

# 7 Landscape and Visual Impact Assessment

## 7.1 Introduction

7.1.1 This chapter of the Environmental Impact Assessment (EIA) presents a Landscape and Visual Impact Assessment (LVIA) of the proposed Talladh-a-Bheithe Wind Farm development and has been prepared by chartered landscape architects from Pegasus Group.

7.1.2 The purpose of an LVIA when undertaken in the context of an EIA is to identify any likely significant landscape and visual effects arising as a result of the proposals. An LVIA must consider both:

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

7.1.3 Therefore this LVIA considers the potential effects of the proposed development upon:

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

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

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

- to identify, evaluate and describe the baseline landscape character of the site and its surroundings 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.

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

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

- to identify and describe any impacts of the proposed development in so far as they affect a viewpoint or views experienced;
- to evaluate the nature of the visual effects (i.e. the magnitude, duration and reversibility of the effect);
- to identify and describe mitigation measures that have been adopted to avoid, reduce and compensate for visual effects;
- to evaluate the relative significance of residual visual effects; and
- to determine which visual effects, if any, are significant.

7.1.7 The LVIA also considers any cumulative landscape and visual effects which may arise as a result of constructing the proposed development in conjunction with other developments.

7.1.8 All figures and visualisations referenced in this chapter are bound within Volume 2 of this ES, unless otherwise stated. Relevant appendices can be found at the end of this section.

## 7.2 Assessment Methodology

### Published Guidance Documents

7.2.1 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). 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.”*

7.2.2 The methodology for this assessment has therefore been tailored specifically for this LVIA to ensure that it is ‘fit for purpose’.

7.2.3 Consideration has also been given to the following documents:

- *Guidelines for Landscape Character Assessment, (2002) Countryside Agency and Scottish Natural Heritage (SNH);*
- *The Guidelines for Environmental Impact Assessment (2004) Institute for Environmental Management and Assessment.*
- *LI Advice Note 01/11 Photography and Photomontage in Landscape and Visual Impact Assessment, (2011) Landscape Institute;*
- *Assessing the Cumulative Impact of Onshore Wind Energy Developments (March 2012) SNH;*
- *Landscape Character Assessment Guidance for England and Scotland: Topic Paper 6: Techniques and Criteria for Judging Capacity and Sensitivity, (2002) The Countryside Agency and Scottish Natural Heritage;*
- *Visual Representation of Wind farms – Good Practice Guidance, (March 2006), SNH commissioned report no. FO3 AA 308/2;*

- *Siting and Designing Wind farms in the Landscape (2014) SNH*
- *Wildness in Scotland's Countryside Policy Statement no. 02.03, 2002*
- *SNH Assessing the Impacts on Wild Land Interim Guidance Note February 2007*
- *SNH Analysis of Responses on Phase I Wildness Mapping – 30 April 2012*
- *SNH Mapping Scotland's Wildness and Wild Land Phase 1 – Identifying Relative Wildness Non-Technical Methodology, Revised February 2013 (Non-Technical Methodology)*
- *SNH Phase II & III - Mapping Areas of Wild Land Description of Methodology, March 2013*

7.2.4 The assessment was undertaken by Chartered Members of the Landscape Institute who are experienced in the EIA of wind energy developments.

### Types of Impact Considered in the LVIA

7.2.5 **The LVIA assesses both the long term effects relating to the operational lifetime of the wind farm and also the short-term effects associated with its construction. Where appropriate, the LVIA also considers any residual effects once the wind farm has been decommissioned and removed.**

7.2.6 The LVIA not only assesses the impacts associated with the turbines but also any related impacts resulting from the meteorological mast, control building, underground cabling, site tracks, borrow pits and access roads.

7.2.7 Consideration has been given to seasonal variations in the visibility of the wind farm.

7.2.8 Best practice guidelines identify two principal types of cumulative visual impact:<sup>1</sup>

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

7.2.9 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 recently published GLVIA3 also indicates a difference in emphasis between sequential effects that are frequent and those which are occasional.

7.2.10 For the avoidance of doubt, this LVIA adopts the approach advocated in paragraph 7.13 of GLVIA3 which indicates that existing schemes and those under construction should be considered as part of the baseline against which the proposed development is assessed. The baseline for the cumulative impact assessment is then extended to include other schemes that are not yet present in the landscape but are at various stages in the proposed development and consenting process. Therefore the baseline for the cumulative impact assessment is extended to include other schemes which are consented but not yet under construction and schemes which are the subject of a formal planning application. Notwithstanding the above, the cumulative visualisations of the proposed development also illustrate schemes which are consented but not yet constructed

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<sup>1</sup> *Assessing the Cumulative Impact of Onshore Wind Energy Developments* (March 2012) SNH.

as there is a reasonably high likelihood that these schemes will be constructed in the same timeframe as the proposed development if it was to be approved.

- 7.2.11 Wind Farm applications often include a standalone residential visual amenity study for residential properties within approximately 1-2km of the proposed turbines (often incorporated as an appendix to the main LVIA). In the case of the proposed development, it was ascertained at an early stage in the LVIA that there were no residential properties within 2km of the proposed turbines. The approach adopted in this LVIA has therefore been to consider the visual effects on residential amenity within the main body of the LVIA and not to include a standalone residential visual amenity study.

### Study Area

- 7.2.12 The extent of the primary study area for the landscape and visual impact assessment has been taken to be a 35km radius from the site in all directions, following current Scottish Natural Heritage guidance. The extent of this study area is illustrated in Figure 7.1. Initial site work informed by analysis of preliminary ZTVs however indicated that significant landscape and visual effects are likely to occur within only part of this area and that for the majority of the study area there would be no visibility of the proposed development and no effects on visual amenity or landscape character. The assessment work in this LVIA therefore focuses on that area which would have theoretical visibility of the proposals. The intention is that the detail of the LVIA remains proportional to the likely significance of effects with some areas, such as those in very close proximity to the site, being considered in particular detail.
- 7.2.13 In terms of cumulative effects, the intention has again been that assessment work is proportional to the likelihood of significant effects arising. The approach adopted in the cumulative LVIA has been to focus on other wind farms which are either operational, under construction, consented or the subject of a full planning application and which have the potential to give rise to significant cumulative effects when considered in combination with the proposed development. Rather than simply considering every other wind farm within a set distance of the proposed development, the approach has been to focus the assessment on those sites which genuinely have the potential to give rise to significant cumulative effects. Further details of this approach are set out in the cumulative impact assessment section of the LVIA. However as a starting point other wind farms within 70km of the proposed development, are illustrated in Figure 7.2. It is noted that there are no other operational or proposed wind farms which lie within 35km of the site and that the potential for significant cumulative effects are therefore very limited.

### Consultations

- 7.2.14 Discussions in respect of the proposed methodology and viewpoints for the LVIA have been held with consultees including Scottish Natural Heritage (SNH) and Perth and Kinross Council (PKC) over a long time period and at various stages during the evolution of the proposed development proposals.
- 7.2.15 Having considered the consultation responses included within the EIA Scoping Response, discussion regarding the LVIA viewpoint selection commenced in March 2012, and an initial list of 15 proposed viewpoints was issued to SNH and PKC (who also invited comments from the Cairngorms National Park Authority and Highland Council) for comment. A meeting with representatives of P&K and SNH then took place on 16 August 2012, during which the viewpoints were discussed. As a result of this meeting and other feedback received, a further 5 viewpoints (Viewpoints 16 – 20) were included, along with the micro-siting of the location of some of the viewpoints initially proposed. It is acknowledged that reference was made to other potential viewpoint locations

during this process which were not subsequently included; however these locations were located outside the Zone of Theoretical Visibility (ZTV) of the proposed development and therefore would have no view of the proposals.

- 7.2.16 A further meeting was then held with SNH on 23 November 2013 at which photo-wire visualisations, of the proposals were presented for viewpoints 1-20 (based on the iteration of the design which was current at that time). During, this meeting SNH requested the addition of further viewpoints, which was formalised in their letter dated 6 November 2013 (**\*see note below in relation to the micro-siting of viewpoint 5**). In response to this request a further 5 viewpoints (Viewpoints 21 – 25) were subsequently included.

*\* It is noted that the letter from SNH dated 06.11.13 makes reference to Meall Buidhe and suggests that the location of vp 5 could be micro-sited to the summit of Meall Buidhe or to the summit of Garbh Mheall which lies to the north. Pegasus advised SNH in an email dated 13.11.13 that it was originally intended that viewpoint 5 be taken from the summit of Meall Buidhe, however, on site it became apparent that from this summit the proposals would be partly screened by the summit of Garbh Mheall to the north. As such, the viewpoint location was micro-sited to the peak at the southern extent of the Meall Buidhe ridge where the proposals can be seen in full.*

*Garbh Mheall is in front of Meall Buidhe and it was agreed that visual representation of the proposals from Garbh Mheall would be a worthwhile addition to the LVIA. However, given that the proposals were already fully visible from the existing viewpoint 5 location, in close proximity, it was proposed that instead of including an additional viewpoint a wireframe be provided illustrating the view from Garbh Mheall and also from the summit of Meall Buidhe. These would then form part of an Appendix which will accompany the LVIA.*

*SNH confirmed they were happy with this approach in an email dated 22.11.13.*

### Landscape Assessment Methodology

- 7.2.17 A baseline landscape assessment was carried out to determine the current features and character of the landscape within and surrounding the site.

- 7.2.18 The baseline landscape assessment involved firstly a review of desk material including:

- Ordnance Survey maps at 1:250,000; 1:50,000; 1:25,000 and 1:10,000 scales;
- Aerial photographs of the site and surrounding area;
- Topography;
- Current & historical land use;
- Geology and soil maps;
- Historic Parks and Designated Landscapes;
- Relevant planning policy;
- Relevant landscape sensitivity/capacity studies; and

- Relevant landscape character assessments.

- 7.2.19 Field visits were conducted in a variety of weather conditions and at different times of the year. Surveys were undertaken between March 2013 and May 2014. A photographic record was taken of the site during the field visits and the site is visible in a number of the assessment viewpoint photographs (in particular viewpoints 21 and 25).
- 7.2.20 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 proposed development on landscape features and character.
- 7.2.21 The LVIA firstly assesses how the proposed development would impact directly on any landscape features and resources (e.g. removal of trees).
- 7.2.22 The LVIA then considers impacts on landscape character with reference to regional landscape character areas identified in the relevant regional landscape character assessments.
- 7.2.23 There are numerous character types and areas within 35km of the site and therefore an initial sieving exercise was undertaken to determine which character types and areas should be considered in detail in the main LVIA report. This initial review of landscape character types and areas within 35km is presented in Appendix 7.2.
- 7.2.24 The level of effect on landscape features and character is determined by considering in tandem the sensitivity of the feature or character with the magnitude of change. A professional judgement is then provided as to whether the effect is significant or not. The effects which are identified as significant are those which, in the opinion of the professional assessor are likely to be a material consideration in the decision making process.

### **Visual Assessment Methodology**

- 7.2.25 Potential visual receptors of the proposed development were identified by interpretation of digitally generated Zones of Theoretical Visibility (ZTVs) (see Table 7.1 for an explanation of ZTVs and how they were produced).
- 7.2.26 A selection of viewpoints was chosen to represent a range of views and viewer types as discussed in Table 7 of Visual Representation of Wind farms – Good Practice Guidance, SNH commissioned report FO3 AA 308/2.
- 7.2.27 The viewpoints cover a variety of different character areas, are in different directions from the site and are at varying elevations. The viewpoints are located at a range of distances from the proposed development to illustrate the varying magnitude of visual impacts with distance from the site.
- 7.2.28 Each viewpoint was photographed (see Table 7.3 for a description of how the photography was taken). For each of the viewpoints, a wireframe model was generated to help identify the scale, arrangement and visibility of the turbines (see Table 7.2 for a description of how the wireframes were generated). The images were reviewed on site to assess how natural and built screening would affect visibility of the turbines.

- 7.2.29 The wireframe models were developed further into photomontages to help illustrate the predicted impact of the proposed development (see Table 7.3 for a description of how the photomontages were generated). The wireframes for all of the assessment viewpoints were modelled into photomontages.
- 7.2.30 Each of the representative viewpoints was visited to understand the sensitivity of the viewpoint receptors. Furthermore, the entire extent of the study area was visited to appreciate visibility of the proposed development as receptors move through the landscape.
- 7.2.31 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 25 snapshots from a small selection of the important locations within the study area from where the proposed development will be visible and that these were specifically chosen to illustrate locations where the proposed development would be visible. Following the viewpoint assessment, the LVIA therefore considers the effect on visual amenity throughout the study area with reference to different visual receptor groups at varying distances from the site and with regard to further locations within the study area where the proposals would not be seen.
- 7.2.32 The level of effect on views and visual amenity is determined by considering in tandem the sensitivity of the visual receptor with the magnitude of change. A professional judgement is then provided as to whether the effect is significant or not. The effects which are identified as significant are those which, in the opinion of the professional assessor, are likely to be a material consideration in the decision making process.

**Table 7.1 Production of Zone of Theoretical Visibility (ZTV) Maps**

A Zone of Theoretical Visibility (ZTV) illustrates the extents from which a feature (in this case several wind turbines) would theoretically be visible within a defined study area.

It should be noted that the ZTVs have been generated assuming a 'bare ground' terrain model. This means that it is generated from topographical data only and does not take any account of vegetation or the built environment, which may screen views of the proposed development. It is, as such, a 'worst case' Zone of Theoretical Visibility and considerably over-emphasises the actual visibility of the proposed development. In reality trees, hedges and buildings may restrict views of the proposed development from many of the areas rendered as within the ZTV.

A further assumption of the ZTVs is that climatic visibility is 100% (i.e. visibility is not impeded by moisture or pollution in the air). In reality, such atmospheric conditions are relatively rare in this part of the country. Mist, fog, rain and snow are all common weather occurrences, which would regularly restrict visibility of the proposed development from some of the areas within the ZTV. Atmospheric pollution is not as significant as it is in other parts of the country but is still present and would also restrict actual visibility on some occasions. Climatic conditions inevitably reduce visibility with increasing distance from the proposed development.

The ZTVs were generated using Resoft WindFarm release 4.1. The programme used 3D height data (OS Landform Panorama) to build a terrain model. The programme then renders the model using a square grid to illustrate whether the turbine would be visible in each 50m x 50m square on the grid for a specified distance in every direction from the site.

Digital ZTVs have been prepared to illustrate the theoretical visibility of the turbine for a radius of 35km around the site. Two sets of ZTVs have been produced, the first shows visibility of the turbine at hub height

and the second shows visibility of the turbine to blade tip when one blade is at its highest possible position. Enlargements of the ZTVs have also been produced.

Cumulative ZTVs have been produced to show locations where the ZTVs of two or more operational or proposed wind turbine sites overlap. In the cumulative ZTVs one colour has been used to illustrate the theoretical visibility of the Talladh-a-Bheithe site and a second colour to illustrate the visibility of a second site. Where the ZTVs of the two sites overlap a third colour has been used to illustrate this potential cumulative visual influence.

It should be noted that there are several limitations to the use of ZTVs. For a discussion of these limitations please refer to Visual Representation of Wind farms – Good Practice Guidance (SNH commissioned report FO3 AA 308/2). In particular, it should be noted that the ZTV plans simply illustrate theoretical visibility and do not imply or assign any level of significance to those areas identified as being within the ZTV. The ZTVs are a tool to assist the Landscape Architect to identify where the site would potentially be visible from. The assessment of landscape and visual effects in this chapter does not rely solely on the accuracy of the ZTVs. Professional judgement has been used to evaluate the significance of effects.

### Table 7.2: Wireframe Visualisations

A wireframe or wireline visualisation is a computer generated 3D outline of a particular structure (in this case a wind farm) placed on top of a 3D ground terrain model, which again is represented by a wireframe. No rendering is given to any of the surfaces. The actual dimensions of the proposed turbine were used to build a model of the structures and this was placed in position over a ground terrain model generated from Ordnance Survey Landform Panorama height data.

The coordinates of the viewpoints were taken using a Global Positioning System (GPS) in the field. These coordinates were used to set up viewpoints in the model from which to view the turbines. The wirelines were generated using Resoft WindFarm release 4.1.

The wireline images are generated on a bare ground model and therefore do not take account of any vegetation or the built environment between the viewpoint and the proposed development. As such, they represent a worst case view. Each of the wirelines was checked on site to ascertain whether there was any screening of the view caused by vegetation or buildings.

The wirelines are presented to scale beneath a baseline photograph to illustrate the actual view from each viewpoint. The wireline images only illustrate the anticipated scale and position of the turbines. Whilst every effort has been made to ensure the accuracy of the images, it must be appreciated that no wireline image could ever claim to be 100% accurate as there are a number of technical limitations to the model. For a detailed discussion regarding the limitations of wirelines, please refer to Visual Representation of Windfarms – Good Practice Guidance (SNH commissioned report FO3 AA 308/2).

It should be noted that wirelines are just a ‘snap shot’ of the view from a single fixed location and the wirelines presented in this ES represent only a small number of locations where the proposed development will be visible from. In reality views will change as receptors move through the landscape. Therefore the wirelines are simply a tool to assist the Landscape Architect in his/her assessment of effects. The assessment of visual effects in this chapter does not rely solely on the accuracy of the wireline images. Professional judgement has been used to evaluate the significance of effects.

**Table 7.3 Generation of Photomontages**

A photomontage is the superimposition of a rendered, photorealistic, computer generated model of a structure (in this case a wind farm) on to a baseline photograph.

Baseline photographs were taken in favourable weather conditions and reasonably clear visibility, using a digital SLR camera with a full size sensor and using a high quality fixed focal length 50mm lens. All pictures were taken using a levelled tripod and using a high quality resolution. Each of the viewpoints presented in the ES is made up of a number of photographs which have been stitched together using Adobe Photoshop software and cropped to give the equivalent of a 90 degree angle of view in the horizontal field. During the stitching process none of the photographs were distorted in terms of scaling. At the time the baseline photographs were taken, co-ordinates of the viewpoints were recorded using a GPS. Photographs were taken at 1.6m above ground level (i.e. approximately eye level).

A 3D wireline model was generated of the turbine. Resoft WindFarm release 4.1 software was used to generate the 3D model of the turbines and associated structures. The model of the structures was rendered and lighting was set appropriate to the date, time and orientation on which the photograph was taken.

A digital ground terrain model was generated in Resoft WindFarm release 4.1 and the proposed development was overlaid on top of it. Using world coordinates in the computer modelling programme the photographic viewpoints were replicated such that a view was set up looking at the structures from exactly the same location as where the baseline photograph was taken from. The view from the model was then superimposed over the original photograph and edited as necessary in Adobe Photoshop to give a final photomontage.

Whilst every effort has been made to ensure the accuracy of the photomontages, it must be appreciated that no photomontage could ever claim to be 100% accurate as there are a number of technical limitations in the model relating to the accuracy of information available from Ordnance Survey and from the GPS. For a detailed discussion regarding the limitations of photomontages, please refer to Visual Representation of Windfarms – Good Practice Guidance (SNH commissioned report FO3 AA 308/2). In particular, it should be recognised that baseline photographs on which photomontages are based can, at best, only ever be a 'flattened' 2D representation of what the eye sees in 3D on site. A photograph will never capture as much detail as the eye would see in the field, it therefore follows that a photomontage can never truly capture the sense of perspective and detail which would be possible in reality. In some of the photomontages, the visibility of the turbines has been slightly digitally enhanced to ensure that they are visible when printed out. Taking account of the inherent technical limitations in producing and presenting photomontages, the photomontages have been produced according to current best practice.

The photomontages are simply a tool to assist the Landscape Architect in his/her assessment of effects. The assessment of visual effects in this chapter does not rely solely on the accuracy of the photomontages. Professional judgement has been used to evaluate the significance of effects. Each of the photomontages should be viewed from the stated viewing distance to give an accurate representation of what the proposed development will look like.

## Assessment Criteria

- 7.2.33 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 proposed development under consideration.

- 7.2.34 In accordance with the Landscape and Visual Impact Assessment Guidelines, 3rd Edition (Landscape Institute and IEMA, 2013), the level (relative significance) of an effect is ascertained by considering in tandem the sensitivity of the baseline landscape or visual receptor and the magnitude of change as a result of the proposed development. Professional judgement is then employed to determine whether the effect is significant or not.
- 7.2.35 The detailed assessment criteria used to determine landscape and visual sensitivity, magnitude of change and level of effect are set out in Appendix 7.1.

### 7.3 Landscape Planning Policies and Designations

- 7.3.1 Chapter 6 of the Environmental Statement sets out the planning policy framework that is relevant to the EIA. The policies set out include those from the 'TAYplan' (the Strategic Development Plan), the Perth and Kinross Local Development Plan, those relevant aspects of Scottish Planning Policy (SPP), and other relevant guidance.
- 7.3.2 A full and detailed consideration of national, regional and local planning policy is contained in the Planning Statement. However, this section simply provides an overview of the policies of particular relevance to the landscape and visual issues considered in this chapter. Landscape policies with specific geographical limits are illustrated on Figure 7.3.

#### European Landscape Convention

- 7.3.3 The European Landscape Convention (ELC) is the first international convention to focus specifically on landscape. 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.
- 7.3.4 The Government has stated that it considers the UK to be compliant with the ELC's requirements and in effect the principle requirements of the ELC are already enshrined in the existing suite of national policies and guidance on the assessment of landscape and visual effects.
- 7.3.5 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)
- 7.3.6 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.
- 7.3.7 The ELC highlights the importance of developing landscape policies dedicated to the protection, management and planning of landscapes. In this regard, Perth & Kinross Council and the other local planning authorities within the study area have landscape character assessments which enables decisions to be made with due regard to landscape character as promoted by the ELC.

## National Policy and Advice

7.3.8 National Policy relevant to a consideration of the landscape and visual effects of the proposed development is set out in:

- *National Planning Framework for Scotland 2 (NPF2);*
- *Scottish Planning Policy (SPP); and*
- *Scottish Government Online Renewables Planning Guidance.*

7.3.9 This section of the ES does not attempt to summarise policy contained within these documents. A summary of this policy is contained within Chapter 6 of this ES.

## Regional Policy

7.3.10 The Perth and Kinross Development Plan consists of two tiers:

- A Strategic Development Plan (SDP) 'TAY plan' jointly prepared by Perth & Kinross, Dundee, Angus and Fife Councils. The Approved Plan was published on 18 June 2012.
- The Perth and Kinross Local Development Plan (LDP) was approved on 3 February 2014 and covers the whole Perth & Kinross Council area (excluding areas covered by the National Parks).

7.3.11 Whilst existing and proposed policy has been reviewed as part of the LVIA process, this section of the ES does not attempt to summarise policy contained within these documents. A summary of this policy is contained within Chapter 6 of this ES.

7.3.12 It is expected that supplementary planning guidance to the Perth and Kinross Local Development Plan will provide a spatial framework for wind energy developments. At the time of preparing this LVIA the 'Supplementary Planning Guidance for Wind Energy Proposals in Perth and Kinross' (Approved May 2005) is the current document used as a material consideration in the determination of wind energy proposals.

