered in the context of the turbines being erected. It is assessed that any views of these works would result in a low magnitude of additional change and no greater than a temporary **minor effect** which would be **not significant**.

Operational Effects

- 6.7.138 A detailed viewpoint assessment of the operational effects is presented at **Technical Appendix 6.5** and this considers the long-term visual effects during the operational phase of the proposed Development for each of the 16 viewpoints.
- 6.7.139 For each of the assessment viewpoints, a short description is given of the baseline view, and a judgement is provided regarding the sensitivity of the key receptors likely to experience the view.
- 6.7.140 This is followed by a description of the features of the proposed Development that would be visible from that viewpoint. This includes a description of how many turbine hubs and blades would be visible and the ground-level components of the proposed Development which would be visible. For each viewpoint, there is a comment on how vegetation or topography would affect the actual visibility of the turbines.
- 6.7.141 A judgement is then provided of the magnitude of change that would be experienced at each viewpoint during both daylight hours and the hours of darkness, the level of the effect on the view and a statement provided to clarify whether the additional effect resulting from the proposed Development is significant or not.
- 6.7.142 A summary of the sensitivity of the view, magnitude of change in the view, the level of effect and its significance is given in **Table 6.8** below. Where a viewpoint is representative of more than one type of visual receptor, the assessment carried forward into the table represents the most sensitive receptor group represented by the viewpoint.
- 6.7.143 With reference to the Viewpoint Assessment at **Technical Appendix 6.5**, when considered against the existing baseline it has been assessed that there would be a significant visual effect at seven of the 16 representative viewpoints during daylight hours. These are as follows:
- Viewpoint 1 - Minor Road, Drochaid na h-Uidh;
 - Viewpoint 3 – Core path Cornhill – Culrain, via Invercharron Hill/Carbisdale;
 - Viewpoint 4 – Ardgay;
 - Viewpoint 5 – Creagan Glas;
 - Viewpoint 7 - A836 at Ardchronie;
 - Viewpoint 8 – Auchintoul; and
 - Viewpoint 10 - Struie Viewpoint on B9176.
- 6.7.144 It was further assessed that during the hours of darkness there would be no significant visual effects experienced from any of the representative viewpoint locations.

Table 6.8: Summary of Operational Effects on Representative Viewpoints

Viewpoint	Value	Susceptibility	Daylight Hours				Hours of Darkness			
			Sensitivity	Magnitude of change	Level of Effect	Significant	Sensitivity	Magnitude of change	Level of Effect	Significant
1 - Minor Road, Drochaid na h-Uidh (N)	Medium	High	Medium high	Medium high	Moderate major	Yes	Medium	Medium	Moderate	No
2 - Bonar Bridge (N)	High	High	High	Low	Minor moderate	No	Medium	Very low	Minor	No
3 – Core path	Medium	High	Medium high	Medium	Moderate	Yes	Medium	Medium	Moderate	No
4 – Ardgay (N)	High	High	High	Medium	Moderate	Yes	Medium	Low	Minor moderate	No
5 – Creagan Glas	Medium	High	Medium high	Medium	Moderate	Yes	Medium	Medium	Moderate	No
6 - A839 Between Lairg and Rosehall	Medium	High	Medium high	Low	Minor moderate	No	Medium	Low to very low	Minor	No
7 - A836 at Ardchronie	High	High	High	Medium	Moderate	Yes	Medium	Low	Minor moderate	No
8 - Auchintoul	Medium	High	Medium high	Medium	Moderate	Yes	Medium	Low	Minor moderate	No
9 - Lairg Cemetery, overlooking Lairg	Medium	High	Medium high	Low	Minor moderate	No	Low medium	Low to very low	Minor	No

Viewpoint	Value	Susceptibility	Daylight Hours				Hours of Darkness			
			Sensitivity	Magnitude of change	Level of Effect	Significant	Sensitivity	Magnitude of change	Level of Effect	Significant
10 - Struie Viewpoint on B9176 (N)	High	Very high	Very high	Low-Medium	Moderate	Yes	Medium	Low	Minor moderate	No
11 - West Langwell	Medium	High	Medium high	Low to very low	Minor	No	Medium	Low to very low	Minor	No
12 - Achnairn, near Caravan Park	Medium	High	Medium high	Low	Minor moderate	No	Medium high	Very low	Minor	No
13 - A837 Strath Oykel	Medium	Medium	Medium	Very low	Minor	No	Low medium	No change	No effect	No
14 - Carn Chuinneag	High	High	High	Low	Minor moderate	No	Medium high	Low	Minor moderate	No
15 - A836 Rhian Bridge	Medium high	High	Medium high	Low	Minor moderate	No	Medium	Very low	Minor	No
16 – Ord Hill*	Medium high	High	High	Low medium	Moderate	No	Medium high	Low	Minor moderate	No

Bold text indicates a significant effect

* Additional LVIA Viewpoint added following feedback received at scoping.

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

Assessment of Effects on Visual Receptor Groups

- 6.7.145 This section considers the effects of the proposed Development on the visual receptor groups brought forward into detailed assessment. Principal visual receptors are illustrated on **Figures 6.18** and **6.19**.

Construction Effects on Visual Receptor Groups

- 6.7.146 It is recognised that there would be some additional temporary visual effects during the construction of the proposed Development over and above those assessed under the operational phase.
- 6.7.147 The vast majority of effects, of note, when considering the construction phase would be experienced within the local environs of the Site, with views from the Dornoch Firth and the Kyle of Sutherland to the south and west contained by topography.
- 6.7.148 The construction works would be visible from a number of locations within the local landscape. However, views of the construction phase would be restricted to views of cranes appearing above intervening landform and vegetation with ground-level components screened from view. These views would only be experienced for a relatively short duration during the construction, and they would be experienced within the context of the turbines being constructed.
- 6.7.149 Overall, it is assessed that there would be a low magnitude of additional effect during construction over and above the operational phase effects assessed below. This would result in a temporary moderate additional effect which would be not significant, and these effects need to be considered in conjunction with the operational effects identified below.

Operational Effects on Visual Receptor Groups

- 6.7.150 Views of the ground level components of the proposed Development would be limited to a relatively short radius around the Site and or would be experienced from receptors at elevated locations which allow views onto the Site where the proposed Development is located. Therefore, except where indicated, the discussion below relates primarily to views of the proposed turbines.

Residential Receptors

- 6.7.151 As set out at paragraph **6.5.73** in **Section 6.5**, there are seven residential properties located within 2 km, two of which are abandoned and are not considered to be immediately inhabitable and as such have not been considered further. The location of these properties is illustrated on **Figure 6.6.1** in **Technical Appendix 6.6**.
- 6.7.152 The RVAA concluded that, when the experience from each property is considered in the round, its residents would not experience such an overbearing or overwhelming effect on their visual amenity that their property would become an unattractive place to live.

Effects on Settlements within 5 km

Bonar Bridge

- 6.7.153 Bonar Bridge is situated approximately 4.4 km to the south of the proposed Development clustered around the junction between the A836 and A949 and extending to the north

west along the A836 and to the south east along the A949. The settlement also extends up the rising valley side to the north east along Migdale Road towards Bonar Bridge Primary School. Properties broadly orientated towards the south west along parallel streets with a clear, open aspect to the south west across the Kyle of Sutherland. Open, grassland fields border the eastern edge of the settlement, while to the north west and south east of the settlement there are large areas of woodland at Meikle Wood and Swordale Wood.

- 6.7.154 With reference to **Figure 6.19** illustrating the principal visual receptors within 20 km overlaid with the blade tip ZTV, theoretical visibility of up to all eight turbines is predicted from the majority of the settlement, while theoretical visibility reduces towards the north western end of the settlement. Referring to the hub height ZTV at **Figure 6.6**, there is predicted visibility of up to four hubs from the part of the settlement to the south of Migdale Road and theoretical visibility of up to two hubs from the part of the settlement to the north of Migdale Road, and no predicted hub visibility from the north western end of the settlement along the A836. Views from the settlement are represented by **Viewpoint 2** in **Volume 3b** and **3c**.
- 6.7.155 During daylight hours, the proposed Development would introduce a small size and scale of change, with the turbines occupying a small to medium proportion of the view set back beyond the ridgeline to the north of the settlement. Intervening trees along field boundaries to the east of the settlement would provide further screening of the proposed Development, with views limited to blade tips and a limited number of hubs. Receptors would not experience any views of the substation/BESS and other ground-level components which would be screened by topography.
- 6.7.156 Overall during daylight hours, the proposed Development would introduce no greater than a low magnitude of change. Combined with the high sensitivity of the residential receptors, this would result in a **minor moderate effect** that would be **not significant**.
- 6.7.157 During the hours of darkness, receptors within the settlement would be less susceptible and have a lower sensitivity due to the presence of existing light sources around properties and along the A836 within the settlement.
- 6.7.158 With reference to the lit turbine ZTV at **Figure 6.7**, there would be theoretical visibility of up to two lit turbines from the part of the settlement extending along Migdale Road and to the south of it while the majority of the settlement to the north of Migdale Road would not experience views of any lit turbines. However, in practice, due to the level of intervening screening provided by the deciduous trees to the immediate east of the settlement it is considered that actual visibility would be less.
- 6.7.159 With reference to the lit turbine lighting intensity ZTV at **Figure 6.8**, although a reduced number of turbine lights would be visible in theory, due to the difference in elevation between the aviation lights and the settlement, their intensity would be perceived at a lower intensity than the stated 2,000/200 cd. Their intensity would also be reduced due to the distance from the settlement. This would result in a very low magnitude of change.
- 6.7.160 Combining the medium sensitivity of receptors and the magnitude of change during the hours of darkness would result in a **minor effect** that would be **not significant**.

Effects on Settlements within 5 km to 10 km

Ardgay

- 6.7.161 Ardgay is located on the southern side of the Dornoch Firth, approximately 5.8 km to the south of the proposed Development. Properties at lower elevations are grouped to the west of the bend in the A836 before it crosses towards Bonar Bridge, with properties also positioned on higher ground to the west on roads to the north and south of Ardgayhill and also to the north of the A836 along Church Street and Manse Road.
- 6.7.162 With reference to **Figure 6.19** illustrating the principal visual receptors within 20 km overlaid with the blade tip ZTV, theoretical visibility of up to all eight turbines is predicted from the settlement. Referring to the hub height ZTV at **Figure 6.6**, there is predicted visibility of up to six hubs from the part of the settlement to the north and south of Ardgayhill and theoretical visibility of up to four hubs from the part of the settlement to the north along Church Street and Manse Road. Views from the settlement are represented by **Viewpoint 4** in **Volume 3b** and **3c**.
- 6.7.163 During daylight hours, the proposed Development would introduce a medium scale of change, with the turbines introducing new elements on the distant horizon occupying a small to medium lateral extent of the view. Receptors would not experience any views of the substation/BESS and other ground-level components which would be screened by the topography of the hillside to the north east of Bonar Bridge that forms the view horizon. The turbines would extend slightly above the distant horizon but would be set beyond it. As such they would be more closely associated with the moorland beyond horizon rather than the wooded valley sides that form the backdrop to the view.
- 6.7.164 Overall during daylight hours, the proposed Development would introduce a medium magnitude of change. Combined with the high sensitivity of the residential receptors, this would result in a **moderate effect** that would be **significant**.
- 6.7.165 During the hours of darkness, receptors within the settlement would be less susceptible and have a lower sensitivity due to the presence of existing light sources around properties and the A836 within the settlement.
- 6.7.166 With reference to the lit turbine ZTV at **Figure 6.7**, there would be theoretical visibility of up to four lit turbines from the part of the settlement to the north and south of Ardgayhill and up to two lit turbines from lower elevations within the settlement and along Church Street and Manse Road.
- 6.7.167 With reference to the lit turbine lighting intensity ZTV at **Figure 6.8**, although a reduced number of turbine lights would be visible in theory, due to the difference in elevation between the aviation lights and the settlement, their intensity would be perceived at a lower intensity than the stated 2,000/200 cd. Their intensity would also be reduced due to the distance from the settlement. This would result in a low magnitude of change.
- 6.7.168 Combining the sensitivity of receptors and the magnitude of change during the hours of darkness would result in a **minor moderate effect** that would be **not significant**.

Lairg

- 6.7.169 The settlement of Lairg is situated approximately 9.1 km to the north north west of the proposed Development at the junction between the A836 and the A839. The western part of the settlement is located on the western bank of the River Shin while the eastern part

of the settlement is situated on the eastern bank, extending from the A836 along A839 and in the northern part of the settlement along Lochside and Manse Road.

