

Carn Fearna Wind Farm

EIA Report – Volume 1 Non-Technical Summary

Preface

This Environmental Impact Assessment (EIA) Report has been prepared in support of an application by Carn Fearn Wind Farm Limited (Ltd) (a company wholly owned by Statkraft UK Limited) ('the Applicant') to the Scottish Government Energy Consents Unit (ECU) for Section 36 consent to construct and operate Carn Fearn Wind Farm ('the Proposed Development') in The Highland Council (THC) administrative area.

The Proposed Development is located approximately 1.5km north east of the village of Garve in Ross-shire. The Proposed Development will comprise up to nine wind turbines and other associated infrastructure. There would also be an Off-site turning circle located at Inchbae Lodge to allow Abnormal Indivisible Load (AIL) Vehicles to turn round and approach the site from the north.

The EIA Report comprises the following volumes:

- Volume 1: EIA Report Non-Technical Summary (NTS) (this document);
- Volume 2: EIA Report Written Statement;
- Volume 3a-d: EIA Report Figures; and
- Volume 4a-b: EIA Report Technical Appendices.

In addition to the above, the application is accompanied by a Planning Statement, a Design Statement, a Pre-Application Consultation (PAC) Report, covering letter and Marine Science Scotland (MSS) Checklist and a revised version of The Standard onshore wind conditions – Section 36 consent and deemed planning permission..

A hard copy of the EIA Report will be available for public viewing during the application consultation period at the following addresses:

- Strathpeffer Community Centre, School Road, Strathpeffer, Ross-shire, IV14 9AG.
- Garve Village Hall, Station Road, Garve, Ross-Shire, IV23 2PR.

A copy of the EIA Report Volumes will be made available for download from the project website at:

- <https://projects.statkraft.co.uk/Carn-Fearna/>

Paper copies of the NTS are available free of charge from:

Statkraft UK Limited
The Garment Factory
10 Montrose Street
Glasgow
G1 1RE

Paper copies of the EIA Report may be purchased by arrangement from the above address for £1,500 per copy, or £15 per USB memory stick copy. The price of the paper copy reflects the cost of producing the Landscape and Visual photographs at the recommended size. As such, a CD/USB memory stick version is recommended.

Any public representations to the application may be submitted via the ECU website at www.energyconsents.scot/Register.aspx; by email to the Scottish Government, Energy Consents Unit mailbox at representations@gov.scot; or by post to the Scottish Government, Energy Consents Unit, 4th Floor, 5 Atlantic Quay, 150 Broomielaw, Glasgow, G2 8LU, identifying the proposal (reference ECU00004851) and specifying the grounds for representation.

The Applicant will advertise the submission of the Section 36 application in the local and national press (as per Table 1 below) and on the dedicated project website at <https://projects.statkraft.co.uk/Carn-Fearna/>.

Table 1: Newspaper Notices

Publication	Date of Public Notice
The Scotsman	25 th April 2025
The Press and Journal	25 th April and 2 nd May 2025
Ross-shire Journal	25 th April and 2 nd May 2025
Edinburgh Gazette	25 th April 2025

The deadline for submitting representations to Scottish Ministers is the 4th June 2025.

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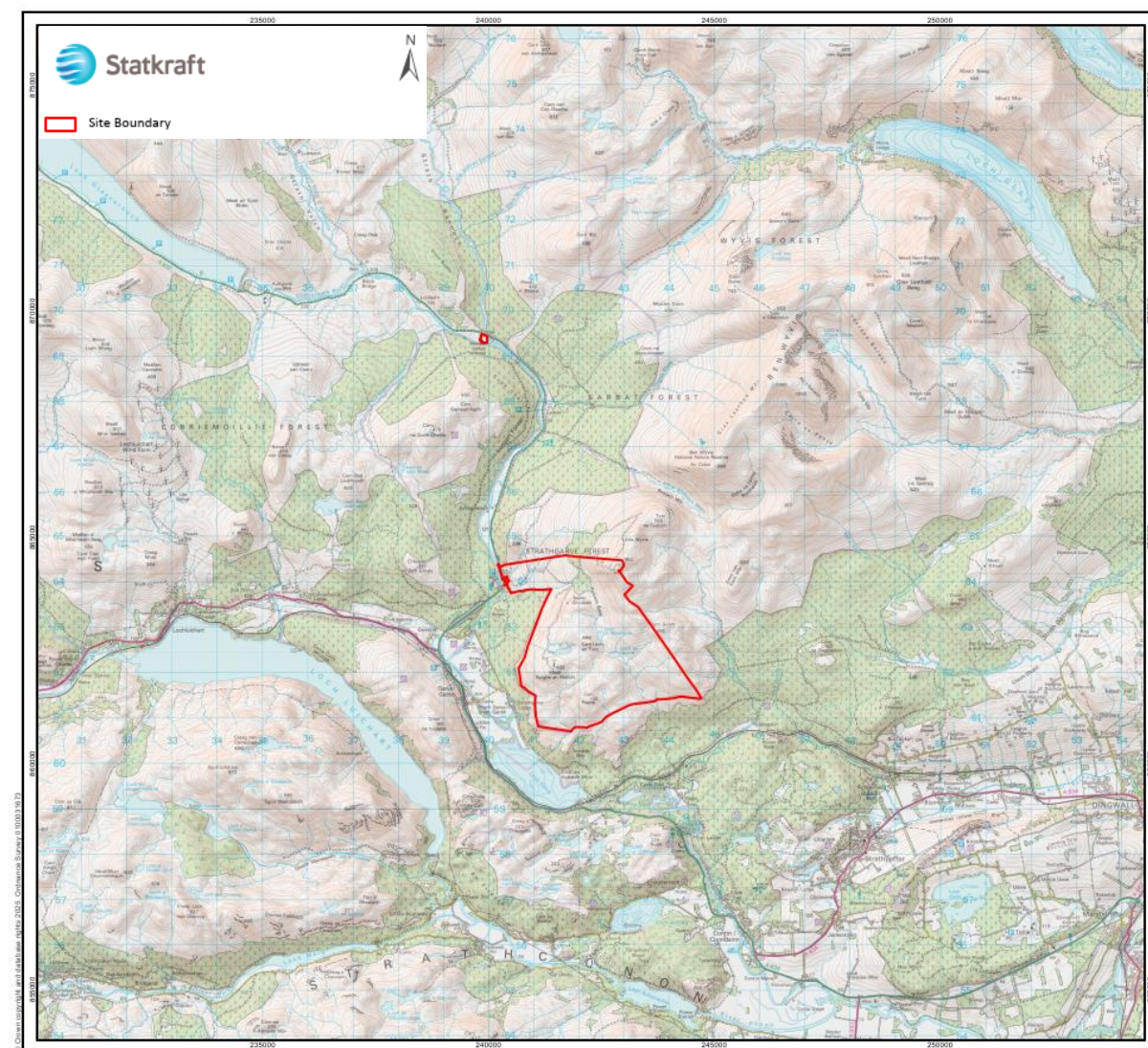
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1 Introduction

1.1 Overview

- 1.1.1 This document is a Non-Technical Summary (NTS) of the Environmental Impact Assessment (EIA) Report for Carn Fearna Wind Farm which accompanies an application for development consent made by Carn Fearna Wind Farm Limited (hereafter referred to as 'the Applicant'). The NTS summarises the findings of the EIA which has been undertaken to assess the potential impacts from the construction, operation and decommissioning of Carn Fearna Wind Farm (hereafter referred to as the 'Proposed Development').
- 1.1.2 The Proposed Development is located in the Highlands of Scotland, approximately 1.5km north east of the village of Garve in Ross-shire, and is centred on National Grid Reference (NGR) E-242260, N-862627. The off-site turning circle is centred on NGR E-239892, N-869390. The site boundary is shown in Figure 1.

Figure 1: Site Location



- 1.1.3 The Proposed Development consists of up to nine wind turbines and associated ancillary infrastructure. Five of the turbines have been assessed with a maximum tip height of 200m, and the remaining four with a maximum tip height of 180m.
- 1.1.4 As the generating capacity of the Proposed Development would exceed 50 MW, an application is being submitted for consent under Section 36 of the Electricity Act 1989, with the Applicant also seeking a

direction that deemed planning permission is granted under the Town and Country Planning (Scotland) Act 1997.

1.2 The Applicant

- 1.2.1 The Applicant, Carn Fearn Wind Farm Limited, is a wholly owned subsidiary of Statkraft UK Limited (Statkraft).
- 1.2.2 Statkraft is a leading company in hydropower internationally and Europe's largest generator of renewable energy. The Group produces hydropower, wind power, and solar power and supplies district heating generating 62 TWh of renewable power. Statkraft is a global company in energy market operations and has over 6,000 employees in over 20 countries.
- 1.2.3 Statkraft is at the heart of the UK's energy transition. Since 2006, Statkraft has gone from strength to strength in the UK, building experience across wind, solar, hydro, storage, grid stability, EV charging, green hydrogen and a thriving markets business. Statkraft has invested over £1.3 billion into the UK's renewable energy infrastructure and facilitated over 4 GW of new-build renewable energy generation through Power Purchase Agreements (PPA). Statkraft develops, constructs, owns and operates renewable facilities across the UK and employs over 500 people in offices across Scotland, England and Wales.
- 1.2.4 Further information about Statkraft can be found at www.statkraft.co.uk

1.3 Environmental Impact Assessment

- 1.3.1 An EIA is carried out where a proposed development has the potential to result in significant environmental effects. As it is considered possible that the Proposed Development may result in significant environmental effects, an EIA has been undertaken to accompany the application for Section 36 consent.
- 1.3.2 EIA involves the compilation, evaluation and presentation of any likely significant environmental effects resulting from a proposed development, to assist the consent authority, statutory consultees and wider public in considering an application.