### **Supplementary Planning Guidance for Wind Energy Proposals in Perth and Kinross' (Approved May 2005)**

7.3.13 The supplementary planning guidance forms two key parts. Part one covers wind energy and locational policy, part two goes on to set out detailed policy guidance. Within the locational policy section is Diagram 1 which indicates Sensitive Areas, Broad Area of Search and Routes for Assessment. The proposed development site is located within the 'Strategically Sensitive Area'.

## 7.4 Planning Designations

7.4.1 Landscape and other relevant designations are illustrated in Figure 7.3.

### National Parks

7.4.2 There are two National Parks in Scotland, the Cairngorms National Park and Loch Lomond and The Trossachs National Park. At its closest point the boundary of the Cairngorms National Park is located approximately 10km to the northeast of the nearest turbine in the proposed development. The boundary of the Loch Lomond and The Trossachs National Park is located approximately 30km to the south.

7.4.3 There are four National Park aims set out in the National Parks (Scotland) Act 2000 these are:

1. *To conserve and enhance the natural and cultural heritage of the area*
2. *To promote sustainable use of the natural resources of the area*
3. *To promote understanding and enjoyment (including enjoyment in the form of recreation) of the special qualities of the area by the public*
4. *To promote sustainable economic and social development of the area's communities.*

### Cairngorms National Park

7.4.4 The park is managed by the Cairngorms National Park Authority (CNPA) and is Britain's largest National Park covering 4,528km<sup>2</sup> and accounting for almost 6% of Scotland. The park contains the Cairngorms range of mountains as well as the surrounding hills and associated river valleys.

7.4.5 The Cairngorms National Park includes two National Scenic Areas (NSAs), the Cairngorm Mountains and Deeside and Lochnagar. Both of these NSAs are located beyond the 35km study area approximately 40km north east of the site. Further discussion of NSAs in the vicinity of the site is set out in the following section of the Chapter.

7.4.6 In 2010 Scottish Natural Heritage (SNH) published Report No. 375 - The Special Landscape Qualities of the Cairngorms National Park produced in partnership with the Cairngorms National Park Authority. 'Special qualities' are defined in 'Guidance for identifying the Special Qualities of Scotland's National Scenic Areas (SNH2008) as *'the characteristics that individually or combined, give rise to an area's outstanding scenery.'* It is emphasised in the scope of the report No.375 that the term refers to special landscape qualities.

7.4.7 The summary list of the special qualities of the Cairngorms National Park, each of which are expanded in more detail in report No.375 are detailed below:

<p><b>1.0 General Qualities</b> Magnificent mountains towering over moorland, forest and strath Vastness of space, scale and height Strong juxtaposition of contrasting landscapes A landscape of layers, from inhabited strath to remote, uninhabited upland</p>	<p><b>2.0 The Mountains and Plateaux</b> The unifying presence of the central mountains An imposing massif of strong dramatic character The unique plateaux of vast scale, distinctive landforms and exposed, boulder strewn high ground The surrounding hills The drama of deep corries</p>
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'The harmony of complicated curves' Landscapes both cultural and natural	Exceptional glacial landforms Snowscapes
<b>3.0 Moorlands</b> Extensive moorland, linking the farmland, woodland and the high tops A patchwork of muirburn	<b>4.0 Glens and Straths</b> Steep glens and high passes Broad, farmed straths Renowned rivers Beautiful lochs
<b>5.0 Trees, Woods and Forests</b> Dark and venerable pine forest Light and airy birch woods Parkland and policy woodlands Long association with forestry	<b>6.0 Wildlife and Nature</b> Dominance of natural landforms Extensive tracts of natural vegetation Association with iconic animals Wild land Wildness
<b>7.0 Visual and Sensory Qualities</b> Layers of receding ridge lines Grand panoramas and framed views A landscape of many colours Dark skies Attractive and contrasting textures The dominance of natural sounds	<b>8.0 Culture and History</b> Distinctive planned towns Vernacular stone buildings Dramatic, historical routes The wistfulness of abandoned settlements Focal cultural landmarks of castles, distilleries and bridges The Royal connection
<b>9.0 Recreation</b> A landscape of opportunities Spirituality	

#### Loch Lomond and the Trossachs National Park

- 7.4.8 The Loch Lomond and the Trossachs National Park includes the area in and around Loch Lomond and various surrounding ranges of hills with the most notable being the Trossachs. The nearest point of the boundary of the National Park to the proposed wind farm is located approximately 30km to the south of the southern site boundary.
- 7.4.9 The special landscape qualities of Loch Lomond and The Trossachs National Park have been detailed in 'The special landscape qualities of the Loch Lomond and The Trossachs National Park. Scottish Natural Heritage Commissioned Report, No.376 (2010).' The report No. 376 identifies the park as 'large and diverse' and follows a different format to the Cairngorms report in that as well as listing general landscape qualities for the park it also identifies and sections the park into four landscape areas. Argyll Forest, Loch Lomond, Breadalbane and the Trossachs. The Breadalbane area to the north of the park is the area closest to the site and within the 35km study area therefore the general qualities and those of Breadalbane only are listed below.

<b>1.0 General Qualities</b> A world renowned landscape famed for its rural beauty Wild and rugged highlands contrasting with pastoral lowlands Water in its many forms The rich variety of woodlands Settlements nestled within a vast natural backdrop Famous through-routes Tranquillity The easily accessible landscape splendour	<b>4.0 Breadalbane</b> Steep mountains and long glens Crossroads within remote mountain ranges A landscape of distinctive glens and straths The narrow Strathyre and Loch Lubnaig ribbon Beautiful Balquhidder Wide and straight Loch Earn The rocky pass of Glen Ogle Killin and the Falls of Dochart
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## National Scenic Areas

- 7.4.10 National Scenic Areas (NSA's) were designated in 1980 under Section 263A of the Town and Country Planning (Scotland) Act in recognition of their outstanding scenery and are defined as "*of outstanding scenic value in a national context*". The legislation also states that within an NSA "*special attention is to be paid to the desirability of safeguarding or enhancing its character or appearance*".
- 7.4.11 The Scottish Planning Policy, the Scottish Government's statement on land use planning, states: "A National Scenic Area (NSA) is an area which is nationally important for its scenic quality... Development that affects a NSA... should only be permitted where: It will not adversely affect the integrity of the area or the qualities for which it has been designated; or – Any such adverse effects are clearly outweighed by social, environmental or economic benefits of national importance."
- 7.4.12 SNH has surveyed the forty NSA's and produced a list of the landscape qualities that make each one special. These are detailed in Scottish Natural Heritage (2010), The special qualities of the National Scenic Areas, SNH Commissioned Report No. 374.
- 7.4.13 The location of the nearest NSAs in relation to the proposed wind farm is shown in Figure 7.3. The southern portion of the site, where no turbines are proposed to be sited, is located within the Loch Rannoch and Glen Lyon NSA, which extends a further 25km to the south covering the area around Glen Lyon and the landscape around Ben Lawers. The Ben Nevis and Glen Coe NSA and Loch Tummel NSA are both also located within the 35km study area.

### Loch Rannoch and Glen Lyon National Scenic Area

- 7.4.14 The southernmost extent of the site, where no turbines are proposed to be sited, lies within the Loch Rannoch and Glen Lyon NSA. This NSA includes Loch Rannoch (to the north) and Glen Lyon (to the south), which both run east west across the NSA. The loch and glen are separated summits including Carn Mairg (1,042m) and Schiehallion (1,083m). To the south of Glen Lyon rise Meal Ghaordie (1,039m) and Ben Lawers (1,214m).
- 7.4.15 The special qualities of the Loch Rannoch and Glen Lyon NSA are identified in Report no. 374 as follows:

Epitome of the mountain grandeur of Highland Perthshire A clear linkage of land use and landform A combination of natural and cultural beauty The great diversity of woodland Secluded side glens and ancient shielings The wild summits	Peacefulness and tranquillity Rich, varied cultural features The long, narrow and sinuous Glen Lyon The great expanse of Loch Rannoch The long, symmetric mass of Schiehallion The dominance of Ben Lawers
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### Ben Nevis and Glen Coe National Scenic Area

- 7.4.16 Ben Nevis and Glen Coe NSA is located to the west of the site. The eastern boundary of this NSA is located 12km from the boundary of the site at its closest point. Located to the south of Fort William the area encompasses Loch Leven and Glen Coe towards its centre with Glen Nevis to the north and Glen Etive and Ranoch Moor to the south.

7.4.17 The special qualities of the Ben Nevis Glen Coe NSA are identified in Report no. 374 as follows:

A land of mountain grandeur A land of classic highland vistas Human settlement dwarfed by mountain and moorland The expansive Moor of Rannoch The spectacular drama of Glen Coe The wooded strath of lower Glen Coe	The narrow and enclosed Loch Leven The impressive massif of Ben Nevis The wild Mamores and secretive Glen Nevis The fjord-like upper Loch Leven Long and green Glen Etive The dark heritage
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#### Loch Tummel National Scenic Area

7.4.18 Loch Tummel National Scenic Area is located to the east of the site approximately 25km from the western boundary of the NSA. The NSA is focussed around Loch Tummel and the corresponding valley sides. Towards the east of the NSA is the confluence of the rivers Tummel and Garry.

7.4.19 The special qualities of the Loch Tummel NSA are identified in Report no. 374 as follows:

A breathtakingly beautiful landscape, both lowland and highland Loch Tummel, the heart of the NSA Rich and varied woodlands Peacefulness and tranquillity	The celebrated Queen's view Spectacular and famous mountain gorge – the Pass of Killiecrankie The picturesque Linn of Tummel
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#### **Conservation Areas**

7.4.20 Within Perth and Kinross Council there are Conservation Areas within the settlements of Aberfeldy, Forthingall and Kenmore. All three settlements are located to the south east of the site around the area of Loch Tay 25-35km from the site. None of the settlements fall within the Zone of Theoretical Visibility of the proposed turbines and would therefore have no visibility of the proposed development.

#### **Gardens and Designed Landscapes**

7.4.21 There are several Gardens and Designed Landscapes within 35km of the Talladh-a-Bheithe site, although no inventory listed Gardens and Designed Landscapes fall within 25km. The Gardens and Designed Landscapes located within the study area are illustrated at Figure 7.3 and include:

- **Taymouth Castle;**
- **Bolfracks;**
- **Castle Menzies;**
- **Cluny House; and**
- **Grandtully Castle.**

7.4.22 The potential for impacts of the proposed development on the setting of Gardens and Designed Landscapes are considered separately within the Cultural Heritage Chapter of the ES.

## 7.5 Wild Land ('Search Areas for Wild Land' and 'Core Areas of Wild Land')

7.5.1 Wild land is not a statutory designation however the importance of wild land is documented in national policy. Wild land is currently recognised in Paragraph 99 of the NPFS(2) which states:

*"Some of Scotland's remoter mountain and coastal areas possess an elemental quality from which many people derive psychological and spiritual benefits. Such areas are very sensitive to any form of development or intrusive human activity and great care should be taken to safeguard their wild land character."*

7.5.2 Additionally Paragraph 128 of SPP states:

*"The most sensitive landscapes may have little or no capacity to accept new development. Areas of wild land character in some of Scotland's remoter upland, mountain and coastal areas are very sensitive to any form of development or intrusive human activity and planning authorities should safeguard the character of these areas in the development plan."*

### Search Areas for Wild Land

7.5.3 SNH's Policy Statement No. 02/03, 'Wildness in Scotland's Countryside' issued in July 2002, identified wild land as an aspect of landscape character to be protected through land-use planning and recognises the concept of wild land / wildness as land that is sensitive to any form of development whilst providing psychological benefit to those seeking more challenging forms of outdoor recreation. The Statement included the identification of a series of 26 'search areas for wild land', which included one area covering the northernmost part of the Talladh-a-Bheithe site, where no turbines are proposed to be sited. This boundary is illustrated on Figure 7.3, a further three search areas are located within the 35km study area. These are not named, but cover parts of the Cairngorms, Monadhliath and the Loch Etive Mountains. These areas are also illustrated on Figure 7.3.

7.5.4 SNH Policy Statement No. 02/03 identified in annex 1 the physical attributes (Para 3) which contribute to the experience of wildness (and thereby to the identification of wild land) and these are detailed in the table below along with the perceptual responses evoked by the physical attributes (Para 4) and the detracting features which effect the experience of wild land.

**Table 7.4 Physical attributes, perceptual responses contributing to the identification of wild land and detracting features not constituting wild land (based on SNH Policy Statement No. 02/03 - annex 1)**

Physical Attributes	Detracting features	Perceptual Responses
Perceived naturalness;	<p>Non indigenous vegetation.</p> <p>Commercial forestry plantations.</p> <p>Modified catchment systems.</p> <p>Land management effecting geomorphological processes.</p>	A sense of sanctuary and solitude.
Lack of constructions or other artefacts;	<p>Contemporary or recent built or engineering works.</p> <p>Power lines, masts intensive land</p>	Risk, or for some visitors, a sense of awe or anxiety, depending on the individual's emotional response to the

	uses (e.g. forestry). Noise Light pollution Extensive penetration of vehicular tracks.	setting.
Little evidence of contemporary land uses;	Intensive land uses. Combinations of over grazing, habitat management, footpath deterioration and erosion, effects of the use of off road vehicles.	Perceptions that the landscape has arresting or inspiring qualities.
Rugged or otherwise challenging terrain;	Easy to traverse Not providing challenge.	
Remoteness and inaccessibility;	Closeness to settlements or modern communications. Vehicular tracks , Access by e.g. bridges, boats.	Fulfilment from the physical challenge required to penetrate these places.
Extent of area (sufficient to engender a sense of remoteness).	Not large enough to engender sense of remoteness, provide a physical challenge or separation from intensive human activities.	

7.5.5 The SNH Policy Statement No. 02/03 notes *'In bringing the criteria together to identify wild land:*

- *all the physical attributes must be present and be well expressed in an area;*
- *all the perceptual attributes should be identifiable to some degree; and*
- *where detracting features exist they should be localised, their cumulative effects on the sense of wildness enjoyed by visitors should be limited, and there should be potential for enhancement.*

#### Approach to the Assessment of Wild Land

7.5.6 The SNH Interim Guidance Note: Assessing the impacts on Wild Land (Feb 2007) provided the following guidance on the assessment of impacts of development on Wild Land:

*'The assessment of impact on wild land comprises two stages: first establishing the baseline condition and extent of the wild land resource; and secondly, assessing the magnitude and the significance if the impact upon it.'*

7.5.7 The Guidance goes on to note that:

*'The degree to which the categories of physical attributes may change along with any losses in perceptual attributes will require professional informed judgement in concluding if these impacts constitute a significant adverse effect on the extent and condition of the resource.'*

7.5.8 The approach to the assessment of the search areas for wild land areas is therefore recommended to follow the same broad methodology as would be undertaken for the assessment of landscape character units within the study area: establishing the sensitivity of the baseline environment before then assessing the magnitude of change and significance of effect upon the area based on professional judgement. It is this approach which is used in the assessment of the search areas for wild land in this LVIA. As part of this assessment, specific regard will be made to the key physical attributes and perceptual responses associated with Wild Land, noted by SNH, as follows:

#### Physical Attributes

- Perceived Naturalness
- Lack of constructions or other artefacts
- Little evidence of contemporary land uses
- Rugged or otherwise challenging terrain
- Remoteness and inaccessibility

#### Perceptual Responses

- A sense of sanctuary, solitude or refuge
- Risk or anxiety – hazard
- Arresting/inspiring qualities, sense of awe – prospect
- Physically challenging

#### **Core Areas of Wild Land**

7.5.9 In 2013 SNH published a document Core Areas of Wild Land in Scotland 2013 (Version 1) for consultation. This proposed a series of wild land areas which were greater in number and extent than were previously included as search areas for wild land. Within the 35km study area there are eight (proposed) Core Areas of Wild Land, which are illustrated on Figure 7.3 and listed below:

- 9 Upper Almond
- 10 Loch Etive Mountains
- 11 Bredalbane – Schiehallion
- 12 Lyon – Lochay
- 13 Ben Lawers
- 14 Rannoch – Nevis – Mamores – Alder
- 15 Cairngorms

- 17 Monadhliath

- 7.5.10 The entirety of the Talladh-a-Bheithe site lies within the proposed Core Area 14. This is an increase to the extent of the Search Area for Wild Land which only covers the northernmost part of the estate, an area which it is not proposed to contain any of the proposed turbines or development infrastructure. It should be noted, as set out in paragraph 4.6 of SNH Core Areas of Wild Land 2013 Map Consultation Paper (Nov 2013), field survey has not been undertaken as part of the preparation of the proposed Core Areas of Wild Land.
- 7.5.11 In July 2013 Pegasus Group undertook a 'Review of SNH Potential Core Areas of Wild Land' which provided an overview of the proposed Core Areas of Wild Land selection criteria, methodology and issues arising. A full copy of the report which formed part of a representation in response to the Scottish Government's consultation on the Draft Scottish Planning Policy (SPP) and the National Planning Framework 3 – Main Issues Report and Draft Framework (April 2013) is contained within Appendix 7.4. In summary however, it is our understanding that the identification of a series of core wild land areas, such as those which are set out on the Core Areas of Wild Land Map, is sound in principle as an approach for determining the extent of wild land within Scotland. However, we have a number of concerns regarding the specific methodology taken in the proposed development of the current Core Areas of Wild Land Map, not least the lack of field testing to establish the validity of the proposed Core Areas on the ground. Should human artefacts have been considered robustly and field survey work been undertaken to ground test the proposed areas on site, it is clear that areas such as the southern extent of the Talladh-a-Bheithe estate would have been excluded from the proposed Core Area of Wild Land. It is likely that this same conclusion would also apply to many other areas on the periphery of the proposed Core Area of Wild Land should they be analysed on site.
- 7.5.12 In light of comments received to the consultation exercise undertaken by the Scottish Government on the Main Issues Report for the National Planning Framework 3 and draft Scottish Planning Policy, SNH have been asked to provide further advice to the Scottish Ministers on the Core Areas of Wild Land 2013 map. It is therefore considered that as the proposed Core Areas of Wild Land are subject to further considerations, that these areas should be given less focus in the LVIA than the Search Areas for Wild Land. Notwithstanding this, the proposed Core Areas of Wild Land are discussed in this LVIA.

## 7.6 Baseline Conditions

### Site Location

- 7.6.1 The proposed Talladh-a-Bheithe wind farm site is located within the Talladh-a-Bheithe Estate in Perth and Kinross, centred approximately at OS Grid Reference 253489, 759190. The Talladh-a-Bheithe Estate extends to approximately 47 km<sup>2</sup> and is approximately 25 km south of the village of Dalwhinnie and 14 km west northwest of Kinloch Rannoch. It is located approximately equidistant between Fort William and Pitlochry. The Talladh-a-Bheithe Estate extends from the far western end of Loch Rannoch, northwards to the Talladh-a-Bheithe Forest and the southern end of Loch Ericht.
- 7.6.2 The Talladh-a-Bheithe Estate itself comprises heath and blanket bog moorland managed for shooting. A small block of coniferous plantation lies towards the centre of the Estate (Garrocher Plantation) and other intermittent woodland also occurs. There are substantial commercial forestry plantations bordering the Talladh-a-Bheithe Estate to the south (Leathad nan Craobh Fearna) and to the west (Creag an Fhithich). It is also bordered by a 14km long hydro-electric reservoir, Loch Ericht, which is dammed to both the north and the south. Part of the estate includes hydroelectric energy infrastructure including power buildings, overhead power lines, large diameter pipework and roads. Renewable hydroelectricity has been produced by the Estate since the 1930's.

The Estate falls partially within the Coire Bhachdaidh Site of Special Scientific Interest (SSSI) and the Loch Rannoch and Glen Lyon National Scenic Area (NSA) covers the southernmost part of the site, where no turbines are proposed to be sited.

7.6.3 The A9 road lies approximately 15km to the northeast of the estate at its closest point. Loch Rannoch lies to the south of the estate and Loch Ericht lies on the western boundary of the estate, beyond which lie the Ben Alder & Dalwhinnie and Camusericht Estates.

7.6.4 The land within the estate has a varied, rolling rather than 'rugged' topography, with a number of hills surrounding a series of shallow glens containing burns feeding Lochs Ericht and Rannoch. The elevation of land within the estate is between 420m (at Rhuighe Ghias) and 750m (Carn Dearg). To the north east of the estate, the topography creates an area of landscape with limited horizons which despite a lack of tree cover is intimate and inward-facing.

## 7.7 Baseline Landscape Character

7.7.1 A review was undertaken of the following published landscape Character Assessments (LCAs) and supporting documents which cover the 35km study area including:

### Tayside

- SNH (1999) Landscape Character Assessment No. 122 Tayside Landscape Assessment
- Supplementary Planning Guidance for Wind Energy Proposals In Perth and Kinross, 2005

### Ben Alder, Ardverikie and Creag Meagaidh

- SNH (1999) Landscape Character Assessment No. 120 Ben Alder, Ardverikie and Creag Meagaidh

### Lochaber

- SNH (1998) Landscape Character Assessment No. 97 Lochaber
- Assessment of Landscape Sensitivity to Wind Turbine Development in Highland, September 2010

### Cairngorms

- SNH (1996) Landscape Character Assessment No. 75 Cairngorms Landscape Assessment

### Argyll and the Firth of Clyde

- SNH (1996) Landscape Character Assessment No. 78 Argyll and the Firth of Clyde
- Argyll and Bute Wind Energy Capacity Study

### Central Region

- SNH (1999) Landscape Character Assessment No. 123 Central Region
- Stirling Landscape sensitivity and capacity study for wind energy development 2007.

- 7.7.2 At this point, for clarity, it is necessary to distinguish between two terms that are used throughout this chapter. They originate from the "Guidelines for Landscape Character Assessment" (Countryside Agency and SNH, 2002):-
- Landscape Character Types 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 are defined as discrete geographical areas of a particular landscape character type and can only occur at a single location.
- 7.7.3 Landscape Character Types and their geographical distribution within the landscape surrounding the site are described by a number of different landscape character assessment (LCAs), commissioned by SNH.
- 7.7.4 The assessments were primarily undertaken to provide a detailed inventory of the landscape resources, and in particular, the major cultural and natural forces which have shaped the evolution of the regions. The reports were commissioned for the most part more than 10 years ago, and while the descriptions of the underlying landscape remain largely accurate, some of the 'forces for change' and recommended management measures may have changed in emphasis.
- 7.7.5 As each of the SNH commissioned consultants used independently devised methods, the labels given to similar character types vary, as do the names of adjoining character areas. Additionally some overlap between character areas occurred in preparing the LCA's, and therefore the most recent assessments have been assumed to supersede earlier information where it overlaps.
- 7.7.6 Landscape Character Types and Areas as identified in the published LCAs above within 35km of the site are collectively illustrated in Figure 7.4 and Figure 7.5. Landscape character types and areas within 35km have also been overlaid onto the proposed development ZTV to blade tip as shown on Figure 7.22.
- 7.7.7 An initial review was undertaken (presented in Appendix 7.2) in order to determine which of the character types and units within 35km of the site required detailed consideration in this LVIA. This review had due regard to the ZTV plan overlaid on the landscape character areas which illustrated that from a great many of the character units there would be little or no theoretical visibility of the proposed development and therefore no potential for significant effects.
- 7.7.8 Initial analysis indicated that beyond 20km of the site, the effects upon landscape character would not be significant. This is not to suggest that the turbines will not be visible from some locations beyond 20km, but even in an area that exhibits strong wild land characteristics, where distant features may have a greater influence on landscape character, there is not likely to be a conspicuous visual or landscape effect. In the context of the site, even where visible at a distance of over 20km, the turbines would simply be very distant structures seen within the landscape of much less importance than the remaining landscape context in closer proximity.