- 6.7.170 With reference to **Figure 6.19** illustrating the principal visual receptors within 20 km overlaid with the blade tip ZTV, theoretical visibility of up to all eight turbines is predicted to be experienced from the northern part of the settlement. Referring to the hub height ZTV at **Figure 6.6**, there is predicted visibility of up to six hubs from this part of the settlement, with hub visibility reducing and no hubs being visible from parts of the settlement at lower elevations. Views from the settlement are broadly represented by **Viewpoint 9** in **Volume 3b** and **3c**.
- 6.7.171 During daylight hours, the proposed Development would introduce a small scale of change, with the turbines introducing new elements set beyond the distant horizon and occupying a small to medium lateral extent. Receptors would not experience any views of the substation/BESS and other ground-level components which would be screened by the topography of the hillside to the north east of Bonar Bridge that forms the view horizon.
- 6.7.172 The turbines would extend above the horizon but would be set behind it. As such they would be more closely associated with the landscape beyond the horizon rather than the strath landscape surrounding the settlement.
- 6.7.173 Overall during daylight hours, the proposed Development would introduce a low magnitude of change. Combined with the sensitivity of the residential receptors, this would result in a **minor moderate effect** that would be **not significant**.
- 6.7.174 During the hours of darkness, receptors within the settlement would be less susceptible and have a lower sensitivity due to the presence of existing light sources around properties and the A836 and A839 within the settlement.
- 6.7.175 With reference to the lit turbine ZTV at **Figure 6.7**, the majority of the settlement would not experience any views of the lit turbines. However, the northern part of the settlement would experience theoretical visibility of up to all six lit turbines.
- 6.7.176 With reference to the lit turbine lighting intensity ZTV at **Figure 6.8**, due to the difference in elevation between the aviation lights and the northern part of the settlement, their intensity would be perceived at a lower intensity than the stated 2,000/200 cd. Their intensity would also be reduced due to the distance from the settlement. This would result in a low to very low magnitude of change.
- 6.7.177 Combining the medium sensitivity of receptors and the magnitude of change during the hours of darkness would result in a **minor effect** that would be **not significant**.

Table 6.9: Summary of Operational Effects on Settlements

Receptor	Daylight Hours				Hours of Darkness			
	Sensitivity	Magnitude of change	Level of Effect	Significant	Sensitivity	Magnitude of change	Level of Effect	Significant
Settlements within 5 km								
Bonar Bridge	High	Low	Minor moderate	No	Medium	Very low	Minor	No
Settlements within 5 km and 10 km								
Ardgay	High	Medium	Moderate	Yes	Medium	Low	Minor moderate	No
Lairg	High	Low	Minor moderate	No	Medium	Low to very low	Minor	No

Bold text indicates a significant effect

Core Paths

- 6.7.178 The following assessment focuses on those core paths identified in the filtering exercise at **Technical Appendix 6.4** as having the potential to experience significant effects.
- 6.7.179 In accordance with the methodology set out in **Technical Appendix 6.1** the sensitivity of users of public rights of way can vary between medium and very high depending on the reason for which they are using the route. A summary of the effects is presented at **Table 6.10** below.

Effects on Core Paths within 5 km to 10 km

SU08.03 Lochcoire, Lower Track & SU03.01 Cornhill – Culrain, via Invercharron Hill/Carbisdale

- 6.7.180 These core paths are located approximately 5 km to the west south west of the proposed Development.
- 6.7.181 With reference to **Figure 6.19** illustrating the principal visual receptors within 20 km overlaid with the blade tip ZTV, theoretical visibility of up to all eight turbines is predicted to be experienced from the majority of these paths, except for an approximate 1 km section at the southern end of Core Path SU03.01 near Cornhill. Referring to the hub height ZTV at **Figure 6.6**, there is predicted visibility of up to all eight hubs over a distance of approximately 3.8 km, with views of hubs restricted at the northern end of the route and a reduced number of turbine hubs visible at the southern end of these routes near Invercharron Hill. Views from these routes are represented by **Viewpoint 3** in **Volume 3b** and **3c**.
- 6.7.182 During daylight hours, walkers would experience oblique views towards the proposed Development, with the turbines introducing new elements on the horizon and occupying a small proportion of the overall view. Although the turbines introduce new components into the view, the primary visual focus would remain the Dornoch Firth to the south east. Receptors would not experience any views of the substation/BESS and other ground-level components which would be screened by the topography of the hillside to the north east of Bonar Bridge that forms the view horizon. The turbines would appear above the distant horizon but in the main would be set behind the landform that forms the horizon.
- 6.7.183 Overall during daylight hours, the proposed Development would introduce a medium magnitude of change. Combined with the sensitivity of the receptors considered to be medium high, this would result in a **moderate effect** that would be **significant** which would be experienced over a distance of approximately 5.7 km.
- 6.7.184 During the hours of darkness, it is considered that few people would be using these routes. Any walkers would be likely to be carrying some form of light to see their route. Although there would be very few other light sources in the immediate vicinity of these routes, views would be available of distant lights in the valley below. However, any people venturing along these routes would have some appreciation of the dark sky.
- 6.7.185 With reference to the lit turbine ZTV at **Figure 6.7**, there would be up to all six lit turbines visible from the more elevated sections of the route over a distance of approximately 5.7 km. Referring to the lit turbine lighting intensity ZTV at **Figure 6.8**, due to the elevation of these routes their intensity would only be perceived at a slightly lower intensity than

their stated 2,000/200 cd. Their intensity would also be reduced due to the distance from these paths. However, taking these factors into consideration there would be a slight reduction in the magnitude of change, but it would remain a medium magnitude of change.

- 6.7.186 Combining the sensitivity of receptors and the magnitude of change during the hours of darkness would result in a **moderate effect** that would be **not significant**.

SU03.10 Ardgayhill

- 6.7.187 This core path is located approximately 6.1 km to the south of the proposed Development.
- 6.7.188 With reference to **Figure 6.19** illustrating the principal visual receptors within 20 km overlaid with the blade tip ZTV, theoretical visibility of up to all eight turbines is predicted to be experienced from the whole length of the paths. Referring to the hub height ZTV at **Figure 6.6**, there is predicted visibility of up to six hubs from the path apart from the northern section of the path to the south of Lower Gledfield where there is predicted visibility of up to four hubs over an approximate 480 m section of the path where it descends towards Church Street in to Ardgay and up to two hubs over the final 120 m of the path at lower elevation near where it meets Church Street. Views from this path are broadly represented by **Viewpoint 4** in **Volume 3b** and **3c**.
- 6.7.189 During daylight hours, walkers would experience oblique to very oblique views in a north easterly direction towards the proposed Development. The proposed turbines would introduce a medium scale of change, with the turbines introducing new elements on the distant horizon occupying a small to medium lateral extent of the view. Walkers on this core path would not experience any views of the substation/BESS and other ground-level components which would be screened by the topography of the hillside to the north east of Bonar Bridge that forms the view horizon. The turbines would extend slightly above the distant horizon but would be set beyond it. As such they would be more closely associated with the moorland beyond the horizon rather than the wooded valley sides that form the backdrop to the view.
- 6.7.190 Overall during daylight hours, the proposed Development would introduce a medium magnitude of change. Combined with the high sensitivity of the receptors, this would result in a **moderate effect** that would be **significant**.
- 6.7.191 During the hours of darkness, it is considered that there would be likely to be fewer receptors using this path. Due to the proximity to existing lights within Ardgay and the more distant lights in Bonar Bridge, they would be less susceptible and have a lower sensitivity.
- 6.7.192 With reference to the lit turbine ZTV at **Figure 6.7**, there would be theoretical visibility of up to four lit turbines from the core path. Referring to the lit turbine lighting intensity ZTV at **Figure 6.8**, although a reduced number of turbine lights would be visible in theory, due to the difference in elevation between the aviation lights and the path, their intensity would be perceived to be lower intensity than the stated 2,000/200 cd. Their intensity would also be reduced due to the distance from the path. This would result in a low magnitude of change.
- 6.7.193 Combining the sensitivity of receptors and the magnitude of change during the hours of darkness would result in a **minor moderate effect** that would be **not significant**.

SU03.12 Oakwood Chalet – Oldtown, SU03.08 Oldtown – Badvoon, SU03.04 Badvoon Forest, Link Path, SU03.05 Badvoon Forest, Allt Eiteachan Path, SU03.03 Badvoon Forest, Forest Road

- 6.7.194 This group of core paths is located approximately 6.9 km to the south of the proposed Development.
- 6.7.195 With reference to **Figure 6.19** illustrating the principal visual receptors within 20 km overlaid with the blade tip ZTV, theoretical visibility of up to all eight turbines is predicted to be experienced from the more elevated sections of SU03.05 Badvoon Forest, Allt Eiteachan Path and SU03.03 Badvoon Forest, Forest Road and at lower elevations from SU03.04 Badvoon Forest, Link Path and SU03.02 Badvoon Forest, Entrance Track, where more open views would be available towards the proposed Development.
- 6.7.196 Referring to the hub height ZTV at **Figure 6.6**, there is predicted visibility of up to all eight hubs from the more elevated sections of the above paths, while hub visibility is reduced at the above mentioned paths at lower elevations. The turbines would extend slightly above the distant horizon but would be set beyond it. As such they would be more closely associated with the moorland beyond the horizon rather than the wooded valley sides that form the backdrop to the view.
- 6.7.197 Views of the proposed Development would be screened for a large proportion of these routes, in particular from SU03.05 Badvoon Forest, Allt Eiteachan Path and SU03.03 Badvoon Forest, Forest Road due to these routes passing through forestry.
- 6.7.198 Where views are available, walkers would experience similar effects to those experienced from SU03.10 Ardgayhill due to the paths being a similar distance from the proposed Development and sharing a similar orientation relative to the proposed Development.
- 6.7.199 During daylight hours, the proposed Development would introduce a medium magnitude of change. Combined with the high sensitivity of the receptors, this would result in a **moderate effect** that would be **significant**.
- 6.7.200 During the hours of darkness, it is considered that there would be likely to be fewer receptors using this network of paths. Due to the proximity to existing lights within Ardgay and the more distant lights in Bonar Bridge, they would be less susceptible and have a lower sensitivity.
- 6.7.201 With reference to the lit turbine ZTV at **Figure 6.7**, there would be theoretical visibility of up to four lit turbines from the core path. Referring to the lit turbine lighting intensity ZTV at **Figure 6.8**, although a reduced number of turbine lights would be visible in theory, due to the difference in elevation between the aviation lights and the path, their intensity would be perceived to be lower intensity than the stated 2,000/200 cd. Their intensity would also be reduced due to the distance from theses path. This would result in a low magnitude of change.
- 6.7.202 Combining the sensitivity of receptors and the magnitude of change during the hours of darkness would result in a **minor moderate effect** that would be **not significant**.

Effects on Core Paths within 10 km to 15 km

RC15.04 Struie Hill, Mast Track

- 6.7.203 This core path is located approximately 11.8 km to the south east of the proposed Development. It leads from Leachonich and climbs Struie Hill towards the telecommunications mast.
- 6.7.204 With reference to **Figure 6.19** illustrating the principal visual receptors within 20 km overlaid with the blade tip ZTV, there would be no visibility of the proposed Development from the majority of the path. Theoretical visibility of up to all eight turbines would be available over a distance of approximately 470 m as the path reaches the summit of Struie Hill. Views from this path are broadly represented by **Viewpoint 10** in **Volume 3b** and **3c**.
- 6.7.205 During daylight hours, walkers would experience oblique to very oblique views in a north westerly direction towards the proposed Development. The proposed turbines would introduce a medium scale of change, with the turbines introducing new elements on the distant horizon occupying a small to medium lateral extent of the view. Walkers on this core path would not experience any views of the substation/BESS and other ground-level components which would be screened by the topography. The susceptibility of walkers on this path is reduced due to the proximity to the existing telecommunications mast that the track climbs towards, resulting in walkers on this route having a medium high sensitivity.
- 6.7.206 Overall during daylight hours, the proposed Development would introduce a low medium magnitude of change. Combined with the medium high sensitivity of the receptors, this would result in a **moderate effect** that would be **not significant**.
- 6.7.207 During the hours of darkness, any walkers using this path would be likely to be carrying some form of light to see their route. Although there would be very few other light sources in its immediate vicinity, views would be available of distant lights in the valley below resulting in receptors being less susceptible and having a medium sensitivity.
- 6.7.208 With reference to the lit turbine ZTV at **Figure 6.7**, there would be theoretical visibility of all six lit turbines from the core path this 470 m section of the path. Referring to the lit turbine lighting intensity ZTV at **Figure 6.8**, due to the elevation of the path relative to the lit turbines there would not be much reduction in their intensity. However, their intensity would be reduced due to the distance from the path. This would result in a low magnitude of change.
- 6.7.209 Combining the sensitivity of receptors and the magnitude of change during the hours of darkness would result in a **minor moderate effect** that would be **not significant**.

Table 6.10: Summary of Operational Effects on Core Paths

Receptor	Daylight Hours				Hours of Darkness			
	Sensitivity	Magnitude of change	Level of Effect	Significant	Sensitivity	Magnitude of change	Level of Effect	Significant
Core Paths within 5 km and 10 km								
SU08.03 Lochcoire, Lower Track & SU03.01 Cornhill – Culrain, via Invercharron Hill/Carbisdale <i>Over a distance of approximately 5.7 km</i>	Medium high	Medium	Moderate	Yes	Medium	Medium	Moderate	No
SU03.10 Ardgayhill	High	Medium	Moderate	Yes	Medium	Low	Minor moderate	No
SU03.12 Oakwood Chalet – Oldtown, SU03.08 Oldtown – Badvoon, SU03.04 Badvoon Forest, Link Path, SU03.05 Badvoon Forest, Allt Eiteachan Path, SU03.03 Badvoon Forest, Forest Road	High	Medium	Moderate	Yes	Medium	Low	Minor moderate	No
RC15.04 Struie Hill, Mast Track	Medium high	Low medium	Moderate	No	Medium	Low	Minor moderate	No

Bold text indicates a significant effect

Effects on Roads, Railways, Promoted Tourist Routes and Cycle Routes

- 6.7.210 The following assessment focuses on those routes identified in the filtering exercise at **Technical Appendix 6.4** as having the potential to experience significant effects.
- 6.7.211 In accordance with the methodology set out in **Technical Appendix 6.1** the sensitivity of users of roads, railways and cycle routes can vary between low and high depending on the reason for which they are using the route. A summary of the effects is presented at **Table 6.11** below.