- 1.3.3 EIA is an iterative process whereby the identification and assessment of effects can also inform the design of a proposed development so that potentially significant adverse environmental effects can be avoided, reduced and, if possible, removed. A proposed development can then be refined to avoid or reduce potential environmental effects, where necessary, through the use of mitigation measures.

- 1.3.4 The EIA Report presents information on the identification and assessment of the likely significant environmental effects resulting from the Proposed Development across a number of environmental topics. The significance of these effects has been assessed using criteria defined in the topic chapters of the EIA Report. Where appropriate, or as otherwise defined, the significance of effects has been categorised as major, moderate, minor or negligible. In the context of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (hereafter referred to as the 'EIA Regulations') likely effects assessed as being of 'major' or 'moderate' significance are considered to be significant effects.

- 1.3.5 The scope of the EIA was informed by an EIA Scoping Opinion provided by the Scottish Government Energy Consents Unit (ECU) in consultation with consultees including The Highland Council (THC), NatureScot, Scottish Environment Protection Agency (SEPA) and Historic Environment Scotland (HES).

2 The Proposed Development

2.1 Design Evolution

- 2.1.1 A number of parameters and considerations informed the site selection and design of the Proposed Development, which are described in full in the Design Statement and summarised in Chapter 2 of the EIA Report.
- 2.1.2 The initial input to the design process for the Proposed Development was the desk-based identification of constraints including: topography and ground conditions (including peat), environmental designations, identified landscape and visual constraints, proximity to residential receptors (with regards to visual amenity, shadow flicker and noise), presence of protected habitats and species, presence of watercourses, private water supplies and related infrastructure, presence of cultural heritage features, aviation and radar constraints, recreation resource (no Rights of Way or Core Paths within the site), and fixed communications links. This was augmented with field-based survey work including ornithological surveys, habitat and protected species surveys, a Phase 1 peat probing exercise, a baseline noise survey and a cultural heritage visit of the site and surrounding area.
- 2.1.3 Following an initial round of public consultation and the receipt of the EIA Scoping Opinion the number of turbines were reduced from 14 to 11, to reduce impacts on landscape and visual receptors. Following two rounds of public exhibitions, and further detailed surveys and assessments, the overall number of turbines was reduced further to 9 in total, and the tip height was reduced from 200m to 180m for 4 of the turbines – primarily to further reduce landscape and visual impacts.
- 2.1.4 Additional considerations which influenced changes to the location and number of turbines include:
- proximity to hydrological constraints;
 - proximity to ecological constraints;
 - telecommunications link buffers;
 - the topography of the site;
 - phase 2 peat probing survey findings; and
 - energy yield constraints.
- 2.1.5 Potential impacts from the ancillary infrastructure, including the access tracks were minimised by using the existing site access tracks where possible.

2.2 The Proposed Development

- 2.2.1 The Proposed Development is described in detail in Chapter 3 of the EIA Report. The layout of the Proposed Development is shown on Figure 2: Site Layout. In summary, the Proposed Development would comprise:
- up to nine wind turbines including internal transformers, five turbines with blade tip heights of up to 200 m, the remaining four turbines with blade tip heights of up to 180 m;
 - nine turbine foundations (approximately 25-30m in diameter) and a crane hardstanding area which includes areas for blade, tower and nacelle storage at each wind turbine;
 - on-site signage;
 - up to 11.6 km of new on-site access track with a typical running width of 6 m (wider on bends and junctions) and 3.3 km of upgraded existing access track (widened from 4 m to 6 m) and associated

drainage, 7 turning heads and passing places (number and locations to be confirmed as part of detailed design);

- small areas of tree felling (~1.2 hectares);
- watercourse crossings;
- passing places (number and locations to be confirmed as part of detailed design);
- batching plant (to be located in main temporary construction compound);
- underground cabling and electrical infrastructure alongside the access tracks to connect the turbine locations, with the on-site electrical substation;
- one on-site substation compound which would accommodate a control building and the wind farm substation;
- three construction compounds, the main compound directly beside the substation and 2 smaller compounds located on the initial access track and across from Turbine 1;
- search areas for up to 3 borrow pits; and
- an off-site turning circle for Abnormal Indivisible Load (AIL) vehicles, located at Inchbae Lodge.

- 2.2.2 An Outline Construction Environmental Management Plan (CEMP) is contained in the EIA Report as Technical Appendix 3.1 which describes the measures which would be employed during the construction of the Proposed Development in order to protect the environment.

Operational Life

- 2.2.3 It is anticipated that the Proposed Development would have an operational life of up to 50 years. At the end of the operational life, the Proposed Development would be decommissioned, or an application may be submitted to repower or extend the life of the site.

Access

- 2.2.4 Access to the Proposed Development site would be directly from the A835 via a new access junction. It is anticipated that the Abnormal Indivisible Loads (AIL) (i.e. the turbine components) will travel to the site from the Port of Invergordon or Port of Nigg via the B817, A9 and A835. Full details of the transport route and access to the site are provided in Chapter 13 of the EIA Report.

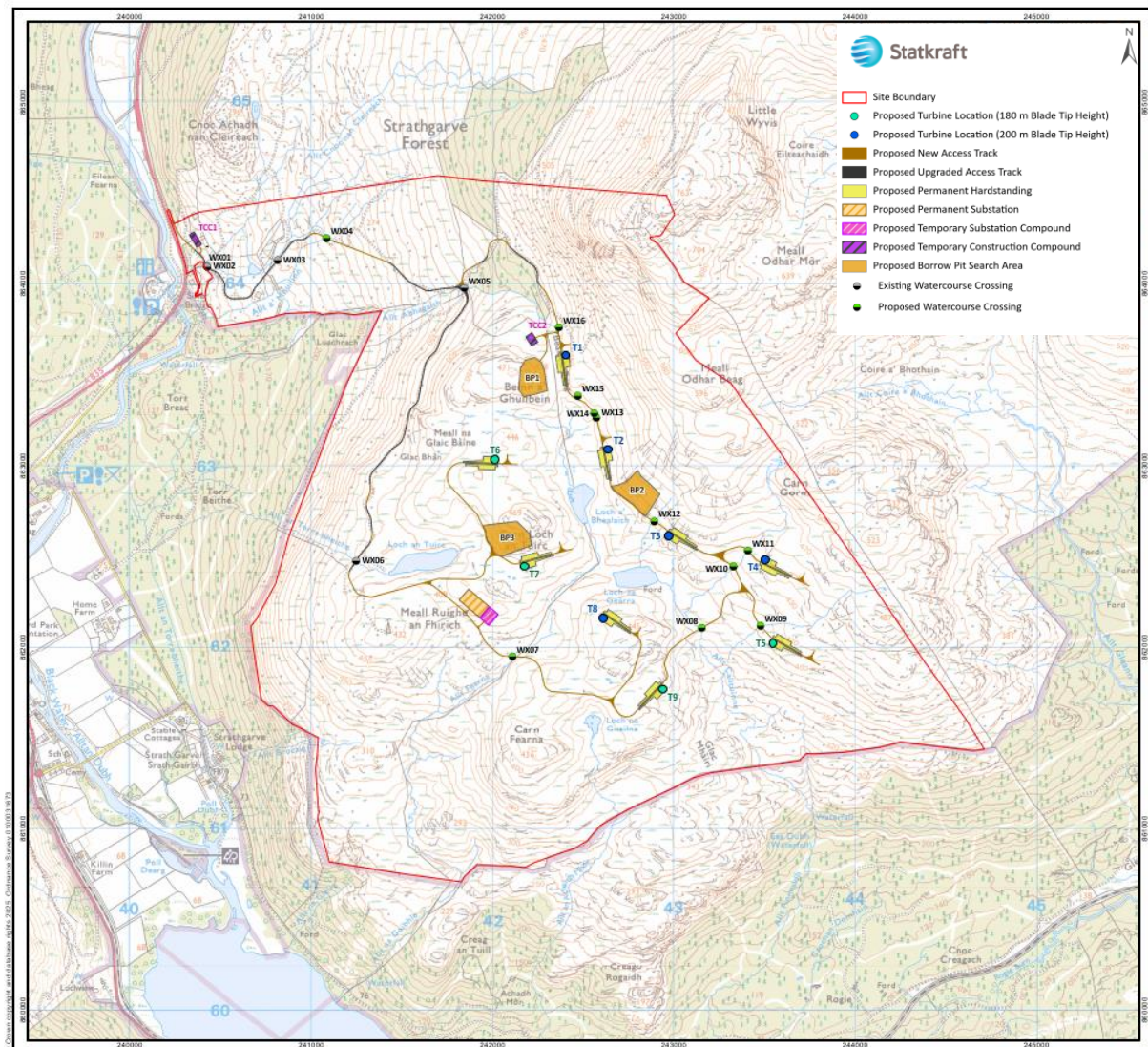
Off-site Turning Circle

- 2.2.5 A turning circle would be located off-site at Inchbae Lodge on the A835 approximately 5 km north of the site to allow AIL Vehicles to turn round and approach the site from the north.
- 2.2.6 The layout of the turning circle would comprise of stone tracks of a similar composition to those at the main wind farm, along with an asphalt junction and an area for laydown of materials.