## Landscape Character Types and Areas

### Tayside

- 7.7.9 The site is encompassed entirely within the West Highlands regional character area as described within the Tayside Landscape Character Assessment. Within this regional area the site covers three Character Types. The majority of the site including 21 of the turbines lies within Type 3 'Highland Summits and Plateaux'. The northwestern part of the site, including 3 turbines, lies within Type 2a 'Upper Highland Glens with Lochs'. The remaining southern extent of the site lies within Type 2b 'Mid Highland Glens with Lochs'. However, no turbines or ground level development (with the exception of the existing site access track from Loch Rannoch and the B846) would lie within this area.
- 7.7.10 Much of the wider 35km study area (to the south and east) is also described in the Tayside Landscape Character Assessment. However in addition, to the north of the site all of the area covered by Ben Alder, Ardverkie and Creag Meagaidh Landscape Character Assessment is contained within the 35km study area. The area covered by the Cairngorms LCA lies to the far northeast of the study area and the study area also includes part of the area discussed in the Lochaber LCA which lies to the west of the site beyond approximately 10km. Finally a small part of the areas covered by the Argyll and Firth of Clyde and the Central Region LCAs lie to the south and southwest of the site beyond 15km.
- 7.7.11 A summary of the published landscape character of the site is described below, starting with the regional landscape character area, and then in regards to the individual LCTs as described by the published documents.

### West Highlands Regional Landscape Character Area

- 7.7.12 SNH LCA No. 122 – Tayside describes the West Highlands regional character area as:

*'...the north-western part of Tayside, bounded to the south by the Highland Boundary fault between Glen Artney and Strath Tay near Dunkeld, and to the east by Drumochter-Glen Garry-Strath Tummel and Strath Tay. Geologically, the area has a structure...dominated by...the pattern of faulting and ice movements...Glens tend to follow west to east fault lines, and are larger than the Angus Glens to the east. Several of the West Highland glens contain large lochs...the higher rate of precipitation in the west part of the region...resulting in the mountains gaining a sharper, craggier relief.*

*Historically, settlement was influenced by the concentration of cultivable land within the principal glens, and by the existence of three major communication routes through the West Highlands towards the Atlantic coast...the third climbs past Loch Tummel and passes through Kinloch Rannoch to Rannoch Moor...large parts of the valley sides are clothed in coniferous woodland, while the expanses of highland between are under heather or grass shrub heath'.*

- 7.7.13 Having established regional landscape character areas, the Tayside Landscape Character Assessment then identifies and evaluates a finer grain of landscape character types which in turn are subdivided into further individual units (these areas effectively being sub-units of the types). Each of these landscape character types and units are discussed in turn below.

LCT 3: Highland Summits and Plateaux

7.7.14 This Landscape Character Area is extensive across the study area and contains 12 individual character units, 4 of which are relevant to the study area. Although it is not clearly identified in the Tayside Landscape Character Assessment, the area extending over Rannoch Forest to the west of the proposed wind farm is included within the discussion of the 'Talla Bheith and Craginour Forest' character unit within this LVIA. It should also be noted that the units are not specifically referred to as '3i-3vi' in the Character Assessment but have been ascribed these identifications in this text and on Figures 7.4 and 7.22 for clarity of location.

7.7.15 The following key characteristics of the Highland Summits and Plateaux character type are described as follows:

*Key characteristics*

- *Areas of upland separating the principal glens*
- *West Highlands comprise distinct summits and ranges, separated by fault line lochs; the hills are sharply defined and often craggy*
- *Mounth Highlands comprise a more extensive area of upland with spurs extending southwards; the hills are more rounded than those to the west and rock outcrops are fewer*
- *Vegetation patterns closely reflect altitude and exposure and include heather, grassland, blanket bog and arctic alpine plant communities; variations reflecting the underlying geology*
- *Most of the area managed as open moorland*
- *Little or no settlement some extensive plantations; one of the remotest and wildest landscapes in the UK*

7.7.16 The Character assessment then goes on to set out a series of objective and subjective description of the character type as follows:

*Objective description*

- *Physical scale 400 to 1000 metres AOD, forming individual groups of mountains or extensive upland tracts*
- *Woodland: broad-leaf A few areas of semi-natural woodland up to 600 metres AOD. Generally cleared by burning, cutting and grazing coniferous Plantations up to about 450 metres*
- *Agriculture; arable Absent; pasture Rough and unimproved; fields Unenclosed; field boundaries Not applicable*
- *Settlement pattern: Unsettled*
- *Building materials: Not applicable*
- *Historic features: Ancient routeways, former shielings*
- *Natural heritage features: Rich arctic-alpine flora and fauna Other landscape features Rock outcrops, glacial features, expansive views*

*Subjective description*

- *Views - panoramic*
- *Scale - large*
- *Enclosure - exposed*

- *Variety - simple to uniform*
- *Texture - rough*
- *Colour - muted*
- *Movement - distant*
- *Unity - unified*
- *'Naturalness' - undisturbed to managed.*

7.7.17 The character assessment then goes on to set out that the character type falls within two broad geographical areas, the 'West Highlands', which are said to lie to the west of Glen Garry/Drumochter, and the 'Mounth Highlands', which lie to the east. Each of these broad areas are then divided into a series of more discrete units based on hills ranges or forests. Six of these areas are listed for the 'West Highlands' and a further six areas are listed for the 'Mounth Highlands'. Although these twelve areas are not identified on a plan within the character assessment, the descriptions allow for their geographical locations to be established.

7.7.18 It is therefore understood that the Talladh-a-Bheithe site lies within the area known as 'Talla Bheith and Craiganour Forest', which for the purpose of this assessment is referred to as unit (i) of Character Type 3 Highland Summits and Plateaux.

7.7.19 Although the units are not delineated by the LCA on a plan, it is considered within this ES that the study area encompasses part of the following further character units within Character Type 3 Highland Summits and Plateaux as follows:

- i. Talla Bheith (Talladh a Bheithe) and Craiganour Forest;
- ii. Forest of Atholl;
- iii. Carn Gorm/Schiehallion range between Glen Lyon and Loch Rannoch;
- iv. Meall Tairneachan Group
- v. Ben Lawers and Beinn Heasgarnich range south of Glen Lyon;
- vi. Ben Chonzie/Sron Mhor/Meall nam Furan and Craigvinean Forest

#### LCT 2a: Upper Highland Glens and Lochs

7.7.20 The following key characteristics of the Upper Highland Glens and Lochs character type are described as follows:

- *Geological and physical structure similar to Upper Highland Glens*
- *Visual dominance of lochs, enlarged to provide hydroelectric power*
- *The expanse of water, changing its appearance according to the weather, adds to the sense of exposure, remoteness and desolation*

7.7.21 The Character assessment then goes on to set out a series of objective and subjective description of the character type as follows:

#### *Objective description*

- *Physical scale 1.5km wide at valley crest, Loch surface at 300-450m AOD*

- *Woodland: broad-leaf virtually absent, coniferous geometric plantations on mid slopes, more natural shapes on upperslopes.*
- *Agriculture; arable Absent; pasture Rough grazing on valley slopes; fields Unenclosed; field boundaries Not applicable*
- *Settlement pattern: Predominantly unsettled, hydroelectric infrastructure (dams turbine houses, pylons etc.)*
- *Building materials: Not applicable*
- *Historic features: Old routeways*
- *Natural heritage features: Upland vegetation*
- *Other landscape features: Rock outcrops, glacial features, hydro schemes*

*Subjective description*

- *Views - corridor*
- *Scale - medium*
- *Enclosure - enclosed*
- *Variety - simple*
- *Texture – rough to very rough*
- *Colour – muted to monochrome*
- *Movement - remote*
- *Unity – unified/uninterrupted*
- *'Naturalness' – wild/slightly tamed*

*LCT 2b: Mid Highland Glens and Lochs*

7.7.22 The following key characteristics of the Mid Highland Glens and Lochs character type are described as follows:

- *Geological and physical structure similar to Mid Highland Glens*
- *Large-scale landscape created by the combination of expansive lochs and large enclosing mountains*
- *Concentration of settlement and farming activity on lower slopes and at the ends of the lochs*
- *Extensive woodland on lower slopes*
- *Extensive corridor views*
- *Clear transition from lower pastures through heather midslopes to bare upper summits*

7.7.23 The Character assessment then goes on to set out a series of objective and subjective description of the character type as follows:

*Objective description*

- *Physical scale: 1 to 1.5km wide loch. Loch surface at 120-200m AOD, Valley sides rise to 300-600m AOD. Lochs between 50 and 100m deep.*
- *Woodland: broad-leaf Native birch and oak woodland on steeper and poorer ground. Coniferous, substantial areas of plantation*

- *Agriculture; arable Absent; pasture Rough pasture on lower/mid slopes ; fields regular fields on smooth valley slopes; field boundaries Drystone dykes and post and wire fences.*
- *Settlement pattern: Scatter of farmsteads along shore of loch; greater concentration on sunnier, south facing slopes.*
- *Building materials: Schists and granite with slates.*
- *Historic features: Old farmsteads, castles/estates concentrated on lower ground at each end of lochs*
- *Natural heritage features: Native woodlands*
- *Other landscape features: Mills, historic settlement sites.*

#### *Subjective description*

- *Views - corridor*
- *Scale – medium to large*
- *Enclosure –enclosed to semi enclosed*
- *Variety - varied*
- *Texture – smooth to textured*
- *Colour - colourful*
- *Movement - peaceful*
- *Unity - unified*
- *'Naturalness' - retrained*

#### Summary of Character Types/Areas

7.7.24 Table 7.5 below provides a summary of the character types and units within 35km of the proposed turbines. Based on a sieving exercise presented in Appendix 7.2, it was determined that those character types/units shaded in the table below should be considered in detail in the LVIA, due to their assessed potential to experience effects on their landscape character in relation to the proposed development.

**Table 7.5 Summary of Landscape Character Types and Units**

Landscape Character Type	Landscape Character Units
<b>Tayside</b>	
1a - Upper Highland Glens	Drumochter pass
1b - Mid Highland Glens	3no areas within the study area are identified as part of this landscape character type at: <ul style="list-style-type: none"> <li>• Glen Errochty</li> <li>• Dun Alastair</li> <li>• Glen Lyon</li> </ul>
1c - Lower Highland Glens	Glen Garry/ Blair Atholl
2a - Upper Highland Glens with Lochs	3no areas within the study area are identified as part of this landscape

Landscape Character Type	Landscape Character Units
	character type at: <ul style="list-style-type: none"> <li>• Loch Ericht</li> <li>• Loch Daimh</li> <li>• Loch Lyon</li> </ul>
2b - Mid Highland Glens with Lochs	2no areas within the study area are identified as part of this landscape character type at: <ul style="list-style-type: none"> <li>• Loch Rannoch</li> <li>• Loch Tay</li> </ul>
2c - Lower Highland Glens with Lochs	Loch Tummel
3 - Highland Summits and Plateaux	6no areas within the study area are identified as part of this landscape character type at: <ul style="list-style-type: none"> <li>(i) Talla Bheith and Craiganour Forest</li> <li>(ii) Forest of Atholl</li> <li>(iii) Carn Gorm/Schiehallion</li> <li>(iv) Meall Tairneachan Group</li> <li>(v) Ben Lawers and Beinn Heasgarnich</li> <li>(vi) Ben Chonzie/Sron Mhor/Meall nam Fuaran and Craiqvinean Forest</li> </ul>
4 - Plateau Moor: Rannoch Moor	1 no area within the study area is identified as part of this landscape character type at: <ul style="list-style-type: none"> <li>• Rannoch Moor</li> </ul>
<b>Lochaber</b>	
1 - Blanket Bog	The Blanket Bog landscape type occurs in only one location in Lochaber on the eastern edge of Rannoch Moor.
2 - Mountain Massif	2no areas within the study area are identified as part of this landscape character type one to the north west of the site and another to the south west of the site, both approximately 23km from the site.
4 - Broad Forested Strath	2no areas within the study area are identified as part of this landscape character type to the north west of the site.
5 - Smooth Moorland Ridges	3no areas within the study area are identified as part of this landscape character type to the north west of the site
7 - Rugged Massif	2no areas within the study area are identified as part of this landscape character type to the west and north west of the site.
<b>Ben Alder, Arderikie and Creag Meagaidh</b>	
I – Isolated Mountain Plateau	2no areas within the study area are identified as part of this landscape character type to the immediate north west of the site and further north 23km plus from the site boundary. <ul style="list-style-type: none"> <li>-Ben Alder</li> <li>- Creag Meagaidh</li> </ul>
II – Smooth Rounded Hills	2no areas within the study area are identified as part of this landscape character type to the north of the proposed wind farm between 5k and 12km of the site boundary.
III – Small Craggy Knolls and Hills	-
IVa - Loch Ericht	This landscape character type covers a single area encompassing a

Landscape Character Type	Landscape Character Units
	significant portion of the area around Loch Ericht
IVb - Loch Laggan	Loch Laggan
<b>Cairngorms</b>	
3 - Monadhliath	-
7 - Ardverikie	2no areas within the study area are identified as part of this landscape character type approximately 17km plus north of the northern site boundary
8 - Southern Hill Ranges	-
10 - The Spey Headwaters	-
11 - Upper Spey Farmland	-
<b>Argyll and Firth of Clyde</b>	
2 – High Tops	A single large area landscape character type is located to the south west of the proposed wind farm site approximately 15km from the southern site boundary
<b>Central Region</b>	
2- Ben Lochy Group	-
3 - Beinn Leabhainn Group	-

## 7.8 Local Level Landscape Appraisal

7.8.1 This section provides an objective and factual description of the landscape features and character of the landscape within and immediately surrounding the assessment boundary. The landscape context of the site is illustrated in Figure 7.6.

### Landform and Topography

7.8.2 A plan illustrating the topography of the wider 35km study area is set out at Figure 7.7. The elevation of the estate ranges between a low of 205m AOD on the southern boundary and a high of 791m AOD near Carn Dearg within the Coire Bhachdaidh SSSI towards the site's western boundary. Peaks adjacent to the site boundary include Beihnn Bhoidheach (789m OAD), Ghlas Mheall Mor (825), Stob an Aonaich Mhoir (830m). Slightly further east is Beinn Mholach (841m), and to the northeast Mam Ban (919m OAD). These taller peaks tend to contain the site from the east, north and west, while the gradient falling south towards Loch Rannoch is relatively gentle, a typical profile within the Western Highlands resulting from glacial erosion. All of the proposed turbines are located at elevations between approximately 400m and 600m AOD and occupy the more visually contain central section of the site.

### Watercourses and Drainage

7.8.3 The site encompasses a natural watershed feeding Loch Ericht to the west and Loch Rannoch to the south. Loch Ericht drains into Loch Rannoch via the river Ericht (and associated hydroelectric pipework), which in turn drains eastwards into the River Tummel and eventually the Tay in the vicinity of Perth.

7.8.4 A significant flow of water crossing the site and within the study area is controlled by a Scottish Hydro hydroelectric scheme in the area, however. Approximately 25km north east of the site, Cuaith dam collects

water from Loch a-t-Seilich (427m OAD), Loch Cuaich (397m OAD) and the Spey headwaters. Together with Loch Garry (415m) these waters discharge into Loch Ericht at 359m OAD via a series of subterranean aqueducts. Loch Ericht discharges into Loch Rannoch at 205m AOD via Rannoch Power Station, first collecting additional waters from additional surface aqueducts off the Talladh-a-Bheithe Estate and adjoining watershed.

- 7.8.5 The water levels of each loch within the hydroelectric generation scheme are maintained by dams. These in turn have a varying array of associated infrastructure, including sluice gates, diversion channels, valves and valve housing, turbine chambers, transfers and substations, equipment storage sheds, access roads and tracks, aqueducts and pipework and high voltage power lines, pylons and distribution network. Much of this infrastructure is of a very large scale.

### Vegetation

- 7.8.6 The Talladh-a-Bheithe Estate primarily comprises rough bog and heath moorland, managed as a sporting estate. It also contains a block of coniferous plantation in the central section at Old Shielings Ford and other intermittent woodland.
- 7.8.7 There are substantial commercial forestry plantations bordering the Talladh-a-Bheithe Estate to the south (Leathad nan Craobh Fearn) and to the west (Creag an Fhithich). It is also bordered by a 14km long hydro-electric reservoir, Loch Ericht, which is dammed to both the north and the south ends. The Estate falls partially within the Coire Bhachdaidh Site of Special Scientific Interest (SSSI).

### Buildings and Infrastructure

- 7.8.8 The majority of the site and immediate surrounding area is moorland. There is relatively little development and infrastructure within the site boundary. A single estate road track road, complete with passing bays and snow demarcation poles at regular intervals, runs through the site. The road follows an almost north south route for a distance of approximately 15km from the B846 road at Bridge of Ericht, to Ericht Dam and then on to Corrievarkie Lodge, and the generating station some 500m further north. For much of the route the road is flanked by overhead power lines supported by timber poles.
- 7.8.9 Within the southern section of the site are a collection of buildings and houses connected to the B846 running along the northern shore of Loch Rannoch. These buildings include residential properties and Rannoch Power Station and associated infrastructure including a pipeline, Valve House, large diameter pipe work and roads. Renewable hydroelectricity has been produced at the Estate since the 1930's. A power line follows the line of the road along the southern site boundary.
- 7.8.10 Within 5km of the proposed turbines there are very few buildings, residential development continues in a similar pattern to that within the site in that it is largely confined to the loch side. Beyond 5km settlement continues to be very sparse and is largely confined to the loch sides and valley bottoms.
- 7.8.11 The B846 running along the southern perimeter of the site is the only secondary road within the site or 5km of the proposed turbine locations. This road runs to Rannoch Station 10km to the west and to the settlement of Kinloch Rannoch (the nearest settlement) 15km to the east. A track runs north parallel to the western boundary to a dam and then further north to Corrievarkie Lodge approximately 7km north of the proposed turbines. A second track runs up the side of the pipeline from Rannoch Power Station turning east into Tay Forest Park to the east of the site.

- 7.8.12 The nearest major roads are the A82 approximately 25km to the south west and the A9 15km to the north east. A rail line runs adjacent to the A9 and a further rail line runs north south approximately 10- 14km from the western boundary.
- 7.8.13 The majority of Talladh-a-Bheithe Estate comprises undeveloped moorland and plantations. Although there are no residential properties directly within the site area, there are a number of substantial structures within it.
- 7.8.14 On the southern site boundary there is a gatehouse and gated entrance to the estate and a metalled track. The track serves the estate management and leads up to the Loch Ericht dam. From here it runs on through the estate to Corrievarkie Lodge and Keepers Cottage on the shore of Loch Ericht and then a generating station associated with the hydroelectricity scheme.
- 7.8.15 Deer fencing surrounds the plantations. A line of power cables supported on timber posts follows the track.
- 7.8.16 Hydroelectric energy infrastructure including power buildings, overhead power lines, large diameter pipework and roads is located on part of the estate. Renewable hydroelectricity has been produced by the estate since the 1930's. A valve house associated with the hydro-electric scheme is a listed building within the estate. It is located on south facing slopes adjacent to Loch Rannoch. A part of the wider Tummel hydro-electric power scheme, the pipework, access tracks and overhead electricity lines located within the site constitute structures and infrastructure of a substantial size, forming notable feature within some views both from within the site and from outside.

### Historical Landscape Interpretation

- 7.8.17 The historical Smiths "1806 New Map of the United Kingdom" shows a road on the south bank of Loch Rannoch on leading to Georges Town at the western end of the loch (a place name that no longer formally exists), from Kinloch Rannoch.
- 7.8.18 The 1858 map show roads to both north and south shores of Loch Rannoch following much the same routes as today. Both lochs Ericht and Rannoch had been dammed and enlarged, but forestry appears to be largely absent.
- 7.8.19 The Mallaig to Crianlarich railway, opened only in 1894, is shown in place on the 1906 map. The 1926 Ordnance Survey map indicated that damming had been undertaken of Loch Ericht (it is stated as being a reservoir under ownership of Grampian Electricity Supply Co. and a tunnel between Loch Ericht and Loch Garry (Grampian Power Co.). The map also shows a Coire Bhachdaidh lodge in the same location as the current Corrievarkie Lodge with a track leading to it from Killichonan, and another tunnel leading from the dam at Loch Ericht to Loch Rannoch in the same location as the Rannoch Power station is today.
- 7.8.20 Overall, there are relatively few if any indications of changes to historical land use or landscape patterns in the immediate vicinity of the site beyond the introduction of large areas of commercial forestry to the east and west of the site boundaries.

## Sensory Experience

7.8.21 The site principally occupies an area of upland moorland from where there is a strong sense of openness and the upland ridges exhibit the characteristics of a large scale landscape. The upland parts of the site are relatively exposed and open although there is not truly a sense of remoteness due to the presence of the estate access road and the hydroelectricity generation infrastructure associated with Loch Ericht. With comparatively little tree planting or other large scale features the landscape appears expansive, however from much of the site longer distance views are curtailed by the surrounding topography.

## 7.9 Baseline Visual Receptors

7.9.1 Due to the height of the proposed wind turbines and the irregular topography of the surrounding area, there is potential for the proposed development to be visible at some considerable distance in several directions. However, at an early stage in the assessment it was determined that beyond 35km from the site there would be no significant effects on views, due to a combination of distance, intervening topography and the scale of the landscape. This section therefore focuses on visual receptors within 35km of the proposed turbines. Principal visual receptors within the surrounding landscape are illustrated in Figure 7.8 and are identified below.

### Residential Receptors

7.9.2 Residential visual receptors have been identified below in bands of distance from the nearest turbine with a greater level of detail provided in relation to properties nearer the proposed development. It is however recognised that there could be views from some individual properties and clusters of properties throughout the study area.

#### Nearby Individual Properties

- 7.9.3 There are no residential properties within 3km of the proposed turbines. The nearest residential properties, measured from the nearest turbine, include:
- Ardlarach & Birch Grove (3.7km approx) located due south of the proposed site.
  - Camasericht Lodge & Tighnabruich (3.9km approx) and Chumann Cottage (4.1km approx) located south west at Bridge of Ericht
  - Wester Killichonan, Lockview Cottages, Woodstock, Cameron's, Clais Bheilthe, Muiredge, Broomhill, Tigh-a-ness (3.8-3.9km approx) a series of properties located along Loch Rannoch west of Killichonan Burn.
  - Burnside, Douglas Cottage, Braeside, Killichonan, The Cottage, Gatehouse, Ivy Cottage, Grianan, Rowans (4.0-4.2km approx) a group of properties located east of Killichonan Burn.
  - Tigh na Vilt (4.6km approx) located south west towards Bridge of Gaur
  - Finart Lodge & Cottage (4.8-4.9km approx) located on the southern side of Loch Rannoch, due south of the proposed site

### Settlements within 15km

- 7.9.4 There are three small settlements within 15km of the proposed Talladh-a-Bheithe site. Bridge of Ericht is the closest settlement to the proposed site, located approximately 3.7km south of the nearest turbine on the B846. Bridge of Gaur is located further west along the B486 approximately 5.5km south west of the nearest turbine at the western end of Loch Rannoch. At the opposite end of Loch Rannoch to the east, along the B486 and approximately 12.5km from the nearest turbine, is Kinloch Rannoch. Other settlements within 15km of the proposed site are either loosely associated groups of individual properties or very small clusters of properties.