Roads

- 6.7.212 Referring to **Technical Appendix 6.1**, users of trunk/major roads are typically considered to have low sensitivity. While the A836 is a main route through the area and is likely to be used by local people accessing the wider area, it is used by tourists visiting the area and also forms part of the promoted Moray Firth Tourist Route, increasing the susceptibility of some of the users of the road. The road also passes alongside and crosses through part of the Dornoch NSA increasing its value. Therefore, it is considered that during daylight hours users of the A836 have a high sensitivity to the change proposed in the vicinity of the Dornoch Firth NSA and a medium high sensitivity elsewhere. During the hours of darkness, the lights of road users' vehicles together with lights around properties and settlements would reduce their susceptibility to the proposed aviation lights, reducing their sensitivity to medium.

A836 – North westbound

- 6.7.213 With reference to **Figure 6.19** illustrating the principal visual receptors within 20 km overlaid with the blade tip ZTV, theoretical visibility commences approximately 17.1 km to the south east near Edderton Sands and continues over a distance of approximately 3.6 km to north west of Edderton. Referring to the hub height ZTV at **Figure 6.6**, there would only be theoretical visibility of up to two turbine hubs. Over this section of the road, road users would experience oblique views at a considerable distance that would also be intermittently screened trees adjacent to the road. During daylight hours this would result in a very low magnitude of change and no greater than a **minor effect** that would be **not significant**. During the hours of darkness, referring to the lit turbine ZTV at **Figure 6.7**, the very limited theoretical visibility of the lit turbines coupled with the distance from the proposed Development and the difference in elevation between the turbine lights and this section of road, would mean that the magnitude of change would be very low with effects considered to **minor** and **not significant**.
- 6.7.214 From Edderton there is no further theoretical visibility for 5.7 km until approximately 1.5 km to the east of the junction with the B9176. Referring to **Figure 6.19**, theoretical visibility increases over a relatively short distance until there would be theoretical visibility of up to all eight turbines until the junction with the B9176 over a distance of approximately 1 km. Referring to the hub height ZTV at **Figure 6.6**, there would be theoretical visibility of up to two turbine hubs. Over this section, road users would experience oblique views at a distance of approximately 10.5 km from the proposed Development. Views would also be intermittently screened by trees adjacent to the road. During daylight hours this would result in a very low magnitude of change and no greater than a **minor effect** that would be **not significant**.

- 6.7.215 During the hours of darkness, referring to the lit turbine ZTV at **Figure 6.7**, the limited theoretical visibility of the lit turbines together with the distance from the proposed Development and the difference in elevation between the turbine lights and this section of road, would mean that the magnitude of change would be very low with effects considered to **minor and not significant**.
- 6.7.216 As the road continues north west from the junction with the B9176 there is theoretical visibility of up to all eight turbines for approximately 6.7 km until the road reaches Bonar Bridge. However, the visual experience would be varied over different parts of this section of the road.
- 6.7.217 Over approximately 1.5 km as the road continues from the B9176 to Wester Fearn, referring to **Figure 6.19** there would be theoretical visibility of up to all eight turbines. Road users would experience oblique views that would be intermittently screened by intervening trees to the north side of the road. During daylight hours this would introduce a low magnitude of change and a **minor moderate** effect that would be **not significant**. During the hours of darkness, referring to the lit turbine ZTV at **Figure 6.7**, up to all six lit turbines would be visible. However, the distance from the proposed Development and the difference in elevation between the turbine lights and this section of road, together with the intermittent screening would mean that the magnitude of change would be low with effects considered to **minor moderate** and **not significant**.
- 6.7.218 From Wester Fearn to Bonar Bridge over a distance of approximately 5.2 km, referring to **Figure 6.19** there would be theoretical visibility of up to all eight turbines. Road users would experience oblique views, that would be intermittently screened by roadside vegetation and buildings on the approach to Ardgay and Bonar Bridge. Where views are available the turbines would be seen set beyond the landform to the north of Bonar Bridge that forms the view horizon. As such they would be more closely associated with the moorland beyond the horizon rather than the valley slopes that form the backdrop to the view. During daylight hours this would introduce a medium magnitude of change and a **moderate effect** that would be **significant**. During the hours of darkness, referring to the lit turbine ZTV at **Figure 6.7**, up to all six lit turbines would be visible initially before the number of visible turbine lights reduces from between Kincardine and Bonar Bridge. The difference in elevation between the turbine lights and this section of road would also reduce the intensity at which the lights would be perceived. Considered with the existing lighting within Ardgay and Bonar Bridge and the reducing number of aviation lights that would be seen this would result in a low magnitude of change and **minor moderate** effect that would be **not significant**.
- 6.7.219 As road users continue north westwards through Bonar Bridge, referring to **Figure 6.19**, theoretical visibility is predicted over a distance of approximately 1 km within the settlement, with views limited to blade tips only for the majority of this section. However, the properties along the eastern side of the road and existing tree cover towards the north of the settlement would provide further screening of views from the road. During daylight hours this would introduce no greater than a very low magnitude of change and a **minor effect** that would be **not significant**.
- 6.7.220 During the hours of darkness, referring to the lit turbine ZTV at **Figure 6.7**, the very limited theoretical visibility of the lit turbines coupled with the difference in elevation between the turbine lights and this section of road and the level of intervening screening would mean

that the magnitude of change would be very low with effects considered to **minor** and **not significant**.

- 6.7.221 From Bonar Bridge, road users travelling north westwards would experience no further views and once past the Site entrance, the proposed Development would be situated behind the direction of travel.

A836 – South eastbound

- 6.7.222 With reference to **Figure 6.19** illustrating the principal visual receptors within 20 km overlaid with the blade tip ZTV, theoretical visibility commences approximately 20 km to the north west of the proposed Development at Rhian Bridge and continues over a distance of approximately 4 km to Dalmichy. Referring to the hub height ZTV at **Figure 6.6**, there would be theoretical visibility of up to all eight turbine hubs. Over this section, road users would experience oblique views at a considerable distance that would also be intermittently screened trees adjacent to the road. During daylight hours this would result in a low magnitude of change and a **minor moderate** effect that would be **not significant**. During the hours of darkness, referring to the lit turbine ZTV at **Figure 6.7**, there would be theoretical visibility of up to all six lit turbines. However, the distance from the proposed Development and the difference in elevation between the turbine lights and this section of road, would mean that the magnitude of change would be very low with effects considered to **minor** and **not significant**.
- 6.7.223 Between Dalmichy and north of Lairg there would be no visibility for approximately 4.2 km. Referring to **Figure 6.19**, theoretical visibility would be available for an approximate 2 km section of the road to the immediate north of Lairg and referring to **Figure 6.6**, a limited number of turbine hubs would also be visible. Over this section, road users would experience oblique views at a distance of between approximately 10 to 12 km, with views also intermittently screened trees adjacent to the road. During daylight hours this would result in a low magnitude of change and no greater than a **minor moderate effect** that would be **not significant**. During the hours of darkness, referring to the lit turbine ZTV at **Figure 6.7**, there would be theoretical visibility of up to two lit turbines. However, the distance from the proposed Development and the difference in elevation between the turbine lights and this section of road, together with the intermittent screening provided by roadside trees would mean that the magnitude of change would be low to very low with effects considered to **minor** and **not significant**.
- 6.7.224 As road users continue southwards towards Bonar Bridge, they would not experience any further visibility for approximately 16 km until they enter Bonar Bridge. Within Bonar Bridge they would experience the same effects as identified for road users travelling north westwards. During daylight hours they would experience a very low magnitude of change and a **minor effect** that would be **not significant**. During the hours of darkness, the magnitude of change would be very low with effects considered to **minor** and **not significant**.
- 6.7.225 As road users cross Bonar Bridge the proposed Development would be behind the direction of travel and as such, they would not experience any further effects as they continue south eastwards.

A837

- 6.7.226 Referring to **Technical Appendix 6.1**, users of trunk/major roads are typically considered to have low sensitivity. While the A837 is a main route through Strath Oykel and is likely to be used by local people accessing the wider area, it is used by tourists visiting the area and travelling westwards. It does not cross through a landscape designated for its particular scenic quality. The susceptibility of users of the road is also reduced due to the proximity to the existing Achany and Rosehall wind farms. Therefore, it is considered that during daylight hours users of the A837 have a medium sensitivity to the change proposed. During the hours of darkness, the lights of road users' vehicles would reduce their susceptibility to the proposed aviation lights, reducing their sensitivity to low medium.
- 6.7.227 With reference to **Figure 6.19** illustrating the principal visual receptors within 20 km overlaid with the blade tip ZTV, theoretical visibility commences approximately 19 km to the west of the proposed Development and continues over a distance of approximately 4.7 km to near Rosehall with theoretical visibility of up to all eight turbines available over the majority of this section, with visibility reducing towards Rosehall. Referring to the hub height ZTV at **Figure 6.6**, there would be theoretical visibility of up to all eight turbine hubs. Over this section, road users would experience slightly oblique views at distances of over 15 km that would also be occasionally screened by trees adjacent to the road. During daylight hours, the proposed Development would introduce in a low magnitude of change and a **minor moderate effect** that would be **not significant**. During the hours of darkness, referring to the lit turbine ZTV at **Figure 6.7**, there would be theoretical visibility of up to all six lit turbines. However, the distance from the proposed Development and the difference in elevation between the turbine lights and this section of road, would mean that the magnitude of change would be low with effects considered to **minor and not significant**.
- 6.7.228 From Rosehall, there would be no views available for approximately 4.9 km until the road passes Mid Altass. Views would be available over a 4.3 km section of the road and are broadly represented by **Viewpoint 8** in **Volume 3b** and **3c**. However, a large proportion of this section of the road is bordered by trees that would screen or filter views towards the proposed Development. During daylight hours, the proposed Development would introduce in a low magnitude of change and a **minor moderate effect** that would be **not significant**. During the hours of darkness, referring to the lit turbine ZTV at **Figure 6.7**, there would be theoretical visibility of up to all six lit turbines. However, the difference in elevation between the turbine lights and this section of road, together with the level of intervening screening would mean that the magnitude of change would be low with effects considered to **minor and not significant**.
- 6.7.229 From near Linsidmore, no views would be available for approximately 1.9 km until the road approaches Inveran, where views would be available over a 1.8 km section of the road. However, a large proportion of this section of the road is bordered by trees that would screen or filter views towards the proposed Development. This section of the road also passes Shin Substation which would reduce the susceptibility of road users due to the close proximity to existing electrical infrastructure. During daylight hours, where views are available the proposed Development would introduce in a medium magnitude of change and a **moderate effect** that would be **not significant**. During the hours of darkness, referring to the lit turbine ZTV at **Figure 6.7**, there would be theoretical visibility of up to four lit turbines. However, the difference in elevation between the turbine lights

and this section of road, together with the level of intervening screening would mean that the magnitude of change would be low with effects considered to **minor** and **not significant**.

- 6.7.230 Road users travelling in a westerly direction along the A837 would experience no effects as the proposed Development would be behind the direction of travel.

B9176

- 6.7.231 The B9176 is one of the main routes likely to be used by local people accessing the wider area and by tourists visiting the area. It also forms part of the promoted Moray Firth Tourist Route, increasing the susceptibility of some of the users of the road. Therefore, it is considered that during daylight hours users of the B9176 have a high sensitivity to the change proposed. During the hours of darkness, the lights of road users' vehicles would reduce their susceptibility to the proposed aviation lights, reducing their sensitivity to medium.
- 6.7.232 Northbound travellers would experience theoretical visibility of up to two turbines over an approximate 425 m section of the road near Cnoc nan Gaimhnean. However, the view would be limited to a single blade tip and at approximately 17 km distance the magnitude of change would be very low and the effect would be **negligible** and **not significant** during both daylight hours and the hours of darkness.
- 6.7.233 The main section of the road where road users travelling northwards would experience theoretical visibility commences to the south of Struie and extends for approximately 1.3 km. Over this section of the road, it passes through a broad U-shaped valley that directs views in a north westerly direction. Referring to **Figure 6.19**, road users would experience visibility of up to all eight turbines. Referring to the hub height ZTV at **Figure 6.6**, there would be theoretical visibility of up to all eight turbine hubs. Over this section, road users would experience slightly oblique views at distances of over 16 km with the adjacent valley formation partially screening the proposed Development. During daylight hours, the proposed Development would introduce in a low magnitude of change and a **minor moderate** effect that would be **not significant**. During the hours of darkness, referring to the lit turbine ZTV at **Figure 6.7**, there would be theoretical visibility of up to all six lit turbines. However, the distance from the proposed Development would mean that the magnitude of change would be very low with effects considered to **minor** and **not significant**.
- 6.7.234 Following a short break in theoretical visibility of approximately 300 m, theoretical visibility commences to the west of Struie and continues for approximately 1.8 km as the road descends Cadha Mor, passing the Struie Viewpoint (see **Viewpoint 10** in **Volume 3b** and **3c**). Road users would experience, open, oblique views towards the proposed Development that would be seen on the hills to the north of the Dornoch Firth. While their attention would be mostly focussed on the road, they would experience glimpsed views across the Dornoch Firth.
- 6.7.235 Referring to **Figure 6.19** and **Figure 6.6**, road users would experience visibility of up to all eight turbine blades and hubs. During daylight hours, the proposed Development would introduce in a low medium magnitude of change and a **moderate effect** that would be **not significant**. During the hours of darkness, referring to the lit turbine ZTV at **Figure 6.7**, there would be theoretical visibility of up to all six lit turbines. However, the distance

from the proposed Development would mean that the magnitude of change would be low with effects considered to **minor moderate** which would be **not significant**.

