



Clune Wind Farm

Scoping Report

Author	RES
Date	05 February 2024
Ref	405.064807.00001

This document (the “Report”) has been prepared by Renewable Energy Systems Ltd (“RES”). RES shall not be deemed to make any representation regarding the accuracy, completeness, methodology, reliability or current status of any material contained in this Report, nor does RES assume any liability with respect to any matter or information referred to or contained in the Report, except to the extent specified in (and subject to the terms and conditions of) any contract to which RES is party that relates to the Report (a “Contract”). Any person relying on the Report (a “Recipient”) does so at their own risk, and neither the Recipient nor any person to whom the Recipient provides the Report or any matter or information derived from it shall have any right or claim against RES or any of its affiliated companies in respect thereof, but without prejudice to the terms of any Contract to which the Recipient is party.

This page is intentionally left blank

Contents

Glossary and Abbreviations.....	i
1. Introduction.....	1
2. Environmental Impact Assessment	4
3. Site Description	7
4. Description of the Development	9
5. Planning Policy Context	15
6. Landscape and Visual.....	17
7. Cultural Heritage and Archaeology.....	38
8. Ecology	49
9. Ornithology	72
10. Geology, Hydrology and Hydrogeology.....	89
11. Transport and Access.....	98
12. Acoustics	103
13. Socioeconomics.....	106
14. Aviation and Radar.....	112
15. Climate and Carbon Balance	114
16. Other Issues.....	117
17. Summary	125

FIGURES

Figure 3.1 - Site Location Plan

Figure 4.1 - Conceptual Site Layout

Figure 6.1 - LVIA Study Area

Figure 6.2 - Blade Tip ZTV

Figure 6.3 - Blade Tip ZTV with Landscape Planning Designations

Figure 6.4 - Blade Tip ZTV with Wildland Areas

Figure 6.5 - Blade Tip ZTV with Landscape Character

Figure 6.6 - Blade Tip ZTV with Visual Receptors

Figure 6.7 - Cumulative Wind Farms

Figure 7.1 - Heritage Designations Within 10km

Figure 8.1 - National Designated Sites Within 10km

Figure 9.1 - VP Locations and Viewsheds

TECHNICAL APPENDICES

Appendix 7.1 - Heritage Appraisal of Designated Heritage

Appendix 10.1 - Phase 1 Peat Probing Report

Glossary and Abbreviations

Term	Definition
The applicant	Client/developer (RES).
The Proposed Development	The scheme, the development, the proposal, the development proposal, the Proposed Development scheme, the wind farm, the proposed wind farm ...etc. (Clune Wind Farm).
The Site	The project site, the site, development area, developable area, red line boundary, the proposed wind farm site.
Scoped in	Included in the proposed scope of the EIA
Scoped out	Excluded in the proposed scope of the EIA
AM	Amplitude Modulation
ATC	Automatic Traffic Count
APQ	Area of Panoramic Quality
BESS	Battery Energy Storage System
BGS	British Geological Survey
CAA	Civil Aviation Authority
CAR	Controlled Activities Regulations
CEMP	Construction Environmental Management Plan
CIEEM	Chartered Institute of Ecological and Environmental Management
CNP	Cairngorms National Park
dB	Decibel
DfT	Department for Transport
DTM	Digital Terrain Modelling
ECow	Ecological Clerk of Works
ECU	Energy Consents Unit
EIA	Environmental Impact Assessment
GDL	Gardens and Designed Landscapes
GLVIA	Guidelines for Landscape and Visual Impact Assessment
GPG	Good Practice Guide
GWDTE	Ground Water Dependent Terrestrial Environment
Ha	Hectare
HEPS	Historic Environment Policy for Scotland
HER	Historic Environment Record
HES	Historic Environment Scotland
HGV	Heavy Goods Vehicle
HMP	Habitat Management Plan

Term	Definition
HRA	Habitat Regulations Appraisal
Km	Kilometres
LA90	The A-weighted noise level exceeded for 90% of the time, often used to describe background or wind turbine noise as it excludes transient noises that affect the LAeq.
LCT	Landscape Character Type
LDP	Local Development Plan
LUPS	Land Use Planning Guidance
LVIA	Landscape and Visual Impact Assessment
m	Metre
MoD	Ministry of Defence
MW	Mega Watt
NERL	NATS (En Route)
NNR	National Nature Reserve
NPF	National Planning Policy
NSA	National Scenic Area
NVC	National Vegetation Classification
RSPB	Royal Society for the Protection of Birds
RVAA	Residential Visual Amenity Assessment
SAC	Special Area of Conservation
SBL	Scottish Biodiversity List
Scotways	Scottish Rights of Way and Access Society
SEPA	Scottish Environment Protection Agency
SLA	Special Landscape Area
SM	Scheduled Monument
SNH	Scottish Natural Heritage
SPA	Special Protection Area
SPP	Scottish Planning Policy
SSSI	Site of Special Scientific Interest
THC	The Highland Council
VP	Vantage Point
WLA	Wild Land Area
ZTV	Zone of Theoretical Visibility

1. Introduction

1.1. Background and Context

- 1.1.1. RES ('the applicant') is intending to apply to Scottish Ministers for consent under Section 36 of the Electricity Act 1989 for the construction and operation of a wind farm (the 'Proposed Development') on land approximately 27km south-east of Inverness and approximately 13km north-west of Aviemore. The Proposed Development is within the administrative boundary of The Highland Council (THC) near the village of Tomatin on the Clune Estate, Scottish Highlands.
- 1.1.2. The Proposed Development will have an installed generational capacity in excess of 50 megawatts (MW). It is anticipated that the Proposed Development will consist of up to 27 wind turbines with a likely maximum blade tip height of 200m. An associated battery energy storage system may be installed.
- 1.1.3. The Proposed Development will constitute a Schedule 2 development as provided for by the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (the 'EIA Regulations') by virtue of being a generating station requiring Section 36 consent but which is not Schedule 1 development. The applicant considers that the Proposed Development would be of a size and nature that has the potential for significant environmental effects. The applicant therefore proposes to undertake an Environmental Impact Assessment (EIA) and submit an EIA Report in support of the Section 36 application.

1.2. Purpose of the Scoping Report

- 1.2.1. Undertaking an EIA Scoping Study is regarded as good practice¹ and is considered to be an important step in the EIA as it allows all parties involved in the process to agree on key environmental issues relevant to the Proposed Development and to agree the methodology used for their assessment. The Scoping stage seeks to engage the determining authority and other stakeholders at an early stage in the planning process; and ensures that key opinions, based on local understanding, are identified.
- 1.2.2. The specific aims of this Scoping Report are:
 - to identify the technical subject areas that may be subject to significant environmental effects, as a result of the Proposed Development proceeding, and which would therefore require further study;
 - to identify the technical subject areas that are unlikely to be subject to significant environmental effects and can therefore be scoped out of further study;
 - to provide a basis for the consultation process to agree the scope and content of the EIA with the Energy Consents Unit (ECU) of the Scottish Government;

¹ SNH (2013) A Handbook on Environmental Impact Assessment 4th Edition

- to provide a basis for the agreement of methodologies to undertake required studies with the ECU, based upon currently available baseline data; site characteristics and best practice across the technical disciplines; and
- provide all statutory consultees and stakeholders as listed in Appendix 1.1 with an opportunity to comment on the Proposed Development at an early stage.

1.2.3. In making its formal Scoping Opinion, under Regulation 17(4)(a) of the EIA Regulations, the ECU must consult with a number of consultees and incorporate their views within the Scoping Opinion.

1.2.4. Upon receipt of the Scoping Opinion the applicant will continue the EIA process that will lead to the preparation of an EIA Report, paying due cognisance to the findings and responses received. In the 2017 version of the Environmental Impact Assessment (EIA) Directive (2014/52/EU), scoping remains voluntary, however, if a Scoping Opinion is requested, there is a requirement to base the EIA on the Scoping Opinion received.

1.3. Notice of Intention

1.3.1. The applicant hereby gives the ECU notice in writing that it intends to make an application for consent (as detailed above), and to accompany such an application with an EIA Report. This notice, made pursuant to Regulation 17 of the EIA Regulations, includes information necessary to identify the location, the nature and purpose of the Proposed Development, and indicates the main environmental consequences to which the applicant proposes to refer to in its EIA.

1.4. The Applicant

1.4.1. RES is the world's largest independent renewable energy company active in onshore and offshore wind, solar, energy storage and transmission and distribution. At the forefront of the industry for 41 years, RES has delivered more than 23GW of renewable energy projects across the globe and supports an operational asset portfolio exceeding 12GW worldwide for a large client base.

1.4.2. Understanding the unique needs of corporate clients, RES has secured 1.5GW of power purchase agreements (PPAs) enabling access to energy at the lowest cost. RES employs more than 2,500 people and is active in 10 countries.

1.4.3. Based in the Glasgow office, RES have developed, constructed and operated wind farms across Scotland since 1993. This includes the development and/or construction of 21 wind farms in Scotland with a total generation capacity of 597MW.

1.4.4. RES have recently completed the construction of Blary Hill Wind Farm in Argyll and Bute and have previously developed Aberarder Wind Farm and Dunmaglass Wind Farm (14km southwest of the Proposed Development), also in the Highlands.

- 1.4.5. Further information on RES can be found on its corporate website at <https://www.res-group.com>.

1.5. SLR Consulting Limited

- 1.5.1. SLR is a Registered Environmental Impact Assessor and Member of the Institute of Environmental Management and Assessment (IEMA) and holder of the EIA Quality Mark (<http://www.iema.net/qmark>). SLR is also a Registered Organisation validated by the Institute for Archaeologists (IfA), a member of the Association of Geotechnical and Geo-environmental Specialists, and a Landscape Institute (LI) Registered Practice.
- 1.5.2. The company has significant experience and expertise in the preparation of planning applications and section 36 Electricity Act applications and undertaking EIA for a wide variety of projects. SLR's environmental specialists, have the skills and relevant competency, expertise and qualifications to undertake EIA for the Proposed Development.
- 1.5.3. Further information on SLR can be found on its corporate website at <https://www.slrconsulting.com>

1.6. Project Team

- 1.6.1. SLR have been commissioned by the applicant to co-ordinate the EIA for the Proposed Development, with input from specialist consultants Savills (Planning), Atmos (Ecology, Ornithology, Hydrology and Peat), OPEN (Landscape and Visual), Pell Frischmann (Traffic and Transport), BiGGAR Economics (Socio-economics) and McMillan Consultancy (Community and Communications).

2. Environmental Impact Assessment

2.1. Approach to EIA

- 2.1.1. EIA is an iterative process which identifies the potential environmental effects that in turn inform the eventual design of the Proposed Development. It seeks to avoid, reduce, offset and minimise any adverse environmental effects through mitigation. It takes into account the effects arising during the construction, operation and decommissioning phases.
- 2.1.2. The EIA for the Proposed Development will be undertaken in accordance with the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended) (the EIA Regulations)², Circular 01/2017³(Scottish Government, 2017), the best practice guidelines of the Institute of Environmental Management and Assessment (Guidelines for Environmental Impact Assessment)⁴ published in 2004 and the Scottish Natural Heritage (SNH; now NatureScot) Handbook on EIA published in 2018. Other topic-specific specialist methodologies and good practice guidelines will be drawn on as necessary.

2.2. The EIA Report

- 2.2.1. The structure of the EIA Report will follow EIA Regulations 2017 and other relevant good practice guidance. The EIA Report will comprise the following volumes:
- Volume 1: EIA Report written text.
 - Volume 2: Figures and Visualisations.
 - Volume 3: Technical Appendices.
 - Volume 4: Non-Technical Summary.
- 2.2.2. The following supporting documentation will accompany the Section 36 application:
- Planning Statement.
 - Design and Access Statement.
 - Pre-application Consultation Report.
 - Socio-economic Report.
- 2.2.3. Volume 1 of the EIA Report will comprise of the following chapters:
- Introductory Chapters.
 - Landscape and Visual.

² Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended) (the EIA Regulations) - <https://www.legislation.gov.uk/ssi/2017/101/contents/made>

³ Scottish Government, Planning Circular 01/2017 - <https://www.gov.scot/publications/planning-circular-1-2017-environmental-impact-assessment-regulations-2017/>

⁴ Institute of Environmental Management and Assessment (Guidelines for Environmental Impact Assessment) 2004 - <https://www.thenbs.com/PublicationIndex/documents/details?DocId=267357#:~:text=Guidelines%20for%20environmental%20impact%20assessment%201%20Publication%20Year,Information%20Institute%20of%20Environmental%20Management%20and%20Assessment%20>

- Cultural Heritage.
- Ecology.
- Ornithology.
- Geology, Hydrology, Hydrogeology and Peat.
- Transport and Access.
- Acoustics.
- Climate and Carbon Balance.
- Other Considerations including Aviation and Radar.

2.2.4. Each technical chapter will include, as a minimum, the following sections:

- Introduction.
- Legislation, Policy and Guidance.
- Consultation.
- Methodology.
- Baseline.
- Assessment of Potential Effects.
- Mitigation.
- Assessment of Residual Effects.
- Assessment of Cumulative Effects.
- Summary.

2.3. EIA Report Format

2.3.1. The EIA Report will be made available online, on USB flash drive and hard copy - although in the interest of sustainability the applicant would encourage take up of the online format.

2.4. Consultation

2.4.1. The Applicant is committed to undertaking meaningful consultation with the local community and stakeholders. Albeit not a requirement for applications under Section 36 of the Electricity Act 1989, the Applicant aims to apply the principles of the consultation process recommended for 'major' planning applications as set out in The Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013 and Circular 3:2022 - Development Management Procedures. This enables the local community and all those with an interest in the proposals to have a clear opportunity to view the proposals, and importantly provide comment and feedback.

- 2.4.2. During the development period, a project website will be developed, with at least two rounds of in-person public exhibitions taking place. These events will be advertised locally, with a phone number, email and postal address established to receive comment and feedback. It is also anticipated that meetings will take place with the neighbouring community councils, local residents and interested parties.
- 2.4.3. Consideration will be given to ensure that engagement methods reflect varying levels of access to technology.

3. Site Description

3.1. Site and Surrounds

- 3.1.1. The area bounded by the site boundary (red line) on **Figure 3.1** shall be referred to as ‘the Site’. The Site is located on elevated open moorland, located approximately 27km south-east of Inverness, and approximately 3km south of the village of Tomatin.
- 3.1.2. The Site comprises predominately managed upland grouse moorland with agricultural fields and mixed woodland in lower altitude areas. Clune Burn and Allt Lathach traverse the Site along with other smaller tributaries running into the River Findhorn that lies to the north-west, out with the Site boundary.
- 3.1.3. The Site inclines generally in a north-east to south-west direction, reaching the highest point of the Site, 750m, at Carn Dubh’Ic an Deoir. The northern edge is bounded by the River Findhorn and the northeastern boundary by the A9. The Site can be approximately divided by four main watercourses that flow north into the River Findhorn: Allt Phris, Clune Burn, Allt Lathach, and Wester Strathnoon Burn.
- 3.1.4. The Site is mainly used as a grouse moor, managed by grazing livestock such as sheep, and regular burning of mature heather to provide new growth. The Site also consists of small patches of grassland along the northern boundary used by grazing livestock, a block of conifer plantation in the north-east, and an area of ancient deciduous woodland on the banks of the Allt Phris.

3.2. Cumulative Sites

- 3.2.1. The location of cumulative sites within 35 km of the Site are shown on **Figure 6.7** and listed in **Table 3.1**. The rationale for these sites is explained in Section 6: Landscape and Visual of this Scoping Report.

Table 3.1: Cumulative Sites within 35 km

Site Name	Status	Distance from nearest turbine	Number of Turbines	Blade Tip Height
Glen Kyllachy	Operational	4.7	20	110
Farr	Operational	6.4	40	102
Balnespick	Scoping	9.5	9	200
Aberarder	Under Construction	11.0	12	130
Dunmaglass Estate	Operational	11.4	33	120
Tom nan Clach Extension	Application	13.2	7	149.9
Tom nan Clach	Operational	13.4	13	125

Site Name	Status	Distance from nearest turbine	Number of Turbines	Blade Tip Height
Moy	Operational	13.7	20	126.5
Lethen	Application	16.8	17	185
Corriegarth 2	Consented	19.2	16	149.9
Corriegarth	Operational	19.7	23	120
Easter Aberchalder	Application	20.3	1	68
Balmore	Scoping	23.4	8	220
Cairn Duhie Redesign	Application	26.2	16	149.9
Cloch	Consented	26.4	36	149.9
Stronelaig	Operational	26.8	66	135
Ourack	Application	29.3	18	180
Dell	Consented	29.8	14	130.5
Dell Redesign	Scoping	29.9	9	200
Belladrum	Consented	30.6	1	60.7
Berry Burn	Operational	33.9	29	100
Hill of Glaschyle	Operational	34.3	12	99.91
Berry Burn II	Consented	36.2	9	149.9

4. Description of the Development

4.1. Need for Development

- 4.1.1. The UK and Scottish Government have made a number of international and domestic commitments in respect of reducing emissions of greenhouse gases to combat climate change and commitments to renewable energy generation.
- 4.1.2. In May 2019, the Scottish Government formally declared a climate emergency, stating that:
“There is a global emergency. The evidence is irrefutable. The science is clear. And people have been clear: they expect action.”
- 4.1.3. The declaration of a Climate Emergency resulted in the Climate Change (Emissions Reduction Target) (Scotland) Act 2019⁵. This commits Scotland to a legally binding target for net-zero emissions of all greenhouse gases by 2045 at the latest alongside a series of ambitious and challenging interim targets for 2020, 2030 and 2040 towards this net-zero target.
- 4.1.4. At the COP26 event held in Glasgow in November 2021 there was worldwide consensus on the severity of the current climate emergency, in particular recognition of the loss and damage that the current impacts of climate change are already having.
- 4.1.5. A large increase in the deployment of this renewable energy technology is supported through a number of UK level policy documents including the latest UK Energy White Paper (2020) and Net Zero Strategy (2021). Scottish Government policy commitments are also clear - most recently expressed in the Onshore Wind Policy Statement (OWPS) and in the adopted National Planning Framework 4 (NPF4) which will be material to the energy and national planning policy positions to be considered for the determination of the application.
- 4.1.6. The key points which can be drawn from the OWPS include:
- The central requirement for a rapid transition to net zero and the crucial role of further onshore wind development in achieving legally binding targets, especially through the 2020s.
 - Unequivocal Scottish Government policy support for the future role of onshore wind.
 - The urgency of the Climate Emergency and the scale of the necessary ambition - there is express recognition in the OWPS of the need for *“decisive and meaningful action”*, *“further and faster”* delivery and that continued deployment of onshore wind will be key to ensuring our 2030 targets are met. The OWPS sets out a new ambition for the deployment of onshore wind in Scotland of *“A minimum installed capacity of 20 GW....by 2030.”*

⁵ Climate Change (Emissions Reduction Target) (Scotland) Act 2019 - <https://www.legislation.gov.uk/asp/2019/15/enacted>

- *“This ambition will help support the rapid decarbonisation of our energy system, and the sectors which depend upon it, as well as aligning with a just transition to net zero whilst other technologies reach maturity.”*
- The OWPS is clear that rapid transformation is required across all sectors of our economy and society in order to meet climate targets. *“Meeting the ambition of a minimum installed capacity of 20 GW of onshore wind in Scotland by 2030 will require taller and more efficient turbines. This will change the landscape.”*

4.1.7. The Proposed Development is needed to meet these climate change and renewable energy commitments, to provide greater energy security and to meet rising electricity demands.

4.2. The Proposed Development

4.2.1. This section describes the Proposed Development and provides information on its location, physical characteristics, proposed infrastructure components and design. The turbine and infrastructure layout will be subject to an iterative design process as part of the EIA.

4.2.2. Careful consideration has been given to the provisional layout of the Proposed Development, and design will evolve as the EIA progresses - taking into account environmental and technical constraints, and feedback obtained during consultation with key consultees and the local community.

4.2.3. It is currently anticipated that the Proposed Development would consist of up to 27 wind turbines with a likely maximum blade tip height of 200m and an associated battery energy storage system. An indicative layout of the Proposed Development is shown on **Figure 4.1** - Conceptual Site Layout. Although the Proposed Development will be optimised through the EIA and conceptual design process, based on preliminary feasibility work, it is anticipated that proposed infrastructure would likely include the following components:

- up to 27 three-bladed horizontal axis wind turbines of up to 200m tip height. The turbines would be nominally rated at 7.2MW;
- permanent wind turbine foundations;
- associated low to medium voltage transformers and related switch gear would be located at each wind turbine;
- hardstand areas for erection of cranes at each wind turbine location;
- a network of onsite tracks including an access track, Site entrance from the public road network, water crossings, passing places and turning heads;
- a substation compound containing electrical infrastructure, control building, welfare facilities and a communications mast;
- a possible Battery Energy Storage System (BESS) compound;
- a network of buried electrical and communication cables to be routed alongside the access tracks;
- borrow pits (dependent on availability of stone within the Site); and
- temporary construction compound(s).

4.3. Wind Turbines

- 4.3.1. The Proposed Development will have an installed capacity of greater than 50MW. A range of wind turbine models may be suitable for the Proposed Development, and the choice of candidate turbine model for this application will be dependent on wind analysis and the findings of the relevant technical and environmental assessments to be undertaken. The final choice of turbine model for construction will be dependent on the turbine economics and available technology at the time of procurement. For the purpose of scoping, turbines with a 162m rotor diameter, 119m hub height and height to blade tip are being considered.
- 4.3.2. **Table 4.1** shows the current turbine specifications being considered, as well as the turbine coordinates for the layout shown in **Figure 4.1**. This layout has been developed through an iterative process which has avoided known potential impacts as far as possible. The layout will continue to be refined during the EIA process and through further consultation. Any amendments to the design scoped here are unlikely to increase the likelihood of a significant effect. However, should any changes occur that are likely to result in a significant or unknown effect on an important feature previously scoped out, then this feature will be scoped back into the EIA process. Any changes will first be discussed with the relevant consultees, to ensure that they are in agreement before altering the scope of the EIA.

Table 4.1: Turbine Coordinates and Indicative Specifications

Turbine ID	Easting	Northing	Tip Height (m)
Turbine 1	281503	820204	200
Turbine 2	281064	819603	200
Turbine 3	280649	820015	200
Turbine 4	280998	820461	200
Turbine 5	281413	821208	200
Turbine 6	280667	821205	200
Turbine 7	280405	820703	200
Turbine 8	280086	820105	200
Turbine 9	279504	820376	200
Turbine 10	279925	821011	200
Turbine 11	280277	821670	200
Turbine 12	279906	822103	200
Turbine 13	276704	821974	200
Turbine 14	279098	820805	200
Turbine 15	278484	820886	200
Turbine 16	278895	821585	200

Turbine ID	Easting	Northing	Tip Height (m)
Turbine 17	279658	821551	200
Turbine 18	278711	822281	200
Turbine 19	278221	822567	200
Turbine 20	277940	822021	200
Turbine 21	278112	821315	200
Turbine 22	277579	821122	200
Turbine 23	277398	821815	200
Turbine 24	277240	822509	200
Turbine 25	276952	821464	200
Turbine 26	279144	822649	200
Turbine 27	279249	822092	200

4.4. Electrical Layout and Grid Connection

- 4.4.1. The specific configuration of the grid connection between the Proposed Development and the grid network is not yet finalised. The grid connection will be subject to a separate application under Section 37 of the Electricity Act 1989⁶.
- 4.4.2. Turbines will be electrically connected to each other via inter-array cable circuits. A substation, which would house transformer(s) and associated switchgear, would convert the electricity generated by the turbines onto an appropriate voltage for onward transmission onto the National Grid.

4.5. Access

- 4.5.1. The wind turbine components would be delivered to the Site using the existing public road network, specifically the A9 and the U2856 minor road.
- 4.5.2. Construction traffic access for the Proposed Development will be accessed directly from the U2856 (Slochd - Tomatin road) from a new priority access junction. Loads will then proceed to the proposed turbine locations using upgraded and new access tracks.

4.6. Battery Storage

- 4.6.1. Energy storage such as the use of batteries is being considered for inclusion as part of the Proposed Development. Battery storage would comprise a number of units with ancillary equipment such as inverters. The batteries could store excess power generated by the Proposed Development and release into grid when the output from the Proposed Development falls due to decreased windspeed.

⁶ The Electricity Act (2009), Section 37 - <https://www.legislation.gov.uk/ukpga/1989/29/section/37>

4.7. Borrow Pits

- 4.7.1. It is anticipated that borrow pits would be included as part of the Proposed Development. A review of suitability of materials on the Site will be undertaken and borrow pit search areas will be identified as part of the Borrow Pit Assessment. If appropriate areas are identified, a description of likely materials, borrow pit size and the ability to supply appropriate materials for the construction of the Proposed Development will be included.
- 4.7.2. Material for the construction of onsite access tracks would, where possible, be won from borrow pits. This approach would minimise transportation movements of stone to Site. The location and design of borrow pits will be defined as part of the EIA process and Site design.
- 4.7.3. Should a suitable borrow pit search area not be identified within the Site, the applicant will need to make provision for the import of aggregate from a suitable offsite source.

4.8. Construction Phase

- 4.8.1. It is anticipated that the construction of the Proposed Development would take approximately 24 months.
- 4.8.2. All statutory legislation will be fully complied with during construction and Scottish Environmental Protection Agency (SEPA) best practice guidance and Pollution Prevention Guidelines⁷ will be adhered to.
- 4.8.3. Construction mitigation and environmental protection measures will be implemented via a Construction Environmental Management Plan (CEMP). In the event that the consent application for the development is approved, the CEMP will be issued to the Planning Authority for approval in consultation with NatureScot, prior to the commencement of construction work. An Outline CEMP will be prepared as part of the EIA Report and will include information on specific environmental requirements and construction good practice that will likely be included in the construction phase.
- 4.8.4. Relevant licenses, such as a Construction Site License, Controlled Activities Regulation (CAR) Licenses⁸, Simple License etc will be applied for as required prior to construction commencing.

4.9. Operational Phase

- 4.9.1. The assessments undertaken to inform the EIA will consider the operational phase of the Proposed Development as being 40 years.
- 4.9.2. Routine operational and maintenance work would be carried out as necessary.

⁷ Scottish Environmental Protection Agency, Pollution Prevention and Control - <https://www.sepa.org.uk/regulations/pollution-prevention-and-control/>

⁸ Scottish Environmental Protection Agency, Controlled Activities Regulation (CAR)- <https://www.sepa.org.uk/media/34800/introduction-to-the-controlled-activities-regulations.pdf>

4.10. Decommissioning Phase

- 4.10.1. At the end of the operational life, the Proposed Development would be decommissioned, or an application may be submitted to extend the life or repower the Proposed Development. The decommissioning period would take up to one year. Decommissioning effects would likely be similar to or less than those be assessed during construction.
- 4.10.2. The final decommissioning approach would be agreed with THC and other appropriate regulatory authorities in line with best practice guidance and requirements of the time. This would be done through the preparation and agreement of a Decommissioning and Restoration Plan (DRP). Should the Proposed Development gain consent, it is common for the financial provision for decommissioning to be in place before construction commences.
- 4.10.3. Over the period of operation of the wind farm it is recognised that there are likely to be changes in legislation and guidance, environmental designations, the status/condition of sensitive environmental receptors and stakeholder objectives that may affect decommissioning and restoration methodologies. The detailed DRP would reflect the scientific knowledge and best practice current at the time of decommissioning and restoration.
- 4.10.4. A high-level assessment of the decommissioning of the Proposed Development will be undertaken as part of the EIA, as at this stage the future baseline conditions cannot be predicted accurately and both the proposals for repowering/decommissioning and the future regulatory context are unknown. As decommissioning is in essence a reversal of the construction process, for a shorter period, the effects of decommissioning can in general be anticipated to be no greater than those arising from construction.

5. Planning Policy Context

5.1. Introduction

- 5.1.1. The EIA Report will provide an overview of relevant legislative and planning policy context within each topic chapter. Each assessment will have regard to national and local policy documents, where relevant. However, it is not proposed to include a dedicated chapter on Planning Policy Context in the EIA Report.
- 5.1.2. Instead, it is proposed that a separate Planning Statement will be submitted with the Section 36 application. The Planning Statement will provide an assessment of the Proposed Development in relation to the Development Plan and other relevant material considerations, before weighing up the planning case for the proposals and providing a conclusion on the overall acceptability of the Proposed Development.
- 5.1.3. Whilst the Planning Statement will not form part of the EIA Report, it will be informed by the conclusions of the EIA Report in assessing the Proposed Development against the provisions of the Development Plan and other relevant material considerations.

5.2. National Policy Considerations

- 5.2.1. The Planning Statement will consider the Proposed Development against a range of planning and energy policy documents, having regard to their status at the time of application submission. At this stage, the key documents that will be assessed within the Planning Statement are likely to comprise, but not necessarily be limited to, the following:-
 - The legislative context to the legally binding net zero greenhouse gas reduction targets, including consideration of progress towards attainment of these targets;
 - Consideration of the Electricity Act 1989 and Schedule 9,
 - National Planning Framework 4 (2023), as the national element of the Development Plan;
 - Highland-wide Local Development Plan (2012), as the adopted Local Development Plan for Highland and associated Supplementary Guidance particularly the Onshore Wind Supplementary Guidance;
 - The Onshore Wind Policy Statement (2022); and
 - Draft Energy Strategy and Just Transition Plan (2023); currently in draft format at the time of writing it is expected this document will be approved by the time of application submission.