### Principal Towns between 10km and 35km

- 7.9.5 While a number of other villages and smaller settlements are situated between 10km and 35km of the proposed Talladh-a-Bheithe turbines, larger settlements are relatively sparsely distributed and located some distance away. Blair Athol (31km) lies on the A9 to the east and Aberfeldy (33km) is located to the southeast and is connected to the A9 by the A827 and to Loch Rannoch by the B486. Pitlochry (40km) lies outside of the study area further along the A9.

### **Local Recreational Walking/Cycling Routes**

- 7.9.6 There is one recognised recreational walking route (RANN/104) within the site boundary which leads from Talladh-a-Bheithe Estate gatehouse to Loch Ericht Dam, following the route of the estate road. It is understood however, that the route is very infrequently used as a walking route.
- 7.9.7 Although a route that crosses the dam and continues on the western shoreline of Loch Ericht Routes is indicated on the Perth and Kinross Council Core Paths Plan Map 8 - South Loch Ericht (January 2012), it is not a registered route nor is it laid out on the ground. Access across the otherwise difficult bog/tussock grassland terrain is made possible however by a number of slatted timber 'rafts' that bridge small burns or boggy areas. This route links to another Council registered path (RANN/8), running north/south some 2.5 km northwest to form a circular route. These and other routes that fall within the ZTV of the proposed development within 15km are listed in Table 7.6 below:

**Table 7.6 Perth & Kinross Council Core Paths**

Route Number/name		Distance to nearest visible turbine	Direction to nearest visible turbine
1	RANN/104/1	1 km	east
2	RANN/8/2	2.5 km	southeast
3	RANN/112/1&3&4, 114/1&4, 51/2&3, 2/2&110	6-8km	north
4	RANN/11	8.5km	east
5	RANN/7/4	10km – 20km	north east
4	RANN9/3	7-8km	west

### Long Distance Recreational Walking Routes

- 7.9.8 Two long distance recreational walking routes run through the 35km study area, the West Highland Way and the Rob Roy Way.
- 7.9.9 The West Highland Way is located approximately 26km to the west of the proposed wind farm site at its closest point, near the Glencoe Mountain Resort. The entire route runs from Milngavie to Fort William with the section passing within the study area being approximately 44km in length. It is noted however, that the majority of this 44km route lies outside of the Zone of Theoretical Visibility of the proposed turbines and would have no views of the proposed development.
- 7.9.10 The Rob Roy Way is located approximately 26.3km to the south east of the proposed Talladh-a-Bheithe site at its closest point near Callelochan near the southern shore of Loch Tay. The sections of the footpath within the study area run from Aberfeldy to Glen Ogle, however the route lies outside of the Zone of Theoretical Visibility of the proposed turbines and would have no views of the proposed development.

### National Cycle Networks

- 7.9.11 National Cycle Route 7 is a long distance route from Sunderland to Inverness and runs through the Talladh-a-Bheithe study area at approximately 15km to the nearest turbine at the nearest point. Travelling southwards the route runs along the A9 and section of the route passes through the study area as it runs between Newtonmore and Pitlochry. The route then re-enters the study area to the north east of Aberfeldy and follows a minor road to the south of Loch Tay. The route does not fall within the ZTV of the site at any point and would have no views of the proposed development.

### Roads

- 7.9.12 There are relatively few roads within the 35km study area. The existing Talladh-a-Bheithe estate road runs within the site and consists of a tar macadam single carriageway track with passing places and snow location poles. The track provides access to Loch Ericht dam and then runs on through the estate to Corrievarkie Lodge and Keepers Cottage on the shore of Loch Ericht and beyond to a generating station associated with the hydroelectricity scheme.
- 7.9.13 The nearest primary public road is the B846 which follows the north shore of Loch Rannoch, which is approximately 4 km from the nearest turbine at its closest point. The route links Rannoch Station to the west and Bridge of Gaur with Kinloch Rannoch at the eastern end of the Loch Rannoch. The B487 links with the B486 to the A9 north of Dunalastair Water and to the B8019 at Tummel Bridge. A minor north/south road links the A9 to the B847 at Trinafour, near Loch Errochty dam. A minor road loops from Bridge of Gaur south of Loch Rannoch following the shore to Kinloch Rannoch, where another C road forks south east past Schiehallion linking to the B846, a north/south route that again joins the A8019 at Tummel Bridge. There are no other secondary roads within 15km of the site.
- 7.9.14 The nearest major trunk road within the vicinity of the proposed wind farm is the A9, which lies 15km to the north east. The A9 joins the A86 at Dalwhinnie, at the northern end of Loch Ericht. The A86 joins the A82 at Spean Bridge, linking to Fort William and then to the A85 to the south. This route is jointed to the A827 near Killin, which follows the north shore of Loch Tay to Aberfeldy, the A9 and then back to Pitlochry.

- 7.9.15 A minor route branches north near Edramuchy, traversing the Ben Lawers and Tarmachan range ridgeline via Ben Lawers National Nature Reserve and the pass at Lochan na Lairige into Glen Lyon. The Glen Lyon road joins the A846, some 30km to the southeast of the site.

### **Railways**

- 7.9.16 There are two main railway lines within the 35km study area, namely the West Highland Line located approximately 10km to the west of the site at its closest point near Rannoch Station and the Highland Main Line, approximately 13km to the north east near Dalnaspidal Lodge.
- 7.9.17 The West Highland Line links Glasgow to the ports of Oban and Mallaig. The section of the route which passes through the Talladh-a-Bheithe study area begins to the north of Tyndrum, alongside the A82 near Beinne Odhar and travels to Spean Bridge located to the north west of the proposed site. Train speeds during this section of the route are relatively slow due to speed restrictions across Rannoch Moor and the single track construction. Much of the railway as it passes through the study area would lie outside of the ZTV of the proposed development and would not have any views of the turbines. In addition, further sections of the route which are located within the ZTV occur in areas where large scale commercial forestry would screen the view towards the site. The ZTV indicates the proposed development would however potentially be visible from a section of the route across Rannoch Moor.
- 7.9.18 The Highland Main Line links Perth to Inverness and runs adjacent to the A9 to the east of the site. The ZTV indicates no potential visibility of the proposals from this route.

### **Recognised Vantage Points**

- 7.9.19 The OS map indicates two recognised viewpoints in the study area in the vicinity of the site at Rannoch Station (approximately 10km from nearest turbine) and at the eastern end of Loch Rannoch (approximately 12km away). Both of these locations are at the altitude of nearby local roads and both locations were included as assessment viewpoints in this LVIA. Although there are no other vantage points identified on OS mapping within the vicinity of the site which lie within the ZTV of the proposals, the nature of the local landscape allows for numerous other vantage points within the vicinity of the proposed development. These include many of the mountain summits in the study area and a number of these have therefore been used as assessment viewpoints (VP), including Ben Alder VP 11 (distance 8,100m, 1150m AOD), Schiehallion VP8 (distance 18,190m, 1079m AOD), and Ben Lawers VP 14 (distance 22,870m, 1213m AOD). Other high points included as viewpoints include VP 5 Meall Buidhe; VP 6 Meall a Mhuic; VP 7 Meall Garbh; VP 9 Beinn Mholach; and VP 18 Stob Dearg.

### **Historic and Tourism Viewpoints**

- 7.9.20 There are a number of additional recreational locations in the study area, in addition to the walking and cycling routes and mountain summits. In particular Glencoe Ski Centre (27.75km away, 641m AOD) to the south west of the site is represented by viewpoint 20 from the top of the first ski lift.
- 7.9.21 Queen's View is a famous vantage point located on the north side of Loch Tummel from which panoramic views can be gained and an important tourist viewpoint. The ZTV indicates that there would be no potential for views of the proposed turbines from this point.

## 7.10 Assessment Viewpoints

- 7.10.1 The desk studies, site visits and interpretation of the ZTVs, alongside consultation with statutory consultees, helped to identify 25 assessment viewpoints which are considered to be representative of the range of views around the site. The viewpoints are not intended to cover every single possible view, but are representative of a range of distances and directions from the site and receptor types (e.g. residents, walkers, road users).
- 7.10.2 Table 7.7 identifies the 25 Assessment Viewpoints. The locations of these assessment viewpoints are illustrated in Figure 7.21 where they are overlaid on the ZTV.
- 7.10.3 In Appendix 7.3 there is a baseline description of the view from each assessment viewpoint followed by a detailed analysis and assessment of effects on the viewpoint.

**Table 7.7 Assessment Viewpoints**

ID	Name / receptor	Easting	Northing	Distance to nearest turbine (m)
VP 1	Kinloch Rannoch (Car park adjacent to Loch Rannoch)	265925	757824	11,870 (T24)
VP 2	Bridge of Gaur	250285	756678	5,945 (T6)
VP 3	Rannoch Railway Station	242644	757723	10,298 (T1)
VP 4	Leagag	251888	753905	8,383 (T21)
VP 5	Meall Buidhe (Peak at the southern extent of Meall Buidhe ridge)	250065	748930	13,583 (T6)
VP 6	Meall a Mhuic	257553	751237	11,566 (T21)
VP 7	Meall Garbh	264672	751692	14,580 (T24)
VP 8	Schiehallion	271373	754768	18,100 (T24)
VP 9	Beinn Mholach	258737	765482	4,233 (T23)
VP 10	Loch Ericht, shoreline	249090	765232	3,497 (T1)
VP 11	Ben Alder summit	249629	771849	8,031 (T5)
VP 12	A82 Rannoch Moor	230844	749864	24,460 (T1)
VP 13	West Highland Way	228078	751170	26,243 (T1)
VP 14	Ben Lawers	263553	741420	22,887 (T24)
VP 15	Meall Reamhar	286222	770276	31,854 (T23)
VP 16	Southern shore of Loch Rannoch nr Croiscrag	254260	756796	5,353 (T21)
VP 17	Southern shore of Loch Rannoch at Tay Forest Park Car Park	263167	757476	9,606 (T24)
VP 18	Stob Dearg	222363	754307	30,449 (T1)
VP 19	Rannoch Moor – within the moor	236180	752814	18,374 (T1)

VP 20	Glencoe Ski Centre – top of first lift	226121	751570	27,847 (T1)
VP 21	Meall Gorm	253450	760245	1,871 (T21)
VP 22	Sgor Gaibhre	244480	767439	8,501 (T1)
VP 23	Sron Bealach (Ben Alder massif)	249937	770752	6,918 (T5)
VP 24	Beinn Udlamain	257859	773827	10,131 (T10)
VP 25	Carn Dearg	253243	767263	2,559 (T5)

## 7.11 Project Description

7.11.1 A detailed description of the project is set out in ES Chapter 3. However, this section very briefly summarises those details of the proposed development that have particular relevance to the LVIA.

7.11.2 The proposed development will principally comprise of the following permanent visible features which may have an impact on landscape character or visual amenity:

- 24 three-bladed wind turbines;
- Crane hard standing areas and access tracks;
- Substation and control building.

7.11.3 During the construction and decommissioning phases there would be a temporary construction compound, between turbines T2 and T3. During the construction phase there would also be potentially four borrow pits (to excavate suitable base material should it be required, depending on ground conditions). The substation and control building would be located between turbines T2 and T3 on the western side of the site.

7.11.4 The proposed turbines would be approximately 80m to the hub with a blade radius of 45m, giving a maximum height of 125m to the tip of the blade when in their highest position. Each of the turbines would be of the same dimensions and specification.

7.11.5 At the end of the proposed wind farm's operational phase the site and ground cover would be reinstated. The decommissioning stage would involve the dismantling and subsequent removal of the turbines, their foundations and the control building.

## 7.12 Assessment of Effects on Existing Landscape Features

### Construction Effects (on existing landscape features)

7.12.1 The construction phase would result in the removal of existing ground level vegetation, to facilitate the construction of the access tracks, borrow pits, the construction compound, substation, hardstandings, foundations and crane pads. The vegetation removed will be bog, mire and heathland type vegetation, prevalent across much of the surrounding landscape. The area of moorland affected as a proportion of the total within the surrounding landscape would be minimal. It is therefore considered that there would be no more than a slight effect on the existing land cover.

7.12.2 A section of trees would be removed from within the block of coniferous woodland in the centre of the site to facilitate the construction of T9 and T14 and associated infrastructure, and to comply with the objectives of the Outline Habitat Management Plan (see Appendix 9.2). This would not have a significant effect on the form and

landscape value of this small commercial woodland/ game cover, which would in any event be clear felled at some future time for its timber as part of standard forestry management practices.

#### **Operational Phase on (on existing landscape features)**

- 7.12.3 The operational phase of the proposed development will not result in any additional impacts upon landscape features above those which would occur during the construction phase of the proposed development. There will therefore be no effect on landscape features during this phase.

#### **De-commissioning Effects (on existing landscape features)**

- 7.12.4 There would be no additional effects on landscape features during the decommissioning phase, over and above those assessed under the heading of 'Construction Effects' above. Once the proposed development is fully decommissioned, the landscape of the site will be reinstated to its original state wherever possible including the reinstatement of vegetation and soils. It is recognised that there may be some site features such as where trees have been felled and material removed from borrow pits that will not be reinstated to the original state. However this will not result in discernible changes to the landscape overall and therefore there will be only a slight residual effect on landscape features once the proposed development has been decommissioned which would not be significant.

### **7.13 Assessment of Effects on Landscape Character**

#### **Sensitivity of Landscape Character and Capacity for Wind Energy Development**

- 7.13.1 The first stage in determining the significance of effects on landscape character is to evaluate the sensitivity of the receiving landscape to the type of change proposed (i.e. the construction of a wind farm). The discussion below considers the sensitivity of the landscape across the study area with reference to published sensitivity studies, informed by further desk and field study.
- 7.13.2 There are no specific wind farm landscape sensitivity or capacity studies covering the site or its immediate surroundings within Perth and Kinross, as have been produced for many other regions in Scotland. Evaluating the sensitivity of the landscape to wind energy development for the purposes of this LVIA therefore requires a project specific consideration of the physical and perceptual characteristics of the landscape in combination with a review of the published landscape character assessments which cover the study area. Together with further observations made during the fieldwork for this assessment, it has been possible to establish the sensitivity to wind energy development of each character type within 35km of the site for which it was determined (Appendix 7.2) that an assessment of the proposed development was necessary.
- 7.13.3 Based on an analysis of recent regional landscape capacity studies for wind farms in other parts of Scotland, a series of 'sensitivity indicators' can be used to establish the sensitivity of the relevant character types to wind energy development. Table 7.8 below sets out the sensitivity indicators which have been used in this LVIA to consider the sensitivity of the character types.

Table 7.8 Landscape Sensitivity Indicators

<i>Sensitivity Indicator</i>	<i>Attributes typically indicative of low sensitivity</i>	<i>Attributes typically indicative of high sensitivity</i>
Scale	Large	Small
Openness	Open	Enclosed
Landform	Uniform, Simple, Regular	Complex, Rugged, Irregular
Land Cover	Large areas of consistent land cover	Mosaic of land cover
Complexity/Pattern	Predictable, Simple	Intricate, Complex
Built Structures/Human Influence	Pylons, Masts, Infrastructure, contemporary buildings and settlements	Vernacular buildings and settlements. Historic structures.
Sense of remoteness/wilderness	Busy, evidence of human activity	Remote, Wild
Perception of change	Modern landscape	Traditional, ancient, or designed landscape
Landmarks/Skyline	No distinctive landmarks or skyline features	Focal points in landscape or distinctive skyline features
Visual Intervisibility	Limited visibility within/into/out of landscape	Extensive or distant views within/into/out of landscape
Condition	Under managed, lack of management	Intact landscape, well managed
Designations	None	International or National designations present
Rarity	Common	Rare
Scenic Quality	Low	High

7.13.4 The two character units containing the proposed turbines '3 Highland Summits and plateaux (Talla Bheith and Craiganour Forest Unit)' and '2a Upper Highland Glens with Lochs (Loch Ericht)' are considered in detail with regard to these indicators below. The remaining character types and the analysis of the respective units in the 35km study area are summarised in Table 7.11.

Sensitivity of LCT 3: Highland Summits and Plateaux (Talla Bheith and Craiganour Forest) to Wind Energy Development

**Table 7.9 Sensitivity of the LCT 3: Highland Summits and Plateaux (Talla Bheith and Craiganour Forest Unit)**

<i>Sensitivity Indicator</i>	<i>Character Type Analysis</i>
Scale	<p>The Tayside Character Assessment describes the scale of the LCT3 character type as 'Large'. This concurs with observations made on site. Whilst the scale of the landscape is not very large as in some other upland parts of Scotland, the scale of the moorland and plantations and lochs are typically large.</p> <p><i>Sensitivity Analysis – Low.</i></p>
Openness	<p>The Tayside Character Assessment describes the LCT3 character type as an 'open' landscape having an 'open... exposed character' and goes on to say that 'tree cover is rare.' Although there are isolated pockets of land exhibiting a stronger sense of isolation (e.g. in the northeast of the site) overall this character type has a strong sense of openness.</p> <p><i>Sensitivity Analysis – Low.</i></p>
Landform	<p>The Tayside Character Assessment describes the landform of the LCT3 character type as having 'rolling hills... typically dome shaped with convex slopes' and 'subtle variations in relief caused by shallow glens eroded by minor burns.' A key characteristic of the type is that it is a 'large scale, rolling topography with gentle slopes and smooth relief'. The supporting appendices to the Local Landscape Designation Review acknowledge that 'The underlying landform reflects the typical uplands of the LCT 3: Highland Summits and Plateaux (Talla Bheith and Craiganour Forest).'</p> <p><i>Sensitivity Analysis – Low.</i></p>
Land Cover	<p>The Tayside Character Assessment identifies the key Land Cover characteristic of the PG type as follows - 'Vegetation cover dominated by coarse grassland with localised patches of heather moorland, rush pasture and scattered small coniferous plantations and shelterbelts... Tree cover is rare, and consists mainly of scattered small coniferous plantation blocks and shelterbelts...'</p> <p>It goes on to describe one of the negative attributes of the type as being 'vulnerable isolated remnants of heather moorland' and highlights threats to these remaining fragments as a key landscape issue.</p> <p><i>Sensitivity Analysis – Medium</i></p>
Complexity/Pattern	<p>The Tayside Character Assessment includes the following descriptive elements of the PG type 'On the plateau top the landscape is open, large scale, and exposed in character, with distant and panoramic views often gained.....The infrequency of field boundaries, lack of enclosure at road edges (and) high levels uniformity of the land cover and large scale of the landform....' Generally the landscape has a simple pattern with large scale open areas and large fields interspersed with a few scattered woodland blocks.</p> <p><i>Sensitivity Analysis – Low</i></p>
Built Structures/Human	<p>There is limited evidence of human activity throughout the character type. The Tayside Character Assessment includes the following Key Characteristic 'Low density settlement with</p>

<b>Sensitivity Indicator</b>	<b>Character Type Analysis</b>
Influence	<p><i>widely dispersed farm buildings</i>: The transport network is limited to <i>'minor roads and farm tracks, together with the B6368 and B6362 which traverse the plateau linking the A7 and A68 Trunk Roads'</i> The Assessment describes the infrequency of field boundaries and enclosure by drystone dykes rather than walls. The supporting appendices to the Local Landscape Designation Review acknowledge that <i>'There is no substantive settlement within this LCU....A number of paths across the southern half of the LCU.'</i> Electricity pylons cross the eastern part of the character type.</p> <p><i>Sensitivity Analysis – Medium</i></p>
Sense of remoteness/wilderness	<p>The Tayside Character Assessment includes the following statement <i>'The infrequency of field boundaries, lack of enclosure at road edges at high levels uniformity of the land cover and large scale of the landform all contribute to an impression of some remoteness.'</i> And lists <i>'Remote, isolated quality'</i> as one of its Positive Attributes. Agriculture is evident throughout the character type.</p> <p>The supporting appendices to the Local Landscape Designation Review acknowledge that <i>'Large scale of the landform and lack of enclosure contributes to a feeling of remoteness, but this is tempered by (inter alia) coniferous forest and pylons.'</i></p> <p>In short the character type exhibits a relatively strong sense of detachedness but is not a wild landscape.</p> <p><i>Sensitivity Analysis – Medium</i></p>
Perception of change	<p>This is a relatively old landscape and not much changed since its enclosure, although intensive sheep farming has given way to forestry and management for sporting purposes on the uplands. Many of the farmsteads, whilst often centred on an old building, are typically surrounded by modern utilitarian agricultural silos and barns. Pylons crossing the landscape are a modern influence on the landscape</p> <p><i>Sensitivity Analysis – Low/Medium</i></p>
Landmarks/Skyline	<p>The Tayside Character Assessment lists as a positive attribute of the PG type <i>'relative absence of visual detractors or detractors from tranquillity'</i>. Horizons are relatively distant but are occasionally foreshortened by the scattered plantations and woodland shelter belts.</p> <p><i>Sensitivity Analysis – Medium</i></p>
Visual Intervisibility	<p>The Tayside Character Assessment concludes that due to the openness of the character type, there is a high degree of intervisibility within the Character type to the east and south. Intervisibility is locally high from the Rannoch Moor/plateau moor and Highland Summits and Plateau margins to the south and southwest). Intervisibility from the Upper Highland Glens with Lochs is restricted to the south and south-western shore of Loch Ericht and within Mid Highland Glens with Lochs it is restricted to the western and south shores of Loch Rannoch. The Tayside Landscape Character Assessment states on page 79 that <i>'...in a large-scale landscape (e.g., and exposed upland area) the visual impact of turbines may be comparatively small, though they will be visible over a considerable area...A further influence on wind farms' landscape impact is their prominence. Thus turbines sited on the skyline area likely to be far more noticeable than those located a little further down the hillslope. Topography and landcover may further influence these impacts, providing screening or</i></p>