- 6.7.236 As the road passes through the Easter Fearn Burn valley no views would be available for approximately 590 m. Referring to **Figure 6.19**, theoretical visibility is predicted for a further approximate 1.2 km section of the road until it meets the A836. However, views would be screened or heavily filtered by an extensive belt of mature trees along the northern edge of the road that would mean the proposed Development would introduce a very low magnitude of change and **negligible** effects that would be **not significant** during both daylight hours and the hours of darkness.
- 6.7.237 Road users travelling in a south easterly direction along the B9176 would experience no effects as the proposed Development would be behind the direction of travel.

Railways

Far North Railway Line

- 6.7.238 Referring to **Technical Appendix 6.1**, rail travellers are typically considered to have low sensitivity except where the route forms part of a scenic route. Part of the route passes alongside and crosses through parts of the Dornoch NSA increasing its value. Therefore, it is considered that during daylight hours rail travellers have a high sensitivity to the change proposed. During the hours of darkness, lights within the carriages and their reflection in the windows would reduce the susceptibility of passengers to the proposed aviation lights, reducing their sensitivity to low.
- 6.7.239 Within the detailed 20 km LVIA study area, the Far North railway line follows a similar course to that of the A836 along the southern edge of the Dornoch Firth. As such, between Edderton Sands and Ardgay, passengers would experience similar effects.
- 6.7.240 Over a distance of approximately 3.6 km between Edderton Sands and to the north west of Edderton, during daylight hours the proposed Development would introduce a very low magnitude of change and no greater than a **minor effect** that would be **not significant**. During the hours of darkness, the magnitude of change would be very low with effects considered to be **negligible** and **not significant**.
- 6.7.241 No further theoretical visibility would be experienced for 5.7 km until approximately 1.5 km to the east of the junction with the B9176 and the A836 near Easter Fearn Point. Referring to **Figure 6.19** and the hub height ZTV at **Figure 6.6**, there would be theoretical visibility of a limited number of turbines over a distance of approximately 2 km between Easter Fearn Point and Fearn Lodge. Over this section of the route, passengers would experience oblique views at a distance between approximately 9.3 km and 10.5 km from the proposed Development. During daylight hours this would result in a very low magnitude of change and a **minor effect** that would be **not significant**. During the hours of darkness, due to the limited ability for passengers to experience views from the carriages due to the reflection of carriage lighting in the windows the magnitude of change would be very low with effects considered to **minor** and **not significant**.
- 6.7.242 Referring to **Figure 6.19** there would be theoretical visibility of up to all eight turbines over a distance of approximately 4.6 km between Fearn Lodge and Ardgay. Passengers would experience oblique views that would be intermittently screened as the route passes through cuttings. During daylight hours this would introduce a medium magnitude of change and a **moderate effect** that would be **significant**. During the hours of darkness,

referring to the lit turbine ZTV at **Figure 6.7**, up to all six lit turbines would be visible initially before the number of visible turbine lights reduces from between Kincardine and Ardgay. However, due to the limited ability for passengers to experience views from the carriages due to the reflection of carriage lighting in the windows the magnitude of change would be very low resulting in a **minor effect** that would be **not significant**.

- 6.7.243 To the north west of Ardgay there would be theoretical visibility of up to all eight turbine blade tips and up to four turbine hubs between Ardgay and Balinoe over a distance of approximately 3.5 km. However, to the north west of Ardgay the railway line passes through a cutting which would partially screen views. Where views are available, passengers would experience oblique to very oblique views. During daylight hours this would introduce a low magnitude of change and a **minor moderate effect** that would be **not significant**. During the hours of darkness, referring to the lit turbine ZTV at **Figure 6.7**, up to two lit turbines would be visible over this section. However, due to the limited ability for passengers to experience views from the carriages due to the reflection of carriage lighting in the windows the magnitude of change would be very low resulting in a **minor effect** that would be **not significant**.
- 6.7.244 To the north of Balinoe there would be no further predicted visibility, due to the screening provided by the landform of the Shin Valley and Strath Fleet.
- 6.7.245 Passengers travelling southwards towards Inverness would first experience views from Balinoe. They would experience the same effects as northbound travellers except in reverse order.

Promoted Tourist Routes

Moray Firth Tourist Route

- 6.7.246 The Moray Firth Tourist Route follows the B9176, the A836, A839 and the A9 as it passes through the detailed 20 km LVIA study area. As such, tourists would experience views over the same sections of the B9176 and the A836 as reported above and as set out in **Table 6.11** below. Referring to **Figure 6.19** there is no predicted visibility from the tourist route as it passes along the A839 in Strath Fleet nor from the section of the route that follows the A9.

Cycle Routes

- 6.7.247 The John O’Groats Cycle Route passes through the detailed 20 km LVIA study area, following the A836 to Ardgay. At Ardgay, the route diverges with one leg following the minor road along the western shoreline of the Kyle of Sutherland and rejoining the A836 near Culrain. The other leg continues along the A836 through Bonar Bridge and joining the B864 between Inveran and Lairg. From Lairg the route rejoins and continues to follow the A836.
- 6.7.248 Referring to **Technical Appendix 6.1**, cyclists are considered to have high sensitivity due to the generally slower pace of travel and views of the wider landscape are a component of the experience when cycling. During the hours of darkness, cyclists would typically be using a light to illuminate their route and signal their presence to other road users. This would reduce their susceptibility to the proposed aviation lights, reducing their sensitivity to medium.

John O'Groats Cycle Route Northbound

- 6.7.249 Cyclists travelling northbound would experience the same effects as people travelling along the A836 between Edderton Sands and Ardgay as reported above and as set out in **Table 6.11** below.
- 6.7.250 At Ardgay, cyclists taking the easterly route via Bonar Bridge would experience the same effects as people travelling along this section of the A836 as reported above and as set out in **Table 6.11** below.
- 6.7.251 Referring to **Figure 6.19**, cyclists taking the westerly leg towards Culrain would experience theoretical visibility of up to all eight turbines over a distance of approximately 1.6 km between Ardgay and Cornhill. Cyclists would experience very oblique views with the proposed Development appearing behind the direction of travel for the majority of this section due to the orientation of the road relative to the proposed Development. Where views are available the turbines would be seen set beyond the landform to the north of Bonar Bridge that forms the view horizon. As such they would be more closely associated with the moorland beyond the horizon rather than the valley slopes that form the backdrop to the view. During daylight hours this would introduce a medium magnitude of change and a **moderate effect** that would be **significant**. During the hours of darkness, referring to the lit turbine ZTV at **Figure 6.7**, up to two lit turbines would be visible. This would introduce a low magnitude of change and result in a **minor moderate effect** that would be **not significant**.
- 6.7.252 No views would be available as the route crosses through Strath Carron. Referring to **Figure 6.19**, cyclists would experience theoretical visibility of up to all eight turbines over a distance of approximately 2.7 km to Balinoe. Cyclists would experience very oblique views that would be screened for the majority of this section due to roadside trees. During daylight hours this would introduce a low magnitude of change and a **minor moderate effect** that would be **not significant**. During the hours of darkness, referring to the lit turbine ZTV at **Figure 6.7**, up to two lit turbines would be visible from limited parts of this section, with the majority of the route not experiencing views any views of the lit turbines. This would introduce a very low magnitude of change and result in a **minor effect** that would be **not significant**.
- 6.7.253 Referring to **Figure 6.19**, cyclists travelling northwards would not experience any further effects as past Invershin the proposed Development would appear behind the direction of travel.

John O'Groats Cycle Route Southbound

- 6.7.254 Cyclists travelling southbound would experience the same effects as people travelling along the A836 between Rhian Bridge and Dalmichy, and to the north of Lairg as reported above and as set out in **Table 6.11** below.
- 6.7.255 Referring to **Figure 6.19**, cyclists travelling along the section of the route that follows the B864 would experience theoretical visibility of up to all six turbines over a distance of approximately 1.1 km in the Achany Glen. However, actual views would be screened by extensive tree cover. This would introduce a very low magnitude of change and negligible effects that would not be significant during both daylight hours and the hours of darkness.

6.7.256 Referring to **Figure 6.19**, there is no predicted visibility as the route continues towards Balinoe. However, cyclists travelling southwards would not experience any further effects as past Balinoe the proposed Development would appear behind the direction of travel.

Table 6.11: Summary of Operational Effects on Roads, Railways, Promoted Tourist Routes and Cycle Routes

Receptor	Daylight Hours				Hours of Darkness			
	Sensitivity	Magnitude of change	Level of Effect	Significant	Sensitivity	Magnitude of change	Level of Effect	Significant
A836 North westbound								
Edderton <i>Approximate 3.6 km section</i>	High	Very low	Minor	No	Medium	Very low	Minor	No
Near junction with B9176 <i>Approximate 1 km section</i>	High	Very low	Minor	No	Medium	Very low	Minor	No
B9176 to Wester Fearn <i>Approximate 1.5 km section</i>	High	Low	Minor moderate	No	Medium	Low	Minor moderate	No
Wester Fearn to Bonar Bridge <i>Approximate 5.2 km section</i>	High	Medium	Moderate	Yes	Medium	Low	Minor moderate	No
Bonar Bridge <i>Approximate 1 km section</i>	High	Very low	Minor	No	Medium	Very low	Minor	No
A836 South eastbound								
Rhian Bridge to Dalmichy <i>Approximate 4 km section</i>	Medium high	Low	Minor moderate	No	Medium	Very low	Minor	No

Receptor	Daylight Hours				Hours of Darkness			
	Sensitivity	Magnitude of change	Level of Effect	Significant	Sensitivity	Magnitude of change	Level of Effect	Significant
North of Lairg <i>Approximate 2 km section</i>	Medium high	Low	Minor moderate	No	Low medium	Low to very low	Minor	No
Bonar Bridge <i>Approximate 1 km section</i>	High	Very low	Minor	No	Medium	Very low	Minor	No
A837 Eastbound								
Section to Rosehall <i>Approximate 4.7 km section</i>	Medium	Low	Minor moderate	No	Low medium	Low	Minor	No
Section to Mid Altass <i>Approximate 4.3 km section</i>	Medium	Low	Minor moderate	No	Low medium	Low	Minor	No
Section to Inveran <i>Approximate 1.8 km section</i>	Medium	Medium	Moderate	No	Low medium	Low	Minor	No
B9176 Northbound								
Cnoc nan Gaimhnean <i>Approximate 425 m section</i>	High	Very low	Negligible	No	Medium	Very low	Negligible	No
South of Struie <i>Approximate 1.3 km section</i>	High	Low	Minor moderate	No	Medium	Very low	Minor	No

Receptor	Daylight Hours				Hours of Darkness			
	Sensitivity	Magnitude of change	Level of Effect	Significant	Sensitivity	Magnitude of change	Level of Effect	Significant
West of Struie <i>Approximate 1.8 km section</i>	High	Low medium	Moderate	No	Medium	Low	Minor moderate	No
West of Easter Fearn Burn valley <i>Approximate 1.2 km section</i>	High	Very low	Negligible	No	Medium	Very low	Negligible	No
Far North Railway Line Northbound/Southbound								
Edderton Sands to north west of Edderton <i>Approximate 3.6 km section</i>	High	Very low	Minor	No	Low	Very low	Negligible	No
Easter Fearn Point to Fearn Lodge <i>Approximate 2 km section</i>	High	Very low	Minor	No	Low	Very low	Minor	No
Fearn Lodge to Ardgay <i>Approximate 4.6 km section</i>	High	Medium	Moderate	Yes	Low	Very low	Minor	No
Ardgay to Balinoe <i>Approximate 3.5 km section</i>	High	Low	Minor moderate	No	Low	Very low	Minor	No
John O'Groats Cycle Route Northbound								
Westerly leg Ardgay to Cornhill	High	Medium	Moderate	Yes	Medium	Low	Minor moderate	No

Receptor	Daylight Hours				Hours of Darkness			
	Sensitivity	Magnitude of change	Level of Effect	Significant	Sensitivity	Magnitude of change	Level of Effect	Significant
<i>Approximate 1.6 km section</i>								
South of Balinoe <i>Approximate 2.7 km section</i>	High	Low	Minor moderate	No	Medium	Very low	Minor	No
John O'Groats Cycle Route Southbound								
Achany Glen <i>Approximate 1.1 km section</i>	High	Very low	Negligible	No	Low	Very low	Negligible	No

Bold text indicates a significant effect

6.8 Cumulative effects

6.8.1 The following section provides an assessment of potential cumulative landscape and visual effects. The assessment criteria that underpins the judgements for the cumulative landscape and visual assessment is detailed in **Technical Appendix 6.1, Volume 4**. The approach and methodology is set out below in paragraph **6.8.2** to **6.8.8**.