Grid Connection

- 2.2.7 The grid connection point for the Proposed Development has been confirmed by the network operator as being at Scottish and Southern Electricity Networks (SSEN) Corriemoillie substation, located approximately 5.5 km west of the site. An application was submitted in April 2022 to SSEN/National Grid Electricity System Operator (ESO) for the potential grid connection, with an aspired connection date of 2030.
- 2.2.8 The precise route of the grid connection cabling has not yet been determined by SSEN and its effects are not identifiable/assessable as the design has not yet been confirmed, and is subject to the decision of the network operator.
- 2.2.9 The grid connection will require separate consent under Section 37 of the Electricity Act 1989 and the grid connection application would be made by SSEN who is responsible for the transmission and distribution of electricity in the north of Scotland.

Figure 2: Site Layout



3 Benefits of the Proposed Development

3.1 Contribution Towards Government Targets

3.1.1 The Proposed Development would:

- make a meaningful contribution of over 50 MW of installed onshore wind capacity, towards meeting the renewable energy generation targets set out by the Scottish Government, such as the goal for Scotland to have a fully decarbonised energy system by 2045;
- make a valuable contribution towards UK generation targets and the reduction in emissions of greenhouse gases, principally carbon dioxide, in becoming carbon neutral in approximately 1.6 years as demonstrated by the carbon calculator; and
- make Scotland, and therefore the UK, less reliant on imported and price-volatile fossil fuels by generating the equivalent energy to supply the approximate domestic needs of 56,642 average UK households.

3.2 Community Benefit and Shared Ownership

- 3.2.1 Should the Proposed Development gain consent, a Community Benefit Fund would be made available to the community as set out within the Pre-Application Consultation (PAC) Report. This is offered on the basis

of an annual, index linked payment per MW of installed capacity at the Scottish Government recommended rate at the time of commissioning the Proposed Development. At present the recommended rate is £5,000 per MW.

- 3.2.2 Should there be an interest for local groups or organisations to have a financial interest in the Proposed Development, the Applicant would be willing to engage locally in order to bring this forward. This would offer local community groups the ability to invest in the Proposed Development. Local Energy Scotland can provide independent advice and support to communities interested in the shared ownership opportunity. Further details of the consultation effort associated with and response from communities is provided in the PAC Report accompanying the application.

It is estimated that the community benefit fund would accrue benefits to the local community of £324,000 per annum and worth approximately £16.2 million over the 50 year operational life of the Proposed Development.

3.3 Other Economic Benefits

- 3.3.1 It is estimated that the construction of the Proposed Development would directly support an estimated 26 temporary full-time jobs locally and 113 jobs within Scotland per year during the 23-month construction period. The local economy would be expected to be boosted by approximately £2.4 million (net Gross Value Added, GVA) and the Scottish economy by approximately £10.5 million (GVA) during the construction of the Proposed Development. It is anticipated that the Proposed Development would employ up to three local members of staff during its operational period.

3.4 Outline Nature Enhancement Plan

- 3.4.1 An Outline Nature Enhancement Management Plan (ONEMP) is provided as Technical Appendix 8.5. It is anticipated that the document would be further developed, following the granting of consent, in discussion with The Highland Council (THC), and NatureScot. The aim of the outline NEMP is to establish the key objectives and principles by which parts of the site would be enhanced for the benefit of biodiversity, which would then form the basis for the more detailed NEMP. A Steering Group and Review Committee (SGRC) comprising of NatureScot, THC and the Operator of the Proposed Development (and others) would be set up to oversee the effectiveness of the NEMP.

- 3.4.2 The ONEMP includes five key aims to improve and enhance biodiversity at the site:

- Enhancement of peatland habitats;
- Enhancement of riparian (riverbank) habitats;
- Improvement opportunities for nesting birds and roosting bats;
- Improve habitats on-site for invertebrates; and
- Enhance and increase native tree cover.

3.4.3 Peatland Habitats

- 3.4.4 Peatland Restoration Search Areas' (areas of peatland that are potentially suitable for restoration) have been identified, totalling 270.59 ha. These Peatland Restoration Search Areas are a mix of areas identified as priority peatland of possible national interest, and other areas not of national interest, as well as an area of acid grassland/wet heath/bracken mosaic in the north-west of the site, but all with features considered potentially restorable by reinstating and improving the peatland/carbon-rich soil function of these areas. There is 333.46 ha of peatland considered as of 'possible national interest' on the site. Based on current guidance, up to 33 ha of degraded peatland would require to be restored to deliver enhancement.

3.4.5 Riparian Habitats

- 3.4.6 Opportunities to enhance and/or create fish habitats, including fish cover and native riparian (bankside) planting within the identified watercourses on the site would be investigated, with prescriptive measures agreed with NatureScot, THC and Cromarty Firth Fishery Board.

3.4.7 Improvement of Opportunities for Nesting Bird and Roosting Bats

- 3.4.8 Opportunities to enhance the habitat available for nesting birds and roosting bats includes installation of nest boxes suitable for a range of species, and installation of bat boxes.

3.4.9 Invertebrates Habitats

- 3.4.10 Invertebrates would benefit from improved habitats created through the restoration of degraded peatland, increased amount of deadwood (from tree/scrub planting and felling associated with the Proposed

Development), wildflower seeding, riparian planting, and the creation of more cover in the identified watercourses.

3.4.11 **Enhanced Native Tree Cover**

3.4.12 As well as providing shelter, feeding and roosting opportunities for wildlife, riparian planting would increase habitat connectivity through parts of the site.

3.4.13 **Monitoring**

3.4.14 Monitoring is proposed as part of the NEMP in operational years 3, 5, 10 and 15 of the Proposed Development and would consist of checks of the habitat enhancement measures. The Applicant would provide a summary of the NEMP activities and monitoring results to the SGRC each year of monitoring. The frequency of monitoring and reporting thereafter would be agreed with the SGRC.

4 **Landscape and Visual**

4.1.1 EIA Report Chapter 7 identifies and assesses the potential impacts that the Proposed Development would have on physical elements of the landscape; landscape character; areas that have been designated or otherwise identified for their scenic or landscape-related qualities; and views from various locations such as settlements, routes, tourism features and other sensitive locations. The potential cumulative effects that will arise from the addition of the Proposed Development to other wind farms are also considered.

4.2 **Baseline**

4.2.1 The study area for the LVIA covers a radius of 45 km from the outer turbines in the Proposed Development. This study area includes a range of landscapes, from rounded/rocky hills and moorland slopes to rolling uplands; wooded glens and rocky moorland; and mountain massif.

4.2.2 The site itself is not covered by any known international or national landscape-related planning designations. The eastern periphery of the site is, however, within the Ben Wyvis Special Landscape Area (SLA) as designated by THC, and various designated areas are found elsewhere in the Study Area.

4.2.3 Potential visibility of the Proposed Development within the 45 km study area is demonstrated by generating a Zone of Theoretical Visibility (ZTV)¹ and is reflective of the topography and woodland cover. These show that there are large parts of the 45 km study area where there will be no visibility of the Proposed Development at all or very limited visibility.