<b>Sensitivity Indicator</b>	<b>Character Type Analysis</b>
	<p><i>backclothing for all or part of the wind turbines.</i> In relation to the landscape experience, it refers to <i>'distant and panoramic views often gained over the adjoining landscape types.'</i></p> <p>Its overall visual sensitivity is described as <i>'generally low (locally high from trunk road corridors)'</i></p> <p>The supporting appendices to the Local Landscape Designation Review state that the character type has <i>'Open panoramic views over surrounding landscapes, for example to the Eildon Hills from Lauder-Stow road. Prominent landscape in views from the A68 and A7 which cross it at gateways into the Borders from the north. The A68 gateway offers extensive views along Lauderdale, while the A7 gateway is less dramatic.'</i></p> <p><i>Sensitivity Analysis – Medium/high</i></p>
Condition	<p>The Landscape Character Assessment notes <i>'The moorland is not overgrazed, though there has been some erosion of landscape structure.'</i></p> <p><i>Sensitivity Analysis – Medium</i></p>
Designations	<p>There 3 designated landscapes within the LCA, all falling within 15km of the nearest turbine. These are: the Cairngorms National Park; the Ben Nevis and Glen Coe National Scenic Area and the Loch Rannoch and Glen Lyon National Scenic Area. There are no local designations or Conservation Areas or inventory listed landscapes within the character type.</p> <p><i>Sensitivity Analysis – High.</i></p>
Rarity	<p>Widespread in region.</p> <p><i>Sensitivity Analysis – Low.</i></p>
Scenic Quality	<p>The Landscape Character Assessment notes that <i>'Dramatic mountains, sweeping moorlands, extensive views throughout Scotland and constant exposure to changing, often extreme weather conditions, all shape perceptions of the landscape.'</i></p> <p><i>Sensitivity Analysis – High.</i></p>
<b>Sensitivity Analysis</b>	<p>On balance, this character type is considered to be of <b>Medium/High.</b></p>

Sensitivity of the LCT 2a: Upper Highland Glens with Lochs**Table 7.10 Sensitivity of the LCT 2a: Upper Highland Glens with Lochs**

<i>Sensitivity Indicator</i>	<i>Character Type Analysis</i>
Scale	Medium-scale landscape created by the combination of expansive lochs and large enclosing mountains.  <i>Sensitivity Analysis – Medium</i>
Openness	Expanse of water...sense of exposure  <i>Sensitivity Analysis – Low</i>
Landform	Flat (water body)  <i>Sensitivity Analysis – Low</i>
Land Cover	Water. Landscape is dominated by low moorland vegetation, with woodland limited to sheltered side glens or a handful of geometric coniferous plantations.  <i>Sensitivity Analysis – Medium.</i>
Complexity/Pattern	Simple  <i>Sensitivity Analysis – Low</i>
Built Structures/Human Influence	Predominantly unsettled; hydroelectric infrastructure (dams, turbine houses, pylons etc Power lines serve the hydro installations located adjoining the dams that impound the lochs.  <i>Sensitivity Analysis – Medium/Low</i>
Sense of remoteness/wilderness	The landscape Character Assessment notes there is a, '... sense of exposure, remoteness and desolation' and that it is 'wild/slightly tamed'  <i>Sensitivity Analysis – Medium/High</i>
Perception of change	Some change  <i>Sensitivity Analysis – Medium.</i>
Landmarks/Skyline	Loch is a major landmark; surrounding hills provide clear skyline  <i>Sensitivity Analysis – high</i>
Visual Intervisibility	Extensive corridor views  <i>Sensitivity Analysis – High</i>

<i>Sensitivity Indicator</i>	<i>Character Type Analysis</i>
Condition	Moderate quality –draw-down due to hydro-electric activity  <i>Sensitivity Analysis – Medium/low</i>
Designations	None  <i>Sensitivity Analysis – Low</i>
Rarity	Moderate/low – many reservoir lochs in the region  <i>Sensitivity Analysis – Medium/low</i>
Scenic Quality	High – dramatic and enormous waterscape  <i>Sensitivity Analysis – High</i>
<b>Sensitivity Analysis</b>	Although a dramatic landscape, Loch Ericht is a man-modified reservoir loch which is used functionally for hydro-electric power generation. The infrastructure and draw-down scar reduce its scenic quality and any perception of 'naturalness'. There is no waterside/marginal vegetation, emphasising its functional nature. It has a large scale, dwarfing the scale of the dam. It is in keeping with the scale of adjacent hills.  Overall on balance, this character type is considered to be of <b>high</b> sensitivity.

### Sensitivity Ratings Assigned to Other Landscape Character Types in this LVIA within 35km

7.13.5 A similar consideration of the sensitivity indicators has been given to each of the other character types within 35km of the site. The sensitivity ratings determined for each of the other character types within 35km of the site are set out in Table 7.11 below. These ratings are the sensitivity judgements to further wind energy development taking account of any existing operational/consented wind farms in the baseline. The table also contains a summary of sensitivity for the character units discussed above.

Table 7.11 Summary of Landscape Sensitivity Ratings attributed to each Landscape Character Type in this LVIA

Landscape Character Type	Landscape Character Units	Sensitivity to Wind Energy Development
<b>Tayside</b>		
1b - Mid Highland Glens	3no areas within the study area are identified as part of this landscape character type at: <ul style="list-style-type: none"> <li>Glen Errochty</li> <li>Dun Alastair</li> <li>Glen Lyon</li> </ul>	Medium/High
2a - Upper Highland Glens with Lochs	3no areas within the study area are identified as part of this landscape character type at: <ul style="list-style-type: none"> <li>Loch Ericht</li> </ul>	High

Landscape Character Type	Landscape Character Units	Sensitivity to Wind Energy Development
	<ul style="list-style-type: none"> <li>Loch Daimh</li> <li>Loch Lyon</li> </ul>	
2b - Mid Highland Glens with Lochs	<p>2no areas within the study area are identified as part of this landscape character type at:</p> <ul style="list-style-type: none"> <li>Loch Rannoch</li> <li>Loch Tay</li> </ul>	High
3 - Highland Summits and Plateaux	<p>6no areas within the study area are identified as part of this landscape character type at:</p> <p>(i) Talla Bheith and Craiganour Forest</p> <p>(ii) Forest of Atholl</p> <p>(iii) Carn Gorm/Schiehallion</p> <p>(iv) Meall Tairneachan Group</p> <p>(v) Ben Lawers and Beinn Heasgarnich</p> <p>(vi) Ben Chonzie/Sron Mhor/Meall nam Fuaran and Craigvinean Forest</p>	Medium/ High - High
4 - Plateau Moor: Rannoch Moor	<p>1 no area within the study area is identified as part of this landscape character type at:</p> <ul style="list-style-type: none"> <li>Rannoch Moor</li> </ul>	Medium /Very High
<b>Lochaber</b>		
1 - Blanket Bog	The Blanket Bog landscape type occurs in only one location in Lochaber on the eastern edge of Rannoch Moor.	Very High
<b>Ben Alder, Arderikie and Creag Meagaidh</b>		
1 – Isolated Mountain Plateau	<p>2no areas within the study area are identified as part of this landscape character type to the immediate north west of the site and further north 23km plus from the site boundary.</p> <p>-Ben Alder</p> <p>- Creag Meagaidh</p>	Very High
IVa - Loch Ericht	This landscape character type covers a single area encompassing a significant portion of the area around Loch Ericht	High
<b>Argyll and Firth of Clyde</b>		
2 – High Tops	A single large area landscape character type is located to the south west of the proposed wind farm site approximately 15km from the southern site boundary	High

### Construction Effects (on Landscape Character)

- 7.13.6 It is recognised that there would be some additional temporary effects on landscape character during construction over and above those assessed as permanent effects under the heading of Operational Phase below.
- 7.13.7 There would be direct effects on landscape character both within the Loch Ericht character unit (No.2a Highland Glens with lochs character) and Talla Bheith and Craiganour Forest character unit (No.3 Highland Summits and Plateaux character), relating principally to the borrow pits and the construction of the access tracks, turbine foundations, substation and construction compound, as well as the erection of the turbines themselves.
- 7.13.8 Apart from in close proximity to small pockets of intensive construction activity, the additional effects resulting from construction activities would generally be relatively incidental when viewed in the wider context of the turbines being erected. The overall effect on landscape character would therefore increase incrementally as construction progresses and as more turbines are put onto place.
- 7.13.9 Within both the character units encompassing the site (Loch Ericht & Talla Bheith and Craiganour Forest) there would be earth movements associated with the construction of the turbine foundations and other features of the proposed development. Such activities would all result in some relatively minor soil disturbance. An impact on landscape character would arise therefore from the temporary stockpiling of soil, exposure of areas of bare earth and the exposed face of the borrow pits and the movement of construction vehicles.
- 7.13.10 The fenced construction compound would be located within the Loch Ericht character unit, the buildings and structures within this compound would be a temporary change to the open character of the moorland, related to the construction operations. There would also be a temporary increase in personnel on site and the combined effect would reduce the perceptual sense of remoteness for a short duration during construction.
- 7.13.11 Cranes would be involved in the erection of turbines; these would be on site for a relatively short period during the overall construction phase. The cranes would form noticeable vertical features in the landscape for a short period of time but be relatively incidental to the turbines as they are being erected.
- 7.13.12 Within a relatively small radius of the site, approximately 2-3km of the proposed turbines it is considered that there would be a medium magnitude of additional change, (above that which would occur during the operation phase) for the reasons outlined above. These additional construction effects on landscape character would be limited principally to locations within the very western portion of the Talla Bheith and Craiganour Forest unit and the transition into the very eastern fringe of the Loch Ericht character unit. Overall within these character areas there would be a temporary moderate additional effect on landscape character over and above the permanent effects dealt with under the heading of Operational Effects below. The construction effects would all be temporary, short term, non permanent and are unlikely to occur at the same time during the construction phase. The additional effect during construction would not be significant.
- 7.13.13 Beyond 2-3km of the site the construction works at ground level would not generally be highly visible, with views limited to the summits and higher ground in the wider study area. The additional effect over and above those discussed below as 'Operational Effects' would arise for a short duration during the construction process and while the cranes are erecting the turbines. Therefore elsewhere in the Loch Ericht and Talla Bheith and Craiganour and Forest character units and in all other surrounding landscape character units there would be no

greater than a slight additional effect on landscape character during the construction phase above that which would occur during the operational phase of the proposed development. The additional effect during construction would not be significant.

### Operational Phase Effects (on Landscape Character)

7.13.14 The effects on landscape character are discussed below in relation to each character type/area as identified in Table 7.11. The magnitude of impact 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 area from where the site would theoretically and actually be visible;
- The distance between the character area and the wind farm site;
- The likely prominence of the turbines from the character area taking account of existing locally dominant characteristics in the character area; and
- The degree to which the physical and perceptual characteristics of the landscape would change as a result of the turbines.

7.13.15 Beyond a short distance from the site, the ground level components of the proposed development would generally not be prominent. Therefore impacts on landscape character as experienced in the wider landscape arise mostly in relation to the introduction of turbines into the landscape and the resultant impact on the perceptual experience of landscape character.

7.13.16 It is noted that in general, the magnitude of change in landscape character will incrementally decrease with distance from the turbines as they gradually become less prominent. Some of the character areas considered in this appraisal extend for several kilometres. Inevitably therefore the effect on landscape character in the tract of landscape nearest the site will be more affected than the landscape within the same character area but at a greater distance from the site.

7.13.17 Figure 7.22 shows the character unit boundaries overlaid on the blade tip ZTV. This demonstrates that potential visibility is largely concentrated to within 5km to the north and north-east of the proposals and 15km to the south of the proposed turbines, with some further potential up to 35km to south west. Beyond these areas there are some large tracts of landscape where there would be no view or very limited views of the proposed wind farm and within these areas there would clearly be no effect on the experience of landscape character.

7.13.18 The character areas are discussed below in order of proximity to the proposed wind farm. A summary of effects on landscape character is presented in Table 7.12.

#### 3 Highland Summits and Plateaux - Unit (i) Talla Bheith and Craiganour Forest

7.13.19 The majority of the proposed turbines (other than T1, T3, T4 and the sub-station/ control building) would be located within this character unit which covers a large area of the landscape to the north-east and east of the site extending to the north and south of Glen Errochty towards the A9. It also covers a further tract of landscape across Loch Ericht to the west of the site around Rannoch Forest. The landscape is large scale with some panoramic views available; it is exposed and comparatively remote and the land cover is rough in character and texture.

- 7.13.20 Much of this character unit lies outside the ZTV of the proposed development and from these areas there would be no effect on landscape character. This includes the majority of the landscape beyond 3km to the north-east (including part of the Cairngorms National Park) and beyond 5km to the east, and also the western section of the Rannoch Forest area of the character unit.
- 7.13.21 It is acknowledged however that for the sections of the character unit in which the proposed development is located, elsewhere in the Talladh-a-Bheithe estate and also from parts of the Rannoch Forest area across Loch Ericht, there would be views of the proposals and the potential for effects on landscape character to occur. This is illustrated with regard to viewpoints 9, 21, 22 and 25. In general terms such impacts on landscape character would decrease incrementally with distance from the site and the ground level components of the proposed development including the access tracks, the substation and compound would only affect landscape character to a significant degree in closer proximity to the site.
- 7.13.22 Additional new tracks crossing the site will have an effect on landscape character locally, though the rough moorland will serve to screen and soften the appearance, such that the tracks will not be visible or noticeable from the wider character unit and therefore have no significant effect on landscape character beyond a short distance from the tracks.
- 7.13.23 By far the most influential new features of the proposed development on local landscape character would therefore be the turbines. The turbines have been designed to lie at grade with the existing ground levels across the site and in this regard the proposed wind farm would not directly affect the landform and topography of the surrounding landscape, nor the perception of the landform. When viewed from anywhere except directly adjacent to the turbines or the access track, there would be no appreciable change to landcover or pattern in the landscape.
- 7.13.24 The structural form of the proposed turbines is such that a high degree of visual permeability would be maintained and hence the sense of openness would not be greatly altered by the introduction of the proposed turbines particularly in the context of the scale of this landscape. They are relatively slender structures which would not obstruct the long distance view when experienced from any direction. The turbines will however become a component of some of these views.
- 7.13.25 Within approximately 1km of the turbines the proposed development would have a very high magnitude of change on this landscape character unit (judged to be of medium/high sensitivity) by virtue of their scale resulting in a substantial and significant effect. In the area between around 1km and 4km of the proposed development, where the turbines would be visible the magnitude of change would reduce to high which result in a substantial/moderate effect on the character of this area. Elsewhere beyond around 4km and up to approximately 8km within this character unit, where the turbines would be visible, there would be a medium magnitude of change to the character of the landscape resulting in a moderate significant effect. Beyond this distance there would be no significant effects on the landscape character unit.
- 7.13.26 It is noted that across the Talla Bheith and Craiganour Forest character unit as a whole that the areas which would experience a significant effect on landscape character would be less than the total area of landscape from which the proposed development would not be visible and there would be no effect on landscape character.

#### 2a Upper Highland Glens with Lochs - Loch Ericht Unit

- 7.13.27 This character area unit covers Loch Ericht, its immediate shoreline and the lower slopes of the hills which rise up from the loch. The western part of the Talladh-a-Bheithe estate falls within this character unit and three of the proposed turbines T1, T2, T4 and the substation/control building would be located within this unit. The character unit extends north along the eastern shore of the loch up to approximately 9km from the nearest proposed turbine. The majority of the northern part of the character unit lies outside of the ZTV and would have no visibility of the proposals. Much of the southern section of the character unit lies within the ZTV and would have some visibility of the proposals which would be visible on the elevated land above the loch. LVIA viewpoint 10 illustrates the view from this area of the character unit.
- 7.13.28 The character area is visually dominated by the loch which has been enlarged to provide a water supply for hydroelectric power generation. The expanse of water continually changes in appearance according to the weather and in this regard contributes to the sense of exposure and remoteness. It is a medium scale landscape, with corridor views dominated by moorland vegetation.
- 7.13.29 The onsite infrastructure including the new tracks will have an effect on the landscape character of the immediate surroundings of the site, however the most influential features of the proposed development on local landscape character would be the turbines. The design of the proposed development would mean that the proposed wind farm would not directly affect the landform or topography and when viewed from any location except those directly adjacent to the turbines or the access track, there would be no appreciable change to landcover or pattern in the landscape.
- 7.13.30 Within the wind farm and its immediate surroundings within the Talladh-a-Bheithe estate, up to approximately 1km from a turbine, there would be a very high magnitude of change. Over the remainder of the character unit from which the proposed development was visible there would be a high magnitude of change (the introduction of major new features into the landscape in parts of the character area where the proposed development would be visible). The character area is judged to be of high sensitivity to change resulting in a substantial significant effect for that part of the southern extent of the character area where the proposed development would be visible. Whilst the effect would be a non-permanent effect it would be long term (25yrs).
- 7.13.31 The greater part of the character unit which lies outside of the ZTV would however experience no effect on its landscape character.

#### 2b Mid Highland Glens with Lochs - Loch Rannoch Unit

- 7.13.32 This character unit covers Loch Rannoch and its northern and southern slopes. The ZTV indicates there would be very little potential visibility of the proposed development from the Loch or its northern slopes, including the B846 as it runs around the northern shore of the Loch. Potential visibility would be greater from the southern slopes; however sections of the slopes are clothed in commercial forestry which are not considered within the ZTV. The ZTV therefore indicates potential visibility in these locations where there would be no visibility.
- 7.13.33 Whilst none of the proposed turbines are located within this character unit, the site entrance along the existing estate access road from the B546 and part of the access leading up to the proposed turbines is located within it. The majority of the potential effects on this character unit would be indirect resulting from intervisibility with the turbines which would lie within the adjacent 3 (i) Talla Bheith and Craiganour Forest unit.
- 7.13.34 The surface water of the substantial loch is a key characteristic of this unit with the woodland clothing the semi enclosed valleys sides. It is large scale landscape, with extensive corridor views. Generally there is a clear

transition from lower pastures, through heather mid-slopes to bare upper summits. Human influence is apparent with a scattering of properties and farmsteads along the shores of the loch linked and accessed by the B846. The features associated with the hydroelectric power station also form part of the character including the pipes which run down to the Loch shore from within the Talladh-a-Bheithe estate. There is very limited visibility of the proposed turbines from the representative viewpoints along the southern loch shore (Viewpoint point 1, 2, 16 and 17) limited to just some of the blade tips being partly visible over the intervening landform. This would be typical of the majority of views from within the character unit, where the turbines where visible are seen as partial or glimpsed views of block or blade tip. There would be no alteration to the existing site entrance or estate road as part of the proposed development.

7.13.35 Overall there would be a very low magnitude of change to the character unit, resulting in a slight effect which is not significant.

#### IVa Loch Ericht - Loch Ericht Unit

7.13.36 This character unit is located between 5 and 20km from the nearest turbines, covering the north west and south east slopes of Loch Ericht, this unit has a close relationship with the 2b Mid Highland Glens with Lochs covering the southern section of Loch Ericht. The ZTV indicates very limited potential visibility within the majority of the character unit. The upper slopes form the transition with adjacent character units that represent higher ground and show more potential for visibility. Viewpoint 24 is located within the character unit but located on the upper slope of is more representative of Character unit 3 Highland Summits and Plateaux (a). Talla Bheith and Craiganour Forest.

7.13.37 The slopes of this steep sided valley appear to sink directly into the loch surface which forms the base of this steep sided trench like glen. The waters are often choppy and stormy due to the prevailing winds down the glen. Vegetation cover is predominantly rough grassland and heather with occasional patches of native woodland and large commercial plantations on the northern shores. Evidence of human settlement is limited; the Ben Alder Lodge is the main building amongst some dispersed built form.

7.13.38 The degree of change around the Loch and lower slopes will be substantially less than from surrounding higher ground and largely screened by landform, leading to a very low magnitude of change. The sensitivity of the character unit is judged to be medium low (decreasing in sensitivity towards Dalwinnie where effects of the loch being a reservoir are more apparent during draw down), resulting in a slight effect which is not significant.

#### I Isolated Mountain Plateau -Ben Alder Unit

7.13.39 This character unit extends to the northwest of the site from 5-18km of the nearest proposed turbine and for the majority of the character unit there would be no visibility of the proposals and no effect on landscape character. There would however be a small section of the character around the summit of Ben Alder and its south eastern flanks where there would be visibility of the proposed development. Viewpoints 11 and 23 are representative of views from this area, with both viewpoints being at difficult to access locations.

7.13.40 The landscape is massive in scale, wide and open and is dominated by the form and high elevation of Ben Alder and the surrounding peaks. Land cover is open with very little commercial forestry and it is remote with very little built development.

7.13.41 The magnitude of change to character would be generally very low to none across the majority of the character area, rising to medium for a small section of the slopes of Ben Alder. This character unit has been judged to be of very high sensitivity leading to generally no effect over the majority of the area, rising to a localised substantial effect which would be significant for a very small section of the south eastern slopes of Ben Alder.

#### 4 Plateaux Moor -Rannoch Moor Unit

7.13.42 This character unit extends to the south west of the site approximately 5-20km from the nearest turbine. The ZTV indicates visibility would not occur across the entire character unit although there would be the potential for some views of the turbines over a large section of the area to the south of the B846 and in the vicinity of the West Highland Railway. However intervening landform adjacent to the site boundary and a large proportion of commercial forestry over the character area limits visibility. Viewpoint 3 is located in this character unit and demonstrates the limited visibility of the proposals from the northern part of the character unit.

7.13.43 The moor is a highly eroded granite basin overlain with glacial deposits. It is a mosaic of lochans, mires, and hillocks. Modern development is apparent but not prominent, for example the West Highland Railway traverses this character area. The landscape is exposed, large scale and has panoramic views. Blanket bog is the key vegetation type with extensive coniferous woodland to the south.

7.13.44 For the northern parts of this character unit there would be no views of the proposed development and no effect on landscape character. Where the proposed turbines would be visible, beyond 5km, they would generally not be particularly noticeable in views and therefore there would be a low magnitude of change to the landscape character of this unit rising to medium from the section of the unit towards the centre of the moor which is more open and where the proposed development would be more apparent. The sensitivity of the unit is judged to range from medium towards its northeast to very high in the most remote parts of Rannoch Moor leading to slight/moderate effect which would not be significant across the majority of the unit and a moderate effect which would be significant within a smaller area towards the centre of the moor. The experience of the Moor would however remain open and remote and the turbines would not become a dominant characteristic of the area.

#### 1b Mid Highland Glens - Dun Alastair Unit

7.13.45 This character area runs west of Loch Rannoch from 2b Mid Highland Glens with Lochs - Loch Rannoch extending along the valley away from the site to the east. The ZTV indicates some potential visibility from the southern slopes of the valley although the majority of the character unit lies outside of the ZTV and would have no view of the proposed development.

7.13.46 Forming the middle section of the glen between Loch Rannoch and Loch Tummel, the valley is more open at this point than the upper sections which are more heavily influenced by the surrounding mountains. The narrow and distinct valley floor is a key characteristic, with some agricultural activity taking place alongside rough grazing, bracken and heather moorland on the valley slopes. There are also substantial areas of commercial forestry and moderate levels of settlement.

7.13.47 Viewpoint 1 lies close to the boundary of this character area and the very minor visibility illustrated within this viewpoint is illustrative of the views which would be available from much of the character unit, where any views are available at all. There would be some increased visibility of the turbines from the lower slopes of Schiehallion however, at a distance of over 10km from the nearest turbine and in the context of the wide expanse of the valley there would be no more than a very low magnitude of change on the character unit

overall. The sensitivity of the character area is judged to be medium high leading to slight / no effect which would not be significant.