Cumulative Baseline

6.8.2 The initial step of the cumulative assessment is to establish the existing cumulative baseline. Consideration was initially given to a 60 km radius from the Site, as recommended by NatureScot best practice guidance. Following this, all other wind energy developments that are operational, under construction, consented or subject to a valid full planning application within 45 km of the proposed Development were identified and reviewed as part of the cumulative baseline, as illustrated at **Figure 6.28**.

6.8.3 Analysis was then undertaken to refine this list in order to ensure a proportionate approach focused on potentially significant effects, as advocated by NatureScot guidelines 'Assessing the Cumulative Impact of Onshore Wind Energy Developments' (2012) which states (page 8, paragraph 33) that:

“Assessments should focus on the most significant cumulative effects and conclude with a clear assessment of those which are likely to influence decision making.”

6.8.4 In this regard, it was agreed at scoping that the Cumulative Landscape and Visual Impact Assessment (CLVIA) would focus on a 20 km cumulative study area. Furthermore, in order that the assessment remains focused on those other schemes which have the greatest potential to give rise to significant cumulative effects, it was deemed appropriate to scope out any turbines under 50 m, or any turbines between 50 m and 80 m which lie over 10 km from the nearest proposed turbine.

6.8.5 The cumulative sites within the agreed 20 km cumulative study area are illustrated at **Figure 6.29** and listed in **Table 6.12** below. The cumulative schemes are based on a cut-off date of 8 November 2024.

Table 6.12: Other Wind Farms within 20 km of the proposed Development

Site	Number of Turbines	Blade Tip Height	Distance and Direction
Operational			
Achany	19	100 m	10.7 km north west
Beinn nan Oighrean	2	80 m	14.3 km south
Beinn Tharsuinn	17	80 m	14.7 km south
Coire na Cloiche	3 10	84.5 m 99.5 m	16 km south
Kilbruar	19	115 m	18.1 km north east

Site	Number of Turbines	Blade Tip Height	Distance and Direction
Kilbruar Extension	8	125 m	17.5 km north east
Lairg	3	100	6.6 km north
Rosehall	19	90 m	12.9 km north west
Consented or Under Construction			
Achany Extension	18	149.9 m	17.4 km north west
Chleansaid	4 12	180 m 200 m	18.5 km north
Lairg II	3 1 6	150 m 190 m 200 m	4.9 km north
Meall Buidhe	8	149.9 m	14.7 km west
Strathroy Redesign	2 1 4	149.9 m 160 m 180 m	18.3 km south
Strath Tirry	4	135 m	17.3 km north north west
In Planning			
Acheilidh	6 6	200 m 230 m	3.5 km north north east
Garvary	25	180 m	2.1 km north
Strath Oykel	11	200 m	15.7 km west
Scoping			
Allt An Tuir	1 8	180 m 200 m	17.8 km north west
Braelangwell	17	220 m	7 km south west
Coille Beith	19	200 m	18 km west
Creachan	21	220 m	16.7 km south west
Inveroykel	29	230 m	5.8 km west

N.B. The status of Strath Oykel is shown in the above table as 'in planning'. The scheme was consented on 8 January 2025 after the cut-off date for the cumulative assessment.

6.8.6 The baseline against which the solus effects of the proposed Development has been assessed includes all operational wind farms. An assessment of the proposed Development with consideration of other operational wind farms has already therefore been presented in **Section 6.7** of this chapter.

- 6.8.7 The primary purpose of the cumulative impact assessment is therefore to consider the additional effects that might arise as a result of the proposed Development if the other consented or under construction, in-planning and scoping schemes were also operational and formed part of the baseline landscape. In addition, this cumulative assessment also includes a further consideration of the overall totality of the effect, when the proposed Development is considered alongside the other operational or proposed schemes across the study area.
- 6.8.8 The baseline in the CLVIA is therefore extended to consider other schemes that are not yet present in the landscape but are at various stages in the planning process. Three scenarios are considered which reflect the different degrees of certainty that these schemes will be constructed:
- **Scenario 1** - assumes that other consented/under construction wind farms are operational;
 - **Scenario 2** - assumes that all schemes in planning are also operational. (In reality, it is possible that all other schemes that are in planning may not be approved and constructed but this scenario assumes all planning schemes are operational as this presents the 'worst case'); and
 - **Scenario 3** – assumes that all schemes currently in scoping are also operational. In reality, it is possible that scoping schemes may not be progressed at all, be progressed with a different number and blade tip height of turbines in a different, may not be approved and constructed but this scenario assumes all schemes are operational as this presents the 'worst case'.

Cumulative ZTVs and Wireframes

- 6.8.9 Cumulative ZTVs (CZTVs) have been produced to illustrate the theoretical visibility of other wind farms with the proposed Development.
- 6.8.10 It should be reiterated that ZTVs imply a much greater geographical extent of influence on the landscape and views of it than would actually be the case as they do not take account of vegetation or buildings in the landscape, which may restrict the nature and extent of views.
- 6.8.11 Cumulative ZTVs have been produced for the following combinations of existing, consented and other wind farms in planning:

Other Operational Schemes

- **Figure 6.30** - Cumulative ZTV with Operational Achany, Rosehall
- **Figure 6.31** - Cumulative ZTV with Operational Lairg
- **Figure 6.32** - Cumulative ZTV with Operational Kilbruar, Kilbruar Extension
- **Figure 6.33** - Cumulative ZTV with Operational Beinn nan Oighrean and Beinn Tharsuinn
- **Figure 6.34** - Cumulative ZTV with Operational Coire na Cloiche

Other Consented/Under Construction Schemes

- **Figure 6.35** - Cumulative ZTV with Consented Achany Extension
- **Figure 6.36** - Cumulative ZTV with Consented Lairg II
- **Figure 6.37** - Cumulative ZTV with Consented Strath Tirry
- **Figure 6.38** - Cumulative ZTV with Consented Chleansaig

- **Figure 6.39** - Cumulative ZTV with Consented Meall Buidhe
- **Figure 6.40** - Cumulative ZTV with Consented Strathroy Redesign

In Planning Schemes

- **Figure 6.41** Cumulative ZTV with In Planning Garvary
- **Figure 6.42** Cumulative ZTV with In Planning Acheilidh
- **Figure 6.43** Cumulative ZTV with In Planning Strath Oykel

Scoping Schemes

- **Figure 6.44** - Cumulative ZTV with Scoping Braelangwell
- **Figure 6.45** - Cumulative ZTV with Scoping Allt An Tuir
- **Figure 6.46** - Cumulative ZTV with Scoping Inveroykel
- **Figure 6.47** – Cumulative ZTV with Scoping Coille Beith
- **Figure 6.48** – Cumulative ZTV with Scoping Creachan

Cumulative Effects on Landscape Character

- 6.8.12 It is acknowledged that wherever more than one wind farm is visible at any given location in the landscape, there will be a greater overall or cumulative effect on landscape character than if just one wind farm was visible in the landscape.
- 6.8.13 However, it is also noted that in any given landscape where turbines are already present, the additional effect on landscape character of introducing further turbines may not be as significant as the initial introduction of turbines. Furthermore, in general, the greater the number of turbines in the baseline landscape the less significant the addition of further turbines may be in landscape character terms as the landscape will be more heavily characterised by turbines in the baseline situation.
- 6.8.14 It has been assessed in the assessment of the solus effects of the proposed Development set out earlier in this chapter that there would be some limited significant effects on landscape character as a result of the proposed Development. The purpose of this section of the cumulative assessment is therefore to identify whether there would be any change to the assessments of significance previously set out in relation to the proposed Development, once the other wind turbines which are not already operational are considered to form part of the baseline landscape.
- 6.8.15 Generally speaking, such additional cumulative effects will arise when the addition of the proposed Development to the baseline results in an increase in effects, when viewed in combination with the other wind turbines forming part of the baseline landscape.
- 6.8.16 The assessment is considered in three parts, firstly in relation to the scenario where the additional consented developments are also considered to be operational, secondly when the consented and in-planning schemes are also considered to be operational and finally when the consented, in-planning and scoping schemes are also considered to be operational.

Cumulative Scenario 1 – Other consented schemes are also considered to be operational

6.8.17 In the first cumulative scenario, six other wind farms would be present in the baseline landscape:

- Achany Extension - 17.4 km north west, located within LCT 135 Rounded Hills – Caithness and Sutherland (South of Strath Fleet unit);
- Chleansaid - 18.5 km north, located within LCT 135 Rounded Hills – Caithness and Sutherland (Strath Brora unit) and LCT 134 Sweeping Moorland and Flows;
- Lairg II - 4.9 km north, located within located within LCT 135 Rounded Hills – Caithness and Sutherland (South of Strath Fleet unit);
- Meall Buidhe - 14.7 km west, located within LCT 135 Rounded Hills – Caithness and Sutherland (Kyle of Sutherland unit);
- Strathrory Redesign - 18.3 km south, located within LCT 330 Rounded Hills and Moorland Slopes – Ross & Cromarty; and
- Strath Tirry - 17.3 km north north west, straddling LCT 142 Strath – Caithness & Sutherland (Shin unit) and LCT 134 Sweeping Moorland and Flows.

LCT 135 Rounded Hills – Caithness and Sutherland (South of Strath Fleet unit)

6.8.18 This is the host LCT unit where the proposed Development would be located. The assessment of the solus effects of the proposed Development identified a significant effect on LCT 135 Rounded Hills – Caithness and Sutherland (South of Strath Fleet unit) extending to approximately 4 km to the north, 5 km to the north east, 2.3 km to the east and 5 km to the south east, 4.4 km to the north west and west and 1.8 km to the south.

6.8.19 In cumulative scenario 1, there would be two additional wind farms located within this unit, Achany Extension located 17.4 km to the north west and Lairg II, located approximately 4.9 km to the north of the proposed Development further reinforcing wind energy as a characteristic feature of the LCT.

6.8.20 The most relevant of these is the consented Lairg II. Referring to the CZTV at **Figure 6.36**, the introduction of Lairg II into the baseline landscape would extend the existing influence of wind farms present in the landscape to the north of the proposed Development. The addition of the proposed Development would extend the influence of wind turbines in the part of the unit predominantly to the west, east and south east of the proposed Development. The cumulative magnitude of change would remain medium high with cumulative effects considered to be moderate and significant. However, the extent of the significant effect introduced by the proposed Development would reduce to approximately 3 km to the north, 4 km to the north east, 2.3 km to the east and 5 km to the south east, 4.4 km to the north west and west and 1.8 km to the south.

6.8.21 The addition of Achany Extension into the baseline landscape at approximately 17.4 km, to the north west of the operational Achany and Rosehall schemes would not result in any change to the solus effects identified for this part of the unit, nor would it introduce a cumulative significant effect.

LCT 135 Rounded Hills – Caithness and Sutherland (Kyle of Sutherland unit)

6.8.22 In cumulative Scenario 1, there would be one additional wind farm within this unit. The addition of Meall Buidhe into the baseline landscape at approximately 14.7 km to the west would not result in any change to the solus effects identified for the part of the unit

between approximately 4.4 km and 11.4 km. However, beyond approximately 11.4 km, the proximity to Meall Buidhe would result in the cumulative magnitude of change reducing to very low with cumulative effects reducing to negligible which would be not significant.

LCT 330 Rounded Hills and Moorland Slopes – Ross & Cromarty

- 6.8.23 In cumulative Scenario 1, there would be one additional wind farm within this unit. The addition of Strathroy Redesign into the baseline landscape at approximately 18.3 km to the south would not result in any change to the solus effects identified for this LCT.
- 6.8.24 Finally, cumulative Scenario 1 would see the introduction of Strath Tirry approximately 17.3 km north north west of proposed Development straddling LCT 142 Strath – Caithness & Sutherland (Shin unit) and LCT 134 Sweeping Moorland and Flows and the introduction of Chleansaid approximately 18.5 km north of the proposed Development, located within LCT 135 Rounded Hills – Caithness and Sutherland (Strath Brora unit) and LCT 134 Sweeping Moorland and Flows. The preliminary assessment of LCTs in **Technical Appendix 6.3** did not identify the potential for significant effects to arise to these LCTs as a result of the proposed Development. As such, it is not considered that the introduction of the proposed Development, over 17.3 km to the south would result in cumulative significant effects because these two schemes would have a greater influence on the character of the landscape within their vicinity than the more distant proposed Development.

Cumulative Scenario 2 – Other consented and in-planning schemes are also considered to be operational

- 6.8.25 In the second cumulative scenario, three other wind farms would be present in the baseline landscape:
- Acheilidh - 3.5 km north north east, located within LCT 135 Rounded Hills – Caithness and Sutherland (South of Strath Fleet unit);
 - Garvary - 2.1 km north, located within LCT 135 Rounded Hills – Caithness and Sutherland (South of Strath Fleet unit); and
 - Strath Oykel - 15.7 km west, located within LCT 135 Rounded Hills – Caithness and Sutherland (Kyle of Sutherland unit).