5.3. Questions for Consultees

- 5.3.1. Q5.1. Are consultees in agreement that national policy considerations and development plan policy be identified and assessed in the Planning Statement and that there is consequently no need to include a dedicated chapter on Planning and Energy Policy Context Chapter in the EIA Report?

6. Landscape and Visual

6.1. Introduction

- 6.1.1. This section of the Scoping Report sets out the proposed methodology and approach to be applied in the production of the Landscape and Visual Impact Assessment (LVIA) for the Proposed Development. It also presents the suggested scope of the LVIA in terms of those landscape and visual receptors to be scoped in and scoped out of the assessment process. Justification of the suggested scope is presented through a preliminary assessment of the relevant receptors in respect of their potential to be significantly affected by the Proposed Development.
- 6.1.2. The purpose of the LVIA is to identify and record the potential effects that the Proposed Development may have on the landscape and visual resource, taking into account effects on the landscape elements of the Site; the landscape character of the Site and surrounding area; areas that have been designated for their scenic or landscape-related qualities; Wild Land Areas and views from various locations such as settlements, routes, hilltops and other sensitive locations. The potential cumulative effects that may arise from the addition of the Proposed Development to other wind farms will also be considered.
- 6.1.3. The LVIA will consider the potential effects of the Proposed Development during the following development stages:
- construction and decommissioning of the Proposed Development; and
 - operation of the Proposed Development.
- 6.1.4. Landscape and visual receptors may or may not be affected at all three development stages.
- 6.1.5. In this (Landscape and Visual) section of the Scoping Report, where distances are referenced in relation to the Proposed Development, these refer to the distance from the nearest proposed turbine, based upon current positions shown on **Figure 4.1**.

6.2. Environmental Baseline and Potential Sources of Impact

Study Area

- 6.2.1. In accordance with guidance⁹, the Study Area for the LVIA of the Proposed Development will cover a radius of 45km from the nearest turbine, as shown in **Figure 6.1**. This is generally considered to be the maximum radius within which a significant landscape and / or visual effect could arise given the height of the turbines that are being considered. Following a review of the Zone of Theoretical Visibility (ZTV) (**Figure 6.2**) for the Proposed Development, it is considered that a Detailed Study Area with a shorter radius of 25km will be appropriate to identify any potential significant landscape effects. Further justification for this shorter radius is provided later in this chapter.

Landscape Context

- 6.2.2. The Site is situated to the south of Strathdearn, across some elevated hill ground that forms part of the northeastern Monadhliath Mountains. While slightly lower in elevation than the massif to the southwest, the elevation of the Site varies between approximately 450-650m and encompasses three notable hilltops: Carn Bad an Daimh (648m AOD), Carn Ruighe Shamhraich (573m AOD), and Carn Coire na Caorach (636m AOD). While the more prominent summit of Carn Dubh (750m AOD) lies to the south of the Site.
- 6.2.3. The hill ground of the Site is limited in extent by the straths associated with the River Findhorn to the west and north and the River Dulnain to the east and south, with the hill ground to the southwest extending further (over 30km) into the Monadhliath Mountain range. The slight depression in the landscape to the north that accommodates the A9 road corridor is also an important landscape element. These straths are generally sparsely settled, apart from where the villages of Tomatin (~6km) and Carrbridge (~8km) provide more residential housing and services for the local area.
- 6.2.4. Beyond the local area, the upland landscape of the Monadhliath Mountains stretches further to the south, west and north, with Strathspey, separating these mountains from the even larger Cairngorm Mountain range to the southeast of the Site. This broader landscape is also largely unsettled with the exception of parts of Strathspey and some other smaller straths, where the larger settlements of Aviemore (~10km), Kingussie (~18km) and Grantown on Spey (~21km) are located.
- 6.2.5. There are a number of existing and consented wind farms scattered across the Monadhliath Mountains, the closest of which are Farr and Glen Kyllachy, located at distances of over 6km to the northwest of the Site. Conversely, there are no wind farms located to the south and east of the Study Area, due to the protection afforded to the Cairngorms National Park (CNP) by national planning policies in recent years.

⁹ NatureScot. (2017) Visual Representation of Wind Farms. Version 2.2

Landscape Character

6.2.6. The landscape of the Site is defined by NatureScot’s National Landscape Character Assessment (2019) (‘NatureScot’s LCA’) as part of a unit of ‘Rolling Uplands - Inverness’ (221) Landscape Character Type (LCT) as shown in **Figure 6.5a**. The key characteristics of the Rolling Uplands - Inverness LCT according to the NatureScot LCA include:

- “A series of large scale, smooth, rounded hills with summits of similar height forming broad, undulating upland plateaux containing occasional steep-sided straths.
- Open heather moorland dominates, the uniform colour and texture accentuating the landform.
- Straths floors contain inbye pastures, trees and small patches of woodland. □
- Conifer forests limited to the lower edges of uplands and strath sides.
- Settlement limited to a few isolated farms in remote straths.
- A few mainly single track roads, integrated within the landform.
- Uninhabited interior, largely inaccessible to vehicles.
- Archaeological evidence of settlement and farming from prehistoric times to the 19th century.
- Striking colour and textural contrast between strath floors and moorland vegetation above. □ Expansive views from the hill tops and plateaux create a strong sense of openness and exposure.
- Scale and distance difficult to judge.
- Few signs of active management in the interiors, creating a strong perception of remoteness, although this is affected by a number of large wind farm developments.”

6.2.7. The Dava Moor, Nairn and Monadhliath Area Wind Energy Landscape Sensitivity Pilot Study (2021)¹⁰ (‘the WELSPS’) also defines the landscape of the Site as part of a broader area of ‘Rolling Uplands (The Monadhliath)’ LCT. The boundaries of this LCT unit are generally similar to the NatureScot LCA with the notable exception that Strathdearn is distinguished as an area of ‘Strath in Rolling Uplands’ LCT in the WELSPS.

6.2.8. NatureScot advise that “*Where there are topic-specific landscape capacity or sensitivity studies, they would take precedence for informing that development type, e.g. windfarms*”. Where coverage allows, the LCT units in the WELSPS will therefore form the basis of the character assessment that will be undertaken in the LVIA. Where parts of the Study Area are not covered by the Council’s study, the LVIA will be based upon NatureScot’s LCA.

¹⁰ Carol Anderson Landscape Associates. (2021) Dava Moor, Nairn And Monadhliath Area Wind Energy Landscape Sensitivity Pilot Study

6.2.9. Given the topography of the local landscape, and the scale of the Proposed Development, we consider that significant effects on landscape character are likely to be found within a 25km radius of the Proposed Development. This shorter radius will capture the likely affected areas of the Monadhliath Mountains, Strathdearn, Dulnain Strath, the Spey Valley and the northwest facing slopes of the CNP. The LVIA will therefore include an assessment of the effects of the Proposed Development on the LCTs within a 25km Detailed Study Area.

Landscape Designations

6.2.10. The Site itself is not subject to any local or national landscape designations intended to protect its landscape quality. A number of areas within 45km of the Proposed Development have been attributed a landscape planning designation. **Figure 6.3** shows these landscape designations with the blade tip ZTV overlain. The designations include a National Park, National Scenic Areas, Gardens and Designed Landscapes (GDLs) and locally important Special/ Local Landscape Areas that have been designated through each relevant Council’s Local Development Plan.

6.2.11. In the preliminary appraisal set out in **Table 6.1**, the potential effects of the Proposed Development are considered in respect of all landscape designations. This considers the separation distance between the landscape designation and the Proposed Development, and whether the landscape designation would be subject to theoretical visibility of the Proposed Development. Thereafter, it is assessed in the final column whether or not, in OPEN’s opinion, these landscape designations should be scoped in or out of the assessment. It should be noted that changes to the layout during the detailed design process may materially alter the potential for significant effects, and therefore the scope of some aspects of the assessment may be reconsidered at a later date.

6.2.12. It is proposed that the designations located in grey shaded boxes in **Table 6.1** will be assessed further within the LVIA. THC and NatureScot’s agreement to this list is sought through this scoping exercise in order to enable the LVIA to be focused on key considerations.

Table 6.1 Preliminary Appraisal of Potential Effects on Landscape Designations

Designation	Approx. distance to nearest turbine (km)	Theoretical visibility?	Needs detailed assessment within the LVIA?
Cairngorms National Park (CNP)	0.9	Yes	Yes - theoretical visibility predicted across closest parts of the CNP around Carrbridge at short distances, some northwest facing slopes above the Spey Valley and across the Cromdale Hills, and also some large areas of theoretical visibility across

Designation	Approx. distance to nearest turbine (km)	Theoretical visibility?	Needs detailed assessment within the LVIA?
			elevated parts of the CNP, including some popular Munro summits, such as Braeriach and Cairn Gorm.
Drynachan, Lochindorb and Dava Moors SLA	5.2	Yes	Yes - theoretical visibility predicted across closest southern and western parts of the SLA at distances of over 5km, as well as some more distant scattered patches of theoretical visibility across other parts of the SLA.
The Cairngorm Mountains NSA	10.8	Yes	Yes - theoretical visibility predicted across some popular Munro summits, such as Braeriach and Cairn Gorm and their northwest facing slopes, at distances of over 13km.
Kinrara GDL	11.8	No	No - there is no potential for significant effects on the GDL's special qualities.
Doune of Rothiemurchus GDL	11.8	No	No - there is no potential for significant effects on the GDL's special qualities.
Loch Ness and Duntelchaig SLA	12.6	Yes	No - very limited patches of theoretical visibility located mostly across the north of the SLA. The closest of these small potentially affected areas is located to the south of Dunlichity at a distance of around 14km. The Proposed Development would be located in the opposite direction to the core of the SLA and would be seen in the context of closer existing developments at Farr and Glen Kyllachy. Other affected areas in the north of the SLA are predicted to receive visibility of smaller parts of the wind farm and from greater distances and are unlikely to receive significant effects. Further south, there is a small patch of theoretical visibility around the summit of Meall Fuar Mhonaidh located at around 30km distance from the Proposed Development, which is predicted to receive theoretical visibility of short sections of five turbine blades. These blade tips are also located in the context of other closer developments in the Monadhliaths at Aberarder and

Designation	Approx. distance to nearest turbine (km)	Theoretical visibility?	Needs detailed assessment within the LVIA?
			Dunmaglass, and as a result there is no potential for significant effects to arise from elevated areas around Meall Fuar Mhonaidh.
Ben Alder, Laggan and Glen Banchor SLA	19.3	Yes	No - extremely limited theoretical visibility predicted across very small elevated areas above Dalwhinnie and Glenshirra Forest at distances of over 40km from the Proposed Development. There is no potential for significant effects on the SLA's special qualities.
Aultmore GDL	19.7	Yes	Yes - extensive theoretical visibility of a large number of blade tips across the GDL, including from the principal views from the formal gardens in front of the house, which are orientated towards the Proposed Development. While it is unlikely that significant effects will occur at distances over 20km, we consider that it will be necessary to ensure that this is the case following the design process.
Leys Castle GDL	20.1	No	No - there is no potential for significant effects on the GDL's special qualities.
Aldourie Castle GDL	21.6	No	No - there is no potential for significant effects on the GDL's special qualities.
Castle Grant GDL	23.3	No	No - there is no potential for significant effects on the GDL's special qualities.
Dochfour GDL	23.3	No	No - there is no potential for significant effects on the GDL's special qualities.
Culloden House GDL	24.0	No	No - there is no potential for significant effects on the GDL's special qualities.
Tomnahurich Cemetery GDL	24.3	No	No - there is no potential for significant effects on the GDL's special qualities.
Cawdor Castle GDL	25.3	No	No - there is no potential for significant effects on the GDL's special qualities.

Designation	Approx. distance to nearest turbine (km)	Theoretical visibility?	Needs detailed assessment within the LVIA?
Dalcross Castle GDL	25.5	No	No - there is no potential for significant effects on the GDL's special qualities.
Findhorn Valley and the Wooded Estates SLA	31.2	No	No - there is no potential for significant effects on the SLA's special qualities.
Cromarty Sutors, Rosemarkie & Fort George SLA	31.8	Yes	No - extremely limited theoretical visibility of only a few blade tips predicted at distances of over 40km from the Proposed Development. There is no potential for significant effects on the SLA's special qualities.
Beaufort Castle GDL	32.5	No	No - there is no potential for significant effects on the GDL's special qualities.
Relugas GDL	32.6	No	No - there is no potential for significant effects on the GDL's special qualities.
Rosehaugh GDL	33.7	Yes	No - some theoretical visibility is predicted across parts of the GDL, but given the distance from the Proposed Development, there is no potential for significant effects.
Deeside and Lochnagar NSA	34.1	No	No - there is no potential for significant effects on the NSA's special qualities.
Ben Rinnes SLA	34.5	Yes	No - while theoretical visibility is predicted across elevated parts of Ben Rinnes and Corryhabbie Hill, effects on the special qualities of the SLA would not be significant at distances of over 41km.
The Fairy Glen GDL	35.2	Yes	No - some theoretical visibility is predicted across parts of the GDL, but given the distance from the Proposed Development, there is no potential for significant effects.
Darnaway Castle GDL	36.0	No	No - there is no potential for significant effects on the GDL's special qualities.
The Spey Valley SLA	37.2	Yes	No - while theoretical visibility is predicted across some hills above the River Spey around Ballindalloch, effects on the special qualities of the SLA would not be significant at distances of over 37km.

Designation	Approx. distance to nearest turbine (km)	Theoretical visibility?	Needs detailed assessment within the LVIA?
Brodie Castle GDL	38.8	No	No - there is no potential for significant effects on the GDL's special qualities.
Culbin to Burghead Coast SLA	39.9	Yes	No - while theoretical visibility of a few wind turbine blade tips is predicted along some of the coastline, effects on the special qualities of the SLA would not be significant at distances of over 41km.
Brahan GDL	40.0	Yes	No - some theoretical visibility is predicted across parts of the GDL, but given the distance from the Proposed Development, there is no potential for significant effects.
Fairburn GDL	41.4	No	No - there is no potential for significant effects on the GDL's special qualities.
Glen Strathfarrar NSA	41.9		No - while theoretical visibility is predicted across some of the elevated ridgelines above the strath, effects on the special qualities of the NSA would not be significant at distances of over 43km.
Pluscarden Valley SLA	43.1	No	No - there is no potential for significant effects on the SLA's special qualities.
Invercauld GDL	43.4	No	No - there is no potential for significant effects on the GDL's special qualities.
Grant Park and Cluny Hill GDL	43.8	No	No - there is no potential for significant effects on the GDL's special qualities.
Cromarty House GDL	43.5	No	No - there is no potential for significant effects on the GDL's special qualities.
Cluny Hill SLA	43.8	No	No - there is no potential for significant effects on the SLA's special qualities.

6.2.13. The findings of this preliminary appraisal are that the special qualities of one National Park, one NSA, one SLA, and the qualifying features of one GDL have the potential to be significantly affected by the Proposed Development and, therefore, require a detailed assessment. All other nationally and locally designated landscapes, do not have the potential to be significantly affected owing to either no theoretical visibility, low levels of theoretical visibility and / or limited extents of theoretical visibility, and/ or substantial separation distances and / or limited association between the designated landscape and the Site of the Proposed Development. In summary, the following designated landscapes will be included in the detailed assessment of the LVIA:

- Cairngorms National Park;
- The Cairngorm Mountains NSA;
- Drynachan, Lochindorb and Dava Moors SLA; and
- Aultmore GDL.

6.2.14. The detailed assessment in the LVIA will consider the special qualities of these local and national landscape designations in order to address the tests provided by Policy 4 of National Planning Framework 4 (‘NPF4’).

Wild Land

6.2.15. Wild Land Areas (WLA) mapped by NatureScot encompass Scotland’s most extensive areas of high wildness. Policy 4 of NPF4 (Scottish Government, 2023) outlines criteria that needs to be satisfied by development proposals in WLAs:

“Development proposals in areas identified as wild land in the NatureScot Wild Land Areas map will only be supported where the proposal:

- i. will support meeting renewable energy targets; or,*
- ii. is for small scale development directly linked to a rural business or croft, or is required to support a fragile community in a rural area.*

All such proposals must be accompanied by a wild land impact assessment which sets out how design, siting, or other mitigation measures have been and will be used to minimise significant impacts on the qualities of the wild land, as well as any management and monitoring arrangements where appropriate. Buffer zones around wild land will not be applied, and effects of development outwith wild land areas will not be a significant consideration.”

6.2.16. It is therefore of relevance to note that one of the proposed wind turbines is located within a WLA, and therefore its effects on the WLA would be a significant consideration to be weighed by the decision maker in the overall planning balance.

- 6.2.17. There are five WLAs located within 45km of the Proposed Development, as shown in conjunction with the scoping layout ZTV in Figure 6.4. These WLAs include the Monadhliath (0km), Cairngorms (15.5km), Rannoch - Nevis - Mamores - Alder (36.1km), Braeroy - Glenshirra - Creag Meagaidh (37.6km), and Central Highlands (41.2km).
- 6.2.18. The Monadhliath (20) WLA is therefore the closest WLA where wildness qualities could be affected by the Proposed Development, due to the location of one of the proposed wind turbines within the mapped boundary. If this wind turbine remains located in the WLA, it is proposed that a wild land impact assessment will be prepared to assess whether there would be any significant effects on its wild land qualities.
- 6.2.19. At the application stage, in the event that all of the proposed wind turbines are located outside of WLA20, and subject to their distance from the WLA, there may still be some potential for adverse effects to arise upon the Wild Land Qualities of the WLA. These effects should be considered in the context of other existing external influences on the WLA, such as those arising from existing wind farm development, including Corriegarth, Dunmaglass, Farr and Glen Kyllachy, located to the north of the WLA. Furthermore, these effects would not be a significant consideration for the decision maker, and as a result we consider that while it would be important for the LVIA to include this area in the broader landscape assessment, we do not consider that it would be necessary to undertake a separate Wild Land Assessment.
- 6.2.20. Regardless of future amendments to the design of the wind farm, it is proposed that the remaining four WLAs in the Study Area are discounted from further detailed assessment, due to their greater distance, and we seek agreement from NatureScot and THC in relation to their omissions from the LVIA.

Visual Receptors

- 6.2.21. The LVIA will undertake an assessment of the likely visual effects of the Proposed Development by considering its wider effects on visual amenity in particular in relation to principal visual receptors (shown on Figure 6.6), including settlements, roads, railway lines, national cycling routes, walking routes, and a selection of viewpoints (shown on Figure 6.2 and listed in Table 6.2). In accordance with the EIA Regulations, this assessment will focus on identifying those visual receptors that have the potential to be significantly impacted by the Proposed Development. A sequential route assessment will be undertaken for the closest stretches of the A9 where theoretical visibility arises, to examine the degree to which visibility may in reality occur.

Viewpoint Selection

- 6.2.22. A preliminary representative viewpoint list is presented in **Table 6.2**. The locations of the viewpoints are shown on **Figure 6.2**.

6.2.23. The viewpoints represent sensitive visual receptors in the Study Area, which have potential to be significantly affected. The selection of the viewpoints also considers the representation of the landscape receptors within which they are located, as well as the representation of the surrounding cumulative context, with both these considerations helping to inform the wider assessment. Collectively, the aim is to achieve a distribution of viewpoints from different directions and distances across the Study Area, albeit ensuring that the closer range receptors with the greatest potential to be significantly affected, are fully represented. Comments on the proposed viewpoint locations are invited as part of this request for a Scoping Opinion.

Table 6.2 Preliminary Viewpoints

ID	Viewpoint name	Grid ref. (Preliminary)		Dist. nearest turbine (km)	Visual receptors represented
1	C1121 Road (near Glenkyllachy Lodge)	275314	823776	2.3	Road Users and Residents
2	U1116 Road (near Garbole)	275458	824548	2.7	Road Users
3	Sustrans Route 7 (Core Path LBS114)	284292	822251	3.1	Cyclists and Walkers
4	C1121 Road (near Kyllachy House)	278817	826060	3.4	Road Users and Residents
5	A9 (Slochd)	285241	823883	4.7	Road Users
6	U1116 Road (near Carn Eitidh)	273245	825655	5.1	Road Users
7	Tomatin	280344	828173	5.7	Residents and Road Users
8	A9 (River Findhorn Crossing)	280820	829038	6.6	Road Users
9	Track near Geal Charn Mor	284681	812950	7.6	Hill Walkers
10	Carn a' Choire Mhoir Summit	284261	829067	8.2	Hill Walkers
11	A9 (near Carrbridge)	289665	822545	8.4	Road Users
12	A9 (north of Tomatin)	279493	831326	8.7	Road Users
13	Carrbridge	290710	823005	9.5	Residents
14	Carn na h-Easgainn Summit	274383	832043	10.0	Hill Walkers
15	Carn an Fhreiceadain Summit	272590	807139	14.8	Hill Walkers
16	Carn na Saobhaide Summit	260041	814453	18.3	Hill Walkers

ID	Viewpoint name	Grid ref. (Preliminary)		Dist. nearest turbine (km)	Visual receptors represented
17	A9 (near Dulnain Bridge)	300459	825003	19.4	Road Users
18	Cairn Gorm Mountain Railway Cafe	300518	805114	24.3	Hill Walkers and Visitors
19	Braeriach Summit	295163	799839	24.3	Hill Walkers

6.2.24. The applicant acknowledges the request of THC to include a viewpoint at the summit of Meall Fuar Mhonaidh but given the extremely limited extent of visibility, and the Proposed Developments location beyond existing, closer wind farm development, we do not consider that there is any potential for significant effects to arise at distances of around 30km. This viewpoint has therefore been discounted from the scope of the LVIA.

6.2.25. Visualisations and figures will be produced to both NatureScot standards, as set out in ‘Visual Representation of Wind farms: Version 2.2’ (February 2017), and also to THC ‘Visualisation Standards for Wind Energy Developments’ (July 2016). In line with NatureScot guidance, photomontages will be prepared for viewpoints within a 20km radius of the outermost turbines associated with the Proposed Development.

Visual Receptors - Night-time

6.2.26. A key factor in the development of turbines at or greater than 150m in height is the likely requirement for them to have visible red, medium intensity (2,000 candela) lights fitted to the turbine nacelles in accordance with ICAO and CAA guidance, to ensure civil aviation safety. The details of the lighting requirements for the Proposed Development are currently being defined along with potential mitigation measures.

6.2.27. OPEN will, if required, prepare a night-time impact assessment section and visualisations illustrating turbine lighting at night, for inclusion in the LVIA. The hub height ZTV will be used to identify where there would be direct line of sight of the lights from the surrounding area. OPEN has undertaken night-time lighting assessments and visualisations for several other wind farm projects in the UK which will inform the approach to assessment of turbine lighting and the basis of our professional judgement about the level of effect arising from the proposed lighting.

6.2.28. In order to inform this assessment, OPEN will take photographs from three of the readily accessible viewpoints at dusk (photographs to be taken 30 minutes after the period of civil twilight) and will prepare visualisations to represent the effects of lighting on these views. It is proposed that the following three viewpoints be used to represent the effects of night-time lighting:

- Viewpoint 1: C1121 Road (near Glenkyllachy Lodge);
- Viewpoint 7: Tomatin; and

- Viewpoint 11: A9 (near Carrbridge)

6.2.29. These viewpoints have been selected to represent the effects on road-users and residents in the local area who would be most likely to be affected. Night-time visualisations will be prepared in accordance with NatureScot guidance.

Cumulative Wind Farms

6.2.30. The assessment of cumulative effects describes the effects arising from the addition of the Proposed Development to a cumulative baseline of operational, under construction, consented and application stage wind farms. This assessment will include supporting graphics such as cumulative ZTVs and cumulative wirelines.

6.2.31. An initial review of the broad wind farm context within a 60km radius has been undertaken, based on the latest NatureScot mapping of large-scale wind farm development. It is considered that any cumulative effects that would occur, will arise as a result of the pattern of wind farm development within a shorter radius than 60km.

6.2.32. In respect of the Proposed Development, its relationship with other existing, consented and Proposed Developments located within the Monadhliath Mountains, in particular the operational and consented Farr, Glen Kyllachy, Moy, Tom na Clach, Dunmaglass and Aberarder schemes, and potentially also the nearby Balnespick scoping proposal, and how cumulative effects between these developments affect receptors across Strathdearn, the Monadhliath Mountains, and the Cairngorms National Park, are likely to be of most relevance. Taking this into account and in combination with the ZTV coverage anticipated, it is considered that any significant cumulative effects that would occur would arise as a result of the pattern of development within a 35km radius, rather than as a result of changes beyond this distance.

6.2.33. It is therefore proposed that a detailed cumulative plan will be produced showing the locations of wind farms within 35km of the Proposed Development that are operational, under construction, consented or which are at application stage and where the turbines are greater than 50m to blade tip. Sites that lie outwith a 35km radius of the Proposed Development in their entirety will be discounted due to their distance from the Proposed Development and the reduction in likely effects as a result of the surrounding topography.

6.2.34. Known cumulative wind farms within a 35km radius of the Site are shown for scoping purposes in Figure 6.7.

6.2.35. THC and NatureScot will be consulted over the final list of developments to be considered within the cumulative assessment. Exceptionally, scoping stage sites may also be included, at the request of THC or NatureScot, where they are considered to be of specific relevance to the cumulative effect of the Proposed Development.

Potential Sources of Impact

6.2.36. The following key sensitivities will form the focus of the LVIA (subject to ZTV coverage):

- potential effects on landscape character, in particular LCT units within a 25km radius of the Proposed Development;
- potential effects on the special landscape qualities of the Cairngorms National Park;
- potential effects on the special qualities of the Cairngorm Mountains NSA;
- potential effects on the special qualities of the Drynachan, Lochindorb and Dava Moors SLA;
- potential effects on the qualifying features of the Aultmore GDL;
- potential visual effects from settlements within the immediate context of the Proposed Development, in particular Tomatin and Carrbridge;
- potential visual effects from the surrounding road network, in particular from locations along the A9 and A938;
- potential cumulative landscape and visual effects, in particular with other wind farm developments within 35km of the Proposed Development;
- views from residential properties within 2km; and
- visibility of the Proposed Development at night due to aviation lighting.

6.3. Method of Assessment and Reporting

Categories of Effects

6.3.1. The LVIA is intended to determine the effects that the Proposed Development will have on the landscape and visual resource. For the purpose of assessment, the potential effects on the landscape and visual resource are grouped into eight categories:

- **Physical effects:** physical effects are restricted to the area within the Site and are the direct effects on the existing fabric of the Site. This category of effects is made up of landscape elements, which are the components of the landscape such as rough grassland and moorland that may be directly and physically affected by the Proposed Development;
- **Effects on landscape character:** landscape character is the distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape and the way that this pattern is perceived. Effects on landscape character arise either through the introduction of new elements that physically alter this pattern of elements or through visibility of the Proposed Development that may alter the way in which the pattern of elements is perceived. This category of effects is made up of landscape character receptors, which fall into two groups; landscape character areas and landscape-related designated areas;
- **Effects on the special qualities of National Scenic Areas (NSA) and Areas of Panoramic Quality (APQ) / Special Landscape Areas (SLA):** an assessment is carried out to cover the potential for significant effects on the landscape's special qualities;
- **Effects on wild land:** the assessment of the effects on the wild land qualities of the Wild Land Areas through consideration of the impacts on the physical attributes and perceptual responses identified;

- **Effects on views:** the assessment of the effects on views is an assessment of how the introduction of the Proposed Development will affect views throughout the study area. The assessment of effects on views is carried out in relation to representative viewpoints and principal visual receptors;
- **Effects on views from properties:** Residential Visual Amenity Assessment (RVAA) is carried out for properties within 2km in line with Landscape Institute (LI) technical guidance;
- **Effects of Turbine Lighting:** should visible aviation lighting be required, a night time visual impact assessment is prepared to assess the potential visual impact of the turbine lights; and
- **Cumulative effects:** cumulative effects arise where the study areas for two or more wind farms overlap so that both of the wind farms are experienced at a proximity where they may have a greater incremental effect, or where wind farms may combine to have a sequential effect. In accordance with guidance, the LVIA assesses the effect arising from the addition of the Proposed Development to the cumulative situation.

Assessment Approach

- 6.3.2. The objective of the LVIA is to predict the likely significant effects on the landscape and visual resource. In line with the EIA Regulations, the LVIA effects are assessed to be either significant or not significant.
- 6.3.3. The significance of effects is assessed through a combination of two considerations: the sensitivity of the landscape or visual receptor and the magnitude of change that will result from the addition of the Proposed Development.
- 6.3.4. The geographic extent over which the landscape and visual effects will be experienced is also assessed, which is distinct from the size or scale of effect. This evaluation is not combined in the assessment of the level of magnitude but instead is used in determining the extent in which a particular magnitude of change is experienced and the extent of the significant and non-significant effects. The extent of the effects will vary depending on the specific nature of the Proposed Development and is principally assessed through analysis of the geographical extent of visibility of the Proposed Development across the landscape or principal visual receptor.
- 6.3.5. The duration and reversibility of effects on views are based on the period over which the Proposed Development is likely to exist, and the extent to which the Proposed Development will be removed, and its effects reversed at the end of that period. Duration and reversibility are not incorporated into the overall magnitude of change and may be stated separately in relation to the assessed effects.