### 3 Highland Summits and Plateaux – Unit (iii). Carn Gorm/Schiehallion

- 7.13.48 This character unit extends across a large area of the landscape between Loch Rannoch and Glen Lyon, which lies between around 7km and 20km to the south of the site and covers much of the ridge of high ground which runs generally in a westerly direction from Schiehallion. This unit is specifically characterised by the presence of Schiehallion within its area (Viewpoint 8). Meall Buidhe (Viewpoint 5), Meall a Mhuic (Viewpoint 6) and Meall Garbh are also located along the same ridge.
- 7.13.49 The landscape character is of a mountainous upland landscape with large scale panoramic views which contain relatively little evidence of human activity beyond small settlements and areas of commercial forestry, although distant development, including existing wind farms, is visible within the wider views from the summits including Schiehallion. Access is generally limited to pedestrians only as there are few roads within this character area. However.
- 7.13.50 As can be seen with reference to the assessment viewpoints which are located within this character unit, the proposed turbines would introduce noticeable features into the landscape when the viewer looks in the direction of the site. For the areas within the elevated sections of the character unit where such views are available, there would be a medium magnitude of change to the character of the unit, in an area up to around 15km from the nearest turbine. The sensitivity of this character unit is judged to be high leading to a moderate effect on landscape character within those areas, which would be significant. It is noted that throughout the character area the turbines would not appear above the skyline and would therefore be backclothed by the landscape to a degree reducing their visibility. Views of the high summits of Ben Alder, Schiehallion and across Loch Rannoch would remain the dominant features of the area, even where the turbines are also visible.

### 1 Blanket Bog - Western edge of Rannoch Moor

- 7.13.51 This character area unit extends beyond unit 4 Plateaux Moor -Rannoch Moor to the west of the site and lies between 10km and 30km from the nearest turbine. The ZTV indicates that the majority of this unit would have no visibility of the proposed development and therefore no effect on landscape character. The area with the most visibility of the proposed development would be southern portion of the character unit in the area through which the A82 runs. Here the landscape character is of expansive and open blanket bog moorland with higher peaks beyond.
- 7.13.52 As can be seen with reference to viewpoints 12 and 19, from those areas where the turbines are visible, introduction of the proposed turbines would result in the addition of distant and minor elements in the view from this landscape. Generally there would be low to no change to the character unit, however this would rise to a medium magnitude of change from the small section of the moor in the vicinity of viewpoint 19 which is away from the A82 and very inaccessible. The sensitivity of the character unit is judged to be very high leading to a slight/no effect across the majority of the character unit, which would not be significant, rising to a moderate effect from a small more isolated and difficult to access section of the moor, which would be significant. From this area, the experience of the Moor would however remain one which is vast and expansive and they turbines would not become a dominant feature of the area.

### 2 High Tops – Beinn a' Chreachain

- 7.13.53 This character area contains the line of the West Highland Railway and a section the A82 trunk road, from which the dramatic mountain scenery can be experienced. It comprises rugged, steep sided mountain ranges of a massive scale which beyond the rail and road routes mentioned above are generally inaccessible and relatively uninhabited. Bare rock faces and open moorland are the predominant land covers.
- 7.13.54 .The area is located 17km from the nearest turbine to beyond the study area to the south west. The ZTV indicates possible visibility on the south east slopes of the valley. Analysis of the representative viewpoints for the adjacent character unit indicate that the magnitude of change on landscape character would be low/very low on a character area judged to be of high sensitivity leading to a slight effect which would not be significant.

### 3 Highland Summits and Plateaux – Unit (v). Ben Lawers and Beinn Heasgarnich

- 7.13.55 This character area unit extends from approximately 17km up to 30km from the nearest proposed turbine. The unit is characterised by containing a series of high peaks including Ben Lawers approximately 22km from the nearest proposed turbine. The unit is represented by Viewpoint 14. The landscape character is large scale and mountainous with little evidence of human impact beyond patches of commercial forestry. It is exposed, undisturbed and rough in texture.
- 7.13.56 The proposed turbines would generally not be visible from this character unit with views limited to a very small number of isolated summits. Where they would be visible from these areas the turbines at distances of 17km and over the turbines would be seen as very minor features in the wider landscape, due to the extent of views, the scale of the landscape. There would be generally no effect on the character unit with a low/very low magnitude of change to the existing character of the summit from which the turbines would be visible. The unit is judged to be of high sensitivity leading to a slight effect on these areas which would not be significant.

### 3 Highland Summits and Plateaux – Unit (ii). Forest of Atholl

- 7.13.57 This character area unit extends from approximately 15km from the nearest turbine across the Forest of Atholl beyond the study area to the east. The ZTV indicates very limited visibility of the proposed turbines over the extent of the character unit and for the vast majority of the area there would be no view of the proposals. Viewpoint 15 is representative of the character unit which rises up to the north of Glen Garry and illustrates the extremely limited nature of the view from the area. The landscape is large scale with panoramic views; it is exposed, undisturbed and rough in texture.
- 7.13.58 The turbines would generally not be visible from this character area therefore would be very low /no change to this character unit, the unit is judged to be of high sensitivity therefore the effect would be slight/no effect, which would not be significant.

Table 7.12 Summary of Effects on landscape Character (Operational Phase)

Character Type	Character Unit	Sensitivity	Magnitude of Change	Duration	Reversibility	Level of effect	Significant?
3 Highland Summits and Plateaux	(i)Talla Bheith and Craiganour Forest	Medium/ High	Very High (within up to approximately 1km from the wind farm)  High (in the area up to around 4km from which the proposed development would be visible)	Long Term	Non Permanent	Substantial  Substantial / Moderate	Yes  Yes
3 Highland Summits and Plateaux	(ii) Forest of Atholl	High	Very low/ none	Long Term	Non Permanent	Slight/ none	No
3 Highland Summits and Plateaux	(iii) Carn Gorm/ Schiehallion	High	Medium	Long Term	Non Permanent	Moderate	Yes
3 Highland Summits and Plateaux	(v) Ben Lawers and Beinn Heasgarnich	High	Low / Very Low	Long Term	Non Permanent	Slight	No
2a Upper Highland Glens with Lochs	Loch Ericht	High	Very High (within up to approximately 1km from the wind farm)  High (in the southern part of the character area beyond 1km of a turbine where the proposed development would be visible)	Long Term	Non Permanent	Substantial	Yes (within up to approximately 1km from the wind farm and for the southern part of the character area beyond 1km of a turbine where the proposed development would be visible)
2b Mid Highland Glens with Lochs	Loch Rannoch	High	Low	Long Term	Non Permanent	Slight	No
IVa Loch Ericht	Loch Ericht	High	Generally Very Low to none.  High for a very small section of the lower	Long Term	Non Permanent	Generally Slight/ none.  Substantial for a very small	No  Yes

Character Type	Character Unit	Sensitivity	Magnitude of Change	Duration	Reversibility	Level of effect	Significant?
			slopes of Ben Alder.			section of the lower slopes of Ben Alder.	
I Isolated Mountain Plateau	Ben Alder	Very High	Generally Very Low to none.  Medium for a small section of the lower slopes of Ben Alder	Long Term	Non Permanent	Generally Slight/ none.  Substantial for a very small section of the slopes of Ben Alder.	No  Yes
4 Plateaux Moor	Rannoch Moor	Medium to Very High	Generally Low.  Medium from the section of the unit towards the centre of the Moor where the proposed development would be visible	Long Term	Non Permanent	Slight/ Moderate  Moderate	No  Yes
1b Mid Highland Glens	Dun Alastair	Medium / High	Very Low / none	Long Term	Non Permanent	Slight/ no effect	No
1 Blanket Bog	Western edge of Rannoch Moor	Very High	Generally Very Low to none.  Medium from the small section of the Moor where the proposed development would be visible.	Long Term	Non Permanent	Slight/ no effect  Moderate	No  Yes
2 High Tops -	Beinn a' Chreachain	High	Low / Very Low	Long Term	Non Permanent	Slight	No

### Decommissioning Effects (on Landscape Character)

- 7.13.59 The effects of the proposed development on landscape character would decrease incrementally as the turbines are removed from site and the land cover is reinstated. There would be a temporary increase in activity on site during the decommissioning phase and effects on landscape character would be similar to those experienced during construction but in reverse, with the exception of there being no working of any borrow pits during decommissioning. The effects of the decommissioning activities would be relatively incidental when viewed in the context of the turbines being taken down.
- 7.13.60 Overall it is considered that there would be no more than a low magnitude of change during decommissioning for the reasons outlined above, which would result in no more than a slight additional effect on landscape character. The additional effect during decommissioning would not be significant.
- 7.13.61 Post decommissioning, and once restoration of the landscape is complete, there would be a very low residual effect on the landscape character of the site relative to the current baseline resulting in no greater than slight residual effect on landscape character. In this sense the effects on the proposed development are largely reversible.

## 7.14 Assessment of Effects on Visual Receptors

### Assessment of Visual Effects at Representative Viewpoints

#### Construction Effects (at representative viewpoints)

- 7.14.1 Beyond the immediate vicinity of the site the construction activities at ground level would either not be visible or if visible would generally be sufficiently distant and form such a minor element in the view that they would not be particularly noticeable when viewed in the wider landscape context. From the vast majority of the assessment viewpoints the only additional visual effects over and above those addressed under the heading of operational effects would arise in relation to views of the cranes erecting turbines. The cranes would be visible for a brief period and would be incidental to the turbines being erected. Therefore except for the viewpoints discussed further below, there would be a very low magnitude of additional impact during construction tending towards no impact at all. Therefore at these viewpoints, there would be no greater than a very short term, non permanent slight additional effect tending towards no additional effect during construction. This would not be significant.
- 7.14.2 From viewpoints 21 and 25 located within the site boundary (1.8km and 2.5km respectively from the nearest turbine) and Viewpoints 9 and 10 (4.2km and 3.5km respectively) some ground work activities would be visible, albeit at some distance, including the working of the borrow pits, the construction of the tracks between the turbines and the cranes erecting the turbines . The construction compound would also be visible to some degree from these viewpoints. It is considered that these activities would result in a low/medium magnitude of additional change during the construction phase above and beyond the effect which would occur during the operational phase. A significant effect would occur.

### Operational Effects (at representative viewpoints)

- 7.14.3 An assessment of the operational phase effects at each of the 25 representative assessment viewpoints is presented in Appendix 7.3. Table 7.13 provides a summary of the operational effects at each of the assessment viewpoints.
- 7.14.4 Beyond the immediate vicinity of the site, the ground level components of the proposed development would not be clearly visible and therefore from the vast majority of the assessment viewpoints, the potential visual effects relate solely to the introduction of 24 turbines into the view.
- 7.14.5 Only at viewpoints 9, 11, 21, 22, 23 and 25 would any of the ground level components of the proposed development be visible. From these locations, the access tracks between the turbines and the crane hard standing areas would also be visible. When seen in the context of the proposed turbines and the wide panoramic views available across the landscape, these features would not have any greater than a low magnitude impact on the view from these viewpoints. The visual effects at each of the assessment viewpoints therefore arise principally due to the introduction of the 24 turbines into the landscape.
- 7.14.6 At fourteen of the twenty five representative viewpoints there would be a significant visual effect these are as follows:
- Viewpoint 4 - Leagag
  - Viewpoint 5 – Meall Buidhe
  - Viewpoint 6 – Meall a Mhuic
  - Viewpoint 7 – Meall Garbh
  - Viewpoint 8 – Schiehallion
  - Viewpoint 9 – Beinn Mholach
  - Viewpoint 10 – Loch Ericht shoreline
  - Viewpoint 11 – Ben Alder summit
  - Viewpoint 19 – Rannoch Moor (within the Moor)
  - Viewpoint 21 – Meall Gorm
  - Viewpoint 22 - Sgor Gaibhre
  - Viewpoint 23 - Sron Bealach (Ben Alder massif)
  - Viewpoint 24 – Beinn Udlamain
  - Viewpoint 25 - Carn Dearg
- 7.14.7 Whilst it is acknowledged that there would be a significant effect on many of the assessment viewpoints included in the LVIA, it should be noted that these viewpoints were specifically selected to represent the locations within the study area which would have the greatest visibility of the proposals and therefore the greatest potential for significant effects. There are many further areas which would lie outside of the ZTV of the proposed development and which are therefore not represented by an assessment viewpoint, in line with best practice guidance. These areas include important tourist viewpoints such as Queens View, the northern shore of Loch Rannoch and the majority of the landscape to the north and northeast of the estate including the Cairngorms National Park.

Decommissioning Effects (at representative viewpoints)

- 7.14.8 As during the construction phase, beyond the immediate vicinity of the site, the decommissioning activities at ground level would not be visible. Effects on views would generally decrease incrementally as the turbines are removed. There would be no greater than a very temporary slight additional effect tending towards no additional effect during decommissioning.
- 7.14.9 Post decommissioning there would be no visual evidence of the wind farm at any of the assessment viewpoints and therefore there would be no residual effect on any of them..

Table 7.13 Summary of Viewpoint sensitivity, Magnitude of Change in View and level of Effect (Operational Phase)

Reference number and viewpoint location	OS Grid reference	Distance to nearest turbine (m)	Number of hubs theoretically visible	Number of blade tips theoretically visible	Sensitivity of view	Magnitude of change	Duration of effect	Reversibility of effect	Significance of effect	Significant?
<b>Viewpoint 1</b> Kinloch Rannoch (Car park adjacent to Loch Rannoch)	265925, 757824	11,870 (T24)	0	9	High	Very Low	Long term (25 years)	Non permanent	Moderate/ Negligible	No
<b>Viewpoint 2</b> Bridge of Gaur	250285, 756678	5,945 (T6)	6	10	High	Very Low - Negligible	Long term (25 years)	Non permanent	Slight/ Negligible	No
<b>Viewpoint 3</b> Rannoch Railway Station	242644, 757723	10,298 (T1)	0	2	Medium (Station High)	Very Low - Negligible	Long term (25 years)	Non permanent	Slight Negligible	No
<b>Viewpoint 4</b> Leagag	251888, 753905	8,383 (T21)	23	24	High	Medium - High	Long term (25 years)	Non permanent	Substantial	Yes
<b>Viewpoint 5</b> Meall Buidhe (Peak at the southern extent of Meall Buidhe ridge)	250065, 748930	13,583 (T6)	24	24	Medium - High	Medium - High	Long term (25 years)	Non permanent	Substantial	Yes
<b>Viewpoint 6</b> Meall a Mhuic	257553, 751237	11,566 (T21)	24	24	High	Medium - High	Long term (25 years)	Non permanent	Substantial	Yes
<b>Viewpoint 7</b> Meall Garbh	264672, 751692	14,580 (T24)	24	24	High	Medium	Long term (25 years)	Non permanent	Moderate/ Substantial	Yes
<b>Viewpoint 8</b> Schiehallion	271373, 754768	18,100 (T24)	24	24	Very High	Medium	Long term (25 years)	Non permanent	Moderate/ Substantial	Yes
<b>Viewpoint 9</b> Beinn Mholach	258737, 765232	4,233 (T23)	17	20	Medium	High	Long term (25 years)	Non permanent	Moderate/ Substantial	Yes
<b>Viewpoint 10</b> Loch Erich, shoreline	249090, 765232	3,497 (T1)	12	13	Medium to High	High	Long term (25 years)	Non permanent	Substantial	Yes
<b>Viewpoint 11</b> Ben Alder summit	249629, 771849	8,031 (T5)	7	12	Very High	Low to Medium	Long term (25 years)	Non permanent	Moderate	Yes
<b>Viewpoint 12</b> A82 Rannoch Moor	230844, 749864	24,460 (T1)	16	24	High	Very Low - Low	Long term (25 years)	Non permanent	Moderate - slight	No
<b>Viewpoint 13</b> West Highland Way	228078, 751170	26,243 (T1)	12	16	High	Very Low	Long term (25 years)	Non permanent	Slight	No
<b>Viewpoint 14</b> Ben Lawers	263553, 741420	22,887 (T24)	24	24	High/ Very High	Low	Long term (25 years)	Non permanent	Moderate / Slight	No
<b>Viewpoint 15</b> Meall Reamhar	286222, 770276	31,854 (T23)	0	1	High	Negligible	Long term (25 years)	Non permanent	No effect	No
<b>Viewpoint 16</b>	254260,	5,353	0	1	High	Very Low	Long term	Non	Slight/Negli	No

Reference number and viewpoint location	OS Grid reference	Distance to nearest turbine (m)	Number of hubs theoretically visible	Number of blade tips theoretically visible	Sensitivity of view	Magnitude of change	Duration of effect	Reversibility of effect	Significance of effect	Significant?
Southern shore of Loch Rannoch nr Croiscrag	756796	(T21)					(25 years)	permanent	gible	
<b>Viewpoint 17</b> Southern shore of Loch Rannoch at Tay Forest Park Car Park	263167, 757476	9,606 (T24)	0	5	High	Low	Long term (25 years)	Non permanent	Slight	No
<b>Viewpoint 18</b> Stob Dearg	222363, 754307	30,449 (T1)	24	24	High	Very Low - Low	Long term (25 years)	Non permanent	Slight	No
<b>Viewpoint 19</b> Rannoch Moor - within the moor	236180, 752814	18,374 (T1)	15	22	Very High	Low	Long term (25 years)	Non permanent	Moderate	Yes
<b>Viewpoint 20</b> Glencoe Ski Centre - top of first lift	226121, 751570	27,847 (T1)	16	18	High	Low - Very Low	Long term (25 years)	Non permanent	Slight	No
<b>Viewpoint 21</b> Meall Gorm	253450, 760245	1,871 (T21)	20	24	Medium to High	High	Long term (25 years)	Non permanent	Substantial	Yes
<b>Viewpoint 22</b> Sgor Gaibhre	244480, 767439	8,501 (T1)	24	24	Medium to High	High	Long term (25 years)	Non permanent	Substantial	Yes
<b>Viewpoint 23</b> Sron Bealach (Ben Alder massif)	249937, 770752	6,918 (T5)	23	24	High	High	Long term (25 years)	Non permanent	Substantial	Yes
<b>Viewpoint 24</b> Beinn Udlamain	257859, 773827	10,131 (T10)	14	18	High	Medium	Long term (25 years)	Non permanent	Moderate/ Substantial	Yes
<b>Viewpoint 25</b> Carn Dearg	253243, 767263	2,559 (T5)	23	24	Medium	High	Long term (25 years)	Non permanent	Moderate/ Substantial	Yes

## Effects on Visual Receptor Groups

7.14.10 In this section, the effects of the proposed development on various different visual receptor groups are considered.

### Construction Effects (on visual receptor groups)

7.14.11 Views of the ground level construction activities will be limited to the immediate vicinity of the site and minor distant glimpses from a limited number of more distant highpoints (represented by viewpoints 9, 11, 21, 22, 23 and 25), including core footpath RANN104/1 within the site, (following the access track to the southern tip of Loch Ericht).

7.14.12 From elevated core footpaths in the wider landscape views of construction activities would be minimised by distance. It is therefore considered that there would be a temporary slight additional effect during construction at the close and elevated locations listed above, but that the overall effect would not be considerably greater than the effects arising from the operational phases of the wind farm which are discussed below.

7.14.13 No construction or alteration to the existing access is required at the site entrance; however properties along the access route would experience views of some increased traffic movements on and off the site. Elsewhere there would be no additional effect during construction.

### Operational Effects (on visual receptor groups)

7.14.14 From analysis of the assessment viewpoints and wider on site observations it is possible to draw some conclusions about the level of effect on views and visual amenity experienced by different receptor groups at different distances from the proposed development. Views of the ground level components of the proposed development will be limited to a very short radius around the proposed development site. Therefore, except where indicated, the discussion below therefore relates primarily to views of the turbines.

### Residential properties within 5km of the turbines

7.14.15 There are no residential properties within 3km of the proposed turbines. The nearest properties are Ardlarach and Birch Grove approximately 3.7km due south of the nearest turbines. Neither of these properties is located within the ZTV.

7.14.16 Camusericht Lodge (3.9km approx) and Chumann Cottage (4.1km approx) at Bridge of Ericht adjacent to the south west site boundary are the only properties within 5km of the proposed turbines that fall within the ZTV. Both properties are located approximately 150m apart above the B846. There is tree planting immediately around all three sides bar the southern side of Camusericht Lodge. Beyond these properties there is another substantial area of forestry 1km plus deep along the outer side of the western site boundary which is also likely to restrict potential views of the proposed turbines, despite the ground rising steeply in elevation behind the properties. There would be a very low magnitude of change from these receptors in that views will be mostly to be screened out by the adjacent land cover resulting in a slight/ no effect which would not be significant.

7.14.17 It is not considered that there would be the potential for a significant visual effect on any individual residential property within 5km of the proposed development.

### Settlements within 15km

- 7.14.18 There are only three small settlements within 15km of the proposed development, each of which is discussed in turn below.
- 7.14.19 Bridge of Ericht is the closest settlement, lying approximately 3.7km to the south of the nearest proposed turbine, along the B846. The village is almost entirely outside of the ZTV of the proposals, with no more than blade tips theoretically visible, however, in reality this theoretical visibility will be further reduced by intervening woodland which lies to the north. The intervening topography of the valley side means that no views of the turbines would be gained from this settlement beyond the two properties discussed above and there would be no significant visual effects.
- 7.14.20 Bridge of Gaur (5.8km) is situated to the south west of Loch Rannoch and lies partly within the ZTV, however, in reality this theoretical visibility would be screened from the view by intervening woodland and forestry. This is illustrated with reference to viewpoint 2 where six hubs and ten blade tips can theoretically be seen from this viewpoint, but due to intervening forestry the turbines would be screened from the view. It is considered that there would be effects ranging from slight to no effect on views from this settlement which would not be significant.
- 7.14.21 Kinloch Rannoch lies 12.5km to the west and the settlement is not located within the ZTV and therefore there would have no view of the proposed development from the village.
- 7.14.22 Overall it is considered that none of the individual properties, small clusters of properties, or settlements within 15km of the proposed development would have views of the proposed turbines which would result in significant effects.

### Footpaths

- 7.14.23 Across the 35km study area as a whole there are several Rights of Way (ROW)/ Core Paths and Long Distance Routes .The users of the paths discussed below are all assessed as being of high sensitivity to change in the view unless otherwise stated.
- 7.14.24 A number of Core Paths are located within the study area. The closest being Core Path RANN104/1 following the access to the site from the shore of Loch Rannoch to the dam on the southern shore of Loch Ericht. Travelling north from the shore of Loch Rannoch the ZTV indicates that receptors using the path would gain no views of the turbines for the first approximately 2km of the route. As height is gained from the loch side the turbines would come into view, the footpath follows the western periphery of the site and generally runs along the 350m contour. The ground within which the turbines would be placed continues to rise up to 550m to the east of the path, to some extent screening out the bases of the turbines. It is considered that there would be a high magnitude of change to the view for receptors travelling in either direction on this footpath resulting in a substantial and significant visual effect.
- 7.14.25 Core Path RANN/8/2 is located within 5km of the nearest turbine west of the site boundary running from Loch Rannoch to the south western point of Loch Ericht. The ZTV indicates receptors using the route from the south travelling north would not experience any potential views until the last 2km of the route, as they approach Loch Ericht. The majority of the final section of the route is within a forestry plantation which would screen out views.