LCT 135 Rounded Hills – Caithness and Sutherland (South of Strath Fleet unit)

- 6.8.26 This is the host LCT unit where the proposed Development would be located. The assessment of the solus effects of the proposed Development identified a significant effect on LCT 135 Rounded Hills – Caithness and Sutherland (South of Strath Fleet unit) extending to approximately 4 km to the north, 5 km to the north east, 2.3 km to the east and 5 km to the south east, 4.4 km to the north west and west and 1.8 km to the south.
- 6.8.27 In cumulative scenario 2, there would be two additional wind farms located within this unit, Acheilidh, located approximately 3.5 km north north east and Garvary, located approximately 2.1 km to the north of the proposed Development.
- 6.8.28 The addition of these schemes to the south of the operational Lairg and the consented Lairg II would establish a 'wind cluster' within the central part of this unit, further reinforcing wind farms as a characteristic feature of the LCT. However, it would not be the case that wind farms would become the single-most dominant characteristic feature

of the unit. This is due to the wide separation between the central part of LCT and the operational Achany and Rosehall Wind Farms in the north western part of the unit and the consented Achany Extension further north west and the extent of LCT to the east of the central part of the unit where there would be no wind farms.

- 6.8.29 Referring to the CZTVs at **Figure 6.41** and **6.42**, the introduction of Garvary and Acheilidh into the baseline landscape would extend the existing influence of wind farms present in the landscape to the north of the proposed Development. The addition of the proposed Development would further reinforce the wind energy as an existing characteristic feature within this central part of the LCT. The cumulative magnitude of change introduced by the proposed Development would reduce to medium with cumulative effects considered to be moderate and not significant due to the increased influence introduced by Garvary and Acheilidh to the north of the proposed Development. This would extend to approximately 1.5 km to the north, 2 km to the north east, 2.3 km to the east and 5 km to the south east, 4.4 km to the north west and west and 1.8 km to the south.
- 6.8.30 The location of Garvary and Acheilidh close to one another would mean that in some views they would read as one larger wind farm, such as from **Viewpoint 5** (see **Volume 3b** and **3c**). However, the compact nature of the proposed Development and its separation distance from these schemes together with the landform of Sròn Ach' a' Bhacaidh and Sidhean Mòr to the north and north east of the proposed Development would mean that it would appear separate and distinct from these schemes further north.

LCT 135 Rounded Hills – Caithness and Sutherland (Kyle of Sutherland unit)

- 6.8.31 In cumulative Scenario 2, there would be one additional wind farm within this unit. The addition of Strath Oykel into the baseline landscape at approximately 15.7 km to the west would not result in any change to the solus effects identified for the part of the unit between approximately 4.4 km and 11.4 km. However, beyond approximately 11.4 km, the proximity to Meall Buidhe and Strath Oykel to its west would result in the cumulative magnitude of change reducing to very low with cumulative effects reducing to negligible which would be not significant.

Cumulative Scenario 3 – Other consented, in-planning and scoping schemes are also considered to be operational

- 6.8.32 In the third cumulative scenario, five other wind farms would be present in the baseline landscape:
- Allt An Tuir - 17.8 km north west, located within LCT 135 Rounded Hills – Caithness and Sutherland (Invercassley unit);
 - Braelangwell - 7 km south west, located within LCT 135 Rounded Hills – Caithness and Sutherland (Kyle of Sutherland unit);
 - Coille Beith - 18 km west, located within LCT 135 Rounded Hills – Caithness and Sutherland (Kyle of Sutherland unit);
 - Creachan - 16.7 km south west, located within LCT 330 Rounded Hills and Moorland Slopes – Ross and Cromarty and LCT 329 Rounded Mountain Massif; and
 - Inveroykel - 5.8 km west, located within LCT 135 Rounded Hills – Caithness and Sutherland (Kyle of Sutherland unit).

- 6.8.33 The most relevant of these schemes would be Coille Beath, Inveroykel and Braelangwell situated within LCT 135 Rounded Hills – Caithness and Sutherland (Kyle of Sutherland unit) to the west of the proposed Development. The addition of these three schemes into the baseline landscape would reduce the influence of the proposed Development on this unit such that the cumulative magnitude of change would reduce to very low with effects reducing to negligible and not significant.
- 6.8.34 Finally, cumulative Scenario 3 would see the introduction of Allt An Tuir located approximately 17.8 km to the north west within LCT 135 Rounded Hills – Caithness and Sutherland (Invercassley unit) and Creachan, located approximately 16.7 km to the south west, located within LCT 330 Rounded Hills and Moorland Slopes – Ross and Cromarty and LCT 329 Rounded Mountain Massif. The preliminary assessment of LCTs in **Technical Appendix 6.3** did not identify the potential for significant effects to arise to these LCTs as a result of the proposed Development. As such, it is not considered that the introduction of the proposed Development would result in cumulative significant effects because these two schemes would have a greater influence on the character of the landscape within their vicinity than the more distant proposed Development.

Totality of the Combined Effect of All Developments

- 6.8.35 Consideration has also been given to the overall totality of the effect, when the proposed Development is considered alongside the other operational, consented, in-planning and scoping schemes. Of most relevance to this, is a consideration of the overall impact on the LCT where a significant effect was identified in the main assessment, LCT 135 – Rounded Hills – Caithness and Sutherland (South of Strath Fleet unit).
- 6.8.36 The proposed Development is located in LCT 135 – Rounded Hills – Caithness and Sutherland (South of Strath Fleet unit). The operational Achany and Rosehall Wind Farms are located within the north western part of the LCT and the operational Lairg Wind Farm is located in the northern central part of the LCT. The introduction of the Garvary and Acheilidh wind farms within the central part of the LCT would introduce direct significant effects on a localised part of the LCT and indirect significant effects that would extend across a further part of the LCT beyond the immediate vicinity of the turbines.
- 6.8.37 It is acknowledged that the combined overall effect on the character of the LCT 135 – Rounded Hills – Caithness and Sutherland (South of Strath Fleet unit), were the proposed Development and the other consented and in-planning schemes constructed, would be notable, reinforcing an existing documented characteristic feature. There would remain a considerable spacing between the proposed Development and the operational Achany and Rosehall schemes and the Achany Extension situated in the north western part of the LCT. The consented Lairg II and the in-planning Garvary and Acheilidh schemes would combine to create a ‘wind cluster’ within the central northern part of the unit with the proposed Development remaining separate and distinct from this cluster in a part of the LCT that is already influenced by electricity transmission infrastructure.
- 6.8.38 However, it would not be the case that wind energy would become the single dominant characteristic of the LCT so as to prevent an understanding and appreciation of the character of the LCT.

Cumulative Effects on Views and Visual Amenity

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

Cumulative 'in combination' visual effects

- 6.8.41 An 'in combination' cumulative visual effect is the term used to refer to the situation where a viewer is able to see one or more further wind farms, in addition to the proposed Development, whilst standing in the one location. These effects are either 'simultaneous', where the viewer can see the additional turbines in the same angle of view, or 'successive', where the view can see the additional turbines in a different angle of view by turning their head. **Table 6.13** and **Table 6.14** below provide a summary of cumulative visibility at each of the 16 representative LVIA viewpoints.

Table 6.13: Summary of In-Combination Visual Effects by Viewpoint Location of Operational and Consented Schemes

Viewpoint	Operational Achany	Operational Beinn nan Oighrean	Operational Beinn	Operational Coire na	Operational Kilbruar	Operational Kilbruar Ext.	Operational Lairg	Operational, Rosehall	Consented Achany Ext.	Consented Lairg II	Consented Strath Tirry	Consented Chleainsaid	Consented Meall	Consented Strathory
1 - Minor Road, Drochaid na h-Uidh	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2 - Bonar Bridge	X	-	O	O	-	-	-	O	X	-	-	-	O	-
3 - Core Path	O	-	-	-	-	-	X	-	-	X	-	-	-	-
4 - Ardgay	-	-	O	O	-	-	-	-	-	-	-	-	-	-
5 - Creagan Glas	O	X	X	X	O	O	O	O	O	O	O	O	X	X
6 - A839 Between Lairg and Rosehall	O	X	X	X	-	-	O	-	-	X	-	O	O	-
7 - A836 at Ardchronie	X	-	-	-	-	-	-	-	-	-	-	-	-	-
8 - Auchintoul	O	-	-	-	-	-	-	-	-	-	-	-	O	-
9 - Lairg Cemetery, overlooking Lairg	O	X	X	X	-	-	X	-	O	X	-	-	-	-
10 - Struie Viewpoint on B9176	X	-	-	-	O	O	X	X	X	X	-	X	O	-
11 - West Langwell	X	-	X	X	O	O	X	X	O	X	-	-	X	-
12 - Achnairn, near Caravan Park	X	X	X	X	-	-	X	O	O	-	O	O	-	-
13 - A837 Strath Oykel	-	-	-	-	-	-	-	-	-	X	-	-	O	-
14 - Carn Chuinneag	X	O	O	O	X	X	X	X	-	X	X	X	-	-
15 - A836 Rhian Bridge	X	X	X	X	-	-	X	X	O	X	X	O	X	-
16 - Ord Hill	O	X	X	X	-	-	X	-	-	X	O	O	O	-

Table 6.14: Summary of In-Combination Visual Effects by Viewpoint Location of In Planning and Scoping Schemes

Viewpoint	In Planning Garvary	In Planning Acheilidh	In Planning Strath Oykel	Scoping Braelangwell	Scoping An Tuir	Scoping Inveroykel	Scoping Coille Beith	Scoping Creachan
1 - Minor Road, Drochaid na h-Uidh	X	O	-	-	-	-	-	-
2 - Bonar Bridge	-	-	-	O	-	O	-	O
3 - Core Path	X	X	-	O	-	O	-	-
4 - Ardgay	X	X	-	O	-	O	-	-
5 - Creagan Glas	X	X	X	X	O	X	X	X
6 - A839 Between Lairg and Rosehall	X	X	-	X	O	O	-	-
7 - A836 at Ardchronie	X	X	-	O	-	O	-	-
8 - Auchintoul	X	X	O	O	-	X	O	-
9 - Lairg Cemetery, overlooking Lairg	X	X	-	X	-	X	-	X
10 - Struie Viewpoint on B9176	X	X	-	X	X	X	X	O
11 - West Langwell	X	X	X	X	O	X	X	X
12 - Achnairn, near Caravan Park	X	X	-	X	-	X	-	X
13 - A837 Strath Oykel	X	X	X	X	O	X	O	-
14 - Carn Chuinneag	X	X	-	X	O	X	-	X
15 - A836 Rhian Bridge	X	X	-	X	-	X	-	X
16 - Ord Hill	X	X	-	X	-	X	-	X

(Key: X = Simultaneously, O = In Succession and '-' = No Combined Visibility)

Cumulative Scenario 1 – Other consented schemes are also considered to be operational

- 6.8.42 In the first cumulative scenario, six other wind farms would be present in the baseline landscape:
- Achany Extension - located approximately 17.4 km to the north west;
 - Chleansaid - located approximately 18.5 km to the north;
 - Lairg II - located approximately 4.9 km to the north;
 - Meall Buidhe - located approximately 14.7 km to the west;
 - Strathroy Redesign - located approximately 18.3 km to the south; and
 - Strath Tirry - located approximately 17.3 km to the north north west.
- 6.8.43 The addition of these schemes would serve to further establish wind energy as a visual component in the wider landscape to the north, north west, west and south of the proposed Development.
- 6.8.44 Referring to the Viewpoint Assessment at **Technical Appendix 6.5**, during daylight hours, from the majority of viewpoints there would be no change to effects identified in the assessment of the solus effects, with the exception of **Viewpoints 9, 12 and 15** where the cumulative effect would reduce to minor and not significant and **Viewpoint 16** where the cumulative effect would reduce to minor moderate not significant.
- 6.8.45 During the hours of darkness, the cumulative effect would reduce to negligible at **Viewpoint 9**, and minor not significant at **Viewpoint 16** due to the presence of aviation lights in the baseline landscape.

Cumulative Scenario 2 – Other consented and in-planning schemes are also considered to be operational

- 6.8.46 In the second cumulative scenario, three other wind farms would be present in the baseline landscape:
- Acheilidh - located approximately 3.5 km to the north north east;
 - Garvary - located approximately 2.1 km to the north;
 - Strath Oykel - located approximately 15.7 km to the west.
- 6.8.47 The addition of these schemes would serve to further establish wind energy as a visual component in the wider landscape predominantly to the north but also to the west of the proposed Development.
- 6.8.48 Referring to the Viewpoint Assessment at **Technical Appendix 6.5**, during daylight hours, the addition of these three in-planning schemes into the baseline landscape would reduce the effects identified in the main assessment experienced at **Viewpoints 1, 5, 6, 9, 10, 11, 12, 15 and 16**.
- 6.8.49 Effects would remain the same as identified in the main assessment at all other viewpoints.
- 6.8.50 During the hours of darkness, the cumulative effects would remain the same as identified in the main assessment at the majority of viewpoints with the exception of **Viewpoints 5,**

9, 11 and 16 where the cumulative effect would be reduced due to the presence of aviation lights in the baseline landscape.