Baseline Survey Methodology

Desk Study

- 6.3.6. The assessment is initiated through a desk study of the Site and the Study Area. This study identifies aspects of the landscape and visual resource that may need to be considered in the landscape and visual assessment, including landscape-related planning designations (i.e. National Scenic Areas), landscape character typology, Wild Land Areas, operational and potential cumulative wind farms, and views from routes (including roads, railway lines, National Cycle Routes, long-distance walking routes and recreational sailing routes), and settlements.
- 6.3.7. The desk study also utilises Geographic Information System (GIS) and Resoft Windfarm software to explore the potential visibility of the Proposed Development. The resultant Zone of Theoretical Visibility (ZTV) diagrams and wirelines provide an indication of which landscape and visual receptors are likely to be key in the assessment.

Field Survey

- 6.3.8. Field surveys are carried out throughout the Study Area, although the focus is on the areas shown on the ZTV to gain theoretical visibility of the Proposed Development. The baseline field survey has four broad stages:
- 6.3.9. A preliminary familiarisation around the Study Area in order to visit the aspects of the landscape and visual resource that have been identified through the desk study and verify their existence and importance. Important features and characteristics that have not become apparent through the desk study are also identified, and particularly sensitive receptors are noted in order to inform the design process.
- 6.3.10. A visit onto the Site, in order to establish the potential of the Site for the Proposed Development and to identify the most suitable areas for development in landscape and visual terms, along with any constraints that may restrict the developable area.
- 6.3.11. Further field survey around the Study Area, concurrent with the design process for the Proposed Development, to identify those receptors that are likely to be particularly important in the assessment and inform the layout design, possible turbine height, and the extent of the Proposed Development.
- 6.3.12. The identification of representative viewpoints, and route assessments, to include in the landscape and visual assessment, including a wide range of receptors, landscape character, and directions and distances from the Proposed Development.

- 6.3.13. The ‘nature of effects’ relates to whether the effects of the Proposed Development are adverse, neutral or beneficial. Guidance provided in GLVIA3 states that ‘thought must be given to whether the likely significant landscape and visual effects are judged to be positive (beneficial) or negative (adverse) in their consequences for landscape or for views and visual amenity’ but does not provide an indication as to how that may be established in practice. The nature of effect is therefore one that requires interpretation and reasoned professional opinion.
- 6.3.14. OPEN generally adopts a precautionary approach which assumes that significant landscape and visual effects will be weighed on the negative side of the planning balance, although positive or neutral effects may arise in certain situations.

Methodology for the Assessment of Effects

- 6.3.15. The LVIA will follow OPEN’s methodology devised specifically for the assessment of wind farm developments and which generally accords with ‘Guidelines for Landscape and Visual Impact Assessment: Third Edition’ (‘GLVIA3’), the key source of guidance for LVIA. The methodology will be provided in full in the LVIA.
- 6.3.16. The objective of the assessment of the Proposed Development is to predict the likely significant effects on the landscape and visual resource. In accordance with the EIA Regulations, the LVIA effects are assessed to be either significant or not significant.
- 6.3.17. The significance of effects is assessed through a combination of two considerations; the sensitivity of the landscape receptor or view and the magnitude of change that will result as a consequence of the addition of the Proposed Development.

Sensitivity of Receptors

- 6.3.18. The sensitivity of the baseline conditions, including the importance of environmental features on or near to the Proposed Development or the sensitivity of potentially affected receptors, will be assessed in line with best practice guidance, legislation, statutory designations and / or professional judgement.
- 6.3.19. It is established by considering the value of the receptor and its susceptibility to change.

Resource / Receptor Value

- 6.3.20. For the landscape resource this is related to the value that is attached to different landscapes by society. A landscape may be valued by different people for different reasons. For visual receptors this relates to the recognition attached to a particular view (for example in relation to heritage assets or through planning designations) and indicators of value attached to views by visitors (for example through appearances in guidebooks or on tourist maps and the provision of facilities such as car parking and interpretation). For the purposes of the LVIA a receptor value is classified on a four-point scale of: negligible, low, medium, and high.

Susceptibility to Change

- 6.3.21. For landscape receptors this means the ability to accommodate the Proposed Development without undue consequences for the maintenance of the baseline situation and/or achievement of landscape planning policies and strategies
- 6.3.22. For visual receptors this is a consideration of the susceptibility to the Proposed Development and is a product of the occupation or activity of people experiencing the view and the extent to which their attention or interest may therefore be focused on the views and visual amenity they experience.
- 6.3.23. For the purposes of this LVIA, susceptibility to change is classified on a three-point scale of: low, medium, and high.

Magnitude of Effect

- 6.3.24. This is gauged by appraising the type and amount of change predicted to occur in relation to the landscape or visual receptor. Factors influencing the magnitude of change include: size, scale and nature of change; geographical extent; and duration and reversibility of effect.
- 6.3.25. For the purposes of the LVIA, magnitude of change is classified on a six-point scale of: negligible, small, medium-low, medium, medium-high and high.
- 6.3.26. Where there is no change to the receptor, or indeed no view of the wind turbines, the magnitude of change is assessed as No Change / None which would result in No Effects.

Significance of Effect

- 6.3.27. The sensitivity of the landscape and visual receptor and the magnitude of change that will result from the addition of the Proposed Development will be used as a guide, in addition to professional judgement, to predict the significance of the likely effects. **Table 6.3** summarises guideline criteria for assessing the significance of effects.

Table 6.3 Framework for Assessment of the Significance of Effects

Sensitivity	Magnitude					
	High	Medium-High	Medium	Medium-Low	Low	Negligible/ None
High	Significant (Major)	Significant (Major)	Significant (Major / moderate)	Significant or Not Significant (Moderate)	Not Significant (Moderate / minor)	Not Significant (Minor)
Medium- High	Significant (Major)	Significant (Major / moderate)	Significant or Not Significant (Moderate)	Significant or Not Significant (Moderate)	Not Significant (Moderate / minor)	Not Significant (Minor)

Sensitivity	Magnitude					
	High	Medium-High	Medium	Medium-Low	Low	Negligible/ None
Medium	Significant (Major / moderate)	Significant or Not Significant (Moderate)	Significant or Not Significant (Moderate)	Not Significant (Moderate / minor)	Not Significant (Minor)	Not Significant (Minor)
Medium- Low	Significant or Not Significant (Moderate)	Significant or Not Significant (Moderate)	Not Significant (Moderate / minor)	Not Significant (Minor)	Not Significant (Minor)	Not Significant (Negligible)
Low	Significant or Not Significant (Moderate)	Not Significant (Moderate / minor)	Not Significant (Minor)	Not Significant (Minor)	Not Significant (Negligible)	Not Significant (Negligible)

6.3.28. Effects within the dark grey boxes in the matrix are considered to be significant with either a Major or Major / Moderate level of effect. Effects within the light grey boxes may be significant or not significant depending on the specific relevant factors that arise at a particular landscape or visual receptor and here the level of effect is Moderate. Effects within the white boxes are considered to be not significant at either a Moderate / Minor, Minor or Negligible level. In accordance with GLVIA3, experienced professional judgement is applied to the assessment of all effects and reasoned justification is presented in respect of the findings where the level of effect is assessed as Moderate.

6.3.29. A significant effect occurs where the Proposed Development will provide a defining influence on a landscape element, landscape character receptor or view, albeit that it may be one of a number of defining characteristics. A not significant effect occurs where the effect of the Proposed Development is not material, and the baseline characteristics of the landscape element, landscape character receptor, view or visual receptor continue to provide the definitive influence. In this instance, the Proposed Development may have an influence, but this influence will not be definitive.

Consultation

6.3.30. The Applicant has undertaken pre-application consultation with Highland Council by way of a meeting with THC on 21st November 2023. The advice received at this meeting has informed the suggested approach and scope of the LVIA outlined in this report. It is envisaged that it may be necessary for further correspondence with NatureScot and THC following receipt of the Scoping Opinion. Details of all relevant correspondence will be included in the LVIA that will accompany the application for the Proposed Development.

6.4. Matters Scoped Out

- 6.4.1. The LVIA will include an assessment of effects on the landscape and visual receptors that are described in this chapter. No receptors or impacts will be scoped out prior to the confirmation of the final layout, aviation lighting requirements and turbine tip height included in the Proposed Development.

6.5. References and Standard Guidance

Relevant Guidance, Legislation and Information

- 6.5.1. The following guidance, legislation and information sources will be considered when carrying out the Environmental Impact Assessment (EIA):
- Landscape Institute and Institute of Environmental Management and Assessment. (2013) Guidelines for Landscape and Visual Impact Assessment: Third Edition;
 - NatureScot. (2017) Visual Representation of Wind Farms. Version 2.2;
 - NatureScot. (2017) Siting and Designing of Windfarms in the Landscape: Version 3a;
 - NatureScot. (2018) Guidance for Assessing the Effects on Special Landscape Qualities (Working Draft 11);
 - NatureScot. (2020) Assessing impacts on Wild Land Areas - Technical Guidance;
 - NatureScot. (2021) Guidance - Assessing the cumulative landscape and visual impact of onshore wind energy developments;
 - NatureScot. (2022) General pre-application and scoping advice for onshore wind farms;
 - Landscape Institute. (2021) Technical Guidance Note 02/21 Assessing landscape value outside national designations;
 - Landscape Institute. (2019) Visual Representation of Development Proposals, Technical Guidance Note 06/19; and
 - Landscape Institute. (2019) Technical Guidance Note 2/19 Residential Visual Amenity Assessment.

6.6. Questions for consultees

- 6.6.1. Q6.1. Do you have any comments on the proposed methodology?
- 6.6.2. Q6.2. Are you in agreement with the proposed Study Areas?
- 6.6.3. Q6.3. Are you in agreement that the assessment of the effects on landscape designations should focus on those areas which are highlighted as being relevant to the LVIA in **Table 6.1**?
- 6.6.4. Q6.4. Are you in agreement with the proposed approach to the assessment of Wild Land Areas in the Study Area?

- 6.6.5. Q6.5. Do you have any comments or suggestions in relation to the preliminary viewpoint locations listed in **Table 6.2**?
- 6.6.6. Q6.6. Do you have any comments on the approach to assessing the effects of turbine lighting?
- 6.6.7. Q6.7. Do you have any comments or suggestions on the approach to cumulative landscape and visual assessment?

7. Cultural Heritage and Archaeology

7.1. Introduction

- 7.1.1. This section of the Scoping Report sets out the proposed methodology and approach to be applied in the production of the Cultural Heritage and Archaeology for the Proposed Development.

7.2. Pre-Application Advice

- 7.2.1. Pre-application advice was sought from the Highland Council Historic Environment Team regarding the Proposed Development.
- 7.2.2. Within their response, the Highland Council Historic Environment Team noted that the number of turbines within the Proposed Development was of concern. At the time of writing of this report the number of turbines has been reduced from the original 35, to 27 turbines.
- 7.2.3. It was also noted that the Proposed Development may impact the setting of a number of Scheduled Monuments, namely Dalarossie Cottage cairn 375m SSE of (SM11815) and Banchor cairn, 315m SE of (SM11814), and any relationship they may have with Edinchat cairn, 415m NNW of (SM11734), and Woodend cairn, 760m NW of (SM11739). This advice has been taken into consideration in the production of this report, and as such, in order to establish the significance of any impacts the Proposed Development would have on these monuments, they have been scoped in for further detailed and comprehensive settings assessments as part of the Environmental Impact Assessment.
- 7.2.4. As recommended in the pre-application advice, an archaeological Site investigation will also be carried out as part of this process, and appropriate visualisations will be produced for a number of monuments, as outlined in section 7.2.9.

7.3. Environmental Baseline and Potential Sources of Impact

Within the Site

- 7.3.1. There are 14 heritage assets located within the Site boundary, with 12 being non-designated and two comprising scheduled monuments. The assets are mainly focussed along the northern border of the Site, along the south bank of the River Findhorn and around its tributaries. Three assets are located along the east bank of the Clune Burn, comprising field systems and buildings. The assets, a combination of prehistoric cairns and post-medieval agricultural assets, indicating a long history of settlement and activity within the Site. A list of assets within the Site can be found in **Table 7-1**.

7.3.2. Historic Environment Record data will be purchased from The Highland Council Historic Environment Team in advance of the baseline survey. This data will be used to inform the baseline survey for the EIA and to inform our understanding of key constraints.

Table 7-1: Historic Environment Record Sites within the Proposed Development

HER Reference	Asset Name	Asset Type	Period
MHG14249	Banchor	Township	Post-medieval
MHG56888	Banchor	Hut Platform	Prehistoric
MHG14250	Banchor	Field System, Farmstead	Undated
MHG2850	Banchor	Field System	Undated
SM11815/MHG2849	Dalrossie Cottage	Round Cairn	Prehistoric
SM11814/MHG2848	Banchor Cairn	Cairn	Prehistoric
MHG2847	Banchor	Cairn	Prehistoric
MHG26192	River Findhorn	Building	Post-medieval
MHG26193	Wester Strathnoon	Township	Post-medieval
MHG2798	Raigmore	Burial	Undated
MHG2823	Carn Baile Nan Gordonach	Hut Circle	Prehistoric
MHG2796	Coire an Reiog	Field System	Undated
MHG2795	Carn Na Loinne	Field System	Undated
MHG55431	Clune	Buildings and Shielings	Post-medieval

Outwith the Site

- 7.3.3. All nationally significant designated assets (**Section 7.4.2**) outwith the Site but within the Study Area will be subject to setting assessment in order to determine any impacts as a result of change in setting.
- 7.3.4. Within 10km of the proposed turbine locations there are a total of ten heritage assets. This includes nine Scheduled Monuments and one Category A Listed Building. There are no World Heritage Sites within 10km of the Proposed Development. Designated Heritage Assets within 10km of the Proposed Development can be seen on **Figure 7-1**.
- 7.3.5. The Nationally significant heritage assets within 10km of the proposed turbines are noted in **Table 7-2**.

- 7.3.6. A high-level heritage appraisal has been carried out in relation to all nationally significant designated heritage assets within 10km of the proposed turbine locations. The Scheduled Monuments within 10km of the proposed turbine locations are listed within **Appendix 7-1: Table 1**, the Listed Buildings within 10km of the proposed turbine locations are listed within **Appendix 7-1: Table 2**.
- 7.3.7. All Conservation Areas within 5km have been considered. Due to there being no conservation areas within 5km of the proposed turbine locations, conservation areas have been scoped out of further assessment.
- 7.3.8. There are no World Heritage Sites, Inventoried Battlefields or Inventoried Garden and Designed Landscapes within 10km of the Proposed Development.
- 7.3.9. Five of the designated cultural heritage assets within 10km of the proposed turbine locations will be subject to detailed settings assessment as there is the potential for the Proposed Development to have a significant effect upon them. The assets that are scoped in for this further assessment are as follows:
- Dalrossie Cottage, Cairn (SM11815);
 - Banchor Cairn, (SM11814);
 - Woodend, Cairn (SM11729);
 - Drumbain Cottage, Hut Circles (SM11674); and
 - Edinchat Cairn (SM11734)
 - Soilsean, deserted township and hut circle (SM11806)
- 7.3.10. Visualisations are proposed for the following assets:
- Photomontages***
- Edinchat Cairn (SM11734); and
 - Woodend, Cairn (SM11729).
- Wirelines***
- Dalrossie Cottage, Cairn (SM11815);
 - Banchor Cairn, (SM11814); and
 - Drumbain Cottage, Hut Circles (SM11674)
 - Soilsean, deserted township and hut circle (SM11806)
- 7.3.11. Assets that fall out of the proposed study area, the ZTV, and that do not have a third viewpoint that contributes to the significance of the asset have been scoped out of assessment. Assets that have been scoped in may be scoped out and vice versa, dependent on the final layout as a result of consultee comments.

7.3.12. The following Category B Listed Buildings located within 5km of the Proposed Development have been scoped out of further assessment. The primary contributor to the significance of the assets is their architectural interest and any key views out from the assets and views along key or historic approaches to the assets are anticipated to have peripheral views at most of the Proposed Development. These peripheral views would form a minor distraction at most to the ability to understand, appreciate and experience the asset and the aspects of the asset's setting which contribute to its significance. The Category B assets that are scoped out of further assessment are as follows:

- Slochd Viaduct (LB237);
- Bridge Over Allt Slochd Mhuic, Slochd (LB239);
- Dalarossie Church and Burial Ground (LB14884);
- Findhorn Bridge (LB14885);
- Railway Viaduct Over River Findhorn (LB14893); and
- Railway Viaduct Over Old A9 Road (LB14894).

Table 7-2: Nationally Significant Cultural Heritage Assets within 10km of Proposed Turbines

Designation Reference	Designation Title	Type of Asset	Direction and Distance to Proposed Turbines	Visualisation location co-ordinates
SM4157	Avelochan, Tor Beag, fort	Scheduled Monument	9.5km west	n/a
SM10481	Inverlaidnan Old House	Scheduled Monument	4.8km northeast	n/a
SM11734	Edinchat, cairn 415m NNW of	Scheduled Monument	8.9km north	281665, 831177
SM11814	Banchor, cairn 315m SE of	Scheduled Monument	1.4km northwest	276507, 823739
SM11815	Dalarossie Cottage, cairn 375m SSE of	Scheduled Monument	1.6km northwest	276718, 824067
SM11739	Woodend, cairn 760m NW of	Scheduled Monument	4.1km north	278622, 826795
SM11901	Ruthven, depopulated township 600m S of	Scheduled Monument	10km north	n/a
SM11673	Drumbain Cottage, hut circles 725m, 845m and 975m ESE of	Scheduled Monument	5.0km north	281954, 826768

Designation Reference	Designation Title	Type of Asset	Direction and Distance to Proposed Turbines	Visualisation location co-ordinates
SM11806	Soilsean, deserted township and hut circle 745m ESE of	Scheduled Monument	5.7km north	281496, 827817
LB240	Sluggan Bridge Over River Dulnain	Listed Building	5.6km west	n/a

7.4. Method of Assessment and Reporting

Study Area

- 7.4.1. For purposes of this assessment, a Study Area for the assessment of impact on setting has been defined extending 10km from the proposed turbines¹¹.
- 7.4.2. Assessment of direct and indirect effect on assets within the Site will be assessed with the red line boundary and 1km buffer to conduct a model of predictability.

Consultation

- 7.4.3. Based on the results of the baseline study, constraint mapping will be generated using GIS software to show mapped heritage assets in relation to a Zone of Theoretical Visibility (ZTV). This will filter out those assets that do not require further assessment. It will also be used to identify and agree the most potentially sensitive assets; these may then require computer-generated visualisations to be produced as part of their assessment, in liaison with consultees.
- 7.4.4. Consultation will be undertaken with HES in relation to the method of assessment employed in assessing those heritage assets within their remit; these include: Scheduled Monuments, Category A Listed Buildings, Inventoried Gardens and Designed Landscapes (GDLs), and Inventoried Battlefields. The Highland Council Historic Environment Team will be consulted in relation to designated heritage assets of regional and local significance, and any non-designated assets they consider to be of higher significance

Field Surveys

- 7.4.5. A targeted Site inspection will be carried out in relation to those recorded assets likely to be impacted by the Proposed Development; the aim of this would be to establish the condition of any recorded assets and identify the potential for any additional presently unrecorded assets.

¹¹ There is no guidance defining what the extent of an appropriate 'study area' should be for the archaeological and cultural heritage assessment of wind farms. Any given study area will therefore represent an exercise in professional judgment, refined to point of agreement between stakeholders during consultation

7.4.6. Targeted field inspection of other assets will also be undertaken following a desk-based comparison of asset mapping with ZTV and satellite imagery; the aim of this would be to identify and inspect any designated heritage assets potentially susceptible to impact as a result of change to setting under the Proposed Development

Heritage Significance

7.4.7. The categories of cultural heritage significance to be referred to are presented in **Table 7-4**, which will act as an aid to consistency in the exercise of professional judgement and provide a degree of transparency for others in evaluating the conclusions drawn.

7.4.8. The significance categories take into account factors such as: designation, status and grading. For non-designated assets, consideration will be given to their inherent heritage interests, intrinsic, contextual, and associative characteristics. In relation to these assets, the assessment will focus upon an assessment of the assets' inherent capability to contribute to our understanding of the past; the character of their structural, decorative and field characteristics as informed by the HER and Canmore records and / or site visit observations; the contribution of an asset to their class of monument, or the diminution of that class should an asset be lost; and how a site relates to people, practices, events, and/or historical or social movements. Assessments of the cultural significance of specific assets, where recorded within the HER, will be taken into account where appropriate.

Table 7-3: Cultural Heritage Significance

Heritage Significance	Explanation
Highest	Sites of international importance, including: World Heritage Sites Sites on the 'Tentative List' for WHS status
High	Site of National importance, including: Scheduled Monuments Category A Listed Buildings Gardens and Designed Landscapes included on the national inventory Designated Battlefields Non-designated assets of equivalent significance
Medium	Sites of Regional/local importance, including: Category B and C Listed Buildings Some Conservation Areas Non-designated assets of equivalent significance.
Low	Sites of minor importance or with little of the asset remaining to justify a higher importance
None	Sites that are of no heritage significance
Unknown	Further information is required to assess the significance of these assets

Magnitude of Impact

- 7.4.9. Determining the magnitude of any likely impacts will include consideration of the nature of the activities proposed during the construction and operational phases of the Proposed Development.
- 7.4.10. The changes could potentially include direct change (e.g. ground disturbance), and indirect change (e.g. visible change, noise, vibration), or change to the setting of the asset. Impacts may be beneficial or adverse, and may be short term, long term or permanent.
- 7.4.11. The magnitude of any effects will be assessed using professional judgment, with reference to the criteria set out in **Table 7-5**.

Table 7-4: Cultural Heritage - Magnitude of Impact

Magnitude of Impact	Explanatory Criteria
High Beneficial	The Proposed Development would considerably enhance the cultural heritage significance of the affected asset, or the ability to understand, appreciate and experience it.
Medium Beneficial	The Proposed Development would enhance, to a clearly discernible extent, the cultural heritage significance of the affected asset, or the ability to understand, appreciate and experience it.
Low Beneficial	The Proposed Development would enhance, to a minor extent, the cultural heritage significance of the affected asset, or the ability to understand, appreciate and experience it.
Very Low Beneficial	The Proposed Development would enhance, to a very minor extent, the cultural heritage significance of the affected asset, or the ability to understand, appreciate and experience it.
Neutral/None	The Proposed Development would not affect (or would have harmful and enhancing impacts of equal magnitude upon) the cultural heritage significance of the affected asset, or the ability to understand, appreciate and experience it.
Very Low Adverse	The Proposed Development would erode, to a very minor extent, the cultural heritage significance of the affected asset, or the ability to understand, appreciate and experience it. This level of indirect impact would not be considered to affect the integrity of the asset's setting.
Low Adverse	The Proposed Development would erode, to a minor extent, the cultural heritage significance of the affected asset, or the ability to understand, appreciate and experience it. This level of indirect impact would rarely be considered to affect the integrity of the asset's setting.
Medium Adverse	The Proposed Development would erode, to a clearly discernible extent, the cultural heritage significance of the affected asset, or the ability to understand, appreciate and experience it. This level of indirect impact might be considered to affect the integrity of the asset's setting.
High Adverse	The Proposed Development would considerably erode the cultural heritage significance of the affected asset, or the ability to understand, appreciate and experience it. This level of indirect impact would probably be considered to affect the integrity of the asset's setting.

Significance of Impact

7.4.12. The categories of Impact referred to, and the criteria used in their determination, are presented in Table 7-6.

Table 7-5: Cultural Heritage Impact

Impact	Criteria
Major	Severe harm or notable enhancement, such as total loss of significance of the asset or of the integrity of its setting, or exceptional improvement of the cultural heritage significance of the asset and/or the ability to understand, appreciate and experience it.
Moderate	Harm or enhancement, such as the introduction or removal of an element that would affect the cultural heritage significance of the asset and the ability to understand, appreciate and experience it to a clearly discernible extent.
Minor	Harm or enhancement to the asset's heritage significance and/or to the ability to understand, appreciate and experience it to a modest extent, such that the majority of the asset's inherent interests and aspects of setting would be preserved.
Very Minor	Harm or enhancement to the asset's cultural heritage significance and/or to the ability to understand, appreciate and experience it, that is barely discernible.
Negligible/Nil	The development would not affect the cultural heritage significance of the asset and/or the ability to understand, appreciate and experience it, or would have harmful and enhancing impacts of equal magnitude.

7.4.13. **Table 7-7** provides a matrix that relates the cultural heritage significance of the asset to the magnitude of impact on its significance, to produce an overall anticipated level of impact. This assessment will be undertaken separately for physical (direct and indirect) impacts and impacts resulting from change to the setting of heritage assets.

Table 7-6: Cultural Heritage Impact Matrix

Magnitude of Impact	Cultural Heritage Significance (excluding unknown)			
	Highest	High	Medium	Low
High beneficial	Major	Major	Moderate	Minor
Medium beneficial	Major	Moderate	Minor	Very Minor
Low beneficial	Moderate	Minor	Very Minor	Very Minor
Very low beneficial	Minor	Very Minor	Negligible	Negligible
Neutral/None	Neutral/Nil	Neutral/Nil	Neutral/Nil	Neutral/Nil
Very low adverse	Minor	Very Minor	Negligible	Negligible
Low adverse	Moderate	Minor	Very Minor	Very Minor
Medium adverse	Major	Moderate	Minor	Very Minor
High adverse	Major	Major	Moderate	Minor

Mitigation

7.4.14. Where adverse effects on cultural heritage assets are identified, measures to prevent, reduce and/or, where possible, offset these effects, will be proposed. Potential mitigation measures can be discussed in terms of direct, indirect and settings impact.

7.4.15. Suitable measures for mitigating direct and indirect impacts might include:

- the micro-siting of Proposed Development infrastructure away from sensitive locations;
- the fencing off or marking out of heritage assets or features in proximity to construction activity in order to avoid disturbance where possible;
- a programme of archaeological work where required, such as an archaeological watching brief during construction activities in or in proximity to areas of archaeological sensitivity, or excavation and recording where impact is unavoidable; and/or
- a working protocol to be implemented should unrecorded archaeological features be discovered.

7.4.16. Suitable measures for mitigating any settings impacts might include:

- alteration of the proposed turbine layout;
- reduction of proposed turbine heights; and/or
- changing the proposed colour of select turbines.

Residual Impact

7.4.17. Residual impacts are those that remain even after the implementation of suitable mitigation measures. Residual impacts will be identified, and the level of those residual impact defined with reference to **Table 7-6** and **Table 7-7**.

Significance of Impact

7.4.18. Professional judgment will be used in the determination of whether any impacts/residual impacts are ‘Significant’ or ‘Not Significant’ for the purposes of EIA.

With reference to the matrix presented in **Table 7-7**, any impacts identified as ‘Major’ within the matrix would almost certainly be considered ‘Significant’, while determining whether any impacts identified as ‘Moderate’ (or below) within the matrix would be ‘Significant’ or ‘Not Significant’ would require the exercise of professional judgement.

A clear and justified statement will be made as to whether any identified impacts are ‘Significant’ or ‘Not Significant’ for the purposes of EIA.

Cumulative Impact

7.4.19. A cumulative impact is considered to occur when there is a combination of:

- an impact on an asset or group of assets due to changes resulting from the development subject of assessment; and

- an impact on the same asset or group of assets resulting from another development (consented or proposed) within the surrounding landscape.

7.4.20. Consideration of other developments will be limited to:

- wind farm planning applications that have been submitted and have a decision pending; and
- wind farm planning applications which have been granted permission but not yet constructed.

7.4.21. Any impact resulting from operational wind farms would be considered as part of the baseline impact assessment. Cumulative impact would be considered in two stages:

- assessment of the combined impact of the developments, including the Proposed Development; and
- assessment of the extent to which the Proposed Development contributes to the combined impact.

7.5. Matters Scoped Out

7.5.1. On the basis of the work undertaken to date, the professional judgement of the cultural heritage team, and experience of other comparable projects, it is considered that indirect, settings and cumulative impacts of the Proposed Development on Category C Listed Buildings can be scoped out of the EIA in relation to cultural heritage. As per best practice guidance within the NatureScot EIA Handbook (2019), Category C Listed Buildings are of local rather than national or regional importance, unless in the opinion of an assessor the designation should be higher.

7.5.2. It is also considered that any assets that fall outwith the ZTV (and where those assets' approaches also fall outwith the ZTV) can be scoped out of the EIA in relation to cultural heritage

7.6. References and Standard Guidance

Legislation

7.6.1. The assessment will be undertaken in accordance with the following principal relevant legislation:

- The Ancient Monuments and Archaeological Areas Act 1979;
- The Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997;
- The Historic Environment (Amendment) (Scotland) Act 2011; and
- Scottish Statutory Instrument No. 101 The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017.