Over the majority of the route there would be no views. However as receptors exit the woodland and approach the Lochside views of the turbines would be gained. For a very short section of this path at its very northern end it is considered that there would be a high magnitude of change at this point resulting in a substantial and significant effect at the shore of the Loch. From the greater part of the length of this path there will be either no effect or a minor and not significant effect.

- 7.14.26 Core Paths RANN/112/1&3&4, 114/1&4, 51/2&3, 2/2&110 form a network of routes from various points along the shore of Loch Rannoch (206m) (Reference viewpoints 2,16 &17) the eastern section climbing south through Rannoch Forest and the western section climbing beyond the peak of Leagag (601m) (Reference viewpoint 4). The eastern and western sections of the network are joined by Core Path RANN/114/1 a track running east west through Rannoch Forest. None of the paths climb to the main peaks, RANN/2/2 in the eastern section continues over the ridge in a localised valley and into Glen Lyon approximately 10km south.
- 7.14.27 Whilst the ZTV indicates potential visibility over much of the eastern routes bar the southern section of RANN/2/2 that descends to Glen Lyon, the routes, once leaving the loch sides, are contained within Rannoch Forest. Therefore, beyond the immediate shore of Loch Rannoch (where the significance of effect from these viewpoints was found to be slight to no effect and not significant), there is limited potential for views of the turbines and for the greater extent of the path there will be no views due to localised screening.
- 7.14.28 The three paths in the western section of this network RANN/112/1,3&4 are located in a more open landscape with limited landcover. The ZTV indicates potential visibility over the majority of both routes Bar an approximately 2km section of RANN/112/1 which is screened out by the landform of Leagag to the north. The visual impacts on receptors using these routes would increase as elevation is increased to the south. Therefore it is concluded that in this section receptors will experience very low to no magnitude of change rising to medium high magnitude of change resulting in Slight/ no effect of significance rising to substantial effect on views as altitude is gained and when travelling south on the paths.
- 7.14.29 Core Path RANN11 runs from the northern shore of Loch Eigeach (Reservoir) south of the B846 approximately 8km west of the nearest turbine to the north over a length of approximately 8km to Carn Dearg. The ZTV indicates that from the majority of the path the proposed turbines would not be visible bar two approximately 1km sections, the high point of Carn Dearg and thorough a section of lower ground linking the valleys of Loch Erich and Black Water reservoir to the west. It is considered that there would be a change in the view for receptors using the majority of the route. This will range from a very low/ no magnitude of change in views in the valley section to a high magnitude of change at the peak, resulting in a slight /no effect (not significant) and a substantial and significant effect from Carn Dearg at the end of the route.
- 7.14.30 Core Path RANN/7/4 extends from the B846 at Rannoch Railway Station (approximately 10km from the nearest turbine west through woodland adjacent to Loch Laidon. The eastern section of the path runs within woodland screening out potential visibility. There is no potential visibility along the western section beyond the woodland. Receptors using this path would gain very limited glimpsed views through occasional breaks in the woodland or no views of the proposed turbines from this route.
- 7.14.31 Core Path RANN/9/3 runs north from the north eastern shore of Loch Rannoch north past Loch Garry forming a link to Glen Garry and the A9. There is no potential visibility beyond an approximately 1km section of path approximately 2km north of Loch Rannoch approximately 7-8km from the nearest turbine. Receptors travelling north would potentially experience decreasing views of the proposed turbines along this small section. The magnitude of change would be very low for this section only resulting in slight visual effect which is not deemed to be significant.

7.14.32 The West Highland Way (a 154km long distance footpath from Milngavie north to Fort William) is located to the south west of the study area between 35km and 22km from the nearest proposed turbines. The route follows a similar line to the A82 through the study area which it crosses several times diverting away from the road up to 3km in places. The key area of potential visibility is along an approximately 5km length, (approximately 2km of which lies out of the ZTV within which potential views would not be gained) around Black Mount on Rannoch Moor. The West Highland Way is represented by Viewpoint 13 in this location; potential views are limited by distance and intervening landform. The sensitivity of this receptor is high the magnitude of change is judged to be very low resulting in a slight effect on a short section of the route which would not be significant.

### Roads

7.14.33 The nearest road to the proposed turbines is the B846 located on the southern site boundary of the site continuing east west to the north of Loch Rannoch from Rannoch Station west of the site through Kinloch Rannoch, Tummel Bridge and onto Aberfeldy on the eastern perimeter of the study area. There is no potential visibility along the entire length of this route.

7.14.34 The A9 trunk road runs through Glen Garry to the north east of the site. The A9 is linked to the B846 detailed above by the B847. The ZTV indicates no visibility of the proposed turbines from either of these roads.

7.14.35 The only section of A or B road within the study area with potential visibility indicated on the ZTV is an approximately 4km section of the A82 trunk road across Rannoch Moor 25km south west of the nearest proposed turbine. This section of the A82 is represented by Viewpoint 12. It is a section of road potential receptors frequently stop to take in and photograph the view a point indicative of having 'arrived' in the highlands. The potential magnitude of change to the view from this section of the view is judged to be very low to low resulting in a moderate to slight effect which is not deemed to be significant.

### Railways

7.14.36 There would be no visibility of the proposed wind turbines from the Highland Main Line running parallel to the A9 in Glen Garry north east of the site.

7.14.37 The West Highland Line links Glasgow to the ports of Oban and Mallaig. The section of the route which passes through the Talladh-a-Bheithe study area begins to the north of Tyndrum, alongside the A82 near Beine Odhar and travels to Spean Bridge located to the north west of the proposed site. Train speeds during this section of the route are relatively slow due to speed restrictions across Rannoch Moor and the single track construction.

7.14.38 The majority of the railway as it passes through the study area would lie outside of the ZTV of the proposed development and would not have any views of the turbines. This includes important locations such as Corroul Station and also Rannoch Station and its immediate environs which would have no views of the proposed development (Viewpoint 3 near Rannoch Station was micro-sited to a knoll above the road leading away from the station where views of blade tips only can be gained, as elsewhere in the immediate vicinity there would be no views of the turbines). In addition, further sections of the route, which are located within the ZTV and therefore would have theoretical views, occur in areas where large scale commercial forestry would screen the view towards the site, reducing the actual visibility.

7.14.39 The proposed development would potentially be visible at a distance of over 10km from a section of the route across Rannoch Moor up to approximately 5km in length. Potential views are limited and very brief in the

context of the journey across the study area as a whole and therefore are deemed to be of low magnitude resulting in a moderate effect over this limited section which is not considered to be significant in the context of its transient nature and relatively limited extent of views of the turbines over 10km from the route.

## 7.15 Effects on Landscape Designations

### Construction Effects (on Landscape Designations)

- 7.15.1 The southernmost section of the site lies within the Loch Rannoch and Glen Lyon National Scenic Area (NSA) and access to the site would be achieved in part using the existing estate road which runs through this area. There would however be no construction works within the NSA and no direct effects on this area.
- 7.15.2 There would be some additional landscape and visual effects during the construction phase, over and above those which would occur during the operational phase, however these would not be greater than the effects identified in relation to the operational phase below.

### Operational Effects (on landscape designations)

#### National Parks

- 7.15.3 At its closest point the boundary of the Cairngorms National Park is located approximately 10km to the northeast of the nearest proposed turbine in the proposed development. The boundary of the Loch Lomond and The Trossachs National Park is located approximately 30km to the south.

#### Cairngorms National Park

- 7.15.4 There is extremely limited visibility of the proposed development over the area of The Cairngorms National Park as a whole, the majority of which lies to the north east of the A82. LVIA Viewpoint 15 is a representative viewpoint of those views within the main section of the Cairngorms National Park which would be available, with the viewpoint lying 32km from the nearest turbine. No effect was assessed to occur at this viewpoint and there would be no effect on the remainder of the National Park in this area north east of the A82.
- 7.15.5 A further LVIA viewpoint was included on the boundary of the National Park, at the closest point to the proposed turbines, lying 10km to the northeast of the nearest turbine. The viewpoint (24) at Beinn Udlamain represents one of a very small number of isolated summits at the edge of the National Park from which the turbines would be visible. It is acknowledged that from this viewpoint there would be a significant visual effect, however given the very small number of locations from which the turbines would be visible and the distance from the site, it is considered that there would not be a significant effect on the landscape character of this area or on the special qualities of the National Park.

#### Loch Lomond and the Trossachs National Park

- 7.15.6 The ZTV indicates no visibility from any part of Loch Lomond and the Trossachs National Park within the study area. Therefore there would be no effect on this National Park as a result of the proposed development.

### National Scenic Areas

- 7.15.7 Three National Scenic Areas (NSAs) are located within the study area: Loch Rannoch and Glen Lyon NSA covers the southern section of the site and a further 25km to the south; Ben Nevis and Glen Coe NSA lies to the west/ south west, 10km from the nearest proposed turbine; and Loch Tummel NSA is located over 20km to the east of the site. Each of these is discussed in turn below.

#### Loch Rannoch and Glen Lyon NSA

- 7.15.8 The ZTV indicates that for the majority of the NSA there would be no view of the proposed development. However, it is acknowledged that there would be visibility of the proposed development from parts of the northern section of the NSA, in particular the ridge of high ground which runs to the south of Loch Rannoch (illustrated by LVIA viewpoints 4-8) and from the peaks around Ben Lawers (viewpoint 14). In addition there would also be views from the northern boundary of the NSA within the Talladh-a-Bheithe estate at the ridge to the north of Loch Rannoch (viewpoint 21). Representative viewpoints from the lower ground within the NSA around Loch Rannoch (Viewpoints 1, 2, 16 and 17) would have very little view of the proposed development and were found to experience moderate/ slight to slight/ no effect on views, none of which were deemed to be significant. Further locations in and around the Loch would have no view of the proposals. From the high ground however, represented by viewpoints 4, 5, 6, 7, 8, 14 and 21, effects on views are considered to be significant.
- 7.15.9 In terms of effects on landscape character within the NSA, it was considered that the relatively inaccessible area of landscape at the northernmost boundary of the NSA within the Talladh-a-Bheithe estate would experience a significant effect on landscape character, in addition to the area of landscape where the turbines would be visible up to 15km from the site to the south of Loch Rannoch.
- 7.15.10 The special qualities of this NSA do not specifically refer to views or human activity but reference wild summits, mountain grandeur and natural beauty. Overall it is acknowledged that that there would be a significant effect on some views and on the landscape character within part of the NSA, however it is considered that the proposals would not have significant harm to the special qualities. The mountain grandeur, wild summits and natural beauty within the NSA would not be directly affected by the proposed development, which lies beyond the NSA boundary with the nearest turbine over 1.8km away, and would remain appreciable following construction of the proposed development.

#### Ben Nevis and Glen Coe NSA

- 7.15.11 The majority of the Ben Nevis and Glen Coe NSA lies outside of the ZTV and would have no view of the proposals. There would however be visibility of the turbines from parts of Rannoch Moor and beyond the A82 in the vicinity of Glen Coe Ski Centre (key areas of which are represented by Viewpoints 12, 13, 18, 19, and 20). The proposed turbines would lie approximately 10km from this area at the closest point. The magnitude of change from these representative viewpoints was found to be **very low/low to low** due to distance and the proposed turbines therefore forming a very small visual element in the view resulting in a **slight to moderate** effect.
- 7.15.12 With regard to the effects on landscape character within this area, it was considered that there would be none.

- 7.15.13 The special qualities of the NSA include 'A land of classic highland vistas.' With regard to the assessment that 'there would be no significant effect on views or landscape character from within the NSA,' it is considered that there would be no effects on the special qualities of the NSA.

#### Loch Tummel NSA

- 7.15.14 Loch Tummel NSA lies almost entirely outside of the ZTV with visibility limited to a small number of the uppermost slopes on the southern boundary NSA in the vicinity of Meall Tairneachan and Farragon Hill at distance of around 25km from the nearest proposed turbine. There would be no effect on the Queen's View at the eastern end of the Loch, which lies outside of the ZTZ and there would be no significant effects on views or landscape character from within the NSA due to distance and the proposed turbines therefore forming a very small visual element in the wider view from a very limited part of the NSA.
- 7.15.15 The special qualities of the NSA include both low and highland but in balance are focused on Loch Tummel at its heart. It is therefore concluded that there would be no significant effects on the special qualities of the NSA.

#### Conservation Areas Gardens and Designed Landscapes

- 7.15.16 There would be no visibility of the proposals from any Conservation Areas or Gardens and Designed Landscapes.

#### **Decommissioning Effects (on landscape designations).**

- 7.15.17 There would be no additional effect on any landscape designations during the decommissioning phase.

### **7.16 Effects on Wild Land ('Search Areas for Wild Land' and 'Core Areas of Wild Land')**

#### **Effects on 'Search Areas for Wild Land'**

- 7.16.1 The northernmost part of the Talladh-a-Bheithe site, where no turbines are proposed to be sited, lies within a 'Search Area for Wild Land'. This area extends westwards across Ben Alder and Ben Nevis and parts of Rannoch Moor. This Search Area is shown in the context of the ZTV of the proposed development on Figure 7.24, which demonstrates that from much of the Search Area there would be no visibility of the proposals.
- 7.16.2 It is acknowledged however that from the area within the Talladh-a-Bheithe estate to the immediate north of the proposed turbines, from Ben Alder and its eastern flanks and from the elevated land to the west of Rannoch Station and parts of Rannoch Moor there would be views of the proposed development (LVIA viewpoints 10, 11, 12, 19, 22, 23 and 25 are located within this area). It is noted that there would be some significant effect on landscape character in these areas.
- 7.16.3 In addition to the consideration of the effects on visual amenity and landscape character, an assessment of the potential for impacts on wild land has been undertaken for the Wild Land Search Area encompassing the site, (identified as Ben Alder). The methodology employed is guided by the Scottish Natural Heritage publication 'Assessing the Impacts on Wild Land Interim Guidance Note' February 2007. The results of this assessment are summarised in Table 7.14 and discussed below.

7.16.4 The study area for the wild land assessment has been divided into four areas (which are also illustrated on Figure 7.27) as follows:

- A Northern portion of the site from the northern most proposed turbine north to approximately the 5km study area radius band. (Area including Viewpoint 25)
- B Ben Alder and Rannoch Forrest (Area including Viewpoints 10, 1, 23, 25)
- C Wider area of wild land search area to north west beyond the ZTV.
- D Southern portion of Wild Land Search Area across Rannoch Moor.

**Table 7.14 Assessment of impacts on Wild land Search Area (Ben Alder Area/Ben Nevis/Rannoch Moor)**

	PHYSICAL ATTRIBUTES					PERCEPTUAL RESPONSES				
Area	Perceived Naturalness	Lack of Constructions or other artefacts	Little evidence of contemporary land uses	Rugged or otherwise challenging terrain	Remoteness and inaccessibility	A sense of sanctuary, solitude or refuge	Risk or anxiety - hazard	Arresting /inspiring qualities, sense of awe – prospect	Physically challenging	Significance of effect
A	Medium	Medium	Medium	Low	Neg	Y	N	Y	N	
Strength of attribute at baseline										
Magnitude of Change	Vegetation pattern not changed	Turbines would be a new visible structure, to south of area.	Additional tracks between turbines may be visible as a change to existing land cover close up. Some felling of trees that does not alter the baseline	This attribute is not affected	This attribute is not affected	Introduction of turbines on adjacent southern section of site where no such artefacts (beyond hydro elements) are presently visible.	Unchanged	Focus of view is shifted to wind farm in foreground, potentially losing some inspiring qualities	Unchanged	Two perceptual responses not present in baseline, area not considered to be wild land.
	Neg	High	Neg	Neg	Neg	N	N	N	N	

	PHYSICAL ATTRIBUTES					PERCEPTUAL RESPONSES				
Area	Perceived Naturalness	Lack of Constructions or other artefacts	Little evidence of contemporary land uses	Rugged or otherwise challenging terrain	Remoteness and inaccessibility	A sense of sanctuary, solitude or refuge	Risk or anxiety - hazard	Arresting /inspiring qualities, sense of awe – prospect	Physically challenging	Significance of effect
B Strength of attribute at baseline	High	High	High	High	Medium	Y	Y	Y	Y	
Magnitude of Change	Vegetation pattern not changed	Turbines would be a new visible structure, 3-10km to south east on high ground.	Changes to this attribute will not be perceived from this area.	This attribute is not affected	This attribute is not affected	Introduction of turbines where no artefacts (beyond the dam and resulting reservoir status/draw-down of the loch) are presently visible.	Unchanged	Focus is shifted on the banks of Loch Ericht. (Viewpoint 10 3.5km) From peaks (Viewpoints 10,11,22,23) Long distance view is foreshortened as attention is drawn to the wind farm however quality remains in these sections.	Unchanged	One of the physical attributes is altered by the introduction of the turbines. Two perceptual attributes are no longer present.  Significant
	Neg	High	Neg	Neg	Neg	N	Y	N/Y	Y	

	PHYSICAL ATTRIBUTES					PERCEPTUAL RESPONSES				
Area	Perceived Naturalness	Lack of Constructions or other artefacts	Little evidence of contemporary land uses	Rugged or otherwise challenging terrain	Remoteness and inaccessibility	A sense of sanctuary, solitude or refuge	Risk or anxiety - hazard	Arresting /inspiring qualities, sense of awe – prospect	Physically challenging	Significance of effect
C Strength of attribute at baseline	High	Medium	High	High	Low	Y	Y	Y	Y	
Magnitude of Change	Vegetation pattern not changed	Turbines would not be visible over vast majority of area.	Changes to this attribute will not be perceived from this area.	This attribute is not affected	This attribute is not affected	Unchanged turbines not visible over majority of area.	Unchanged	Unchanged turbines not visible over majority of area.	Unchanged	No change to baseline. Not significant
	Neg	Neg	Neg	Neg	Neg	Y	Y	Y	Y	

	PHYSICAL ATTRIBUTES					PERCEPTUAL RESPONSES				
Area	Perceived Naturalness	Lack of Constructions or other artefacts	Little evidence of contemporary land uses	Rugged or otherwise challenging terrain	Remoteness and inaccessibility	A sense of sanctuary, solitude or refuge	Risk or anxiety - hazard	Arresting /inspiring qualities, sense of awe – prospect	Physically challenging	Significance of effect
D Strength of attribute at baseline	High	High	Medium	Medium	Low	Y	Y	Y	Y	
Magnitude of Change	Vegetation pattern not changed	Turbines would be a new visible structure, 10-25km to north east over some parts of the area	Changes to this attribute will not be perceived from this area.	This attribute is not affected	This attribute is not affected	Introduction of turbines where no artefacts presently visible, however Viewpoint distances are 10-20km so attribute is not significantly affected.	Unchanged	Wind farm too distant and takes up too little of the view to affect this attribute significantly	Unchanged	One of the physical attributes is altered by the introduction of the turbines. No significant change to perceptual attributes.  Not Significant
	Neg	High	Neg	Neg	Neg	Y	Y	Y	Y	

- 7.16.6 Having considered the physical attributes and perceptual responses associated with wild land, the judgments expressed in the assessment result in Area A within the northern part of the Talladh-a-Bheithe estate being assessed as not considered to be wild land. It is judged that whilst being located within a Search Area the northern part of the Talladh-a-Bheithe estate does not have the same characteristics and attributes of core wild land as much of the central section of the Search Area to the west of Ben Alder and to the east of Ben Nevis. These areas are more rugged, remote and inaccessible when compared to the Talladh-a-Bheithe estate which lies adjacent to a loch managed and dammed as part of hydroelectric generation scheme and areas of plantation forestry and is traversed by a tarmac road. However, should it be considered that this area did form wild land, it is acknowledged that the assessment of effects on visual amenity landscape character did identify some significant effects within this area.
- 7.16.7 All four perceptual responses are identified for Areas B, C, and D indicating that these areas could be identified as of wild land character under the assessment criteria, i.e. they may offer i) a sense of sanctuary or solitude, ii) risk or for some visitors a sense of awe or anxiety, iii) perceptions that the landscape has arresting or inspiring qualities, and iv) provides fulfilment from the physical challenge required to penetrate into these places. It is identified by the above additional assessment of impacts on wild land that the introduction of turbines may have a significant effect on the potentially wild land character of the small part of Area B Ben Alder, of the Search Area for Wild Land, from which the proposed development would be visible. It is noted that although significant impacts were found on viewpoint receptors in this area (Viewpoints 10, 11, 23, 22), significant impacts on character were found only for a very small section of the slopes of Ben Alder.
- 7.16.8 A further three Search Areas for Wild Land are located within the 35km study area, these cover parts of the Cairngorms, Monadhliath and the Loch Etive Mountains.
- 7.16.9 The Cairngorms Search Area would be approximately 20km from the proposals at its nearest point and analysis of the ZTV indicates that potential visibility of the proposals would be limited to a very small number of locations approximately 30km from the proposed development. Having considered this limited visibility in the context of the physical attributes and perceptual responses associated with wild land it is considered there is no potential for any significant effect on the Cairngorms Search Area. The Monadhliath Search Area lies entirely outside of the ZTV and there would be no visibility of the proposals from his area.
- 7.16.10 The Loch Etive Mountains Search Area lies to the west of the A82 approximately 25km from the proposed development at its nearest point. The majority of the area is outside of the ZTV and would have no visibility of the proposals, however a small section of the landscape in the vicinity of the Black Mount and the Glencoe Ski Centre would have theoretical visibility of the turbines. At a distance of over 25km from the proposals in any views in which the turbines would be visible they would form no more than very minor elements of the view. The physical attributes and perceptual responses associated with wild land have been considered in the context of this limited visibility from over 25km and it is considered that there would not be a significant effect on the Loch Etive Mountains Search Area.

#### **Effects on 'Core Areas of Wild Land'**

- 7.16.11 The entirety of the Talladh-a-Bheithe site lies within the proposed Core Area 14 'Rannoch – Nevis – Mamores – Alder'. As noted previously, this is an increase to the extent of the area covered by the Search Area for Wild Land discussed above, which only covers the northernmost part of the Talladh-a-Bheithe estate. Indeed the proposed Core Area covers further land to the east across to the A9 and to the north towards the A86, as well as additional land to the west of the area towards Fort William and the A82.