4.3 **Predicted Effects**

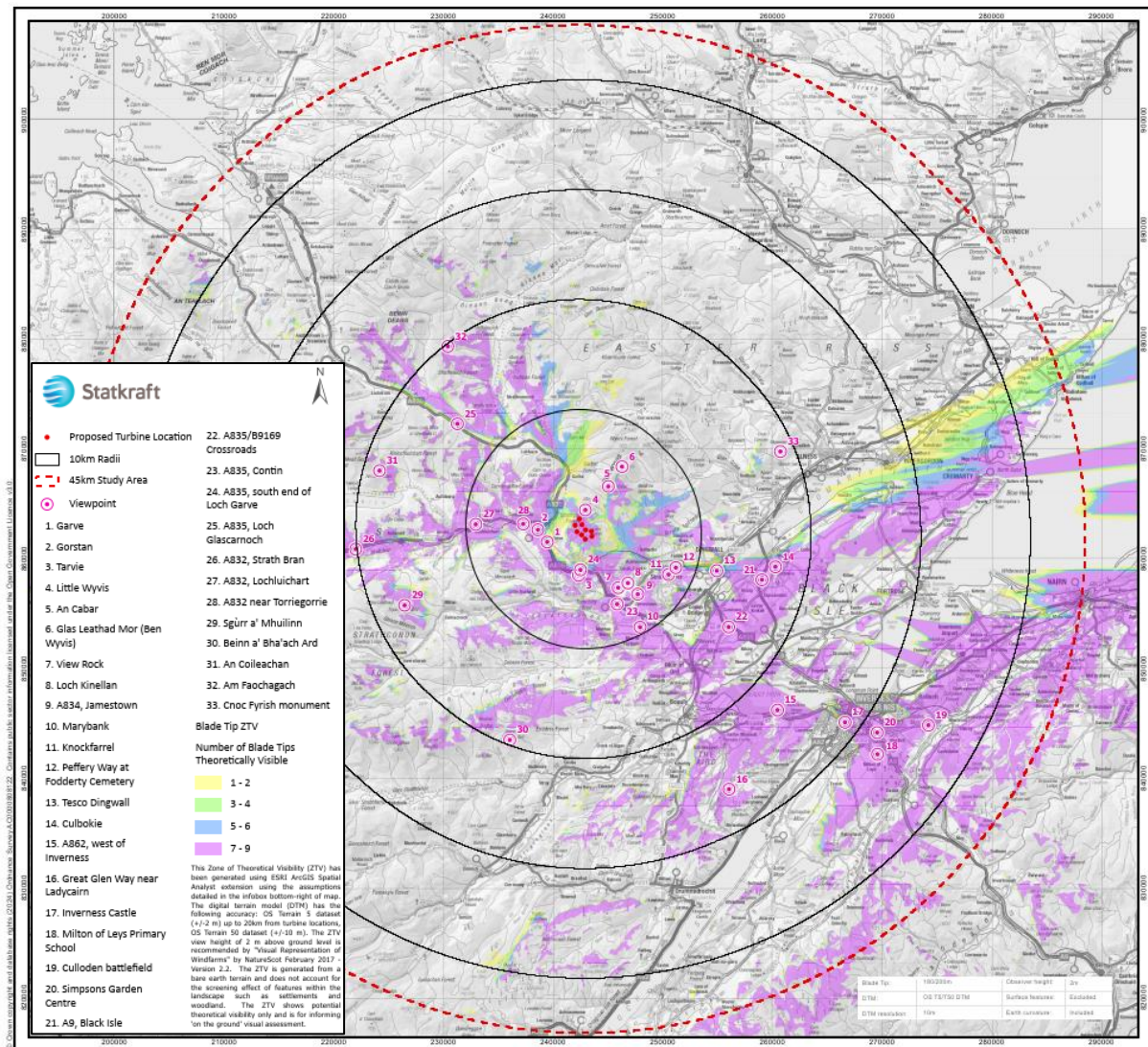
4.3.1 The assessment has shown that the effect on the landscape and visual resource of the great majority of this study area will be not significant, which means that the effect of the Proposed Development will not be one of the defining influences, and the existing characteristics of the landscape and views will continue to prevail. The assessment indicates that the Proposed Development will not significantly affect any national landscape planning designations and will not significantly affect local scenic designations with the exception of the Ben Wyvis SLA.

4.3.2 While the effect on the landscape and visual resource of the majority of the study area will be not significant, as described above, the LVIA has indicated that there is potential for the Proposed Development to result in some significant effects within the 20 km study area that has been defined for the detailed assessment. The LVIA has identified that there is potential for significant effects to arise as follows:

¹ The ZTV is an analysis of the theoretical visibility of the proposed turbines based on a 'bare earth' model and as such represents the maximum visibility of the turbines. The actual visibility is expected to be less in some parts of the study area due to screening afforded by vegetation/woodland and buildings.

- intermittent or very intermittent significant effects on the landscape character of the site and some parts of its surroundings up to a maximum of approximately 5.5 km away from the nearest turbine, including the following landscape character types (LCTs):
 - Rounded Rocky Hills (LCT 331);
 - Rounded Hills and Moorland Slopes (LCT 330);
 - Rounded Mountain Massif (LCT 329);
 - Forest Edge Farming (LCT 341);
 - Strath - Ross & Cromarty (LCT 340);
 - Wooded Glens and Rocky Moorland (LCT 335);
- localised intermittent significant effect on the Ben Wyvis SLA;
- significant effect on one of the Wild Land Qualities (WLQs) of Wild Land Area (WLA) 29, up to a maximum of approximately 5 km away from the Proposed Development;
- very intermittent significant effects on views from the settlements of Contin (as seen at Viewpoint 23) and Garve (as seen at Viewpoint 1), restricted to areas where there is a clear, open view with high visibility of the Proposed Development;
- intermittent significant effects on views from residential areas (that are not classified as settlements) around Gorstan (as seen at Viewpoint 2), Lochluichart (Viewpoint 27), Marybank (Viewpoint 10) and Tarvie (Viewpoint 3);
- intermittent or very intermittent significant effects on views from several stretches of the A835, including in the vicinity of Contin (Viewpoint 23) and the south end of Loch Garve (Viewpoint 24);
- intermittent or very intermittent significant effects on views from several stretches of the A832, including in the vicinity of Marybank (Viewpoint 10) and Torriegorrie (Viewpoint 28);
- intermittent or very intermittent significant effects on views from several stretches of the Inverness – Kyle of Lochalsh railway line, including in the vicinity of Garve (Viewpoint 1), the south end of Loch Garve (Viewpoint 24) and Lochluichart (Viewpoint 27);
- intermittent or very intermittent significant effects on views from paths (including core paths), up to a maximum of approximately 10 km away, where there is a clear, open view with high visibility of the Proposed Development, including:
 - core path at Loch Kinellan (Viewpoint 8);
 - core path at Knockfarrel (Viewpoint 11);
 - Peffery Way at Fodderty Cemetery (Viewpoint 12);
 - views from hilltops/walking destinations at:
 - Little Wyvis (Viewpoint 4);
 - An Cabar (Viewpoint 5); and
 - Glas Leathad Mor (Ben Wyvis) (Viewpoint 6).

Figure 3: Blade Tip Zone of Theoretical Visibility



Residential Visual Amenity

- 4.3.3 The Residential Visual Amenity Assessment (RVAA) (Technical Appendix 7.2) assesses individual properties or groups of properties within 2km of the Proposed Development. The RVAA considers the change to visual amenity at each property/group of properties, including consideration of likely views from the property, its curtilage (garden) and approach.
- 4.3.4 The assessment of the properties around the Proposed Development indicates that one of the four properties included is likely to experience a major and **significant** visual effect as a result of the Proposed Development. This is Property 1 (Tigh Fiodha Larder), which is financially involved with the Proposed Development. The RVAA found that effects at this property would not reach what in current guidance is called a 'Residential Visual Amenity Threshold'².

Aviation Lighting

- 4.3.5 The Civil Aviation Authority (CAA) requires that 'en-route obstacles' at or above 150 m above ground level are lit with visible lighting to assist their detection by aircraft flying at night. As the turbines in the Proposed Development are more than 150 m to tip height, visible red lighting is required on four turbines: Turbine 1, Turbine 4, Turbine 7, and Turbine 9. Agreed mitigation includes the reduction of intensity of the lights during conditions of clearer visibility. Further possible mitigation could be achieved through the use of lights

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

designed to emit a horizontal beam of light with reduced upward and downward spill of light, such that the brightness of the light emitted is decreased for viewers close to the turbines viewing the lights from below.

- 4.3.6 All turbines will also be fitted with infra-red lighting for Ministry of Defence (MoD) purposes; this is not visible to the human eye and is therefore not relevant to the landscape and visual impact assessment.
- 4.3.7 An assessment of the effects of the lighting on views after dark has been carried out considering the appearance of the proposed lighting relative to exemplar lights and existing lights in the views; and any change to the night-time viewing experience from various viewpoints and routes. The assessment has indicated that a significant effect is likely to arise from aviation lighting at the following locations:
- views from residential areas at Gorstan (as seen at Viewpoint 2) and Tarvie;
 - views from hilltops/walking destinations at Little Wyvis and An Cabar (and an effect on WLA 29 at these locations);
 - the core path at Loch Kinellan;
 - intermittent/very intermittent effect on views gained by people travelling on the A835 between Garve (Viewpoint 1) and the south end of Loch Garve (Viewpoint 24) but not at these viewpoints;
 - the view gained by people who have stopped in the layby on the A835 at Viewpoint 24;
 - intermittent/very intermittent effect on views gained by people travelling on the A832 at and around Torrieggorrie;
 - very intermittent significant effects on views gained by people travelling on the Inverness – Kyle of Lochalsh railway line on the stretch between east of the Black Water bridge and west of Gorstan; and
 - views from core paths up to approximately 5.5 km away from the Proposed Development.

Cumulative Effects

- 4.3.8 As well as assessing the effect of the Proposed Development itself, the LVIA considers the cumulative effect that may arise when the Proposed Development is added to various scenarios of operational, under-construction, consented and application-stage wind farms. The assessment concludes that significant cumulative effects arising from the addition of the Proposed Development to other operational, consented and application stage wind farms will arise at four viewpoints – Tarvie (Viewpoint 3), Little Wyvis (Viewpoint 4), An Cabar (Viewpoint 5) and Glas Leathad Mor (Ben Wyvis) (Viewpoint 6) – as well as very intermittent and localised cumulative significant effects on part of the Ben Wyvis unit of Rounded Mountain Massif LCT, the Ben Wyvis SLA, and one of the WLQs of WLA 29.

5 Ecology

- 5.1.1 Chapter 8 of the EIA Report evaluates the potential effects of the construction, operation and decommissioning of the Proposed Development on important ecological features.