Cumulative Scenario 3 – Other consented, in-planning and scoping schemes are also considered to be operational

- 6.8.51 In the third cumulative scenario, five other wind farms would be present in the baseline landscape:
- Allt An Tuir – located approximately 17.8 km to the north west;
 - Braelangwell - located approximately 7 km to the south west;
 - Coille Beith - located approximately 18 km to the west;
 - Creachan - located approximately 16.7 km to the south west; and
 - Inveroykel - located approximately 5.8 km to the west.
- 6.8.52 The addition of these schemes would serve to further establish wind energy as a visual component in the wider landscape predominantly to the west but also to the south west of the proposed Development.
- 6.8.53 Referring to the Viewpoint Assessment at **Technical Appendix 6.5**, during daylight hours, the addition of these five scoping schemes into the baseline landscape would reduce the effects identified in the main assessment experienced at **Viewpoints 1, 6, 9, 11, 12, 14, 15 and 16**.
- 6.8.54 Effects would remain the same as identified in the main assessment at all other viewpoints, with the exception of **Viewpoint 5**. The main assessment identified a moderate significant effect at this viewpoint. The addition of the proposed Development into this baseline landscape would introduce a moderate major significant effect. This is due to the proposed Development being positioned between the scoping Creagan and Braelangwell schemes resulting in wind farms extending through a greater proportion of the landscape without any separation between the schemes.
- 6.8.55 During the hours of darkness, the cumulative effects would remain the same as identified in the main assessment at the majority of viewpoints with the exception of **Viewpoint 16** where the cumulative effect would reduce due to the presence of aviation lights in the baseline landscape.

Table 6.15: Summary of Cumulative Effects on Representative Viewpoints

Viewpoint	Daylight Hours			Hours of Darkness		
	Cumulative Scenario 1	Cumulative Scenario 2	Cumulative Scenario 3	Cumulative Scenario 1	Cumulative Scenario 2	Cumulative Scenario 3
1 - Minor Road, Drochaid na h-Uidh (N)	No consented schemes visible	Moderate significant	Moderate significant	No consented schemes visible	No change	No change
2 - Bonar Bridge (N)	No change	No change	No change	No change	No change	No change
3 – Core path Cornhill – Culrain, via Invercharron Hill/Carbisdale	No change	No change	No change	No change	No change	No change
4 – Ardgay (N)	No change	No change	No change	No change	No change	No change
5 – Creagan Glas	No change	Moderate not significant	Moderate significant	No change	Minor moderate not significant	No change
6 - A839 Between Lairg and Rosehall	No change	Minor not significant	Minor not significant	No change	No change	No change
7 - A836 at Ardchronie	No change	No change	No change	No change	No change	No change
8 - Auchintoul	No change	No change	Moderate not significant	No change	No change	No change
9 - Lairg Cemetery, overlooking Lairg	Minor not significant	Minor not significant	Minor not significant	Negligible	Negligible	Negligible

Viewpoint	Daylight Hours			Hours of Darkness		
	Cumulative Scenario 1	Cumulative Scenario 2	Cumulative Scenario 3	Cumulative Scenario 1	Cumulative Scenario 2	Cumulative Scenario 3
10 - Struie Viewpoint on B9176 (N)	No change	Moderate not significant	Moderate not significant	No change	No change	No change
11 - West Langwell	No change	Negligible	Negligible	No change	Negligible	No change
12 - Achnairn, near Caravan Park	Minor not significant	Minor not significant	Minor not significant	No change	No change	No change
13 - A837 Strath Oykel	No change	No change	No change	No change	No change	No change
14 - Carn Chuinneag	No change	No change	Minor not significant	No change	No change	No change
15 - A836 Rhian Bridge	Minor not significant	Minor not significant	Minor not significant	No change	No change	No change
16 – Ord Hill*	Minor moderate not significant	Minor not significant	Minor not significant	Minor	Minor	Minor

Bold text indicates a significant effect

Cumulative effects on Settlements

6.8.56 The main assessment focussed on the following settlements which were identified as having the potential to experience significant effects as a result of the proposed Development:

- Bonar Bridge (represented by **Viewpoint 2**);
- Ardgay (represented by **Viewpoint 4**); and
- Lairg.

Cumulative Scenario 1 – Other consented schemes are also considered to be operational

6.8.57 In the first cumulative scenario, six other wind farms would be present in the baseline landscape:

- Achany Extension - located approximately 17.4 km to the north west;
- Chleansaid - located approximately 18.5 km to the north;
- Lairg II - located approximately 4.9 km to the north;
- Meall Buidhe - located approximately 14.7 km to the west;
- Strathroy Redesign - located approximately 18.3 km to the south; and
- Strath Tirry - located approximately 17.3 km to the north north west.

6.8.58 Referring to the CZTVs at **Figures 6.35 to 6.40**, in the first cumulative scenario when other consented schemes are considered to be present in the baseline landscape it is assessed that the addition of the proposed Development would not introduce any significant effects. With reference to **Technical Appendix 6.5**, the cumulative effect would be reduced from Lairg due to the much closer proximity of the settlement to the consented Lairg II wind farm.

6.8.59 There would be no change to the effects identified in the main assessment from either Bonar Bridge or Ardgay.

Cumulative Scenario 2 – Other consented and in-planning schemes are also considered to be operational

6.8.60 In the second cumulative scenario, three other wind farms would be present in the baseline landscape:

- Acheilidh - located approximately 3.5 km to the north north east;
- Garvary - located approximately 2.1 km to the north; and
- Strath Oykel - located approximately 15.7 km to the west.

6.8.61 Referring to the CZTVs at **Figures 6.41 to 6.43**, in the second cumulative scenario when other consented and in-planning schemes are considered to be present in the baseline landscape, it is assessed that the addition of the proposed Development would not introduce any significant effects. With reference to **Technical Appendix 6.5**, the cumulative effect would be reduced from Lairg due to the much closer proximity of the settlement to the consented Lairg II wind farm and the in-planning Acheilidh and Garvary schemes.

6.8.62 Referring to **Viewpoint 2** and 4 in **Volume 3b** and **3c**, there would be no visibility of the in-planning schemes from Bonar Bridge and very limited theoretical visibility of the in-planning schemes from Ardgay. As such there would be no change to the effects identified in the main assessment from either of these settlements.

6.8.63 There would be no combined visibility experienced of the in-planning Strath Oykel scheme from any of the settlements.

Cumulative Scenario 3 – Other consented, in-planning and scoping schemes are also considered to be operational

6.8.64 In the third cumulative scenario, five other wind farms would be present in the baseline landscape:

- Allt An Tuir – located approximately 17.8 km to the north west;
- Braelangwell - located approximately 7 km to the south west;
- Coille Beith - located approximately 18 km to the west;
- Creachan - located approximately 16.7 km to the south west; and
- Inveroykel - located approximately 5.8 km to the west.

6.8.65 Referring to the CZTVs at **Figures 6.44** to **6.48**, in the third cumulative scenario when other consented, in-planning and scoping schemes are considered to be present in the baseline landscape, it is assessed that the addition of the proposed Development would not introduce any significant effects. With reference to **Technical Appendix 6.5**, the cumulative effect would be reduced from Lairg due to the much closer proximity of the settlement to the consented Lairg II wind farm and the in-planning Acheilidh and Garvary schemes. The scoping schemes of Braelangwell, Inveroykel and Creachan would be located further from the settlement and have less influence on views from the settlement.

6.8.66 When considering the cumulative visual effects during the hours of darkness, receptors in settlements are considered to be less susceptible to change due to the presence of other light sources such as streetlighting within settlements or lights on properties which would affect their darkness adaptation.

6.8.67 It has been assessed that the addition of the proposed Development would not introduce any significant effects during the hours of darkness in any of the cumulative scenarios. Receptors in Lairg would experience reduced cumulative effects due to the closer proximity of the consented Lairg II wind farm.

Sequential Cumulative Visual Effects

6.8.68 A 'sequential' cumulative visual effect is the term used to refer to the situation where a receptor is able to see one or more wind farms in addition to the proposed Development, whilst travelling along a route. This could be either on foot, whilst walking on a footpath, travelling along a cycle route or car in a vehicle along the public highway. The main assessment focussed on the following routes from which it was considered receptors had the potential to experience significant effects as a result of the proposed Development:

- Core Paths SU08.03 Lochcoire, Lower Track & SU03.01 Cornhill – Culrain, via Invercharron Hill/Carbisdale;
- Core Path SU03.10 Ardgayhill;

- Core Paths SU03.12 Oakwood Chalet – Oldtown, SU03.08 Oldtown – Badvoon, SU03.04 Badvoon Forest, Link Path, SU03.05 Badvoon Forest, Allt Eiteachan Path, SU03.03 Badvoon Forest, Forest Road;
- Core Path RC15.04 Struie Hill, Mast Track;
- A836;
- A837;
- B9176;
- Far North Railway Line; and
- John O’Groats Cycle Route.

6.8.69 The main assessment identified no more than moderate, significant effects on the above core paths with the exception of Core Path RC15.04 Struie Hill, Mast Track where no more than a moderate non-significant effect was identified. A moderate significant effect was identified for an approximate 5.2 km section of the A836 between Wester Fearn and Bonar Bridge when travelling in a north westerly direction. A moderate significant effect was identified for an approximate 4.6 km section of the Far North Railway Line between Fearn Lodge and Ardgay and a moderate significant effect was also identified for an approximate 1.6 km section of the John O’Groats cycle route when travelling northwards. Primarily, effects were assessed as moderate or less.

6.8.70 The potential for the effects of the proposed Development to result in significant cumulative effects once the other consented, in-planning and scoping schemes are also included has been considered and no further significant cumulative effects have been identified.

6.8.71 The majority of the routes have some periodic visibility of existing wind energy, but the relatively limited additional effect introduced by the proposed Development would in no instance lead to an overall significant effect alongside the other developments, where such a significant effect does not already arise from the other development in isolation.

Totality of the Combined Effects of all Developments

6.8.72 Consideration has also been given to the overall totality of the cumulative visual effect when the proposed Development is considered alongside the other operational and proposed developments.

6.8.73 The closest schemes to the proposed Development would be the operational Lairg situated approximately 6.6 km to the north, the consented Lairg II approximately 4.9 km to the north, the in-planning Garvary approximately 2.1 km to the north and the scoping Inveroykel approximately 5.8 km to the west.

6.8.74 Overall, collectively these developments would serve to result in wind energy being seen as a noticeable feature in views in the landscape primarily to the north of the Site within approximately 6 km. The addition of the proposed Development would serve to reinforce this pattern of wind energy, albeit extending the significant visual effects into a further part of the landscape.

Summary of Cumulative Effects

6.8.75 It is acknowledged that wherever more than one wind farm is visible at any given location in the landscape, there will be a greater overall or cumulative effect on landscape character and visual amenity than if just one wind farm was visible in the landscape.

Likewise, it is acknowledged that the more wind turbines that are constructed in any given landscape, the greater the magnitude of overall (or combined) change to the landscape character or views.

When the other consented wind farms are considered to already form part of the baseline landscape it is assessed that there would be a reduction in the extent of significant landscape character effects to LCT 135 Rounded Hills – Caithness & Sutherland (South of Strath Fleet unit) introduced by the proposed Development from approximately 4 km to the north, 5 km to the north east, 2.3 km to the east and 5 km to the south east, 4.4 km to the north west and west and 1.8 km to the south to approximately 1.5 km to the north, 2 km to the north east, 2.3 km to the east and 5 km to the south east, 4.4 km to the north west and west and 1.8 km to the south (associated with Scenario 2).

- 6.8.76 Regarding the totality of the effect of all schemes on landscape character, it is acknowledged that the combined overall effect on the character of the LCT 135 – Rounded Hills – Caithness and Sutherland (South of Strath Fleet unit), were the proposed Development and the other consented, in-planning and scoping schemes constructed, would be notable, reinforcing an existing documented characteristic feature. There would remain a considerable spacing between the proposed Development and the operational Achany and Rosehall schemes and the Achany Extension situated in the north western part of the LCT. The consented Lairg II and the in-planning Garvary and Acheilidh schemes would combine to create a ‘wind cluster’ within the central northern part of the unit with the proposed Development remaining separate and distinct from this cluster in a part of the LCT that is already influenced by electricity transmission infrastructure. However, it would not be the case that wind energy would become the single dominant characteristic of the LCT so as to prevent an understanding and appreciation of the character of the LCT.
- 6.8.77 As with cumulative landscape character effects, it is acknowledged that wherever more than one wind farm is visible in any given view, there will be a greater overall or cumulative effect on the view or visual amenity than if just one wind farm was visible in the landscape and that the more wind turbines that are constructed, the greater the magnitude of overall (or combined) change to the view or visual amenity that prevailed prior to the introduction of the first turbines.
- 6.8.78 When each of the other consented, in-planning and scoping wind farms were considered to already form part of the baseline landscape, the proposed Development would not introduce a cumulative significant visual effect. In many cases there would be either no change or a reduction in the effects identified in the main assessment. Nor would they introduce any additional significant sequential effects to any of the routes assessed in detail.
- 6.8.79 In terms of the totality of effect on visual amenity, it is not considered that the addition of the proposed Development would be such as to result in the overall cumulative visual effect of wind turbines being dominant or oppressive in views experienced at various points within the area.

6.9 Summary of effects

- 6.9.1 This chapter presents the findings of the Landscape and Visual Impact Assessment (LVIA) and identifies the likely significant effects arising from the proposed Development

on landscape character and visual amenity. It has been informed by field visits carried out on separate occasions at different times of the year and by consultation undertaken with statutory consultees.