- 7.16.12 The majority of the proposed Core Area 14 lies outside of the ZTV and would have no visibility of the proposed development. However, it is acknowledged that in addition to the parts of the Search Area from which the proposed development would be visible (within the Talladh-a-Bheithe estate to the immediate north of the proposed turbines, from Ben Alder and its eastern flanks and from the elevated land to the west of Rannoch Station) there would also be visibility of the proposals from within the southern part of the Talladh-a-Bheithe estate where the proposed development is located and from parts of the Craiganour Forest to the east. Within the southern part of the Talladh-a-Bheithe estate and Craiganour Forest there would be a significant effect on the local landscape character and therefore also upon the proposed Core Area of Wild Land at this location. It is noted however, as indicated previously that this area of landscape does not have the same characteristics of core wild land as the central section of the proposed Core Area to the west of Ben Alder and to the east of Ben Nevis. This matter was discussed in detail in our Report which accompanied a representation to the Scottish Government which is presented as Appendix 7.4.
- 7.16.13 There are a further six proposed Core Areas of Wild Land in the wider study area. The potential for effects on the character of the landscape of these areas has been considered previously in the assessment, but are discussed in turn in relation to wild land specifically below.
- 7.16.14 10 Loch Etive Mountains - The proposed Loch Etive Mountains Core Area lies to the west of the A82 approximately 28km from the proposed development at its nearest point. The majority of the area is outside of the ZTV and would have no visibility of the proposals, however a small section of the landscape in the vicinity of the Black Mount and the Glencoe Ski Centre would have theoretical visibility of the turbines. At a distance of over 28km from the proposals in any views in which the turbines would be visible they would form no more than very minor elements of the view. It is therefore considered that there would not be a significant effect on the Loch Etive Mountains Core Area.
- 7.16.15 11 Breadalbane – Schiehallion - This proposed area did not form part of the Search Areas for Wild Land and covers part of the northern section of the Loch Rannoch and Glen Lyon NSA to the east of Schiehallion and also the Breadalbane range further to the south. The Breadalbane section of the proposed area lies outside of the ZTV and there would be no visibility of the proposed development from this area. There would be some views of the proposals from the northernmost section of the area to the east of Schiehallion which would lie 10km from the nearest proposed turbine at its closest point. It is acknowledged that there would be no potential for significant effects on the character of the landscape from parts of this landscape and therefore from parts of the proposed Core Area of Wild Land.
- 7.16.16 12 Lyon – Lochay and 13 Ben Lawers - These two proposed areas also did not form part of the Search Areas for Wild Land and together they cover much of the landscape between Loch Tay and Glen Lyon including the summit of Ben Lawers. Visibility of the proposed development from these areas would be limited to the summits of the highest peaks with the majority of the area having no views of the proposed development. Those summits from which the proposed development would be visible would lie approximately 20km and it is considered there would be no significant effect on the landscape character of these areas or the proposed Core Areas of Wild Land.
- 7.16.17 15 Cairngorms - The Cairngorms Core Area would be approximately 15km from the proposals at its nearest point and analysis of the ZTV indicates that potential visibility of the proposals would be limited to a very small number of locations approximately 30km from the proposed development. It is therefore considered there is no potential for any significant effect on the proposed Cairngorms Core Area.

7.16.18 17 Monadhliath -The proposed Monadhliath Core Area lies entirely outside of the ZTV and there would be no visibility of the proposals from his area.

7.16.19 9 Upper Almond - The proposed Upper Almond Core Area lies entirely outside of the ZTV and there would be no visibility of the proposals from his area.

## 7.17 Cumulative Landscape and Visual Effects

### Other Wind farms within 70km of Talladh-a-Bheithe Wind Farm

7.17.1 At the time of preparing this LVIA, there are no other wind farms or wind turbine schemes within 35km of the Talladh-a-Bheithe site which are either operational, under construction or in the planning system.

7.17.2 It was acknowledged however, that there may be the potential in this landscape for cumulative effects to occur in relation to other wind farm schemes beyond 35km from the Talladh-a-Bheithe site. This primarily related to the potential from the notable high points i.e. Ben Alder, Schiehallion and Ben Lawers within the study area, for other wind farms to be visible which whilst lying greater than 35km from Talladh-a-Bheithe, may be within 35km of the notable high point. As such information was gathered in relation to wind farms which are either operational, under construction or in the planning system up to 70km from the site. These sites are illustrated on Figure 7.2.

7.17.3 As the majority of these other sites lie very close to 70km away from Talladh-a-Bheithe and therefore almost 35km from any point within the Talladh-a-Bheithe study area, it was deemed appropriate to scope out a number of the sites which would not have the potential to result in any significant cumulative effects.

7.17.4 The potential for cumulative effects of the following schemes (illustrated on Figure 7.50) have been identified by producing ZTV's and overlaying the ZTV for Talladh-a-Bheithe with each of the following consented or operational schemes:

**Table 7.15 Wind farms studied for cumulative effects**

Fig 7.2 ref.	Wind farm	Approximate Distance from site	Direction From Site	Status
6	Griffin	40km+	South east	Operational
9	Braes of Doune	47km+	South east	Operational
14	Stronelairg	36km+	North	Consented
16	Calliachar	35km+	South east	Consented

### Cumulative Effects on Landscape Character

7.17.1 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 was visible in the landscape. Likewise it is acknowledged that the more wind turbines that are constructed in any given landscape, the greater will be the magnitude of overall (or combined) change to the landscape character that prevailed prior to the introduction of the first turbines.

- 7.17.2 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. 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.
- 7.17.3 The cumulative impact assessment presents an assessment of effects on landscape character for each of the identified schemes in relation to the notable high points i.e. Ben Alder, Schiehallion and Ben Lawers and their respective character areas. The main assessment of effects set out in the preceding sections of this LVIA considered that currently operational wind farms formed the baseline for the assessment. However the shift of attention to three of the high points in the study area for the cumulative assessment results in operational wind farms beyond the 35km study area forming part of this assessment as well as consented schemes.
- 7.17.4 Ben Alder is located within the Ben Alder Character Unit of the Isolated Mountain Plateau Character Area (I) of the Ben Alder, Ardverikie and Creag Meagaidh Landscape Character Assessment No.120. Looking first at operational schemes in relation to this character area Griffin Wind Farm, a 68 turbine scheme is located approximately 50km to the south east of the summit of Ben Alder. The combined ZTV (Figure 7.51) indicates that visibility of these turbines could be gained from the very highest areas of ground within the character area only i.e. the summit of Ben Alder and surrounding peaks. It has been assessed above that the effect of the Talladh-a-Bheithe site would be moderate and significant on the southern section (highest ground) of the character unit. The existence of the Griffin Wind Farm in the baseline does not alter the level of effect on the Ben Alder Character Unit of the introduction of the Talladh-a-Bheithe scheme due to the distance of the Griffin scheme and the close, intervening proximity of the Talladh-a-Bheithe site to the Ben Alder Unit.
- 7.17.5 Braes of Doune Wind Farm is located 63km plus to the south east of Ben Alder. The ZTV indicates no potential overlap in visibility between the proposed site and Braes of Doune and therefore there are no cumulative effects to consider from this scheme.
- 7.17.6 Turning secondly to consented schemes the proposed Calliacher Wind Farm is located adjacent to the Griffin Wind Farm (approximately 2km west of Griffin). As discussed in the paragraph above if this wind farm was constructed it would not influence the resulting base line sufficiently to alter the effect of the introduction of the Talladh-a-Bheithe scheme on the Ben Alder unit.
- 7.17.7 A second consented scheme, Stronelairg Wind Farm is located approximately 30 km due north of Ben Alder. The ZTV for Stronelairg indicates potential effects on the Ben Alder Character Unit would be to the north western portions of the character unit. The ZTV in Figure 7.52 indicates the combined distribution of potential visibility is over separate areas for each of the proposals with very minimal overlap beyond the upper ridges of Ben Alder. The majority of the effect of the introduction of the proposed Talladh-a-Bheithe scheme would therefore be over different portions of the character area to the Stonelairg scheme with combined affects limited to the very tips of the high ground within the character area and therefore the cumulative effects over the unit would not likely to be significant beyond the isolated areas of very high ground.
- 7.17.8 Schiehallion is located within the Carn Gorm/Schiehallion Character Unit of Character Area 3 Highland Summits and Plateau (Tayside Character Assessment No.122). The operational Griffin Wind Farm is located approximately 20km to the south east .The Combined ZTV (Figure 7.51) indicates that this wind farm is potentially visible from a significant portion of the southern section of this character unit. The combined ZTV

indicates that the introduction of the Talladh-a-Bheithe scheme would potentially affect the northern section of the character area with any overlap between the two schemes being limited to the upper ridges of Schiehallion and surrounding high ground. It has been assessed above that the effect of the Talladh-a-Bheithe scheme would be moderate and significant on the northern portion of the character area. The existence of the Griffin Wind Farm does not alter the effect on the Carn Gorm/Schiehallion Character Unit, of the introduction of the Talladh-a-Bheithe scheme beyond the very high ground of the character unit, where there is some potential influence of two sets of turbines on the unit where currently there is one to the south west. The two schemes are located approximately equidistant from Schiehallion and the character unit it sits within, therefore it is likely both schemes would exert a comparable influence over the character unit as a whole with a very small potential area of overlap around the peak of Schiehallion within in this character area.

- 7.17.9 Braes of Doune operational wind farm is located 42km due south of Schiehallion the ZTV's (Figure 7.54) indicate minimal potential visibility of this wind farm from Schiehallion and the remainder of the high ground within the Carn Gorm/Schiehallion Character Unit. Figure 7.54 indicates that any potential overlap of the ZTV's is very limited and confined to the very peak of Schiehallion and surrounding ridges. At a distance of over 35km this operational wind farm is unlikely to alter the base line. There would be no additional effect of introducing the Talladh-a-Bheithe scheme in relation to these existing turbines.
- 7.17.10 Turning to the consented scheme Calliachar adjacent to Griffin Wind Farm the ZTV's repeat the pattern of potential visibility over the southern portion of the character area around Schiehallion. The introduction of the Talladh-a-Bheithe scheme indicates additional potential visibility over the northern section of the character area. Combined potential effects are limited to the very upper sections of high ground on Schiehallion and upper sections of the surrounding peaks only. The introduction of this scheme to the baseline so close to the existing scheme at Griffin would have no effect on the existing baseline in relation to the Carn Gorm/Schiehallion Character Unit
- 7.17.11 Figure 7.52 indicates there is no potential visibility of the consented scheme Stronelairg to the north from Schiehallion or the surrounding Carn Gorm/Schiehallion Character Unit.
- 7.17.12 Ben Lawers is located in the Ben Lawers and Beinn Heasgarnich Character Unit of Character Area 3 Highland Summits and Plateaux. The operational Griffin scheme is located approximately 25km east of the summit of Ben Lawers. The ZTV's (Figure 7.51) indicate visibility of the operational scheme from the southern slopes of Ben Lawers and the southern section of the character area in general. Combined visibility occurs only on the upper eastern slopes of Ben Lawers and the peaks of the associated high ground running north. It has been assessed above that the effect of the Talladh-a-Bheithe scheme would be moderate and significant on the upper north facing slopes of the character area. The existence of the Griffin Wind Farm results in the southern section of the character area having an influence from wind turbines the introduction of the Talladh-a-Bheithe scheme would result in a similar level of influence over the northern portion of the character area. There is some very limited potential for overlap (cumulative impacts) over the very upper sections of high ground around Ben Lawers within the character unit.
- 7.17.13 The other currently operational wind farm at Braes of Doune is located approximately 30km south east of Ben Lawers. The combined ZTV (Figure 7.54) follows a similar pattern to the operational scheme of Griffin detailed above. The potential visibility of the Braes of Doune scheme is distributed across the southern slopes of Ben Lawers and the southern portion of the character unit whilst the potential visibility of the Talladh-a-Bheithe scheme is distributed to the upper northern slopes of the peak and surrounding character unit. Combined visibility is again limited to the very upper slopes of the ridge dividing the two portions of the character unit. This pattern is again repeated for the consented scheme adjacent to Griffin approximately 20km east of the summit

of Ben Lawers. Any very limited potential cumulative effects of this scheme are further reduced by the location of the proposed site adjacent to an existing wind farm which would not significantly alter the baseline from this viewpoint.

7.17.14 There is no visibility of the consented scheme at Stronelairg (Fig 7.52) and therefore no potential cumulative effects arise from this proposed scheme.

### **Cumulative Effects on Views and Visual Amenity**

7.17.15 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 views and visual amenity than if just one was visible in the landscape. Likewise it is acknowledged that the more wind turbines that are constructed in any given landscape, the greater will be the magnitude of overall (or combined) change to the view or visual amenity that prevailed prior to the introduction of the first turbines.

7.17.16 However it is also noted that in any given landscape where turbines are already present the additional effect on visual amenity of introducing further turbines may not be as significant as the initial introduction of turbines. Furthermore, in general, the greater the number of turbines in the baseline landscape the less significant the addition of further turbines may be in visual terms as the landscape will be more heavily characterised by turbines in the baseline situation. 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.

7.17.17 The cumulative impact assessment now presents an assessment of effects on views and visual amenity for each of the identified cumulative schemes in relation to the notable high points i.e. Ben Alder, Schiehallion and Ben Lawers. The main assessment of effects set out in the preceding sections of this LVIA considered that currently operational wind farms formed the baseline for the assessment. However the shift of attention to three of the high points in the study area for the cumulative assessment results in operational wind farms and their relationship to the three peaks detailed above forming part of this assessment as well as consented schemes.

7.17.18 From Ben Alder, the ZTV of the operational scheme Braes of Doune (Figure 7.54) indicates there is no potential visibility of these turbines. The ZTV for operational scheme Griffin (Figure 7.51) however indicates potential visibility from Ben Alder which is confirmed by study of the cumulative wire frames for Viewpoint 11, and the adjacent Viewpoint 23 (Ben Alder Massif) which indicates the tips of the Griffin turbines may be visible from these locations. It is noted however that these turbines located approximately 40km to the south east are unlikely to actually be visible from these points and form part of the baseline. The introduction of the Talladh-a-Bheithe scheme would not cause cumulative impacts to arise to these viewpoints in relation to any currently operational turbines.

7.17.19 The consented scheme at Calliachar would be located adjacent to the existing scheme at Griffin, as discussed above neither of these schemes would form a significant part of the base line and therefore the introduction of the Talladh-a-Bheithe scheme would not result in cumulative impacts on these viewpoints.

7.17.20 The consented scheme at Stronelairg approximately 30km north of both viewpoints has limited potential visibility from these viewpoints and would be unlikely to contribute significantly to the baseline from the peaks of Ben Alder. The potential for cumulative impacts are therefore also very limited.

- 7.17.21 From Schiehallion (Viewpoint 8) the operational scheme of Griffin is visible within the baseline approximately 20km away. Views are to the south east from the southern slopes of Schiehallion and from the summit itself. The introduction of the Talladh-a-Bheithe scheme would introduce views of turbines to north east as well as the south west. The availability of views in both directions (cumulative) would be potentially from the summit and intermediate ridge between the adjacent valleys only. The significance of effect of the views towards the Talladh-a-Bheithe scheme have been judged in the assessment above to be moderate/substantial and significant, this assessment is in part based on views of turbines being obtained from potentially two directions with the introduction of the Talladh-a-Bheithe scheme rather than one as is the current case and therefore the cumulative assessment would not result in a greater significance of effect. The same result would be the case if the consented scheme at Calliachar adjacent to Griffin was added to the baseline as there would be potential views of more turbines but in a similar direction of view. The other operational scheme at Braes of Doune is unlikely to be visible in the baseline at a distance of 40km plus and therefore unlikely to contribute to any cumulative impacts.
- 7.17.22 The consented scheme at Stronelairg to the north west of Schiehallion does not indicate any visibility on the ZTV in relation to Viewpoint 8 Schiehallion. The same is the case for Viewpoint 14 Ben Lawers.
- 7.17.23 In relation to Ben Lawers a similar pattern of potential visibility is exhibited on the ZTV's for operational schemes Griffin and Braes of Doune, in that visibility is likely over the southern slopes with some potential overlap on the peaks. These two existing schemes have been included in the baseline for the assessment of effects on this viewpoint of the proposed introduction of the Talladh-a-Bheithe scheme into the view, which was assessed as moderate and significant.
- 7.17.24 In the scenario that consented scheme Calliachar was introduced to the baseline this would add further turbines to the view already occupied by the existing operational Griffin scheme and would not alter the existing baseline. Figure 7.52 demonstrates that the other consented scheme at Stronelairg to the north has no potential visual influence on Ben Lawers and therefore there would be no cumulative impacts from this scheme if it was added to the baseline.

### Sequential Cumulative Effects

- 7.17.25 Wind farms are becoming more of a common sight across Scotland as a whole and people travelling along some of the roads and trails which pass through the study area would see not only the proposed Talladh-a-Bheithe wind farm turbines but other wind farms during the course of their journey. Sequential effects are most likely to be significant where several wind farms are seen during a relatively short duration whether that is during an extended walk or bicycle ride in the countryside or a journey in a car or train. It is therefore considered that the most relevant discussion of sequential effects is likely to relate to the following linear routes each of which is discussed further below:
- West Highland Way Long Distance Route
  - Mallaig to Crianlarich West Highland Railway
  - B8019 & B846 Pitlochry to Rannoch Station Road
- 7.17.26 Analysis of the cumulative ZTV's (Figures 7.51, 7.52 & 7.53) for the schemes identified in Table 7.15 above against the routes of the West Highland Way Long Distance Route, Mallaig to Crianlarich West Highland Railway B8019 & B846 Pitlochry to Rannoch Station Road indicate that there would no significant cumulative effects along any section of these routes through the study area.

## 7.18 Mitigation Measures

7.18.1 As discussed in best practice guidance for EIA, mitigation measures may include:

- avoidance of impacts;
- reduction in magnitude of impacts; and
- compensation for impacts (sometimes referred to as remediation).

7.18.2 The principal landscape and visual mitigation measures adopted in relation to the proposed Talladh-a-Bheithe wind farm are embedded within the design of the scheme and relate to the consideration that was given to avoiding and minimising landscape and visual effects during the evolution of the turbine layout. Full details of this design iteration process are provided in Chapter 2 of the ES, however the key aim of the design process was to seek to use the topography of the site to limit views, in particular in the area around Loch Rannoch.

7.18.3 An iterative design approach was adopted for the detailed arrangement of structures on the site. Following baseline site work and identification of the most important landscape features, the turbines were arranged to cause least disturbance to these features. Notably, the turbine locations have therefore avoided any disruption to the alignment of watercourses. The turbines were also arranged to achieve the maximum possible offset from the nearest residential properties whilst taking account of other environmental and engineering constraints.

7.18.4 Taking all other engineering and environmental constraints into account, the final layout of the turbines on site was specifically designed to achieve a well balanced cluster of turbines when viewed from the surrounding areas. Particular regard was taken to minimising the potential for turbines to be viewed against the skyline and to reducing the potential for views from residential receptors in and around Loch Rannoch.

7.18.5 The control building and the temporary construction compound were located to take maximum advantage of the screening effects of landform.

7.18.6 The proposed location of the borrow pits has sought to use the topography of the site to screen potential views and eliminate visual effects that may otherwise occur. The landform of the site has also been used to provide screening to compounds and site storage areas from the immediate site vicinity.

7.18.7 The turbines themselves would be painted an off white colour with a low reflectivity semi-matt finish (or similar as agreed with the local planning authority). Such a finish is widely regarded to be the least intrusive in the landscape when seen against the sky in a host of weather conditions typically experienced in the UK.

7.18.8 Unlike some other forms of development, it is neither possible nor considered appropriate to screen turbines. No landscape or visual enhancement measures are proposed as part of this application.

7.18.9 In the long term, when the wind farm is decommissioned, the turbines can be removed from site and the vegetation along the proposed access tracks can be restored to its current state.

## 7.19 Residual Effects

7.19.1 Best practice for EIA in general terms requires that the significance of potential effects be assessed, mitigation proposals identified and the residual effect (with mitigation in place) then re-assessed to demonstrate the effectiveness of the mitigation proposed.

7.19.2 In the case of LVIA for wind farms this presents two interrelated problems:

- Potential effects cannot be meaningfully assessed in the absence of an assumed layout; and
- Landscape and visual mitigation principally focuses on refinement of the site layout.

7.19.3 The approach taken in this study has therefore been to build landscape and visual mitigation into the final layout, and that has been assessed in this chapter. Mitigation has been taken into account as part of the iterative design process as described above but as this mitigation is integral to the final layout, there is no difference between the assessed effects reported in the main body of this chapter and the residual effects.

## 7.20 Summary of Landscape and Visual Effects

### Summary of Effects on Landscape Features

7.20.1 It has been assessed that there would be no significant effects on existing landscape features during the construction, operational or decommissioning phases of the proposed development.

### Summary of Effects on Landscape Character

7.20.2 The Talladh-a-Bheithe site boundary spans three character types all within the Tayside Landscape Character Assessment No.122.

- 2a Upper highland Glens with Lochs
- 2b Mid Highland Glens with Lochs
- 3 Highland Summits and Plateaux

7.20.3 Beyond a short distance from the site the ground level components of the proposed development would not be prominent. Therefore impacts on landscape character as experienced in the wider landscape arise principally in relation to the introduction of turbines into the landscape and the resultant impact on the perceptual experience of landscape character.

7.20.4 It has been assessed that there would be a significant effect on part of 7 landscape character units which cover the 35km study area surrounding the site. It is however acknowledged, that a much greater proportion of the landscape would not experience a significant effect on landscape character.

### Summary of Visual Effects

7.20.5 It has been assessed that there would be a significant visual effect at fourteen out of the twenty five assessment viewpoints, namely:

## 7.20.6

Viewpoint 4 - Leagag	Viewpoint 11 – Ben Alder Summit
Viewpoint 5 – Meall Buidhe	Viewpoint 19 – Rannoch Moor (within the Moor)
Viewpoint 6 – Meall a Mhuic	Viewpoint 21 – Meall Gorm
Viewpoint 7 – Meall Garbh	Viewpoint 22 – Sgor Gaibhre
Viewpoint 8 – Schiehallion	Viewpoint 23 – Sron Bealach
Viewpoint 9 – Beinn Mholach	Viewpoint 24 – Beinn Udlamain
Viewpoint 10 – Loch Ericht, shoreline	Viewpoint 25 – Carn Dearg

7.20.7 It is noted however that there would be no significant visual effect on any residential receptors or settlements in the vicinity of the site and that the assessment viewpoints were chosen to represent many of locations from which the proposals would be most visible.

### Summary of Effects on Landscape Designations

7.20.8 It has been assessed that there would be significant effects on landscape character and visual amenity within parts of the Loch Rannoch and Glen Lyon NSA. It is not considered however that the proposals would have significant harm to the special qualities of the NSA. The mountain grandeur, wild summits and natural beauty within the NSA would not be directly affected by the proposed development, which lies beyond the NSA boundary with the nearest turbine over 1.8km away, and would remain appreciable following construction of the proposed development. There would be no significant effect on any of the other National Parks or National Scenic Areas which are located within the study area.

7.20.9 With regard to the Area of Search for Wild Land, it is judged that whilst being located within a Search Area the northern part of the Talladh-a-Bheithe estate does not have the same characteristics and attributes of core wild land as much of the central section of the Search Area to the west of Ben Alder and to the east of Ben Nevis. These areas are more rugged, remote and inaccessible when compared to the Talladh-a-Bheithe estate which lies adjacent to a loch managed and dammed as part of hydroelectric generation scheme and areas of plantation forestry and is traversed by a tarmac road. However, should it be considered that this area did form wild land, it is acknowledged that the assessment of effects on visual amenity landscape character did identify some significant effects within this area.

### Summary of Cumulative Landscape and Visual Effects

7.20.10 The nearest other wind farm lies over 35km from the proposed development. An assessment of the potential for significant cumulative effects has been undertaken and no significant cumulative effects on landscape character or visual amenity have been assessed.