5.2 Baseline

- 5.2.1 There are no internationally or nationally designated sites for ecological features within the site boundary. The Ben Wyvis Site of Special Scientific Interest (SSSI), Special Area of Conservation (SAC) and National Nature Reserve (NNR) all lie 1.35km to the north-east of the site boundary, and are designated for their mix of upland habitats, including heathland, grasslands, and wetlands, which support a variety of important plant species. Lower River Conon SSSI and Conon Islands SAC, and Loch Ussie SSSI and SAC, are located 5.94km and 6.64km to the south-east of the site boundary respectively. Allt nan Caorach SSSI lies 9.02 km to the north-east.
- 5.2.2 The site does not form part of any non-statutory designated site for nature conservation and no such sites are located within 2 km of the site. Part of the site is located within the Transitional Zone of the Wester Ross Biosphere Reserve, which is recognised as an internationally world class environment for people and nature. The Wester Ross Biosphere Reserve, which overlaps with the north-western area of the site, is known to include mountains, forests, waterfalls, seascapes and lochs and support otter, pine marten and red squirrel. The majority of the site is also located within the Strathpeffer Scottish wildcat priority area.
- 5.2.3 To identify the ecological baseline, the following surveys were undertaken: an extended Phase 1 habitat survey, a National Vegetation Classification (NVC) survey, a peatland condition assessment, terrestrial mammal surveys, a bat habitat suitability appraisal, bat activity surveys, a preliminary bat roost assessment and a fish habitat survey.
- 5.2.4 The surveys identified that habitats within the site predominantly comprise a typical mix of upland types, with most of the ground being dominated by blanket bog and a mosaic of wet and dry heaths. The lower

slopes consist of acid and marshy grassland and bracken, where livestock are grazed. The highest tops are covered in bryophyte/lichen heath, some semi-natural birch woodland and regen scrub is present around the site peripheries, with neighbouring commercial conifer plantations. Peatland of Possible National Interest was recorded within the site. Field surveys confirmed the presence of badger, pine marten, water vole and mountain hare within the site. Common pipistrelle, soprano pipistrelle, brown long-eared and *Myotis* bat species were recorded during the bat activity surveys.

5.3 Predicted Effects

Construction

- 5.3.1 The Proposed Development has the potential to affect notable habitats and the species that use them through effects of pollution and run-off (such as silt) without appropriate control measures. Embedded mitigation and good practice measures, including (but not restricted to) pollution prevention controls, sediment management, sensitive techniques with regards to construction near water, are detailed within the outline CEMP (**Technical Appendix 3.1**) and have been taken into account when undertaking the assessment, as is standard practice. In order to ensure that the aquatic environment is safeguarded, a water quality monitoring plan will be put in place prior to, during and post-construction. A Fish Monitoring Plan (FMP) will also be implemented to record pre-, during and post- construction fish populations in watercourses on and adjoining the site.
- 5.3.2 The CEMP will include Species Protection Plans (SPPs), Habitat Specific Protection Plans (HSPPs), and the appointment of an Ecological Clerk of Works (ECOW) to oversee the implementation of the ecology mitigation measures.
- 5.3.3 For all ecological receptors scoped in for detailed assessment, except for peatland of possible national interest, no significant adverse direct or indirect effects are expected from the Proposed Development, following the implementation of built-in mitigation measures.
- 5.3.4 Impacts on peatland of possible national interest have been predicted as resulting in an effect of Moderate/Minor adverse significance, which is considered Significant under the EIA Regulations. However, additional mitigation measures, together with habitat creation and enhancement measures to be implemented under the Outline Nature Enhancement Management Plan (ONEMP) in Technical Appendix 8.5, are expected result in long-term net benefits. As a result, the residual effect on peatland habitats on-site is expected to be of Minor beneficial significance, which is considered Not Significant under the EIA Regulations.

Operation

- 5.3.5 During operation, wind turbines can pose risks to bats through potential collision, changes in air pressure or disruption to their commuting and foraging routes. However, due to the low activity levels recorded during bat surveys and maintaining the Proposed Development infrastructure 50 m away from key bat habitat features, no significant adverse effects are anticipated. Additional mitigation in the form of pitching the turbine blades out of the wind ("feathering") to reduce rotation speeds while idling, will be implemented as additional mitigation to reduce unnecessary risk to foraging and commuting bat.
- 5.3.6 Direct adverse effects for other sensitive ecological features (such as habitat loss and disturbance) are not anticipated to occur during the operational period.

Decommissioning

- 5.3.7 Effects during decommissioning would be less than those during the construction phase. Methods and mitigation will follow best practice and guidance at the time of decommissioning and a decommissioning environmental management plan will be agreed with the relevant consultees at that time.

Cumulative Effects

- 5.3.8 No significant cumulative effects are predicted for habitats or protected species.

6 Ornithology

6.1.1 Chapter 9 of the EIA Report evaluates the effects on ornithological (birds) receptors during the construction and operation (and decommissioning) of the Proposed Development.

6.2 Baseline

6.2.1 Baseline studies and surveys took the following into account:

- Statutory sites designated for their bird interest – i.e. Ben Wyvis SSSI, Ben Wyvis SPA, Glen Affric to Strathconon SPA, Cromarty Firth SPA and Ramsar site, and Inner Moray Firth SPA and Ramsar site; and
- target bird species potentially affected by the Proposed Development, such as species of European conservation importance (as listed on Annex I of the Birds Directive), species listed in Schedule 1 of the Wildlife & Countryside Act, red-listed species on 'Birds of Conservation Concern', and species potentially at risk of impacts from onshore wind farms, as per Annex 1 of NatureScot Guidance 'Priority bird species for assessment when considering the development of onshore wind farms in Scotland'.

6.2.2 Field surveys undertaken for birds included both static vantage point surveys which recorded bird flights and breeding walkover surveys that identified moorland, raptor, owl, black grouse and diver breeding birds.

6.2.3 These surveys revealed that the site is primarily by foraging golden eagle and red kite and breeding black grouse, and other ground-nesting species including modest numbers of waders and ptarmigan.

6.3 Predicted Effects

6.3.1 No significant effects (including cumulatively) are predicted for ornithology during the construction, operation or decommissioning phases of the Proposed Development.

6.3.2 Notwithstanding the lack of potential impacts on target bird species, some standard mitigation measures will be implemented during construction to protect birds, including:

A suitably qualified Ecological Clerk of Works (ECoW) will ensure ornithological interests are safeguarded and oversee the implementation of ecological and ornithological mitigation.

- good practice construction measures, pollution prevention controls and monitoring as set out in the outline CEMP.
- development of a Construction Breeding Bird Protection Plan (CBBPP) which will form part of the CEMP.
- if site clearance activities were to commence during the core breeding bird season (1 March to 31 August, inclusive), they will be subject to a pre-clearance survey by a competent ornithologist to identify any active wild bird nests with works proceeding subject to exclusion buffers where nests are discovered.

6.3.3 Some precautionary additional mitigation would be implemented to minimise unnecessary disturbance to lekking black grouse (during the construction and operation phases of the Proposed Development), and to minimise potentially attracting scavenging raptors on-site during the operation phase of the Proposed Development.

6.3.4 The Proposed Development provides an opportunity to deliver notable habitat improvements at the locality, including the peatland restoration and native woodland planting which is detailed in an ONEMP) in Technical Appendix 8.5, and would benefit many key bird species and would mean the Proposed Development accords with NPF4.

7 Geology, Hydrology, Hydrogeology and Peat

- 7.1.1 EIA Report Chapter 10 evaluates the effects of the Proposed Development in relation to hydrology and hydrogeology (i.e. the water environment), geology and peat during construction, operation and decommissioning.
- 7.1.2 The scope of the assessment was informed by scoping responses received from statutory and non-statutory consultees.

7.2 Baseline

- 7.2.1 Baseline information was compiled through an initial desk study and further verified through site surveys (including an investigation of Private Water Supplies (PWS), peat depth probing, a condition assessment and a hydrological walkover survey).
- 7.2.2 The bedrock geology of the site comprises several metamorphic bedrocks comprising pelites, semipelites and psammites. Several small igneous intrusions are also noted across the site.
- 7.2.3 The off-site turning circle is underlain by gneissose granites of the Carn Chuinneag and Inchbae Augen Gneiss Formation to the north-west and psammites of the Crom Psammite Formation to the south-east.
- 7.2.4 The majority of the Proposed Development lies within areas of Class 1, Class 2 and Class 5 peatland. Class 1 and Class 2 peatland areas are considered nationally important carbon-rich soils, areas of deep peat and priority peatland habitats which are likely to be areas of high conservation value. Class 5 peatland areas are not considered nationally important however the soils remain carbon rich and contain areas of deep peat. The off-site turning circle is located entirely within Class 5 peatland. Peat probing was undertaken to determine the depth of the peat across the site. The peat was found to vary across the Proposed Development in terms of thickness and coverage. Deeper peat was generally encountered in flatter, lower gradient areas of the Proposed Development.
- 7.2.5 The Proposed Development and off-site turning circle is entirely located within the surface water catchment of the Black Water (also referred as the Alltan Dubh). The site is also located within the Loch Garve, Loch na Croic and Rogie Burn sub catchments. The Black Water flows to the south of the off-site turning circle and to the west of the site before it discharges into Loch Garve approximately 640 m south-west of the site. None of the surface water catchments which drain the Proposed Development have been designated as a DWPA.
- 7.2.6 In accordance with wind farm construction best practice guidelines and SEPA consultation advice, a 50 m buffer has been applied to watercourses and waterbodies where technically feasible. The design of the Proposed Development has strived to minimise the number of locations where infrastructure encroaches on the 50 m buffer.
- 7.2.7 Whilst areas of potential Groundwater Dependent Terrestrial Ecosystems (GWDTE) are identified on site, the distribution is not typical of a habitat sustained by groundwater but rather it is likely to be supported by rainfall, surface water ponding and water logging of soils, therefore not considered to be groundwater fed.
- 7.2.8 The PWS assessment confirmed that there is one PWS source potentially at risk from the Proposed Development.