Planning Policy

7.6.2. The Scottish Government and HES have issued a number of statements of policy with respect to dealing with the historic environment in the planning system:

- National Planning Framework 4 (NPF4; 2023);
- Onshore Wind Turbines: Planning Advice (2014);
- Planning Advice Note 2/2011: Planning and Archaeology;
- Our Past, Our Future: The Strategy for Scotland’s Historic Environment (2023); and
- Historic Environment Policy for Scotland (HEPS 2019).

Guidelines and Technical Standards

7.6.3. Relevant guidance and technical standard documents comprise:

- Historic Environment Scotland Guidance on Managing Change in the Historic Environment: Setting (2020);
- A Guide to Climate Change Impact: On Scotland’s Historic Environment (2019);
- Scottish National Heritage (NatureScot) and Historic Environment Scotland Environmental Impact Assessment Handbook: Guidance for competent authorities, consultation bodies, and others involved in the Environmental Impact Assessment Process in Scotland (2019); and
- Chartered Institute for Archaeologists Standard and Guidance for Historic Environment Desk Based Assessment (2014, updated 2020).

7.7. Questions for consultees

- 7.7.1. Q7.1. Do consultees agree with the proposed scope of the assessment, including the proposed Study Areas?
- 7.7.2. Q7.2. Do consultees agree with the proposed assessment methodology?
- 7.7.3. Q7.3. Are consultees satisfied with the mitigation measures proposed?
- 7.7.4. Q7.4. Are consultees satisfied with the locations and types of visualisations proposed?

8. Ecology

8.1. Introduction

8.1.1. This section sets out the proposed approach to the assessment of potentially significant effects on ecological receptors (habitats and non-avian animal species) as a result of the Proposed Development, including physical effects, setting change and cumulative effects.

8.2. Environmental Baseline and Potential Sources of Impact

8.2.1. Wind energy developments can influence ecology both directly through habitat loss and indirectly through disturbance or displacement effects on habitats and species. The main potential effects would be as follows:

- permanent loss of habitat from construction of permanent components (tracks and turbine foundations);
- temporary loss of habitat from construction of temporary components (construction compound);
- modification of habitats due to hydrological change;
- direct impacts such as collision risk for bats;
- accidental mortality due to construction activities;
- fragmentation of species ranges or habitats;
- pollution of the aquatic environment; and
- disturbance from Site traffic, turbine operation, and increased human presence.

8.2.2. The extent of the disturbance and potential effects will be dependent upon a variety of factors including the location of the works, timing, duration and whether permanent or temporary.

8.2.3. Sites designated for the ecological importance are shown in **Table 8-1**.

8.3. Method of Assessment and Reporting

Baseline Data Collection

8.3.1. The Site location is shown on **Figure 3.1** and the location of designated sites in relation to the Proposed Development is shown on **Figure 8.2**.

Desk Study

8.3.2. A desk study was undertaken to identify nature conservation designations with non-avian ecology features, and records of protected or otherwise notable non-avian species in the local area. This information was used to aid in the determination of the proposed scope of the surveys.

8.3.3. The NatureScot SiteLink website was used to identify designated nature conservation sites such as Special Areas of Conservation (SAC), Ramsar sites, Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR) within 2km of the Proposed Development, extending to 10km for nature conservation sites that are designated (in whole or in part) for aquatic migratory species and which are hydrologically connected with the Site.

8.3.4. Results of the designated site search are presented in **Table 8-1**.

Table 8-1: Designated Sites

Designated Site	Designated Feature	Distance from Site Boundary
SACs		
Slochd (NatureScot, 2005a).	Dry heath	Immediately adjacent to north-eastern boundary on the opposite side of the A9.
Kinveachy Forest (NatureScot, 2005b).	North Atlantic wet heaths European dry heaths <i>Juniperus communis</i> formation on heaths or calcareous grasslands Blanket bog Old sessile oak woods with <i>Quercus robur</i> on sandy plains Bog woodland Caledonian forest Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i>	1.8km south-east (at its closest point).
River Spey SAC (NatureScot, 2005c).	Otter <i>Lutra lutra</i> Freshwater pearl mussel <i>Margaritifera margaritifera</i> Sea lamprey <i>Petromyzon marinus</i> Atlantic salmon <i>Salmo salar</i>	3.56km to south-east (at its closest point).
Carn nan Tri-tighearnan (NatureScot, 2005d).	Blanket bog	7.57km north-east (at its closest point).
SSSIs		
Kinveachy Forest (NatureScot, 2010).	Breeding bird assemblage: Crested tit Capercallie Scottish crossbill Native pinewood assemblage:	1.8km south-east (at its closest point).

Designated Site	Designated Feature	Distance from Site Boundary
	Scots pine Birch Alder Bog woodland	
Craigellachie SSSI (NatureScot, 2009a).	Upland birch woodland: Aspen Hazel Sessile oak Wych elm Bird cherry Juniper Moth assemblage: Kentish glory Rannoch sprawler Angle-striped willow	9.73km south-east (at its closest point).
Carn nan Tri-tighearnan SSSI (NatureScot, 2009b).	Upland blanket bog Subalpine dry heath	7.57km north-east (at its closest point).
NNRs		
Craigellachie NNR (NatureScot, 1988)	Birch woodland Open glades	9.73km south-east (at its closest point).

8.3.5. The desk study also collated protected or otherwise notable species records publicly available for commercial use held on the National Biodiversity Network (NBN) Atlas website from within 5km of the approximate centre of the site for the past 10 years. In the case of bats, this was extended to 10km (Table 8-2).

Table 8-7: Protected Species Historical Records (data from NBN Atlas)

Common Name	Summary of Records
Eurasian Red Squirrel <i>Sciurus vulgaris</i> ^{1,2}	24 records (2 from 2021, 7 from 2020, 4 from 2019, 2 from 2018, 2 from 2017, 3 from 2016, 1 from 2014, 1 from 2013, and 2 from 2012) with none located within the Site boundary, with records being from forest blocks along the River Findhorn.
Mountain Hare <i>Lepus timidus</i> ²	3 records (1 from 2018, 1 from 2017, and 1 from 2013) with records adjacent to the Site boundary to the west and east.
Common Lizard <i>Zootoca vivipara</i> ³	1 record from 2020 outwith the Site boundary to the east.

Common Name	Summary of Records
Eurasian Otter <i>Lutra lutra</i> ²	1 record from 2014 outwith the Site boundary to the east.
Daubenton's Bat <i>Myotis daubentonii</i> ²	1 record from 2017 outwith the Site boundary to the west, on the River Findhorn.
Natterer's Bat <i>Myotis nattereri</i> ⁴	1 record from 2014 outwith the Site boundary to the west, on the north bank of the River Findhorn.

¹ The Scottish Squirrel Database

² Highland Biological Records Group (HBRG) Vertebrates (not Badger) Dataset

³ Records Of Amphibians And Reptiles Via IRecord

⁴ Roost Count

Consultation

8.3.6. This document forms the start of the consultation process. Following receipt of the Scoping Opinion, detailed follow-up consultation will be undertaken with relevant consultees (NatureScot, formerly Scottish Natural Heritage (SNH), and Scottish Environment Protection Agency (SEPA)) to agree the scope of the assessment.

Pre-Application Advice

8.3.7. In their pre-application advice for major developments (reference number 23/02727/PREMAJ, dated 19 December 2023), The Highland Council (THC) outline their position and that of statutory consultees such as NatureScot and SEPA towards the Proposed Development. **Table 8-3** summarises those observations pertinent to ecology.

Table 8-3: Pre-Application Advice - Non-Avian Ecology

Consultee / Topic	Comments	Response
NatureScot - Natural Heritage	For national and major developments, or those subject to EIA, Policy 3b of NPF4 notes that proposals will only be supported where it can be demonstrated that they will conserve, restore and enhance biodiversity, including nature networks, so they are in a demonstrably better state than without intervention. The Policy requires that significant biodiversity enhancements are provided, in addition to any proposed mitigation. NatureScot's updated pre-application guidance provides further advice on this (a). As noted by the applicants, the area south of the proposed turbines was subject to a previous application in 2011 for Allt Duine Wind Farm. Assessments carried out for the previous proposal and responses to these will provide useful background to the applicants (b).	(a) Noted. (b) Noted.
NatureScot - Designated Sites	Designated Sites In relation to the European sites referenced below, the site's status means that the requirements of the Conservation (Natural Habitats, &c.) Regulations 1994 as amended (the 'Habitats Regulations') apply or, for	(a) Noted. (b) Noted. Comments relating to Kinveachy Forest SPA are addressed in

Consultee / Topic	Comments	Response
	<p>reserved matters, The Conservation of Habitats and Species Regulations 2017. The NatureScot website has a summary of the legislative requirements (https://www.nature.scot/professional-advice/protected-areasand-species/protected-species/legalframework/habitats-directive-and-habitats-regulations/). A Habitats Regulations Appraisal would be required to assess the potential impacts to these sites, and any future application would need to demonstrate there was no adverse impact on site integrity (a).</p> <p>Kinveachy Forest Special Protection Area (SPA) and Special Area of Conservation (SAC)</p> <p>The SAC is protected for its bog woodland and Caledonian pinewood. The development should aim to avoid direct and indirect impacts to this site. We note that proposals for enhancement are being considered and advise that the Conservation Advice Package may be a useful resource in this respect, see: https://sitelink.nature.scot/site/8283. We recommend that the applicants contact us directly to discuss any proposals for enhancement within the designated sites (b).</p> <p>River Spey Special Area of Conservation (SAC)</p> <p>The southern part of the proposed development site is within the catchment of the River Spey. The River Dulnain is part of the SAC and tributaries within the proposed development site such as the Allt Leth-allt are also connected to the SAC. The SAC is protected for its internationally important populations of salmon, freshwater pearl mussel, sea lamprey and otter (c).</p> <p>Key issues to consider would be potential for impacts from watercourse crossings, and potential for indirect impacts through release of sediment during construction works or potential peat slide risk/slope instability leading to sediment transport to watercourses reaching the SAC. All of the SAC's qualifying features would be sensitive to adverse changes in water quality. NatureScot would expect any future application to show how these issues have been considered and to provide details of any mitigation required (d).</p> <p>NatureScot recommend that fish and freshwater pearl mussel surveys are carried out in line with our guidance "NatureScot pre-application guidance for onshore wind farms" (see above link). NatureScot advise that, if they have not already done so, the applicants contact the</p>	<p>Section 9 of this report.</p> <p>(c) Noted.</p> <p>(d) Noted.</p> <p>(e) Noted.</p> <p>(f) Noted.</p> <p>(g) Noted.</p> <p>(h) Noted.</p>

Consultee / Topic	Comments	Response
	<p>Spey Fishery Board for any available desk study information they may hold (e).</p> <p>We note the applicants proposals for restoration works at tributaries of the River Spey (and Findhorn). We recommend that the Spey Fishery Board (and the Findhorn District Salmon Fishery Board) are contacted for advice on these proposals and for any other recommendations they may have. The River Spey SAC should also be considered in relation to any habitat enhancement measures being considered within Kinveachy Forest as part of this proposal (f).</p> <p>Advice on survey and assessment requirements for otters, for which consideration of potential for disturbance will also be key, can be found at: https://www.nature.scot/doc/standing-advice-planningconsultations-otters (g).</p> <p>Kinveachy Forest Site of Special Scientific Interest (SSSI)</p> <p>The SSSI is protected for its breeding bird assemblage and native pinewood. The SSSI boundary overlaps slightly with the proposed development site although the closest turbines as currently mapped are outside the SSSI boundary. We advise that the final design and layout aims to avoid direct and indirect impacts to the SSSI. Survey and assessment should consider the potential for impacts to birds which are part of this assemblage, either breeding within or using the SSSI (h).</p>	
NatureScot - Habitats	<p>NatureScot advise that a habitat survey is undertaken across the whole development site to assess impacts from the development, to help inform potential redesign or micro-siting, and to identify potential areas for habitat restoration and enhancement. Surveys should cover an appropriate buffer to account for hydrological changes as well as any areas where access tracks/track upgrades and borrow pits may be proposed. Where Annex 1 or UKBAP Priority Habitats occur NatureScot recommend surveys to NVC level. Target notes should be used to identify the presence of any notable plants including any nationally rare/scarce species, and an assessment of habitat condition is also recommended (a).</p> <p>NatureScot advise that survey results are used to inform the design and layout process, so that the development avoids, where possible, sensitive habitats such as blanket bog. Where this is not possible, impacts should be minimised and suitable mitigation, restoration and/or compensation measures be proposed. Assessment should consider the extent of habitat loss</p>	<p>(a) Noted.</p> <p>(b) Noted.</p> <p>(c) Noted.</p>

Consultee / Topic	Comments	Response
	<p>and damage, both direct and indirect, temporary and permanent, with suitable mitigation and/or restoration measures presented in an Outline Habitat Management Plan and a Peat Management Plan (b).</p> <p>OS mapping and aerial imagery suggests there are a number of existing hill tracks. Making use of existing infrastructure would be expected to reduce the level of impact to peatland and other habitats (c).</p>	
<p>NatureScot - Priority Peatland Habitats</p>	<p>NatureScot's Peatland Guidance has recently been updated to reflect NPF4 and we advise the applicants review this document at: https://www.nature.scot/doc/advising-peatland-carbon-rich-soils-and-prioritypeatland-habitatsdevelopment-management. The updated guidance includes advice on survey and assessment, mitigation and enhancement, including peatland restoration techniques and what information is recommended to support an application. NatureScot recommend a full assessment of impacts to peatland habitats in line with this guidance (a).</p> <p>NPF4 Policy 5 (Soils) provides protection for carbon-rich soils and peatlands. NPF4 Policy 5d requires that 'where development on peatland, carbon-rich soils or priority peatland is proposed, a detailed site specific assessment will be required'. In addition to NVC habitat survey information, NatureScot recommend an assessment of peatland condition is completed in line with the template provided in Annex 1 of NatureScot's updated Peatland Guidance. Development proposals on peat should also be supported by a site-specific and detailed peat survey and a Peat Landslide Hazard Risk Assessment (PLHRA). NatureScot advise that these site-specific assessments and surveys inform the project design and siting to ensure compliance with the mitigation hierarchy. Where impacts cannot be avoided, NatureScot's current recommendation is that restoration to achieve offsetting (i.e. compensation rather than biodiversity enhancement) should be in the order of 1:10 (lost:restored), i.e. 1ha loss of peatland should result in measures to restore 10ha of peatland (b).</p> <p>Policy 3 (Biodiversity) also applies to all development proposals, so any proposal affecting carbon-rich soils and peatlands must also take into account the requirements to conserve, restore and enhance biodiversity, including priority peatland habitats (c).</p> <p>Some of the area where infrastructure is proposed is mapped as Class 1 peatland. The provisional layout</p>	<p>(a) Noted. (b) Noted. (c) Noted. (d) Noted. (e) Noted.</p>

Consultee / Topic	Comments	Response
	<p>suggests that some of infrastructure will be at altitudes above 600m. NatureScot’s updated guidance notes that montane bogs (blanket bogs which occur above 600m) are particularly sensitive to damage and difficult to restore. It is therefore recommended that developments aim to avoid these areas entirely (d).</p> <p>NatureScot’s updated guidance includes further information on where impacts to peatland habitats could raise issues of national interest and the implications of this for our advice. Where a proposal raises issues of national interest NatureScot may object (see: https://www.nature.scot/doc/guidance-notice-no-019-identifying-natural-heritage-issues-national-interest-development-proposals) (e).</p>	
<p>NatureScot - Protected Species</p>	<p>NatureScot recommend that the applicants undertake appropriate surveys and implement any necessary mitigation for protected species in line with guidance at: https://www.nature.scot/professionaladvice/planning-and-development/planning-and-development-protected-species. The more recent publication of guidance for mountain hares is highlighted, see: https://www.nature.scot/doc/standing-advice-planning-consultations-mountain-hare (a).</p> <p>The proposed development site is on the edge of a wildcat priority area and the site is potentially suitable for water voles. The River Findhorn is also an important salmon river. Advice on survey and assessment for freshwater interests can be found in our general scoping and pre-application advice document (b).</p> <p>The developer should also consider the need for any species licenses as part of any development and contact NatureScot Licensing Team (licensing@nature.scot) regarding any licence applications (c).</p>	<p>(a) Noted. (b) Noted. (c) Noted.</p>
<p>NatureScot - General Assessment of Terrestrial Habitats</p>	<p>Terrestrial habitats Habitat surveys should include:</p> <ul style="list-style-type: none"> Phase 1 survey for all terrestrial habitats likely to be affected by the development. This should include an appropriate area beyond the footprint of the development to assess more distant effects and to inform any redesign or micro-siting. NVC survey of habitats listed on Annex 1 of the EC Habitats Directive and UKBAP Priority Habitats, accompanied by supporting quadrat information. https://jncc.gov.uk/our-work/terrestrial-habitatclassification-schemes/ provides links to the different habitat classifications and a habitats correspondence table. 	<p>(a) Noted.</p>

Consultee / Topic	Comments	Response
NatureScot - Deer Management	<ul style="list-style-type: none"> Records of any rare and scarce plant species (a). <p>Any future application should consider the potential impacts of the development on deer welfare, habitats, road safety, neighbouring and other interests such as nearby protected areas. Where significant impacts may result, a deer management statement should be provided to address the impacts, either as part of a Habitat Management Plan, a stand-alone document or modification of an existing Deer Management Plan. Advice on what to consider and include in deer assessments and management plans at development sites can be found at https://www.nature.scot/doc/guidance-planning-and-development-what-consider-andinclude-deer-assessment-and-management (a).</p>	(a) Noted.
SEPA and NatureScot - Disturbance and Re-use of Excavated Peat and Other Carbon Rich Soils	<p>Where proposals are on peatland or carbon rich soils the following should be submitted to address the requirements of NPF4 Policy 5:</p> <p>a) layout plans showing all permanent and temporary infrastructure, with extent of excavation required, which clearly demonstrates how the mitigation hierarchy outlined in NPF4 has been applied. These plans should be overlaid on:</p> <ul style="list-style-type: none"> peat depth survey (showing peat probe locations, colour coded using distinct colours for each depth category and annotated at a usable scale; peat depth survey showing interpolated peat depths; peatland condition mapping; National Vegetation Classification survey (NVC) habitat mapping. <p>b) an outline Peat Management Plan (PMP).</p> <p>c) an outline Habitat Management Plan (HMP).</p>	Noted.
SEPA and NatureScot - Biodiversity Enhancement and Management	<p>In order to satisfy Policy 3b a Habitat Management Plan (HMP) that details how criteria i to v will be met, will be required. This will demonstrate that the development will significantly enhance the biodiversity of the site, from its pre-development state. Where the HMP is unable to demonstrate to the satisfaction of the planning authority that the development will conserve, restore and enhance biodiversity, the proposal will not be supported (a).</p> <p>The HMP must demonstrate to the satisfaction of the planning authority that the development will accord with Policies 57-60 of the HwLDP and should include, where possible and appropriate, enhancements measures for HNBAP priority species and habitats (b).</p>	(a) Noted. (b) Noted. (c) Noted.

Consultee / Topic	Comments	Response
	<p>The HMP will be carried out by a suitably qualified and experienced consultant. It is recommended that this will include a Biodiversity Net Gain Metric (BNG) and demonstrate a recommended minimum 10% increase of the biodiversity of the site post construction. It is recommended that the English Nature/DEFRA BNG Metric is used to determine the biodiversity enhancement, and this should be included within the planning application (c).</p>	

Approach to Mitigation

8.3.8. Mitigation and enhancement measures will be developed as appropriate, and details will be provided in the ecology chapter of the EIA Report. The primary form of mitigation will be avoidance by design, (e.g., the avoidance where practical of important habitats such as blanket bog located on deep peat). A range of ‘standard’ good practice measures will be implemented during construction to avoid and reduce potential impacts. Where possible measures to enhance the environment during operation of the wind farm will be proposed.

Assessment of Effects

8.3.9. The impact assessment will be based on the Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2018).

8.3.10. Impacts upon the following features will be assessed:

- Designated sites: including direct effects (i.e. derived from land-take or disturbance to habitats and / or protected species), and indirect effects (i.e. changes caused by impacts to supporting systems such as groundwater or over land flow);
- Terrestrial habitats: including direct effects (i.e. derived from land-take), and indirect effects (i.e. changes caused by impacts to supporting systems such as groundwater or over land flow);
- Aquatic habitats: impacts are limited to the ecological effects of changes in water conditions through potential pollution impacts; and
- Protected species: including direct effects (i.e. loss of life as a result of the Proposed Development; loss of key habitat; displacement from key habitat; barrier impacts preventing movement to / from key habitats; and general disturbance), and indirect effects (i.e. loss / changes of / to food resources; population fragmentation; degradation of key habitat e.g. as a result of pollution).

8.3.11. The assessment will also consider potential cumulative effects arising from the addition of the Proposed Development with other existing developments.

Guidance

8.3.12. The ecology assessment will be carried out in accordance with the principles contained within the following guidance documents:

- Chartered Institute of Ecology and Environmental Management (CIEEM) (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: terrestrial, Freshwater, Coastal and Marine (V1.1);
- Joint Nature Conservation Committee (JNCC) (2013). Guidelines for selection of biological Sites of Special Scientific Interest (SSSI);
- Scottish Executive (2011). Planning Circular 3: Guidance on The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011;
- Scottish Executive (2006). The Scottish Forestry Strategy (SFS);
- Scottish Executive Rural Affairs Department (SERAD) (2000). Habitats and Birds Directives, Nature Conservation: Implementation in Scotland of EC Directives on the Conservation of Natural Habitats and of Wild Flora and Fauna and the Conservation of Wild Birds (“The Habitats and Birds Directives”). Revised Guidance Updating Scottish Office Circular No 6/1995;
- Scottish Government (2001). European Protected Species, Development Sites and the Planning Systems: Interim guidance for local authorities on licensing arrangements;
- Scottish Government (2010). Management of Carbon-Rich Soils;
- Scottish Government (2016). Draft Peatland and Energy Policy Statement;
- Scottish Government (2017). Draft Climate Change Plan - the draft Third Report on Policies and Proposals 2017 - 2032;
- Scottish Environment Protection Agency (SEPA) (2017a). Guidance Note 4 - Planning guidance on on-shore windfarm developments;
- SEPA (2017b). Guidance Note 31 - Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems (GWDTE);
- Scottish Government, SNH and SEPA (2017). Peatland Survey - Guidance on Developments on Peatland;
- European Commission (EC) (2011). Wind energy developments and Natura 2000;
- Scottish Renewables, SNH, SEPA, Forestry Commission (Scotland), Historic Scotland (2015). Good Practice During Windfarm Construction (3rd Edition);
- SNH (2015). Scotland’s National Peatland Plan;
- SNH (2012). Assessing the Cumulative Impact of Onshore Wind Energy Developments;
- Collins, J. (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition). Bat Conservation trust (BCT);
- Collins, J. (ed.) (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition). Bat Conservation Trust (BCT);
- Natural England (2014). Natural England Technical Information Note TIN 051. Bats and Onshore Wind Turbines - Interim Guidance (3rd Edition);
- Rodrigues et al. (2014). Guidelines for consideration of bats in wind farm projects. Revision 2014. EUROBATS Publication Series No. 6; and

- NatureScot, Natural England, Natural Resources Wales, Renewable UK, Scottish Power Renewables, Ecotricity Ltd., the University of Exeter and the BCT (2021). Bats and Onshore Wind Turbines: Survey, Assessment and Mitigation.

8.3.13. The ecology assessment will focus on the impacts of construction and operation of the Proposed Development upon those ecological features identified during the review of desk-based information and field surveys.

Cumulative Effects

8.3.14. The effects of the proposed development will be assessed in isolation and in combination with predicted effects of other consented wind farm development within 10km of the Site boundary, where applicable.

8.4. Field Survey

8.4.1. A range of surveys have been undertaken across the Site, the details of which are summarised below.

Field Surveys

Extended Phase 1 Habitat Survey

8.4.2. An extended Phase 1 habitat survey has been undertaken across the entire site and included a 250m buffer (where access permitted) using standard JNCC methodology (JNCC, 2010).

8.4.3. The survey involved mapping any area of habitat greater than 0.1ha in terms of the standard Phase 1 categories and compiling a series of target notes to describe particular areas or significant features within each survey area.

8.4.4. This included features with the potential to support protected or otherwise notable species that may require further survey or consideration in relation to the Proposed Development. Target notes may also be used to describe locations with the potential to be included within a future Habitat Management Plan (HMP).

National Vegetation Classification (NVC) Survey

8.4.5. A botanical survey has also been undertaken to NVC standard (Rodwell, 1991 - 2000, 5 volumes), and in accordance with NVC survey guidelines (Rodwell, 2006), and targeted habitats within the site that potentially have nature conservation importance or are potentially Groundwater Dependent Terrestrial Ecosystems (GWDTE).

8.4.6. This means that where there is little likelihood of GWDTEs and no indication of a habitat of conservation importance, then the NVC survey would not be carried out. This increases survey efficiency, while also allowing the results to help inform layout and mitigate for the presence of GWDTEs.

- 8.4.7. Communities will be evaluated in terms of their nature conservation interest, e.g. through inclusion on the Scottish Biodiversity List (SBL) or local Biodiversity Action Plan, as well as in terms of potential groundwater dependence based on the list provided by SEPA (2017b).

Bat Surveys

- 8.4.8. The latest UK guidance on surveys, assessment and mitigation in relation to bats and onshore wind turbines was released in January 2019 (SNH et al.). This guidance states a minimum level of pre-application survey required using static detectors of 10 nights in each of spring (April - May), summer (June - mid-August), and autumn (mid-August - October).
- 8.4.9. Guidance suggests that for sites with more than 10 turbines, a detector should be placed at 10 turbine locations plus a third of additional turbine locations over 10. Therefore, 11 detectors were allocated to the survey during 2022, with additional detectors deployed as required in 2023 to ensure survey coverage is in line with NS best practice guidance.
- 8.4.10. A static detector only approach was followed and no transect work undertaken.

Protected Mammals

- 8.4.11. A combined survey investigating for signs of protected mammals, such as (but not limited to) badger *Meles meles*, otter *Lutra lutra*, water vole *Arvicola amphibius*, pine marten *Martes martes* and wildcat *Felis silvestris* have been carried out across the site and up to a 250m buffer (where access permits) (the maximum distance at which potential disturbance impacts on otter are generally considered likely to occur).
- 8.4.12. The survey was based on standard methods (i.e. Harris et al., 1989; Chanin, 2003; Strachan et al., 2011) and involved searching for field evidence, such as feeding signs, latrines and individual droppings, burrows, nests, footprints and obvious runways in vegetation and sightings of the animals themselves.

Fish Habitat Survey

- 8.4.13. The survey method followed a modified version of the methodologies developed by Hendry and Cragg-Hine (1997), and the Scottish Fisheries Co-ordination Centre (2007) with areas of habitat defined as detailed in **Table 8-3** below. Reference was also made to SEPA's "Guidance for applicants on supporting information requirements for hydropower applications".
- 8.4.14. Spawning redds where present and accessible, would be described in terms of stability, compaction and notes on the degree of siltation present within the spawning redds. In addition to notes on physical channel morphology, notes were also taken on bankside structure and surrounding land use.

Table 8-8: Fish Habitat Classification

Habitat Type	Classification
Spawning redds	Stable gravel up to 30cm deep that is not compacted or contains excessive silt. Substrate size with a diameter of 0.8 to 10.2cm.
Fry habitat *	Shallow (< 0.2m) and fast flowing water indicative of riffles and runs with a substrate dominated by gravel (16 - 64mm) and cobbles (64 - 256mm).
Parr habitat *	Riffle - run habitat that is generally faster and deeper than fry habitat (0.2 - 0.4m). Substrate consists of gravels (16 - 64mm), cobbles (64 - 256mm) and boulder (> 256mm).
Glides	Smooth laminar flow with little surface turbulence and generally greater than 0.3m deep.
Pools	No perceptible flow and usually greater than 1m deep.
Flow constriction	Where flows are accelerated between narrow banksides (usually combined with deep fast flows and bedrock substrates).
Obstacles/Barrier	A structure or item identified as a potential obstruction to fish passage at certain water heights.

* If significant amounts of fry and parr habitat were found to co-exist in the same section, these habitat classifications are often combined and classified as juvenile habitat. Where parr habitat is mentioned this will refer to habitat that has principally been identified as habitat more suited to parr than fry, however will habitually contain a lower quantity of fry habitat and habitat which is suited to both fry and parr.

- 8.4.15. The survey comprised, a walkover, noting physical morphology throughout the potentially impacted reach, as well as upstream and downstream with potential existing obstacles to migration being noted.
- 8.4.16. Photos and target notes were recorded in the context of varying fisheries habitat / flow types, and obstacles / barriers along the survey reach.
- 8.4.17. On the basis of the fish habitat classification, each stretch was allocated a fish habitat quality band (Low, Medium, Good, High) - this is a further subjective assessment based on the survey information to give a quick overview of the usefulness of each stretch for fish.

Summary of Results

- 8.4.18. Results documented here relate to surveys limited to Clune and Corryborough Estate land in the north of the Proposed Application area. Terrestrial ecology surveys on Seafield Estate (land in the south of the Proposed Application area) were completed in October 2023 and the results currently being analysed.