- 6.9.2 The existing landscape and visual baseline has been documented and is presented at **Section 6.5** and the assessment has been supported by figures (presented in **Volume 3a**) and visualisations produced to both NatureScot and THC Visualisation Standards (presented in **Volume 3b** and **3c** respectively) that show representative views during daylight hours and views during dark sky hours from a select number of viewpoint locations.
- 6.9.3 The proposed Development is located on the Balblair Estate, which lies approximately 2 km to the north-west of Bonar Bridge, within The Highland Council (THC) local authority area.
- 6.9.4 There are no international, national or local landscape designations or Wild Land Areas (WLA) covering the Site. The Dornoch Firth National Scenic Area (NSA) is located approximately 4.8 km to the south of the proposed Development. The proposed Development is located within rounded moorland hills that provide the backdrop and frame the Dornoch Firth within the Rounded Hills – Caithness & Sutherland landscape character type (LCT 135). Wind energy and electricity transmission infrastructure is an established component of the baseline landscape character.
- 6.9.5 The design of the proposed Development is the result of a considered iterative process which has sought to minimise landscape and visual effects whilst achieving the technical and commercial requirements to ensure project viability without public subsidy.
- 6.9.6 Appropriate offsets from all properties and settlements have been maintained to ensure that no property would experience an overbearing visual impact. Mitigation has been designed into the proposed aviation lighting to reduce the intensity of the 2000 candela steady state lights in certain atmospheric conditions by reducing their intensity and attenuating the amount of vertical downwards lighting in order to reduce the visual impact experienced by receptors below the lights.
- 6.9.7 As with almost any onshore wind farm development it is recognised that the proposed Development would give rise to some additional localised significant effects on landscape character and visual amenity. These worst-case effects are noted in **Table 6.16** at the end of this summary.
- 6.9.8 The proposed Development would result in a localised significant temporary additional effect within approximately 1 km within the Rounded Hills – Caithness & Sutherland landscape character type (LCT 135 – South of Strath Fleet unit) and within a small part of LCT 142 Strath – Caithness and Sutherland (Kyle of Sutherland unit) near to the Site access from the A836 during construction. Indirect effects during the construction phase within the remaining parts of these units and on other LCTs brought forward into detailed assessment would not be considered significant.
- 6.9.9 During operation, the proposed Development would result in significant effects within the Rounded Hills – Caithness & Sutherland landscape character type (LCT 135 – South of Strath Fleet unit) extending to approximately 5 km to the north east, 2.3 km to the east and 5 km to the south east. Effects on other LCTs brought forward into detailed assessment would not be considered significant.

- 6.9.10 In relation to visual effects, it is accepted that the proposed Development would be visible from nearby properties, some settlements as well as parts of the surrounding road network and footpath network.
- 6.9.11 It has been assessed that there would be a significant visual effect at seven of the 16 representative viewpoints during daylight hours. No significant effects were identified at the representative viewpoints during the hours of darkness.
- 6.9.12 The assessment of effects on residential properties found that of the properties assessed in detail as part of the Residential Visual Amenity Assessment (see **Technical Appendix 6.6**) all would experience some significant visual effects, with most properties only experiencing significant visual effects from their access tracks, with the exception of Property 1 - Coirshellach (financially involved) and Property 5 – Reidbreac where significant visual effects would also be experienced from the property. Although it is acknowledged that all financially uninvolved properties would experience some visual effects, it is not the case that any of the effects would be of such a scale so as to become dominant or overbearing.
- 6.9.13 The assessment of effects on settlements found that Ardgay would experience a significant visual effect during daylight hours. However, none of the settlements brought forward into detailed assessment would experience a significant effect during the hours of darkness.
- 6.9.14 The assessment of effects on core paths found that SU08.03 Lochcoire, Lower Track & SU03.01 Cornhill – Culrain, via Invercharron Hill/Carbisdale, SU03.10 Ardgayhill, SU03.12 Oakwood Chalet – Oldtown, SU03.08 Oldtown – Badvoon, SU03.04 Badvoon Forest, Link Path, SU03.05 Badvoon Forest, Allt Eiteachan Path, SU03.03 Badvoon Forest, Forest Road would experience a significant effect during daylight hours. However, none of the core paths brought forward into detailed assessment would experience a significant effect during the hours of darkness.
- 6.9.15 The assessment of effects on roads, railways, promoted tourist routes and cycle routes found that people travelling north westwards along the A836 would experience significant visual effects during daylight hours over an approximate 5.2 km section of the road between Wester Fearn and Bonar Bridge. While people travelling southbound would experience some effects, they would not be considered significant. Furthermore, people travelling along the A836 during the hours of darkness would experience some limited effects but they would not be significant.
- 6.9.16 Road users travelling along the other routes brought forward into detailed assessment would experience some effects but they would not be significant during either daylight hours or the hours of darkness.
- 6.9.17 People travelling along the Far North railway line would experience some significant effects during over an approximate 4.6 km section of the route adjacent to the Dornoch Firth between Fearn Lodge and Ardgay during daylight hours. From all other sections of the route effects would not be considered significant. Also, passengers travelling during the hours of darkness would not experience significant effects.
- 6.9.18 Cyclists travelling along the John O’Groats Cycle Route would experience some significant effects during daylight hours as the route follows the A836 between Wester Fearn and Bonar Bridge and between Ardgay and Cornhill. However, cyclists would not experience significant effects during the hours of darkness.

- 6.9.19 In relation to cumulative landscape and visual effects, it is acknowledged that wherever more than one wind farm is visible at any given location in the landscape, there will be a greater overall or cumulative effect on landscape character and visual amenity than if just one wind farm was visible in the landscape. Likewise, it is acknowledged that the more wind turbines that are constructed in any given landscape, the greater the magnitude of overall (or combined) change to the landscape character or views.
- 6.9.20 When the other consented wind farms are considered to already form part of the baseline landscape it is assessed that there would be a reduction in the extent of significant landscape character effects to LCT 135 Rounded Hills – Caithness & Sutherland (South of Strath Fleet unit) introduced by the proposed Development from approximately 4 km to the north, 5 km to the north east, 2.3 km to the east and 5 km to the south east, 4.4 km to the north west and west and 1.8 km to the south to approximately 1.5 km to the north, 2 km to the north east, 2.3 km to the east and 5 km to the south east, 4.4 km to the north west and west and 1.8 km to the south (associated with Scenario 2).
- 6.9.21 When each of the other consented, in-planning and scoping wind farms were considered to already form part of the baseline landscape, the proposed Development would not introduce a cumulative significant visual effect. In many cases there would be either no change or a reduction in the effects identified in the main assessment. Nor would they introduce any additional significant sequential effects to any of the routes assessed in detail.
- 6.9.22 In relation to effects on the special landscape qualities of the Dornoch Firth NSA, it is considered that there would not be any significant effects on its SLQs. There would be some limited non-significant effects on '*The contrast between the enclosed west and the expansive east*', '*Inhabited surrounds within a wilder backdrop of hills and moors*' and '*The tranquillity of an undeveloped coastline*' SLQs, but these would not be of such a degree as to undermine their overall integrity.
- 6.9.23 It is noted that localised significant effects on landscape character and visual amenity are inevitable as a result of commercial wind energy development anywhere in the UK. Whilst the LVIA identified some significant landscape and visual effects it is considered that the landscape has the capacity to accommodate the effects identified, particularly when the consented but as yet unbuilt wind farms in the surrounding landscape are taken into account in the baseline.
- 6.9.24 Wind turbines give rise to a wide spectrum of opinions, ranging from strongly adverse to strongly positive, with a wide range of opinions lying somewhere between these two positions. Some people view wind turbines as incongruous or industrial structures whilst others view them as aesthetically pleasing, elegant structures and a positive response to climate change. In the case of the proposed Development the turbines and associated ancillary development may be viewed by some as a symbol of continued progress by society towards a low carbon future.
- 6.9.25 However, in considering the effects of the proposed Development, a precautionary approach has been adopted and it is therefore assumed that the effects identified will be adverse in nature even though it is recognised that for some people the impacts could be perceived to be beneficial.
- 6.9.26 The following provides a summary of the conclusions of the impact assessment with respect to each receptor taking into consideration embedded mitigation measures.

Table 6.16: Summary of effects

Potential impact	Pre-mitigation		Mitigation	Residual	
	Effect	Significance		Effect	Significance
<i>Construction Phase / Decommissioning Phase</i>					
Effects on Existing Landscape Features	Worst-case minor moderate	Not significant	No additional mitigation – consideration of landscape and visual matters was inherent in the design process	Worst-case minor moderate Not significant	Adverse
Landscape Character Types	Moderate major effects within 1 km	Significant	No additional mitigation – consideration of landscape and visual matters was inherent in the design process	Moderate major effects within 1 km	Significant
Visual Receptors within the Study Area	Moderate major effects in elevated locations in relative proximity	Significant	No additional mitigation – consideration of landscape and visual matters was inherent in the design process	Moderate major effects in elevated locations in relative proximity	Significant
<i>Operational Phase</i>					
Landscape Character Types within which the proposed turbines are located <i>During daylight hours</i>	Moderate effects within 5 km	Significant	No additional mitigation – consideration of landscape and visual matters was inherent in the design process	Moderate effects within 5 km	Significant

Potential impact	Pre-mitigation		Mitigation	Residual	
	Effect	Significance		Effect	Significance
Other Landscape Character Types <i>During daylight hours</i>	Worst-case moderate within 13 km	Not significant	No additional mitigation – consideration of landscape and visual matters was inherent in the design process	Worst-case moderate within 13 km	Not significant
Visual assessment viewpoints <i>During daylight hours</i>	Moderate major effects on one and moderate effects on six of the 16 representative viewpoints	Significant	No additional mitigation – consideration of landscape and visual matters was inherent in the design process	Moderate major effects on one and moderate effects on six of the 16 representative viewpoints	Significant
Visual assessment viewpoints <i>During hours of darkness</i>	Worst-case moderate on three of the 16 representative viewpoints	Not significant	No additional mitigation – consideration of landscape and visual matters was inherent in the design process	Worst-case moderate on three of the 16 representative viewpoints	Not significant
Residential Properties within 2 km of the proposed Development	Major effects from one property, moderate major effects from one; major effects from four access tracks and moderate major effects from one	Significant	No additional mitigation – consideration of landscape and visual matters was inherent in the design process	Major effects from one property, moderate major effects from one; major effects from four access tracks and moderate major effects from one	Significant

Potential impact	Pre-mitigation		Mitigation	Residual	
	Effect	Significance		Effect	Significance
Settlements within 5 km of the proposed Development <i>During daylight hours</i>	Worst-case minor moderate Not significant	Adverse	No additional mitigation – consideration of landscape and visual matters was inherent in the design process	Worst-case minor moderate Not significant	Not significant
Settlements within 5 km of the proposed Development <i>During hours of darkness</i>	Worst-case minor	Not significant	No additional mitigation – consideration of landscape and visual matters was inherent in the design process	Worst-case minor	Not significant
Settlements within 5 to 10 km of the proposed Development <i>During daylight hours</i>	Moderate effects in one settlement	Significant	No additional mitigation – consideration of landscape and visual matters was inherent in the design process	Moderate effects in one settlement	Significant
Settlements within 5 to 10 km of the proposed Development <i>During hours of darkness</i>	Worst-case minor moderate	Not significant	No additional mitigation – consideration of landscape and visual matters was inherent in the design process	Worst-case minor moderate	Not significant
Core Paths within 5 to 10 km <i>During daylight hours</i>	Moderate effects on three core paths	Significant	No additional mitigation – consideration of landscape and visual matters was inherent in the design process	Moderate effects on three core paths	Significant
Core Paths within 5 to 10 km <i>During hours of darkness</i>	Worst-case moderate effects on one core path	Not significant	No additional mitigation – consideration of landscape and visual matters was	Worst-case moderate effects on one core path	Not significant

Potential impact	Pre-mitigation		Mitigation	Residual	
	Effect	Significance		Effect	Significance
			inherent in the design process		
Roads <i>During daylight hours</i>	Moderate effect on 1 section of road 5.2 km in length	Significant	No additional mitigation – consideration of landscape and visual matters was inherent in the design process	Moderate effect on 1 section of road 5.2 km in length	Significant
Roads <i>During hours of darkness</i>	Worst-case minor moderate effect	Not significant	No additional mitigation – consideration of landscape and visual matters was inherent in the design process	Worst-case minor moderate effect	Not significant
Railways <i>During daylight hours</i>	Moderate effect on 4.6 km section of track	Significant	No additional mitigation – consideration of landscape and visual matters was inherent in the design process	Moderate effect on 4.6 km section of road	Significant
Railways <i>During hours of darkness</i>	Worst-case minor effect	Not significant	No additional mitigation – consideration of landscape and visual matters was inherent in the design process	Worst-case minor effect	Not significant
Cycle Routes <i>During daylight hours</i>	Moderate effect on 1.6 km section of route	Significant	No additional mitigation – consideration of landscape and visual matters was inherent in the design process	Moderate effect on 1.6 km section of route	Significant

Potential impact	Pre-mitigation		Mitigation	Residual	
	Effect	Significance		Effect	Significance
Cycle Routes <i>During hours of darkness</i>	Worst-case minor moderate effect	Not significant	No additional mitigation – consideration of landscape and visual matters was inherent in the design process	Worst-case minor moderate effect	Not significant
Special qualities of the Dornoch Firth NSA	Worst-case minor-moderate effect on one SLQ	Not significant	No additional mitigation – consideration of landscape and visual matters was inherent in the design process	Worst-case minor-moderate effect on one SLQ	Not significant

6.10 References

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