7.3 Predicted Effects

Construction

- 7.3.1 A detailed review of the distribution and depth of peat at the site is presented in a peat management plan (PMP) (Technical Appendix 10.2). The presence of peat within the site formed a key consideration of the design of the Proposed Development. The design has tried to avoid areas of deeper peat (>1 m) where technically feasible and where possible has limited development to areas of peat less than 1 m or where peat is absent. Where peat would be encountered by the Proposed Development it can be readily managed and accommodated within the site layout with no significant environmental effect. No surplus peat would be generated, and the volumes of peat / peaty soil generated from the proposed excavations would be used to reinstate track verges, turbine bases, crane hardstandings and restoration of on-site borrow pits.
- 7.3.2 The site-specific peat landslide hazard risk assessment (PLHRA) (Technical Appendix 10.1) confirms that there are very few areas of peat instability risk across the Proposed Development and concluded that, with the deployment of appropriate mitigation measures, all of the areas of peat instability can be considered

Subject to adoption of best practice construction techniques and a site-specific CEMP, no significant adverse effects on geology (including soils and peat) or the water environment have been identified.

as an insignificant risk. It has been shown that the disturbance of peat and soils as a result of the construction of the Proposed Development can be minimised and the peat deposits and carbon-rich soils safeguarded.

- 7.3.3 The outline CEMP (Technical Appendix 3.1) includes a drainage management plan, including Sustainable Drainage Systems (SuDS), and a Pollution Prevention Plan, both of which would be agreed with THC and SEPA prior to any construction works being undertaken.
- 7.3.4 Notwithstanding these safeguards, a programme of baseline and construction phase water quality monitoring is proposed which would be used to confirm that the Proposed Development does not have a significant effect on geology and the water environment. Monitoring of watercourses that drain from the site, will be included in the monitoring plan. It is proposed that the monitoring schedule includes one PWS source. Monitoring would commence prior to construction and continue throughout the construction phase and immediately post construction. It is anticipated that the monitoring programme would be secured by a pre-development planning condition to be agreed with statutory consultees.

Operation

- 7.3.5 Operation of the Proposed Development would require limited activities relative to the construction and decommissioning phases. Routine maintenance of the infrastructure would be required across the site. Should any maintenance be required on-site during the operational life of the Proposed Development which would involve construction type activities; mitigation measures as per the final CEMP would be adhered to.

Decommissioning

- 7.3.6 Effects during decommissioning would be similar to those during the construction phase. Methods and mitigation will follow best practice and guidance at the time of decommissioning and a decommissioning environmental management plan will be agreed with the relevant consultees at that time.

Cumulative Effects

- 7.3.7 Potential cumulative effects have been considered associated with other wind farm developments within 5 km of the Proposed Development and in the same surface water catchments as the Proposed Development (Kirkcaldy Wind Farm (consented) located within the Loch Garve surface water catchment).
- 7.3.8 This development has been consented recently and therefore will be managed in accordance with best practice, industry standards and relevant legislation, planning policy and guidance regulated by statutory consultees. These standards ensure that, with respect to soils, geology and the water environment, potential impacts are mitigated and controlled at source, therefore no potential significant adverse cumulative effects are anticipated.
- 7.3.9 It should also be noted that the proposed Tarvie Wind Farm is also located within 5 km of the site boundary and within the Black Water surface water catchment, however as it is at scoping stage, it is not considered that there is sufficient information to undertake a cumulative assessment.

8 Archaeology and Cultural Heritage

- 8.1.1 EIA Report Chapter 11 considers the archaeological and cultural heritage value of the site and surrounding area and assesses the potential for significant effects on archaeological features and heritage assets resulting from the construction and operation of the Proposed Development.

8.2 Baseline

- 8.2.1 A study area comprising of the wind farm site and off-site turning circle and a surrounding 1 km radius of these areas was applied for heritage assets.
- 8.2.2 A desk based review of designated and non-designated assets as recorded by Historic Environment Scotland (HES) and Highland Historic Environment Record (HER) was undertaken. This also included a review of historic mapping, historic landscape characterisation, aerial photography and online resources, including Canmore, for additional historic environment information, as required. A walkover survey of the

site and of the off-site turning circle site was undertaken. Overall, both the wind farm site and the off-site turning circle were both identified to have little archaeological potential.

- 8.2.3 An assessment of the settings of designated heritage assets within 10 km of the Proposed Development was informed by consultation with HES, a ZTV, site visits and visualisations. A total of nine designated heritage assets were identified to be taken forward for assessment of their settings.

8.3 Predicted Effects

Construction

- 8.3.1 Two assets have been identified within the wind farm site which have potential to be directly impacted by the construction through the widening of tracks and the borrow pit extraction. These comprise:

- SLR11 within the wind farm site – potential modern quarry related to the construction of the existing track; and
- SLR8 within the wind farm site – a modern marker cairn on the peak of Carn Loch an Tuirc.

- 8.3.2 These assets are modern features and do not comprise remains considered to be of archaeological significance. Therefore, no direct or indirect impacts which would result in a significance of effect have been identified.

Operation

- 8.3.3 Of the nine assets taken forward for assessment of their settings, three were identified that would be subject to effects upon their setting; very minor significance of effects upon Knock Farril, Fort, (SM1672) and Fairburn (GDL00174), and a minor significance of effect upon Little Garve, Bridge over Black Water (SM2720). Overall, no likely significant effects have been identified.

- 8.3.4 The assessment identified no impact on the settings of the other six designated heritage assets.

Decommissioning

- 8.3.5 Effects during decommissioning would be less than those during the construction phase. Methods and mitigation will follow best practice and guidance at the time of decommissioning and a decommissioning environmental management plan will be agreed with the relevant consultees at that time.

Cumulative Effects

- 8.3.6 The potential effects of cumulative developments at operational, consented and application stage on the settings of designated heritage where minor or above effects were identified for the Proposed Development, has been undertaken. The only asset where a minor or above significance of effect was identified was upon Little Garve, bridge of Black Water (SM2720). The assessment identified no cumulative impacts upon this asset.

9 Noise and Vibration

- 9.1.1 Chapter 12 of the EIA Report evaluates the effects of noise due to the Proposed Development. The construction, operation and decommissioning of wind farms can have an impact on nearby noise sensitive receptors (NSRs) (i.e. properties which are potentially sensitive to noise such as residential homes).

9.2 Baseline

The noise assessment concludes that wind turbine noise immission levels from the Proposed Development would be within the levels recommended in national guidance and there would be no significant effects.

9.2.1 Onshore wind turbine developments generally occur in rural locations where background noise levels can be low and therefore wind turbines can be audible. Noise limits are set in accordance with the guidance documents ETSU-R-97³ and the Institute of Acoustics Good Practice Guidance (IOA GPG)⁴. The noise limits are established in relation to existing background noise levels and apply to the combined cumulative noise levels from all wind farms within the study area.

9.2.2 During operation, turbines emit noise from the blades as they pass through the air. The amount of noise emitted varies depending on the wind speed. When there is little wind the turbine rotors will turn slowly and produce

³ The Working Group on Noise from Wind Farms (1996). ETSU-R-97, The Assessment and Rating of Noise from Wind Farms.

⁴ Institute of Acoustics (2013). A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise.

lower noise levels than during high wind speeds, however, background noise levels at nearby properties will also increase at high wind speeds.

- 9.2.3 13 NSRs were identified for the Proposed Development, with the closest (NSR01, Tigh Fiodha Larder Holiday Cottage) located just over 1.6km from the nearest proposed turbine.
- 9.2.4 Noise measurement devices were deployed at four properties (Tigh Fiodha, The Cottage, Station Road, Cluaran) to measure the background noise levels around the site. The locations were chosen in consultation with The Highland Council (THC).

9.3 Predicted Effects

Construction

- 9.3.1 Disruption due to construction would be localised, temporary and intermittent in nature. Predictions have shown that noise generated through construction activities would be of a minor effect. This matches typical noise limits for activities of this type without any specific mitigation being required, nevertheless several safeguards exist to control and minimise the effects of construction noise to be implemented through the outline CEMP (Technical Appendix 3.1). The residual effect from construction noise would be not significant.