Phase 1 Habitat and NVC Surveys

Dominant Habitats

Dry Modified Bog (E1.8)

- 8.4.19. This habitat occupies the largest area of the Site, with wide expanses made up of deergrass *Trichophorum germanicum* to the south-west. The bogs centre around the upper reaches of the Wester Strathnoon Burn and Allt Lathach, and are dominated by heather *Calluna vulgaris*, cross-leaved heath *Erica tetralix* and hare's-tail cotton-grass *Eriophorum vaginatum*, on peat usually deeper than 0.5m.
- 8.4.20. A small variety of *Sphagnum* species were found, typical of modified bogs, including red bog-moss *S. capillifolium*, flat-topped bog-moss *S. fallax* and blunt-leaved bog-moss *S. palustre* in characteristic green and red hummocks.
- 8.4.21. Apart from heather, the commonest dwarf shrub was cross-leaved heath as well as bog-myrtle *Myrica gale*. There was very little crowberry *Empetrum nigrum* and even less bilberry *Vaccinium myrtillus*. The bogs regularly recorded species such as common cotton-grass *Eriophorum angustifolium* and woolly fringe-moss *Racomitrium lanuginosum*, as well as various lichen species in the genus *Cladonia*. The abundance of these species suggests bogs that are slightly drier than those with more *Sphagnum*, hence the dry modified bog classification (JNCC, 2016).
- 8.4.22. The modified bogs were all examples of the NVC community M19 *Calluna vulgaris* - *Eriophorum vaginatum* blanket mire.

Dry Dwarf Shrub Heath - Acid (D1.1)

- 8.4.23. This habitat occupies large swathes of the Site, with wide expanses made up of more than 25% ericoids or small gorse species in relatively dry conditions, usually constrained to the steeper slopes and higher areas of the Site, for example on the hillsides toward the north-west. This habitat is dominated by heather, bell heather *Erica cinerea*, bilberry and gorse *Ulex europaeus* (JNCC, 2016), with patches of common juniper *Juniperus communis* scrub along the hillsides (JNCC, 2016).
- 8.4.24. The dwarf shrub heath is an example of NVC communities H10 *Calluna vulgaris* - *Erica cinerea* heath and H13 *Calluna vulgaris* - *Cladonia arbuscula* heath.

Dry Heath / Acid Grassland (D5)

- 8.4.25. This habitat is a mosaic of dry heath and acid grassland. The hillsides on Site are heavily grazed by sheep and deer and are quite species poor, and these regions usually intersect areas of bog and dry heath as a transition zone. These areas are abundant in the species wavy hair-grass *Deschampsia flexuosa*, heath-rush *Juncus squarrosus*, and sheep's sorrel *Rumex acetosella* (JNCC, 2016), with patches of soft-rush *Juncus effusus* and *Sphagnum* flush in amongst the streams (JNCC, 2016).
- 8.4.26. This habitat type is an example of NVC communities U5 *Nardus stricta* - *Galium saxatile* grassland and H10 heath.

Minor Habitats

Broad-leaved woodland - semi-natural (A1.1.1)

8.4.27. There are two patches in the north-west corner and another on the lower reaches of the Allt Phris of ancient birch woodland, with both silver birch *Betula pendula* and downy birch *Betula pubescens* protected from grazing by fencing. These areas of woodland are considered ancient/climax series as they contain mature trees which host endemic species such as chaga *Inonotus obliquus*. Other tree and shrub species recorded include aspen *Populus tremula*, grey willow *Salix cinerea*, eared willow *Salix aurita*, and gorse (JNCC, 2016).

Broad-leaved woodland - plantation (A1.1.2)

8.4.28. Within the survey area there is a small patch of broad-leaved plantation woodland on the northern boundary which contains both silver and downy birch, and Scots pine *Pinus sylvestris* (JNCC, 2016).

Coniferous woodland - plantation (A1.2.2)

8.4.29. Within the buffer zone on the eastern boundary there is a strip of coniferous woodland plantation on the opposite side of the A9 comprising of Scots pine and European larch *Larix decidua*. Similarly, there is a patch in the buffer zone on the northern boundary (JNCC, 2016).

Mixed woodland - plantation (A1.3.2)

8.4.30. Mixed woodland plantation was recorded on the northern boundary of the Site, straddling the minor road. These areas are comprised mostly of silver birch and Scots pine (JNCC, 2016).

Scrub- dense/continuous (A2.1)

8.4.31. Toward the north-west of the Site there are numerous patches of dense scrub which includes species such as gorse and common juniper, with occasional silver birch (JNCC, 2016).

Scrub - scattered (A2.2)

8.4.32. In the north-west, along the river, these areas of scattered scrub consist of common juniper and silver birch bordered by semi-improved heath and grassland used by grazing sheep and cattle. The relatively steep banks of the lower to middle reaches of the Wester Strathnoon Burn are banked by mature scattered scrub consisting of common juniper and gorse (JNCC, 2016).

Parkland/coniferous scattered trees (A3.2)

8.4.33. Scattered examples of Scots pine and silver birch with less than 30% cover are present on grazing land for cattle and sheep (JNCC, 2016).

Acid grassland - unimproved (B1.1)

8.4.34. This habitat resides in the north-west of the Site, on the southern banks of the River Findhorn. They are relatively species rich areas found on acidic soils that grade into dry dwarf shrub heath. Dominant species include wavy hair-grass and heath bedstraw *Galium saxatile* (JNCC, 2016).

Acid grassland - semi-improved (B1.2)

8.4.35. These are largely areas dominated by wavy hair-grass with frequent heath bedstraw. Small patches can be found along the lower reaches of the Clune Burn, Western Strathnoon Burn and Caochan Seachdag, where cattle and sheep roam freely (JNCC, 2016).

Improved grassland (B4)

8.4.36. These areas of the Site are in the north-west toward the River Findhorn which are heavily grazed by sheep and cattle. The species richness is generally poor, and pastures have been heavily affected by drainage and/or the application of herbicides and/or slurry. Species found here were typical of this habitat and include white clover *Trifolium repens*, common sorrel *Rumex acetosa* and common dandelion *Taraxacum officinale* (JNCC, 2016).

Marsh/marshy grassland (B5)

8.4.37. These areas of the Site are relatively wet and contain large swathes of purple moor-grass *Molinia caerulea*, rushes *Juncus* sp., and sedges *Carex* sp., with only small patches of *Sphagnum* (JNCC, 2016).

Poor semi-improved grassland (B6)

8.4.38. These areas are characteristic of heavily grazed and managed grassland with very little biodiversity. The species present are indicative of neutral grassland with sheep's fescue *Festuca ovina*, false oat-grass *Arrhenatherum elatius* and meadow foxtail *Alopecurus pratensis* recorded (JNCC, 2016).

Lichen/bryophyte heath (D3)

8.4.39. This habitat is restricted to the south-west corner of the Site, at the summit and on the north face of the Carn Dubh'Ic an Deoir. This area of heathland is dominated by heather, together with a carpet of lichens and bryophytes such as *Cladonia* sp., *Lecanora* sp., fountain apple-moss *Philonotis fontana*, rusty feather-moss *Brachythecium plumosum*, yellow fringe-moss *Racomitrium aciculare*, on soils with little depth and on bare rock on places (JNCC, 2016).

Wet Modified Bog (E1.7)

8.4.40. There is a small area of wet modified bog between two tributaries in the upper reaches of the Allt Lathach. This habitat is largely composed of exposed peat of a depth greater than 0.5m, with patches of grass and sedge such as purple moor-grass and deergrass (JNCC, 2016).

Standing Water (G1)

8.4.41. Two examples are present: one in the north-east of the Site, and one in the north to the east of the Clune Burn.

Running Water (G2)

8.4.42. There are 4 main watercourses on Site; Allt Phris, Clune Burn, Wester Strathnoon Burn, and Allt Lathach.

8.4.43. The Allt Phris drains into the River Findhorn from the eastern side of the Site along a relatively shallow gradient from 520m to 310m AOD, a gradient similarly followed by the Clune Burn slightly further to the west. The Allt Lathach flows through the centre of the Site, draining the hills of Carn Ruighe Shamraich, Carn Phris Mhor and Carn Coire na Cluanaich which have relatively steep banks covered by scattered scrub in the middle and lower reaches. The Wester Strathnoon Burn drains the higher regions of the Site in the West, including Carn Dubh'Ic an Deoir and Carn Leachter Beag from a height of 750m to 330m AOD.

Inland cliff - acid/neutral (I1.1.1)

8.4.44. There is a small patch of inland cliff on Site, classified as exposed rock surface over 2m in height at an angle of more than 60° (JNCC, 2016).

Other exposure - acid/neutral (I1.4.1)

8.4.45. An area in the lower reaches of the Clune Burn consisting of natural exposed rock in the riverbed (JNCC, 2016).

Cultivated/disturbed land - ephemeral/short perennial (J1.3)

8.4.46. There is one patch of land in the buffer zone, located on the southern bank of the River Findhorn that hosts a property with mown grass and a managed garden (JNCC, 2016).

Other habitat (J6)

8.4.47. These areas highlight paved roads such as the A9 in the east and the minor road that runs along the south of the River Findhorn, forming a large section of the northern boundary. There is a circuit of tracks throughout the Site that is regularly used by gamekeepers to monitor livestock, grouse, and deer populations (JNCC, 2016).

Bat Surveys

8.4.48. Activity levels across the Site were low with a total of 482 (57 attributed to *Myotis* sp., 150 attributed to soprano pipistrelle, 222 attributed to common pipistrelle, and 53 attributed to *Pipistrellus* sp.) bat passes across all detectors over three deployment occasions.

8.4.49. When converted to bat passes per hour, it is clear that activity across the Site is low reflecting it's exposed, upland geographical location with little to no roosting and / or foraging habitat.

- 8.4.50. Bat pass rates are often highly variable between nights, with some nights having few or no passes and other nights having high activity. This is particularly pronounced on sites within the Scottish Highlands. In these circumstances, the median is likely to be a more useful summary of the typical activity than the mean (Lintott & Mathews, 2018).

Protected Mammals

Otter

- 8.4.51. A desktop study and field survey resulted in no evidence of otter. The main watercourses within the survey area and the banks of the River Findhorn were surveyed and no evidence recorded.
- 8.4.52. Results from the Fish Habitat Survey identified old otter spraint at three locations on the Allt Lathach.

Wildcat

- 8.4.53. The Site does not offer optimal habitat for wildcat being mainly open moorland, maintained as a grouse moor. No evidence of this species was found during the field survey. The species is in significant decline, and this is not recognised as a priority area for wildcat.

Pine Marten

- 8.4.54. No signs of pine marten were recorded during the survey. Woodland along the northern edge of the Site along the River Findhorn is considered to be suitable habitat but evidence was recorded in the survey area, including a 250m buffer.

Water Vole

- 8.4.55. Evidence of water vole was recorded along the middle to upper reaches of the Allt Lathach and Clune Burn. A burrow entrance with fresh faeces were recorded on the Clune Burn. Further upstream, a burrow was found with mud piles breaking through the surface. Along the Allt Lathach, burrows were recorded close to the track. More burrows were observed along the Caochan Leiteir (tributary of the Allt Lathach).

Badger

- 8.4.56. Evidence of badger was found within the survey area at two locations.
- 8.4.57. The first sett was recorded in the spruce plantation within the buffer zone, just south of Clune Farm. This sett consisted of multiple entrances (c. 21), and a selection of fresh spoil heaps.
- 8.4.58. The second sett was found within the Site boundary, in the birch *Betula* sp. woodland on the west bank of the Allt Phris. One entrance was recorded, and the spoil in front showed signs of plant growth, suggestive of an outlier sett that has not been used recently.

Red Squirrel

8.4.59. A desktop study and field survey resulted in no evidence of red squirrel. The woodland along the northern Site boundary is suitable habitat for red squirrels, as was the neighbouring plantation until it was recently felled. However, no evidence of red squirrel was recorded within the Site or the 250m buffer.

Fish Habitat Survey

8.4.60. The watercourses within the survey area were all tributaries of the River Findhorn. The most consistent high quality fish habitat was found along the Allt Lathach where the channel reached widths of up to 5m and 30cm deep. Large boulders and cobbles in the stream provide good cover for fish while washed out areas with rocks and gravel were noted, indicating the channel is highly active. Parr were observed in the water and otter spraint was also found in the upper reaches of the watercourse, indicating that the Allt Lathach is able to sustain a healthy fish population. Tributaries of Allt Lathach including Caochan nan Gamhainn and Caochan Leiteir and these were found to be of low quality habitat for fish, containing impassable culverts and rush pastures growing instream. No barriers to migration were identified along the Allt Lathach other than a build up of sediment at the confluence between the Allt Lathach and the River Findhorn, which may be a barrier to fish migration under low flow conditions.

8.4.61. The other watercourses surveyed were all found to contain impassable barriers to migration. While the upper reaches of the Clune Burn contained good parr habitat, a barrier was recorded downstream of here at the mid-section of the watercourse in the form of a ford, which under low flow conditions would be impassable.

8.4.62. The Allt Phris contained some excellent riparian habitat in the mid-section, including areas of birch woodland and juniper scrub which provides cover for fish and adds nutrients to the watercourse. Tree debris and large cobbles were also recorded which provide a sanctuary for fry and parr. However, downstream of here a perched, double culvert was recorded which would be impassable under most conditions. The nearby Allt Baile nan Gordonach was found to be of poor quality for fish and overgrown with rushes.

8.4.63. The Caochan a' Phuill and Caochan Seachdag were found to contain a mixture of low to good quality habitat in their upper reaches however there were impassable obstacles further downstream including perched culverts and thick rush pastures. The unnamed tributary to the far west of the survey area also contained good fry habitat in places but contained small waterfalls which would likely present an impassable obstacle to migration.

- 8.4.64. It is clear from the survey that the majority of the watercourses within the Site offer low-good quality fish habitat. High quality habitat was recorded along some stretches of the watercourses however impassable obstacles likely prevent migration to most of the upper reaches of these burns. The Allt Lathach was found to be consistently high-quality habitat with confirmed fish and otter signs. During construction design it will be important to ensure that suitable water crossings are put in place for this watercourse which follow current best practice and don't impede fish passage.

8.5. Matters Scoped Out

- 8.5.1. Given that no evidence of wildcat, pine marten or red squirrel has been recorded on Site during surveys, it is proposed to scope these species out of the assessment.

8.6. References and Standard Guidance

Atherton, I., Bosanquet, S. & Lawley, M. (2010). Mosses and Liverworts of Britain and Ireland: a field guide. British Bryological Society.

Averis B (2013). Plants and Habitats: An introduction to common plants and their habitats in Britain and Ireland. Ben Averis.

Bang, P. & Dahlstrøm, P. (2006). Animal Tracks and Signs. Oxford University Press, Abingdon.

Birks, J. (2012). In: Cresswell, W. J., Birks, J. D. S., Dean, M., Pacheco, M., Trehwella, W. J., Wells, D., and Wray, S. (2012). UK BAP Mammals: Interim Guidance for Survey Methodologies, Impact Assessment and Mitigation. The Mammal Society, Southampton.

Chanin, P. (2003). Monitoring the Otter *Lutra lutra*. Conserving Natura 2000 Rivers Monitoring Series No. 10, English Nature, Peterborough.

Crawley, D., Coomber, F., Evans, P., Harrower, C., Kubasiewicz, L., Matthews, F., Smith, B., and Waggitt, J. (2020). Atlas of the Mammals of Great Britain and Northern Ireland. The Mammal Society. Pelagic Publishing, London.

Cresswell, W. J., Birks, J. D. S., Dean, M., Pacheco, M., Trehwella, W. J., Wells, D. and Wray, S. (eds) (2012). UK BAP Mammals: Interim Guidance for Survey Methodologies, Impact Assessment and Mitigation. The Mammal Society, Southampton.

Forestry Commission (2009). Practical Techniques for Surveying and Monitoring Squirrels.

Harris, S., Cresswell, P. and Jefferies, D. (1989). Surveying Badgers. The Mammal Society, London.

Hendry, K. & Cragg-Hine, D. (1997). A Guidance Manual, APEM Ltd, Fisheries Technical Manual 4, R & D Technical Report W44, Version 1.0/07-97. R & D Project 603.

JNCC (2002). National Vegetation Classification: Field Guide to Mires and Heaths. Joint Nature Conservation Committee, Peterborough.

- JNCC (2004). An Illustrated guide to British Upland Vegetation. Joint Nature Conservation Committee, Peterborough.
- JNCC (2006). National Vegetation Classification: User's Handbook. Joint Nature Conservation Committee, Peterborough.
- JNCC (2016). Handbook for Phase 1 habitat survey - a technique for environmental audit, Revised reprint. Joint Nature Conservation Committee, Peterborough.
- Lintott, P. & Mathews, F. (2018). Reviewing the evidence on mitigation strategies for bats in buildings: informing best-practice for policy makers and practitioners. CIEEM.
- McVean, D N (1961). Post-glacial history of juniper in Scotland. Proceedings of the Linnean Society of London.
- Muir, G. and Morris, P. (2013). How to find and identify mammals (2nd edition). The Mammal Society, Southampton.
- Nature Scot (1988). Craigellachie NNR <https://sitelink.nature.scot/site/5020> - accessed 21st December 2023.
- Nature Scot (2005a). Slochd SAC Qualifying Interests <https://sitelink.nature.scot/site/8639> - accessed 21st December 2023.
- Nature Scot (2005b). Kinveachy SAC Qualifying Interests <https://sitelink.nature.scot/site/8283> - accessed 21st December 2023.
- Nature Scot (2005c). River Spey SAC Qualifying Interests <https://sitelink.nature.scot/site/8365> - accessed 21st December 2023.
- Nature Scot (2005d). Carn nan Tri-tighearnan SAC Qualifying Interests <https://sitelink.nature.scot/site/8220> - accessed 21st December 2023.
- Nature Scot (2009a). Craigellachie SSSI Citation and Site Management Statement <https://sitelink.nature.scot/site/428> - accessed 21st December 2023.
- Nature Scot (2009b). Carn nan Tri-tighearnan SSSI Citation and Site Management Statement <https://sitelink.nature.scot/site/323> - accessed 21st December 2023.
- Nature Scot (2010). Kinveachy SSSI Citation and Site Management Statement <https://sitelink.nature.scot/site/864> - accessed 21st December 2023.
- Purseglove, J. (1995). The new rivers and wildlife handbook. RSPB, NRA and RSNC, the Royal Society for the Protection Of Birds, Sandy, 1994.
- Rodwell JS (Ed.) (1991 et seq.). British Plant Communities. 5 volumes: Vol. 1 (1991) - Woodlands and Scrub; Vol. 2 (1991) - Mires and Heaths; Vol. 3 (1992) - Grasslands and Montane Communities; Vol. 4 (1995) - Aquatic Communities, Swamps and Tall-herb Fens; Vol. 5 (2000) - Maritime Communities and Vegetation of Open Habitats. Cambridge University Press, Cambridge.

Scottish Natural Heritage (undated a). Wildcat Survey Methods. Available online from: <https://www.nature.scot/Sites/default/files/2018-04/Guidance-Wildcat-Survey-Methods.pdf> (accessed November 2023).

Scottish Natural Heritage (2003). Best Practice Guidance - Badger Surveys. Inverness Badger Survey. Commissioned Report No. 096.

SEPA (2017). Land Use Planning System SEPA Guidance Note 31: Version 3. Available online at <https://www.sepa.org.uk/media/144266/lups-gu31-guidance-on-assessing-the-impacts-of-development-proposals-on-groundwater-abstractions-and-groundwater-dependent-terrestrial-ecosystems.pdf> (accessed 23 January 2023).

UK Nature Conservation (1992). Summary of National Vegetation Classification Woodland Descriptions; Whitbread AM, Kirby KJ. Joint Nature Conservation Committee.

8.7. Questions for consultees

- 8.7.1. Q8.1. The above surveys have been scoped to ensure that a robust and complete set of baseline ecological data is collected for the Proposed Development. Please can the consultees confirm if the survey and assessment methodologies are appropriate for the Site and in relation to the Proposed Development.
- 8.7.2. Q8.2. Do Consultees agree with the species proposed to be scoped out of further assessment.

9. Ornithology

9.1. Introduction

9.1.1. This section sets out the proposed approach to the assessment of potentially significant effects on ornithological receptors as a result of the Proposed Development, including physical effects, setting change and cumulative effects.

9.2. Environmental Baseline and Potential Sources of Impact

Baseline

Desk Study

9.2.1. A desk study was undertaken to identify nature conservation designations with avian features, and records of protected or otherwise notable avian species in the local area. This information was used to aid in the determination of the proposed scope of the surveys.

9.2.2. The NatureScot SiteLink website was used to identify designated nature conservation sites such as Special Protection Areas (SPA), Ramsar sites, Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR) within 10km of the Proposed Development, extending to 20km for Natura 2000 sites with qualifying interests for geese as a result of NatureScot guidance on connectivity (SNH, 2016a).

9.2.3. Results of the designated site search are presented in **Table 9-1**.

Table 9-9: Designated Sites

Designated Site	Designated Feature	Distance from Site Boundary
SPAs		
Kinveachy Forest (NatureScot, 2000).	Capercaillie Tetrao urogallus Scottish crossbill Loxia scotica	c. 2km south-west (at its closest point).
SSSIs		
Kinveachy Forest (NatureScot, 2010).	Breeding bird assemblage Native pinewood	Directly adjacent to the south-west

9.2.4. The desk study also collated protected or otherwise notable species records¹² publicly available for commercial use held on the National Biodiversity Network (NBN) Atlas website from within 5km of the approximate centre of the Site for the past 10 years (**Table 9-2**).

¹² Species are those listed on Annex I of the EC Birds Directive (2009/147/EC), Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), or are species determined by NatureScot to be particularly at risk from onshore wind farms (SNH, 2018a).

Table 9-10: NBN Species Records (past 10 years)

Species	Annex I of EC Birds Directive 2009/147/EC	Schedule 1 of the Wildlife and Countryside Act 1981	At risk from wind farms (SNH, 2018a)
Curllew Numenius Arquata			X
Dunlin Calidris alpina	X		X
Golden eagle Aquila chrysaetos	X	X	X
Golden plover Pluvialis apricaria	X		X
Goshawk Accipiter gentilis	X	X	
Greylag goose Anser anser		X * (in Outer Hebrides, Caithness, Sutherland and Wester Ross only)	
Hen harrier Circus cyaneus	X	X	X
Herring gull Larus argentatus			X
Lapwing Vanellus vanellus			X
Merlin Falco columbarius	X	X	X
Pink-footed goose Anser brachyrhynchus			X
Red kite Milvus milvus	X	X	X
Scottish crossbill Loxia scotica	X	X	X
Short-eared owl Asio flammeus	X		X

Species	Annex I of EC Birds Directive 2009/147/EC	Schedule 1 of the Wildlife and Countryside Act 1981	At risk from wind farms (SNH, 2018a)
Snow bunting <i>Plectrophenax nivalis</i>		X	
Whimbrel <i>Numenius phaeopus</i>		X	X
Whooper swan <i>Cygnus cygnus</i>	X	X	X

* Listed on Schedule 1, Part II of the WCA 1981. Birds are afforded special protection during the close season which is 1 February to 31 August (21 February to 31 August below high water mark) but which may be killed or taken outside this period.

Field Surveys

9.2.5. A number of ornithological surveys have been undertaken at the Site between September 2020 and August 2022 inclusive¹³, and included the following:

- 24 months of vantage point (VP) surveys;
- 2 seasons of breeding bird surveys;
- 2 seasons of breeding raptor surveys; and
- 2 seasons of black grouse *Lyrurus tetrix* surveys.

9.2.6. As a result of further Site design, land to the south on the adjacent Seafield Estate was also subject to the following surveys:

- 12 months of vantage point (VP) surveys;
- 1 season of breeding bird surveys; and
- 1 season of breeding raptor surveys.

Potential Sources of Impact

9.2.7. The key ornithological issues relating to the Proposed Development are the potential to adversely affect the conservation status of bird species with statutory protection (through inclusion in Annex I of the EU Birds Directive and / or Schedule 1 of the Wildlife & Countryside Act 1981 (as amended)), or otherwise those of high conservation concern.

9.2.8. These impacts can occur through habitat loss, disturbance, displacement, barrier effects and collisions with the turbines. Potential negative impacts (direct or indirect) on ornithology could arise during the construction and operation stages.

¹³ Methodology and results documented here relate to surveys limited to Clune and Corryborough Estate land in the north of the Proposed Application area. Avian ecology surveys (methodology and results) on Seafield Estate (land in the south of the Proposed Application area) were undertaken between January and December 2023 and the results are currently being analysed.

Land Take Impacts

9.2.9. Direct land take for the installation of the Proposed Development infrastructure (turbine bases, sub-station, access tracks, etc.) would result in the long-term temporary and / or permanent loss of habitat for birds within the Site, albeit such losses would be relatively small in the context of the Site as a whole.

Construction Impacts

9.2.10. Disturbance caused by construction may directly displace birds from breeding sites, directly affecting breeding success, or may temporarily displace birds from foraging areas, affecting their breeding success and winter survival.

9.2.11. In addition to these possible impacts on individuals and populations, any wind farm construction work undertaken during the bird breeding season (March to July / August, inclusive) carries a risk of illegal destruction, damage or disturbance to occupied bird nests.

9.2.12. The EIA Report will address and propose measures to reduce or eliminate this impact through mitigation such as seasonal timing of construction works, pre-construction surveys and the employment of an Ecological Clerk of Works (ECoW) during construction.

Operational Impacts

Disturbance / Displacement and Barrier Effects

9.2.13. The operation and maintenance of turbines has the potential to cause disturbance and displace certain bird species from the Site. During the lifetime of the Proposed Development, birds of some species at least, may habituate to the presence of turbines, however, and so this impact may decline in the long-term.

Collision with Turbines

9.2.14. The assessment will consider the potential collision risk to birds from the proposed turbines on the primary target species that have been identified as using the Site. The impact of potential collision mortality on a species population is influenced by several characteristics of the affected population, including:

- Size;
- Density;
- Recruitment rate (additions to the population through reproduction);
- Mortality rate in the absence of collision mortality; and
- Immigration and emigration rates to and from the population.

9.2.15. In general, the impact of an individual (of breeding age) being lost from the population will be greater for species that occur at low density, are relatively long-lived and have low annual reproductive rates. Such species include wildfowl, waders and the larger raptors. Conversely, the impact will often be insignificant for short-lived species with high reproductive rates, including most passerines (e.g. skylark *Alauda arvensis*).

- 9.2.16. Collision risk is perceived to be higher in species that spend much of their time in the air, such as foraging raptors and those that have regular flight paths between feeding and breeding / roosting grounds (e.g. geese, divers).
- 9.2.17. Vulnerability to collision is also influenced by factors such as the flight manoeuvrability of a species and its tendency to fly in conditions of reduced visibility (e.g. at night or in fog). These variances will be considered in the EIA as relevant to the identified species.

Cumulative Impacts

- 9.2.18. It is also important to assess the cumulative impacts of this and other operational and consented wind farms that may affect the broader populations of birds identified as target species in the survey area.
- 9.2.19. NatureScot guidance (SNH, 2012) states that the concept of favourable conservation status (FCS) should be used outside designated sites to determine whether an impact on a sensitive species is likely to be significant. A species' conservation status is favourable where:
- A species' population dynamics indicate that the species is maintaining itself on a long-term basis as a viable component of its habitats; and
 - A species' natural range is not being reduced, nor is it likely to be reduced for the foreseeable future; and
 - There is (and will probably continue to be) a sufficiently large habitat to maintain its population(s) on a long-term basis.
- 9.2.20. A cumulative effect will be judged as significant where it would negatively affect the favourable conservation status of a sensitive species, whether exacerbating an existing decline or preventing a sensitive species that is recovering from reaching favourable conservation status.
- 9.2.21. The premise here is that impacts from a number of developments, when assessed cumulatively, may exceed some threshold value (e.g. for loss of habitat or loss of breeding birds from collision), beyond which the impact becomes unacceptable.
- 9.2.22. NatureScot maintain a database of Proposed Developments within this region to assist with cumulative assessment for Natural Heritage Zones (NHZ) 7, 10 and 21¹⁴. As such, as part of the assessment, we would request the most recent version of this database prior to submission to assist with the cumulative assessment. Our own wind farm site search would also be undertaken; this would identify sites with more than three wind turbines where turbine tip height is more than 50m.

¹⁴ As the location of the Proposed Development is on the boundary of all three NHZs, it would be prudent for the assessment to consider all three.

9.3. Method of Assessment and Reporting

Consultation

- 9.3.1. This document forms the start of the formal consultation process. Following receipt of the Scoping Opinion, detailed follow-up consultation will be undertaken with relevant consultees (NatureScot, formerly Scottish Natural Heritage (SNH), and the Royal Society for the Protection of Birds (RSPB)) to discuss the scope of the assessment.

Pre-Application Advice

- 9.3.2. In their pre-application advice for major developments (reference number 23/02727/PREMAJ, dated 19 December 2023), The Highland Council (THC) outline their position and that of statutory consultees such as NatureScot and SEPA towards the Proposed Development. **Table 9-3** below summarises those observations pertinent to ornithology.