Operation

- 9.3.2 Predictions for a candidate turbine (Vestas V162 7.2 MW) have been undertaken to produce a model of the noise generated during operation. There are no other wind farms, operational, proposed or otherwise, in the area that would cumulatively contribute to wind turbine noise at the assessment locations.
- 9.3.3 For all NSRs, noise levels due to the operation of the Proposed Development are predicted to be on or below the required noise limit during the daytime and night-time across all wind speeds.

10 Site Access, Traffic and Transport

- 10.1.1 Chapter 13 of the EIA Report considers the likely significant effects on transport and access associated with the construction, operation and decommissioning of the Proposed Development.
- 10.1.2 The site would be accessed from an access track leading from the A835. It is anticipated that components would be delivered to the site from the Port of Invergordon, via the A9 and A835, utilising a new turning area at Inchbae to facilitate access to the site from the north.

10.2 Baseline

- 10.2.1 The study area for the assessment of the traffic and transport impacts arising from the Proposed Development comprises the section of the A835 from Inchbae Lodge south-eastwards to the junction of the A835 and the A9.
- 10.2.2 In order to assess the impact of construction traffic on the study area, existing traffic data was obtained from the Transport Scotland and the Department for Transport (DfT) databases.

10.3 Predicted Effects

Construction

- 10.3.1 The Proposed Development would lead to increased traffic volumes on a number of roads in the vicinity of the site during the temporary 23 month construction phase.
- 10.3.2 The maximum traffic effect associated with construction of the Proposed Development is predicted to occur in months five and six of the construction programme. It is estimated that during those months, there would be an average of 355 vehicle movements each working day, of which on average 207 would be HGVs. The predicted movements during months five and six (as these are predicted to be the peak of construction traffic) were compared to the expected traffic volumes in 2028 without the Proposed Development.
- 10.3.3 Institute of Environmental Management and Assessment (IEMA) guidance sets out the level of increase in traffic that requires further assessment. The increase in traffic that would arise from the Proposed Development breaches the guidance on the A835 west of its junction with the A832 at Moy Bridge. The effects of the traffic estimated to be generated during the construction of the Proposed Development on the considerations listed above were assessed and it was concluded that the additional traffic would have

a negligible effect on the surrounding transport network, subject to appropriate measures in a Construction Traffic Management Plan (CTMP).

- 10.3.4 The movement of traffic associated with the delivery of large wind turbine components (known as Abnormal Indivisible Loads (AIL)) would require small scale and temporary remedial works at a number of locations along the identified delivery route.

Operation

- 10.3.5 Transport demand during operation would be much lower than during construction, since during operation there would be only occasional visits from maintenance or inspection vehicles. These would be unlikely to amount to more than a handful of trips per day and would therefore not be significant. The transport impacts of the Proposed Development during operation have therefore been scoped out of assessment.

Decommissioning

- 10.3.6 The number of vehicle movements generated during decommissioning would likely be lower than the number generated during construction. Mitigation measures which may need to be implemented during decommissioning would be agreed with the key stakeholders in line with best practice measures at that time.

Cumulative Effects

- 10.3.7 The effects of the increase in traffic that would arise from the Proposed Development have also been considered in combination with other developments that have planning consent but are unbuilt at the time of writing. This assessment also concluded that the additional traffic would have a negligible effect on the surrounding transport network, again subject to appropriate measures in a CTMP.
- 10.3.8 A CTMP would be prepared for the Proposed Development. The CTMP would describe measures to manage the vehicles travelling to and from the site and would be updated through the planning and construction of the Proposed Development.

With the implementation of a Construction Traffic Management Plan no significant effects are anticipated in respect of traffic and transport issues.

The Applicant will communicate and update the local community as construction progresses.

11 Socio-economics, Tourism, Recreation and Land Use

- 11.1.1 Chapter 14 of the EIA Report considers the impact of the Proposed Development on the socio-economics, recreation, tourism and land use of the area surrounding the site.

11.2 Baseline

- 11.2.1 The assessment uses a three-tiered study area which is considered appropriate for the quantitative and qualitative characteristics of the assessment. Information used for the socio-economics, tourism and recreation baseline was collected through a detailed desktop review of existing studies and datasets.
- 11.2.2 The Highlands has a higher than average proportion of its workforce in skilled trades and process, plant and machine operatives compared with Scotland and the UK. Both of these occupations are likely to include skills and services that would be required for wind farm construction and operation.
- 11.2.3 Assuming that the Proposed Development proceeds as intended by the Applicant, Gross Value Added (GVA) worth a total of £4.7 million is predicted to be generated in the local Wider Study Area (WSA) (i.e.

The Highland Council administrative area) economy during the construction, and commissioning phase. This is equivalent to £2.4 million per year over the construction period.

- 11.2.4 The VisitScotland research and insight statistics for 2023 shows that the tourism related turnover in the Highlands for 2023 was £762 million. Tourism employment for the Highlands in 2022⁵ equated to 18,000 jobs, representing 14.8% of all employment.
- 11.2.5 There are no formal Rights of Way (RoW) or Core Paths through the site, however the Little Wyvis hill trail(s) are accessed via Silverbridge within the north west of the site. The tracks are not considered RoW or core paths within the highlands but provide recreational access for both Ben Wyvis and Little Wyvis.

11.3 Predicted Effects

Construction

- 11.3.1 The construction phase of the Proposed Development would result in an increase in employment, as well as economic effects resulting from expenditure on items such as site preparation including forestry services (small magnitude due to limited amount of felling proposed), construction and maintenance of access roads, purchase and delivery of materials, plant, equipment and components. These effects would be positive, but not significant.
- 11.3.2 There may also be positive effects on accommodation providers and food and drink business during construction as a result of an increase in spending in the area, but likewise there may be adverse effects due to competition for accommodation. Both the potential positive and adverse effects would not be significant.
- 11.3.3 Identified accommodation businesses in the local area depend on access via the A835 which will be temporarily altered. Construction effects on accommodation businesses are therefore considered to be a Moderate (Significant, adverse) effect which is reduced to Minor due to the intermittent/temporary nature of the works and because impacts on the roads would be managed by the implementation of a Construction Traffic Management Plan (CTMP).
- 11.3.4 Users of recreational routes and areas, including walkers, cyclists, anglers etc, may experience temporary non-significant (except effects on the A835 (NC500) at Garve and Gorstan) adverse effects as a result of construction activities. Construction effects on the A835/NC500 would be considered to be Major, reducing to Moderate (Significant, adverse) due to the temporary nature of the construction works and because impacts on the roads would be managed by the implementation of a CTMP to maintain access, safety and movement of traffic alongside other recreational road users (i.e. long-distance cyclists) along the identified extent of the route.
- 11.3.5 Current land uses within the site (hill-walking, mountain-biking, wildlife observation etc.) would be affected throughout the construction period by construction activities. A CTMP will be active during the construction phase which may impact pedestrian access to the site via the A835. This effect would be reduced from significant to non-significant due to the temporary nature of the works.

The Applicant encourages local businesses and potential suppliers to register with them to ensure they are informed of the procurement process for construction. The Applicant will also hold 'meet the buyer' days ahead of construction should the application be consented.

Operation

- 11.3.6 The Proposed Development would require a small team of personnel to provide servicing, maintenance, repairs and other operational support. It is estimated that an annual average of three permanent locally-based direct jobs are likely to be created by the Proposed Development during its operational phase. This effect would be beneficial and not significant on employment and the local economy.
- 11.3.7 During the operational phase users of the Core Path network to the west and south of the site may experience a minor, and not significant, effect as a result of views of the Proposed Development from the recreational routes. Operational effects on recreational users of Ben Wyvis trails and summits are considered to be Moderate (Significant, adverse) reducing to Minor due to enhancement of the trail network via the provision of a new track between turbines 9 and 5.
- 11.3.8 Evidence shows that wind farms have a negligible effect on tourism, with no relationship between wind farm development and tourism employment within a local authority and, in some cases, tourism levels

⁵ Note – the VisitScotland research and insight statistics for 2023 did not include values for 2023 tourism employment, 2022 equivalent provided.

increasing alongside the number of wind farms being developed. Therefore, no impact on tourism assets or the tourism economy is anticipated as a result of the operation of the Proposed Development.

- 11.3.9 The Applicant commissioned Planning Aid Scotland to conduct an independent engagement process with members of the public to inform an Outline Outdoor Management and Enhancement Plan for the Proposed Development (Technical Appendix 14.2). The engagement process has identified a number of opportunities for enhancing biodiversity and outdoor spaces, including improvements to pathways and signage. The addition of information boards, benches, and wildlife hides could offer further learning opportunities, and wildlife management and the planting of native species could enrich the natural environment, enhancing the experience for both the local community and visitors.