Table 9-3: Pre-Application Advice - Ornithology

Consultee / Topic	Comments	Response
NatureScot - Natural Heritage	<p>For national and major developments, or those subject to EIA, Policy 3b of NPF4 notes that proposals will only be supported where it can be demonstrated that they will conserve, restore and enhance biodiversity, including nature networks, so they are in a demonstrably better state than without intervention. The Policy requires that significant biodiversity enhancements are provided, in addition to any proposed mitigation. NatureScot's updated pre-application guidance provides further advice on this (a).</p> <p>As noted by the applicants, the area south of the proposed turbines was subject to a previous application in 2011 for Allt Duine Wind Farm. Assessments carried out for the previous proposal and responses to these will provide useful background to the applicants (b).</p>	<p>(a) Noted. (b) Noted.</p>
NatureScot - Designated Sites	<p>Designated Sites</p> <p>In relation to the European sites referenced below, the site's status means that the requirements of the Conservation (Natural Habitats, &c.) Regulations 1994 as amended (the 'Habitats Regulations') apply or, for reserved matters, The Conservation of Habitats and Species Regulations 2017. The NatureScot website has a summary of the legislative requirements (https://www.nature.scot/professional-advice/protected-areasand-species/protected-species/legalframework/habitats-directive-and-habitats-regulations/). A Habitats Regulations Appraisal would be required to assess the potential impacts to these sites, and any future application would need to demonstrate there was no adverse impact on site integrity (a).</p>	<p>(a) Noted. (b) Noted. (c) Noted.</p>

Consultee / Topic	Comments	Response
	<p>Kinveachy Forest Special Protection Area (SPA) and Special Area of Conservation (SAC)</p> <p>The proposed development site is around 1km from the SPA which is protected for breeding capercaillie and crossbill. NatureScot advise that an assessment of the potential for disturbance, displacement, habitat loss or modification and collision risk to capercaillie would be required to inform a HRA. We recommend the applicants contact the Capercaillie Project Officer Helen Gray (Helen.Gray@rspb.org.uk) to request capercaillie desk study records for this area and for advice on survey and assessment, including the extent of existing coverage so as to avoid any unnecessary duplication and potential for disturbance. We recommend the applicants also contact us directly to discuss the scope of survey and assessment requirements at this sensitive site. Further advice is provided in the ‘Ornithology’ section below. Potential impacts to crossbills and their habitats should also be considered (b).</p> <p>Kinveachy Forest Site of Special Scientific Interest (SSSI)</p> <p>The SSSI is protected for its breeding bird assemblage and native pinewood. The SSSI boundary overlaps slightly with the proposed development site although the closest turbines as currently mapped are outside the SSSI boundary. We advise that the final design and layout aims to avoid direct and indirect impacts to the SSSI. Survey and assessment should consider the potential for impacts to birds which are part of this assemblage, either breeding within or using the SSSI (c).</p>	
NatureScot - Ornithology	<p>We have not yet seen full details of the survey methods, results and assessment, so cannot comment on the likely impacts of the proposal at this stage. We note that two years of survey work have covered part of the site and recommend that this is extended to the whole site unless justification for a reduced survey effort can be agreed. Prior to submission of any future application NatureScot advise that the applicants ensure that all survey methods have followed the guidance at: https://www.nature.scot/recommended-birdsurvey-methodsinform-impact-assessment-onshore-windfarms (a).</p> <p>In addition to SPA protected species, legally protected birds in the wider countryside such as golden eagle and other raptors, moorland waders and black grouse could be affected by the proposal, either as an individual scheme or in combination with other developments in the area. Assessments for wider countryside birds should follow NatureScot’s guidance at:</p>	<p>(a) Noted. All surveys have followed current guidance.</p> <p>(b) Noted. The assessment will follow current guidance, and RSPB and Highland Raptor Study Group (HRSG) will be contacted as part of this.</p> <p>(c) Noted. All surveys have followed current guidance.</p> <p>(d) Noted.</p> <p>(e) Noted.</p>

Consultee / Topic	Comments	Response
	<p>https://www.nature.scot/guidance-assessing-significanceimpacts-bird-populationsonshore-wind-farms-do-not-affect-protected. In addition to reviewing the previous application data (if available) NatureScot advise that the applicants contact the RSPB and Highland Raptor Study Group to request relevant records of the wind farm site, proposed access route and appropriate buffers around these (b).</p> <p>NatureScot advise that survey work and desk studies should also cover access routes. This will allow the potential for disturbance and displacement to be assessed, especially for Schedule 1 species, and any mitigation requirements to be identified. Golden eagle activity is likely within the proposed development site. We note and support the applicant's proposal to undertake GET (Golden Eagle Topographical) modelling. We recommend this tool is used to help with the assessment of impacts to golden eagles, including potential loss of foraging habitat. For further advice see: https://www.nature.scot/doc/naturescot-statement-modellingsupport-assessment-forestryand-wind-farm-impacts-golden-eagles (c).</p> <p>Once survey work is complete an assessment of potential impacts through habitat loss/change, disturbance and/or displacement, and collision risk to SPA and wider countryside bird populations will be required, both for the proposal on its own and in combination with other projects. NatureScot advise that the cumulative assessment is carried out at the level of the relevant Natural Heritage Zone (NHZ 10 Central Highlands for this proposal) or SPA population (see: https://www.nature.scot/doc/guidance-assessing-cumulative-impactsonshore-wind-farmsbirds). Depending on submission timescales NatureScot may be able to provide additional data to assist with the cumulative assessments, on request from the applicants. NatureScot also wish to make the applicants aware of the Regional Golden Eagle Management Plan for NHZ10 (d).</p> <p>Mitigation options should be considered as part of the assessment process and it is recommended these details are included as part of any future application. If a guyed met mast is proposed the applicants are advised to follow standard mitigation guidance at: https://www.nature.scot/guidance-assessment-and-mitigation-impacts-power-lines-andguyed-meteorological-masts-birds (e).</p>	<p>(f) Noted.</p>

Consultee / Topic	Comments	Response
	Further information and advice on assessment of impacts to birds from wind farms (including collision risk modelling, SPA connectivity, effects of aviation lighting, etc) is available at: https://www.nature.scot/professional-advice/planning-anddevelopment/planning-and-developmentadvice/renewable-energy/onshore-windenergy/wind-farm-impacts-birds (f).	

Approach to Mitigation

9.3.3. Ornithological sensitivities will be taken into account as hard constraints when developing the wind farm layout design, with the adoption of appropriate buffers. A range of ornithological mitigation measures are likely to be required, primarily for the construction phase to reduce impacts on breeding birds. These will include, at post-consent, pre-construction stage, the production of a Construction Method Statement to the satisfaction of NatureScot and other relevant stakeholders, timing of works to avoid more sensitive areas/times, and the development and implementation of a Breeding Bird Protection Plan (BBPP) to ensure that no Schedule 1 species are disturbed during the breeding season and to protect other nesting birds.

Assessment of Effects

9.3.4. The ornithology assessment and surveys will be carried out in accordance with the principles contained within the following guidance documents:

- Windfarms and birds: calculating a theoretical collision risk assuming no avoidance action (SNH, 2000);
- Assessing the Significance of Impacts from Onshore Wind Farms on Birds at Sites Outwith Designated Areas (SNH, 2018a);
- Assessing the Cumulative Impacts of Onshore Wind Energy Developments (SNH, 2012);
- Assessing Connectivity with Special Protection Areas (SNH, 2016a);
- Environmental Statements and Annexes of Environmentally Sensitive Bird Information (SNH, 2016b);
- Recommended bird survey methods to inform impact assessment of onshore wind farms (SNH, 2017);
- Avoidance Rates for the Onshore SNH Wind Farm Collision Risk Model (SNH, 2018b);
- Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (CIEEM, 2018);
- The Birds of Scotland (Forrester *et al.*, 2007); and
- Scottish Raptor Monitoring Scheme Annual Report 2020 (Challis *et al.*, 2023).

- 9.3.5. The ornithology assessment will focus on the impacts of construction and operation of the Proposed Development upon those ornithological features identified during the review of desk-based information and field surveys.
- 9.3.6. The assessment and reporting process will follow CIEEM (2018) with reference to relevant NatureScot guidance as appropriate. The intended process is set out below:
- further detailed desk studies and collation of existing material, including all baseline survey data collected for the project, raptor study group data and information from other wind farm developments;
 - identification of the Valued Ornithological Receptors (VORs) at the Site, evaluation of the potential impacts of the Proposed Development during construction and operation and the effects these could have on the VORs;
 - analysis of data including collision mortality modelling, if required, for those VORs with sufficient flight activity within the collision risk zone (Band, 2007), and assessing the potential displacement of VORs with significant populations within the Site;
 - evaluation of the significance of effects by considering the impacts on the VORs by employing appropriate guidance and professional judgement. When describing impacts, in accordance with CIEEM guidelines, reference will be made to the following: magnitude (area or number of individuals to be impacted); extent; duration; and reversibility, i.e. will the impact be permanent or reversible over a given timescale;
 - incorporating measures to avoid and mitigate (reduce) potentially significant effects;
 - assessing the significance of any residual effects after mitigation;
 - identifying appropriate compensation measures to offset significant residual effects (if required);
 - identifying opportunities for ecological enhancement; and
 - cumulative effects assessment along with other developments.
- 9.3.7. As a result of the presence of white-tailed eagle and golden eagle over the Proposed Development, Golden Eagle Territory modelling (GET) modelling will be undertaken. An early model has been developed based on initial data to assist with design. Depending on collision risk levels estimated for the eagle species, Population Viability Assessments (PVA) may be carried out to assist with assessment of impacts on the populations of these birds.

Cumulative Effects

- 9.3.8. A cumulative ornithological assessment will be undertaken following the NatureScot (SNH 2018b) guidance on ‘Assessing Significance of Impacts from Onshore Windfarms on Birds outwith Designated Areas’, considering impacts on the favourable conservation status of key species within the relevant Natural Heritage Zone.

9.4. Survey Findings to Date

Vantage Point Surveys

9.4.1. The Site location is shown on **Figure 9.1** and current VP locations and their respective viewsheds are shown on **Figure 9.2**.

9.4.2. The minimum survey requirements for raptors, waterfowl and waders as recommended by NatureScot is 36 hours per VP for each season that the birds may be on Site (SNH, 2017).

Table 9-3 summarises the VP survey effort across the VP locations from September 2019 to August 2022 inclusive.

Table 9-11: Vantage Point Survey Effort (September 2020 - August 2022)

Month	VP1	VP2	VP3	VP4	VP5	VP6	VP7	VP8	VP9	VP10	VP11
Sep-20	3	6	6	6	3	6	6		6	6	6
Oct-20	9	6	6	6	9	6	6	12	6	6	6
Nov-20	6	6	6	6	6	6	6	6	6	6	6
Dec-20	6	6	6	6	6	6	6	6	6	6	6
Jan-21		6			6						6
Feb-21		7hrs 50 mins			3						9
Mar-21			12		9	16	18	18	12	12	3
Total hours in non-breeding season 20/21*	24	37hrs 50 mins	36	24	42	40	42	42	36	36	42
Apr-21*					6	6	6	6	9	10.5	6
May-21					6	6	3		6	4.5	6
Jun-21					3	3	6	9	6	9	6
Jul-21					9	9	9	9	9	6	6
Aug-21**					6	6	6		6	6	6
Total hours in breeding season 2021					30	30	30	24	36	36	30
Sep-21					3	6	6	12	6	6	3
Oct-21					9	6	6	6	6	6	9
Nov-21					6	9	9	9	9	9	6
Dec-21					6	9	9	9	9	9	6
Jan-22					6	3	3	3	3	3	6
Feb-22					6			3			6
Total hours in					36	33	33	42	33	33	36

Month	VP1	VP2	VP3	VP4	VP5	VP6	VP7	VP8	VP9	VP10	VP11
non-breeding season 21/22											
Mar-22***					6	9	9	6	5.5	3	6
Apr-22					6	9	6	6	9.5	12	6
May-22					3		3	6	3	3	3
Jun-22					6	6	9		6	6	9
Jul-22					9	6	3	6	3	3	3
Aug-22					6	6	9	12	9	9	9
Total hours in breeding season 2022					36	36	39	36	36	36	36

* Due to an extended period of winter weather in January and February 2021, access to the Site was restricted to lower altitude VPs only. Where access was possible, the January and February requirement was undertaken in March 2021 to achieve the requisite number of hours per VP for the season. Due to this, March will be included within the 2020/2021 non-breeding season and the 2021 breeding season will commence in April 2021.

** Two surveys were undertaken in September 2021 to complete August's 2021 survey requirement.

*** Three surveys were undertaken in March 2022 to complete February's 2022 survey requirement.

9.4.3. With reference to **Figure 9.1**, VPs 1 - 4 were sited to cover the airspace to the north-east of the proposed development (on the other side of the A9 from the proposed development), when this part of the estate was under consideration to be included in any proposal. As the site design progressed, it was decided to not include this part of the estate in any proposal and as a result, surveys from VPs 1 - 4 were discontinued at the end of March 2021.

9.4.4. A total of 27 target species were recorded during the VP watches over a 24-month period (September 2020 - August 2022). A summary of numbers of target species flights and flight times are presented in **Table 9-4**. Birds that were only heard, and not seen, are not included in the flight summary in **Table 9-4**.

Table 9-12: Summary Flight Data for Target Species (September 2020 - August 2022)

Species	Scientific Name	Minimum No. of Birds	Maximum No. of Birds	No. of Flights	Total Bird Seconds	At Risk Bird Seconds
Bean goose	Anser fabalis	5	5	1	160	160
Canada goose	Branta canadensis	3	80	4	18,525	3,450
Common tern	Sterna hirundo	1	1	7	467	102
Curlew	Numenius arquata	1	27	80	5,453	3,587

Species	Scientific Name	Minimum No. of Birds	Maximum No. of Birds	No. of Flights	Total Bird Seconds	At Risk Bird Seconds
Fulmar	Fulmarus glacialis	2	2	1	6	0
Golden eagle	Aquila chrysaetos	1	2	69	11,512	8,210
Golden plover	Pluvialis apricaria	1	37	29	6,196	4,583
Goosander	Mergus merganser	1	1	2	25	15
Goshawk	Accipiter gentilis	1	1	1	15	15
Greylag goose	Anser anser	1	255	79	372,766	29,827
Hen harrier	Circus cyaneus	1	2	19	1,352	224
Iceland gull	Larus glaucoides	1	1	1	16	16
Kestrel	Falco tinnunculus	1	1	2	273	198
Lapwing	Vanellus vanellus	1	65	76	13,899	7,374
Little ringed plover	Charadrius dubius	3	3	1	90	0
Merlin	Falco columbarius	1	1	2	85	38
Mute swan	Cygnus olor	9	9	1	405	405
Osprey	Pandion haliaetus	1	1	4	296	221
Oystercatcher	Haematopus ostralegus	1	30	27	1,699	563
Peregrine	Falco peregrinus	1	2	16	1,434	1,379
Pink-footed goose	Anser brachyrhynchus	6	450	23	262,524	36,851
Red grouse	Lagopus lagopus	1	19	13	726	0
Red kite	Milvus milvus	1	6	430	70,931	54,632
Short-eared owl	Asio flammeus	1	1	1	26	26
Snipe	Gallinago gallinago	2	2	1	64	64
unidentified wader		2	2	1	30	0
White-tailed eagle	Haliaeetus albicilla	1	1	34	6,055	4,005

Breeding Bird Surveys

- 9.4.5. Upland breeding bird surveys were carried out during the 2021 and 2022 breeding seasons using the Brown & Shepherd upland breeding bird survey method for moorland habitats (Brown & Shepherd, 1993), but using four visits as per NatureScot guidance (SNH, 2017). The survey area included the Site boundary plus a 500m buffer where access permitted. This technique is used to census upland breeding waders such as golden plover, dunlin, greenshank *Tringa nebularia* and other species of open upland moor, but can be used to record all moorland species and provides a reliable estimate for most other species so long as four visits are used.
- 9.4.6. Survey visits were completed between April and July, avoiding high winds and other unfavourable weather conditions. The method is based on a constant search effort, allowing 20 to 25 minutes per 500 x 500m quadrat of open land. A predetermined route through each quadrat was followed so that all areas of each quadrat were approached to within at least 100m, with the surveys taking place between 08:30 and 18:00, in accordance with the guidelines.
- 9.4.7. The behaviour and location of each individual wader was recorded on a 1:25,000 scale map, using standard BTO codes. Records from each survey were combined into a final visit map, so that duplicate records of the same birds could be removed.
- 9.4.8. Key species recorded during surveys which were regarded as potentially breeding included black grouse, curlew, dunlin, golden plover, greylag goose, and lapwing.

Breeding Raptor Surveys

- 9.4.9. While Hardey *et al.* (2013) describes specific methodologies for individual species, the breeding raptor survey generally followed a walkover approach, taking in all areas of the survey area to within 250m (access permitting), stopping to spend time watching over areas of suitable habitat for signs of activity.
- 9.4.10. Surveys for breeding moorland raptors were undertaken between March and July. The first visit in March to early April is carried out to detect occupancy by various species. A second visit is used to identify active nests in April and early May. The third visit is carried out in June to check for the presence of young birds, and the final visit in July to August is used to record fledged young. Surveys were carried out during daylight hours.
- 9.4.11. The survey area included a 2km buffer (6km buffer for eagles) from the Site boundary, where access permitted.

- 9.4.12. Raptors recorded during the raptor surveys included the target species of golden eagle, hen harrier, merlin (probable breeding), osprey *Pandion haliaetus*, peregrine *Falco peregrinus*, red kite (probable breeding), short-eared owl (possible breeding), and white-tailed eagle. Non-target species recorded were buzzard *Buteo buteo* and kestrel *Falco tinnunculus*.

Black Grouse Surveys

- 9.4.13. The black grouse lek survey followed the National Black Grouse Survey Instructions (Hancock *et al.*, 1999) summarised in Gilbert *et al.* (1998), which involves a preparatory visit followed by one or more further visits between the last week in March and mid-May to locate leks and count any lekking birds. The survey area included the Site and a 1.5km buffer of the Site boundary (the recommended buffer distance in NatureScot guidance (NatureScot 2017a)), where access permitted.

2021

- 9.4.14. Following preparatory visits in which suitable black grouse habitat was identified as well as a review of data provided by RSPB showing historic lek sites, four black grouse surveys were undertaken. Two surveys were undertaken on the 21st and 23rd April, and two on the 19th and 20th May 2021.
- 9.4.15. Despite an incidental record of a single black grouse male by estate staff as well as the recovery of black grouse feathers, no black grouse were recorded during any of the four surveys.

2022

- 9.4.16. Following preparatory visits in which suitable black grouse habitat was identified as well as a review of data provided by RSPB showing historic lek sites, four black grouse surveys were undertaken. Two surveys were undertaken on the 18th and 19th April, and two on the 5th and 6th May 2022.
- 9.4.17. No black grouse were recorded during any of the four surveys.

9.5. Matters Scoped Out

- 9.5.1. No matters have been specifically scoped out at this stage.

9.6. References and Standard Guidance

Band, W., Madders, M. and Whitfield, D.P. (2007). Developing field and analytical methods to assess avian collision risk at wind farms. In: Birds and wind power: risk assessment and mitigation. M. De Lucas, G.F.E. Janss and M. Ferrer, Eds.: 259-275. Quercus, Madrid.

Brown, A. F. and Shepherd, K. B. (1993). A method for censusing upland breeding waders. *Bird Study*, 40:3, 189 - 195.

- Challis, A., Wilson, M. W., Eaton, M. A., Stevenson, A., Stirling-Aird, P., Thornton, M. and Wilkinson, N. I. (2022). Scottish Raptor Monitoring Scheme Report 2020. BTO Scotland, Stirling.
- CIEEM (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. CIEEM, Winchester.
- Forrester, R. and Andrews, I. (2007). The birds of Scotland. Scottish Ornithologists Club, Eastbourne.
- Gilbert, G., Gibbons, D. W. and Evans, J. (1998). Bird Monitoring Methods. RSPB.
- Hancock, M., Baines, D., Gibbons, D., Etheridge, B., and Shepherd, M. (1999). Status of male black grouse *Tetrao tetrix* in Britain in 1995 - 96. *Bird Study* 46, 1 - 15.
- Hardey, J., Crick, H., Wernham, C., Riley, H., Etheridge, B. and Thompson, D. (2013). *Raptors: A Field Guide for Surveys and Monitoring*. The Stationery Office, Edinburgh.
- Scottish Natural Heritage (SNH) (2000a). Windfarms and birds: Calculating a theoretical collision risk assuming no avoiding action. Guidance Note Series.
- SNH (2000b). Kinveachy Forest SPA Citation <https://sitelink.nature.scot/Site/8519> Accessed 08/11/2023.
- SNH (Version 1 2006 and Version 2 2018a). Assessing the Significance of Impacts from Onshore Wind Farms on Birds at Sites Outwith Designated Areas. SNH, Battleby.
- SNH (2010). Kinveachy Forest SSSI Citation <https://sitelink.nature.scot/Site/864> Accessed 08/11/2023.
- SNH (2012). Assessing the Cumulative Impacts of Onshore Wind Energy Developments. SNH, Battleby.
- SNH (2016a). Assessing Connectivity with Special Protection Areas. SNH, Battleby.
- SNH (2016b). Environmental Statements and Annexes of Environmentally Sensitive Bird Information. SNH, Battleby.
- SNH (2017). Recommended bird survey methods to inform impact assessment of onshore wind farms. SNH, Battleby.
- SNH (Version 2 2018b). Avoidance Rates for the Onshore SNH Wind Farm Collision Risk Model. SNH, Battleby.
- Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win, I. (2021). The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds* 114: 723 - 747.

Wilson, M. W., Austin, G. E., Gillings, S. and Wernham, C. V. (2015). Natural Heritage Zone Bird Population Estimates. Scottish Windfarm Bird Steering Group (SWBSG) Commissioned Report No. 1504.

9.7. Questions for Consultees

- 9.7.1. Q9.1. The above surveys have been scoped to ensure that a robust and complete set of baseline avian ecological data is collected for the Proposed Development. Please can the consultees confirm if the survey and assessment methodologies, and the surveys undertaken to date are appropriate for the Site and in relation to the Proposed Development.
- 9.7.2. Q9.2. With respect to cumulative assessment, the projects to be included in the cumulative assessment are set out in section 9.1.4. Are there other projects consultees consider should be scoped into the cumulative assessment which do not fall within the stated criteria?
- 9.7.3. Q9.3. Initial GET modelling has been carried out to assist with Site design; this will be finalised for the impact assessment. PVA modelling may be carried out for Golden eagle and White-tailed eagle, depending on collision risk estimates for those species to assist with impact assessment. As such, further detailed consultation about modelling requirements may be carried out with stakeholders (in particular NatureScot and RSPB Scotland) as the project proceeds. Are consultees content with this iterative approach to the assessment?

10. Geology, Hydrology and Hydrogeology

10.1. Introduction

- 10.1.1. This chapter outlines the proposed scope of the EIA to assess the significant effects from the Proposed Development on geology, hydrology and hydrogeology. The chapter has been prepared by Atmos Consulting Limited, who will also undertake the assessment of effects for the geology, hydrology and hydrogeology for the EIA Report.
- 10.1.2. The scope of the proposed geology, hydrology and hydrogeology assessment reflects existing knowledge of the Site and surrounding area.

10.2. Environmental Baseline and Potential Sources of Impact

Scope of Study

- 10.2.1. The potential effects from the Proposed Development on geology and the water environment (hydrology and hydrogeology) will be assessed by completing a desk study and consultation, field investigation followed by an impact assessment, the processes of which are detailed below.

Baseline Conditions

- 10.2.2. The British Geological Survey (BGS) records show that the bedrock within the Site consists mainly several units of Neoproterozoic sedimentation age rocks (Discrete areas of peat are recorded by NatureScot as ‘Class 1’ priority peatland within the Site).
- 10.2.3. The Site area is classified by BGS as low productivity aquifers where small amounts of groundwater may be present within near surface weathered zone and in secondary fractures.
- 10.2.4. The Site is located within the surface water catchments of the River Findhorn to the west and the River Dulnain to the east.
- 10.2.5. SEPA flood mapping confirms flood extents are typically confined to the watercourse corridors.
- 10.2.6. A review of NatureScot SiteLink indicates that the Site is adjacent to the Cairngorm National Park, Monadhliath and Kinveachy Forest Site of Special Scientific Interest (SSSI).
- 10.2.7. Phase 1 peat probing has been undertaken for the Site, comprising of 1,775 probe locations across the Proposed Development area and potential access route. The results show that peat is present across much of the Site, with areas of deeper peat (up to 3m) interspersed with shallower areas of peat and areas where no peat is present.
- 10.2.8. The results of the Phase 1 peat probing survey have been included within **Appendix 10.1** of this Report.

10.2.9. The Slochd Geological Conservation Review Site is partially located in the very northeastern edge of the Site.

Potential Sources of Impact

Potential Impacts During Construction

10.2.10. The following potential impacts during the construction phase will be considered in the EIA Report:

- disturbance and loss of carbon rich soils and peat deposits;
- ground instability (inc. peat slide risk);
- impacts on surface water and groundwater quality from pollution from fuel, oil, concrete or other hazardous substances;
- discharge of sediment-laden runoff to drainage system and watercourses;
- increased flood risk to areas downstream of the Site during construction through increased surface runoff;
- changes in groundwater levels from dewatering excavations;
- potential change of groundwater flow paths and contribution to areas of peat and Groundwater Dependent Terrestrial Ecosystems (GWDTE);
- disturbance of watercourse bed and banks from the construction of culverts;
- potential pollution impacts to public and private water supplies; and
- disturbance and or pollution resulting from borrow pit formation and use.

Potential Impacts During Operation

10.2.11. The following potential impacts during the operational phase will be considered in the EIA report:

- increased runoff rates and flood risks, resulting from increases in areas of tracks and hardstanding at turbines;
- changes in natural surface water drainage patterns (which may affect water contribution to areas of peat and GWDTE);
- changes to groundwater levels and groundwater movement;
- longer term impacts on abstraction for water supplies, particularly any supplies dependent on groundwater; and
- pollution impacts on surface water quality from maintenance work.

10.3. Method of Assessment and Reporting

Baseline Data Collection

10.3.1. A desk study will be undertaken to confirm the baseline characteristics by reviewing available information relating to soils, peat, geology, hydrology and hydrogeology.

- 10.3.2. The desk study will review neighbouring sites as much valuable and relevant information likely to be contained in these reports and can be used to initially characterise the following:
- the nature of the underlying geology;
 - groundwater resources;
 - licenced and unlicenced groundwater and surface water abstractions;
 - public and private water supplies; surface water flows; and
 - flood extents; rainfall data; and water quality data.
- 10.3.3. The baseline assessment will include review of published geological maps, OS maps, aerial photographs digital terrain models (slope plans) and geological literature.
- 10.3.4. It is recognised that some of the information presented in previous reports may now be out of date and as part of the baseline assessment data requests would be made to The Highland Council, to the Scottish Environment Protection Agency and British Geological survey, in order that a contemporary assessment of baseline conditions can be made.
- 10.3.5. If appropriate, Ironside Farrar Limited, who are advisors to the Scottish Government on matters regarding peat would also be consulted.
- 10.3.6. The desk study will be used to develop a conceptual site model which would then be used to identify sensitive features or receptors which may potentially be affected by the Proposed Development, and which might warrant further investigation as part of the proposed field surveys.
- 10.3.7. The geological and water assessment specialists will liaise closely with each other as well as with the project ecologists and wider project team to ensure that appropriate information is gathered to allow potentially sensitive features or receptors to be adequately assessed and a comprehensive impact assessment to be completed. Phase 1 peat probing was completed the development area in Autumn 2023.
- 10.3.8. A programme of Site visits and surveys will be undertaken to:
- verify the information collected during the desk study;
 - complete a phase 2 peat probing survey once the infrastructure design has been confirmed to identify peat deposits in line with Scottish Government guidance;
 - undertake a visual assessment of the main surface waters and identify private water supplies;
 - identify drainage patterns, areas vulnerable to erosion or sediment deposition, and any pollution risks;
 - visit any identified Groundwater Dependent Terrestrial Ecosystems (GWDTEs) (in consultation with the project ecologists);
 - visit Private Water Supply sources that might be affected by the Proposed Development to confirm details of the location of the abstraction, its type and use;

- prepare a schedule of potential watercourse crossings;
- inspect rock exposures and establish by probing an estimate overburden thickness;
- where required supplement existing soils / peat depth probing data to confirm areas of thick peat that may influence the Proposed Development in accordance with current best practice; and
- confirm substrate beneath areas of peat based on the type of refusal of peat depth probe.

10.3.9. The desk study and field surveys will be used to identify potential development opportunities and constraints and be used to inform the Site design.

10.3.10. Once the desk study and initial field surveys are complete and sensitive soil, geological and water features have been identified, an impact assessment will be undertaken.

Consultation

10.3.11. This document forms the start of the consultation process, it is proposed to consult with SBS, SEPA and NatureScot on the issue of hydrology, geology, hydrogeology and peat to ensure that the potential risk is fully determined in the EIA.

Approach to Mitigation

10.3.12. The Proposed Development will undergo design iterations and evolution in response to constraints identified as part of the baseline studies and field studies so as to avoid and/or minimise potential effects on receptors where possible. This will include geological and hydrological and hydrogeological constraints which include slope stability, deep peat, watercourse locations, areas of potential flooding, private water supplies and groundwater dependent terrestrial ecosystems.

10.3.13. For example, it is expected that the following potential mitigation measures will be included in the design of the Proposed Development:

- a buffer of up to 50m will be applied to watercourses;
- Site specific peat probing will be used to identify areas of potential deep peat and these will be avoided where possible;
- a Site-specific peat landslide and hazard risk assessment will be prepared;
- a peat management plan will be prepared as part of the Construction Environmental Management Plan (CEMP) to show how the integrity of peat will be safeguarded, this plan will address:
 - Peat conditions on Site;
 - Peat depth and habitats (depicted on a detailed map of peat depths with all the built elements (including peat storage areas) overlain);
 - Avoidance and minimisation measures to reduce disturbance to peat and consequential release of CO₂;
 - Estimates of the quantities of acrotelmic, catotelmic and amorphous peat potentially excavated for each element of the Proposed Development; and

- Proposals for re-use of excavated peat in infrastructure and in restoration and rehabilitation, including peat balance;
- Management of peat during construction including proposed phasing of soil stripping, temporary storage and monitoring of works affecting peat by an Environmental Clerk of Works (ECoW);
 - Mitigation measures to minimise disturbance and impacts on peat; and
 - Revised peat depth contour plan with all built elements overlain
- The assessment will also look for opportunities for habitat restoration or improvements to help compensate for the peat disturbance as a result of the Proposed Development; and
- impacts private water supply sources and areas of GWDTE will be avoided where possible.

10.3.14. There is much best practice guidance (see section 10.5) which has been developed to assist developers minimise the risks associated with wind farm construction, operation and decommissioning and this will be used to develop Site specific mitigation measures. Measures will be proposed to control and mitigate, for example, pollution risk (from anthropogenic and geogenic sources), flood risk, watercourse crossings, impacts on surface and groundwater flow paths, and management of peat soils.

10.3.15. Mitigation measures will be specified for all stages of the Site life (construction, operation and decommissioning).

10.3.16. A qualitative risk assessment methodology will be used to assess the significance of the potential effects. Two factors will be considered: the sensitivity of the receiving environment and the potential magnitude should that potential impact occur.

10.3.17. This approach provides a mechanism for identifying the areas where mitigation measures are required, and for identifying mitigation measures appropriate to the risk presented by the Proposed Development. This approach also allows effort to be focused on reducing risk where the greatest benefit may result.

10.3.18. The sensitivity of the receiving environment (i.e., the baseline quality of the receiving environment as well as its ability to absorb the effect without perceptible change) and the magnitude of impacts will each be considered through a set of pre-defined criteria.

10.3.19. The sensitivity of the receiving environment together with the magnitude of the effect defines the significance of the effect, which will be categorised into level of significance.

Assessment of Effects

10.3.20. The purpose of the assessment will be to assess potential effects on soils, peat, geology and the water environment (hydrology and hydrogeology) and specifically:

- identify any areas susceptible to peat slide, using Site specific peat thickness and Digital Terrain Mapping (DTM) data to analysis slopes;

- assist micro-siting turbines, tracks and other proposed infrastructure in areas of no peat or shallow peat, and areas where there is little peat landslide hazard risk;
- if required show how any disturbed peat will be managed and safeguarded, by preparing a peat management plan;
- determine what the likely effects of the Proposed Development are on the hydrological regime, including water quality, flow and drainage;
- allow an assessment of potential effects on identified licenced and private water supplies; and
- assess potential effects on water (including groundwater) dependent habitats.

10.3.21. The impact assessment will consider potential cumulative or in-combination effects associated with other developments in the same hydrological or hydrogeological catchments and within 5 km of the Proposed Development.

10.3.22. It is anticipated that the impact assessment might include the following technical appendices:

- peat landside and hazard risk assessment;
- peat management plan;
- schedule of watercourse crossings;
- private water supply risk assessment; and
- groundwater dependent terrestrial ecosystems risk assessment.

Peat Landslide Hazard Risk Assessment

10.3.23. There is existing phase I peat probing depth data for the Site which was obtained in order to guide this Scoping Report. This will be reviewed and verified as part of this assessment, and if required additional Phase I peat depth data will be obtained to inform the emerging Site design and impact assessment as required by current best practice. As part of the programme of field work the following will be undertaken:

- a geomorphological mapping exercise will be undertaken to link the topographic features with the underlying geology and to visit those areas of the Site that may be identified as potentially “at risk from peat slide”;
- the thickness of the peat will be established by probing and the underlying substrata confirmed by inspections of watercourses; and
- signs of existing or potential peat instability will be recorded.

10.3.24. Phase II peat depth probing will be undertaken as part of the Site design in accordance with best practice and will include peat probing along the infrastructure at 50m centres and at 10 m interval crosshair at wind turbine locations.

10.3.25. Output from the field surveys will comprise a record of investigation locations and summary of peat depths recorded.

10.3.26. If significant peat depths are proven a preliminary Peat Landslide Hazard and Risk Assessment (PLHRA) will be completed using the Site survey data and slope analysis (using DTM data), highlighting areas that may be impacted by a peat slide so that appropriate mitigation measures can be identified and included in the Site design.

10.4. Matters Scoped Out

10.4.1. Geological Conservation Review (GCR) sites are only vulnerable to direct impacts, such as changes to geomorphology, which will not be impacted on by the Proposed Development. As such these are intended to be scoped out of the EIA.

10.5. References and Standard Guidance

10.5.1. The following policy and guidance documents will be used to inform the Geology, Hydrology and Hydrogeology Chapter:

Geology, Peat and Soils

- SEPA Regulatory Position Statement - Developments on Peat (Scottish Environment Protection Agency, 2010).
- Good Practice during Windfarm Construction, 4th Edition (Scottish Renewables, Scottish Natural Heritage (now NatureScot), Scottish Environment Protection Agency, Forestry Commission Scotland, Historic Environment Scotland, Marine Scotland Science and AEECoW, 2019).
- Peat Landslide Hazard and Risk Assessments: Best Practice Guide for Proposed Electricity Generation Developments (Scottish Government, January 2017).
- Developments on Peatland - Guidance on the assessment of peat volumes, re-use of excavated peat and the minimisation of waste (Scottish Renewables & SEPA, 2012).
- Floating Roads on Peat - Report into Good Practice in Design, Construction and Use of Floating Roads on Peat with particular reference to Wind Farm Developments in Scotland (Forestry Commission Scotland & Scottish Natural Heritage, 2010)
- Managing Geotechnical Risk: Improving Productivity in UK Building and Construction (Institution of Civil Engineers, 2001).
- Ground Engineering Spoil: Good Management Practice CIRIA Report 179 (CIRIA, 1997).
- Scottish Roads Network Landslides Study Summary Report (Scottish Executive, 2005).
- Guidelines for the Risk Management of Peat Slips on the Construction of Low Volume/Low Cost Roads on Peat (Forestry Commission, 2006).

Hydrology and Hydrogeology

- SEPA Position Statement (WAT-PS-10-01) on groundwater assessment criteria for pollution control;
- SEPA Supporting Guidance (WAT-SG-53) Environmental Quality Standards and Standards for Discharges to Surface Waters (Feb 2018);

- SEPA, Groundwater protection policy for Scotland;
- SEPA, Policy regarding culverts;
- Scottish Planning Policy (SPP) (Scottish Executive, June 2014).
- EC Water Framework Directive (2000/60/EC).
- Water Environment and Water Services (Scotland) Act 2003.
- Water Environment (Controlled Activities) Regulations 2011.
- The Water Intended for Human Consumption (Private Supplies) (Scotland) Regulations 2017.
- Good Practice during Windfarm Construction, 4th Edition (Scottish Renewables, Scottish Natural Heritage (now NatureScot), Scottish Environment Protection Agency, Forestry Commission Scotland, Historic Environment Scotland, Marine Scotland Science and AEECoW, 2019).
- Forests and Water Guidelines (Forestry Commission, 2012).
- Land Use Planning System - SEPA Guidance Note 31 (Guidance on Assessing Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems), Version 3, (SEPA, 11/09/2017).
- Control of Water Pollution from Linear Construction Projects - Technical Guidance, C648 (CIRIA, 2006).
- The SuDS Manual C753 (CIRIA, 2015).
- Environmental Good Practice on Site C741 (CIRIA, 2015).

10.6. Questions for consultees

- 10.6.1. Q10.1. Published mapping confirms that most of Site is not identified as being at flood risk. It is proposed, therefore, that a simple screening of potential flooding sources (fluvial, coastal, pluvial, groundwater etc.) is presented in the EIA Report. Is this approach acceptable?
- 10.6.2. Q10.2. It is not proposed to prepare a detailed drainage design or a Flood Risk Assessment. Rather measures that would be used to control the rate and quality of runoff will be specified in the EIA Report. Again, is this acceptable?
- 10.6.3. Q10.3. Site investigations, including detailed peat probing and private water survey as outlined in Section 10.3, will be undertaken as part of the proposed assessment. Should any additional investigation or data sources be considered when assessing baseline conditions?
- 10.6.4. Q10.4. It is not proposed to undertake any water quality sampling, establish groundwater monitoring points, surface water monitoring points or undertake leachability trials of any rock in the proposed borrow pit as there is published data that can be used to characterise baseline conditions and complete the impact. Is this acceptable?

10.6.5. Q10.5. Please advise if there is any specific information or methodology that should be used / followed as part of the Private Water Supply risk assessment?

10.6.6. Q10.6. Do you agree that the scope of the proposed assessment is appropriate?

11. Transport and Access

11.1. Environmental Baseline and Potential Sources of Impact

Scope of Study

- 11.1.1. The section covers the predicted transport and access issues that may arise from the construction of the Proposed Development, the significance of these effects and what suitable mitigation can be put in place to avoid, minimise or offset adverse effects.
- 11.1.2. The Transport and Access EIA Report Chapter will be supported by a Transport Assessment report, Abnormal Load Route Survey and technical figures.
- 11.1.3. The key issues for consideration as part of the assessment will include:
- The temporary change in traffic flows and the resultant, temporary effects on the study's road network during the construction phase;
 - The physical mitigation associated with the delivery of abnormal loads;
 - The design of new access infrastructure; and
 - The consideration of appropriate and practical mitigation measures to avoid, minimise or offset temporary effects.
- 11.1.4. The potential effects of these will be examined in detail.

Baseline Conditions

- 11.1.5. Construction traffic access for the Proposed Development will be accessed directly from the U2856 (Slochd - Tomatin road) from a new priority access junction. Loads will then proceed to the proposed turbine locations using upgraded and new access tracks.
- 11.1.6. Abnormal Indivisible Loads (AIL) for turbine components will access the Site via the U2856 and A9. A detailed Route Survey Report will support the application and will identify the necessary access improvements that will be required to enable loads to access the Site.
- 11.1.7. Locally sourced material will be used where feasible and traffic will avoid impacting on local communities as far as is possible.

Potential Sources of Impact

- 11.1.8. The main transport impacts will be associated with the movement of general heavy goods vehicles (HGV) traffic travelling to and from the Site during the construction phase of the development.

11.2. Method of Assessment and Reporting

Baseline Data Collection

- 11.2.1. Baseline traffic count data will be obtained from new Automatic Traffic Count (ATC) surveys located on the U2856 near the proposed Site access junction.

11.2.2. Further traffic data for the local road network will be obtained from UK Government Department for Transport (DfT) traffic count data, the Traffic Scotland database or from specifically commissioned traffic surveys. National Road Traffic Forecast (NRTF) Low Traffic Growth assumptions will be used to provide a common future year baseline to coincide with the expected construction traffic peak.

11.2.3. Traffic accident data will be obtained from Crashmap UK for the study network to inform the accident review for the immediate road study area. Five years' worth of data will be collated for roads within the study area.

Desk Study

11.2.4. A desk review of the study area roads will be undertaken using Ordnance Survey maps and aerial photography to identify constraints and receptors in the area and to inform the wider study.

Consultation

11.2.5. Consultation will be undertaken with the following statutory consultees:

- Transport Scotland (trunk road matters); and
- The Highland Council (for local road network matters)

11.2.6. Further consultation will be undertaken via the Electronic Service Delivery for Abnormal Loads (ESDAL) weight review for structures on the proposed AIL access route from the Port of Inverness to the Site via the strategic trunk road and local road networks.

Approach to Mitigation

11.2.7. Standard mitigation measures that are likely to be included in the assessment are:

- Production of a Construction Traffic Management Plan;
- The design of suitable access arrangements with full consideration given to the road safety of all road users;
- A Staff Sustainable Access Plan; and
- A Framework Abnormal Load Transport Management Plan.

11.2.8. Additional mitigation will be included should the assessment reveal criteria that are significant following the application of standard mitigation measures.

11.2.9. Site specific mitigation, based upon experience of other schemes in the surrounding area, will include:

- Section 96 Agreement of the Roads (Scotland) Act to protect the public road against abnormal wear and tear in the study area;
- Design of the Site access junction to ensure that approved access routes are adhered to; and
- Enhanced temporary construction warning and direction signage.

11.2.10. Details of these measures will be detailed in the Transport Assessment.

Assessment of Effects

- 11.2.11. The Environmental Assessment of Traffic and Movement (IEMA, 2023) sets out a methodology for assessing potentially significant environmental effects. In accordance with this guidance, the scope of assessment will focus on:
- Potential impacts (of changes in traffic flows) on local roads and the users of those roads; and
 - Potential impacts (of changes in traffic flows) on land uses and environmental resources fronting these roads, including the relevant occupiers and users.
- 11.2.12. The following rules taken from the guidance will be used as a screening process to define the scale and extent of the assessment:
- Rule 1: Include highway links where traffic flows are predicted to increase by more than 30% (or where the number of HGVs is predicted to increase by more than 30%); and
 - Rule 2: Include any other specifically sensitive areas where traffic flows are predicted to increase by 10% or more.
- 11.2.13. Increases below these thresholds are generally considered to be insignificant given that daily variations in background traffic flow may fluctuate by this amount. Changes in traffic flow below this level predicted as a consequence of the Proposed Development will therefore be assumed to result in no discernible environmental impact and as such, no further consideration will be given to the associated environment effects.
- 11.2.14. The estimated traffic generation of the Proposed Development will be compared with baseline traffic flows, obtained from existing traffic survey data, in order to determine the percentage increase in traffic.
- 11.2.15. Potentially significant environmental effects will then be assessed where the thresholds are exceeded. Suitable mitigation measures will be proposed, where appropriate.
- 11.2.16. It is not anticipated that a formal Transport Assessment will be required as these are not generally considered necessary for temporary construction works. A reduced scope Transport Assessment is therefore proposed.
- 11.2.17. Each turbine is likely to require between 11 and 14 abnormal loads to deliver the components to Site. The components will be delivered on extendable trailers which will then be retracted to the size of a standard HGV for the return journey.
- 11.2.18. Detailed swept path analyses will be undertaken for the main constraint points on the route from the port of entry through to the Site access junction to demonstrate that the turbine components can be delivered to Site and to identify any temporary road works which may be necessary.
- 11.2.19. Potential effects arising from the construction of the Proposed Development on road users and residents along the delivery route may include the following:
- Severance;

- Driver delay;
- Pedestrian delay;
- Pedestrian amenity;
- Fear and intimidation; and
- Accidents and safety.

11.2.20. The effects to be considered in the assessment will be based upon percentage increases in traffic flow and reviewed against the impacts noted above.

11.2.21. The effects on receptors identified within the study area will be reviewed for the construction phase, with a peak construction period assessment undertaken. This will include a review of the maximum potential impact and therefore it is considered to provide a robust assessment of the effects of construction traffic on the local and trunk road networks.

Residual and Cumulative Effects

11.2.22. Short term residual effects may occur and would be addressed by mitigation measures. Medium - long-term residual effects would not occur due to the short-term nature of the construction traffic.

11.2.23. Cumulative traffic assessments will be undertaken where publicly available information is available for consented developments that are of a significant scale.

11.3. Matters Scoped Out

11.3.1. Once operational, it is envisaged that the level of traffic associated with the Proposed Development will be minimal. Regular monthly or weekly visits would be made to the wind farm for maintenance checks. The vehicles used for these visits are likely to be 4x4 vehicles and there may also be the occasional need for an HGV to access the wind farm for specific maintenance and/or repairs. It is considered that the effects of operational traffic would be negligible and therefore no detailed assessment of the operational phase of the development is proposed.

11.3.2. The traffic generation levels associated with the decommissioning phase will be less than those associated with the development phase as some elements such as access roads will be left in place on the Site. As such, the construction phase is considered the worst-case assessment to review the impact on the study area. An assessment of the decommissioning phase will therefore not be undertaken, although a commitment to reviewing the impact of this phase will be made immediately prior to decommissioning works proceeding.

11.4. References and Standard Guidance

11.4.1. The following policy and guidance documents will be used to inform the Transport and Access Chapter:

- Transport Assessment Guidance (Transport Scotland, 2012);
- Guidelines for Transport Assessments (The Highland Council, 2014);
- Environmental Assessment of Traffic and Movement (Institute of Environmental Management & Assessment (IEMA), 2023); and
- National Planning Framework 4 (Scottish Government, 2023).

11.5. Questions for Consultees

- 11.5.1. Q11.1. Stakeholders and consultees are asked to confirm their acceptance of the proposed Transport and Access study area, data collection methodology and assessment methodology.
- 11.5.2. Q11.2. Stakeholders and consultees are asked to confirm any cumulative development considerations.

12. Acoustics

12.1. Introduction

12.1.1. This Chapter sets out the proposed approach to the assessment of potential effects resulting from the construction and operation of the Proposed Development in relation to sound immissions.

12.2. Legislation, Policy and Guidance

12.2.1. Operational acoustic impact will be assessed in accordance with ETSU-R-97 , and the Good Practice Guide to its application issued by the Institute of Acoustics . This is consistent with ‘Planning Advice Note 1/2011: Planning and Noise’ and the further guidance provided in the web-based planning advice on renewable technologies for onshore wind turbines .

12.2.2. Although ETSU-R-97 makes reference to a background and operational noise, there is a distinction between sound and noise. This document differentiates between sound and noise and therefore the use of ‘background sound’ as well as ‘operational sound’ is more appropriate.

12.2.3. Operational sound immissions from the associated battery energy storage system will be assessed in line with BS 4142:2014+A1:2019 ‘Methods for assessing and rating industrial and commercial sound’ .

12.2.4. Construction sound immissions will be discussed with reference to BS 5228-1:2009+A1:2014 . This is consistent with the web-based Scottish Government technical advice on construction sound assessment in ‘Appendix 1: Legislative Background, Technical Standards and Codes of Practice’ .

12.2.5. If blasting is required at potential borrow pits located at the Proposed Development, the expected sound and vibration levels will be discussed with reference to BS 5228-2:2009+A1:2014, BS 6472-2:2008 and ‘best practicable means’ in this regard.

12.3. Study Area

12.3.1. The study area will be determined by the proximity of nearby properties to the Proposed Development and the location of any neighbouring wind farms being considered as part of the cumulative assessment.

12.3.2. The acoustic assessment will include the nearest properties to the Proposed Development. Any properties that are in planning or consented will be considered alongside those already existing.

- 12.3.3. The cumulative assessment will consider any neighbouring wind farms that are close enough to result in the potential for a significant cumulative effect on the identified properties. Any wind farms that are in planning will be considered along with those that are already operational or consented.

12.4. Assessment Methodology

- 12.4.1. The assessment will consider the potential effects associated with construction and operation of the Proposed Development as detailed below.
- 12.4.2. A discussion of the potential effects due to construction sound, including associated traffic sound, at the nearest properties will be provided. Sound and vibration levels at the nearest properties will also be discussed if blasting is required to extract material from any proposed borrow pits.
- 12.4.3. An assessment of potential effects of sound due to operation of the wind farm at the nearest properties will be undertaken. The operational acoustic assessment will be carried out on the basis of the sound pressure levels with penalties applied for tonality, if applicable.
- 12.4.4. It is not proposed to carry out an assessment of the potential effects of sound from operation of the wind farm at specific frequencies, e.g. low frequency sound, or the potential effects of other sound and vibration characteristics due to operation, such as amplitude modulation and vibration. However, a generalised discussion of these topics, in relation to current guidance and research, with reference to the Proposed Development will be provided.
- 12.4.5. An assessment of potential effects of sound due to the operation of the battery energy storage system associated with the wind farm will be undertaken at the nearest properties. The operational sound assessment will be carried out on the basis of the broadband sound pressure levels with any relevant penalties applied for certain acoustic features, as per BS 4142:2014+A1:2019.

12.5. Baseline Description

- 12.5.1. The acoustic environment around the site is expected to be typical of a rural area and consist of sounds generated by wind, watercourses, farm machinery, birds, distant traffic and occasional overflying aircraft.
- 12.5.2. It is proposed to undertake background sound measurements at representative properties close to the site. The survey locations will be selected in consultation with the environmental health department of Highland Council, subject to permission being granted by the residents.

12.6. Potential Impact

- 12.6.1. The potential impact of sound and vibration on nearby properties and residential amenity due to the construction and operation of the wind farm will be assessed. Where necessary, appropriate mitigation measures will be proposed, and any residual impacts identified.

12.7. Potential Mitigation

- 12.7.1. Standard good practice measures to reduce acoustic impact during construction will be implemented in line with the ‘best practicable means’ defined by the Control of Pollution Act 1974 (Her Majesty’s Stationary Office, 1974) . If additional mitigation measures are required, this will include a reduction in construction activities or traffic during certain periods, where considered appropriate.
- 12.7.2. The potential effects of sound due to operation of the wind farm will be considered as part of the Wind Turbine Development Area design process via the application of nominal buffers to neighbouring residences within which turbines will not be placed.
- 12.7.3. The baseline sound monitoring results will also inform the design of the site, with greater separation distances potentially being required for residences with relatively low background sound levels and similar corresponding acoustic limits.
- 12.7.4. The turbines which comprise the Proposed Development will be operated in reduced sound modes if this is necessary to meet the acoustic limits derived in accordance with ETSU-R-97.
- 12.7.5. The potential operational acoustic impacts from the battery energy storage system associated with the wind farm will be considered in the design process by incorporating appropriate buffers between the storage system compound and neighbouring residences. Additional mitigation such as sound barriers will be proposed if deemed necessary to meet the required acoustic limits in accordance with BS 4142:2014+A1:2019.

12.8. Receptors and impacts scoped in or out of the assessment

- 12.8.1. Potential impacts relating to the construction and operation of the Proposed Development will be discussed and assessed as part of the EIAR supporting the planning application.
- 12.8.2. The nearest planned, consented or existing properties are scoped into the assessment.
- 12.8.3. Specific assessments of low frequency sound, amplitude modulation or vibration due to operation of the Proposed Development are scoped out of the assessment. However, a discussion of relevant guidance and research regarding these topics will be provided as supporting information.

12.9. Questions for Consultees

- 12.9.1. Q12.1. Do the consultees agree with the proposed assessment methodology?

13. Socioeconomics

13.1. Introduction

- 13.1.1. BiGGAR Economics has been commissioned to undertake the socio-economic and tourism elements of the Proposed Development. Socio-economic and tourism assessments of onshore wind farms over the last decade have found no adverse effects assessed as significant in terms of the EIA regulations and there is no reason to expect significant effects for the Proposed Development. It is therefore proposed to scope socio-economics and tourism out of the EIA Report.
- 13.1.2. Nevertheless, it is recognised that socio-economic and tourism issues will be of interest to stakeholders and local authorities and so a separate report on socio-economics and tourism will be provided and submitted alongside the EIA. This will include consideration of local tourism activity, direct effects such as employment generation and any indirect or induced effects from the Proposed Development. The report will also consider whether the Proposed Development maximises net economic benefit, in the context of Policy 11c of the fourth National Planning Framework.
- 13.1.3. This section describes what will be considered in the separate socio-economic and tourism report and the approach that will be taken.

13.2. Baseline Description

- 13.2.1. The study areas of the assessment will be selected to meet the interests of key stakeholders and will be made of predefined geographies. The baseline assessment will include a description of the current socio-economic and tourism baseline within the local area. This will include a summary of the economic performance data and a description of the relevant tourism assets that will be covered in the assessment.
- 13.2.2. The baseline description will cover and compare the study areas of:
- Highland (The Highland Council area); and
 - Scotland.
- 13.2.3. The population of Highland was 238,100 in 2021 (2.7 % of the Scottish total), of which 61 % were working age, lower than the figure for Scotland of 64 %¹⁵. Between 2021 and 2043, the population is projected to decrease by 2.0 %, compared to a 0.4 % increase for Scotland as a whole¹⁶.

¹⁵ National Records of Scotland (2022), Mid-2021 Population Estimates

¹⁶ National Records of Scotland (2021) Highland Council Area Profile

- 13.2.4. The proportion of the population that is economically active is significantly lower in Highland (74.2 %), compared to Scotland as a whole (77.1 %), while the unemployment rate is 3.7 % compared to 3.5 % nationally¹⁷.
- 13.2.5. The main sectors of employment are human, health and social work activities (16 % of employment in Highland compared to 15 % in Scotland), wholesale and retail trade (14 % across both Highland and Scotland) and agriculture, forestry and fishing (11 % compared to 3 % nationally)¹⁸. The share of employment in construction in Highland is 7 %, higher than the Scottish average (6 %).
- 13.2.6. In Highland, around 13 % of employment is in the sustainable tourism sector, which is higher than the proportion in Scotland as a whole (10 %). This indicates the importance of tourism in the area surrounding the Proposed Development.
- 13.2.7. In 2019, there were 12 million day visitors in Highland (compared to 145 million in Scotland as a whole) and about 2 million domestic overnight visitors (compare to 12.4 million nationally). Domestic visitor spend was £413 million, 8 % of the £5.2 billion in Scotland as a whole¹⁹.
- 13.2.8. The socio-economic and strategic baseline will be expanded on in the standalone report through a review of publicly available data sources. This will include:
- the population characteristics of the local area, including local and national demographic trends;
 - deprivation statistics set within a national context;
 - employment and economic activity in the local area within the context of the national economy;
 - wage levels in the local area compared to the national level;
 - the industrial structure of the local economy compared to the national level; and
 - the role of the tourism sector in the local economy.

¹⁷ ONS (2023) Annual Population Survey

¹⁸ ONS (2022) Business register and Employment Survey

¹⁹ Visit Britain (2021) Great Britain Tourism Survey

13.3. Legislation, Policy and Guidance

- 13.3.1. There is no specific legislation or guidance on the methods that should be used to assess the socio-economic impacts of a proposed onshore wind farm development. The proposed method has however been based on established best practice, including that used in the UK Government and industry reports on the sector. In particular, this assessment will draw from two studies by BiGGAR Economics on the UK onshore wind energy sector, a report published by RenewableUK and the Department for Energy and Climate Change (DECC) in 2012 on the direct and wider economic benefits of the onshore wind sector to the UK economy²⁰ and a subsequent update to this report published by RenewableUK in 2015²¹, as well as more recent industry data on the onshore wind sector and its supply chain.
- 13.3.2. There is also no formal legislation or guidance on the methods that should be used to assess the effects that wind farm developments may have on general tourism interests. The proposed method will consider specific attractions or tourism facilities to assess if there could be any effects from the development.
- 13.3.3. It is also important that the socio-economic and tourism assessment takes account of the relevant local and national policy objectives. The most relevant objectives for this are expected to be included in the following strategies:
- Scottish Government (2022), Scotland’s National Strategy for Economic Transformation;
 - Scottish Government (2023), Scotland’s National Performance Framework;
 - Scottish Government (2021), Local Energy Policy Statement;
 - Scottish Government (2022), Onshore Wind Policy Statement;
 - Scottish Government (2023), Onshore Wind Sector Deal;
 - Highlands and Islands Enterprise (2023), Strategy 2023-28; and
 - Scottish Tourism Alliance (2021), Scotland Outlook 2030.
- 13.3.4. It is also essential to take into consideration for the assessment the fourth National Planning Framework (NPF4)²², the national spatial strategy for Scotland. The document considers:
- Scotland’s spatial principles;
 - National planning policy;
 - National developments; and
 - Regional priorities.

²⁰ BiGGAR Economics (2012) Onshore Wind: Direct & Wider Economic Impacts

²¹ BiGGAR Economics (2015) Onshore Wind: Direct and Wider Economic Benefits

²² Scottish Government (2023), National Planning Framework 4.

- 13.3.5. In the context of energy generation, Policy 11 is relevant to the socio-economic impact of the Proposed Development. Paragraph (c) states that “development proposals will only be supported where they maximise net economic impact, including local and community socio-economic benefits such as employment, associated business and supply chain opportunities”. The analysis will reach the conclusion on whether the project maximises the net economic impact in the context of this NPF4 Policy 11(c).
- 13.3.6. Paragraph (d) of Policy 11 sets out a number of impacts that should be addressed during project design and mitigation. That list does not include tourism.
- 13.3.7. Whilst NPF4 includes no requirement to consider tourism when considering net economic impact or in the project design and mitigation process, relevant employment statistics show that in Highland the employment in the sustainable tourism sector accounts for a higher percentage of total employment in the area (13%) compared to Scotland (10%). This indicates the importance of tourism in the local area surrounding the Proposed Development and it is recognised that local stakeholders may be interested in the potential impact. Thus, a tourism assessment will be included in the socio-economic report.