Cumulative Effects

- 11.3.10 Cumulative effects in relation to socio-economics could arise as a result of competition for materials, workers, accommodation and further supply chain products in relation to the construction of other prospective or consented projects. Cumulative effects could also occur if multiple developments were under construction in close proximity to one another, impacting tourism amenity or restricting recreational access. However, the proximity of the Proposed Development and other prospective projects to nearby cities means that no significant adverse cumulative effects in relation to socio-economics, recreation or tourism are anticipated.
- 11.3.11 The landscape and visual assessment (LVIA) concludes that significant cumulative effects would arise at four of the LVIA viewpoints (3 within the Local Area of Influence (LAI)). There are no significant cumulative effects on LVIA viewpoints that are located on core paths – however, three of the significant cumulative effects found in the viewpoint assessment are in locations accessed by walkers. Significant effects are to varying degrees and largely correspond with proximity/orientation and elevation from the proposed development (Viewpoints 4, 5 and 6 respectively).
- 11.3.12 The locale of wind farms currently under application could also result in further local community benefits, through the implementation of the Onshore Wind Sector Deal for Scotland (Scottish Government, 2023). This could increase the volume of community benefits received locally, both in terms of investment and employment, which could maximise the local beneficial effects of the proposed and cumulative developments. Despite significant cumulative LVIA impacts, the chapter details several studies showing no link between the development of wind farms and a reduction in tourism.

12 Aviation

- 12.1.1 Chapter 15 of the EIA Report describes the likely effects of the Proposed Development on aviation related infrastructure.

12.2 Baseline

- 12.2.1 The Proposed Development is located approximately 36km to the west-north-west of Inverness Airport and lies within Class G unregulated airspace. It is just to the south of Class E regulated airspace in the form of an airway that extends from Inverness to Stornoway, designated as the Moray Control Area.
- 12.2.2 In military terms, the Proposed Development is well clear of any military airfields or facilities, the closest is RAF Lossiemouth, 78 km to the east. The site is also just outside the boundary of the Highlands Restricted Airspace (HRA), an area used by military aircraft for tactical low flying.

12.3 Predicted Effects

- 12.3.1 The assessment of effects on aviation and radar considers the potential for technical impacts and the operational acceptability of any such impacts. Rather than following an EIA process of assessing the significance of effects, the primary consideration is the actual or likely position of the specific aviation stakeholders. The assessment of effects on these receptors is therefore one of technical analysis and

consultation and seeks to identify if any identified effects are likely to be 'acceptable' or 'not acceptable' to the asset owner, and if not acceptable, to establish any potential technical mitigation solutions.

- 12.3.2 Consultation was undertaken with the Ministry of Defence (MOD), through the Defence Infrastructure Organisation (DIO); Highlands and Islands Airports Ltd (HIAL); and NATS Safeguarding.
- 12.3.3 NATS Safeguarding confirmed that the Proposed Development would not have an impact on their aviation interests or infrastructure.
- 12.3.4 The Proposed Development lies within the area that HIAL require an assessment of the effect of the Proposed Development on Instrument Flight Procedures at Inverness Airport. This assessment has been instructed by the applicant and will be provided to HIAL when it is completed.
- 12.3.5 Radar modelling against both the main primary surveillance radar (PSR) and the Terma Radar has been undertaken, with the results showing that all of the turbines will be visible to both radars and will have the potential to impact both radars. As the mitigation solution is already being installed, radar mitigation can be subject to a suitably worded planning condition to protect and safeguard operations at Inverness.
- 12.3.6 The Civil Aviation Authority (CAA) have approved a reduced lighting scheme for the Proposed Development. such that Turbine 1, Turbine 4, Turbine 7, and Turbine 9 are lit. All turbines will also be fitted with infra-red lighting⁶ for Ministry of Defence (MoD) purposes (details are set out in Technical Appendix 15.1).

13 Other Considerations

13.1 Introduction

- 13.1.1 Chapter 16 of the EIA report evaluates the effects of the Proposed Development on other environmental considerations, including shadow flicker, carbon balance, telecommunications, major accidents and disasters; and population and human health.

13.2 Shadow Flicker

- 13.2.1 Shadow flicker may occur when the sun passes behind the blades of a wind turbine and casts a shadow over neighbouring properties. As the blades rotate, the shadow of the blades flicks on and off, an effect known as shadow flicker. The effect can only occur inside buildings, where the flicker appears through a window opening.
- 13.2.2 The shadow flicker study area is defined as 11 rotor diameters plus 100 m micro-siting, which equates to 1,882m. Three properties sit within the shadow flicker study area and were assessed for shadow flicker effects.
- 13.2.3 Based on professional judgement, and in line with relevant guidance from other countries, the shadow flicker assessment has adopted a criterion of 30 hours or more of shadow flicker in one year as a significant effect⁷. Where less than 30 hours of shadow flicker is predicted to occur in one year at a particular property, this is considered to be not significant.
- 13.2.4 When assuming 365 days of sunshine and continuous and sufficient wind to rotate the blades, the shadow flicker assessment determined that none of the properties could potentially experience over 30 hours of shadow flicker effect per year. When historic meteorological data was added to the model to add the 'realistic' sunshine hours, the annual hours of shadow flicker anticipated at all properties was further reduced.
- 13.2.5 The Applicant is committed to promptly investigating any complaints of shadow flicker and taking appropriate action as required. This would comprise an investigation which considers the weather conditions at the time of the alleged shadow flicker, to determine which turbines were creating the effect and the extent of the shadow flicker created. If a loss of amenity is confirmed, then the shadow flicker control module would be activated. The module controls the turbine causing the shadow flicker which would be programmed to shut down on specific dates at specific times when the sun is bright enough, there is sufficient wind to rotate the blades, and the wind direction is such that nuisance shadow flicker

⁶ Infrared lighting is not visible to the naked eye.

⁷ There is no guidance in Scotland or the UK that specifies this as a limit. Northern Ireland's Best Practice Guidance to PPS18: Renewable Energy (Department for the Environment, 2009) sets the 30hr limit which we use as a suggested level here.

could occur. Following implementation of this mitigation, no significant effects would result for shadow flicker.

13.3 Television and Telecommunications

- 13.3.1 Effects on television and radio signal have been scoped out of assessment as digital television is unlikely to be affected by wind turbines compared to analogue television and interference to the radio signal is unlikely to noticeable affect audio signal.
- 13.3.2 Consultation was undertaken with telecommunication providers who confirmed that the Proposed Development would have no impact on their links.

13.4 Climate and Carbon Balance

It is estimated that the Proposed Development would displace approximately 3.8 million tonnes of carbon dioxide (CO₂) in its lifetime, compared to the amount of CO₂ fossil fuels would have produced to generate the same amount of electricity. It is also expected to take approximately 1.6 years to offset the CO₂ that is released from the construction of the wind farm.

- 13.4.1 Onshore wind farms by their very nature tackle the issue of climate change. The 'Carbon Calculator' is the Scottish Government's tool to support the process of determining the carbon impact of wind farm developments in Scotland (adverse and beneficial), which in turn establishes any effect on climate.
- 13.4.2 The Proposed Development is expected to take approximately 19 months (1.6 years) to offset the carbon released to the atmosphere (the CO₂ debt) from the construction of the wind farm. Following this the Proposed Development would in effect be in a net gain for the remaining 48.4 years of its proposed operational life, contributing to national CO₂ reduction targets.

13.5 Major Accidents and Disasters

- 13.5.1 The vulnerability of the Proposed Development to major accidents and natural disasters, such as flooding, sea level rise, or earthquakes, is considered to be low due to its geographical location and the fact that its purpose is to ameliorate some of these issues.
- 13.5.2 With regard to risks of accidents during the construction phase, the construction works for the Proposed Development would be undertaken in accordance with primary health and safety legislation, including the Health and Safety at Work Act 1974 and the Construction (Design and Management) (CDM) Regulations 2015 which would include a requirement to produce emergency procedures in a Construction Phase (Health & Safety) Plan in accordance with the Regulations.
- 13.5.3 Appropriate warning signs would be installed concerning restricted areas of the site such as the substation compound, switchgear and metering systems. All on-site electrical cables would be buried underground with relevant signage.
- 13.5.4 Monitoring systems and protocols are in place to monitor weather conditions at the site of wind turbines and to monitor the condition of the turbines themselves, for example, re-starting turbine blades in a controlled manner following an icy period to prevent ice-throw.

14 Summary of Significant Effects

- 14.1.1 The EIA for the Proposed Development has been carried out in accordance with regulatory requirements and guidance on good practice. The findings of the surveys undertaken, in addition to consultation, have informed the design process and assessment. Design modifications and pre-construction, construction and operational mitigation have been implemented to remove and reduce significant adverse effects.
- 14.1.2 Some significant adverse effects remain on the landscape and visual resource as these effects cannot be mitigated further given the inherent nature of the Proposed Development, however they have been reduced to the lowest practical level through the iterative design process. It is important to note, however, that landscape and visual assessments tend to focus on those locations and receptors where significant effects

may arise. There are large parts of the 45 km study area where there will be no visibility of the Proposed Development at all or very limited visibility.

15 Next Steps

- 15.1.1 The ECU will consider the Section 36 application and the findings of the EIA. Before making a decision on the application, the ECU will consult a number of consultees including THC, NatureScot and SEPA, and will consider all representations received from other parties including members of the public.
- 15.1.2 Any public representations to the application may be submitted via the ECU website at www.energyconsents.scot/Register.aspx; by email to the Scottish Government, Energy Consents Unit mailbox at representations_mailbox@gov.scot; or by post to the Scottish Government, Energy Consents Unit, 4th Floor, 5 Atlantic Quay, 150 Broomielaw, Glasgow, G2 8LU, identifying the proposal and specifying the grounds for representation.

16 References

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