13.4. Assessment Methodology

13.4.1. It is anticipated that the contents of the assessment will include:

- introduction;
- economic development and tourism strategic context;
- baseline socio-economic context;
- baseline tourism context;
- socio-economic assessment;
- tourism impact assessment;
- proposed measures and actions to maximise local economic and community impacts; and
- summary of findings and conclusion.

13.4.2. This will primarily be a desk-based study with consultation undertaken by the Applicant with the local community to further inform the baseline and inform any opportunities from the Proposed Development which arise therein.

- 13.4.3. The assessment of socio-economic impacts will focus on the level of activity/employment supported during the construction and operation phases. Government and industry reports will be used to determine the expected capital and operational expenditure associated with the Proposed Development, as well as the breakdown of expenditure by different contracts (e.g. turbine, balance of plant). An assumption will then be made based on the share of each type of contract that can be secured regionally and nationally. This increase in turnover will then be used to estimate the economic impact associated with the Proposed Development.
- 13.4.4. The method to assess the socio-economic effects will be based on industry best practice and will consider the share of contracts that can be secured in each study area, and the level of employment that can be supported as a result.
- 13.4.5. In order to assess effects on tourism, the features that make the local area distinctive and attractive will be identified and the potential impact of the Proposed Development on those key features will then be assessed.
- 13.4.6. If an effects assessment is required, this will be based on assessing the sensitivity of an economy/tourism asset to change and then assessing the potential magnitude of change associated with the Proposed Development. When sensitivity and magnitude are combined, the significance of effect will be assessed. Major and moderate effects will be considered significant in the context of the EIA Regulations.

13.5. Potential Mitigation

- 13.5.1. Proposed mitigation measures will depend on the findings of the assessment. Proposed measures that will be adopted to enhance the socio-economic impacts include:
- engaging early with the local community and local businesses;
 - providing clear information on technical requirements that can allow businesses to prepare; and
 - incentivising Tier 1 suppliers to engage with local businesses.
- 13.5.2. Other measures will be identified as part of the standalone socio-economic and tourism assessment.

13.6. Potential Effects

- 13.6.1. The effects that will be considered in this assessment will include the potential socio-economic and tourism effects associated with the Proposed Development.
- 13.6.2. An economic impact analysis will be undertaken using the methodology developed by BiGGAR Economics which has been used to assess over 150 onshore wind farms across the UK. The potential socio-economic effects that will be considered are:

- temporary effects on the identified study areas due to expenditure during the construction phase;
- permanent effects on the identified study areas due to expenditure associated with the ongoing operation and maintenance of the Proposed Development;
- permanent effects as a result of any additional public expenditure that could be supported by the additional tax revenue that would be generated by the Proposed Development during the operational phase; and
- permanent effects on the local economy that could be supported by any community funding and/or shared ownership proposals during the operational phase of the Proposed Development.

13.6.3. The link between onshore wind energy developments and the tourism sector has been a subject of debate. However, the most recent research has not found a link between tourism employment, visitor numbers and onshore wind development.

13.6.4. Nevertheless, the tourism sector is an important contributor to the Scottish economy, and particularly in Highland where the sustainable tourism sector accounts for 13 % of the total employment, higher than the relative proportion in Scotland (10 %).

13.6.5. Therefore, there is merit in considering whether the Proposed Development will have any effect on tourism behaviour and the tourism economy. This assessment will consider the potential effects that the development could have on tourism following a more focused approach on effects related to key tourist attractions and assets.

13.7. Matters Scoped out of EIA Assessment

13.7.1. It is proposed that any substantial, adverse impacts identified as part of the standalone socio-economic and tourism assessment will be considered as part of the EIA, and all other impacts will be scoped out.

13.8. Questions for Consultees

13.8.1. Q13.1. Do you agree that the approach and scope of the proposed assessment is appropriate?

13.8.2. Q13.2. Are there specific socio-economic and tourism effects that should be considered?

14. Aviation and Radar

14.1. Introduction

- 14.1.1. The EIA Report will include a description of military and civilian aeronautical and radar issues relating to the Proposed Development.
- 14.1.2. Radar systems can be susceptible to interference from wind turbines as the blade movement can cause intermittent detection by radars within their operating range. This is particularly relevant where there is a radar line of sight between the radar and the wind turbine development. Due to their height, wind turbines can also impact airports and airfields if they protrude into the safeguarding areas above and around them.

14.2. Consultation

- 14.2.1. Consultation will be undertaken once the locations of the turbines have been finalised with appropriate interested parties. The EIA Report will present the findings of these consultations and all responses received, as well as any predicted impacts on aviation and mitigation required.

14.3. Baseline

- 14.3.1. There are aviation interests in the area that could potentially be affected by the Proposed Development (see **Plate 14.1**). Initial assessments indicate that operations at Inverness Airport, situated approximately 30 km from the Site, may be impacted. It is not thought there is radar line of sight visibility to the Proposed Development due to terrain shielding but, there may be an impact on the Instrument Flight Procedures. The Proposed Development may also impact the RAF Lossiemouth radar, situated approximately 64 km from the Site, although initial assessments indicated that only one of the turbines has radar line of sight visibility due to terrain screening. Consultation will be undertaken with civil and military aviation stakeholders to agree if mitigation measures if necessary.



Plate 14.1: Potential aviation impacts, receptor locations (reproduced under licence from NATS (Services) Ltd © Copyright 2024 NATS (Services) Ltd. All rights reserved)

14.4. Mitigation

14.4.1. The UK Air Navigation Order (ANO) 2016, Article 222, sets out the statutory requirement for the lighting on en-route obstacles, which applies to structures of 150 m or more above ground level. A visible lighting scheme will be agreed with the Civil Aviation Authority (CAA). The MOD is likely to request an infra-red lighting scheme for low flying military aircraft in the area and this will be agreed through consultation with the MOD.

14.5. Questions for Consultees

14.5.1. Q14.1. Do consultees agree with the approach to aviation and radar interests proposed?

15. Climate and Carbon Balance

15.1. Introduction

- 15.1.1. Climate change is a topic which can be impacted directly by a project and in turn also affect other topics (e.g. the impact of climate change can affect the future flood risk and such effects will be considered in the individual topic chapters).
- 15.1.2. In 2019, The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019, which amended the Climate Change (Scotland) Act 2009 and set targets to reduce Scotland's emissions of all greenhouse gases to net-zero by 2045 at the latest, with interim targets for reductions of at least 75% by 2030, 90% by 2040.
- 15.1.3. The replacement of traditional fossil fuel power generation with renewable energy sources provides high potential for the reduction of greenhouse gas (GHG) emissions. This is reflected in UK and Scottish Governments climate change and renewable energy policy including the latest UK Energy White Paper (2020) and Net Zero Strategy (2021).
- 15.1.4. As a renewable energy project, the Proposed Development is likely to deliver significant carbon savings over its lifetime and will therefore benefit and make an important contribution to the Scottish Government's Climate Change targets. To illustrate this, an assessment will be undertaken that considers the likely magnitude of GHG emissions and savings of the Proposed Development in comparison to the baseline scenario where no development takes place (i.e. where no emissions are produced).
- 15.1.5. Overall, the Proposed Development is anticipated to have a positive effect on climate change due to the carbon savings of renewable energy generation displacing the need for fossil fuel energy generation.

15.2. Legislation, Policy and Guidance

- 15.2.1. Schedule 4 of the EIA Regulations which transpose the EIA Directive into Scottish law states that:
 - (4) *A description of the factors specified in Article 4(3) likely to be significantly affected by the development:... climate (for example greenhouse gas emissions, impacts relevant to adaptation).*
 - (5) *A description of the likely significant effects of the project on the environment resulting from, inter alia ...*
 - (f) *The impact of the development on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the development to climate change.*

15.3. Proposed Scope of Assessment

- 15.3.1. Following ECU and SEPA guidance, the carbon balance assessment will be undertaken using the most recent version of the Carbon Calculator Tool that is available from the Scottish Government's website. This assessment will be based on the available information regarding the scale and nature of the Proposed Development and where data is unavailable, worst-case reasonable assumptions will be used.
- 15.3.2. The carbon balance assessment will aim to quantify the emissions savings over the life of the Proposed Development against the release of CO₂ from other energy generation methods as a result of implementing the Proposed Development and will also report on carbon payback time.
- 15.3.3. This assessment will be based on the proposed information regarding the scale and nature of the Proposed Development. Where data is unavailable, worst-case reasonable assumptions will be used.
- 15.3.4. The carbon balance assessment consists of 4 steps:
- Step 1 - data gathering (e.g. infrastructure dimensions, peat probe data interrogation, habitat loss calculations);
 - Step 2 - data input and review;
 - Step 3 - completion of carbon balance tool (Scottish Government online carbon calculator tool) and reporting;
 - Step 4 - review and QA
- 15.3.5. The EIA Report will present the findings of the carbon balance assessment and will contextualise these results through describing the climate benefits which are likely to occur through delivery of the Proposed Development. In broad terms, these benefits include contribution to mitigating the effects of climate change; contribution to, and security of, domestic energy supplies and to a sustainable energy mix within Scotland and more broadly within the United Kingdom.
- 15.3.6. The EIA Report chapter will also consider the possible effects of the Proposed Development on climate change, and the resilience of the project to the effects of climate change would be informed by other EIAR chapters including Geology, Hydrology and Hydrogeology, and The Proposed Development (e.g. use of sustainable design measures).
- 15.3.7. Climate resilience assessment is undertaken to ensure adequate resilience of major projects to the adverse impacts of climate change, for example flooding. It is based on a vulnerability and risk assessment. However, it is considered that many of key climate trends such as increased temperature, changes in rainfall events and sea level rise will not affect the Proposed Development due to its location and high elevation. And during severe windstorms, turbines typically engage installed braking mechanisms to shut turbines down.

15.4. Questions for consultees

- 15.4.1. Q15.1 Do you agree that the proposed approach with respect to climate change assessment is appropriate?
- 15.4.2. Q15.2. Do you agree the climate vulnerability and risk assessment can be scoped out of further assessment?

16. Other Issues

16.1. Introduction

16.1.1. A single chapter will be prepared to draw together the implications of the Proposed Development on other facets of the environment that have been scoped out of the EIA process, or to signpost readers to where they are dealt with within technical chapters of the EIA Report. It is anticipated that this Chapter would include discussion of the following issues:

- Infrastructure, Telecommunications and Broadcast Services
- Shadow Flicker;
- Air Quality;
- Population and Human Health;
- Major Accidents and Disasters; and
- Waste and Environmental Management.

16.2. Infrastructure, Television and Telecommunications

Infrastructure

16.2.1. A range of investigations will be undertaken to establish the presence of existing infrastructure associated with utilities such as water, gas, electricity and telecommunication links to establish either the absence of effects or to identify appropriate mitigation to overcome any effects. These matters would be addressed through consultation with the relevant system operators.

Television and Radio

16.2.2. Wind turbines have the potential to adversely affect analogue television reception through either physical blocking of the transmitted signal or, more commonly, by introducing multi-path interference where some of the signal is reflected through different routes.

16.2.3. The Proposed Development is located in an area which is served by a digital transmitter and, therefore, television reception is unlikely to be affected by the development of the windfarm as digital signals are rarely affected. In the unlikely event that television signals are affected by the Proposed Development, mitigation measures will be considered by the applicant.

16.2.4. Television reception is, therefore, scoped out from further assessment in the EIA.

- 16.2.5. Broadcast radio (FM, AM and DAB digital radio) are transmitted on lower frequencies than those used by terrestrial television signals. Lower frequency signals tend to pass through obstructions more easily than the higher frequency signals, and diffraction effects also become more significant at lower frequencies. Both these factors will tend to lessen the impact of new structures on broadcast radio (Ofcom, 2009).
- 16.2.6. It is therefore proposed that an assessment of potential effects on broadcast radio is scoped out of the EIA.

Telecommunications

- 16.2.7. Wind turbines have the capability of affecting electromagnetic transmissions by physically blocking or dispersing the transmission/signal. This means that telecommunications and/or broadcast signals could experience interference.
- 16.2.8. Consultation will be undertaken with relevant stakeholders and consultees with respect to telecommunications.

Fixed Links

- 16.2.9. Ofcom is responsible for the licensing of two-way radio transmitters. It holds a register of most fixed links and will therefore be consulted in order to establish baseline conditions. However, because not all fixed links are published, system operators will also be individually consulted on the potential for the Proposed Development to cause electromagnetic interference. The outcome of this consultation process, including any mitigation actions taken, will be detailed in the EIAR.

16.3. Shadow Flicker

- 16.3.1. Shadow flicker occurs when a certain combination of conditions prevail at a certain location, time of day and year. It firstly requires the sun to be at a certain level in the sky. The sun then shines onto a window of a residential dwelling from behind the wind turbine rotor. As the wind turbine blades rotate it causes the shadow of the turbine to flick on and off. This may have a negative effect on residents in affected properties. If shadow flicker cannot be avoided through design, technical mitigation solutions are available, such as shutting down turbines when certain conditions prevail.
- 16.3.2. In the UK, significant shadow flicker is only likely to occur within a distance of 11 times the rotor diameter (of a wind turbine), from an existing residential dwelling and within 130 degrees either side of north.

- 16.3.3. The rotor diameter of the proposed turbines would be up to 162 m; so the potential area in which shadow flicker could occur would be up to 1,782 m from the proposed turbine locations. Once the final turbine layout and parameters are fixed, the locations of residential properties in proximity to the Site will be verified and if any are situated within ten rotor diameters from the proposed turbine positions, a shadow flicker model will be run to predict potential levels of effect. Shadow flicker is considered as an environmental constraint during the design process.
- 16.3.4. Based on the design of the Proposed Development undertaken to date, and the number of residential properties found in the surrounding area, it is likely that a full shadow flicker assessment will be required for the EIA, covering residential properties within 11 rotor diameters of turbines, within 130 degrees either side of north.

16.4. Ice Throw

- 16.4.1. Icing in Scotland is likely to be a rare occurrence, with the Icing Map of Europe (WECO, 2000) showing Scotland to be within a light icing area with an annual average of only 2-7 icing days per year.
- 16.4.2. The risk associated with ice throw affecting members of the public is considered to be very low given the very remote location of the Proposed Development.
- 16.4.3. This is reduced further as turbines are fitted with vibration sensors which shut the turbines down should any imbalance that might be caused by icing be detected.
- 16.4.4. To further minimise the risk, the following mitigation measures will be taken:
- Service crews will be trained regarding the potential for ice throw;
 - Ice risk conditions will be monitored by the wind farm operator; and
 - Public notices will be displayed at access points alerting members of the public and staff accessing the Site of the possible risk of ice throw under certain weather conditions.
- 16.4.5. It is therefore proposed that ice throw is scoped out of the EIA.

16.5. Air Quality

- 16.5.1. Given the relatively remote location of the Site, the generation of dust during construction activity is unlikely to have a direct impact on any human receptors and will be controlled by means of best practice to be described in the EIAR.
- 16.5.2. Consideration will be given within the Ecology and Hydrology Chapters to the potential impacts that dust generation could have on any identified sensitive ecological or hydrological receptors. If required, detailed mitigation measures will be proposed within these EIAR Chapters.

16.6. Population and Human Health

- 16.6.1. The potential effects on population and human health arising from the Proposed Development would be considered in the context of the other factors identified in Schedule 4(4) of the 2017 EIA Regulations, given that any environmentally related health issues (both beneficial and adverse) are likely to result from, for example, exposure to traffic, changes in living conditions resulting from noise and increased employment opportunities.
- 16.6.2. It is therefore proposed that population and human health effects of the Proposed Development are incorporated within the relevant chapter of the EIAR, as appropriate, under each of the other topic headings e.g. noise or socio-economic effects. Where no significant effects are likely these are scoped out of the assessment.

16.7. Major Accidents and Disasters

- 16.7.1. The scope for the EIA to consider major accidents and disasters has been initially considered in **Table 16.1**. Major accidents or disasters have been scoped in where they represent a risk to the Proposed Development, either from the proposed location or the project itself. A high risk is considered to be where there is reasonable likelihood of the accident or disaster occurring, or where the effect of the accident or disaster would lead to the requirement for mitigation which is beyond the usual scope of construction or operational activities.
- 16.7.2. Where an accident or disaster is scoped in, the EIA Report chapter(s) identified would consider the matter in more detail. This further detail may show that no further assessment is needed, or it may lead onto an appropriate level of assessment and/or identification of mitigation.

Table 16.1: Major Accidents and Disasters

Major Accident or Disaster	Risk due to location	Risk due to Project	Scoped in/out due to risk	Rationale	EIA Report Chapter
Biological hazards: epidemics	Very Low	Very Low	Out	The probability of epidemics which would affect the construction or operation of the Proposed Development is considered to be very low.	n/a
Biological hazards: animal and insect infestation	Very Low	Very Low	Out	The probability of animal and insect infestations	n/a

Major Accident or Disaster	Risk due to location	Risk due to Project	Scoped in/out due to risk	Rationale	EIA Report Chapter
				which would affect the construction or operation of the Proposed Development is considered to be very low	
Earthquakes	No	No	Out	Any earthquakes in the vicinity of the Proposed Development would be of a very small magnitude and the design of turbine foundations etc. is adequate to withstand such low magnitude events.	n/a
Tsunamis	No	No	Out	The general location of the Proposed Development and its distance from the coast means there is no risk of these phenomena affecting the Proposed Development	n/a
Volcanic eruptions	No	No	Out	There are no active volcanos in the vicinity.	n/a
Famine / food insecurity	Negligible	Very Low	Out	The probability of famine/food insecurity which would affect the construction or operation of the Proposed Development is considered to be Negligible.	n/a
Displaced populations	Negligible	Very Low	Out	No population displacement.	n/a

Major Accident or Disaster	Risk due to location	Risk due to Project	Scoped in/out due to risk	Rationale	EIA Report Chapter
Landslide/subsidence	Low	Low	In	A peatslide risk assessment would be undertaken if peat is identified on the Site.	Peat Management, Carbon Balance
Severe Weather; storms	Medium	No	Out	Turbines are equipped with lightning conductors and automatically shut down when wind speeds are at a level which could damage components.	n/a
Severe weather; droughts	Very low	No	Out	Turbines would be unaffected by drought conditions.	n/a
Severe weather; extreme temperatures	Low	Very low	Out	<p>Location leads to relatively low icing risk, remote location, turbine sensors, mitigation as follows:</p> <ul style="list-style-type: none"> • Service crews will be trained regarding the potential for ice throw; • Ice risk conditions will be monitored by the wind farm operator; and • Public notices will be displayed at access points alerting members of the public and staff accessing the Site of the possible risk of ice throw under certain weather conditions. 	n/a

Major Accident or Disaster	Risk due to location	Risk due to Project	Scoped in/out due to risk	Rationale	EIA Report Chapter
Floods	Low	Very Low	In	Damage to turbines or infrastructure from flooding, or increased flood risk elsewhere.	Site Selection and Design Evolution, Hydrology, Hydrogeology and Geology.
Terrorist Incidents	No	No	Out	n/a	N/a
Cyber attacks	No	No	Out	n/a	n/a
Disruptive industrial activities	No	No	Out	n/a	n/a
Public disorder	No	No	Out	n/a	n/a
Wildfires	No	No	Out	n/a	n/a
Poor Air Quality events	No	No	Out	n/a	n/a
Transport accidents	No	Yes	In - abnormal loads and increase in traffic from construction.	Abnormal loads or an increase in traffic could lead to an increased risk of accidents. Public road network may be unsuitable for such traffic, further increasing risk.	Design Evolution and Traffic and Transport.
Industrial accidents	No	Yes	In - from construction and maintenance	Manual labour, working at height, working with high voltages and use of specialist plant all bring risk of industrial accidents. All relevant health and safety legislation and industry best practice followed.	Site Selection and Design Evolution, Utilities and Infrastructure.
Urban Fires	No	No	Out	n/a	n/a

16.8. Waste and Environmental Management

- 16.8.1. RES is committed to pollution prevention and environmental protection. As such an environmental management strategy to minimise environmental effects of the Proposed Development will be developed as part of the Outline CEMP.
- 16.8.2. An Outline Peat Management Plan will be prepared as a supporting technical appendix in line with the SEPA Regulatory Position Statement: Developments on Peat (2012). If significant peat deposits are proven, a Peat Landslide Hazard and Risk Assessment will be completed using the Site survey data and slope analysis (using DTM data), highlighting areas that may be impacted by a peat slide so that appropriate mitigation measures and can be identified.
- 16.8.3. If granted planning permission, a Site-specific Waste Management Plan which addresses storage and final disposal of surplus material will be produced as part of an anticipated planning condition. All potential waste streams will be identified and what construction practices can be incorporated into the development to minimise the use of raw materials and maximise the use of secondary aggregates.

16.9. Matters Scoped Out

- 16.9.1. As discussed at Section 16.2, 16.4 and 16.5 television reception, broadcast radio, ice throw and air quality assessment are proposed to be scoped out of the EIA. Section 16.6 proposes to scope out the major accident and disasters not considered to be high risk as a result of the location of the Proposed Development or the nature of the works.

16.10. Questions for Consultees

- 16.10.1. Q16.1. Do you agree with the proposed approach to scope out an assessment of potential effects on major accidents and/or disasters?
- 16.10.2. Q16.2. Do you agree with the proposed approach to scope out an assessment of potential effects on lightning strike?
- 16.10.3. Q16.3. Do you agree with the proposed approach to scope out an assessment of potential effects on air quality?
- 16.10.4. Q16.4. Do you agree with the proposed approach to scope out an assessment of potential effects on television (digital and satellite)?
- 16.10.5. Q16.5. Do you agree with the proposed approach to scope out an assessment of potential effects on broadcast radio?
- 16.10.6. Q16.6. Do you agree with the proposed approach to scope out an assessment of potential effects on ice throw?

17. Summary

17.1. Summary and Conclusion

- 17.1.1. This EIA Scoping Report outlines the proposed technical and environmental assessment that will be included within the EIA Report for the Proposed Development. The proposed scope and methodologies for each assessment have been provided and the guidance to be followed set out. Should any further information be required in order that a full EIA Scoping Opinion can be provided the applicant would be happy to provide further information and/or discuss any further requirements.
- 17.1.2. In conclusion, this scoping report seeks the views of the relevant consultees on the proposed EIA and the content of the EIA Report for Clune Wind Farm.
- 17.1.3. RES is experienced in wind farm development and seeks to work closely with consultees on this project to agree suitable solutions to Site issues.

17.2. Responding to this scoping report

- 17.2.1. Consultee responses to this report should be directed to the Energy Consents Unit which will form a Scoping Opinion.
- 17.2.2. The ECU can be contacted via email: Econsents_Admin@gov.scot
- 17.2.3. The applicant will welcome such responses to inform the scope of EIA to be undertaken for the Proposed Development and further consultation to be undertaken with each consultee as the EIA progresses.

Figures

Appendix 7.1 Heritage Appraisal of Designated Heritage

Table 1 - Scheduled Monuments within 10km of the proposed turbine locations

Reference	Designation Title	Turbines Visible	Nearest Turbine Number	Distance to nearest Turbine	Direction	Appraisal Comments
SM4157	Avielochan, Tor Beag, fort	0	T1	9.5	West	<p>Tor Beag fort lies on a rocky promontory on the eastern side of Beinn Ghuilbin, allowing views to the east over Strathspey valley. The proposed development is not anticipated to be visible from the asset and is therefore scoped out of further assessment.</p> <p>The raised position of the asset allowed its inhabitants defensive control of the valley, with wide ranging views allowing them to monitor for anyone approaching, as well as being visible within the wider landscape. The asset would have utilised this defensive position to control passage and access towards Loch Vaa to the northeast, and Avie Lochan to the southeast, as well as the Spey River to the east. These aspects of the asset's setting contribute to its significance.</p> <p>The views over the valley are not predicted to be impacted by the proposed development and as such, the ability to understand, appreciate and experience the monument is anticipated to remain unaffected by the proposed turbines. The asset is excluded from further assessment.</p>
SM10481	Inverlaidnan Old House	14	T5	4.8	West	<p>This asset concerns the remains of Inverlaidnan Old House, an 18th century laird's house, which lies 0.35km southwest of the confluence of the Allt an Aonaich burn and the River Dulnain.</p> <p>The asset's primary significance derives from its layout and architecture, as well as its potential to improve our</p>

Reference	Designation Title	Turbines Visible	Nearest Turbine Number	Distance to nearest Turbine	Direction	Appraisal Comments
						<p>understanding of the social structure and culture of landed families in the 18th century through archaeological investigations.</p> <p>The asset's location at the confluence of the Allt an Aonaich burn and the River Dulnain may contribute to the assets significance, as this would allow the laird to control access to, from and along both watercourses.</p> <p>The proximity of General Wade's Military Road to the north of the asset also suggests a defensive positioning of the house, as this would allow the inhabitants to monitor travel along this route. The Military Roads in Scotland were primarily built in order to control the parts of the country that had participated in the Jacobite Rebellion. During the 1715 rebellion, the Clan Grant was split, with the main part supporting the British Government, though Bonnie Prince Charlie is believed to have stayed at the house in 1746. The defence and control aspects of the asset's setting are therefore an important contribution to its significance.</p> <p>The proposed development is anticipated to be visible to the west of the asset, with 14 turbines likely to be visible according to the ZTV.</p> <p>The view of these watercourses towards the east would not be impacted by the proposed development. The turbines would be peripheral in views towards General Wade's Military Road to the north and east, and would form a minor distraction to the ability to understand and appreciate the asset's setting. As such the ability to understand, appreciate and experience the asset is anticipated to remain unaffected by the proposed turbines. The asset is excluded from further assessment.</p>

Reference	Designation Title	Turbines Visible	Nearest Turbine Number	Distance to nearest Turbine	Direction	Appraisal Comments
SM11734	Edinchat, cairn 415m NNW of	27	T26	8.9	South	This asset has been scoped in for further assessment.
SM11814	Banchor, cairn 315m SE of	14	T24	1.4	Southeast	Due to the asset's location within the Site Boundary, it has been scoped in for further assessment.
SM11815	Dalarossie Cottage, cairn 375m SSE of	10	T24	1.6	Southeast	Due to the asset's location within the Site Boundary, it has been scoped in for further assessment.
SM11739	Woodend, cairn 760m NW of	27	T26	4.1	South	This asset has been scoped in for further assessment.
SM11901	Ruthven, depopulated township 600m S of	27	T26	10.0	South	The asset concerns the depopulated post-medieval township of Ruthven, located to the south of the River Findhorn, above the floodplain at approximately 300m AOD. The main parts of the asset's setting which contributes to its significance are its placement on fertile agricultural land, as a domestic agricultural dwelling, as well as access to the watercourse to the north, which would have allowed its inhabitants to monitor travel along the river. It is also possible that its position next to the river was used to access trade routes along the watercourse, or along the valley itself. Due to the asset's agricultural nature, long distance views are unlikely to be significant to the asset's setting.

Reference	Designation Title	Turbines Visible	Nearest Turbine Number	Distance to nearest Turbine	Direction	Appraisal Comments
						The Proposed Development, located to the south of the asset, would not be present in views between the asset and the river. Whilst the development would be present in views to the south, it would be a minor distraction at most and would not impede the ability to understand, appreciate and experience the asset. It is therefore scoped out of further assessment.
SM11673	Drumbain Cottage, hut circles 725m, 845m and 975m ESE of	24	T26	5.0	Southwest	This asset has been scoped in for further assessment.
SM11806	Soilsean, deserted township and hut circle 745m ESE of	25	T26	5.7	South	This asset has been scoped in for further assessment.

Appendix 7.1: Table 2 - Category A Listed Buildings within 10km of the proposed turbine locations

Reference	Designation Title	Turbines Visible	Nearest Turbine Number	Distance to nearest Turbine	Direction	Appraisal Comments
LB240	Sluggan Bridge Over River Dulnain	4	T5	5.6	West	<p>The bridge is a military bridge, constructed between 1729 and 1730 as part of General George Wade's Military Road to cross the River Dulnain. The bridge would have originally allowed military personal to cross the watercourse, as part of the British Governments ambition to bring the region under control after the 1715 Jacobite Rebellion.</p> <p>The setting of the bridge comprises the crossing over the River Dulnain, providing a route to the other side of the watercourse. Its primary significance derives from its historical interest as part of the early military roads in Scotland. Long distance views are unlikely to contribute to its significance, as the bridge was constructed primarily for this practical function. According to the ZTV, 4 turbines are predicted to be visible in peripheral views when crossing the bridge. As long-distance views are of minor significance to the asset, peripheral views of 4 turbines are not predicted to impact upon the ability to appreciate, understand or experience the asset. It is therefore scoped out of further assessment.</p>

Appendix 10.1 Phase 1 Peat Probing Report